City of SACRAMENTO

COMMUNITY DEVELOPMENT
DEPARTMENT

ENVIRONMENTAL PLANNING
SERVICES

300 Richards Boulevard
Third Floor
Sacramento, CA 95811

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:

920 San Juan Residential Development (P21-008) The project would develop a residential community of 79 homes, private streets and alleys, open space, tot lot, and drainage basins, with associated landscaping and infrastructure. Parking spaces would include 158 spaces in garages, and 37 uncovered spaces. Proposed dwelling units would range in size from 1,200 to 1,500 square feet. The proposed project would include: a General Plan Amendment from Suburban Neighborhood Low Density (SNLD) to Suburban Neighborhood Medium Density (SNMD); a Rezone from Agriculture (A) to Multi-Unit Dwelling (R-2B); a tentative map that would subdivide the property into 79 single family residential lots, Site Plan and Design Review to construct 79 dwelling units; and a conditional use permit (CUP) for a gated community. Each lot would be developed with a single detached dwelling.

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, 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 pursuant to the Environmental Quality Act of 1970 (Sections 21000, et seq., Public Resources Code of the State of California).

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) adopted by the City of Sacramento, and the Sacramento City Code.

A copy of this document and all supportive is available on the City's EIR Webpage at:
http://www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports

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

By: Scott Johnson

Date: 5/19/2022

920 SAN JUAN RESIDENTIAL PROJECT

Initial Study

Prepared for
The City of Sacramento

May 2022

2600 Capitol Avenue
Suite 200
Sacramento, CA 95816
916.564.4500
www.esassoc.com

ESA

Bend	Oakland	San Diego
Camarillo	Orlando	San Francisco
Delray Beach	Pasadena	San Jose
Irvine	Petaluma	Sarasota
Los Angeles	Portland	Seattle
Mobile	Sacramento	Tampa

202100043

TABLE OF CONTENTS

Initial Study for the 920 San Juan Residential Project

Appendices

Page

List of Figures

List of Tables

ENVIRONMENTAL CHECKLIST

920 San Juan Residential Project

Section 1 Background

1. Project Title and File Number:	920 San Juan Residential Project (P21-008)
2. Lead Agency Name and Address:	City of Sacramento, 300 Richards Blvd., 3rd Floor, Sacramento, CA 95811
3. Contact Person and Phone Number:	Daniel Abbes, Associate Planner
4. Project Location:	920 San Juan Road, Sacramento, CA 95834
5. Project Sponsor's Name and Address:	SKK Developments, 2409 L Street, Suite 200, Sacramento, CA 95816
6. General Plan Designation(s):	Suburban Neighborhood Low Density (SNLD)
7. Zoning:	Agriculture (A)

8. Description of Project:

The project proposes single family homes in the South Natomas community in the City of Sacramento on a 9.17-acre site, see **Figure 1-1**, *Regional Location*. Overall, the community is planned with 79 detached homes ranging from 1,200 square feet (sf) to over 1,500 sf. The project also includes private landscaped areas including a tot lot, private drives, and 195 parking spaces. For further details, see Section 2, *Project Description*.

9. Project Current Land Use and Zoning:

The current General Plan land use designation for the site is Suburban Neighborhood Low Density (SN-LD) and the site is zoned Agriculture (A). The project proposes residential uses that would require rezoning and a general plan amendment.

10. Surrounding Land Uses and Setting:

The roughly triangular, approximately 9.17-acre site is bounded by San Juan Road to the south, an existing canal to the west, and the Natomas Point Apartments to the northeast. There are other residential uses surrounding the project site; single family homes to the west. Rio Terra Park and The Church of Jesus Christ of Latter Day Saints are immediately south and southwest of the project site.

The project site is about quarter mile from the Northgate Boulevard, a corridor with retail and commercial land uses. See **Figure 1-2**, *Project Location and Surrounding Area.*

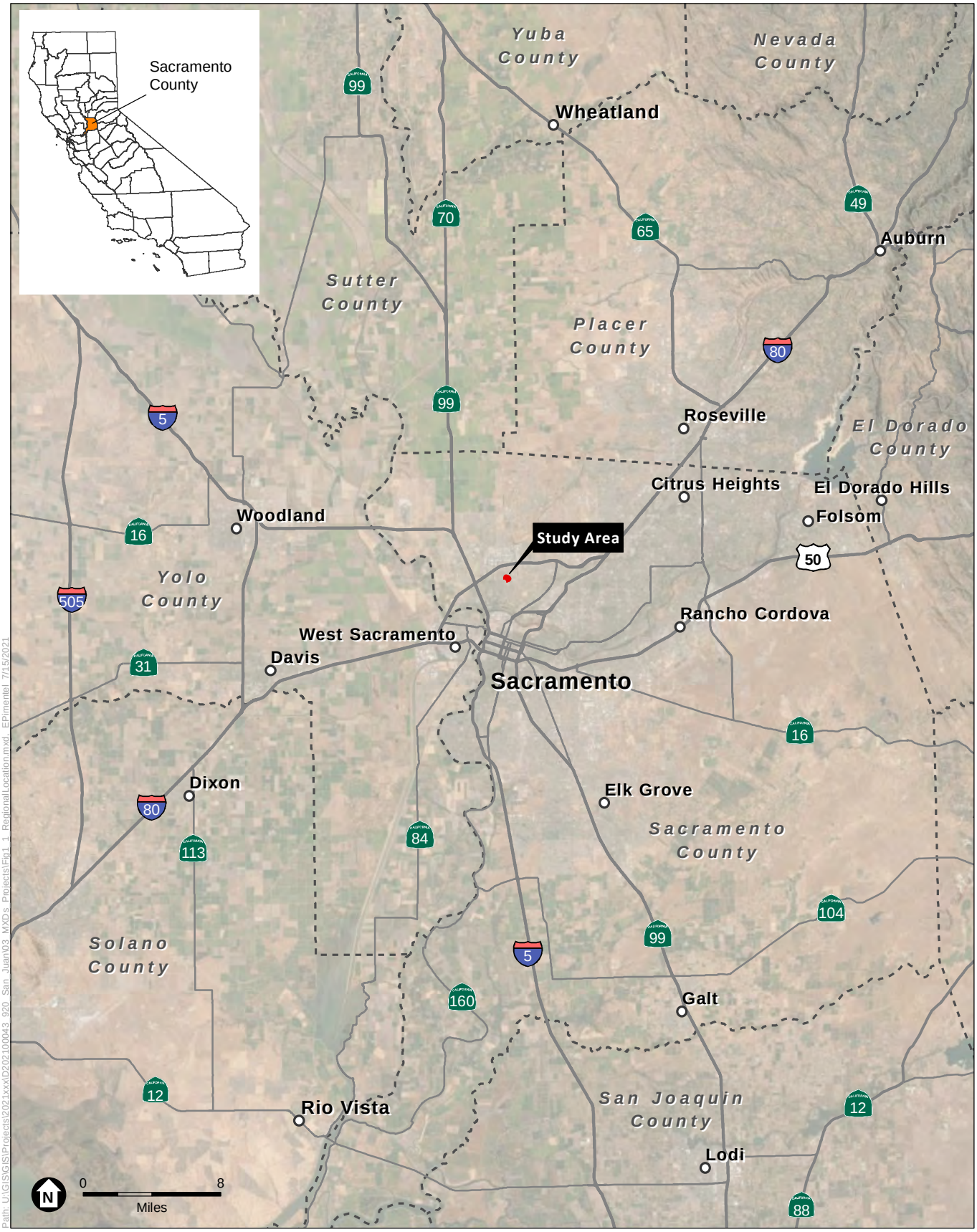
11. Other public agencies whose approval is required:

This Initial Study-Mitigated Negative Declaration would provide the City (the CEQA Lead Agency), responsible agencies, and the general public with relevant environmental information to use in considering the proposed project. The following approvals are anticipated:

- City of Sacramento Community Development: General Plan Amendment
- City of Sacramento Community Development: Rezoning
- City of Sacramento Community Development: Tentative Map to subdivide the property into 79 single family residential lots.
- City of Sacramento Community Development: Design Review Approval
- City of Sacramento Community Development: Conditional Use Permit for a gated community
- City of Sacramento Public Works Permit for Street Access/Driveway Improvements/ Temporary Construction Staging, as needed

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

On April 14, 2021 notifications were sent to the four tribes who've previously requested to receive notifications pursuant to Public Resources Code Section 21080.3.1 (AB 52). On April 15, 2021, United Auburn Indian Community (UAIC) responded providing that based on their review, there are sensitive resources in proximity to the subject site, which could extend to the subject site and they would like to consult. The areas of sensitivity were communicated. They inquired if a cultural study had been prepared yet. Buena Vista Rancheria responded on April 28, 2021 stating they have no objections to the project and agreeing to close consultation. No response was received from the two other tribes. As part of the consultation process with UAIC, when the cultural study was prepared it was provided to UAIC. UAIC further recommended that a post disturbance site visit by a tribal representative is needed to see the site after it was cleared. Additionally, it was agreed upon to include mitigation measures for inadvertent/unanticipated discoveries of potential Tribal Cultural Resources.



SOURCE: Esri, 2015; ESA, 2021

920 San Juan Residential Project

Figure 1-1
Regional Location

ESA

SOURCE: ESA, 2021

920 San Juan Residential Project

Figure 1-2
Project Location and Surrounding Area

ESA

Environmental Factors Potentially Affected

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

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

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial study:

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

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

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

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

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

Scott Johnson — Signature

May 19, 2022 — Date

Section 2 Project Description

The project proposes 79 single family homes ranging from 1,200 sf to over 1,500 sf in the South Natomas community in the City of Sacramento.

Project Location

The project site is located in the South Natomas portion of the City of Sacramento, California (see Figure 1-2 Project Location and Surrounding Map). The roughly triangular, approximately 9.17-acre site identified by APNs 250-0010-085 (7.79 acres) and 250-0010-083 (0.55 acres) is bounded by San Juan to the south, an existing canal to the west, and the Natomas Point Apartments to the northeast.

The proposed community fronting San Juan Road leads to the community commercial area along Northgate Boulevard within less than a mile. A concrete-lined drainage ditch and SMUD high voltage power line easement border the site on the west. San Juan Road on the south edge of the site has two bus routes providing connections to downtown, Arden Fair, Kaiser Morse hospital, and major commercial areas and the library in North Natomas.

The project site is currently vacant with the City of Sacramento 2035 General Plan land use designation of Suburban Neighborhood Low Density (SNLD) and the current zoning is Agriculture (A) as illustrated in **Figure 2-1 and 2-2**, *General Plan Land Use and Zoning*).

Project Characteristics

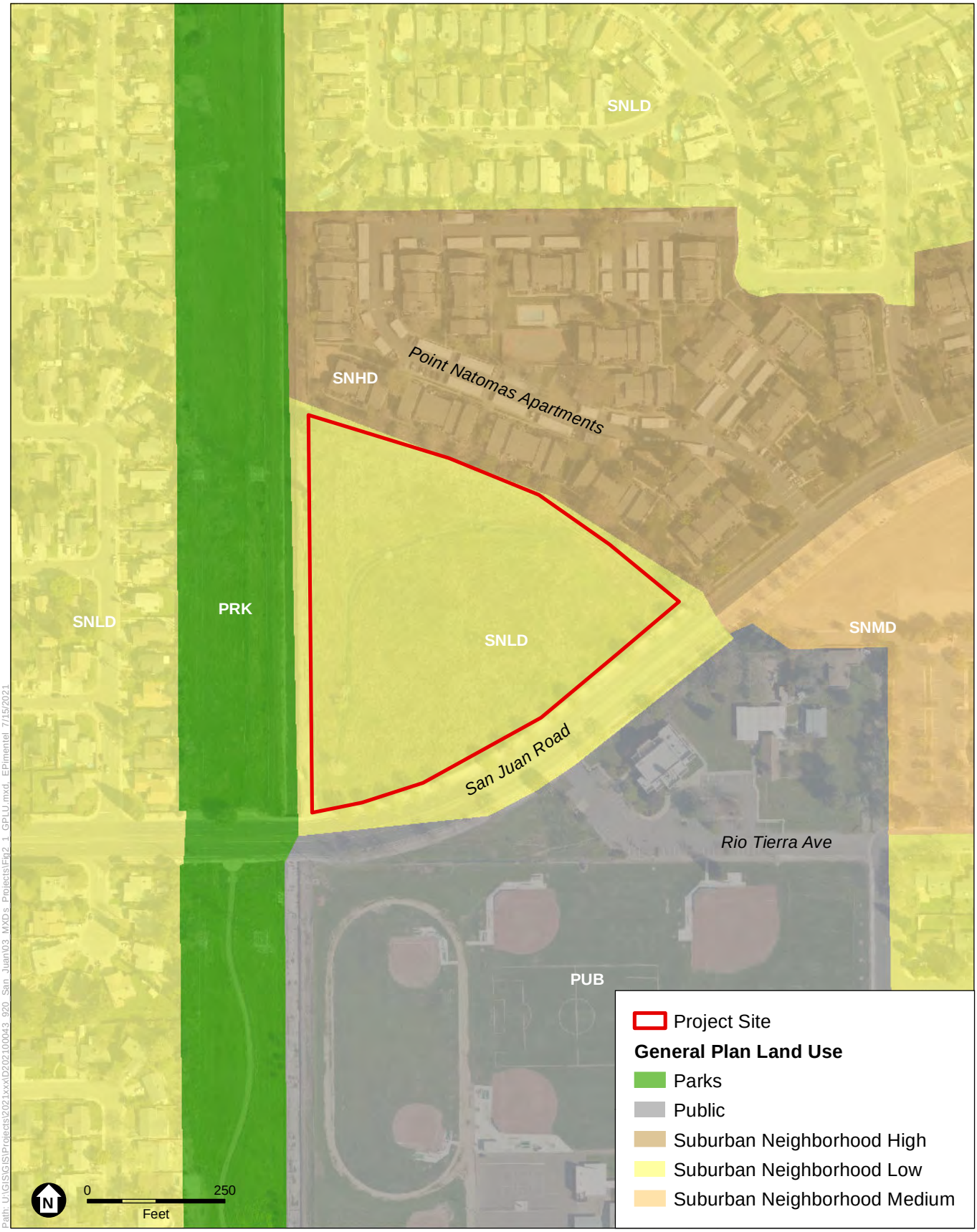
As seen in **Figure 2-3**, *Preliminary Site Plan*, the residential community of 79 homes, private streets and alleys, open space, tot lot, and drainage basins, is planned in a community setting with associated landscaping and infrastructure. Overall, the proposed project would have a development density of 8.6 dwelling units per acre and would include 195 parking spaces. Parking spaces would include 158 spaces in garages, and 37 uncovered spaces.

Proposed dwelling units would range in size from 1,200 to 1,500 square feet. The proposed project would include approval of a tentative map that would subdivide the property into 79 single family residential lots. Each lot would be developed with a single detached dwelling.

Access and Circulation

The primary access to the project site is from the San Juan Road as illustrated in Figure 2-3, *Preliminary Site Plan*. The project site would be accessed via the vehicular entrance proposed on San Juan Road. Emergency vehicle access would be provided via two separate gates at either end of the project frontage on San Juan Road.

Pedestrian and bicycle access to the project site would be provided via gated entry at the project entry. In addition, residential units that border the project site frontage along San Juan Avenue would have individual, gated pedestrian access points to the public sidewalk.

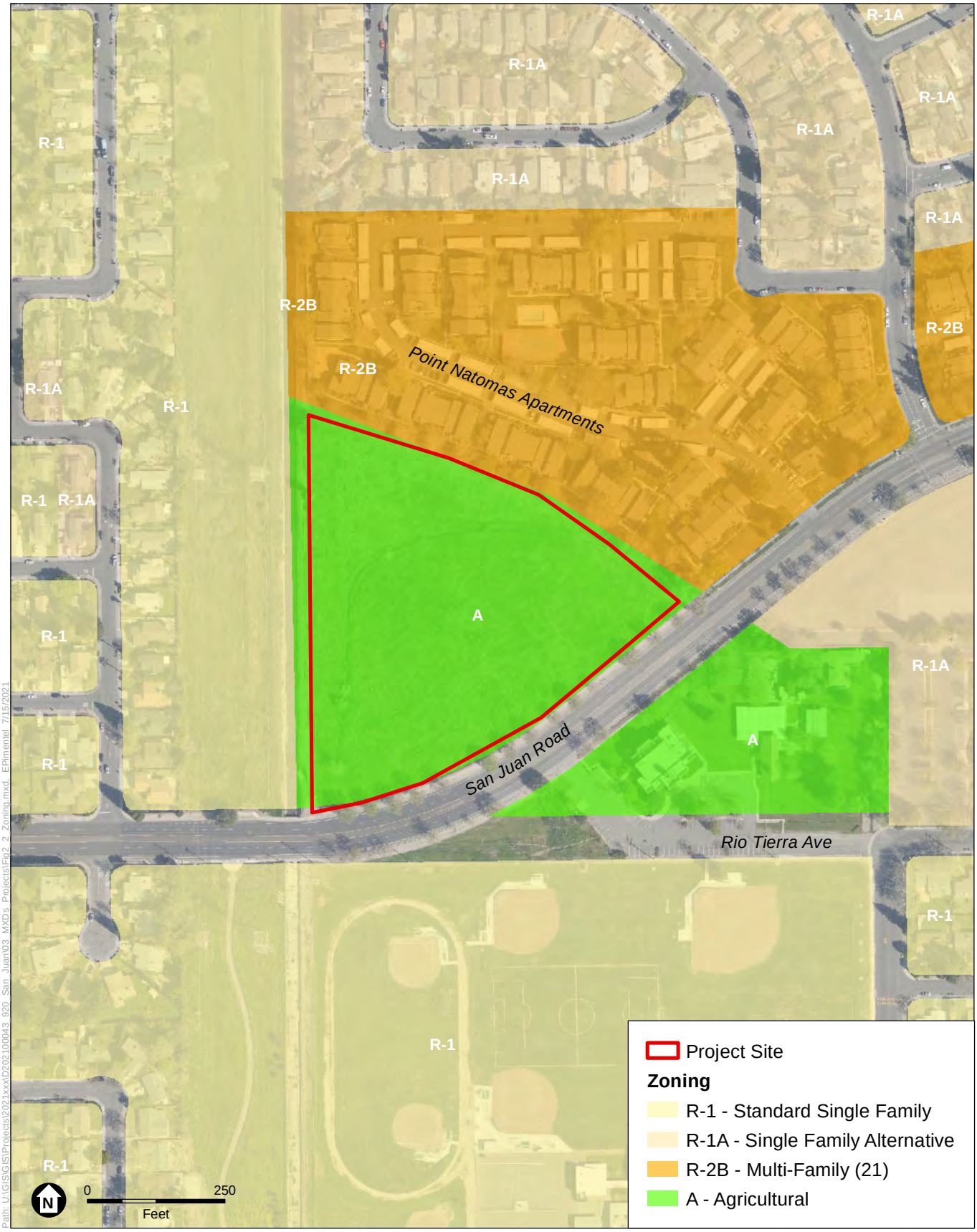


SOURCE: City of Sacramento, 2021; ESA, 2021

920 San Juan Residential Project

Figure 2-1
Existing General Plan Land Use Designation

ESA

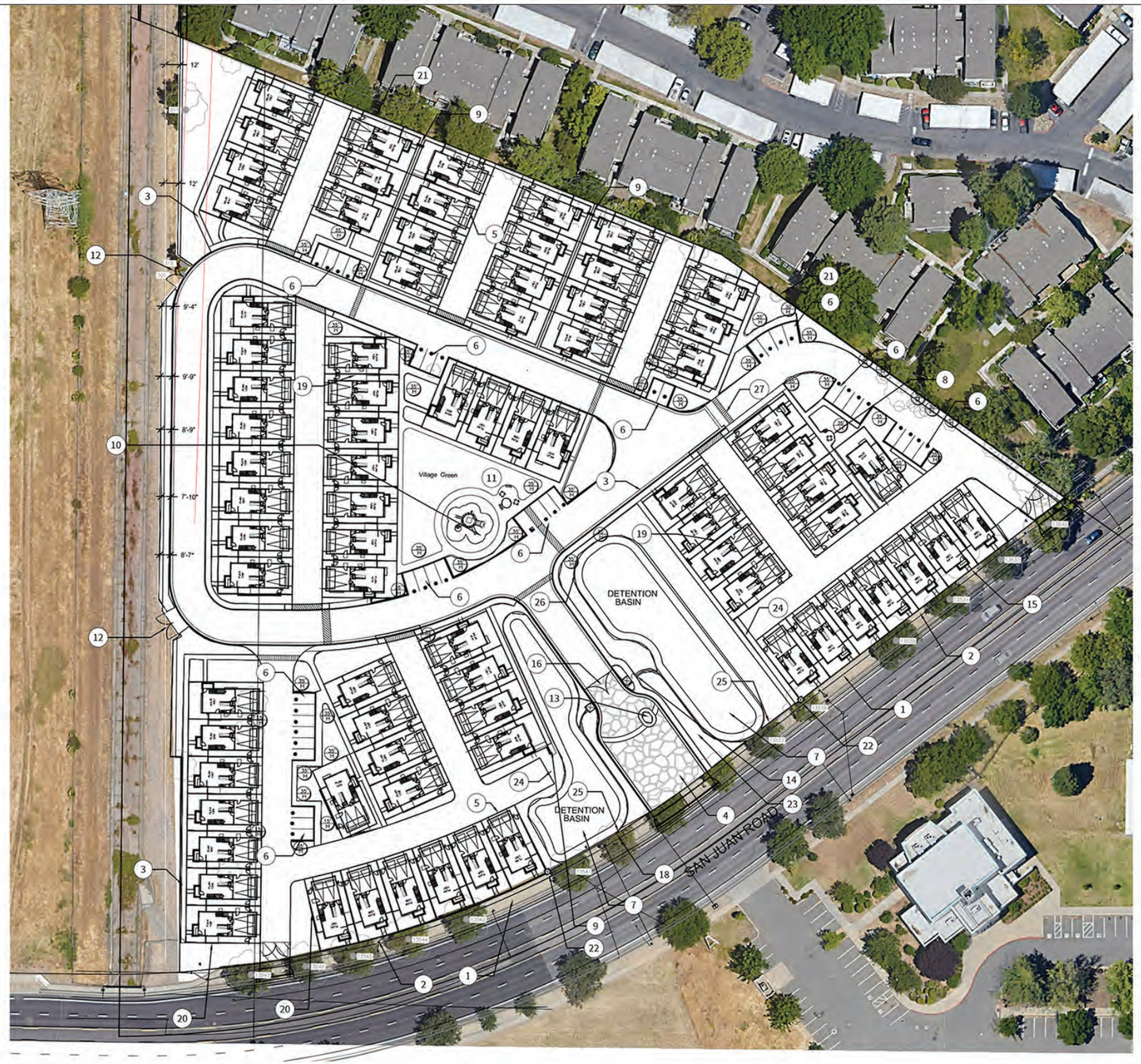


SOURCE: City of Sacramento, 2021; ESA, 2021

920 San Juan Residential Project

Figure 2-2
Existing Zoning

ESA



REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
1	EXISTING DECOMPOSED GRANITE SURFACING IN PARKWAY STRIP TO REMAIN.
2	EXISTING SIDEWALK AND STREET TREE TO REMAIN. SEE PLANTING SHEET PL3.
3	CONCRETE SIDEWALKS, TYPICAL.
4	STAMPED AND COLORED CONCRETE PAVING AT ENTRY.
5	DRIVEWAY APRONS, TYPICAL.
6	GUEST PARKING - (37) STALLS
7	STORM WATER DETENTION BASIN - SEE PL1
8	PICNIC AND BBQ AREA
9	BENCH SEAT
10	TOT LOT WITH PLAY STRUCTURE AND SEATING.
11	TURF AND PICNIC AREA.
12	MAINTENANCE ACCESS GATE
13	VEHICULAR ACCESS GATE KEY PAD WITH GATE CONTROL AND ACCESS PAD.
14	PEDESTRIAN ACCESS GATE.
15	METAL PEDESTRIAN GATE @ EACH UNIT
16	DECORATIVE VEHICUALR SWING ENTRY GATES WITH PILASTERS, ENTRY KEYPAD, AND PROJECT FIRE MAP. SEE DETAIL H SHEET PL3
18	32" CMU WALL WITH 42" DECORATIVE METAL FENCE. SEE DETAIL E SHEET PL3.
19	6`-0" WOOD GOOD NEIGHBOR FENCE. SEE DETAIL B SHEET PL3
20	6`-0" ENHANCED WOOD FENCE WITH CAP. SEE DETAIL A SHEET PL3.
21	6`-0" ENHANCED WOOD FENCE WITH CAP AND STEEL POSTS. SEE DETAIL D SHEET PL3.
22	24" PILASTERS WITH STONE VENEER, TYPICAL. SEE DETAIL G SHEET PL3
23	PROJECT SIGNAGE AT ENTRY.
24	10` MAINTENANCE ACCESS GATE FOR BASIN.
25	RETAINING WALL (CONTINUATION OF 32" CMU WITH 42" DECORATIVE METAL FENCE) AT BASIN. SEE DETAL F SHEET PL3
26	60" MEATL FENCE AROUND STORM WATER BASIN
27	CROSSWALK, FOR ADA ACCESSIBLE PATH OF TRAVEL

SOURCE: Fuhrman Leamy Land Group, 2021

920 San Juan Residential Project

Figure 2-3
Preliminary Site Plan

ESA

This page intentionally left blank

The project is intended to provide direct pedestrian and bicycle access to the future alignment of the Niños Parkway Trail (separate project to be implemented by the City) along the easement for the drainage ditch to the west. The Niños Parkway Trail currently extends from the south to the south side of San Juan Avenue. The project would include closed gated accesses, that would be opened to the Parkway Trail, when the City has completed the segment of the trail that is anticipated to be developed directly adjacent to the west side of the project site. The project provides for continued access for utility easement holders along the western boundary. At present, the Niños Parkway Trail also provides access to the Rio Tierra Junior High School and the Hazel Strauch Elementary, located south of the project site. Further, the Niños Parkway Trail also provides connection to the Jedediah Smith Memorial Bike Trail along the American River.

Common Recreation Areas

The proposed project would include a common area for recreation, situated in the center of the project site. The area is labeled as the Village Green in the project site plan (see Figure 2-3 *Preliminary Site Plan*) and will include a turf and picnic area, tot lot, and eight guest parking stalls. As seen in **Figure 2-4**, *Preliminary Landscape Plan*, other recreational and common areas would include a small picnic and barbecue area near the guest parking spaces on the east side of the site, an off-leash dog park in the northwest corner of the site, and access points to the future bike trail from the boundary fencing. It is anticipated that there will be community lighting to increase security.

Landscaping

The community is visible and accessible from San Juan Road with decorative paved and decorative vehicular entrance gates. The project signage and pedestrian access gate are also located along the main entrance. As illustrated in Figure 2-4, *Preliminary Landscape Plan*, a retaining wall to the west along the canal also provides a boundary and fencing to the proposed community. The fence adjoining the existing Point Natomas Apartment is proposed to be 6’ high enhanced wood fence with cap and steel posts. The site boundary facing San Juan Road is composed of 24” pilasters with stone veneers.

Parking

The project plans a total of 195 parking spaces, which includes 37 uncovered spaces as guest parking and 158 garage spaces within the residential units.

Site Preparation and Construction

Development of the proposed project would commence with the site development which would involve clearing the vegetation, grading the site, trenching, and digging for underground utilities, up to preparation of the blue top. Construction of the internal roadways, pads for buildings, sidewalks, driveways, buildings, and landscaping would follow the site preparation.

It is anticipated that the top 1-2 inches of soil is stripped and topped with a structural fill of up to 36 inches. The stripped top soil would remain on site for use as fill in non-structural areas, including the soils excavated from the retention basins. Access from San Juan Road would

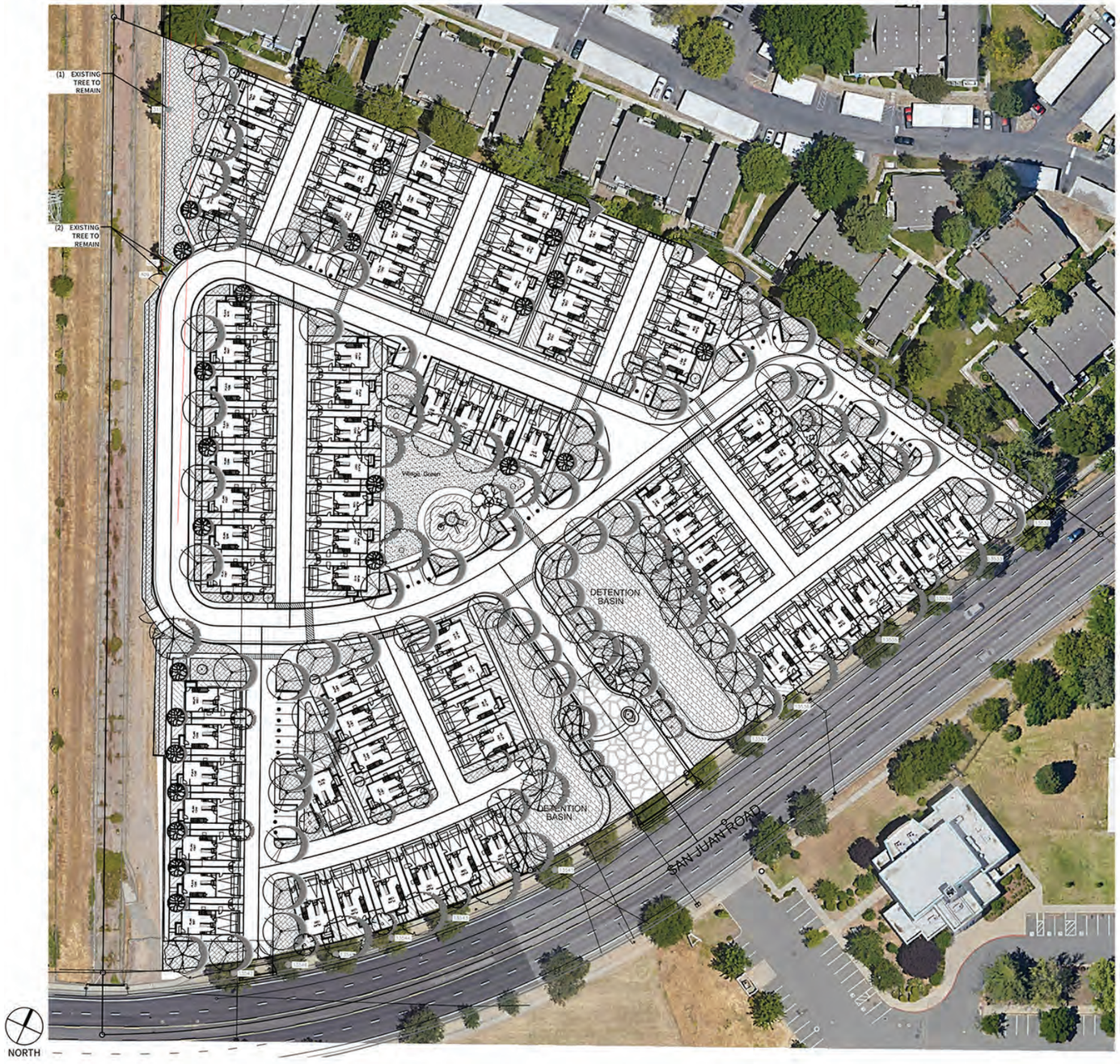
require new driveways for entry and exit, stripping, traffic signal, fire hydrants, and manholes on the segment of San Juan Road adjoining the site.

Project construction would begin in early 2022 and is expected to last for a period of approximately 14 months.

Utilities

The site would be served by domestic water and drainage from public mains extended and connected to the City of Sacramento system. The Sacramento Area Sewer District's (SASD) local sanitary sewer collection system will provide utility connections to the project.

The proposed project is planned for stormwater to drain into onsite retention basins that would be intended to accommodate stormwater flows as well as carry out low-impact-development (LID) function. The onsite retention basins would be approximately 7,186 sf and 4,896 sf, each about 1.8 feet deep, and would be located on the west and east of the main project driveway.



PLANT SCHEDULE

TREES	CODE	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE
	ACE OGL	ACER RUBRUM `RED SUNSET`	RED SUNSET RED MAPLE	24" BOX	MEDIUM
	CUP FRA	CUPRESSUS SEMPERVIRENS `DWARF`	DWARF ITALIAN CYPRESS	15 GAL.	LOW
	ELA LIT	ELAEOCARPUS DECIPIENS `LITTLE EMPEROR`	DWARF JAPANESE BLUEBERRY TREE	15 GAL.	MEDIUM
	LAG M27	LAGERSTROEMIA INDICA X FAURIEI `MUSKOGEE`	MUSKOGEE CRAPE MYRTLE	15 GAL.	LOW
	LAU NOB	LAURUS NOBILIS	SWEET BAY	24" BOX	LOW
	MAG EDI	MAGNOLIA GRANDIFLORA `EDITH BOGUE`	EDITH BOGUE SOUTHERN MAGNOLIA	24" BOX	MEDIUM
	MAG LIT	MAGNOLIA GRANDIFLORA `LITTLE GEM`	MULTI LITTLE GEM DWARF SOUTHERN MAGNOLIA	24" BOX	MEDIUM
	PLA SYC	PLATANUS RACEMOSA	CALIFORNIA SYCAMORE MULTI-TRUNK	15 GAL.	MEDIUM
	QUE SUB	QUERCUS SUBER	CORK OAK	24" BOX	LOW
	ULM DRA	ULMUS PARVIFOLIA `DRAKE`	DRAKE ELM	15 GAL.	MEDIUM

SHRUB & GROUNDCOVER LEGEND

RETENTION BASIN
CHONDROPETALUM ELEPHANTINUM / LARGE CAPE RUSH
CORNUS STOLONIFERA `ARCTIC FIRE` / RED TWIG DOGWOOD
JUNCUS PATENS `ELK BLUE` / SPREADING RUSH
LEYMUS CONDENSATUS `CANYON PRINCE` / CANYON PRINCE BLUE RYE
MAHONIA REPENS / CREEPING MAHONIA
RHAMNUS CALIFORNICA `MOUND SAN BRUNO` / CALIFORNIA COFFEEBERRY
SALVIA ULIGINOSA / BOG SAGE

COMMON AREAS
ACACIA COGNATA `ACCOG01` / COUSIN ITT LITTLE RIVER WATTLE
CALAMAGROSTIS X ACUTIFLORA `KARL FOERSTER` / FEATHER REED GRASS
CALLISTEMON VIMINALIS `LITTLE JOHN` / DWARF WEEPING BOTTLEBRUSH
DIETES BICOLOR / FORTNIGHT LILY
EUONYMUS JAPONICUS `GREEN SPIRE` / GREEN SPIRE EUONYMUS
GAZANIA RIGENS `YELLOW` / YELLOW GAZANIA
LOMANDRA LONGIFOLIA PLATINUM BEAUTY / PLATINUM BEAUTY LOMANDRA
LOMANDRA LONGIFOLIA `BREEZE` / BREEZE MAT RUSH
NANDINA DOMESTICA `FIREPOWER` / FIREPOWER HEAVENLY BAMBOO
RHAMNUS CALIFORNICA `EVE CASE` / CALIFORNIA COFFEEBERRY
RHAPHIOLEPIS UMBELLATA `MINOR` / YEDDA HAWTHORN
TEUCRIUM COSSONII / CREEPING GERMANDER
YUCCA GLORIOSA RECURVIFOLIA `WALBRISTAR` / BRIGHT STAR YUCCA

FRONT YARDS
DIANELLA REVOLUTA `DR5000` TM / LITTLE REV FLAX LILY
EUONYMUS JAPONICUS `GREEN SPIRE` / GREEN SPIRE EUONYMUS
EUONYMUS JAPONICUS `MICROPHYLLUS` / BOXLEAF EUNONYMUS
NANDINA DOMESTICA `LEMON LIME` / LEMON LIME HEAVENLY BAMBOO
NEPETA X FAASSENII `WALKERS LOW` / WALKERS LOW CATMINT
WESTRINGIA FRUTICOSA `MORNING LIGHT` / MORNING LIGHT COAST ROSEMARY

RETENTION BASIN BASE
TURF SOD BIOFILTRATION / DELTA BLUEGRASS BIOFILTRATION SOD

TURF
TURF SOD BOLERO PLUS / FESCUE BLEND

CRUSHED GRANITE CINDER

SOURCE: Fuhrman Leamy Land Group, 2021

920 San Juan Residential Project

Figure 2-4
Preliminary Landscape Plan

ESA

This page intentionally left blank

Section 3 Environmental Checklist

3.1 Aesthetics

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
I.	**AESTHETICS —** Except as provided in Public Resources Code Section 21099, would the project:				
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c)	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d)	Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?	☐	☐	☒	☐

Environmental Setting

The proposed project site is a roughly triangular site located within South Natomas in the City of Sacramento. The approximately 9.17-acre site is grassy and vacant (Figure 1-2), and is surrounded by San Juan Road to the south, an existing drainage ditch to the west, and the Natomas Point Apartments to the northeast. The Peace Lutheran Church is located across from the site on the other side of San Juan Road.

Discussion

a-b) ***No Impact.*** There are no scenic vistas on or near the proposed project site, nor are any officially recognized scenic highways present in proximity to or visible from the site.[1,2] As a result, the proposed project would not result in impacts to a scenic vista or highway.

c) ***Less than Significant.*** The proposed project site is currently vacant, and is bounded by San Juan to the south, an existing canal to the west, and the Natomas Point Apartments to the northeast. The site is currently designated as Suburban Neighborhood Low Density (SN-LD) and zoned as Agriculture (A). The proposed project would change the designation to Suburban Neighborhood Medium Density (SN-MD).

Implementation of the proposed project would result in the conversion of vacant land to developed residential uses and would therefore include alteration of the visual character

1 California Department of Transportation. California State Scenic Highway System Map. Available: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=2e921695c43643b1aaf7000dfcc19983.

2 California Department of Transportation, 2019. List of eligible and officially designated State Scenic Highways. July 2019. Available: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways.

of the project area. Additionally, existing views of the project site, as a vacant lot, visible to pedestrians and from travel along San Juan Road would be affected by development of the proposed project. As the proposed project would result in the development of residential uses similar to those which are already present in the vicinity of the project site, implementation of the proposed project would be consistent with the overall visual character of the existing neighborhood.

Developing the vacant lot would alter the visual character of the project site; however, the existing developed neighborhood already includes residential uses of a similar scale to the proposed residences, so the proposed project would be in keeping with the existing visual character.

The City of Sacramento 2035 General Plan and the South Natomas Community Plan guide the design, development, and standards for development of various land uses, including the residential communities such as the proposed project.

The site is easily accessible from San Juan Road and will provide future direct and pedestrian and bicycle access from the site to both San Juan Road and the future extended alignment of the Niños Parkway Trail to the west of the site. The proposed project will provide shared outdoor spaces and amenities – including a turf and picnic areas and a "tot lot" play area – to serve the anticipated needs of future residents, provide recreational opportunities, and foster a sense of community within the development. Street-facing facades of the residential units will encourage interaction with the street through the use of entry features, windows, front yard landscaping, and other visual points of interest.

As is the intent of the City, the proposed project's design, development, and maintenance standards would be consistent with those outlined in the City of Sacramento 2035 General Plan, and would ensure that the visual character of the proposed project is consistent with the visual character of other similarly developed areas and the project vicinity. Therefore, the impacts to the visual character of the proposed project site would be less than significant.

d) ***Less than Significant.*** Although the proposed project site is located adjacent to existing development, the site itself is currently vacant and emits little light or glare; implementation of the proposed project could therefore result in new sources of spillover lighting or glare effects in the project area. These sources may include building lighting, parking areas, and community lighting in common recreation areas. The types and specific locations of these light sources have not been identified at this time.

The proposed project would be subject to City site plan and design review prior to approval. Exterior lighting conditions will utilize the Crime Prevention through Environmental Design (CPTED) recommendations following review of the site plan by the City of Sacramento Police Department (SPD), as listed below.

- Exterior lighting shall be white light using LED lamps with full cutoff fixtures to limit glare and light trespass. Color temperature shall be between 2700K and 4100K

with a color rendering index of 80 or higher and a light loss factor of 0.95 or better. Lamp efficiency shall be 110 lumens per watt or better.

- Light poles, if applicable, shall be no higher than 16 feet in height.
- Entry drives, drive aisles, parking, and bicycle parking shall be illuminated to a maintained minimum of 1.5 foot candles per square foot of parking area of a 6:1 average to minimum ratios.
- Exterior walkways, alcoves, and passageways shall be illuminated to a maintained minimum of 1/3 foot candles per square foot of surface area at a 6:1 average to minimum ratio.
- Exterior lighting distribution and fixtures shall be approved by the SPD CPTED Sergeant (or designee) prior to issuance of a building permit.
- Exterior lighting shall be designed in coordination with the landscaping plan to minimize interference between the light standards and required illumination and the landscape trees and required shading.
- Exterior lighting shall be shielded or otherwise designed to avoid spill-over illumination to adjacent streets and properties.
- Adequate white light security lighting with full cut-off fixtures shall be provided during construction to illuminate vulnerable equipment and materials.

This site review, in addition to City of Sacramento Development Standards, and policies outlined in the City of Sacramento 2035 General Plan and the South Natomas Community Plan, would ensure that the proposed project would not result in adverse impacts related to light and glare, and that the proposed project would be compatible with existing development in the project area. Results of the proposed project related to light and glare would be less than significant.

3.2 Agriculture and Forestry Resources

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FORESTRY RESOURCES — In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Environmental Setting

The approximate 9.17-acre site is currently in a vacant state surrounded predominately by urban development. Developed areas include residential, a church and residential park, paved roadways, a gravel access road followed by a cement-lined drainage ditch, and mature ornamental landscape trees. The project site has various vegetation include nonnative grassland and a manmade seasonal ditch.

The site is not used for any agricultural purposes, though it is zoned as Agriculture (A) by the City of Sacramento. The project site is not under an active Williamson Act contract. No existing agricultural or timber-harvest uses are located on, or in the vicinity of the project site.

The City of Sacramento 2035 General Plan Master EIR (Master EIR) discusses the potential impact of development under the 2035 General Plan on agricultural resources (Chapter 4.1). Overall, directing future growth within the City limits not only minimizes conversion of existing farmlands outside the City, it also encourages infill within existing communities. The General Plan EIR concludes that the impact of the 2035 General Plan on agricultural resources within the city is less than significant.

Discussion

a) ***No Impact***. The project site has not been used for any agricultural purposes. The California Department of Conservation, Important Farmland Finder (part of the FMMP survey), shows that the site is within the Urban and Built up Land type. The project site does not contain land that is classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance based on the FMMP survey.[3] The project site does not contain soils designated as Important Farmland (i.e., Prime Farmland, Unique Farmland or Farmland of Statewide Importance) as well. Therefore, the proposed project would not convert any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses. There would be no impact.

b) ***Less than Significant.*** The project site is zoned Agriculture (A) by the City of Sacramento. In recognition of inconsistent zoning and potential conflicts, the General Plan Land Use policy addresses method to resolve such conflicts.

> "General Plan LU 1.1.7 Interim Zoning Consistency: Conflict with existing zoning for agricultural use, or a Williamson Act contract. In areas where zoning has not been brought into conformity with the General Plan, the City shall allow property owners to develop consistent with the existing zoning if only a ministerial permit is required. For property owners requiring a discretionary permit, the City shall allow property owners to either (1) develop consistent with the existing zoning, provided the City makes a finding that approval of the project would not interfere with the long-term development of the area consistent with the General Plan, or (2) develop under the General Plan designation, in which case the City will facilitate rezoning consistent with the General Plan. (RDR)."

The project proposes a General Plan Amendment to modify the land use designation from the current Suburban Neighborhood Low Density [SN-LD] to the proposed Suburban Neighborhood Medium Density [SN-MD]. Project also proposes a Rezoning to modify the current zoning Agriculture (A) to Single Family Residential (R-8). As proposed, the project would develop with zoning standards consistent with the proposed General Plan designation and Zone. The entitlement process would establish the zoning consistency through implementation of the General Plan Land Use Policy LU 1.1.7, provision (2) stated above.

c) ***No Impact.*** The proposed project site is not forest lands or zoned for forestry or timberland (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), nor is the site zoned for Timberland Production (as defined by Government Code section 51104(g)). The project site is located in an urbanized area adjoining other urbanized and developed land uses. As such, there would be no impact to forestry and timberland and timberland production/resources.

[3] California Department of Conservation. Farmland Mapping and Monitoring Program. Available: https://www.conservation.ca.gov/dlrp/fmmp. Accessed April 23, 2021.

d) ***No Impact.*** As discussed above for (c), the project site does not have any forest or land designated for forestry. There will no loss of forest land or conversion of forest land to non-forest use. Therefore, there would be no impacts.

e) ***No Impact.*** The project site is located in an urbanized setting with developed uses such as residential communities, places of worship, commercial, and retail uses. The site is not part of any proposal, due to the location or nature that would lead to conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest uses. There would be no impact.

3.3 Air Quality

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY — Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☒	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Environmental Setting

The project site is located in Sacramento County, in the southeast corner of the Sacramento Valley Air Basin (SVAB). The SVAB is relatively flat, bordered by mountains to the east, west, and north. Air flows into the SVAB through the Carquinez Strait, the only breach in the western mountain barrier, and moves across the Delta, bringing with it pollutants from the heavily populated San Francisco Bay Area. The climate is characterized by hot, dry summers and cool, rainy winters. Periods of dense, persistent low-level fog that are most prevalent between storms are characteristic of SVAB winter weather. From May to October, the region's intense heat and sunlight lead to high ozone concentrations. Summer inversions are strong and frequent but are less troublesome than those that occur in fall. Autumn inversions, formed by warm air subsiding in a region of high pressure, have accompanying light winds that do not adequately disperse air pollutants.

Criteria Pollutants

Criteria air pollutants are a group of six common air pollutants for which the U.S. Environmental Protection Agency (EPA) has set ambient air quality standards. These pollutants include ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter 10 microns or less in diameter (PM_{10}), particulate matter 2.5 microns or less in diameter ($PM_{2.5}$), and lead. Most of the criteria pollutants are emitted as primary pollutants. Ground-level ozone, however, is a secondary pollutant that is formed in the atmosphere by chemical reactions between oxides of nitrogen (NO_X) and reactive organic gases (ROG) in sunlight. In addition to the criteria air pollutants identified by EPA, California adds four State criteria air pollutants: visibility-reducing particulates, sulfates, hydrogen sulfide, and vinyl chloride.

Sacramento County is under the jurisdiction of the Sacramento Metropolitan Air Quality Management District (SMAQMD). SMAQMD manages air quality conditions in Sacramento County through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The district's clean-air

strategy includes preparing plans to attain ambient air quality standards, adopting and enforcing rules and regulations governing sources of air pollution, and issuing permits for stationary sources of air pollution. SMAQMD also inspects stationary sources of air pollution and responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations required by the federal Clean Air Act and California Clean Air Act.

The Sacramento region is considered a nonattainment area with respect to the State and federal ozone standards and the State PM_{10} standard and a maintenance area with respect to the federal carbon monoxide and PM_{10} standards. The area is designated as unclassified or is in attainment for all other State and federal standards. **Table 3.3-1** summarizes Sacramento County's attainment status for criteria air pollutants according to the State and federal standards.

TABLE 3.3-1
SACRAMENTO COUNTY CRITERIA POLLUTANT ATTAINMENT STATUS

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

NOTES:
California Air Resources Board (CARB) makes area designations for ten criteria pollutants (O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, lead, visibility reducing particles, sulfates, and hydrogen sulfide. CARB does not designate areas according to the vinyl chloride standard.

* Effective October 28, 2013, the US EPA formally re-designated Sacramento County as attainment for the federal PM_{10} standard.
** As of 2015, the U.S. EPA found that the Sacramento area attained the 2006 $PM_{2.5}$ standards; thus Sacramento County is in the process of being redesignated by EPA.

SOURCE: California Air Resources Board, 2021. *Area Designation Maps*. Available: https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations. Accessed June, 2021.

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

- Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan;[4]
- SMAQMD's Triennial Report and Air Quality Plan Revision;[5]
- PM_{10} Implementation/Maintenance Plan and Redesignation Request for Sacramento County;[6] and
- $PM_{2.5}$ Maintenance Plan and Redesignation Request.[7]

Toxic Air Contaminants

Toxic air contaminants (TACs) are state-designated, airborne substances that are capable of causing short-term (acute) and long-term (chronic or carcinogenic, i.e., cancer-causing) adverse human health effects (injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted by a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations, as well as heavy-duty trucks and heavy equipment. The current California list of TACs includes nearly 200 compounds, including diesel particulate matter (DPM) emissions from diesel-fueled engines,[8] which is driving most of the inhalation pathway health risks in the state.

Odors

Odors are generally regarded as a nuisance or annoyance rather than a health hazard, although individuals can have a strong physical response to specific odors. Odor intensity depends on the concentration of the substance in the air. The ability to detect odors varies considerably among members of the population. The detection of odors is subjective; some individuals can smell minute quantities of specific substances, while others may be sensitive to odors from other substances. Reactions to odors vary substantially as well.

Sensitive Receptors

Air quality does not affect individuals or groups within the population in the same way, as some groups are more sensitive to adverse health effects caused by exposure to air pollutants than

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

5 Sacramento Metropolitan Air Quality Management District, 2015. *Triennial Report and Air Quality Plan Revision.* May 28, 2015. Available: www.airquality.org/ProgramCoordinationDocuments11)%20%202015Triennial ReportandProgressRevision.pdf.

6 Sacramento Metropolitan Air Quality Management District, 2010. *PM_{10} Implementation/Maintenance Plan and Redesignation Request for Sacramento County*. October 28, 2010. Available: www.airquality.org/Program Coordination/Documents/10)%20%20PM10%20Imp%20and%20MP%202010.pdf.

7 Sacramento Metropolitan Air Quality Management District, 2013. *$PM_{2.5}$ Implementation/Maintenance Plan and Redesignation Request for Sacramento $PM_{2.5}$ Nonattainment Area*. October 24, 2013. Available: www.airquality.org/ProgramCoordination/Documents/9)%20%20PM2.5%20Imp%20and%20MP%202013.pdf.

8 California Air Resources Board, 2011. *Toxic Air Contaminant Identification List.* Available: https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants. Accessed June, 2021.

others. Population subgroups sensitive to the health effects of air pollutants include the elderly and the young, those with higher rates of respiratory disease such as asthma and chronic obstructive pulmonary disease, and with other environmental or occupational health exposures (e.g., indoor air quality) that affect cardiovascular or respiratory diseases.

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

The project site is surrounded by sensitive receptors and include the following:

- The nearest sensitive receptors to the project site are the Point Natomas Apartments located to the northeast of the project site; with the nearest residences along Rancho Roble Way located approximately 50 feet from the project boundary.
- Residences are also located to the west and southwest of the project site beyond the Niños Parkway Trail that runs adjacent to the western boundary of the project site.
- The Rio Terra Junior High School and the Strauch Elementary School are located approximately 700 feet and 1,250 feet to the south of the project site.
- The Peace Lutheran Church, which houses the Inspiring Beginnings Childcare Center is located approximately 200 feet to the south and 530 feet to the southeast of the project site, respectively.

Discussion

a) ***Less than Significant.*** SMAQMD relies on its *Guide to Air Quality Assessment in Sacramento County* (CEQA Guide) to help achieve and maintain all air quality standards as relevant to land use projects.[9] Demonstration of the project's conformity with all applicable thresholds of significance and best management practices described by SMAQMD's CEQA Guide is described below under Question b), which indicates compliance with the regional attainment plans.

The *Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan*, which addresses attainment of the federal 8-hour ozone standard, and the *2014 Triennial Report and Plan Revision*, are the current plans required by

9 Sacramento Metropolitan Air Quality Management District, 2021. *Guide to Air Quality Assessment*. Adopted December 2009, Most recently updated April 2021.

US EPA and CARB and issued by SMAQMD, in conjunction with other regional air districts, to meet attainment. These plans demonstrate reasonable progress towards attainment as required by the SIP and CCAA. To demonstrate compliance of the proposed project with the plans there needs to be appropriate conformity analysis. In this case, the appropriate analysis incorporates land use assumptions and travel demand modeling from the Sacramento Area Council of Governments (SACOG). To determine compliance with the applicable air quality plan, SMAQMD recommends comparing the project's VMT and population growth rate to the SACOG growth projections included in the *Metropolitan Transportation Plan/Sustainable Communities Strategy*.[10]

SACOG is required to consider adopted local land use plans, including the 2035 General Plan, in the formulation of the land use forecast and growth projections in the MTP/SCS. Therefore, if the project is consistent with the VMT and population growth projections in the City's 2035 General Plan, the project would also be consistent with the SACOG MTP/SCS. The project proposes a General Plan Amendment to revise the land use designation from Suburban Neighborhood-Low Density (SN-LD) to Suburban Neighborhood-Medium Density (SN-MD) which allows for the development of a higher density range.

The City of Sacramento uses screening criteria for VMT impacts based on the output from the SACOG regional travel demand model known as SACSIM. The project site is located in an area that has 50 percent to 85 percent VMT of the regional average. In other words, while the regional average residential VMT is 20.82 miles per person, this area generates 17.32 miles per person.

The slight increase of intensity of development on the project site comports with the infill nature of the site; located within a residential area with proximity to community amenities such as schools, park, trails, shopping and transit and would be consistent with the MTP/SCS.

The 2035 General Plan projects that by the year 2035, the City's population would have grown to 640,381 people.[11] The most recently published data from the California Department of Finance state that the population of the City was approximately 508,172 people in year 2019.[12] The proposed project is anticipated to increase the population by 214 residents, which would not likely contribute to an exceedance of or be inconsistent with the City's 2035 population projections. For these reasons, the proposed project would be consistent with the City of Sacramento's 2035 General Plan and would consequently be within the growth projections assumed by SACOG in its MTP/SCS.

10 Sacramento Area Council of Governments, 2019. *2020 Metropolitan Transportation Plan/Sustainable Communities Strategy*. Adopted November 18, 2019. Available: https://www.sacog.org/sites/main/files/file-attachments/2020_mtp-scs.pdf?1580330993.

11 City of Sacramento, 2013. *City of Sacramento 2035 General Plan, 2013-2013 Housing Element, Table H 3-3.* Available: http://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/General-Plan/2035-GP/Housing-Element.pdf?la=en.

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

In addition to the proposed project's consistency with the SACOG 2020 MTP/SCS, as discussed under checklist question b) below, the proposed project would not generate operational emissions of ROG, NO_X, PM_{10} or $PM_{2.5}$ that would exceed the SMAQMD thresholds of significance for project operational emissions. Therefore, the emissions generated by the proposed project would not conflict with or obstruct implementation of applicable air quality plans and the impact would be considered less than significant.

b) ***Less than Significant with Mitigation***. Cumulative impacts refer to the incremental effect of several projects that may have an individually minor, but collectively significant, impact on air quality. 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. Although a project's emissions may be individually limited, they may be cumulatively considerable when taken in combination with past, present, and future development projects.

Consequently, the SMAQMD's approach to thresholds of significance is to determine 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 are estimated to be less than the thresholds, the project would not be expected to result in a cumulatively considerable contribution to the significant cumulative impact. Construction emissions exceeding the project-level thresholds after the implementation of all mitigation measures would be considered cumulatively significant. However, for operational emissions exceeding the project-level thresholds, the cumulative impact is determined by analyzing the consistency of the project with the applicable local land use plan and/or general plan.

This impact analysis presented below takes into consideration both short-term construction and long-term operational impacts in terms of project increases for criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard. The focus of this analysis is related to the ground-level ozone precursor NOx and particulate matter for which the SVAB is in non-attainment. Emissions were modeled using the California Emissions Estimator Model (CalEEMod), Version 2020.4.0.

Short-Term Construction Impacts

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

Emissions of ozone precursors (ROG and NO_X) are generated primarily by construction equipment and mobile sources and largely vary as a function of vehicle trips per day and the type, quantity, intensity, and frequency of heavy-duty, off-road equipment used.

Typically, a large portion of construction-related ROG emissions results from the application of asphalt on to roads and parking areas, and the application of architectural coatings. Construction-related fugitive dust emissions of particulate matter would vary from day to day, depending on the level and type of activity, silt content of the soil, and the weather. Project construction activities could result in dust adversely affecting local visibility and PM_{10} concentrations on a temporary and intermittent basis.

Construction emissions were estimated for the proposed project using the methods contained in SMAQMD's *Guide to Air Quality Assessment in Sacramento County*.[13] The CalEEMod model was used to quantify construction emissions from off-road equipment, haul trucks associated with exported soils, worker vehicle emissions, and vendor delivery trips.

Project construction would begin in early 2022 and is expected to last for a period of 14 months. Project-specific construction information was used for modeling when possible; where project-specific data were unavailable, defaults were used, which capture assumed values consistent with standard practice. CalEEMod defaults were used for construction schedule, equipment used within each phase, number, size (horsepower [hp]) and activity level of equipment, number of worker, vendor and haul trips as well as trip lengths. CalEEMod inputs and outputs can be found in **Appendix A**.

Table 3.3-2 shows the unmitigated construction emissions for the worst-case day for each construction year. SMAQMD has established a zero-emissions threshold for unmitigated particulate matter emissions to promote a mandatory mitigation program to counteract air quality impacts from particulate matter. The anticipated project emissions are compared to SMAQMD's NO_X, PM_{10}, and $PM_{2.5}$ construction thresholds, which are appropriate for this analysis. SMAQMD does not recommend a significance threshold for ROG.

As shown in Table 3.3-2, unmitigated maximum daily NO_X emissions would fall below the SMAQMD significance threshold for both years of construction; however, the maximum daily and annual unmitigated construction PM_{10} and $PM_{2.5}$ emissions would exceed the SMAQMD's zero-emissions thresholds.

SMAQMD has established a zero-emissions threshold for PM_{10} and $PM_{2.5}$, requiring that all construction projects implement SMAQMD's Basic Construction Emission Control Practices to control PM_{10} and $PM_{2.5}$, included in Mitigation Measure AQ-1. **Table 3.3-3** shows the mitigated construction emissions for the worst-case day for each construction year. With implementation of SMAQMD's best management practices (BMPs), SMAQMD's maximum daily and annual thresholds increase to 80 pounds per day and 14.6 tons per year of PM_{10} and 82 pounds per day and 15 tons per year of $PM_{2.5}$.

13 Sacramento Metropolitan Air Quality Management District, 2021. *Guide to Air Quality Assessment*. Adopted December 2009, Most recently updated April 2021.

TABLE 3.3-2
UNMITIGATED PROJECT CONSTRUCTION EMISSIONS

Construction Year	NO_X (ppd)	PM_{10} (ppd)	$PM_{2.5}$ (ppd)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
2022	33.1	21.4	11.6	0.3	0.2
2023	10.2	0.6	0.5	<0.1	<0.1
SMAQMD Thresholds	**85**	**0**	**0**	**0**	**0**
Maximum Emissions	**33.1**	**21.4**	**11.6**	**0.3**	**0.2**
Significant (Yes or No)?	**No**	**Yes**	**Yes**	**Yes**	**Yes**

NOTES:

NO_X = oxides of nitrogen; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter; PM_{10} = particulate matter 10 microns or less in diameter; ppd = pounds per day; SMAQMD = Sacramento Metropolitan Air Quality Management District; tpy = tons per year

1 Project construction emissions estimates were made using the California Emissions Estimator Model, Version 2020.4.0. See Appendix A for model outputs and more detailed assumptions.
2 Values in **bold** are in excess of the applicable SMAQMD significance threshold.
3 SMAQMD has established a zero-emissions threshold for PM_{10} and $PM_{2.5}$ when projects do not implement SMAQMD's Best Available Practices.

SOURCES: Data compiled by Environmental Science Associates in 2021; Sacramento Metropolitan Air Quality Management District (SMAQMD), 2021. *Guide to Air Quality Assessment*. Adopted December 2009, Most recently updated April 2021.

TABLE 3.3-3
MITIGATED PROJECT CONSTRUCTION EMISSIONS

Construction Year	NOx (ppd)	PM_{10} (ppd)	$PM_{2.5}$ (ppd)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
2022	2.9	9.0	4.6	0.1	0.1
2023	1.2	0.2	0.1	<0.01	<0.01
SMAQMD Thresholds	**85**	**80**	**82**	**14.6**	**15**
Maximum Emissions	**2.9**	**9.0**	**4.6**	**0.1**	**0.1**
Significant (Yes or No)?	**No**	**No**	**No**	**No**	**No**

NOTES:

NO_X = oxides of nitrogen; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter; PM_{10} = particulate matter 10 microns or less in diameter; ppd = pounds per day; SMAQMD = Sacramento Metropolitan Air Quality Management District; tpy = tons per year

1 Project construction emissions estimates were made using the California Emissions Estimator Model, Version 2020.4.0. See Appendix A for model outputs and more detailed assumptions.
2 Mitigation Measure AQ-1 accounts for a 54 percent reduction in particulate matter dust emissions.
3 Includes Mitigation Measures AQ-2 and AQ-3, addressed in Question c).
4 Values in **bold** are in excess of the applicable SMAQMD significance threshold.

SOURCES: Data compiled by Environmental Science Associates in 2021; Sacramento Metropolitan Air Quality Management District (SMAQMD), 2021. *Guide to Air Quality Assessment*. Adopted December 2009, Most recently updated April 2021.

With implementation of **Mitigation Measure AQ-1** (SMAQMD BMP's), construction of the proposed project would result in emissions of PM_{10} and $PM_{2.5}$ below the SMAQMD significance thresholds, as shown in Table 3.3-3.

In addition, project construction activities would be subject to the applicable SMAQMD rules and regulations with regard to construction equipment, particulate matter generation, architectural coatings, and paving materials. These include, but are not limited to:

- Rule 401 (Ringelmann Chart/Opacity) which limits the discharge of pollutants darker in color than shade No. 1 on the Ringlemann Chart or that obscure a human observers view;
- Rule 402 (Nuisance) which prohibits emissions of contaminants that are a nuisance or cause harm to the public;
- Rule 403 (Fugitive Dust) which requires fugitive dust generating activities to take reasonable precautions to limit emissions of fugitive dust from being airborne beyond the property line;
- Rule 404 (Particulate Matter) which establishes limits emissions of particulate matter;
- Rule 420 (Sulfur Content of Fuels) which places limits on emissions of sulfur compounds from fuel combustion;
- Rule 442 (Architectural Coatings) which imposes limits on the VOC content of architectural coatings used within the SMAQMD; and
- Rule 453 (Cutback and Emulsified Asphalt Paving Materials) which prohibits the use of certain types of cutback asphalt and emulsified asphalt containing organic compounds.

Compliance with these SMAQMD rules is enforced as standard conditions of approval for all development projects within the SMAQMD jurisdiction. Therefore, the project would comply with all applicable SMAQMD Rules and Regulations. Based on the above analysis, project construction would not result in a cumulatively considerable net increase in any criteria pollutant, and the impact would be less than significant with mitigation incorporated.

Long Term Operational Impacts

The proposed project would increase long-term operational emissions primarily due to motor vehicle trips and to a lesser extent from onsite area sources such as use of consumer products, landscaping activities and the application of architectural coatings. The project proposes to have an all-electric site with no natural gas infrastructure and would therefore generate no direct emissions from energy sources on-site. The project also does not propose fireplaces within any of the dwelling units.

The CalEEMod computer model was used to estimate operational pounds per day emissions of ROG, NOx, PM_{10}, and $PM_{2.5}$, and tons per year emissions of PM_{10} and $PM_{2.5}$; the results of this analysis are summarized in **Table 3.3-4**. Estimated emissions are compared to the SMAQMD significance thresholds. As shown in Table 3.3-4, emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ would not exceed SMAQMD's significance thresholds. Consequently, project operation would not result in a cumulatively considerable net

increase in any criteria pollutant for which the region is nonattainment, and the impact would be less than significant.

TABLE 3.3-4
PROJECT OPERATIONAL EMISSIONS[1]

Source	ROG (ppd)	NO_X (ppd)	PM_{10} (ppd)	$PM_{2.5}$ (ppd)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
Area	2.7	0.1	<0.1	<0.1	<0.01	<0.01
Mobile	2.0	2.6	4.0	1.1	0.7	0.2
Total Emissions	4.7	2.7	4.0	1.1	0.7	0.2
SMAQMD Thresholds[3]	65	65	80	82	14.6	15
Significant (Yes or No)?	No	No	No	No	No	No

NOTES:
ppd = pounds per day; tpy = tons per year

1 Project operational emissions estimates were made using CalEEMod version 2020.4.0. See Appendix A for model outputs and more detailed assumptions.
2 Uses SMAQMD's non-zero emissions threshold for PM_{10} and $PM_{2.5}$ when projects implement Best Available Control Technology/Best Management Practices.

SOURCES: Data compiled by Environmental Science Associates in 2021; Sacramento Metropolitan Air Quality Management District (SMAQMD), 2021. *Guide to Air Quality Assessment*. Adopted December 2009, Most recently updated April 2021.

Mitigation Measure AQ-1: Implement SMAQMD Best Management Practices during Construction. The project shall implement the following required best management practices to control fugitive dust from project construction activities.

- Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways shall be covered.
- Use wet power vacuum street sweepers to remove any visible 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 shall be completed as soon as possible. In addition, building pads shall 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 determine to be running in proper condition before it is operated.

- Maintain equipment inspection and maintenance programs to ensure work and fuel efficiencies.

c) ***Less than Significant with Mitigation.*** A discrete health risk assessment was completed to evaluate the risks to nearby receptors from exposure to TACs associated with the proposed project. The health risk assessment focused on construction emissions in the project area, which is considered a new but temporary source. The analysis included evaluating additional cancer risks and chronic health hazards at the closest sensitive receptor to the project site. Sensitive receptors in the form of residential uses are located adjacent to the eastern boundary of the project site, approximately 50 feet from the project site boundary.

A three-step process was used to estimate cancer risk and chronic health hazards of DPM exposure based on approved methods from the State Office of Environmental Health Hazard Assessment's Air Toxic Hot Spots Program Risk Assessment Guidelines.[14] The first step required the use of the CalEEMod software program to conservatively estimate average annual diesel exhaust emissions during project construction, as summarized in response to Question b), above.

The second step in the process involved using the AERSCREEN (Version 16216[15]) dispersion model to convert emissions to maximum annual DPM concentrations. Emissions from project construction were modeled as one area source in AERSCREEN to estimate risk: a conservative representation of the on-site construction equipment within the main project area, modeled as a rectangular area source with an internal vertical dimension of 1.4 meters. AERSCREEN produced estimates of "worst-case" 1-hour concentrations for the single source, which requires application of the included conversion factors to estimate worst-case annual concentrations.

The third step in the process involved using the unit-risk calculation methodologies presented in the State Office of Environmental Health Hazard Assessment's Air Toxic Hot Spots Program Risk Assessment Guidelines to convert maximum concentrations to cancer risks and chronic health hazard index.[16] Modeling parameters and health risk calculations are presented in Appendix A.

SMAQMD does not have published thresholds for addressing potential health risk impacts from construction activities; thus, it is common practice to use SMAQMD's published TAC thresholds for stationary sources. The recommended levels of significance are an incremental cancer burden risk of 10 per million and a hazard index of 1.

14 Office of Environmental Health Hazard Assessment, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments*. Air, Community, and Environmental Research Branch. California Environmental Protection Agency. February 2015.

15 U.S. Environmental Protection Agency, 2019. *Support Center for Regulatory Atmospheric Modeling, Air Quality Dispersion Modeling - Screening Models*. Available: https://www.epa.gov/scram/air-quality-dispersion-modeling-screening-models#aerscreen.

16 Office of Environmental Health Hazard Assessment, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments*. Air, Community, and Environmental Research Branch. California Environmental Protection Agency. February 2015.

As shown in **Table 3.3-5**, the proposed project has a potential incremental cancer risk impact of 14.5 per million before mitigation, which exceeds the threshold of 10 per million.

TABLE 3.3-5
PROJECT CONSTRUCTION HEALTH RISK IMPACTS

Source	Cancer Risk (per million)	Hazard Index
Project Construction	**14.5**	0.02
Applied Thresholds	10	1
Exceeds Threshold?	**Yes**	**No**
Project Construction Mitigated*	0.8	0.001
Applied Thresholds	10	1
Exceeds Threshold?	**No**	**No**

NOTES:
Health risk calculations are included in Appendix A.
* With implementation of Mitigation Measures AQ-1 and AQ-2.

SOURCE: Table compiled by Environmental Science Associates in 2021

Implementing Mitigation Measure AQ-2 would reduce DPM emissions through the use of construction equipment with EPA-certified Tier 4 engines. If all off-road construction equipment were to have Tier 4 engines, DPM emissions would be reduced, and the resulting incremental cancer risk would be 0.8 per million at the Master EIR.

With implementation of Mitigation Measure AQ-2, estimated health risk impacts would not exceed the health risk significance thresholds at existing receptors adjacent to the project site. Therefore, the proposed project would not expose sensitive receptors to substantial pollutant concentrations, and the impact would be less than significant with mitigation incorporated.

Mitigation Measure AQ-2: Implement Best Available Control Technology for Construction Equipment. All diesel off-road equipment shall have engines that meet the Tier 4 Final off-road emission standards, as certified by CARB. This requirement shall be verified through submittal of an equipment inventory that includes the following information: (1) Type of Equipment, (2) Engine Year and Age, (3) Number of Years Since Rebuild of Engine (if applicable), (4) Type of Fuel Used, (5) Engine HP, (6) Verified Diesel Emission Control Strategy (VDECS) information if applicable and other related equipment data. A Certification Statement is also required to be made by the Contractor for documentation of compliance and for future review by the air district as necessary. The Certification Statement must state that the Contractor agrees to compliance and acknowledges that a violation of this requirement shall constitute a material breach of contract.

The Lead Agency may waive the equipment requirement above only under the following unusual circumstances: if a particular piece of off-road equipment with Tier 4 Final standards is technically not feasible or not commercially available; the

equipment would not produce desired emissions reduction due to expected operating modes; installation of the equipment would create a safety hazard or impaired visibility for the operator; or there is a compelling emergency need to use other alternate off-road equipment. If the Lead Agency grants the waiver, the contractor shall use the next cleanest piece of off-road equipment available, as detailed in **Table 3.3-6** below.

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

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

Table 3.3-6 describes the Off Road Compliance Step Down approach. If engines that comply with Tier 4 Final off-road emission standards are not commercially available, then the Contractor shall meet Compliance Alternative 1. If off-road equipment meeting Compliance Alternative 1 are not commercially available, then the Project sponsor shall meet Compliance Alternative 2. If off-road equipment meeting Compliance Alternative 2 are not commercially available, then the Project sponsor shall meet Compliance Alternative 3 as demonstrated below.

TABLE 3.3-6
OFF ROAD EQUIPMENT COMPLIANCE STEP DOWN APPROACH

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

d) ***Less than Significant.*** Engine exhaust from diesel-powered construction equipment can generate short-term, non-persistent odors. However, these odors would be localized, dissipate rapidly and are not expected to be carried over beyond the Project site boundaries. Given the temporary nature of construction activity, the project would have a less-than-significant impact with respect to creation of odors affecting a substantial number of people. The Project would not include any operational sources of odor. This impact would be less than significant.

3.4 Biological Resources

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

Environmental Setting

The project site is located within an urban area surrounded predominately by development. Developed areas include residential housing, a church, a residential park, paved roadways, a gravel access road followed by a cement-lined drainage canal, and mature ornamental landscape trees. Around the project site, landscape trees occur along the right of way between San Juan Road and the project site to the south and southeast and along the fence line between the residential development and the project site to the north and northeast.

An approximately 50-foot wide gravel access road and road shoulder border the western boundary of the project site. An approximately 20-foot wide cement-lined drainage canal occurs to the west of the access road. The majority of the canal lacks vegetation aside from isolated clumps of vegetation present within the bed of the canal. Only isolated ponded areas were present during the April 16, 2021 site visit.

Vegetative communities within the project site include nonnative grassland and a manmade seasonal ditch. Dominant vegetation within the nonnative grassland includes wild oat (*Avena fatua*), slender oat (*Avena barbata*), barley (*Hordeum murinum*), soft chess (*Bromus hordeaceus*), winter vetch (*Vicia villosa*), and ripgut brome (*Bromus diandrus*). Nine isolated trees consisting

of two willow (*Salix* sp.), two Fremont cottonwood (*Populus fremontii* ssp. *fremontii*), two interior live oak (*Quercus wislizeni*), two palm (*Washingtonia* sp.), and one valley oak (*Quercus lobata*) occur within the nonnative grassland. The vegetation within the nonnative grassland was densely distributed and between 2 and 3 feet high throughout the project site at the time of the April 16, 2021 site visit.

The manmade seasonal ditch is an approximately 2-foot wide isolated feature that originates in the southwest, extends north, and terminates in the northeast. The feature is visible on aerial imagery as early as 1985.[17] A berm extends along the southern side of the swale. Dominant vegetation includes upland herbaceous grasses including wild oat, slender oat, soft chess, winter vetch, ripgut brome, and common sowthistle (*Sonchus oleracues*). The ditch was excavated, as evident by the berm along the southern bank.

Methodology

Information in this section is based a review of relevant documentation for the project site and surrounding vicinity, database searches, and a biological survey and botanical inventory conducted on April 16, 2021.The following background data was obtained:

- California Natural Diversity Database (CNDDB) records search for the Rio Linda U.S. Geological Survey (USGS) quadrangle and 8 surrounding quadrangles (Appendix B);[18]
- U.S. Fish and Wildlife Service (USFWS) List of Threatened and Endangered Species (Appendix B);[19]
- California Native Plant Society (CNPS) online database of plant species documented on for the Rio Linda U.S. Geological Survey (USGS) quadrangle and 8 surrounding quadrangles (Appendix B);[20]
- Sacramento 2035 General Plan;[21]
- Sacramento 2035 General Plan Master Environmental Impact Report (EIR).[22]

Special-status species considered for this analysis are based on the CNDDB, CNPS, and USFWS lists. A comprehensive table of regionally occurring special-status plant and wildlife species is provided in **Appendix B**. The table includes the common and scientific names for each species, regulatory status (federal, State, local, CNPS), habitat descriptions, and a discussion of the potential for occurrence within the project site. Habitats present in the project site were compared

17 Google Earth, 2021. Aerial Imagery from May 1985-October 2020.

18 California Department of Fish and Wildlife, 2021. California Natural Diversity Database (CNDDB). Special-Status Species Occurrences on the Rio Linda and 8 Surrounding Quadrangles. Commercial Version dated April 14, 2021.

19 U.S. Fish and Wildlife Service, 2020. List of Threatened and Endangered Species that may occur in your Proposed Project Location, and/or may be Affected by your Proposed Project. Information for Planning and Consultation (IPaC). Consultation Code: 08FBDT00-2020-SLI-0073. Event Code: 08FBDT00-2020-E-00174. Available: https://ecos.fws.gov/ipac/. Accessed April 14, 2021.

20 California Native Plant Society, Rare Plant Program. 2020. Inventory of Rare and Endangered Plants (online edition, v8-03 0.39). California Native Plant Society, Sacramento, CA. Available: http://www.rareplants.cnps.org. Accessed April 14, 2021.

21 City of Sacramento, 2015. *City of Sacramento 2035 General Plan.* Adopted March 3, 2015.

22 City of Sacramento, 2015. *Master Environmental Impact Report for the City of Sacramento 2035 General Plan Update, SCH#20121220006*. Certified March 3, 2015.

to the habitat requirements of the regionally occurring special-status species and used to determine which of these species had the potential to occur within or adjacent to the project footprint. The potential for occurrence within the project site category is defined as follows:

- **None**: The project site and/or surrounding area do not support suitable habitat, the project site occurs outside of the known extant geographic or elevation range, or plant species were not observed within the evident and identifiable period during the April 16, 2021 botanical inventory.
- **Low**: The project site and/or immediate area only provide limited amounts and low-quality habitat for a particular species.
- **Moderate**: The project site and/or immediate area provide suitable habitat for a particular species and there are occurrences within 5 miles of the project site.
- **High**: The project site and/or immediate area provide ideal habitat conditions for a particular species and/or known populations occur in immediate area and/or within the project site.

Only species classified as having moderate or high potential for occurrence were considered in the impact analysis.

Special-Status Plants

No special-status plants have the potential to occur in the project site.

Special-Status Wildlife

Migratory birds and other birds of prey have the potential to nest in the native and ornamental trees within or within the vicinity of the project site including the state-threatened Swainson's hawk (*Buteo swainsoni*) and the state fully-protected white-tailed kite (*Elanus leucurus*). Migratory birds and other birds of prey including burrowing owl (*Athene cunicularia*) and grasshopper sparrow (*Ammodramus savannarum*) have the potential to nest within the nonnative grassland within the project site and on the gravel access road to the west of the project site.

The CDFW considers 5 acres or more of annual grassland as suitable foraging habitat for Swainson's hawk.[23] While the project site is over 5 acres, the nonnative grassland only provides marginal foraging habitat given the dense vegetation present, which reduces Swainson's hawks' ability to spot prey on the ground. In addition, the nonnative grassland is disconnected by development on all sides from other Swainson's hawk foraging areas. Therefore, the nonnative grassland is not likely considered suitable foraging habitat for this species.

Designated Critical Habitat

The project site is not located within designated or proposed critical habitat for any listed species.[24]

[23] California Department of Fish and Wildlife, 1994. Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California. Published November 8, 1994.

[24] U.S. Fish and Wildlife Service. 2021. Critical Habitat Mapper. Available: http://fws.maps.arcgis.com/home/webmap/print.html. Accessed April 14, 2021.

Sensitive Natural Communities including Waters of the U.S. and Waters of the State

The project site does not contain a sensitive natural community or waters of the U.S. or waters of the state. The manmade ditch is an isolated feature that was excavated in uplands, as evidence of the remnant berm along the eastern and southern edge of the ditch. The only water source it receives is from direct storm runoff from surrounding uplands. The water remains there until it percolates into the ground. The bed and banks are comprised of upland vegetation similar to the surrounding nonnative grassland, the upland soils lack the chemical components necessary to be considered an aquatic soil, and there is no hydrologic connection to a downstream waterway. In accordance with 33 CFR 328.3(b)(5), ditches that are not tributaries to waters of the U.S. or used in interstate or foreign commerce are not considered waters of the U.S. The ditch does not meet the state wetland definition because it does not have sufficient inundation to cause anaerobic conditions in the substrate or contain vegetation dominated by hydrophytes or lack vegetation.

Wildlife Movement

The project site does not provide a wildlife corridor since it is surrounded by development on all sides.

Protected Trees

The ornamental landscape trees within the right of way between San Juan Road and the project site are considered City trees. The two interior live oak and one valley oak within the project site may be protected under the City of Sacramento Tree Preservation Ordinance as private protected trees if they measure 12 inches or greater diameter at standard height (DSH). The two willow, two Fremont cottonwood, and two palm trees may be protected under the City of Sacramento Tree Preservation Ordinance as private protected trees if they measure at least 24 inches or greater DSH. The DSH of trees on site was not measured during the survey. Additionally, ornamental and native trees within the residential development to the north and northeast have canopies that overhang the project site.

Regulatory Setting

Federal

Federal Endangered Species Act (FESA) prohibits the unauthorized “take” of any fish or wildlife species listed as threatened or endangered, including the destruction of habitat that could hinder species recovery. The term “take” is defined by the Endangered Species Act as to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.”

Federal law protects raptors, migratory birds, and their nests under the Migratory Bird Treaty Act (MBTA). The federal MBTA (15 USC 703-711 and 16 USC Section 7.3, Supp I 1989), 50 CFR Part 21, and 50 CFR Part 10, prohibits killing, possessing or trading in migratory birds. Executive Order 13186 (January 11, 2001) requires that any project with federal involvement address impact of federal actions on migratory birds.

The federal Clean Water Act (CWA) was enacted as an amendment to the federal Water Pollution Control Act of 1972, which outlined the basic structure for regulating discharges of pollutants to

waters of the U.S. The CWA serves as the primary federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands.

CWA Section 404 regulates the discharge of dredged and fill materials into waters of the U.S. Waters of the U.S. refers to oceans, bays, rivers, streams, lakes, ponds, and wetlands. Applicants must obtain a permit from the U.S. Army Corps of Engineers (USACE) for all discharges of dredged or fill material into waters of the U.S., including wetlands, before proceeding with a proposed activity. Waters of the U.S. are under the jurisdiction of the USACE and the Environmental Protection Agency (EPA).

Compliance with CWA Section 404 requires compliance with several other environmental laws and regulations. The USACE cannot issue an individual permit or verify the use of a general nationwide permit until the requirements of FESA and the National Historic Preservation Act (NHPA) have been met. In addition, the USACE cannot issue or verify any permit until a water quality certification or a waiver of certification has been issued pursuant to CWA Section 401.

Under CWA Section 401, applicants for a federal license or permit to conduct activities which may result in the discharge of a pollutant into waters of the U.S. must obtain certification from the state in which the discharge would originate or, if appropriate, from the interstate water pollution control agency with jurisdiction over affected waters at the point where the discharge would originate. Therefore, all projects that have a federal component and may affect State water quality (including projects that require federal agency approval, such as issuance of a Section 404 permit) must also comply with CWA Section 401.

State

The California Endangered Species Act (CESA) prohibits the take of plant and animal species that the California Fish and Game Commission have designated as either threatened or endangered in California. "Take" in the context of the CESA means to hunt, pursue, kill, or capture a listed species, as well as any other actions that may result in adverse impacts when a person is attempting to take individuals of a listed species. The take prohibitions also apply to candidates for listing under the CESA.

Under Section 3503 of the CFGC, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation under it. Section 3503.5 prohibits the take, possession, or destruction of any birds in the orders Falconiformes (hawks) or Strigiformes (owls), or of their nests and eggs. Code Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) allow the designation of a species as fully protected. This is a greater level of protection than that afforded by the CESA. Except for take related to scientific research, all take of fully protected species is prohibited.

The State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs) (together "Boards") are the principal State agencies with primary responsibility for the coordination and control of water quality. In the Porter-Cologne Water Quality Control Act (Porter-Cologne), the Legislature declared that the "state must be prepared to

exercise its full power and jurisdiction to protect the quality of the waters in the state from degradation...” (California Water Code section 13000).

Porter-Cologne grants the Boards the authority to implement and enforce the water quality laws, regulations, policies and plans to protect the groundwater and surface waters of the State. Waters of the State determined to be jurisdictional would require, if impacted, waste discharge permitting and/or a CWA Section 401 certification (in the case of a required USACE permit under Section 404). The enforcement of the State's water quality requirements is not solely the purview of the Boards and their staff. Other agencies (e.g., the CDFW under Section 5650 of the California Fish and Game Code) have the authority to enforce certain water quality provisions in State law.

Local

The City of Sacramento (City) has adopted an ordinance to protect trees as a significant resource to the community (City Code Title 12, Chapter 12.56, Ordinance 2016-0026 Section 4). The City’s policy is to retain all trees when possible regardless of their size. When circumstances will not allow for retention, permits are required to remove trees that are within City jurisdiction. City trees are defined as any tree the trunk of which, when measured 4.5 feet above the ground (diameter at standard height; DSH), is partially or completely located in a City park, on real property the City owns in fee, or on a public right-of-way, including any street, road, sidewalk, park strip, mow strip, or alley. Private protected trees are defined as trees designated to have special historical value, special environmental value, or significant community benefit, and is located on private property. Private protected trees are:

- All native trees at 12-inch DSH. Native trees include: coast, interior, valley and blue oaks; California sycamore; and buckeye.
- All trees at 32 inch DSH with an existing single family or duplex dwelling.
- All trees at 24-inch DSH on undeveloped land or any other type of property such as commercial, industrial, and apartments.

Regulated work, including removal, pruning, or construction around trees that are protected by the tree ordinance, requires a tree permit and is subject to permission by the Director. The City considers several factors when making a determination for tree removal including, but not limited to, the health and structural condition of the tree, the desirability of the species, and the need for the proposed work in order to develop the property. The director may require, where appropriate, the replacement of city trees or private protected trees proposed for removal.

The City of Sacramento 2035 General Plan includes policies for both identification and preservation of biological resources (Policies ER 2.1.1 through 2.1.17) and the urban forest (Policies 3.1.1 through 3.1.9). Specifically, these policies address issues ranging from identification, retention, preservation, and public awareness of habitat areas, including open space, riparian areas, wetlands, annual grasslands, oak woodlands, and wildlife corridors. Policies relating to the urban forest focus on managing and enhancing the City’s tree canopy and trees of significance.

Development within the Natomas Basin is subject to the Natomas Basin Habitat Conservation Plan (NBHCP). The NBHCP establishes a multi-species conservation program to minimize and

mitigate the expected loss of habitat values and incidental take of covered species that could result from urban development, operation and maintenance of irrigation and drainage systems, and certain activities associated with the Natomas Basin Conservancy (TNBC) management of its system of serves established under the NBHCP. The NBHCP applies to the 53,537-acre area interior to the toe of levees surrounding the Natomas Basin with the exception of areas that were considered to be existing development when the NBHCP was established. Development within the covered areas of the NBHCP is subject to HCP fees and compliance with the requirements of the NBHCP. The project site is located within an area considered exempt from compliance with the NBHCP.[25] Therefore, the proposed project is exempt from HCP fees and compliance with the NBHCP.

Discussion

a) ***Less than Significant with Mitigation.*** The proposed project could potentially have significant impacts on nesting migratory birds and other birds of prey including burrowing owl, Swainson's hawk, white-tailed kite, and grasshopper sparrow and on foraging habitat for Swainson's hawk.

Nesting Birds

The project site and surrounding areas could support nesting birds, including, but not limited to, burrowing owl, Swainson's hawk, white-tailed kite, other raptors, and migratory birds including grasshopper sparrow. Swainson's hawk is a state threatened species. White-tailed kite is state fully protected. Burrowing owl and grasshopper sparrow are state Species of Special Concern. Common nesting birds and raptors are protected under California Fish and Game Code Sections 3503, 3503.5, and 3800 (i.e., take, possession, or destruction of birds, their nests, or eggs), and Section 3513 of the MBTA (16 USC, Section 703 Supp. I 1989). Construction activities associated with the proposed project including clearing and grubbing and tree removal could destroy nests if any birds were nesting within the project site. Additionally, human disturbances from construction activities have the potential to cause nest abandonment and death of young or loss of reproductive success if nests are active near project activities. Loss of active nests, or nest site disturbance which results in nest abandonment, loss of young, or reduced health and vigor of eggs and/or nestlings (resulting in reduced survival rates), or the direct removal of vegetation that supports nesting birds, may result in the killing of nestlings or fledgling bird species, and would be a potentially significant impact. Potentially significant impacts would be reduced to a less-than-significant level with the implementation of Mitigation Measure BIO 1.

Swainson's Hawk Foraging Habitat

Although nonnative grassland is sometimes considered suitable foraging habitat, the nonnative grassland within the project site is comprised mainly of densely growing weedy species and is disconnected by development on all sides from other Swainson's

[25] City of Sacramento, Sutter County & Natomas Basin Conservancy, 2006. Final Natomas Basin Habitat Conservation Plan. Ch. 5 Land Use Issues. p. III-14 & Exhibit B. Available: http://www.natomasbasin.org/helpful-documents/2003-nbhcp-related-documents/. Accessed February 2, 2016.

hawk foraging areas. The loss of 6.71 acres of nonnative grassland within the project site is not recognized by CDFW as significant foraging habitat for Swainson's hawk. Swainson's hawks require large, open grasslands with abundant prey in proximity to suitable nest trees. Suitable foraging areas include native grasslands or lightly grazed pastures, alfalfa, and other hay crops, and certain grain and row croplands. Therefore, impacts to Swainson's hawk foraging habitat are considered less than significant.

Mitigation Measure BIO 1: Avoidance, Minimization, and Mitigation

- **Nesting Birds:** Removal or disturbance of trees shall occur during periods outside the bird nesting season (September 16 to January 31), to the extent feasible. For any construction activities that will occur between February 1 and September 15, the applicant shall obtain a qualified biologist to conduct pre-construction surveys in suitable nesting habitat within 0.25 miles for Swainson's hawk nests, 650 feet for burrowing owl, 500 feet of the construction area for other nesting raptors, and 100 feet for migratory birds. Surveys shall be conducted within seven days prior to commencement of construction activities including removal of trees and clearing and grubbing.

  If active nests are found during the survey, the applicant shall implement appropriate mitigation measures to ensure that the species will not be impacted, which will include establishing a no-work buffer zone, as determined by a qualified biologist, around the active nest. Measures may include, but would not be limited to:

  - Maintaining a 500-foot buffer around all active raptor nests. No construction activities shall be permitted within this buffer. For migratory birds, a no-work buffer zone shall be established, as determined by the qualified biologist, around the active nest. The no-work buffer may vary depending on species and site-specific conditions.

  - Depending on conditions specific to each nest, and the relative location and rate of construction activities, it may be feasible for construction to occur as planned within the buffer without impacting the breeding effort. In this case (to be determined on an individual basis), the nest(s) shall be monitored by a qualified biologist during construction within the buffer. If, in the professional opinion of the monitor, the project would impact the nest, the biologist shall have the authority to halt construction activities within the buffer until the nest is no longer active or until the biologist has determined that construction activities have been modified to eliminate impacts to the nest. Construction activities may re-commence once the biological monitor determines that the nest is no longer occupied or the modifications have eliminated impacts. Modifications associated with eliminating impacts to the nest may be removed once the biological monitor determines that the nest is no longer active and the monitor is no longer needed.

b) ***No Impacts.*** No sensitive natural communities occur within the project site. Therefore, no impacts would occur on sensitive natural communities.

c) ***No Impacts.*** The proposed project would result in the removal of 0.10 acres of the manmade ditch. The manmade ditch is an isolated feature that was excavated in uplands.

The only water source it receives is from direct storm runoff from surrounding uplands. The water remains there until it percolates into the ground. The bed and banks are comprised of upland vegetation and lack wetland soils. In accordance with 33 CFR 328.3(b)(5), ditches that are not tributaries to waters of the U.S. or used in interstate or foreign commerce are not considered waters of the U.S. The ditch does not meet the state wetland definition because it does not have sufficient inundation to cause anaerobic conditions in the substrate or contain vegetation dominated by hydrophytes or lack vegetation. Therefore, no impacts would occur on waters of the U.S. or waters of the State.

d) ***Less than Significant.*** The proposed project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native residents or migratory wildlife corridors or impede the use of native wildlife nursery sites. Impacts would be considered less than significant.

e) ***Less than Significant with Mitigations.*** Removal of existing tree resources were anticipated within City Code 12.56. The applicant would be required to obtain a tree permit for any existing tree resource protected under City Code 12.56 and proposed for removal. Replacement measures for the loss of Private Protected Trees must provide for the replacement of one tree for each Private Protected Tree removed. Any other tree replacement plan for other existing tree resources would be determined in consultation with the City's Director of the Department of Public Works and could include on-site or off-site replacement, payment of an in-lieu fee, or credit for existing trees that are preserved on the same lot. Compliance with established requirements would ensure that no significant impact would occur. The proposed project could result in disturbance of City protected trees consisting of the adjacent ornamental landscape trees. Potential significant impacts would be reduced to a less-than-significant level with the implementation of Mitigation Measure BIO 2.

Mitigation Measure BIO 2: Tree Protection

During construction, the applicant shall implement the following tree protection measures:

- A Tree Protection Zone (TPZ) should be established around any tree or group of trees to be retained. The formula typically used is defined as 1.5 times the radius of the dripline or 5 feet from the edge of any grading, whichever is greater. The TPZ may be adjusted on a case-by-case basis after consultation with a certified arborist.
- The TPZ of any protected trees shall be marked with temporary fencing which should remain in place for the duration of construction activities in the area.
- Construction-related activities, including grading, trenching, construction, demolition or other work shall be prohibited within the TPZ. No heavy equipment or machinery should be operated within the TPZ. No construction materials, equipment, machinery, or other supplies shall be stored within a TPZ.

No wires or signs shall be attached to any tree. Any modifications should be approved and monitored by a certified arborist.

- Trees shall be pruned according to the standards set forth by the American National Standard Institute (ANSI) for Tree Care Operations (Pruning) (ANSI A300).
- A certified arborist shall monitor the health and condition of the protected trees on a weekly basis and, if necessary, recommend additional mitigations and appropriate actions. This shall include the monitoring of street trees adjacent to the project site in order to determine if construction activities (including the removal of nearby trees) would affect protected trees in the future.

f) ***No Impacts.*** The proposed project is exempt from the NBHCP. The proposed project would therefore result in less than significant impacts.

With implementation of the project-specific mitigation measures, the proposed project would not result in a significant impact on special-status species and would have a less than significant impact on biological resources. All significant environmental effects of the project relating to Biological Resources can be mitigated to a **less-than-significant level**.

3.5 Cultural Resources

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
V.	**CULTURAL RESOURCES —** Would the project:				
a)	Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☐	☒
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c)	Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

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, some in deeply buried contexts. One of the tools used to identify the potential for cultural resources to be present in the project area is the 2035 General Plan Background Report. Generalized areas of high sensitivity for cultural resources are located within close proximity to the Sacramento and American Rivers and moderate sensitivity was identified near other watercourses. The proposed project site is not adjacent to these high or moderate sensitivity units shown in the 2035 General Plan Background Report. 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 cultural 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 period archaeological - and pre-contact indigenous 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.

The project site is an undeveloped open space without any buildings or structures that could be considered historical resources, as defined by CEQA Section 15064.5. The project site is adjoining a canal with utility roadway. The site itself is vacant with tall grasses, signs of some utility poles, vehicle tracks, animal bedding and burrows, a drone survey datum, and homeless encampments afforded views of the ground surface.

A drainage ditch running roughly east-west was observed through the middle of the project site. One utility pole with modern nails and telephone line components along with an associated push pile exhibiting modern rubberized utilities piping was observed on the southwest portion of the project site. Additionally, one concrete base with an attached aluminum fencing pole and one in-ground steel footing measuring 5 square inches with a steel pole loosely placed in it were observed in the middle of the project site.

Methodology

As part of the methodology, ESA consulted with the NAHC and requested a Sacred Lands search. Records search at the North Central Information Center (NCIC) of the California Historical Resources Information System to determine the known cultural resources of the project site and the likelihood of presence of unrecorded resources and a pedestrian survey of the project site supplemented the methodology.

Discussion

a) ***No Impact.*** A significant impact would occur if the project would cause a substantial adverse change to a historical resource, herein referring to historic-era architectural resources or the built environment, including buildings, structures, and objects. A significant impact could occur if the project would cause a substantial adverse change to a historical resource through physical demolition, destruction, relocation, or alteration of the resource.

ESA completed a records search for the project at the North Central Information Center (NCIC) of the California Historical Resources Information System on April 13, 2021 (File No. 21-67). The purpose of the records search was to (1) determine whether known cultural resources have been recorded in the vicinity of the project site; (2) assess the likelihood for unrecorded cultural resources to be present based on historical references and the distribution of nearby sites; and (3) develop a context for the identification and preliminary evaluation of cultural resources.

The NCIC records search indicates that there is one previously recorded historic-era cultural resource within the project site. Reclamation District 1000, also known as RD 1000 Rural Historic Landscape District (designated P-34-005251), is a district comprising an area of approximately 53,548 acres. RD 1000 was established in 1911 and encompasses more than 42 miles of water conveyance canals, roads, and levees constructed to control flooding in the Natomas Basin. RD 1000 currently maintains and administers all flood control systems within their boundary. Bradley and Corbett[26] recommended the entire RD 1000 eligible as a Rural Historic Landscape District under both the National Register of Historic Places and California Register Criterion A/1 for its association with the historic regional reclamation plan that physically, economically, and socially transformed the region. In 1994, the State Historic Preservation Officer (SHPO) concurred with this eligibility determination.

In 1997, Sacramento Area Flood Control Agency (SAFCA) completed an Historic American Engineering Record (HAER) for the RD 1000 Rural Historic Landscape District to satisfy the requirements of a Historic Properties Treatment Plan prepared for the U.S. Army Corps of Engineers (USACE). SAFCA required permits from the USACE for improvements to the levees in order to provide the Natomas area with well-above a

26 Bradley, Denise and Michael Corbett, Final Rural Historic Landscape Report for Reclamation for the Cultural Resources Inventory and Evaluations for the American River Watershed Investigations, Sacramento and Sutter Counties, California. Dames & Moore, Inc. January 1996. Report on file at the NCIC. Report No. 11138, 1995.

100-year flood protection. The USACE determined that the improved flood protection would contribute to an increase in development pressures within RD 1000 and that the resulting increase in development would have an adverse effect on the contributing elements of the District. The HAER was completed as part of a Memorandum of Agreement between SAFCA, USACE, and the SHPO. The district includes 26 contributing elements to the RD 1000 Rural Historic Landscape District; however, none of the contributing elements are recorded within the project site.[27]

The project site is undeveloped open space without any buildings or structures that could be considered historical resources, as defined by CEQA Section 15064.5. As there are no historical resources in the project site, the project would have no impact on historical resources.

b) ***Less than Significant with Mitigation.*** Archaeological resources can be considered historical resources, according to Section 15064.5, as well as unique archaeological resources, as defined in Section 21083.2(g). A significant impact could occur if the project would cause a substantial adverse change to an archaeological resource through physical demolition, destruction, relocation, or alteration of the resource.

The NCIC records search indicates that there are no previously recorded pre-contact Native American cultural resources within or within a ½-mile radius of the project site. ESA completed a pedestrian survey of the project site on April 23, 2021. Ground visibility was obscured to less than 10 percent by knee to waist-height grass throughout the project site. However, some portions of the project site that have been impacted by vehicle tracks, animal bedding and burrows, a drone survey datum, and homeless encampments afforded views of the ground surface. Ground surface consisted of a silty clay soil with less than 25 percent coarse sediments of gravel size underlying the otherwise site-wide grass root mat. A drainage ditch running roughly east-west was observed through the middle of the project site, which also afforded improved ground visibility.

One utility pole with modern nails and telephone line components along with an associated push pile exhibiting modern rubberized utilities piping was observed on the southwest portion of the project site. Additionally, one concrete base with an attached aluminum fencing pole and one in-ground steel footing measuring 5 square inches with a steel pole loosely placed in it were observed in the middle of the project site. The poles and associated foundation and footing appear to be related components of a demolished fence. No historic-era or pre-contact cultural resources were observed during the survey.

Based on the results of the survey, paucity of nearby archaeological sites, previous disturbance, and the environmental context, the project has a low potential to impact archaeological resources. Despite the low potential, the discovery of archaeological materials during ground-disturbing activities cannot be entirely discounted. The inadvertent discovery of cultural materials during project implementation could be a

27 National Park Service, Department of the Interior, Historic American Engineering Record for Reclamation District 1000. HAER No. CA-187. On file at the NCIC, 1997.

potentially significant impact. This impact would be reduced to a less-than-significant level with implementation of **Mitigation Measure CUL-1**, which requires avoidance measures or the appropriate treatment of archaeological resources if discovered during project implementation.

Mitigation Measure CUL-1

If pre-contact or historic-era cultural resources are encountered during project implementation, construction activities within 100 feet shall halt and a qualified archaeologist, defined as an archaeologist meeting the U.S. Secretary of the Interior's Professional Qualification Standards for Archeology, shall inspect the find within 24 hours of discovery and notify the City of Sacramento of their initial assessment. Pre-contact cultural materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-era materials might include building or structure footings and walls, and deposits of metal, glass, and/or ceramic refuse.

If the City determines, based on recommendations from a qualified archaeologist and a Native American representative (if the resource is pre-contact), that the resource may qualify as a historical resource or unique archaeological resource (as defined in CEQA Guidelines Section 15064.5) or a tribal cultural resource (as defined in PRC Section 21080.3), the resource shall be avoided if feasible. Consistent with Section 15126.4(b)(3), this may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement.

If avoidance is not feasible, the City shall consult with appropriate Native American tribes (if the resource is pre-contact), and other appropriate interested parties to determine treatment measures to avoid, minimize, or mitigate any potential impacts to the resource pursuant to PRC Section 21083.2, and CEQA Guidelines Section 15126.4. This shall include documentation of the resource and may include data recovery (according to PRC Section 21083.2), if deemed appropriate, or other actions such as treating the resource with culturally appropriate dignity and protecting the cultural character and integrity of the resource (according to PRC Section 21084.3).

c) ***Less than Significant with Mitigation.*** There is no indication from the archival research that any part of the project site has been used for human burial purposes in the recent or distant past. Therefore, it is unlikely that human remains would be encountered during construction of the project. Despite the low potential, the possibility of inadvertent discovery cannot be entirely discounted and would result in a potentially significant impact. This impact would be reduced to a less than significant level with implementation of **Mitigation Measure CUL-2**, which requires avoidance measures or the appropriate treatment of human remains if accidentally discovered during project construction.

Mitigation Measure CUL-2

In the event of discovery or recognition of any human remains during project implementation, construction activities within 100 feet of the find shall cease until the Sacramento County Coroner has been contacted to determine that no investigation of the cause of death is required. The Coroner shall contact the Native American Heritage Commission within 24 hours, if the Coroner determines the remains to be Native American in origin. The Commission will then identify the person or persons it believes to be the most likely descendant from the deceased Native American (PRC Section 5097.98), who in turn would make recommendations to the City for the appropriate means of treating the human remains and any associated funerary objects (CEQA Guidelines Section 15064.5[d]).

3.6 Energy

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. ENERGY — Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

Environmental Setting

The Sacramento Municipal Utility District (SMUD) transmits and distributes electricity to the city of Sacramento. 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 (source is in development). 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. SMUD generated power through hydroelectric, natural gas, wind and solar. The 2019 power content mix for SMUD general mix included 44 percent large hydroelectric; 28 percent renewables like geothermal, solar, wind, eligible hydroelectric, biomass and biowaste; 27 percent natural gas.[28] In addition, SMUD offers consumers the option to enroll in the Greenergy program which provides up to 100 percent of the electricity needs from renewable and carbon-free sources like wind, solar and hydroelectric power.

Pacific Gas & Electric Company (PG&E) is responsible for the procurement, storage, and distribution of natural gas to its 70,000-square-mile Northern and Central California service area, which includes the project area. 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. The company is bound by contract to meet any additional energy demand.

Gasoline makes up the vast majority of transportation fuel usage in California, with 97 percent of all gasoline consumed by light-duty cars, pickup trucks, and sport utility vehicles.[29] Diesel fuel is the next most frequently used transportation fuel used in California, representing 17 percent of total fuel sales. Nearly all heavy-duty trucks, delivery vehicles, buses, trains, ships, boats and barges, farm equipment, construction equipment, and heavy-duty military vehicles have diesel engines. Diesel is popular for heavy-duty usage because it has 12 percent more energy per gallon than gasoline and has fuel properties that prolong engine life, making it ideal for heavy-duty

28 Sacramento Municipal Utility District, 2020. *2019 Power Content label*. October 2020. Available: https://www.smud.org/SMUDPCL.

29 California Energy Commission, Energy Assessments Division, 2021a. California Gasoline Data, Facts, and Statistics. Available: https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-gasoline-data-facts-and-statistics. Accessed June 2021.

vehicle applications.[30] According to the State Board of Equalization, approximately 12.5 billion gallons of gasoline, including aviation gasoline, and 3 billion gallons of diesel, including off-road diesel, were sold in California in 2018.[31,32]

Discussion

Consistent with Public Resources Code Section 21100(b)(3), this impact analysis evaluates the potential for the proposed project to result in a substantial increase in energy demand and the potential for impacts from the wasteful use of energy during construction and operation or inconsistency with plans and policies adopted to increase energy efficiency and renewable energy use.

a) ***Less than Significant.*** Both construction and operation of the project would involve expenditure of energy. During construction, energy use would be both direct and indirect. Direct energy use would include the consumption of fuel (typically gasoline and diesel fuel) for operation of construction equipment and vehicles. Energy in the form of electricity may also be consumed by some pieces of construction equipment, such as welding machines, power tools, lighting, etc.; however, the amount of consumed electricity would be relatively minimal. Indirect energy use would include the energy required to make the materials and components used in construction. This includes energy used for extraction of raw materials, manufacturing, and transportation associated with manufacturing. Direct energy use represents about one-quarter of total construction-related consumption while indirect energy use typically represents the remaining three-quarters.[33]

The estimates of direct energy use provided below are based on the energy input assumptions used in the analysis included in Section 3.3, *Air Quality*. Because the California Emissions Estimator Model (CalEEMod) program used for that analysis does not specifically quantify diesel and gasoline fuel volumes used for construction and operational sources, additional calculations were completed to calculate diesel and gasoline volumes based on estimated carbon dioxide (CO_2) emissions and default factors from The Climate Registry for calculating CO_2 emissions from combustion of transport fuels.

Over the course of construction, the project is expected to consume approximately 34,919 gallons of diesel fuel from construction equipment and vehicles, and approximately 3,488 gallons of gasoline from worker transportation.

Due to the relatively small scope of the project, the small construction crew required for the project, as well as the limited duration of construction activities, the consumption of

30 California Energy Commission, Energy Assessments Division, 2021b. Diesel Fuel Data, Facts, and Statistics. Available: https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/diesel-fuel-data-facts-and-statistics. Accessed June 2021.

31 California State Board of Equalization, 2021a. Motor Vehicle Fuel 10 Year Reports: Net Taxable Gasoline Gallons. Available: https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm. Accessed June 2021.

32 California State Board of Equalization, 2021b. Taxable Diesel Gallons 10 Year Report, Net of Refunds. Available: https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm. Accessed June 2021.

33 Hannon et al., 1978. *Energy and Labor in the Construction Sector*. Article in Science Magazine. November 24, 1978.

fuel energy during construction would be temporary, localized, and would not represent a significant amount of fuel in comparison to the 600 million gallons of gasoline and 87 million gallons of diesel that were sold in Sacramento County in 2019.[34] Vehicles used for project construction would be required to comply with all federal and state efficiency standards. Additionally, there are no project characteristics or features that would be inefficient or that would result in the use of construction-related equipment and vehicles in a manner that would be less energy efficient than similar projects. Although project construction would result in the consumption of energy, the energy consumption would not be wasteful, inefficient, or unnecessary. Fuel use for project construction would be consistent with typical construction and manufacturing practices, and energy standards such as the National Energy Policy Acts of 1975 and 2005, which promote strategic planning and building standards that reduce consumption of fossil fuels, increase use of renewable resources, and enhance energy efficiency.

In addition, the temporary energy consumption during construction would not result in long-term depletion of non-renewable energy resources and would not permanently increase reliance on energy resources that are not renewable. Because project construction would not interrupt existing local energy services and because project-specific construction-related energy demand would not be expected to have a material effect on energy resources, or result in wasteful, inefficient, or unnecessary use of energy, construction activities would result in a less-than-significant impact associated with energy consumption.

Once operational, project trips would be conservatively estimated to consume up to approximately 64,065 gallons of gasoline and 12,224 gallons of diesel annually. There would be no natural gas[35] used by the project, but electricity use would amount to up to approximately 1,156 Megawatt hours per year assuming all natural gas energy needs would be met by electricity. This estimate conservatively excludes any electricity generated by rooftop solar. Project buildings would be subject to the most recent 2019 Title 24 energy efficiency standards that also emphasize use of renewable electricity by requiring photovoltaic (PV) panels be installed on all project residences. Further, as discussed in Section 3.8, *Greenhouse Gas Emissions,* the project would also be consistent with the energy efficiency measures in the City's current Climate Action Plan. Project vehicle trips would continue to be subject to increasingly stringent fuel efficiency standards which would increase the fuel efficiency of the overall fleet as newer fuel efficient and electric vehicles replace older lesser efficient vehicles.

Therefore, project construction and operation would not result in wasteful, inefficient, or unnecessary consumption of energy resources. This impact would be **less than significant**.

b) ***Less than Significant.*** To address energy usage from heavy-duty construction vehicles, EPA and the National Highway Traffic Safety Administration (NHTSA) in 2011

34 California Energy Commission, Energy Assessments Division, 2020. 2019 California Annual Fuel Outlet Report Results (CEC-A15), September 22, 2020. Available: https://www.energy.ca.gov/media/3874.

35 City of Sacramento adopted the New Building Electrification Ordinance on June 1, 2021.

established a comprehensive Heavy-Duty National Program that would reduce greenhouse gas emissions from, and increase the fuel efficiency of, on-road heavy-duty vehicles beginning with model year 2014.[36] California Air Resources Board's Truck and Bus Regulation also requires that diesel trucks in California with a gross vehicle weight rating that are greater than 14,000 pounds, must be upgraded to reduce exhaust emissions so that all truck engines would have 2010 or newer model year by 2023.[37] Vehicles used during construction would already incorporate these standards; therefore, the proposed project would not impede the efficient use of fuel for heavy-duty vehicles. Off-road construction equipment would be subject to regulations for off-road equipment such as Tier 4 standards or the Off-Road Regulation implemented by CARB, and would therefore not impede the implementation of CARB's energy efficiency programs.

Once operational, the project would be required to be consistent with the most recent Title 24 energy efficiency standards. The current 2019 standards require that rooftop PV panels be installed on all new low-rise residential buildings (single family homes and multifamily three stories or less). In addition, project dwellings would overall be energy efficient with the use of energy efficient lighting and appliances, dual pane windows, etc.

Vehicles used by construction workers and project residents would be subject to NHTSA's Corporate Average Fuel Economy (CAFE) standards for passenger cars and for light trucks (collectively, light-duty vehicles). The current CAFE standards set by NHTSA in 2012 increase fuel efficiency to 41 mpg by 2021 and 49.7 mpg by 2025. In the course of more than 40 years, the National Energy Conservation Policy Act's regulatory program has resulted in improved fuel economy throughout the United States' vehicle fleet, and has protected against the inefficient, wasteful, and unnecessary use of energy. In addition, CARB's Advanced Clean Cars Program would continue to improve fuel efficiency and reduce gasoline use by promoting an increase in the number of zero-emission vehicles and plug-in hybrid electric vehicles. Vehicles used by project construction workers and future project residents would already incorporate these standards and programs; therefore, the proposed project would not impede the efficient use of fuel for light-duty vehicles.

Because the proposed project would have relatively low energy demand and would comply with fuel and energy-efficiency regulations, it would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. This impact would be less than significant.

---

36 U.S. Environmental Protection Agency, 2011. Regulatory Announcement – EPA and NHTSA Adopt First-Ever Program to Reduce Greenhouse Gas Emissions and Improve Fuel Efficiency of Medium- and Heavy-Duty Vehicles. August 2011. Available: https://nepis.epa.gov/Exe/tiff2png.exe/p100bot1.png?-r+75+-g+7+D%3A%5czyfiles%5cindex%20data%5c11thru15%5ctiff%5c00000052%5cp100bot1.tif.

37 California Air Resources Board, 2021. Truck & Bus Regulation. Available: https://ww3.arb.ca.gov/msprog/truckstop/tb/truckbus.htm. Accessed June 2021.

3.7 Geology and Soils

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
VII. GEOLOGY AND SOILS — Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Environmental Setting

The City of Sacramento is located with the Great Valley of California, a flat alluvial plain approximately 50 miles wide and 400 miles long in the central portion of California, also known as the Sacramento Valley, and is drained by the Sacramento River. The Valley is surrounded by the Sierra Nevada to the east, the Tehachapi Mountains to the south, the Cascade Range to the north, and the Coastal Range to the west. Overall, the City of Sacramento gradually slopes from the seal levels at the delta in the southwestern portion of the City to approximately 75-feet above sea level in the northeastern portion of the City.

The project site is located in South Natomas, an area in the north of Downtown Sacramento and across the American River. The project site is flat, vacant and undeveloped.

Discussion

a. i-iii) ***Less than Significant.***

Seismic Activity: The project site is not in an Earthquake Fault Zone (EFZ) as delineated by the Earthquake Zones of Required Investigation Map (EZRIM) published by the California Geological Survey (CGS) as required by the Alquist-Priolo Earthquake Fault Zoning Act.[38] The City of Sacramento is not located within an Alquist-Priolo Earthquake Fault Zone and there are no known faults within the project area and the greater Sacramento area.-The closest faults outside the city of Sacramento are the Midland Fault and San Andreas faults to the west, Dunningan Fault to the northwest, and the Foothills fault system to the east. In the event of major seismic activity outside the city of Sacramento, it is likely that the project site may be subject to minor ground shaking.[39]

Ground Shaking: The associated ground shaking could manifest in primary effects and secondary effects. Primary effects such as vibrations could cause damage to the buildings, roads, and other infrastructure. Secondary effects to ground failures such as settlement of ground/soils or liquefaction occurs when grounds are filled with unstable artificial fill or alluvial deposits that are exposed to high intensity ground shaking. The highest intensity of groundshaking experienced in the city (MMI VI to VII) are likely to be caused by a Mw 7.9 earthquake on the San Andreas Fault or a Mw 6.6 earthquake on the Dunnigan Hills fault.

To prevent the primary and secondary effects of potential seismic activities in the City of Sacramento, all commercial, institutional, and large residential buildings and all associated infrastructure are required to reduce the exposure to potentially damaging seismic vibrations through seismic resistant design, in conformance with Chapter 16, Structural Design Requirements, Division IV, Earthquake Design, of the CBC. Chapter 16 of the CBC provides more detailed specifications for earthquake structural design requirements than the federal code, including the requirement that the design of foundation and excavation-wall supports must reduce the exposure to potentially damaging seismic vibrations through seismic-resistant design (Section A33 – Excavation and Grading).

The proposed project would include the construction of 79 single family residential units on an approximate 9.17-acre project site. The proposed project would be constructed in compliance with all applicable development and engineering standards including current Uniform Building Code (UBC) and California Building Code (CBC) (Title 24 of California Code of Regulations) standards.

Additionally, with implementation of the City of Sacramento General Plan Policies EC 1.1.1 and EC 1.1.2, the City keeps records of the up-to-date records of seismic conditions,

38 California Geological Survey, 2002. Earthquake Zones of Required Investigation ap. Scale 1:24,000. February 7, 2002.

39 City of Sacramento, 2015. *City of Sacramento 2035 General Plan.* Adopted March 3, 2015.

the City implements and enforces the most current building standards, and continues to require that site-specific geotechnical analyses be prepared for projects within the City.

With implementation of the existing regulatory framework that addresses earthquake safety issues, adherence to requirements of the UBC and CBC and various design standards, seismically induced ground-shaking and secondary effects would not be a potential hazard for the proposed project. Implementation of the proposed project would not would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault. Therefore, there would be a less than significant impact.

Liquefaction: As mapped on the EZRIM published by the CGS (which delineates liquefaction and earthquake-induced landslide zones, as well as EFZs), the project site is not located in a liquefaction zone.[40,41] Due to the site's flat terrain and large distances from known faults and bodies of water, liquefaction impacts are anticipated to be low.

Nonetheless, all developments in the city are required to conform to the Seismic Zone 3 soil and foundation support parameters in Chapters 16 and 18 of the Building Code and the grading requirements in Chapters 18, 33, and the appendix to Chapter 33 of the Building Code. Additionally, the UBC specifies minimum standards to ensure less-than-significant impacts from structural damage resulting from liquefaction due to the occurrence of maximum credible earthquakes. Adherence to these requirements for structural work and grading would mitigate potential impacts of the proposed project resulting from liquefaction hazards to less than significant levels.

a. iv) ***No Impact.***

Landslide: The project site is located in a relatively flat terrain and devoid of any geologic features that have the potential for landslides. The EZRIM published by the CGS (which delineate earthquake-induced landslide zones, as well as EFZs) indicates the project site is not within an earthquake-induced landslide zone.[42,43]

Due to the relatively flat terrane surrounding the area, the potential for landslides as a result of earthquakes is considered to be nearly minimal. The Earthquake Zones of Required Investigation Map (EZRIM) published by the California Geological Survey[44] also does not show the project site located within a landslide zone. Therefore, there would be no impact.

40 California Geological Survey, 2021. EQ Zapp: California Earthquake Hazards Zone Application. Available: http://www.conservation.ca.gov/cgs/geohazards/eq-zapp. Accessed April 28, 2021.

41 California Geological Survey, 2002. Earthquake Zones of Required Investigation ap. Scale 1:24,000. February 7, 2002.

42 California Geological Survey, 2021. EQ Zapp: California Earthquake Hazards Zone Application. Available: http://www.conservation.ca.gov/cgs/geohazards/eq-zapp. Accessed April 28, 2021.

43 California Geological Survey, 2002. Earthquake Zones of Required Investigation ap. Scale 1:24,000. February 7, 2002.

44 California Geological Survey, 2002. Earthquake Zones of Required Investigation ap. Scale 1:24,000. February 7, 2002.

b) ***Less than Significant.*** The proposed project would develop the 9.17-acre project site with 79 residential units. Site preparation would be anticipated to include grading and excavation for the structural foundations and utility installation, including the two proposed detention basins. The project would involve excavating, filling, moving, grading, and temporary stockpiling of soils onsite, all of which would expose site soils to erosion from wind and surface water runoff, thereby increase the potential of soils erosion. Review of the Natural Resources Conservation Service (NRCS) soils maps shows that the project site has the following soils types:

1. Clear lake clay 0 to 1 percent slopes: The Clear Lake clay soil profile typically consists of 15-inch-thick dark gray clay over a 19-inch-thick dark gray and yellowish-brown clay with segregated lime concentrations over silica cemented hardpan that extends to 64 inches below the surface.

2. Consumnes silt loan, 0 to 2 percent slopes: The Cosumnes silt loam soil profile typically consists of a surface layer of pale brown silt loam about 8 inches thick. The next layer is a pale brown silty clay loam and clay about 13 inches thick. Below this to a depth of 43 inches is a buried surface layer of gray clay. The next layer, to a depth of 60 inches, is gray and pale brown clay loam.

3. Consumnes-Urban land complex 0 to 2 percent slopes,

4. Dierssen sandy loam 0 to 2 percent slopes: profile typically consists of a 20-inch layer of brown clay over strongly silica cemented hardpan to a depth of 55 inches over an indurated (i.e., firm) hardpan., and

5. Jacktone clay 0 to 2 percent slopes: The Jacktone clay soil profile typically consists of a surface layer of very dark gray clay about 11 inches thick. The underlying material is a very dark clay about 23 inches thick. The next layer is a light brownish gray and light gray weakly silica cemented hardpan about 18 inches thick. The underlying material, to a depth of 60 inches, is light yellowish brown sandy loam.

According to the Sacramento 2035 General Plan Master EIR, erosion hazards throughout the City do not represent substantial hazards to people or property,[45] and the potential for soil expansion and/or subsidence would be minimized through adherence to the UBC. Grading activities on the project site would also be subject to the Sacramento City Code Title 15 Chapter 15.88, which requires the preparation of an Erosion and Sediment Control Plan by a qualified geotechnical engineer with oversight of the installation and implementation of erosion and sediment control measures during grading and construction. The Erosion and Sediment Control Plan would include standards and specifications to ensure that soil erosion potential would be minimized.

Construction related soils erosion is further minimized with the requirements of the National Pollution Discharge Elimination System (NPDES) permit program which requires acquisition of an NPDES permit and the preparation of a stormwater pollution prevention plan (SWPPP). The NPDES program is administered by the Central Valley

45 City of Sacramento, 2015. Master Environmental Impact Report for the City of Sacramento 2035 General Plan Update, SCH#20121220006. Adopted March 3, 2015. P. 4.5-1.

Regional Water Quality Control Board (CVRWQCB) and the project would be subject to these permitting requirement.

Compliance with this policy and adherence to the aforementioned requirements would minimize the potential for soils erosion as a result of the proposed project, and the potential impact would be less than significant.

d) ***No Impact.*** **Septic Tanks.** The proposed residential community would not use septic tanks. Therefore, there will be no impacts.

e) ***Less than Significant with Mitigation.*** The project site is not considered sensitive for paleontological resources as is the case for City of Sacramento and the surrounding areas. Further, the project site is not located on fossil bearing soils or rock formation below the ground surface and the potential for paleontological resources is very low. The Cultural Resources Survey conducted on April 9, 2021 confirms lack of any geologic features within the project site.

However, ground disturbing activities, particularly grading may reveal paleontological resources not previously identified. Should any paleontological resources be discovered during project construction, implementation of **Mitigation Measure GEO-1** would reduce potential impacts to paleontological resources to less than significant.

Mitigation Measure GEO-1

Implement Mitigation Measure CUL-1.

With implementation of the UBC, CBC, and project-specific mitigation measures, the proposed project would not result in any significant impacts to geological and soils. All potential environmental effects can be mitigated to a less than significant level.

3.8 Greenhouse Gas Emissions

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
VIII. GREENHOUSE GAS EMISSIONS — Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Environmental Setting

Certain gases in the Earth's atmosphere, classified as greenhouse gases (GHGs), play a critical role in determining the earth's surface temperature. A portion of the solar radiation that enters Earth's atmosphere is absorbed by the earth's surface, and a smaller portion of this radiation is reflected back toward space. Infrared radiation (i.e., thermal heat) is absorbed by GHGs; as a result, infrared radiation released from the earth that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the "greenhouse effect," is responsible for maintaining a habitable climate on Earth.

Global warming is the name given to the increase in the average temperature of Earth's near-surface air and oceans since the mid-20th century. Increases in the GHG concentrations in Earth's atmosphere are thought to be the main cause of human-induced climate change. As discussed above, some GHGs occur naturally and are necessary for keeping Earth's surface habitable. However, increases in the concentrations of these gases in the atmosphere during the last 100 years have decreased the amount of solar radiation that is reflected back into space, intensifying the natural greenhouse effect and resulting in the increase of global average temperature. GHG emissions from human activities are highly likely to be responsible for intensifying the greenhouse effect and have led to a trend of unnatural warming of the earth's atmosphere and oceans, with corresponding effects on global circulation patterns and climate.[46]

The principal anthropogenic (human-caused) GHGs are carbon dioxide (CO_2), methane, nitrous oxide, sulfur hexafluoride, perfluorocarbons, and hydrofluorocarbons. Each of the principal GHGs has a long atmospheric lifetime (1 year to several thousand years). In addition, the potential heat-trapping ability of each of these gases varies substantially from the others. For example, methane is 25 times as potent as CO_2, whereas sulfur hexafluoride is 22,800 times more potent than CO_2. GHGs have been reported as CO_2 equivalents (CO_2e). This approach takes into account the relative potency of non-CO_2 GHGs to convert their quantities to an equivalent amount of CO_2 so that all emissions can be reported as a single quantity.

46 Intergovernmental Panel on Climate Change, 2013. *Climate Change 2013 – The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, 2013. Available: https://www.ipcc.ch/report/ar5/wg1/.

The primary human-made processes that release these gases are the burning of fossil fuels for transportation, heating, and electricity generation; agricultural practices that release methane, such as livestock grazing and crop residue decomposition; and industrial processes that release smaller amounts of high global warming potential gases, such as sulfur hexafluoride, perfluorocarbons, and hydrofluorocarbons. Deforestation and land cover conversion also have been identified as contributing to global warming by reducing Earth's capacity to remove CO2 from the air and altering Earth's albedo (or surface reflectance), allowing more solar radiation to be absorbed.

Discussion

a) ***Less than Significant.*** The Sacramento Metropolitan Air Quality Management District (SMAQMD) has recently updated its guidance to assess project impacts with respect to the State's 2030 GHG reduction goals.[47] The SMAQMD provides recommended thresholds, including required Best Management Practices (BMPs) for operational emissions, for agencies without adopted GHG reduction plans (climate action plans) or their own adopted thresholds and for projects that are inconsistent with an agency's adopted GHG reduction plan. SMAQMD recommends a quantitative threshold of 1,100 metric tons of CO_2e per year to assess GHG emissions from the construction phase of all project types.[48] SMAQMD considers a project's operational GHG impact to be less than significant if annual operational emissions are less than 1,100 metric tons of CO_2e per year with full implementation of the appropriate level of BMPs identified.

Construction of the proposed project is assumed to begin in early 2022 and be completed over a period of 14 months. Construction-related GHG emissions would be generated from a variety of sources including operation of construction equipment and haul truck and construction worker vehicle trips. As with the air quality analysis, GHG emissions from construction equipment and vehicle trips were estimated using the most recent version of CalEEMod (2020.4.0) using project-specific inputs when available, supplemented by CalEEMod default values when project-specific data was not available.

Annual construction emissions associated with the project are presented in **Table 3.8-1**. As shown in Table 3.8-1, project construction emissions would not exceed the SMAQMD's significance threshold of 1,100 metric tons CO_2e/year, and the associated short-term construction emissions impact would be less than significant.

Over the long-term, the proposed project would result in an increase in direct GHG emissions primarily due to motor vehicle trips and onsite area sources (e.g., landscape maintenance, use of consumer products such as hairsprays, deodorants, and cleaning products). The project is proposed as an all-electric development with no natural gas infrastructure. Therefore, there would be no direct GHG emissions from energy use on-

47 Sacramento Metropolitan Air Quality Management District, 2020. *CEQA Guide - SMAQMD Thresholds of Significance Table*, adopted December 2009, revised November 2014, May 2015, April 2020. Available: http://www.airquality.org/LandUseTransportation/Documents/CH2ThresholdsTable4-2020.pdf.

48 Sacramento Metropolitan Air Quality Management District, 2020. *CEQA Guide - SMAQMD Thresholds of Significance Table*, adopted December 2009, revised November 2014, May 2015, April 2020. Available: http://www.airquality.org/LandUseTransportation/Documents/CH2ThresholdsTable4-2020.pdf.

site. Indirect GHG emissions would be generated from the generation of electricity to power the project.

TABLE 3.8-1
PROJECT CONSTRUCTION GREENHOUSE GAS EMISSIONS

Construction Year	CO_2e (MT/year)
2022	367
2023	24
Total Construction GHG Emissions	391
Construction Emissions Significance Threshold	1,100
Exceeds Threshold?	**No**

NOTES:
Project construction emissions were estimated using CalEEMod version 2020.4.0. See Appendix A for model outputs and more detailed assumptions.

CO_2e = carbon dioxide equivalent, MT = metric tons

SOURCE: ESA, 2021.

For the operational phase, SMAQMD does not provide quantitative thresholds of significance, but instead requires projects to demonstrate consistency with CARB's most recent Climate Change Scoping Plan by implementing the following BMPs, as applicable, or equivalent on-site or off-site mitigation.[49]

All projects are required to implement Tier 1 BMPs (BMP 1 & 2) which include:

- BMP 1: Projects shall be designed and constructed without natural gas infrastructure.
- BMP 2: Projects shall meet the current CalGreen Tier 2 standards, except all electric vehicle capable spaces shall instead be electric vehicle (EV) ready.

Projects that exceed 1,100 metric tons of CO_2e per year after implementation of Tier 1 BMPs must implement Tier 2 BMPs (BMP 3):

- BMP 3: Residential projects shall achieve a 15% reduction in vehicle miles traveled per resident and office projects shall achieve a 15% reduction in vehicle miles traveled per worker compared to existing average vehicle miles traveled for the county, and retail projects shall achieve a no net increase in total vehicle miles traveled to show consistency with SB 743.

As described in Project Description, the project is proposed as an all-electric development and natural gas service would not be offered for the individual residential units or to serve any of the communal amenities. In addition, consistent with 2019 California Green Building Standards Code ("CALGreen", Title 24, Part 11) project

49 Sacramento Metropolitan Air Quality Management District, 2020. *CEQA Guide - SMAQMD Thresholds of Significance Table*, adopted December 2009, revised November 2014, May 2015, April 2020. Available: http://www.airquality.org/LandUseTransportation/Documents/CH2ThresholdsTable4-2020.pdf.

residences will include "EV Capable" parking spaces which have electrical panel capacity, a dedicated branch circuit and a listed raceway to the EV parking spot to accommodate a dedicated 208/40-volt branch circuit to support future installation of charging stations. Therefore, the project would fully implement both Tier 1 BMPs. In addition, as shown in **Table 3.8-2** below, the project's operational emissions would be less than 1,100 metric tons of CO_2e per year after implementation of Tier 1 BMPs. Therefore, the proposed project would result in a less-than-significant impact with regard to operational GHG emissions.

TABLE 3.8-2
PROJECT OPERATIONAL GREENHOUSE GAS EMISSIONS

Source	CO_2e (MT/year)
Area	1.4
Electricity Use	194.9
Mobile	666.3
Waste	38.3
Water	10.0
Total Annual Operational GHG Emissions	**911**
Operational Emissions Significance Threshold	1,100
Exceeds Threshold?	**No**

NOTES:
CO_2e = carbon dioxide equivalent, MT = metric tons
Project construction emissions were estimated using CalEEMod version 2020.4.0. See Appendix A for model outputs and more detailed assumptions.

SOURCE: ESA, 2021.

Project construction and operation would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. This would be a less-than-significant impact.

b) ***Less than Significant.*** CEQA Guidelines Section 15183.5 allows for public agencies to analyze and mitigate GHG emissions as part of a larger plan for the reduction of GHGs and describes the required contents of such a plan. As described below, the project would be consistent with the following plans and regulations adopted to reduce GHG emissions within the City of Sacramento and the State of California:

- CARB 2017 Scoping Plan Update;[50]
- The policies and programs as presented in Appendix B of the 2035 General Plan and Climate Action Plan;[51] and

50 California Air Resources Board, 2017. *California's 2017 Climate Change Scoping Plan*, November 2017. Available: https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/scoping_plan_2017.pdf?utm_medium=email&utm_source=govdelivery.

51 City of Sacramento, 2015. *City of Sacramento 2035 General Plan*, adopted March 3, 2015. Available: https://www.cityofsacramento.org/Community-Development/Resources/Online-Library/2035--General-Plan.

- The Mayors' Commission on Climate Change's Achieving Carbon Zero in Sacramento and West Sacramento by 2045 Final Report.[52]

Consistency with 2017 Scoping Plan Update

The 2017 Scoping Plan Update establishes the framework for achieving the 2030 statewide GHG reduction target of 40 percent below 1990 levels. The plan update details local actions that land use development projects and municipalities can implement to support the statewide goal. For project-level CEQA analyses, the 2017 Scoping Plan Update states that projects should implement feasible mitigation, preferably measures that can be implemented onsite. Many of the project features align with these actions and would contribute to direct and indirect reduction of GHG emissions.

The Scoping Plan Update incorporates a broad array of regulations, policies, and state plans designed to reduce GHG emissions. Those that are applicable to the construction and operation of the proposed project are listed in **Table 3.8-3**. As shown below, the proposed project would implement sustainability features and incorporate characteristics to reduce energy use, conserve water, reduce waste generation, and reduce vehicle travel consistent with statewide strategies and regulations. As a result, the proposed project would not conflict with applicable Climate Change Scoping Plan strategies and regulations to reduce GHG emissions.

TABLE 3.8-3
CONSISTENCY WITH APPLICABLE GREENHOUSE GAS REDUCTION ACTIONS IN 2017 SCOPING PLAN UPDATE

Sector / Source	Category / Description	Consistency Analysis
Energy and Water		
California Renewables Portfolio Standard (RPS)	SB 100 requires that the proportion of electricity from renewable sources be 60 percent renewable power by 2030 and 100 percent renewable power by 2045.	**Consistent.** The proposed project's electricity will be provided by SMUD. SMUD is required to comply with SB 100 and the RPS.
California Renewables Portfolio Standard and SB 350	SB 350 requires that the proportion of electricity from renewable sources be 50 percent renewable power by 2030 (superseded by SB 100). It also requires the state to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.	**Consistent.** The proposed project's electricity will be provided through SMUD. SMUD is required to comply with both the RPS and SB 350 and will meet these standards.
California Building Efficiency Standards (CCR, Title 24, Part 6)	Energy Efficiency Standards for Residential and Nonresidential Buildings.	**Consistent.** Project buildings would be designed to comply with the applicable Title 24 Building Energy Efficiency Standards.
California Green Building Standards Code (CCR, Title 24, Part 11 - CALGreen)	California's Green Building Standards (CALGreen) Code includes energy and water efficiency requirements, as well as waste management and other design regulations that apply to residential buildings.	**Consistent.** Buildings constructed within the project site would comply with mandatory CalGreen measures.

52 Mayors' Commission on Climate Change, 2020. *Achieving carbon Zero in Sacramento and West Sacramento by 2045 – Final Report*, June 2020. Available: https://www.lgc.org/wordpress/wp-content/uploads/2020/06/Mayors-Commission-on-Climate-Change-Final-Report.pdf.

TABLE 3.8-3
CONSISTENCY WITH APPLICABLE GREENHOUSE GAS REDUCTION ACTIONS IN 2017 SCOPING PLAN UPDATE

Sector / Source	Category / Description	Consistency Analysis
Senate Bill X7-7	The Water Conservation Act of 2009 sets an overall goal of reducing per capita urban water use by 20 percent by December 31, 2020. Each urban retail water supplier shall develop water use targets to meet this goal.	**Consistent.** Water delivered to the project site would be supplied by the City of Sacramento Department of Utilities, which is required to comply with SB X7-7 and would meet these standards.
Mobile Sources		
Advanced Clean Cars Program (ACC) and Mobile Source Strategy (MSS)	In 2012, CARB adopted the Advanced Clean Cars (ACC) program to reduce criteria pollutants and GHG emissions for model year vehicles 2015 through 2025. ACC includes the that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years. The Mobile Source Strategy (2106) calls for 1.5 million ZEVs (including plug-in hybrid electric, battery-electric, and hydrogen fuel cell vehicles) on the road by 2025, and 4.2 million ZEVs by 2030.	**Consistent.** The standards would apply to all vehicles used by the residents of the proposed project, and to construction workers traveling to and from the project site. As required by requirements of 2019 CalGreen Building Standards Code, project residences would be constructed as EV ready with electrical panel capacity, a dedicated branch circuit and a listed raceway to the EV parking spot to accommodate a dedicated 208/40-volt branch circuit to support future installation of charging stations.
SB 375 and the SACOG MTP/SCS	SB 375 establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions. Under SB 375, CARB is required, in consultation with the state's Metropolitan Planning Organizations, to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector 2035. SACOG's MTP/SCS calls for GHG reductions from passenger vehicles and light-duty trucks of 19 percent below 2005 levels by 2035.	**Consistent.** The proposed project would be consistent with SACOG MTP/SCS goals and objectives under SB 375 to implement "smart growth." The proposed project would consist of in-fill residential development in a compact land-use pattern in proximity to off-site employment opportunities in the City of Sacramento. The site provides a place where people can live in close proximity to work locations, and is located to provide access to convenient modes of transportation that provides options for reducing reliance on automobiles and minimizing associated air pollutant emissions. The proposed project is consistent with the smart growth land use pattern discussed in the MTP/SCS, and would therefore be conducive to meeting the SB 375 GHG reduction goal.
Solid Waste		
California Integrated Waste Management Act (IWMA) of 1989 and Assembly Bill (AB) 341	The IWMA mandated that state agencies develop and implement an integrated waste management plan which outlines the steps to be taken to divert at least 50 percent of their solid waste from disposal facilities. AB 341 directs CalRecycle to develop and adopt regulations for mandatory commercial recycling and sets a statewide goal for 75 percent disposal reduction by the year 2020.	**Consistent.** The proposed project would be served by a solid waste collection and recycling services from the City of Sacramento that includes weekly garbage and yard waste collection and recycling collection every other week. This yields waste diversion results comparable to source separation and consistent with Citywide recycling targets. The City of Sacramento has a goal to achieve 75 percent waste diversion by 2020 and zero waste to landfills by 2040.

SOURCE: ESA 2021.

Consistency with the City of Sacramento 2035 General Plan and Climate Action Plan

The City of Sacramento first adopted a Climate Action Plan in 2012 to reduce GHG emissions and adapt to climate change. In 2015 the CAP was incorporated into the 2035 General Plan.[53] The Sacramento CAP includes emission reduction targets, strategies, and specific actions for addressing climate change within the community and established a goal of reducing GHG emissions 15% below 2005 levels by 2020. The City of Sacramento met this 2020 climate goal in 2016. Between 2005 and 2016, community wide emissions decreased by over 19 percent and per capita emissions decreased by over 26 percent demonstrating that even though the City has grown substantially since 2005, emissions have decreased at a more rapid rate. The City is currently working on an updated CAP to help the community reach even more aggressive climate targets in line with State goals, including carbon neutrality (0 MT CO_2e) in 2045.

In the absence of a CAP that addresses the State's GHG reduction goals beyond 2020, the analysis in this section presented as part of checklist question a) above used SMAQMD recommended thresholds for the evaluation of project GHG impacts. As detailed above, SMAQMD thresholds include requiring Best Management Practices for operational emissions, for agencies without adopted GHG reduction plans (or climate action plans) or their own adopted thresholds and for projects that are inconsistent with an agency's adopted GHG reduction plan to establish consistency with CARB's Climate Change Scoping Plan. Nevertheless, a consistency analysis of the project with the strategies, measures, and actions contained in the 2012 Climate Action Plan is provided below.

Policies from the 2012 Climate Action Plan contained in the 2035 General Plan that are applicable to the construction and operation of the proposed project are listed in **Table 3.8-4**. As shown below, the proposed project would implement sustainability features and incorporate characteristics to reduce energy use, conserve water, and promote the use of alternative modes of transportation consistent with the City of Sacramento's policies. As a result, the project would not conflict with applicable 2035 General Plan and Climate Action Plan policies to reduce GHG emissions.

Consistency with the Mayors' Commission on Climate's Achieving Carbon Zero in Sacramento and West Sacramento by 2045 Final Report

The Mayors' Commission on Climate published the Achieving Carbon Zero in Sacramento and West Sacramento by 2045 Final Report, which aims to reduce contributions to climate change by achieving "Carbon Zero" in the City of Sacramento and the City of West Sacramento.[54] The report includes various recommendations which would reduce carbon emissions from the built environment and the transportation sector, as well as through community health and resiliency efforts. The proposed project would

53 City of Sacramento, 2015. *City of Sacramento 2035 General Plan*, adopted March 3, 2015. Available: https://www.cityofsacramento.org/Community-Development/Resources/Online-Library/2035--General-Plan.

54 Mayors' Commission on Climate Change, 2020. *Achieving carbon Zero in Sacramento and West Sacramento by 2045 – Final Report*, June 2020. Available: https://www.lgc.org/wordpress/wp-content/uploads/2020/06/Mayors-Commission-on-Climate-Change-Final-Report.pdf.

TABLE 3.8-4
CONSISTENCY WITH CITY OF SACRAMENTO GENERAL PLAN AND CLIMATE ACTION PLAN

General Plan Policy	Description	Consistency Analysis
Policy LU 7.1.2	**Housing in Employment Centers.** The City shall require compatible integration of housing in existing and proposed employment centers to help meet housing needs and reduce vehicle trips and commute times, where such development will not compromise the City's ability to attract and maintain employment-generating uses.	**Consistent.** The proposed project would develop 79 residential units as an infill development in a largely residential area in close proximity to commercial retail development, and well served by transit. As the proposed project would be built on undeveloped land and would be located close to Sacramento Regional Transit's San Juan Road and Binghamton Drive bus stop, it would encourage the use of public transportation that could reduce vehicle trips and commute times.
Policy M 5.1.5	**Motorists, Bicyclists, and Pedestrian Conflicts.** City shall develop safe and convenient bikeways, streets, roadways, and intersections that reduce conflicts between bicyclists and motor vehicles on streets, between bicyclists and pedestrians on multi-use trails and sidewalks, and between all users at intersections.	**Consistent.** The project site is served by an existing bike lane along San Juan Road. In addition, the Niños Parkway Bike Trail provides connectivity to the regional bike network as a separated bike path located 600 feet west of the project driveway on San Juan Road. The existing Niños Parkway trail that currently runs only to the south of San Juan Road is proposed to include a future pedestrian/bicycle mid-block crossing that crosses San Juan Road to continue north of San Juan Road as a part of Niños Parkway Bike Trail Phase 2.
Policy U 2.1.10	**Water Conservation Standards.** The City shall achieve a 20 percent reduction in per-capita water use by 2020 consistent with the State's *20x2020 Water Conservation Plan* (California Water Resources Control Board, 2010).	**Consistent.** The proposed project would be required to be consistent with the State's *20x2020 Water Conservation Plan*. The project would also comply with existing mandatory CalGreen standards regarding water use and efficiency.
Policy U 2.1.15	**Landscaping.** The City shall continue to require the use of water-efficient and river-friendly landscaping in all new development, and shall use water conservation gardens (e.g., Glen Ellen Water Conservation Office) to demonstrate and promote water conserving landscapes.	**Consistent.** Project landscaping would include plants that are drought tolerant, native to California or other Mediterranean climates, or other low water use species. High efficiency irrigation systems with water-efficient sprinkler heads, and smart controllers will be used.
Policy U 6.1.16	**Energy Efficiency Appliances.** The City shall encourage builders to supply Energy STAR appliances and HVAC systems in all new residential developments.	**Consistent.** All residences would be equipped with Energy Star certified appliances (dishwashers and refrigerators). Energy efficient LED light fixtures would be installed within the residences and office suites and for exterior lighting.

SOURCE: ESA 2021.

be consistent with the recommendations included in the Achieving Carbon Zero in Sacramento and West Sacramento by 2045 Draft Report as it is characterized as infill development within an existing residential neighborhood, located in close proximity to commercial retail development and transit opportunities, including Sacramento Regional Transit's San Juan Road and Binghamton Drive bus stop located approximately 500 feet east of the project frontage and existing bike lane facilities along San Juan Road and the Niños Parkway Bike Trail that provide connectivity to the regional bike network. In addition, the project would include several sustainability characteristics consistent with the most recent CalGreen standards including rooftop PV panels on residences and capability for electric vehicle charging. In addition, the project would be an all-electric site with no natural gas infrastructure to project residences or any of the common amenities. These project characteristics and project design features make the proposed project consistent with the applicable recommendations described in the Mayors' Commission on Climate's Achieving Carbon Zero in Sacramento and West Sacramento by 2045 Final Report.

The proposed project would implement sustainability measures so that it would be consistent with all applicable GHG reduction plans and policies. Therefore, this impact would be considered less than significant.

3.9 Hazards and Hazardous Materials

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

Environmental Setting

The City of Sacramento General Plan Goal PHS 3.1 aims to reduce exposure to hazardous materials and waste. General Plan Policies PSH 3.1.1 and PSH 3.1.2 ensure investigations of sites for contamination and for known contamination sites, preparation of a Hazardous Material Contamination Management Plan. The 9.17-acres site is vacant and undeveloped. A search of the State Water Resources Control Board (SWRCB) GeoTracker[55] and Department of Toxic Substances Control (DTSC) EnviroStor[56] databases indicates that there are no known hazardous materials sites within the project site.

55 California State Water Resources Control Board, 2021. Geotracker Database. State of California 920 San Juan Road, Sacramento, CA 95834. Available: https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=920+San+Juan+Road%2C+Sacramento. Accessed April 30, 2021.

56 U.S. Department of Toxic Substances Control, 2021. Envirostor Database. California Department of Toxic Substances Control. DTSC's Hazardous Waste and Substances Site List – Site Cleanup (Cortese List). Available: https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=920+San+Juan+Road%2C+Sacramento. Accessed April 30, 2021.

Discussion

a-b) ***Less than Significant.*** The approximate 9.17-acre project site located in South Natomas area does not indicate any known hazards site conditions. As discussed above, the State Water Resources Control Board (SWRCB) GeoTracker and Department of Toxic Substances Control (DTSC) EnviroStor databases indicates that there are no known hazardous materials sites within the project site. The GeoTracker and EnviroStor databases also indicate that there are no Cleanup Program Sites and Leaking Underground Storage Tank (LUST) and there is no indication that activities proposed for the project would encounter any contaminated soil or groundwater during construction. Further, the project site is also not on the Sacramento County Environmental Management Department's (SCEMD's) toxic site list.[57]

Use of construction materials and equipment to prepare the site and construct the proposed 79 residential homes and associated infrastructure would require the use of hazardous materials. Construction materials such as fuels, oils and lubricants, solvents and cleaners, glues and adhesives, paints and thinners, degreasers, cement and concrete, and asphalt mixtures are all commonly used in construction. And, storage of hazardous materials or chemicals in large quantities is not generally associated with residential development. The routine use or an accidental spill of hazardous materials during construction could result in exposures or inadvertent releases, which could adversely affect construction workers, the public, and the environment.

However small the potential, construction activities would be required to comply with the numerous federal, State, and local hazardous materials regulations. These regulations are designed to ensure that hazardous materials are transported, used, stored, and disposed of in a safe and legal manner to protect construction workers' safety. These regulations are also intended to reduce the potential for a release of construction-related fuels or other hazardous materials into the environment, including stormwater and downstream receiving water bodies.

Based on these regulations, including Sacramento 2035 General Plan policies and City Code Title 8.60 (Hazardous Material Cleanup) and 8.64 (Hazardous Materials Disclosure), contractors would be required to prepare and implement Hazardous Materials Business Plans requiring that hazardous materials used for construction be used properly and stored in appropriate containers with secondary containment, as needed, to contain a potential release. In addition, the California Fire Code would require measures for the safe storage and handling of hazardous materials.

Compliance with those regulations would render the impact of hazardous materials risks related to construction and operation of the proposed project less than significant.

57 Sacramento County Environmental Management, 2021. Available: https://emd.saccounty.net/EC/CUPA/Documents/Form/TOX1%203%2030%202021.pdf. Accessed April 30, 2021.

As discussed in, Section 3.7, *Geology and Soils*, above, construction contractors would be required to prepare a Storm Water Pollution Prevention Plan (SWPPP) for construction activities in compliance with requirements of the National Pollutant Discharge Elimination System's (NPDES) General Construction Permit. The SWPPP would list the hazardous materials (including petroleum products) proposed for use during construction; describe spill prevention measures, equipment inspections, and equipment and fuel storage; protocols for responding immediately to spills; and describe best management practices (BMPs) for controlling site run-on and runoff.

Additionally, the transportation of hazardous materials would be regulated by the Department of Transportation (DOT), California Department of Transportation (Caltrans), and the California Highway Patrol (CHP). Together, federal and State agencies determine driver-training requirements, load labeling procedures, and container specifications designed to minimize the risk of an accidental release. In the event of a spill that releases hazardous materials, a coordinated response would occur at the federal, state, and local levels, including the City of Sacramento whose Fire Department is the local hazardous materials response team. In the event of a hazardous materials spill, the Sacramento Police and Fire Departments would be notified simultaneously and sent to the scene to assess and respond to the situation.

The required compliance with the numerous existing laws and regulations discussed above that govern the transportation, use, handling, and disposal of hazardous materials would limit the potential for creation of hazardous conditions from the use or accidental release of hazardous materials. Compliance with these regulations also minimizes the potential of hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment to a **less than significant level**.

c) ***Less than Significant.*** The project site is in a residential neighborhood with four schools, namely; (1) Natomas High School approximately 2,900 feet to the west, (2) Garden Valley Elementary approximately 1,900 feet to the northeast, and (3) Rio Terra Junior High approximately 700 feet, and 4) Hazel Strauch Elementary approximately 1,200 feet to the south of the project site.

Rio Terra Junior High and Strauch Elementary are within 0.25-mile (1,320 feet) of the site. Implementation of the proposed project would not involve hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste as it is a residential community. The proposed project is residential uses; as such storage of hazardous materials or chemicals in large quantities is not generally associated with residential development.

However, the construction of these residences, clubhouse/leasing office, roadways, landscaping, utilities and infrastructure involves the use of construction equipment, staging, use of building materials, overhauling of dirt and debris. As such, there is potential for accidental leak or accidental exposure to hazardous materials during construction.

The project is subject to the Sacramento City Code, Titles 8.60 (Hazardous Material Cleanup) and 8.64 (Hazardous Materials Disclosure) that establishes parameters for the safe handling of hazardous materials to limit the risk of public exposure. The grading permit that includes ground disturbing activities occurring as a result of the proposed project would require adherence to best management practices (BMPs) for hazardous material spill prevention and cleanup as established in the associated SWPPP.

Compliance with those regulations would render the impact of hazardous materials risks related to construction and operation of the proposed project less than significant. No mitigation measures would be required.

d) ***No Impact.*** As discussed above for a) and b), the project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (also referred to as the "Cortese List"). Therefore, the proposed project would not create a significant hazard to the public or the environment on account of being located on a hazardous materials site. There would be no impact under this criterion.

e) ***No Impact.*** The nearest airport is the Sacramento International Airport, approximately 6.32 miles northwest to the project site. According to the Comprehensive Land Use Plan (CLUP) for the Sacramento International Airport,[58] the project site is not within the delineated Airport Influence Area (AIA) safety zones or noise contours. The proposed project would not result in a safety hazard or excessive noise for people residing in the area, and there would be no impact.

f) ***Less than Significant.*** The City of Sacramento has an Emergency Operations Plan and the Fire Department has a hazardous materials incident response team that works in coordination with other regional and state agencies in the event of a major emergency (Policy PHS 4.1.1). In addition, Sacramento County has developed an Area Plan for Emergency Response to Hazardous Materials Incidents and a Local Hazard Mitigation Plan. The City has adopted the latter and cooperates with the County with the adopted emergency response plans.

Construction activities for large projects would likely cause land closures or may restrict travel on city roadways for temporary periods of time. It is not anticipated that implementation of the proposed project would cause similar level of temporary closures. As specified by the Sacramento Municipal Code Sections 12.20.020 and 12.20.030, the City's Public Works Department requires preparation of a Traffic Management Plan for the construction activities to reduce major congestion problems, which could result in interference with emergency response.

With compliance with the Traffic Management Plan review and approval by the City's Public Works Department, the proposed project would minimize the potential for

58 Sacramento Area Council of Governments, 2013. *Sacramento International Airport Land Use Compatibility Plan*. Adopted December 12, 2013. Available: https://www.sacog.org/sites/main/files/file-attachments/smf_alucp_all_adopted_dec_2013.pdf?1456339912.

construction impacts to interfere with emergency response and implementation of Traffic Management Plans would reduce the impact to less than significant. The proposed development would not require substantial or permanent road closures which might affect implementation of an emergency response or evacuation plan, the proposed project impact would remain less than significant. No mitigation measures would be required.

g) ***Less than Significant.*** The project site is not located in a Very High Fire Hazard Severity Zone (VHFHSZ)[59] as mapped by the California Department of Forestry and Fire Protection (CAL FIRE). As directed by Government Code 51175-89, the CAL FIRE identifies areas of very high fire hazard severity zones within Local Responsibility Areas (LRA). The project site is located within the City of Sacramento's Fire Department service area.

As construction activities occurring during the dry season has the potential to create sparks that could ignite dry grasses and weeds in the project area or on the project site. However, this risk is similar to that found at other construction sites and ongoing vegetation management practices would ensure that wildland fires would be unlikely to occur.

The proposed project would develop the project site with urbanized uses and would be subject to similar conditions for which vegetation management practices would remain applicable and effective in minimizing the potential fire hazards from construction. For this reason, the impact of the proposed project with respect to fire hazards would remain less than significant.

---

59 California Department of Forestry and Fire Protection, 2021. Available: https://osfm.fire.ca.gov/media/6758/fhszl_map34.pdf. Accessed April 30, 2021.

3.10 Hydrology and Water Quality

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
X. HYDROLOGY AND WATER QUALITY — Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv) impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

Environmental Setting

The proposed project site is zoned for agricultural use, but is currently vacant and undeveloped. The majority of the site consists of pervious soils.

The City of Sacramento is located within the Sacramento Valley Groundwater Basin, which includes both the 351,000-acre North American Subbasin and the 248,000-acre South American Subbasin. The proposed project site would fall within the North American Subbasin.[60]

The City is also situated at the confluence of the Sacramento River and American River, within the Sacramento River Basin. The basin consists of approximately 27,000 square miles bounded by the Cascade Range and Trinity Mountains to the north, the Sacramento-San Joaquin Delta to the southeast, the Sierra Nevada to the east, and the Coast Ranges to the west. This basin captures approximately 22 million acre-feet (AF) of average annual precipitation.[61]

[60] City of Sacramento, 2015. *City of Sacramento 2035 General Plan Background Report.* Adopted March 3, 2015. P. 6-48.

[61] City of Sacramento, 2015. *City of Sacramento 2035 General Plan Background Report.* Adopted March 3, 2015. P. 6-43.

Discussion

a) ***Less than Significant.*** Water quality in the City of Sacramento is regulated by the City of Sacramento Stormwater Quality Improvement Program (SQIP), a comprehensive program intended to reduce stormwater pollution to the Maximum Extent Practicable (MEP).[62] The State Water Resources Control Board (SWRCB) adopts a statewide general National Pollutant Discharge Elimination System (NPDES) permit to regulate stormwater discharges associated with construction activity. Projects which disturb at least one acre of soil are also required to obtain coverage under the General Permit for Discharges of Stormwater Associated with Construction Activity Construction General Permit Order 2012-0006-DWQ (General Permit). This permit applies to construction activities that include clearing, grading, and ground disturbances like stockpiling or excavation.

The City of Sacramento SQIP contains a Construction Element, or General Construction Permit, which seeks to eliminate prohibited non-stormwater discharges by directing implementation of the NPDES Permit for Stormwater Discharges Associated with Construction Activity. This General Construction Permit requires the development of implementation of a Stormwater Pollution Prevention Plan (SWPPP), which must include the best management practices (BMPs) the proposed project will utilize to protect stormwater runoff. The SWPPP also includes a visual monitoring program, and chemical monitoring program for "non-visible" pollutants to be implemented in case of BMP failure, and a sediment monitoring plan if the site discharges directly to a body of water listed on the 303(d) list for sediment.

Implementation of the proposed project would include construction activities which could potentially degrade water quality as a result of increased sedimentation and discharge associated with stormwater runoff. The potential for stormwater erosion due to the disturbance of soils onsite would also be increased by the proposed project. As the proposed project would disturb more than one acre of land, it would be required to comply with the Construction General Permit by filing a Notice of Intent (NOI) through the State's Stormwater Multiple Application and Report Tracking System (SMARTS) and receiving a valid identification number prior to the issuance of any grading permits. During construction, the proposed project would be subject to the requirements of the Construction General Permit, NPDES, and General Permit.

Operation of the proposed project would be designed in adherence with standards and guidelines for source control, runoff reduction, and treatment control measures established in the Stormwater Quality Design Manual for the Sacramento Region,[63] and with the stormwater pollutant reduction requirements of the Stormwater Management and Discharge Control Code under Chapter 13.16 of the Sacramento City Code.

62 City of Sacramento, 2021. "Stormwater." Available: https://www.cityofsacramento.org/utilities/drainage/stormwater. Accessed June 4, 2021.

63 Cities of Citrus Heights, Elk Grove, Folsom, Galt, Rancho Cordova, and Sacramento and County of Sacramento, 2018. *Stormwater Quality Design Manual for the Sacramento Region.* Published July 2018.

Compliance with the aforementioned permit requirements, Stormwater Quality Design Manual standards and guidelines, and Sacramento City Code regulations, along with the implementation of BMPs and associated monitoring programs, would result in a less-than-significant impact to water quality standards.

b) ***Less than Significant.*** The proposed project would introduce impervious surfaces throughout the approximately 9.17-acre project site, which is situated within the 351,000-acre North American Subbasin. In 2014, estimated that cumulative groundwater recharge to the North American Subbasin from various recharge components was approximately 114,400 AF.[64] Given the size of the subbasin and the cumulative recharge the basin receives, the relatively small acreage of pervious area which would be lost as a result of project implementation would not be anticipated to substantially decrease or interfere with groundwater recharge such that sustainable groundwater management of the basin would be impeded. Compliance with the 2014 Groundwater Management Plan and with the 2015 Sustainable Groundwater Management Act (SGMA) would further reduce environmental effects of the proposed project related to groundwater recharge, and the impact would be less than significant.

c.i) ***Less than Significant.*** Although the proposed project would introduce new impervious surfaces to the project site, the project would be subject to the development, review, and implementation of a project-specific drainage study and site-specific grading plan under the guidance of the City of Sacramento Department of Utilities (DOU), prior to construction. As mentioned above, the proposed project would be required to comply with the requirements of an NPDES permit, General Permit, and General Construction Permit to regulate ground-disturbing activities and stormwater runoff. Compliance with these permits would also include implementation of BMPs and monitoring programs to mitigate potential erosion or sedimentation resulting from stormwater runoff or discharge.

The proposed project would also be subject to compliance with and inspections under the City of Sacramento's Grading, Erosion, and Sediment Control Ordinance, which requires project applicants to demonstrate erosion, sediment, and urban runoff pollution control methods on construction plans. Adhering to these conditions would result in a less-than-significant impact to on- or off-site erosion or siltation through alteration of the existing drainage pattern for the proposed project.

c.ii) ***Less than Significant.*** The proposed project would require a site-specific drainage study subject to review and approval by DOU. This drainage study would comply with the Master Drainage Plan for Basin 141 and would include analysis for mitigating sizing and drainage system design. Grading of the proposed project site would not occur prior the review and approval of a project-specific grading plan by the DOU.

64 Sacramento Groundwater Authority, 2014. *Groundwater Management Plan: Sacramento County – North Basin*. Published December 2014. P. 32.

Although the proposed project would alter existing drainage on the site through the addition of impervious surfaces, the proposed project is not anticipated to substantially alter existing patterns of the project site or vicinity in a manner which would result in flooding on- or off-site. Completion of a project-specific drainage study would reduce potential flooding hazards resulting from project implementation. Compliance with relevant policies of the 2035 General Plan and with the requirements of the NPDES, General Permit, and General Construction Permit, as well as with Stormwater Quality Design Manual standards and guidelines and Stormwater Management and Discharge Control regulations, would reduce the potential environmental effects of increased surface runoff resulting from the proposed project, and would result in a less-than-significant impact to on- or off-site flooding.

c.iii) ***Less than Significant.*** Increased runoff in the project vicinity would result from implementation of the proposed project, which would include the additional of new impervious surfaces on the proposed project site. However, the DOU has not indicated that construction or operation of the proposed project would exceed the capacity of existing or planned stormwater drainage systems. Any anticipated infrastructure for the drainage system at the proposed project site would be designed in accordance with the standards and guidelines of the Stormwater Quality Design Manual for the Sacramento Region and the DOU's Onsite Design Manual for Drainage, Sewer, Water, Stormwater Quality and Erosion and Sediment Control.[65]

Compliance with NPDES, General Permit, and General Construction Permit measures, implementation of BMPs to protect stormwater runoff and regulate discharge, and adherence to the City of Sacramento's Grading, Erosion, and Sediment Control Ordinance, would reduce the potential effects of drainage pattern alteration to runoff capacity or pollution resulting from the proposed project. The drainage study which would be required for this project prior to project construction would confirm this conclusion. This impact would therefore be less than significant.

c.iv) ***Less than Significant.*** The proposed project site is situated within Zone A99 as mapped by the Federal Emergency Management Agency (FEMA).[66] Zone A99 areas are subject to inundation by a one-percent-annual-chance flood event, but are considered protected under the specified statutory progress toward or complete construction of flood protection systems.[67] The proposed project site does not fall within any special flood hazard areas or other areas of flood hazard.

The proposed project would require a site-specific drainage study in compliance with the Master Drainage Plan for Basin 141; this study would be subject to review and approval

65 City of Sacramento Department of Utilities, 2020. *Onsite Design Manual for Onsite Drainage, Sewer, Water, Stormwater Quality and Erosion and Sediment Control.* Published May 1, 2020.

66 Federal Emergency Management Agency, 2020. "National Flood Hazard Layer FIRMette." October 2020. Available: https://msc.fema.gov/arcgis/rest/directories/arcgisjobs/nfhl_print/mscprintb_gpserver/j0d3df0e9a36a420c9a00b9f22b4f4fad/scratch/FIRMETTE_1fad3a3c-5a0a-4e99-afff-c5ce5d02d4e4.pdf. Accessed June 4, 2021.

67 Federal Emergency Management Agency, 2020. "Zone A99." Updated July 7, 2020. Available: https://www.fema.gov/glossary/zone-a99. Accessed June 4, 2021.

by the DOU. The proposed project would also comply with Section 15.88.010 of the Sacramento City Code, which prohibits development of a project such that the project would obstruct, impede, or interfere with the natural flow of existing off-site drainage crossing the proposed project site. Grading of the proposed project site would not occur prior the review and approval of a project-specific grading plan by the DOU.

Although the proposed project would alter existing drainage on the site through the addition of impervious surfaces, the proposed project is not anticipated to substantially alter existing patterns of the project site or vicinity in a manner which would impede or redirect flood flows. The Natomas Levee Improvement Program (NLIP) is currently being carried out by the Sacramento Area Flood Control Agency (SAFCA) to address deficiencies in the levee system and to provide the Natomas Basin with protection against a 100-year flood as soon as possible.[68,69] Completion of a drainage study would reduce potential flooding hazards resulting from project implementation. Compliance with relevant policies of the 2035 General Plan and with FEMA-mandated flood insurance purchase requirements and National Flood Insurance Program (NFIP) floodplain management standards established for A99 zones would result in a less-than-significant impact to the alteration of existing drainage patterns such that flood flows would be impeded or redirected.

d) ***Less than Significant.*** The proposed project site is not located near a body of water such that the project would place individuals or structures at risk of tsunami or seiche. However, the proposed project site is located within an A99 zone, as mapped by FEMA. Because of this designation, the proposed project would be subject to mandatory flood insurance purchase requirements and floodplain management and building requirements as contained in Section 60 of NFIP regulations. These regulations include, but are not limited to, the provisions that:

- flood insurance not be sold or renewed within a community, unless the community has adopted adequate flood plain management regulations consistent with Federal criteria;[70]
- all permit applications for proposed construction be reviewed to determine whether proposed building sites will be reasonably safe from flooding;[71]
- and review subdivision proposals and other new development, including manufactured home parks or subdivisions, to determine whether such proposals will be reasonably safe from flooding.[72]

Should proposed buildings be situated within a flood-prone area, NFIP regulations require that all new construction and substantial improvements: (i) be designed or

68 City of Sacramento, 2021. Sacramento City Code Chapter 15.104.065: Zone A99 Regulations. Available: http://www.qcode.us/codes/sacramento/view.php?topic=15-15_104-i-15_104_065. Accessed June 4, 2021.

69 Reclamation District 1000. "Natomas Levee Project." Available: https://www.rd1000.org/natomas-levee-project. Accessed June 4, 2021.

70 Federal Code of Regulations (CFR). 44 CFR Part 60.1 Purpose of subpart.

71 Federal Code of Regulations (CFR). 44 CFR Part 60.3 Flood plain management criteria for flood-prone areas.

72 Federal Code of Regulations (CFR). 44 CFR Part 60.3 Flood plain management criteria for flood-prone areas.

modified and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, (ii) be constructed with materials resistant to flood damage, (iii) be constructed by methods and practices that minimize flood damages, and (iv) be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

If proposed subdivisions or other new development is located in a flood-prone area, NFIP regulations require that: (i) all proposals are consistent with the need to minimize flood damage within the flood-prone area, (ii) all public utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage, and (iii) adequate drainage is provided to reduce exposure to flood hazards.[73]

As the proposed project would comply with the NFIP floodplain management and building requirements delineated in Section 60.3, as well as previously mentioned permit conditions and BMPs, 2035 General Plan policies, and relevant City Code regulations to reduce erosion, sedimentation, and pollution discharge, the proposed project would not substantially risk the release of pollutants due to project inundation resulting from flood hazard. This result would be less than significant.

e) ***No Impact.*** The proposed project would be subject to the standards and guidelines of the City of Sacramento 2020 Urban Water Management Plan (UWMP) and the 2014 Sacramento County Groundwater Management Plan, and would not conflict with or obstruction implementation of a water quality control plan or sustainable groundwater management plan. There would be no impact to water management plans resulting from implementation of the proposed project.

---

[73] Federal Code of Regulations (CFR). 44 CFR Part 60.3 Flood plain management criteria for flood-prone areas.

3.11 Land Use and Planning

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XI. LAND USE AND PLANNING — Would the project:				
a) Physically divide an established community?	☐	☐	☒	☐
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Environmental Setting

The project site is located in the South Natomas area of the City of Sacramento. The project site has been designated as Suburban Neighborhood Low Density (SN-LD Density Range: 3.0 to 5.0 du/ac) and a maximum Floor Area Ratio (FAR) of 1.5 in the 2035 General Plan,[74] and is zoned Agriculture (A). This land use designation is meant to provide residential uses of suburban nature of low-density range. The project proposes a General Plan Amendment (GPA) to modify the land use designation to Suburban Neighborhood Medium Density (SN-MD).

Discussion

a) ***Less than Significant.*** The project site is surrounded by other residential uses, including condominiums, places of worship, and a public park. Immediately northeast is a rental community–Point Natomas Apartments and single-family neighborhood further west of San Juan Street. Immediately south and southwest to the site is a public park and a place of worship, i.e., Rio Terra Park and The Church of Jesus Christ of Latter Day Saints. The project site is about a quarter-mile from the Northgate Boulevard corridor, which includes retail and commercial land uses.

The proposed 79-unit residential project, would be infill development, filling in vacant parcels within an urbanized neighborhood, on a site designated for urban development in the City's 2035 General Plan. This designation provides for low-intensity urban housing of varying sizes. The project proposes a total of 79 attached and detached single family residences at a higher density with supportive amenities on two vacant parcels and would provide a consistent development density to the residential land uses surrounding the project site. Therefore, the project proposes a General Plan Amendment to modify the land use designation from SN-LD to SN-MD. As the SN-LD land use designation would allow for the higher residential density included in the proposed project, the project would provide additional housing needed in the City and the region. The project would not result in any physical division to an established community.

The project site is zoned Agriculture (A), the Sacramento City Code Title 17 Planning and Development Code Division II Zoning Districts and Land Use Regulations Chapter 17.200.110 Permitted Uses within Agriculture (A) zone does not include residential other

[74] City of Sacramento, 2015. *City of Sacramento 2035 General Plan.* Adopted March 3, 2015.

than farm worker housing or a single family unit. The main purpose of Agriculture zone is to restrict land uses to those that directly provide or support agriculture, farming or open space uses. However, the project parcels are surrounded by urbanized residential development and are the only parcels with the Agriculture (A) zoning designation within a predominantly residential area.

In such cases, parcels with the Agriculture zoning designation can be considered for reclassification when proposed for development that is consistent with the general plan (Ord. 2013-0020 § 1; Ord. 2013-0007 § 1). Rezoning would make it consistent with the general nature of the surrounding urbanized area. Therefore, the project proposes rezoning of the project site to a residential zoning designation.

The project would increase housing within a growing residential area, and would not physically divide an established community. For the reasons described above, the project would have a less than significant impact.

b) ***Less than Significant.*** The proposed project, a residential community, is consistent with the regional, local, neighborhood and conservation plans and policies that guide the development of land uses and avoid or mitigate for environmental effects.

SACOG Blueprint: The Sacramento Area Council of Governments (SACOG) adopted the Sacramento Region Blueprint Transportation and Land Use Study Preferred Blueprint Scenario (Blueprint) in December 2004[75]. The proposed project is on a site earmarked for single family residential. With development of single –family residential units, the proposed project is consistent with the regional Preferred Blueprint Scenario.

2035 General Plan: The City's General Plan includes policies intended for protection, maintenance, and enhancement of Sacramento's residential neighborhoods. Policies that address diversity of housing types and support the development of more complete residential neighborhoods and complementary community and neighborhood serving uses, such as parks and schools and places of assembly, are applicable to the proposed project.

The project site is designated Suburban Neighborhood-Low Density (SN-LD) which allows for a density range of 3 to 8 dwelling units per acre. The project proposes 79 homes on an approximately 9.17-acre site, a gross density of 8.6 dwelling units per acre. The project proposes a General Plan Amendment to revise the land use designation to Suburban Neighborhood-Medium Density (SN-MD) which allows for a density range of 7.0 to 17.0 dwelling units per acre.

General Plan policies for suburban neighborhoods also focus on enhancing the housing choices, pedestrian safety and neighborhood connectivity. The project proposes housing types of varying sizes and architectural character in keeping with the adjacent

[75] Sacramento Area Council of Governments, 2017. "About SACOG." Available: http://www.sacog.org/about/. Accessed July 15, 2021.

developments. The project reinforces accessibility through inclusion of sidewalks for pedestrians and connection to the future alignment of the pedestrian and bicycle trail along the canal.

South Natomas Community Plan: The project site is located within the South Natomas Community Plan area, and is designed to be consistent with the overall community plan–land use and urban form for South Natomas as illustrated in SN-2.[76]

Natomas Basin Habitat Conservation Plan: The project site is located within an area considered exempt from compliance with the NBHCP.[77] Therefore, the proposed project would not conflict with the NBHCP.

For the reasons described above, the proposed project would involve a General Plan Amendment and a Rezoning as discussed above and would have a less than significant impact related conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

---

76 City of Sacramento, 2015. *South Natomas Community Plan*. Adopted March 3, 2105. Available: https://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/Community-Plans/South-Natomas.pdf?la=en. Accessed May 10, 2021.

77 City of Sacramento, Sutter County, and Natomas Basin Conservancy, 2006. *Final Natomas Basin Habitat Conservation Plan*, Ch. 5, Land Use Issues. Available: www.natomasbasin.org/helpful-documents/2003-nbhcp-related-documents/. Accessed February 2, 2016. p. III-14 & Exhibit B

3.12 Mineral Resources

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XII. MINERAL RESOURCES — Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

Environmental Setting

Existing mineral extraction activities around the City of Sacramento include clay and gold, as well as fine sand and coarse gravel aggregates. Over 67 million tons of permitted aggregate resources exist in Sacramento County, and the City of Sacramento had one permitted mining operation in the southeastern portion of the city; however, this operation is no longer an active mining site. One other mining operation for construction sand is located adjacent to the American River in the South Natomas Community Plan area; however, this has been ordered to cease and desist by both the City and the State, as it is not a permitted mining operation.[78]

Mineral Resource Zones (MRZs) are categorized by geologic factors into four broad classifications (MRZ-1 through MRZ-4). Zones that are likely to include significant existing or likely mineral deposits are classified as MRZ-2 areas. Many of the areas within the City of Sacramento that are classified as MRZ-2 have already been developed.

Discussion

a) ***No Impact.*** The City of Sacramento 2035 General Plan Background Report identified one MRZ within the plan area where the likelihood of significant mineral deposits is high (MRZ-2).[79] This MRZ-2 zone is located approximately 3.5 miles southeast of the proposed project site, along the American River, and is not situated within the project area.[80] No MRZ-2 zones have been mapped by the California Geologic Survey in proximity to the proposed project site, although areas containing mineral deposits, the significance of which cannot be evaluated from available data (MRZ-3), have been mapped south of the proposed project site, along the American River.

The project area is classified as MRZ-1,[81] indicating that there is adequate information to suggest that no significant mineral deposits are present or that there is little likelihood of

78 City of Sacramento, 2015. *City of Sacramento 2035 General Plan Background Report.* Adopted March 3, 2015. P. 6-93.

79 City of Sacramento, 2015. *City of Sacramento 2035 General Plan Background Report.* Adopted March 3, 2015. P. 6-93.

80 Dupras, Don L., 1999. Mineral Land Classification Map of PCC-Grade Aggregate Resources in Sacramento County, Plate 3. Published 1999.

81 Dupras, Don L., 1999. Mineral Land Classification Map of PCC-Grade Aggregate Resources in Sacramento County, Plate 3. Published 1999.

their presence in the area. As there are no known mineral resources located on the proposed project site, no impact to known mineral resources of regional or state-wide would value result from implementation of the proposed project.

b) ***No Impact.*** No locally-important mineral resources or locally-important mineral resource recovery sites were identified within the City of Sacramento 2035 General Plan or the South Natomas Community Plan. Although existing mineral extraction activities in the vicinity of Sacramento include clay and fine and course construction aggregates (sand and gravel, respectively), these activities do not pertain to locally-important mineral resources or recovery sites.

As the proposed project vicinity is classified as MRZ-1, indicating a lack of the presence or likelihood of significant mineral deposits, the proposed project would result in no impact related to the loss of availability of a locally-important mineral resource recovery site.

3.13 Noise

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XIII. NOISE — Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Environmental Setting

Sound is mechanical energy transmitted by pressure waves through a medium such as air. Noise can be defined as unwanted sound. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. Sound pressure level is measured in decibels (dB), with 0 dB corresponding roughly to the threshold of human hearing, and 120 to 140 dB corresponding to the threshold of pain.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to low and extremely high frequencies instead focusing on the frequency mid-range. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA). All sound pressure levels and sound power levels reported below are A-weighted.

Noise Exposure and Ambient Noise

An individual's noise exposure is a measure of the noise experienced by the individual over a period of time. A noise level is a measure of noise at a given instant in time. However, noise levels rarely persist consistently over a long period of time. In fact, noise varies continuously with time with respect to the contributing sources in the noise environment. Different noise descriptors used to characterize environmental noise are summarized below:

L_{eq}: The equivalent sound level is used to describe noise over a specified period of time, in terms of a single numerical value. The L_{eq} is the constant sound level which would

contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).

L_{dn}: The energy average of the A-weighted sound levels occurring during a 24-hour period, and which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night ("penalizing" nighttime noises). Noise between 10 p.m. and seven a.m. is weighted (penalized) by adding 10 dBA to take into account the greater annoyance of nighttime noises.

L_{max}: The instantaneous maximum noise level measured during the measurement period of interest.

Effects of Noise on People

The effects of noise on people can be placed into three categories:

- subjective effects of annoyance, nuisance, dissatisfaction;
- interference with activities such as speech, sleep, learning; and
- physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers at industrial plants often experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction. A wide variation exists in the individual thresholds of annoyance, and different tolerances to noise tend to develop based on an individual's past experiences with noise. Thus, an important way of predicting a human reaction to a new noise environment is the way the new noise compares to the existing noise levels that one has adapted to, which is referred to as the "ambient noise" level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it.

With regard to increases in A-weighted noise level, the following relationships occur:[82]

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference when the change in noise is perceived but does not cause a human response;
- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10-dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

These relationships occur in part because of the logarithmic nature of sound and the decibel system. The human ear perceives sound in a non-linear fashion; hence, the decibel scale was

82 California Department of Transportation, 2020. *Transportation and Construction Vibration Guidance manual.* April 2020.

developed. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather they combine logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA. However, where ambient noise levels are high in comparison to a new noise source, there will be a small change in noise levels. For example, when 70 dBA ambient noise levels are combined with a 60 dBA noise source, the resulting noise level equals 70.4 dBA.

Noise Attenuation

Sound level naturally decreases with more distance from the source. This basic attenuation rate is referred to as the *geometric spreading loss*. The basic rate of geometric spreading loss depends on whether a given noise source can be characterized as a point source or a line source. Point sources of noise, including stationary mobile sources such as idling vehicles or on-site construction equipment, attenuate (lessen) at a rate of 6.0 to 7.5 dBA per doubling of distance from the source. Widely distributed noises such as a street with moving vehicles (a "line" source) would typically attenuate at a lower rate of approximately 3.0 to 4.5 dBA for each doubling of distance between the source and the receiver depending on the ground conditions between the source and the receiver. Atmospheric effects, such as wind and temperature gradients, presence of trees and vegetation, buildings, and barriers also influence noise attenuation rates from both line and point sources of noise. Generally, a solid noise barrier that breaks the line of sight between source and receiver will provide at least a 5-dBA reduction in noise.

Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal and is typically expressed in units of inches per second (in/sec). The PPV is most frequently used to describe vibration impacts on buildings. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (VdB) is commonly used to measure RMS. The decibel notation acts to compress the range of numbers required to describe vibration.[83] Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration.

Some common sources of ground-borne vibration are trains, heavy trucks traveling on rough roads, and construction activities such as blasting, pile driving, and operation of heavy earthmoving equipment. The effects of ground-borne vibration include movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. In extreme cases, vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and pile-driving during

[83] Federal Transit Administration, 2018. *Transit Noise and Vibration Impact Assessment Manual*. September 2018. Available: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf.

construction. In residential areas, the background vibration velocity level is usually around 50 VdB.

Sensitive Receptors

Human response to noise varies considerably from one individual to another. Effects of noise at various levels can include interference with sleep, concentration, and communication, and can cause stress and hearing loss. Given these effects, some land uses are considered more sensitive to ambient noise levels than others. In general, residences, schools, hotels, hospitals, and nursing homes are considered to be the most sensitive to noise. Places such as churches, libraries, and cemeteries, where people tend to pray, study, and/or contemplate are also sensitive to noise. Commercial and industrial uses are considered the least noise-sensitive.

Sensitive receptors in the form of residential uses surround the project site except to the south and southeast. The Rio Terra Junior High School and Hazel Strauch Elementary School are located to the south of the project site across San Juan Road. The Peace Lutheran Church and the Church of Jesus Christ of Latter-day Saints is located to the southeast. The nearest residences are the single family homes along Rancho Roble Way located approximately 50 feet from the project site's northeastern boundary.

Regulatory Setting

Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies. Local regulation of noise involves implementation of general plan policies and noise ordinance standards. Local general plans tend to identify general principles intended to guide and influence development plans; local ordinances establish standards and procedures for addressing specific noise sources and activities.

City of Sacramento 2035 General Plan

The following noise and vibration-related standards identified in the Environmental Constraints Element of the City of Sacramento 2035 General Plan[84] are relevant to the proposed project.

Exterior Noise Standards. Per Policy EC 3.1.1, the City shall require noise mitigation for all development where the projected exterior noise levels exceed those shown in **Table 3.13-1** (Table EC 1 in the General Plan), to the extent feasible.

Exterior Incremental Noise Standards. Policy EC 3.1.2 requires that the City shall require noise mitigation for all development that increases existing noise levels by more than the allowable increment shown in **Table 3.13-2** (Table EC 2 in the General Plan), to the extent feasible.

84 City of Sacramento, 2015. *City of Sacramento 2035 General Plan.* Adopted March 3, 2015.

TABLE 3.13-1
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	65 dBA
Urban Residential Infill[f] and Mixed-Use Projects[g]	70 dBA
Transient Lodging—Motels, Hotels	65 dBA
Schools, Libraries, Churches, Hospitals, Nursing Homes	70 dBA
Auditoriums, Concert Halls, Amphitheaters	Mitigation based on site-specific study
Sports Arena, Outdoor Spectator Sports	Mitigation based on site-specific study
Playgrounds, Neighborhood Parks	70 dBA
Golf Courses, Riding Stables, Water Recreation, Cemeteries	75 dBA
Office Buildings—Business, Commercial and Professional	70 dBA
Industrial, Manufacturing, Utilities, Agriculture	75 dBA

NOTES:
a. As defined in the **State of California General Plan Guidelines**, "Normally Acceptable" means that the "specified land use is satisfactory, based upon the assumption that any building involved is of normal conventional construction, without any special noise insulation requirements."
b. L_{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. dBA or A-weighted decibel scale is a measurement of noise levels.
e. The exterior noise standard for the residential area west of McClellan Airport known as McClellan Heights/Parker Homes is 65 dBA.
f. With land use designations of Central Business District, Urban Neighborhood (Low, Medium, or High) Urban Center (Low or High), Urban Corridor (Low or High).
g. All mixed-use projects located anywhere in the City of Sacramento.

SOURCE: City of Sacramento, 2015. *City of Sacramento 2035 General Plan.* Adopted March 3, 2015.

TABLE 3.13-2
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

NOTES:
a. This category includes homes, hospitals, and hotels where a nighttime sensitivity to noise is assumed to be of utmost importance.
b. This category includes schools, libraries, theaters, and churches where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material.

SOURCE: City of Sacramento, 2015. *City of Sacramento 2035 General Plan.* Adopted March 3, 2015.

Interior Noise Standards. Policy EC 3.1.3 requires new development to include noise mitigation to assure acceptable interior noise levels appropriate to the land use type: 45 dBA L_{dn} for residential, transient lodgings, hospitals, nursing homes, and other uses where people normally sleep; and 45 dBA L_{eq} (peak hour) for office buildings and similar uses.

Vibration. Policy EC 3.1.5 requires construction projects anticipated to generate a significant amount of vibration to ensure acceptable interior vibration levels at nearby residential and commercial uses based on the current City or FTA criteria. Policy EC 3.1.7 requires an assessment of the damage potential of vibration-induced construction activities, highways, and rail lines in close proximity to historic buildings and archaeological sites and require all feasible measures be implemented to ensure no damage would occur.

Operational Noise. Policy EC 3.1.8 requires mixed-use, commercial, and industrial projects to mitigate operational noise impacts to adjoining sensitive uses when operational noise thresholds are exceeded.

Construction Noise. Policy EC 3.1.10 requires development projects subject to discretionary approval to assess potential construction noise impacts on nearby sensitive uses and to minimize impacts on these uses, to the extent feasible.

City of Sacramento Municipal Code (Noise Control Ordinance)

The Sacramento Municipal Code includes noise regulations in Title 8 – Health and Safety, Chapter 8.68 – Noise Control (referred to generally as the Noise Control Ordinance). Of the regulations in Chapter 8.68, the following regulations would be applicable to the proposed Project:

- Section 8.68.080 exempts certain activities from Chapter 8.68, including "noise sources due to the erection (including excavation), demolition, alteration, or repair of any building or structure" as long as these activities are limited to between the hours of 7:00 am and 6:00 pm Monday through Saturday, and between the hours of 9:00 am and 6:00 pm on Sunday. The use of exhaust and intake silencers for internal combustion engines is also required. Construction work can occur outside of the designated hours if the work is of urgent necessity and in the interest of public health and welfare for a period not to exceed 3 days. Section 8.68.080 also exempts noise from any mechanical device, apparatus, or equipment related to or connected with emergency activities or emergency work from Chapter 8.68 requirements.

- Section 8.68.060 sets standards for cumulative exterior noise levels at residential and agricultural properties, including exterior noise standards of 55 dBA from 7:00 am to 10:00 pm, and 50 dBA from 10:00 pm to 7:00 am. Per Section 8.68.060(b), the allowable decibel increase above the exterior noise standards in any one hour are:

    1. 0 dB for cumulative period of 30 minutes per hour;
    2. 5 dB for cumulative period of 15 minutes per hour;
    3. 10 dB for cumulative period of 5 minutes per hour;
    4. 15 dB for cumulative period of 1 minutes per hour; or
    5. 20 dB not to be exceeded for any time per hour.

In addition, per Section 8.68.060(c), each of the noise limits above shall be reduced by 5 dB for impulsive or simple tone noises, or for noises consisting of speech or music. If the ambient noise level exceeds that permitted by any of the first four noise limit categories specified in subsection (b) above, the allowable noise limit shall be increased in 5 dB increments in each category to encompass the ambient noise level. If the ambient noise level exceeds the fifth noise level category, the maximum ambient noise level shall be the noise limit for that category.

Discussion

a) ***Less than Significant with Mitigation***. This noise impact analysis evaluates the temporary noise increases associated with construction activities associated with the project, as well as operational noise generated primarily from the increase in traffic noise associated with changes in traffic volumes and patterns due to project. Operational noise from any on-site sources associated with the residential uses proposed as part of the project would be minimal.

Construction Noise

As detailed in Section 2, *Project Description*, the proposed project would construct 79 residential units over the approximately 9.17-acre site. Construction of the project is expected to take place over a period of 14 months starting in early 2022.

Construction, although typically short-term, can be a significant source of noise. Construction is most significant when it takes place near sensitive land uses, occurs during noise-sensitive evening and nighttime hours or when construction takes place over an extended period of time. Construction activities would temporarily increase ambient noise levels within and in the vicinity of the project area over the duration of construction. Construction activities would be temporary and intermittent, occurring at different parts of the site. Construction-related noise levels would fluctuate depending on the particular type, number, and duration of use of various pieces of construction equipment. The effect of construction noise would depend upon the phase of construction, level of construction activity on a given day, the related noise generated by that activity, the distance between construction activities and the nearest noise-sensitive uses, the presence or absence of barriers between the noise and the receptor, and the existing noise levels at the receptors.

Noise associated with construction equipment and activities is regulated through the enforcement of City of Sacramento noise ordinance standards, implementation of General Plan policies and imposition of conditions of approval for building or grading permits. As detailed earlier, Section 8.68.080 exempts certain activities from complying with standards in the noise ordinance, including “noise sources due to the erection (including excavation), demolition, alteration, or repair of any building or structure” as long as these activities are limited to between the hours of 7:00 am and 6:00 pm Monday through Saturday, and between the hours of 9:00 am and 6:00 pm on Sunday and use exhaust and intake silencers for internal combustion engines. All construction activities associated with the project would occur during these hours pursuant to Section 8.68.080.

Table 3.13-3 shows typical noise levels associated with various types of construction equipment.

TABLE 3.13-3
REFERENCE CONSTRUCTION EQUIPMENT NOISE LEVELS
(50 FEET FROM SOURCE)

Type of Equipment	L_{max}, dBA	Acoustical Usage Factor (%)	Hourly L_{eq}, dBA
Backhoe	78	40	74
Grader	85	40	81
Scraper	84	40	80
Crane	81	16	73
Dozer	82	40	78
Paver	77	50	74
Roller	80	20	73
Loader	78	40	74
Air Compressor	78	40	74
Excavator	81	40	77

SOURCE: Federal Highway Administration, 2008. *FHWA Roadway Construction Noise Model, Version 1.1,* December 2008.

As shown in Table 3.13-3, operation of construction equipment could generate maximum noise levels as high as 85 dBA at 50 feet. However, these maximum noise levels do not persist over the entire workday as equipment would not consistently need to be operated at their peak capacity. Equipment would operate at lower loads, idle and even be turned off during a typical workday. This range of activity is captured by the acoustical usage factor, also shown in Table 3.13-3. The L_{eq} for the various construction equipment (also shown in Table 3.13-3) is estimated as the equivalent noise level over an hour of construction taking into account the usage factor. Noise from construction activities generally attenuates at a rate of 6.0 to 7.5 dBA per doubling of distance.

Residential uses are considered most sensitive to noise as people spend extended amounts of time in them and therefore chances of exposure to noise is high. Residential uses along Rancho Roble Way are located as close as 50 feet from the northeastern boundary of the project site. Assuming simultaneous operation of the two noisiest equipment (grader and scraper), which represents the worst-case scenario, these receptors would intermittently experience noise levels of up to 83 dBA, well above the exterior noise compatibility standard of 65 dBA for residential multifamily uses shown in Table 3.13-1 and are also likely to exceed the exterior incremental noise impact standards shown in Table 3.13-2 for residential uses.

Due to the proximity of existing sensitive receptors, the impact of temporary increase in ambient noise levels from the worst-case scenario for construction would be considered a short-term significant impact on the nearby sensitive receptors.

Implementation of **Mitigation Measure NOI-1** would reduce this impact to a less than significant level by requiring noise control devices on construction equipment and implementation of best management practices to reduce noise impacts to adjacent receptors consistent with General Plan Policy ES 3.1.10. The impact of construction noise would therefore be less than significant with mitigation.

Operational Noise

Most of the long-term noise that would result due to the proposed project would primarily be generated by vehicle traffic on local roadways. The project would contribute to an increase in local traffic volumes, resulting in higher traffic noise levels along local roadways. Noise generated from stationary sources at the clubhouse and pool (HVAC equipment, pumps etc.) would be minimal.

The traffic analysis for the project conservatively estimated the project would generate approximately 57 and 75 vehicle trips during the a.m. and p.m. peak hours, respectively.[85] These trips would be distributed on the roadway network in the vicinity of the project site but would all traverse San Juan Road to access the project site. Existing eastbound and westbound volumes on San Juan Road are 647 and 268 during the a.m. peak hour and 894 and 745 during the p.m. peak hour.[86] Even with a worst-case assumption that all project generated p.m. peak hour trips (which are greater than a.m. peak hour trips) would travel westbound along San Juan Road (which is lower than existing eastbound volume), the project would result in a 10 percent increase in peak hour traffic volumes on San Juan Road. Typically, it takes a doubling of traffic volume (100 percent increase) to increase the associated noise level by 3 dBA, a change that is considered just-perceivable. As the traffic volume increase on San Juan Road due to the project would be at most 10 percent, the associated traffic noise increase would not be perceivable. Other roadways would experience even lower increases in traffic volumes due to the project and would also not experience perceivable increases in traffic noise due to the project. The impact of project operational noise would therefore be less than significant.

Project construction, with the implementation of Mitigation Measure NOI-1, and project operation would not result in ambient noise levels in the vicinity of the project in excess of standards established in the City's general plan or noise ordinance. This impact would be less than significant with mitigation.

Mitigation Measure NOI-1: The project applicant shall require construction contractors to prepare and implement a Construction Noise Reduction Plan, to be approved by the City Planning Department, that implements the following construction noise reduction measures during grading and construction activities:

i. Consistent with Section 8.68.080 of the City of Sacramento Noise Ordinance, construction activities shall be limited to the hours between 7:00 a.m. and

85 Kimley Horn, 2021. Local Transportation Analysis – 920 San Juan Road (P21-008). June 4, 2021.
86 Kimley Horn, 2021. Local Transportation Analysis – 920 San Juan Road (P21-008). June 4, 2021.

6:00 p.m. Monday through Saturday and between the hours of 9:00 am and 6:00 pm on Sundays.

ii. Any construction activity proposed to occur outside of the designated hours above shall be evaluated on a case by case basis and only be allowed with the prior written authorization of the City's Building Services Division. Such activities shall not exceed a period of 3 days.

iii. All equipment and trucks used for construction shall be equipped with the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds).

iv. Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible; this could achieve a reduction of 5 dBA.

v. Stationary noise sources shall be located as far from adjacent receptors as possible and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or include other measures.

vi. Temporary noise barriers or shielding shall be erected for construction work involving heavy duty construction equipment if the other noise reduction methods are not effective or possible and if occurring within 300 feet of receptors for an extended period of time (more than 2 weeks).

vii. Advance notice shall be provided to all residences located within 300 feet of extensive construction activities, including the approximate start date and duration of such activities.

Implementation of Mitigation Measure NOI-1 would reduce noise impacts to existing nearby sensitive receptors by limiting exposure to the less noise-sensitive daytime hours of the day, using noise control devices on all construction equipment that reduce noise and by using best management practices to separate noise sources from receptors to allow for increased attenuation consistent with General Plan Policy EC 3.1.10. This impact would be less than significant with mitigation.

b) ***Less than Significant.*** Construction activity can result in varying degrees of groundborne vibration, depending on the type of soil, equipment, and methods employed. Operation of construction equipment can cause ground vibrations that spread through the ground and diminish in strength with distance. Buildings on the soil near the construction site respond to these vibrations with varying results, ranging from no perceptible effects at the lowest levels, low rumbling sounds and perceptible vibrations at moderate levels, and slight damage at the highest levels. While ground vibrations from construction activities do not often reach the levels that can damage structures, fragile buildings must receive special consideration.

There are no structures in the vicinity of the project site that are of historical significance (see Section 3.5, *Cultural Resources*, for additional details about historic resources). Therefore, the analysis below focuses on the potential for construction vibration to cause damage to buildings of conventional construction and generate human annoyance impacts. Policy EC 3.1.5 of the Sacramento General Plan requires construction projects anticipated to generate a significant amount of vibration to ensure acceptable interior vibration levels at nearby residential and commercial uses based on the current City or other criteria.

Construction vibration may generate perceptible vibration when impact equipment or heavy earth moving equipment are used. Construction equipment expected to be used for project construction are shown in Table 3.13-3 and do not include any high vibration generating equipment such as pile drivers or drill rigs. The City does not specify any vibration thresholds in its General Plan, but the FTA and Caltrans have adopted vibration standards that are used to evaluate potential impacts related to sensitive receiving land uses from vibration. The FTA *Transit Noise and Vibration Impact Assessment Manual*[87] identifies 0.2 and 0.3 in/sec PPV as the levels at which potential damage could result to non-engineered timber and masonry buildings and engineered concrete and masonry buildings, respectively. The Caltrans' *Transportation and Construction Vibration Guidance Manual*[88] identifies 0.24 in/sec PPV as the level at which vibration is distinctly perceivable to humans.

Based on groundborne vibration levels for standard types of construction equipment provided by the FTA, of the equipment proposed to be used for project construction, the use of a vibratory roller/compactor would be expected to generate the highest vibration levels. Vibratory rollers typically generate vibration levels of 0.210 in/sec PPV at a distance of 25 feet.[89] Construction activities would take place as close as 50 feet from residential receptors. Vibration levels associated with a vibratory roller at this distance would be approximately 0.07 in/sec PPV, which would be lower than both the building damage and human annoyance vibration thresholds identified above. Therefore, operation of the project's highest vibration generating construction equipment would result in less-than-significant impacts at nearby residences. Vibration impacts from other equipment are expected to be lower. Further, the operation and location of each piece of construction equipment at the project site would not be constant throughout the day, as equipment would be operating at different locations within the project site and would not always be operating concurrently. Consequently, vibration levels during the majority of the

87 Federal Transit Administration, 2018. *Transit Noise and Vibration Impact Assessment Manual*. September 2018. Available: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf.

88 California Department of Transportation, 2020. *Transportation and Construction Vibration Guidance manual.* April 2020.

89 Federal Transit Administration, 2018. *Transit Noise and Vibration Impact Assessment Manual*. September 2018. Available: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf.

construction period at the nearest off-site residences would be much lower. Therefore, vibration impacts from project construction would be less than significant.

Once operational, the project would not include any new sources of vibration. The Project would involve operation of equipment such as pumps and motors associated with the swimming pool at the clubhouse, which do not generate significant vibration. Therefore, the project would have no operational impacts with regard to ground-borne vibration.

c) ***No Impact.*** There are no private airstrips or public airports located within two miles of the project site. The nearest airport, the Sacramento McClellan Airport is located more than 4 miles northeast of the project site and the Sacramento International Airport is located more than 6 miles to the northwest. Therefore, the project would not expose people residing or working in the project area to excessive noise levels from aircraft activity. There would be no impact with respect to this criterion.

3.14 Population and Housing

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XIV. POPULATION AND HOUSING — Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Environmental Setting

The City of Sacramento 2035 General Plan Master Environmental Impact Report (2035 General Plan Master EIR) projected that Sacramento's population would grow to approximately 640,400 residents by 2035, including 131,076 residents living in multifamily (MF) housing.[90] The 2035 General Plan Master EIR estimated that in order to support these projections, approximately 68,000 housing units would need to be developed. These projections were influenced by a variety of factors, including employment opportunities and housing conditions and needs.

Although the proposed project site is currently vacant and undeveloped, it is designated for residential development and part of the 2035 General Plan build-out projections for provision of housing units.

Discussion

a) ***Less than Significant.*** Under the proposed project, 79 new residential units would be developed over 9.17 acres of undeveloped land, resulting in a direct increase to population. The project site is currently designated as Suburban Neighborhood Low Density (SNLD), with an acceptable range of 3.0 to 8.0 dwelling units per acre (du/ac) and a maximum floor area ratio (FAR) of 1.5 in the City of Sacramento 2035 General Plan.

The proposed project would require a general plan amendment (GPA) to modify the land use designations in the City of Sacramento 2035 General Plan and the South Natomas Community Plan to a Suburban Neighborhood Medium Density designation, which would allow for an FAR of 1.5 and an acceptable range of 7.0 to 17.0 du/ac. The site is currently zoned for Agriculture (A); the zoning designation applicable to the proposed general plan amendment would therefore also modify the current zoning designation to the appropriate multi-family residential zone designation.

90 City of Sacramento, 2015. *Draft Master Environmental Impact Report for the City of Sacramento 2035 General Plan Update, SCH#2012122006.* Pg. 3-5.

Using an average estimated household factor of 2.7[91] for the City of Sacramento, implementation of the proposed project would result in an anticipated introduction of approximately 214 residents to the proposed project site.[92] While this result would represent a direct increase to population in the project vicinity, such an increase would be consistent with growth anticipated by the City of Sacramento 2035 General Plan.

Impacts resulting from this population increase would be reduced by consistency with 2035 General Plan land use policies, which encourages sustainable growth and change through well-planned development that accounts for the needs of present and future residents (Goal LU 1.1). A GPA and zoning amendment to allow for a higher density of residential development than is acceptable under current land use and zoning designations would assure compliance with General Plan Policies LU 1.1.2 and LU 1.1.3. These policies ensure that the City regulates building intensity and population density in accordance with the standards and land use designations established in the General Plan Update and the City's Zoning Code. The project's proposed land use and zoning designation would be consistent for the neighborhood and the resulting population growth and this impact would be less than significant.

b) **No Impact.** The proposed project site is currently vacant and undeveloped; as such, the proposed project would not displace existing residents or housing that would necessitate the construction of replacement housing elsewhere. The project would therefore not result in an impact which would displace existing residents or housing.

---

91 California Department of Finance, 2021. E-5 Population and Housing Estimates for Cities, Counties, and the State, January 2011-2021 with 2010 Benchmark. Published May 2021. Available: https://www.dof.ca.gov/Forecasting/Demographics/Estimates/e-5/. Accessed May 21, 2021.

92 ESA, 2021.

3.15 Public Services

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XV. PUBLIC SERVICES —				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:				
i) Fire protection?	☐	☐	☒	☐
ii) Police protection?	☐	☐	☒	☐
iii) Schools?	☐	☐	☒	☐
iv) Parks?	☐	☐	☒	☐
v) Other public facilities?	☐	☐	☒	☐

Environmental Setting

The proposed project site is currently vacant and undeveloped, but is located near existing Suburban Neighborhood, Regional Commercial, Public/Quasi-Public, and Parks and Recreation land uses. The site is bordered by San Juan Road to the south, an existing canal to the west, and the Natomas Point Apartments to the northeast. The Peace Lutheran Church is located across from the site on the other side of San Juan Road. Residential uses which would be introduced to the project vicinity through implementation of the proposed project would generate increased demand for public services such as fire protection, police protection, and school services. Consideration of the demand for parks and recreational facilities is discussed in detail in the following section, "Recreation."

Fire Protection Services

Fire protection and prevention services to the proposed project site would be provided by the City of Sacramento Fire Department (SFD). In addition to fire protection services, the SFD also provides Emergency Medical Services (EMS) and Special Operations services, including Hazardous Materials, Domestic Preparedness, Technical Rescue, Boat and Heavy Rescue, and Urban Search and Rescue programs[93] to approximately 480,000 residents in the City of Sacramento. The SFD is also contracted to provide fire protection services to an additional 50,000 residents within the Pacific/Fruitridge and Natomas Fire Protection Districts over approximately 46 square miles.[94] The SFD maintains automatic aid agreements with neighboring agencies and is part of a state mutual aid response system to provide the use of Type I and Type III engine companies at the request of the California Office of Emergency Services (CALOES).

93 City of Sacramento, 2021. "Special Operations." Available: https://www.cityofsacramento.org/Fire/Operations/Special-Operations. Accessed May 21, 2021.

94 City of Sacramento Fire Department, 2017. *2017 Annual Report*. Available: https://www.cityofsacramento.org/-/media/Fire/Sacramento-Fire-2017-Annual-Report.pdf?la=en. P. 4.

Police Protection Services

Police protection services are provided by the City of Sacramento Police Department (SPD) within incorporated areas of the city, and by the Sacramento County Sheriff's Department (Sheriff's Department) for areas located outside of the city but within the 2035 General Plan policy area. Law enforcement services may also be provided by the California Highway Patrol (CHP) in the form of traffic enforcement on highways and roadways within unincorporated portions of Sacramento.[95] Services provided by the SPD are distributed among four offices: the Office of Operations, the Office of Investigations, the Office of Specialized Services, and the Office of the Chief.

The SPD is divided into four command areas, each of which is served by an SPD station: North Command, Central Command, East Command, and South Command. The SPD does not have an adopted officer-to-resident ratio staffing goal; however, the Department maintains an unofficial goal of 2.0 to 2.5 sworn police officers per 1,000 residents and one civilian staff per two sworn officers.[96]

Schools

The proposed project site falls within the Twin Rivers Unified School District (TRUSD). The TRUSD operates 27 elementary schools, five middle schools, five high schools, and eight charter schools. TRUSD also operates eight other facilities supporting preschool, alternative education, adult education, and special education.[97]

Recreation

The City of Sacramento contains 223 neighborhood, community, and regional parks, constituting 4,255.5 acres of parkland and recreational facilities.[98]

Other Public Services

As mentioned above, public safety and education services are provided by the City of Sacramento.

Discussion

a.i) ***Less than Significant.*** The SFD does not utilize an official staffing ratio goal. However, the Department seeks to provide one station for every 1.5-mile service radius, per every 16,000 residents, and for every location where a company experiences call volumes exceeding 3,500 calls per year. Additionally, the SFD has a goal of first responding

95 City of Sacramento, 2015. *City of Sacramento 2035 General Plan Background Report.* Adopted on March 3, 2015. P. 5-1.

96 City of Sacramento, 2015. *City of Sacramento 2035 General Plan Background Report.* Adopted on March 3, 2015. P. 5-5.

97 Twin Rivers Unified School District, 2021. "Schools." Available: https://www.twinriversusd.org/About/Schools/index.html. Accessed May 21, 2021.

98 City of Sacramento, 2021. "Sacramento Parks." Available: https://www.cityofsacramento.org/parksandrec/parks. Accessed May 20, 2021.

companies for fire suppression and emergency medical services arriving within four minutes of receiving a call.[99]

The SFD currently staffs 24 fire stations, 24 fire engines, nine ladder trucks, and one heavy rescue unit; these facilities and equipment are divided into three battalions. With the exception of one engine staffed by three people, each fire engine and truck is staffed by four personnel. This staffing, in addition to three battalion chiefs, 34 suppression companies, 15 advanced life support (ALS) ambulances, and one EMS captain, contributes to a daily operational staffing of 169 SFD personnel.[100] This daily staffing is adequate to support immediate responses by the SFD to fire risk needs in built-up and urban areas of the City.[101]

The station nearest the proposed project site would be Fire Station 15, located approximately 1.4 miles southwest of the project site at 1640 W. El Camino Avenue.[102] The SFD received a call volume in 2017 of 91,205 calls across its various units;[103] Station 15 received 4,117 of these calls and was dispatched for 4,001 of the incidents.[104] In 2017, engine companies within the service area were able to respond, on average, within five minutes, 27 seconds of receiving a call, while medics and truck companies were able to respond within seven minutes, one second and five minutes, 46 seconds, respectively.[105]

The proposed project would involve the construction of 79 new residential units and would introduce approximately 214 residents to the project area. This population growth would increase the demand for fire protection services provided by the SFD and could also therefore result in the need for additional or expanded fire protection facilities and/or personnel.

Development under the proposed project would be required to comply with the policies contained within the City of Sacramento 2035 General Plan, including Policies PHS 2.1.5, PHS 2.1.10, PHS 2.2.3, PHS 2.2.4, and PHS 2.2.9. These policies would, respectively: ensure that the development of fire facilities and the delivery of services keeps pace with development and growth in the city; require development projects to pay

99 City of Sacramento, 2014. *Draft Master Environmental Impact Report for the City of Sacramento 2035 General Plan Update, SCH#20121220006*. Pp. 4.10-4 to 4.10-5.

100 City of Sacramento, 2021. "Fire Suppression." Available: https://www.cityofsacramento.org/Fire/Operations/Fire-Suppression. Accessed May 21, 2021.

101 Citygate Associates, LLC, 2016. *Technical Report: Fire Department Standards of Response Cover Review, Volume 2 of 3*. Available: http://sacramento.granicus.com/MetaViewer.php?view_id=22&clip_id=3845&meta_id=475451. Published on July 20, 2016. P. 27.

102 City of Sacramento Fire Department. *Fire Station Locations by Council District*. Available: https://www.cityofsacramento.org/-/media/Corporate/Files/Fire/Maps/Fire-Stations-by-Council-District-with-addresses-and-map-link.pdf?la=en.

103 City of Sacramento Fire Department, 2017. *2017 Annual Report*. Available: https://www.cityofsacramento.org/-/media/Fire/Sacramento-Fire-2017-Annual-Report.pdf?la=en. P. 11.

104 City of Sacramento Fire Department, 2017. *2017 Annual Report*. Available: https://www.cityofsacramento.org/-/media/Fire/Sacramento-Fire-2017-Annual-Report.pdf?la=en. P. 52.

105 City of Sacramento Fire Department, 2017. *2017 Annual Report*. Available: https://www.cityofsacramento.org/-/media/Fire/Sacramento-Fire-2017-Annual-Report.pdf?la=en. P. 68.

fees for the cost of fire protection services and facilities; promote the installation of fire sprinkler systems in new commercial and residential development; require that the City ensure adequate water supplies are available for fire suppression throughout the city and that new development constructs all necessary fire suppression infrastructure and equipment; and mandate that the City include appropriate emergency responders in the review of development proposals to ensure adequate emergency response times can be maintained.[106] Prior to the issuance of building permits, the proposed fire protection system for each building will be reviewed and approved by the SFD, and any modifications and/or additions identified by the Department will be incorporated into the proposed fire protection systems. The proposed project would also be required to comply with the development standards and requirements contained within the California Fire Code (CFC), particularly with respect to the timing, design, and installation of fire apparatus access roads and water supplies for protection, building and site access, and available water flow. Moreover, the fire hydrants necessary to serve the proposed project would be provided in accordance with both the CFC and the Sacramento Municipal Code, and the residential units would be equipped with an approved NFPA 13D sprinkler system, as mandated by the California Residential Code.[107,108]

Subsequent development projects anticipated in the 2035 General Plan include construction of new and/or replacement fire stations in 12 locations throughout the City of Sacramento, including one station which would serve South Natomas.[109] Construction and staffing of these facilities would be completed such that DFD staffing ratio, call volume, and response time goals would be maintained, and would be financed by development within the City of Sacramento as anticipated under the 2035 General Plan, in accordance with Policy PHS 2.1.10. Where possible, these planned future facilities may also co-locate with police protection services, in adherence with 2035 General Plan Policy 2.1.8. These anticipated future facilities, in conjunction with compliance with 2035 General Plan policies and with adherence to the California Fire Code, would reduce the potential environmental impact of increased demand on fire protection services resulting from the proposed project to a less-than-significant level.

a.ii) ***Less than Significant.*** The proposed project site would be served by Beat 1C of the North Command; this command broadly encompasses North Natomas, South Natomas, Robla, Del Paso Heights, Strawberry Manor, and Arden Fair. The North Command station which would serve the proposed project is the William J. Kinney Police Facility, located at 3550 Marysville Boulevard.[110] The proposed project would involve the

106 City of Sacramento, 2015. *City of Sacramento 2035 General Plan.* Adopted March 3, 2015. Pp. 2-287 to 2-290.

107 Morten Myers, CSG Consultants, Inc, 2021. P21-008, 920 San Juan Road, APNs: 250-0010-083 and 250-0010-085. April 19, 2021.

108 California Office of the State Fire Marshal, 2011. "The History of Residential Fire Sprinklers in California." Published November 1, 2011. Available: https://www.nfpa.org/-/media/Files/Fire-Sprinkler-Initiative/Sprinkler-Coalitions/California/History-of-Residential-Fire-Sprinklers-in-CA.ashx.

109 City of Sacramento, 2014. *Draft Master Environmental Impact Report for the City of Sacramento 2035 General Plan Update, SCH#20121220006.* Pp. 2-40.

110 City of Sacramento, 2016. *Sacramento Police Department 2016 Annual Report.* Published 2016. Available: https://www.cityofsacramento.org/-/media/Corporate/Files/Police/About-SPD/Annual-Reports/ar16.pdf?la=en. Pp. 7-8.

construction of 79 new residential units and would introduce approximately 214 residents to the project area. This increase in population would contribute to an increase in the demand for police protection services provided by the SPD and could subsequently result in the need for additional or expanded law enforcement facilities and/or personnel.

Current population estimates for the City of Sacramento total approximately 513,624 residents.[111] As of 2016, the SPD employed 669 sworn officers and 280 civilian staff members.[112] This staffing level meets the stated SPD goal for the ratio of civilian staff members to sworn police officers, but falls short of the unofficial goal of 2.0 to 2.5 sworn officers per 1,000 residents. However, the number of additional residents which the proposed project would contribute to the City of Sacramento population would not be substantial enough to induce the need for additional police facilities or staff beyond what is already present within the City of Sacramento and has been considered within the 2035 General Plan Master EIR.[113]

Additionally, subsequent development projects anticipated in the 2035 General Plan include construction of three new police facilities within the City of Sacramento.[114] Construction and staffing of these facilities would be completed as to maintain SPD staffing ratio goals, and would be financed by development within the City of Sacramento as anticipated under the 2035 General Plan, in accordance with Policy PHS 1.1.8. As mentioned above, planned future SPD facilities may co-locate with fire stations and other City facilities to optimize use of space in urbanized portions of the City, in adherence with 2035 General Plan Policy 1.1.6.

Development under the proposed project would be constructed and operated in adherence to the policies of the City of Sacramento 2035 General Plan Public Health and Safety Element, including Policies PHS 1.1.2, PHS 1.1.3, PHS 1.1.4, PHS 1.1.5, PHS 1.1.17, and PHS 1.1.8. These policies, respectively, would ensure that the City of Sacramento: strives to maintain optimal response times for all call priority levels for police services; maintain optimum staffing levels for sworn officers and civilian support staff; ensures that the development of police facilities and delivery of police protection services remains commensurate with development and growth in the city; expands the distribution of police substation facilities such that all city residents receive an optimum response to calls for service; includes the SPD in the review of development proposals; and requires the payment by development projects of fees for the construction and operation of police facilities.[115] Project development would also comply with SPD Crime Prevention through Environmental Design (CPTED) principles and operational recommendations pertaining

111 U.S. Census Bureau, 2021. "QuickFacts: Sacramento city, California; United States." Available: https://www.census.gov/quickfacts/fact/table/sacramentocitycalifornia,US/PST045219. Accessed May 19, 2021.

112 City of Sacramento, 2016. *Sacramento Police Department 2016 Annual Report.* Published 2016. Available: https://www.cityofsacramento.org/-/media/Corporate/Files/Police/About-SPD/Annual-Reports/ar16.pdf?la=en. P. 11.

113 City of Sacramento, 2014. *Draft Master Environmental Impact Report for the City of Sacramento 2035 General Plan Update, SCH#20121220006.* P. 4.10-4.

114 City of Sacramento, 2014. *Draft Master Environmental Impact Report for the City of Sacramento 2035 General Plan Update, SCH#20121220006.* P. 2-37.

115 City of Sacramento, 2015. *City of Sacramento 2035 General Plan.* Adopted March 3, 2015. Pp. 2-283 to 2-284.

to construction, lighting, landscaping, and security,[116] in adherence to General Plan Policy PHS 1.1.7 of the 2035 General Plan. Compliance with these 2035 General Plan policies, in conjunction with the expansion of facilities and staffing anticipated by the 2035 General Plan, would reduce the potential environmental impact of increased demand for law enforcement facilities and staffing resulting from the proposed project to a less-than-significant level.

a.iii) ***Less than Significant.*** The proposed project would introduce approximately 214 residents to the project area; any school-age children living on the project site would be served by the TRUSD and could attend schools located within the district boundaries. The schools located nearest the proposed project site are:

- Garden Valley Elementary School (Grades K-6), located at 3601 Larchwood Drive;
- Rio Tierra Junior High School (Grades 7-8), located at 3201 Northstead Drive;
- Grant High School (Grades 9-12), located at 1400 Grand Avenue.[117]

School capacity is the primary determination of the need for additional public school facilities and resources. Anticipated student yields for elementary, middle, and high school students resulting from the proposed project would be generated as shown below in **Table 3.15-1**.

TABLE 3.15-1
STUDENT GENERATION RESULTING FROM THE PROPOSED PROJECT

Type of School	Single-Family Generation Rate	Number of Single-Family Dwelling Units	Multi-Family Generation Rate	Number of Multi-Family Dwelling Units	Number of Students Generated
Elementary	0.44	79	0.19	N/A	35
Middle	0.12	79	0.03	N/A	10
High	0.23	79	0.04	N/A	19
Total					**21**

SOURCE: City of Sacramento, 2014. Draft Master Environmental Impact Report for the City of Sacramento 2035 General Plan Update, SCH#20121220006. P. 4.10-9.

Although the number of students anticipated under the proposed project would result in increased demand upon school facilities and resources, the relatively small contribution of the student population which would result from the proposed project is unlikely to add a substantial number of school-age children within the TRUSD. The proposed project is therefore unlikely to result in an increased demand such that the construction or expansion of school facilities would be required.

[116] Young, Matt, Sacramento Police Department CPTED Unit, 2021. File No. P21-008: 920 San Juan Road (82 New Rental Units), Site Plan Review and CPTED recommendations. May 6, 2021.

[117] MySchoolLocator, 2021. Twin Rivers Unified School District. Available: https://locator.decisioninsite.com/?StudyID=235039. Accessed May 21, 2021.

Moreover, the project applicant would be required to pay school impact fees to be allocated to the TRUSD. Although school impact fees are often insufficient to completely fund the construction and operation of new school facilities, the California State Legislature has deemed such fees full and adequate mitigation under CEQA, pursuant to Senate Bill 50 (SB 50) and Assembly Bill 1600 (AB 1600). In the event that construction or expansion would be necessary as a result of the proposed project, the payment of these school impact fees would, under CEQA, reduce the potential resultant environmental impacts to less-than-significant levels, and no additional mitigation would be required. Should construction or expansion of school facilities be required, consistency with Policies ERC 1.1.1 through 1.1.9 of the 2035 General Plan, which require the City to provide efficient and equitable distribution of quality educational facilities, would further reduce the potential environmental effects resulting from such facilities modifications. As a result, this impact would be less than significant.

a.iv) Consideration of the demand for parks and recreational facilities is discussed in detail in the following section, "Recreation."

a.v) ***Less than Significant.*** As discussed above, while implementation of the proposed project may result in increased demand for fire protection, police protection, education, and recreational services, the environmental impacts resulting from the need for new or expanded facilities in these sectors, and public services as a whole, would be less than significant.

3.16 Recreation

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XVI. RECREATION —				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

Environmental Setting

The City of Sacramento contains 230 neighborhood, community, and regional parks, constituting 4,829 acres of parkland and recreational facilities.[118]

The proposed project site is currently vacant and undeveloped. At present, there are no neighborhood, local, or regional parks or bikeways existing on the proposed project site or in the immediate vicinity, although a bike trail is planned along the canal to the west of the project site. The Rio Tierra Park, a publicly-accessible facility associated with Rio Tierra Junior High School, is located across San Juan Road from the project site. Chuckwagon Park and Northgate Park are located within one half-mile and one mile of the project site, respectively.

Discussion

a) ***Less than Significant.*** The proposed project is anticipated to introduce approximately 214 residents[119] to the project site, with an average household size of 2.7 residents.[120] The Quimby Act (California Government Code Section 66477), established in 1965, is intended to preserve open space and parkland in urban areas throughout California, and establishes standards for dedicated parkland use, including the allocation of five acres of parkland per 1,000 residents. The City of Sacramento 2035 General Plan establishes park acreage service level goals both within and outside the Central City area; these goals are 1.75 acres of neighborhood and community parks per 1,000 residents and 3.5 acres of neighborhood and community parks per 1,000 residents, respectively.[121]

The proposed project site would be served by both a neighborhood and a community park: Chuckwagon Park and Northgate Park. The City of Sacramento defines a neighborhood park as ranging from 2 to 10 acres in size and serving a half-mile radius, while community parks range in size from 6 to 60 acres and serve a three-mile radius or

[118] City of Sacramento, 2021. "Sacramento Parks." Available: https://www.cityofsacramento.org/ParksandRec/Parks. Accessed May 20, 2021.

[119] ESA, 2021.

[120] U.S. Census Bureau, 2019. "QuickFacts: Sacramento City, California; United States".

[121] City of Sacramento, 2015. *City of Sacramento 2035 General Plan.* Adopted March 3, 2015. P. 4.9-1.

several neighborhoods.[122] Chuckwagon and Northgate Parks are 5.31 acres and 15.97 acres in size, respectively, and are located within one half-mile and one mile of the proposed project site.[123,124] Given the proximate land uses present in the vicinity of the project site, the proposed project would not represent an increase in population which would exceed Quimby Act parkland dedication standards or City of Sacramento park acreage service level goals.

The proposed project intends the construction of common recreation areas on the project site itself, including turf and picnic areas, a "tot lot" children's play area, and pedestrian and bike trail access points for the planned bike trail along the canal to the west of the project site. As such, the proposed project is unlikely to increase the use of existing neighborhood or regional parks or other recreational facilities such that deterioration of those facilities would occur or be accelerated. Impacts to existing park and recreational facilities would therefore be less than significant.

b) ***Less than Significant.*** As mentioned above, the proposed project intends the construction of common recreation areas on the project site itself, including turf and picnic areas, a "tot lot" children's play area, and pedestrian and bike trail access points for the planned bike trail along the canal to the west of the project site. However, these facilities are intended for use by the residents of the proposed project and will not be publicly accessible or available as part of an integrated parks and recreation system managed by the City of Sacramento. Construction of these facilities would comply with applicable City of Sacramento Multi-Unit Dwelling Design Guidelines and Development Standards, which would reduce potential adverse physical effects of the construction on the environment, and result in a less-than-significant impact due to the construction or expansion of recreational facilities

---

[122] City of Sacramento, 2021. "Sacramento Parks." Available: https://www.cityofsacramento.org/ParksandRec/Parks. Accessed May 20, 2021.

[123] City of Sacramento, 2021. "Chuckwagon Park." Available: https://www.cityofsacramento.org/ParksandRec/Parks/Park-Directory/South-Natomas/Chuckwagon-Park. Accessed May 20, 2021.

[124] City of Sacramento, 2021. "Northgate Park." Available: https://www.cityofsacramento.org/ParksandRec/Parks/Park-Directory/South-Natomas/Northgate-Park. Accessed May 20, 2021.

3.17 Transportation

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XVII. TRANSPORTATION — Would the project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☐	☒
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d) Result in inadequate emergency access?	☐	☐	☐	☒

Environmental Setting

The project site is located in the South Natomas area adjoining San Juan Road and Northgate Boulevard. The project proposes a 79 single-unit and duplex-dwellings development with 143 parking spaces at the currently vacant site at 920 San Juan Road. The proposed residential community will include a leasing/club house, pool, dog park, 128 parking spaces, internal circulation roadways, and one (1) gated access driveway. The driveway to the community is proposed on the northern side of San Juan Road, west of the San Juan Road intersection with Binghampton Drive, and east of the San Juan Road intersection with Zenobia Way.

This analysis is based on the following 1. VMT Technical Memorandum, May 20, 2021 prepared by the City of Sacramento Public Works (**Appendix C**); and 2. Local Transportation Analysis, June 4, 2021 prepared by Kimley-Horn (**Appendix D**).

City of Sacramento uses several "screening thresholds" to determine whether a project may be presumed to have a less-than-significant VMT impact without conducting a detailed projected generated VMT analysis. For residential projects, screening criteria include:

- Small Projects – Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact.
- Map-Based Screening – Maps created with VMT data can illustrate areas that are currently below threshold VMT. Output from the SACOG regional travel demand model may be generalized to simplify project VMT estimates as well as producing screening maps. Because new development in such locations would likely result in a similar level of VMT, such maps can be used to screen out residential and office projects from needing to prepare a detailed VMT analysis.
- Near Transit Stations – presumption that certain projects proposed within ½ mile of an existing major transit stop or an existing stop along a high-quality transit corridor will have a less-than-significant impact on VMT. Additionally, the project would need to have a floor

area ratio of at least 0.75, without excessive parking, is consistent with the adopted regional SCS, and does not result in a reduction of citywide affordable housing.

- Affordable Residential Development – adding affordable housing to infill locations generally improves jobs-housing match, in turn shortening commutes and reducing VMT.

Discussion

a) ***No Impact.***

Multimodal Access and Site Circulation

Project impacts to transit, bicycle facilities, and pedestrian circulation were determined based on the standards of significance defined in the City's Traffic Impact Analysis Guidelines (City of Sacramento). Considerations were given to offsite bicycle and pedestrian facilities and connectivity in the immediate vicinity of the project site.

Pedestrians: The project proposes internal connected pedestrian facilities including sidewalks and crosswalks for all internal project roadways. Pedestrians will access the project site through a key-code pedestrian gate located at the project driveway and individual pedestrian gates for residential units along the San Juan Avenue frontage. There is an existing sidewalk on the north side of San Juan Road along the project frontage that is to remain under project conditions for which pedestrian gates to individual dwelling units would have access. The project causes no impacts on the surrounding pedestrian network and is consistent with the city general plan goals and policies.

Transit: The project site is served by the Sacramento Regional Transit that provides bus services in the area. The project frontage is located approximately 500 feet west of the San Juan Road & Binghamton Drive (EB/WB) Bus Stop. This bus stop is serviced by the following routes:

1. Route 13 Natomas/Arden provides weekday and weekend service between Natomas and the Arden Fair Mall Transit center. Weekday hourly headways increased to 40 min headways during AM and PM peak commute hours start at 6:00 AM and terminate at 9:00 PM.
2. Route 86 Grand provides weekday and weekend service between Marconi Arcade and Downtown 9th & K stations. Weekday hourly headways increased to 15 min headways during AM and PM peak commute hours start at 5:30 AM and terminate at 10:00 PM.

The project proposes onsite connectivity that would allow for bus transit ridership to easily access the site via the main project driveway. The project causes no impacts on the surrounding transit network.

Bicycles: Consistent with the City's Bikeway User Map[125] there is an existing bike lane along San Juan Road. In addition, the Niños Parkway Bike Trail provides connectivity to the regional bike network as a separated bike path located 600 feet west of the project driveway on San Juan Road. The existing Niños Parkway trail currently only runs to the south of San Juan Road, however future plans will include a pedestrian/bicycle mid-block crossing that crosses San Juan Road and the trail will continue north of San Juan Road as a part of Niños Parkway Bike Trail Phase 2.

The project entrance will be gate operated with keypad entry; therefore, pedestrians and bicyclist will be able to access the project via keypad entry and have connectivity to the internal project roadways. As discussed in the vehicle queuing section, no project ingress queues are anticipated to interfere with operations of the Niños Parkway trail San Juan Road mid-block pedestrian/bicycle crossing. The project causes no impacts on the surrounding bicycle network and is consistent with the city general plan goals and policies.

Construction: Construction of the project site is consistent with adopted general plan goals and policies. The project is proposed to be constructed in one phase and construction traffic in not anticipated to affect the traffic operations of the study area. The proposed project does not conflict with the City of Sacramento's policies related to bicycle and pedestrian connectivity and regional plans related to transit. There are no impacts.

b) ***Less than Significant.*** Transportation impacts for residential projects are considered significant if the proposed project would generate Household VMT per capita figures that exceeds 85 percent of the regional average for Household VMT per capita. This current practice in the City of Sacramento is consistent with the technical advisory from the Governor's Office of Planning and Research (OPR) published in 2018. The project was evaluated against the following screening criteria to determine if it could be presumed to have a less-than-significant VMT impact:

Map-Based Screening – The proposed project's VMT was determined using the residential VMT SACOG maps derived from the traffic analysis zone results from SACOG's travel demand model, known as SACSIM. These maps use hexagonal shaped geographic areas (HEX) to establish a uniform grid of Household VMT per capita by tallying all household VMT's generated by residents within the HEX and dividing by the total population in the HEX.

The proposed project is within a HEX calculated to produce between 50% to 85 % of the Regional Average VMT which is less than the average household VMT per capita for the region, as illustrated in **Figure 3.17-1**, *SACOG VMT Residential Screening Map*. The proposed project meets the criteria based on the Map-Based screening, and therefore a

[125] City of Sacramento, 2020. *Sacramento Bikeway User Map*. Published July 2020. Available: https://www.cityofsacramento.org/-/media/Corporate/Files/Public-Works/Transportation/Sacramento-Bike-Map-July-2020.pdf?la=en.

D2021000043.00 - 920 San Juan Residential Project\05 Graphics-GIS-Modeling\Illustrator

SOURCE: City's VMT Memo (attached), Figure 1

920 San Juan Residential Project

Figure 3.17-1
SACOG VMT Residential Screening Map

ESA

VMT analysis is not required. By inference, VMT impacts are considered below the screening criteria and therefore are less than significant.

c) ***No Impact.*** The Local Transportation Analysis, prepared by Kimley Horn addresses access, circulation, including queuing, and safety for the proposed project. The proposed project does not introduce a geometrical or other design feature that would increase or substantially increase hazards related to roadway geometrics. There would be no impact.

Planning Considerations

San Juan Road operates at a posted speed limit of 40 mph along the Project frontage, so a design speed of 50 mph per the City's Design Procedures Manual was used to perform the sight distance analysis. Further, it is assumed that the marked two-way left-turn lane (TWLTL) along San Juan Road is in place and may be used by project traffic for acceleration/deceleration purposes when entering and exiting the site. As analyzed, there is adequate sight distance for Project traffic exiting the driveway to safely turn onto San Juan Road with no need for acceleration lanes for the turning vehicles, as shown in **Table 3.17-1**.

TABLE 3.17-1
DRIVEWAY SIGHT DISTANCE REQUIREMENTS

Movement	Design Speed (mph)	Time Gap (sec)	Corner Sight Distance (ft)	Existing Site Distance at Project Driveway (ft)
Left-turn from Stop, looking left	50	8.0	625	>700
Right-turn from Stop	50	6.5	478	>700

Queuing and Safety

The need for deceleration lanes was analyzed for westbound right entering vehicles to the Project site. According to the American Association of State Highway and Transportation Officials, *A Policy on Geometric Design of Highways and Streets Manual*[126] Table 3.1 and Table 3.3, the stopping sight distance for a level 50 mph roadway is 425 feet. The decision sight distance for a vehicle to see another slowing vehicle preparing to turn into the project driveway and to slow or change lanes to avoid collision is 600 feet. Based on the proposed site plan and analysis of existing conditions geometry on San Juan Road, there is adequate sight distance for these maneuvers. Therefore, there are no safety concerns that would require the addition of right-in deceleration lane.

While there is adequate sight distance for project traffic exiting the driveway to safely turn onto San Juan Road, if a physical median is constructed along the project frontage along San Juan Road, vehicles turning left from the project site would not have a refuge and there would not be adequate sight distance when looking right. Therefore, any

[126] American Association of State Highway and Transportation Officials, 2011. *A Policy on Geometric Design of Highways and Streets, 6th Edition*. Published 2011.

proposed physical median should preserve the TWLTL east of the project driveway to allow for its continued use for vehicles turning left from the project site and vehicles turning left into the Church. Further, it is recommended that the existing two-way left-turn lane on San Juan Road be restriped to include an eastbound left-turn lane with at least 25-feet of storage to provide access to the project site.

Queueing for select turning movements was analyzed for the purpose of providing recommendations on turning movement storage lengths and to ensure safe operations. The gated entrance from San Juan Road presents one scenario for queueing. One concern is the potential for vehicles queuing at this gated entrance backing up onto San Juan Road resulting in unsafe conditions The project site plan shows approximately 75 feet between the project driveway entrance off of San Juan Road and the entry gate which is adequate queue storage for the expected queues during the weekday PM peak hour. Further, a current City project plans to extend the Niños Parkway Trail that currently terminates at San Juan Road. This extension would result in a new pedestrian and bicycle crossing across San Juan Road that is located 600 feet west of the proposed project driveway. Based on the results of the queueing analysis there are no concerns for entering eastbound left turn project traffic queueing back and blocking the planned pedestrian/bicycle mid-block crossing for the Niños Parkway Trail across San Juan Road.

There are no safety concerns that would require the addition of right-in deceleration lane. There are no vehicular safety concerns based on historical crash rates on San Juan Road near the project when compared to crash rates of similar roads from across the state.

d) ***No Impact.*** The project site plan shows two emergency vehicle access driveways located approximately 300 feet east and 300 feet west of the proposed project driveway. Connectivity and circuity of internal project roadways combined with the three points of emergency vehicle access (one main driveway and two emergency vehicle driveways) provide sufficient circulation for emergency vehicles.

3.18 Tribal Cultural Resources

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XVIII. TRIBAL CULTURAL RESOURCES —				
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, 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.	☐	☒	☐	☐

Environmental Setting

Please reference the Cultural Resources Chapter for the Ethnohistory of the historic indigenous groups that occupied the region. This section focuses on the contemporary tribal communities and tribal cultural resources as they pertain to AB52.

This section analyzes and evaluates the potential impacts of the project on Tribal cultural resources, both identified and undiscovered. Tribal cultural resources, as defined by Assembly Bill (AB) 52, Statutes of 2014, in Public Resources Code (PRC) Section 21074, are sites, features, places, cultural landscapes, sacred places and objects, with cultural value to a Tribe. A Tribal cultural landscape is defined as a geographic area (including both cultural and natural resources and the wildlife therein), associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values.

The unanticipated find of Native American human remains would also be considered a Tribal cultural resource, and are therefore analyzed in this section.

The proposed project area is situated within the lands traditionally occupied by the Valley Nisenan, or Southern Maidu. Many descendants of Valley Nisenan throughout the larger Sacramento region belong to the United Auburn Indian Community, Shingle Springs, Ione Band, Colfax-Todds Valley, and Wilton Rancheria Tribes. The Tribes actively participate in the identification, evaluation, preservation, and restoration of Tribal Cultural Resources.

Data Sources/Methodology

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.

On April 14, 2021 notifications were sent to the four tribes who've previously requested to receive notifications pursuant to Public Resources Code Section 21080.3.1 (AB 52).

In response to the City's notification of the project to UAIC, UAIC conducted a records search for the identification of Tribal Cultural Resources for this project which included a review of pertinent literature and historic maps, and a records search using UAIC's Tribal Historic Information System (THRIS). UAIC's THRIS database is composed of UAIC's areas of oral history, ethnographic history, and places of cultural and religious significance, including UAIC Sacred Lands that are submitted to the Native American Heritage Commission (NAHC). The THRIS resources shown in this region also include previously recorded indigenous resources identified through the California Historic Resources Information System Center (CHRIS) as well as historic resources and survey data.

On April 15,2021, United Auburn Indian Community (UAIC) responded providing that based on their review, there are sensitive resources in proximity to the subject site, which could extend to the subject site and they would like to consult. The area of concern was described and shared with staff. They inquired if a cultural study had been prepared yet. Buena Vista Rancheria responded on April 28, 2021 stating they have no objections to the project and agreeing to close consultation. No response was received from the two other tribes. As part of the consultation process with UAIC, when the cultural study was prepared it was provided to UAIC. UAIC further recommended that a post disturbance site visit by a tribal representative is needed to see the site after it was cleared. Additionally, it was agreed upon to include mitigation measures for inadvertent/unanticipated discoveries of potential Tribal Cultural Resources.

Discussion

a.i/ii) ***Less than Significant with Mitigation.*** Tribal cultural resources are: 1) sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are listed, or determined to be eligible for listing in the California Register of Historical Resources (California Register), or local register of historical resources, as defined in PRC Section 5020.1(k); or, 2) a resource determined by the lead CEQA agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC Section 5024.1(c). For a cultural landscape to be considered a tribal cultural resource, it must be geographically defined in terms of the size and scope of the landscape (PRC Section 21074[b]). A historical resource, as defined in PRC Section 21084.1, unique archaeological resource, as defined

in PRC Section 21083.2(g), or non-unique archaeological resource, as defined in PRC Section 21083.2(h), may also be a tribal cultural resource.

Through background research at the North Central Information Center of the California Historical Resources Information System and a survey, no known archaeological resources that could be considered tribal cultural resources, listed or determined eligible for listing in the California Register, or included in a local register of historical resources as defined in PRC Section 5020.1(k), pursuant to PRC Section 21074(a)(1), would be impacted by the project.

According to the provision of PRC Section 21080.3, four Native American tribes have requested to receive notification of projects in the jurisdiction of the City of Sacramento. As described above, only one tribe requested consultation. The City and UAIC conducted consultation and exchanged communications. UAIC reviewed their records and the information from the cultural study prepared for the project. The project area is in an area where there are sensitive resources nearby and there is the potential of undiscovered resources in the area. UAIC agreed to the inclusion of mitigation measures for post ground disturbance and inadvertent/unanticipated discoveries mitigation measures. With the inclusion of these measures, it was agreed upon that consultation could be closed on March 8, 2022. Therefore, with inclusion of **Mitigation Measure TCR-1a through TCR-1d**, the proposed project would have a less-than-significant impact on tribal cultural resources.

Mitigation Measures

Mitigation Measure TCR-1a: Tribal Cultural Resources Sensitivity and Awareness Training Program Prior to Ground-Disturbing Activities

The City shall require the applicant/contractor to provide a 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 culturally affiliated Native American tribes. T The WEAP shall be conducted before any project-related construction activities begin at the project site. The WEAP will include relevant information regarding sensitive 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 tribal cultural resources that could be located at the project site and will outline what to do and who to contact if any potential 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: Post Disturbance Site Visit

A minimum of seven days prior to beginning earthwork, clearing and grubbing, or other soil disturbing activities, the applicant/contractor shall notify lead agency and United Auburn Indian Community (UAIC) of the proposed earthwork start-date. A UAIC Tribal Representative shall be invited to inspect the project site, including any soil piles, trenches, or other disturbed areas, within the first five days of groundbreaking activity, or as appropriate for the type and size of project. During this inspection, a UAIC Tribal Representative may provide an on-site meeting for construction personnel information on TCRs and workers awareness brochure.

If any TCRs are encountered during this initial inspection, or during any subsequent construction activities, work shall be suspended within 100 feet of the find and the measures included in the Inadvertent/Unanticipated Discoveries Mitigation Measure shall be implemented. Preservation in place is the preferred alternative under CEQA and UAIC protocols, and every effort must be made to preserve the resources in place, including through project redesign.

The contractor shall implement any measures deemed by CEQA lead agency to be necessary and feasible to preserve in place, avoid, or minimize significant effects to the resources, including the use of a paid Native American Monitor during ground disturbing activities.

Mitigation Measure TCR-1c: In the Event that Tribal Cultural Resources Are Discovered During Construction, Implement Avoidance and Minimization Measures to Avoid Significant Impacts and Procedures to Evaluate Resources.

If 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 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 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 tribal cultural resources, modification of the design to eliminate or reduce impacts to 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 notified 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 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 a tribal cultural resource will be determined in consultation with interested culturally affiliated Native American tribes and tribes will be notified 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 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 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 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 notification. 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-1d: 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.

3.19 Utilities and Service Systems

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

Environmental Setting

Water Supply

The City of Sacramento provides domestic water service within City limits through a combination of surface water and groundwater sources, including the American River, the Sacramento River, and wells which pump in groundwater from the North and South American Subbasins.[127] Water from the American and Sacramento Rivers is diverted by two water treatment plants, the Sacramento River Water Treatment Plant and the E.A. Fairbairn Water Treatment Plant. Following treatment, water diverted from the American and Sacramento Rivers is stored in reservoirs and pumped to customers via an existing conveyance utility network. The proposed project site would be situated within the City of Sacramento Retail Water Service Area.[128]

California Water Code requires that urban water suppliers prepare and adopt an Urban Water Management Plan (UWMP) every five years. The most recent UWMP for the City of Sacramento is the 2020 Urban Water Management Plan, which considers water demand for the City under normal, single dry year, and five consecutive dry year scenarios. Water supply and demand projections include anticipated future development through 2045.

[127] City of Sacramento, 2015. *City of Sacramento 2035 General Plan Background Report.* Adopted March 3, 2015. P. 4-25.

[128] City of Sacramento, 2021. *2020 Urban Water Management Plan: Draft Report.* Published May 2021. Pp. 3-4 to 3-5.

Wastewater

The Sacramento Area Sewer District (SASD) would be responsible for providing local sewer service to the proposed project site via its local sanitary sewer collection system. Sacramento Regional County Sanitation District (Regional San) would be responsible for the conveyance of wastewater from the SASD collection system to the Sacramento Regional Wastewater Treatment Plant (SRWTP).

Stormwater

Storm water drainage for the proposed project site and its vicinity would be collected by storm drain systems owned and managed by the City of Sacramento, and subsequently pumped into nearby rivers, creeks, and drainages.

The project vicinity is served by the Central Valley Regional Water Quality Control Board, and is located within Reclamation District 1000 (RD 1000).[129] However, as the proposed project site is currently vacant, undeveloped, and largely pervious and implementation of the proposed project would develop the site for residential uses with more than one acre of new or modified impervious area, the management of stormwater drainage would be required. Such management would include the use of Low Impact Development (LID), Hydromodification Management Plan (HMP), and on-site treatment control measures.[130]

Solid Waste

The City of Sacramento collects all residential solid waste within the City limits; solid waste collected in the northern portion of the city is transported to the Sacramento County North Area Recovery Station (NARS) before being transferred to the Sacramento County Kiefer Landfill. Refuse and garden refuse are collected on a weekly basis, with curbside recycling collected every other week. Garden refuse and recycling are both taken to the Sacramento Recycling and Transfer Station (SRTS), with garden refuse then transferred to the Elder Creek Transfer Station. [131]

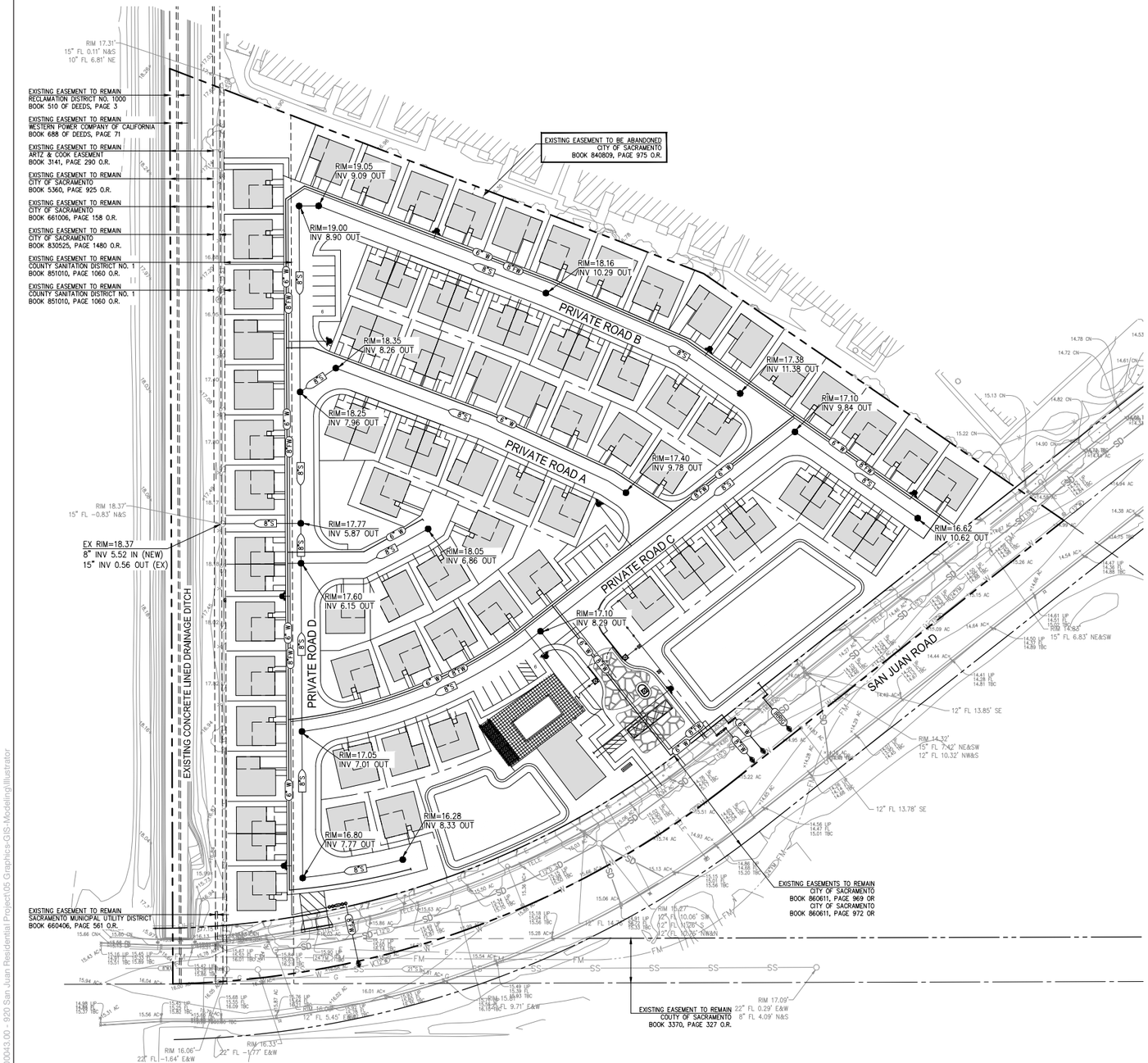
Electricity

Electrical utilities are provided to Sacramento County, including the proposed project site and its vicinity, by the Sacramento Municipal Utility District (SMUD). The proposed project site would be anticipated to connect to the SMUD electrical grid via existing electric lines and boxes are present on the proposed project site along San Juan Road (see **Figure 3.19-1**, *Preliminary Utility Plan*).

[129] California State Water Resources Control Board, 2021. "State and Regional Water Boards." Available: https://www.waterboards.ca.gov/waterboards_map.html#rwqcbs. Accessed June 4, 2021.

[130] Ochoa, Sarai, 2021. "P21-008, 920 San Juan Rd, TPM, SPDR, Draft Revised." May 12, 2021.

[131] City of Sacramento, 2014. *Draft Master Environmental Impact Report for the City of Sacramento 2035 General Plan Update, SCH#20121220006*. P. 4-44.



LEGEND

	PROPOSED	EXISTING
PROPERTY LINE	N/A	
EASEMENT LINE	N/A	
SEWER LINE & MANHOLE	6"S	SS 21"S
DOMESTIC WATER LINE	8" W	8" W
IRRIGATION LINE	IRRIG	N/A
FIRE WATER LINE	8"FW	N/A
FIRE HYDRANT		
WATER VALVE		
BACKFLOW PREVENTOR		N/A
ELECTRIC LINE & BOXES	N/A	E
OVERHEAD ELECTRIC LINE	N/A	OHE
TELECOMM LINE	N/A	TELE
GAS LINE	N/A	G
FORCE MAIN LINE	N/A	24"FM
STREET LIGHT	N/A	

NOTES

1. THIS CONCEPTUAL UTILITY EXHIBIT WAS PREPARED TO DEPICT PROPOSED UTILITY CONCEPTS AS REQUIRED FOR THE ENTITLEMENT PROCESS. ACTUAL FINAL DESIGN MAY VARY FROM THAT SHOWN HEREON AS THE DESIGN PROCESS PROGRESSES.
2. UTILITIES AND PIPE SIZES SHOWN ARE ESTIMATES ONLY. SIZES AND LOCATIONS MAY CHANGE DURING FINAL DESIGN.
3. BOUNDARY AND TOPOGRAPHIC SURVEY PREPARED MY MORROW SURVEYING, FEBRUARY 2021.
4. EXISTING UTILITY IMPROVEMENTS ARE BASED ON AVAILABLE AS-BUILT IMPROVEMENT PLANS AND CITY BASE UTILITY MAPS. ACTUAL SIZES, TYPES AND LOCATIONS MAY VARY FROM INFORMATION SHOWN HEREON.

D2021000043.00 - 920 San Juan Residential Project\05 Graphics-GIS-Modeling\Illustrator

SOURCE: BSB Design, 2021

920 San Juan Residential Project

Figure 3.19-1
Preliminary Utility Plan

ESA

This page intentionally left blank

Discussion

a) ***Less than Significant.*** Existing utilities infrastructure on the proposed project site includes the 24" Old Natomas force man operated by Regional San and a 21" sewer line, both of which are located within San Juan Road within the site boundaries of the proposed project site. The proposed project would require the construction of 6" domestic water lines, 8" sewer lines, and 8" fire water lines throughout the project site, as well as an irrigation line extending from the boundary of the property fronting San Juan Road to the existing water line located within San Juan Road.

Water Infrastructure

An existing 12" water distribution main is present near the proposed project site within San Juan Road. The anticipated 6" domestic water lines which would be used for the conveyance of both the on-site potable and fire system water supplies, and would connect to this main, and would be provided by the City of Sacramento local water service systems. As part of routine conditions of approval, a water study would be required in order to inform the final design of the water distribution system that would supply fire flow to the project site. The City of Sacramento has not identified existing capacity as a constraining factor in development of the proposed project; as such, this impact would be less than significant.

Stormwater Infrastructure

As the proposed project would develop a currently vacant and largely pervious site for residential purposes, the proposed project would add impervious surface to approximately 9.17 acres of the Drainage Basin 141 service area.[132] Although this development may increase peak storm water flow rates and rainfall run-off volume in the immediate project vicinity, the proposed project site was previously designated for residential development and future drainage needs for the project vicinity were anticipated. Implementation of the proposed project would require the construction of storm drainage infrastructure for connection to the existing City of Sacramento conveyance system. However, an existing concrete-lined drainage ditch is present along the western boundary of the proposed project site. Stormwater would be pumped to this drainage canal via anticipated conveyance connections, and this existing infrastructure would be sufficient to serve the proposed project site.

Onsite storm drain systems anticipated by the proposed project would be private systems maintained by the project owner or other approved entity, and would be constructed per the recommendations of a project-specific drainage study subject to review and approval by the City of Sacramento Department of Utilities (DOU). This drainage study would comply with the Master Drainage Plan for Basin 141 and would include analysis for mitigating sizing and drainage system design. Appropriate detention for the proposed project would be provided. Should the drainage study use a static drainage analysis

[132] City of Sacramento, 2018. *City of Sacramento Design and Procedures Manual, Section 11*. Published July 24, 2018. P. 11-39.

methodology, the proposed project would require an estimated 5,300 cubic feet of detention with a limited maximum discharge rate of 0.30 cubic feet per second per acre.[133]

Design of the proposed project would comply with Section 15.88.010 of the Sacramento City Code, which prohibits development of the proposed project should the project would obstruct, impede, or interfere with the natural flow of existing off-site drainage crossing the proposed project site. Grading of the proposed project site would not occur prior the review and approval of a project-specific grading plan by the DOU. Any required stormwater drainage infrastructure would be constructed in compliance with the standards, regulations, and design guidelines of the Department of Utilities Onsite Design Manual,[134] the Sacramento Region Stormwater Quality Design Manual,[135] the City of Sacramento Stormwater Collection Systems,[136] and with applicable goals and policies of the 2035 General Plan. Post-construction stormwater quality control measures to minimize additional urban runoff resulting from the proposed project would be also be incorporated into the development, including certified full capture trash control devices in accordance with the requirements of the Sacramento Region Stormwater Quality Design Manual. Compliance with Sacramento City Code regulations, 2035 General Plan policies, and applicable design standards and guidelines, in addition to implementation of construction and post-construction mitigation proposed by the site-specific drainage study required by the DOU would therefore result in a less-than-significant impact to stormwater infrastructure resulting from the proposed project.

Wastewater Infrastructure

Sewer connections from public mains to the proposed project site would be provided by the SASD local sanitary sewer collection system. In addition to the 8" sewer connections and associated SASD sewer infrastructure which would be constructed throughout the site, each residential unit would have a separate connection to SASD's sewer system, per SASD requirements.[137] Construction of this sewer infrastructure would adhere to current SASD Standards and Specifications for public sewer construction or modification and would be reflected on improvement plans prior to the approval of such plans. Additionally, the project applicant would be required to pay sewer impact fees prior to the issuance of building permits to alleviate sewer impact and connection costs.[138] These considerations would help to reduce the environmental effects of the proposed project on sewer service systems.

The 24" Old Natomas force man operated by Regional San is located within San Juan Road within the site boundaries of the proposed project site. Regional San has indicated

[133] Ochoa, Sarai, 2021. "P21-008, 920 San Juan Rd, TPM, SPDR, Draft Revised." May 12, 2021.

[134] City of Sacramento Department of Utilities, 2020. *Onsite Design Manual for Onsite Drainage, Sewer, Water, Stormwater Quality and Erosion and Sediment Control.* Published May 1, 2020.

[135] Cities of Citrus Heights, Elk Grove, Folsom, Galt, Rancho Cordova, and Sacramento and County of Sacramento, 2018. *Stormwater Quality Design Manual for the Sacramento Region.* Published July 2018.

[136] City of Sacramento, 2018. *City of Sacramento Design and Procedures Manual, Section 11.* Published July 24, 2018.

[137] MacGowan, Haley, 2021. "920 San Juan, APN 250-0010-083 & 250-0010-085, File No. P21-008." May 3, 2021.

[138] Armstrong, Robb, 2021. "920 San Juan Road – Rezone & General Plan Amendment, APN: 250-0010-083 & 085, File No. P21-008." April 14, 2021.

that direct connections to this interceptor would not be permitted;[139] however, an existing 15" mainline parallels the drainage canal along the western boundary of the proposed project site, and SASD has not identified available capacity of this existing mainline as a constraint of the proposed project. This conclusion would be confirmed through a Level 3 Sewer Study to design the sewer system for the proposed site, as required by SASD. This study would include consideration of topography, phasing and timing, interceptors, collector pipes, street layouts, manhole details, exceptions to SASD Standards and Specifications, and miscellaneous other factors.[140]

Anticipated connections to the existing sewer conveyance system would comply with SASD Standards and Specifications, and the proposed project would not require changes to the local wastewater conveyance system. These considerations, in addition to the payment of fees to existing impact fee programs, would result in a less-than significant impact on sewer infrastructure following construction and operation of the proposed project.

Dry Utilities Infrastructure

Existing utilities infrastructure is also present on the proposed project site for the provision of electric power, natural gas, and telecommunications facilities to the proposed project site. Electrical service for the proposed project site would be provided by SMUD, and the proposed project would not utilize natural gas service. Beyond connections or service laterals which could be required to tie project systems into existing utilities service infrastructure, no additional requirements for electrical power, natural gas, or telecommunications facilities would be anticipated on the project site, at present, nor would these existing utilities require relocation which could result in significant environmental effects.

b) ***Less than Significant.*** The proposed project would construct 79 new residential units; using water demand rates from the City of Sacramento's Water Distribution System Criteria, the proposed project would result in an annual water demand of approximately 30.81 acre-feet per year (AFY) (see **Table 3.19-1**).

TABLE 3.19-1
WATER DEMAND RESULTING FROM THE PROPOSED PROJECT

Land Use Type	Number of Units	Composite Residential Use Factor (AFY/unit)	Demand (AFY)
Residential Medium	79	0.39	30.81

SOURCE: City of Sacramento, 2018. *Water Study Design Manual*. Published January 2018. P. 8.

[139] Armstrong, Robb, 2021. "920 San Juan Road – Rezone & General Plan Amendment, APN: 250-0010-083 & 085, File No. P21-008." April 14, 2021.

[140] Sacramento Area Sewer District, 2021. "Minimum Sewer Study Requirements." Published April 22, 2021. Available: https://www.stoptheclog.com/sites/main/files/file-attachments/reqs-minimum-sewer-study.pdf.

The 2020 UWMP projects that the City of Sacramento's water supply for the year 2045 will include 29,155 acre-feet (AF) of groundwater and 326,800 AF of surface water,[141] and that future water supplies available to the City through the year 2045 would be approximately 350,200 AF.[142] The 2020 UWMP also anticipates that the City's water supply would exceed project demand during five consecutive dry years through 2045, with a fifth year projected retail supply of 350,200 AF and an expected demand of 151,764 AF. This difference between supply and demand would result in a 198,436 AF surplus in 2045 during drought.[143] As a result of this surplus, and because the water demand which would result from implementation of the proposed project is well below projected future water supply for the City of Sacramento, the proposed project would have a less-than-significant impact on water supply.

c) ***Less than Significant.*** The proposed project would introduce 82 new residential units and approximately 214 residents[144] to the proposed project site. The City of Sacramento uses an Equivalent Single Family Dwelling Unit (ESD) standard to determine project-specific wastewater demand relative to treatment and conveyance infrastructure. The existing standard for sewer generation is 310 gallons per day (gpd) per ESD.[145] As shown in **Table 3.19-2**, the proposed project would generate approximately 18,367 gpd of wastewater according to current City standards.

TABLE 3.19-2
WASTEWATER GENERATION RESULTING FROM THE PROPOSED PROJECT

Land Use Type	Number of Units	ESD Factor	ESD	Generation Rate[1] (gpd/unit)	Average Dry Weather Flow (ADWF) (gpd)
Residential	79	0.75/Residential Unit (Condo, Townhouse, Apartments, or Mobile Home)	59.25	232.5 gpd/unit	18,367 gpd

NOTES:
[1] 310 gpd x ESD factor

SOURCE: City of Sacramento, 2018. *City of Sacramento Design and Procedures Manual*, Section 9. July 24, 2018. Pp. 9-17 and 9-54.

Because the SASD did not identify existing capacity of current wastewater infrastructure or treatment facilities as a limiting factor to the proposed project, implementation of the proposed project would not result in a determination by SASD that it does not have adequate capacity to serve the proposed project's projected demand in addition to existing SASD commitments. This impact would be less than significant.

[141] City of Sacramento, 2021. *2020 Urban Water Management Plan: Draft Report.* Published May 2021. Pp. 6-8 to 6-12.
[142] City of Sacramento, 2021. *2020 Urban Water Management Plan: Draft Report.* Published May 2021. Pp. 6-26.
[143] City of Sacramento, 2021. *2020 Urban Water Management Plan: Draft Report.* Published May 2021. Pp. 7-13.
[144] ESA, 2021.
[145] City of Sacramento, 2018. *City of Sacramento Design and Procedures Manual*, *Section 9*. Published July 24, 2018. P. 9-17.

d) ***Less than Significant.*** Solid waste for the proposed project would be managed and collected by the City of Sacramento. The Sacramento Kiefer Landfill, located at 12701 Kiefer Boulevard in Sloughhouse, California, serves as the primary location for solid waste disposal by the City.

In 2019, California had an annual per capita disposal rate per resident of 6.7 pounds per resident per day.[146] Given that the proposed project would introduce approximately 214 new residents to the proposed project site,[147] operation of the proposed project would have the potential to generate approximately 1,434 pounds of solid waste per day, or approximately 523,337 pounds annually. The Sacramento Kiefer Landfill has a designed capacity of 117.4 million cubic yards and is permitted to receive a maximum of 10,815 tons of solid waste per day. The current estimated closure year of the facility is 2035.[148] The proposed project would therefore generate an estimated daily disposal far below the current permitted maximum and would be able to serve the proposed project until the year 2035. As a result, the proposed project would not generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure, and impacts to solid waste due to implementation of the proposed project would be less than significant.

e) ***Less than Significant.*** The proposed project would comply with applicable federal, state, and local management and reduction statuses and regulations related to solid waste. Solid waste collection for the proposed project would be subject to Chapter 1, Subchapter 1, Parts 239 through 259 of Title 40 of the Code of Federal Regulations (CFR), which include regulations pertaining to solid waste. The proposed project would also be subject to applicable policies for solid waste management within the 2035 General Plan. The proposed project would also comply with implementation programs for state and local solid waste reduction goals; as such, the impact of the proposed project on solid waste management regulations and reduction statuses would be less than significant.

---

146 California Department of Resources Recycling and Recovery, 2021. *State of Disposal and Recycling for Calendar Year 2019.* Published February 12, 2021. P. 4.

147 ESA, 2021.

148 California Department of Resources Recycling and Recovery, 2018. Solid Waste Facility Permit No. 34-AA-0001. Issued November 18, 2018. Available: https://secure.calrecycle.ca.gov/SWISDocument/Document/Details/356050.

3.20 Wildfire

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. WILDFIRE — If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

Environmental Setting

The proposed project site is located in the South Natomas Community Plan area within the City of Sacramento. The site and its surroundings are not located in the Very High Fire Hazard Severity Zone (VHFHSZ)[149] as mapped by the California Department of Forestry and Fire Protection (CAL FIRE). The project site is located within the City of Sacramento's Fire Department service area.

Discussion

a, c) ***Less than Significant.*** The project site is not located in the VHFHSZ as mapped by the California Department of Forestry and Fire Protection (CAL FIRE). As directed by Government Code 51175-89, the CAL FIRE identifies areas of very high fire hazard severity zones within Local Responsibility Areas (LRA). The project site is located within the City of Sacramento's Fire Department service area.

Nonetheless, the City of Sacramento has an Emergency Operations Plan and the Fire Department has a hazardous materials incident response team that works in coordination with other regional and state agencies in the event of a major emergency (General Plan Policy PHS 4.1.1.). As discussed earlier in Section 3.9, *Hazards and Hazardous Materials*, Sacramento County has also developed an Area Plan for Emergency Response to Hazardous Materials Incidents and a Local Hazard Mitigation Plan. The City has adopted the latter and cooperates with the County with the adopted emergency response plans.

149 California Department of Forestry and Fire Protection, 2021. Available: https://osfm.fire.ca.gov/media/6758/fhszl_map34.pdf. Accessed April 30, 2021.

Construction and operations of the proposed project would not affect or alter impair an adopted emergency response plan or emergency evacuation plan. It is not anticipated that implementation of the proposed project would cause similar level of temporary closures as could be the case during construction of large projects.

As specified by the Sacramento Municipal Code Sections 12.20.020 and 12.20.030, the City's Public Works Department requires preparation of a Traffic Management Plan for the construction activities to reduce major congestion problems, which could result in interference with emergency response.

With compliance with the Traffic Management Plan review and approval by the City's Public Works Department, the proposed project would minimize the potential for construction impacts to interfere with emergency response and implementation of Traffic Management Plans would reduce the impact to less than significant.

b, d) ***Less than Significant.*** The site is relatively flat along San Juan Road to one perimeter of the roughly triangular site, a canal to the west, and an existing residential community to the northeast. The site is not near any existing forests or stands of trees, or slopes that are vegetated with potential for wildfires.

There are no site or project characteristics such as slope, prevailing winds, and other factors that would exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. As such, there is no potential for spread of wildfires due to the site characteristics.

The project site is not in a general area located downslope or downstream to experience post wildfire secondary effects such as flooding, landslides, or post fire slope collapse and drainage changes. As discusses earlier in Section 3.7, *Geology and Soils*, the site is not part of the wildfire ecological setting.

Construction activities occurring during the dry season has the potential to create sparks that could ignite dry grasses and weeds in the project area or on the project site. However, this risk is similar to that found at other construction sites and ongoing vegetation management practices would ensure that wildland fires would be unlikely to occur. The proposed project would develop the project site with urbanized uses and would be subject to similar conditions for which vegetation management practices would remain applicable and effective in minimizing the potential fire hazards from construction. For this reason, the impact of the proposed project with respect to fire hazards would remain less than significant.

3.21 Mandatory Findings of Significance

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

Discussion

a) ***Less than Significant.*** As discussed earlier in Section 3.4, *Biological Resources*, the proposed project would not degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species or cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal. For additional discussion, please refer to the impact analysis in Section 3.4.

There are no historic resources on site; and potential archaeological resources if uncovered during construction would be subject to the mitigation measures identified in Section 3.5, *Cultural Resources*.

b) ***Less than Significant.*** Consideration of the proposed project-related impacts along with, or in combination with other project related impacts are defined as cumulative impacts. As discussed in various sections, the proposed project has the potential impacts related to construction. These are short-term in nature and therefore, considered as temporary impacts. All of the potential direct and indirect impacts of the proposed project were determined to be fully avoided or a less-than-significant level. Other projects in the vicinity of the proposed project would be also subject to the City of Sacramento General Plan policies, codes, regional requirements similar to that applicable to the proposed project. As a result, the potential impacts of the proposed project are not considered cumulatively considerable, and impacts would be less than significant.

Therefore, these cumulative impacts would be mitigated to a less-than-significant level; therefore, cumulative effects are not considered a significant impact.

c) ***Less than Significant.*** All potential environmental impacts identified in support of the proposed project would either be minimal or reduced to a less than significant level with mitigation. The project site does not contain any hazards or known to have any sensitive biological and cultural resources. The proposed project does not have any environmental impacts that could have substantial adverse direct or indirect effects on human beings. No potentially significant impacts, which could cause substantial adverse direct or indirect effects on human beings were identified. No mitigation would be required.

This page intentionally left blank

Appendix A

Air Quality and Greenhouse Gas Emissions Calculations

920 San Juan Road Residential Project - CALEEMOD EMISSIONS SUMMARIES

CONSTRUCTION EMISSIONS - Criteria Air Pollutants - Uncontrolled

Year	Start date	End Date	No. of Construction Wokdays	Tons per year					Average Pounds per day				Maximum Pounds per day			
				ROG	NOx	PM-10	Exhaust PM-10	PM-2.5	ROG	NOx	PM-10	PM-2.5	ROG	NOx	PM-10	PM-2.5
2022	1/3/2022	12/31/2022	260	0.25	2.25	0.32	0.11	0.20	1.9	17.3	2.5	1.5	3.2	33.1	21.4	11.6
2023	1/1/2023	2/24/2023	40	0.81	0.12	0.01	0.01	0.01	40.3	5.8	0.4	0.3	79.5	10.2	0.6	0.5
PROJECT TOTAL			300	1.05	2.37	0.33	0.12	0.21	7.0	15.8	2.2	1.4				

CONSTRUCTION EMISSIONS - Criteria Air Pollutants - Tier 4 Final for all equipment

Year	Start date	End Date	No. of Construction Wokdays	Tons per year					Average Pounds per day				Maximum Pounds per day			
				ROG	NOx	PM-10	Exhaust PM-10	PM-2.5	ROG	NOx	PM-10	PM-2.5	ROG	NOx	PM-10	PM-2.5
2022	1/3/2022	12/31/2022	260	0.06	0.37	0.125	0.006	0.056	0.5	2.8	1.0	0.4	0.5	2.9	9.0	4.6
2023	1/1/2023	2/24/2023	40	0.80	0.01	0.002	0.000	0.001	39.8	0.7	0.1	0.0	79.3	1.2	0.2	0.1
PROJECT TOTAL			300	0.86	0.38	0.128		0.057	5.7	2.5	0.9	0.4				

OPERATIONAL EMISSIONS - Criteria Air Pollutants

Source	Tons per year				Average pounds per day			
	ROG	NOx	PM-10	PM-2.5	ROG	NOx	PM-10	PM-2.5
Proposed Uses								
Area	0.60	9.74E-03	4.69E-03	4.69E-03	3.3	0.1	0.0257	0.0257
Energy	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
Mobile	0.37	0.48	0.72	0.20	2.0	2.6	4.0	1.1
TOTAL	0.97	0.49	0.73	0.20	5.3	2.7	4.0	1.1

CONSTRUCTION EMISSIONS - GHG as MT

Year	CO_2	CH_4	N_2O	CO_2e
2022	363.2	0.08	4.56E-03	367
2023	23.9	0.01	4.00E-05	24
Total	387.2	0.09	0.0046	391

OPERATIONAL EMISSIONS - GHG as MT/year

Operational Source	CO_2	CH_4	N_2O	CO_2e
Proposed Uses				
Area	1.4	0.001	0.000	1.4
Energy	194.4	0.007	0.001	194.9
Mobile	655.5	0.045	0.033	666.3
Solid waste	15.5	0.913	0.000	38.3
Water & Wastewater	8.6	0.007	0.004	10.0
Total Project Operational Emissions	875.3	0.973	0.038	910.9

	CO_2	CH_4	N_2O
GWP	1	25	298

Source: https://ww2.arb.ca.gov/ghg-gwps

920 San Juan Road Residential Project - Construction Health Risk Assessment

Onsite DPM Emissions per Year (tons)

Residential Risk

Year	Start Date	End Date	Calendar Days	Uncontrolled	Tier 4
2022	1/3/2022	12/31/2022	362	0.11	6.35E-03
2023	1/1/2023	2/24/2023	54	0.01	4.20E-04
			416		
			1.1	*years*	

Emission Rates - Scaling Factors (g/s)

Year	Uncontrolled	Tier 4
2022	0.0032	0.0002
2023	0.0011	0.0001

Exposure Duration in seconds	
2022	31276800
2023	4665600

AERSCREEN Output [µg/m^3]/[g/s] - Maximum

Maximum 1 Hour	Resident	309.99	µg/m^3
Annual Average	Resident	31.00	µg/m^3

Maximum Emission Impact - (µg/m^3)

Year	Uncontrolled	Tier 4
2022	1.00E-01	5.71E-03
2023	3.51E-02	2.53E-03

Age Group	3rd Trimester	Age 0<2	Age 2<9
Exposure Duration	91	325	0
2022	0.25	0.75	0.00
2023	0.00	0.14	0.00

Cancer Risk = Dose inhalation × Inhalation CPF × ASF × ED/AT × FAH **(Equation 8.2.4 A)**

Where:

Cancer Risk = residential inhalation cancer risk

Dose inhalation (mg/kg-day) = C_{AIR} × DBR × A × EF × 10^{-6} **(Equation 2)**

Inhalation CPF = inhalation cancer potency factor ([mg/kg/day]$^{-1}$)

ASF = age sensitivity factor for a specified age group (unitless)

ED = exposure duration for a specified age group (years)

AT = averaging time period over which exposure is averaged in days (years)

FAH = fraction of time at home (unitless)

Where:

C_{AIR} = concentration of compound in air in micrograms per cubic meter (µg/m^3)

DBR = daily breathing rate in liter per kilogram of body weight per day (L/kg-body weight/day)

A = inhalation absorption factor (1 for DPM, unitless)

EF = exposure frequency in days per year (unitless, days/365 days)

10^{-6} = micrograms to milligrams conversion, liters to cubic meters conversion

Dose Inhalation Inputs

Uncontrolled	Tier 4

Receptor Type	Exposure Scenario	Receptor Group Age	C_{AIR} ($\mu g/m^3$)		DBR (L/kg-day)	A (unitless)	EF (days/year)
Off-Site Child Resident	Construction	3rd Trimester	1.00E-01	5.71E-03	361	1	0.96
		Age 0<2	8.99E-02	5.21E-03	1090	1	0.96
		Age 2<9	0.00E+00	0.00E+00	861	1	0.96

Dose Inhalation Outputs

			Uncontrolled	Tier 4
Receptor Type	**Exposure Scenario**	**Receptor Group Age**	**Dose inhalation (mg/kg-day)**	
Off-Site Child Resident	Construction	3rd Trimester	3.47E-05	1.98E-06
		Age 0<2	9.40E-05	5.45E-06
		Age 2<9	0.00E+00	0.00E+00

Risk Inputs

Receptor Type	Exposure Scenario	Receptor Group Age	CPF ($mg/kg\text{-}day^{-1}$)	ASF (unitless)	ED (years)	AT (years)	FAH (unitless)	REL ($\mu g/m^3$)
Off-Site Child Resident	Construction	3rd Trimester	1.1	10	0.25	70.00	1	5
		Age 0<2	1.1	10	0.89	70.00	1	5
		Age 2<9	1.1	3	0.00	70.00	1	5

Risk Outputs

			Uncontrolled	Tier 4	Uncontrolled	Tier 4
Receptor Type	**Exposure Scenario**	**Receptor Group Age**	**Cancer Risk**		**Chronic Non-Cancer Risk**	
Off-Site Child Resident	Construction	3rd Trimester	1.36E-06	7.76E-08		
		Age 0<2	1.31E-05	7.61E-07		
		Age 2<9	0.00E+00	0.00E+00		
		Total Risk	1.45E-05	8.39E-07	0.020	0.001
		Risk per Million	14.51	0.84	NA	NA

SOURCE: Office of Environmental Health Hazard Assessment, 2015. *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments* . February.
Daily breathing rate for residential receptor is based on the OEHHA 95th percentile moderate intensity breathing rates (OEHHA Table 5.7).
Fraction of time at home is set to values per OEHHA Table 8.4 for residential since the nearest school has an unmitigated cancer risk of <1 per million.
Inhalation cancer potency factor from OEHHA Table 7.1

920 San Juan Road Residential Project - AERSCREEN Output

AERSCREEN 16216 / AERMOD 19191 05/19/21
14:56:11

TITLE: 920 San Juan Construction

********** AREA PARAMETERS **********

SOURCE EMISSION RATE: 1.0000 g/s 7.937 lb/hr

AREA EMISSION RATE: 0.198E-04 g/(s-m2) 0.157E-03 lb/(hr-m2)
AREA HEIGHT: 5.00 meters 16.40 feet
AREA SOURCE LONG SIDE: 244.00 meters 800.52 feet
AREA SOURCE SHORT SIDE: 207.00 meters 679.13 feet
INITIAL VERTICAL DIMENSION: 1.40 meters 4.59 feet
RURAL OR URBAN: URBAN
POPULATION: 513624

FLAGPOLE RECEPTOR HEIGHT: 1.80 meters 5.91 feet

INITIAL PROBE DISTANCE = 5000. meters 16404. feet

********** BUILDING DOWNWASH PARAMETERS **********

BUILDING DOWNWASH NOT USED FOR NON-POINT SOURCES

********** FLOW SECTOR ANALYSIS **********
25 meter receptor spacing: 1. meters - 5000. meters

MAXIMUM IMPACT RECEPTOR

Zo SECTOR	SURFACE ROUGHNESS	1-HR CONC (ug/m3)	RADIAL (deg)	DIST (m)	TEMPORAL PERIOD
1*	1.000	646.4	40	150.0	WIN

* = worst case diagonal

********** MAKEMET METEOROLOGY PARAMETERS **********

MIN/MAX TEMPERATURE: 282.0 / 296.0 (K)

MINIMUM WIND SPEED: 0.5 m/s

ANEMOMETER HEIGHT: 10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

DOMINANT SURFACE PROFILE: Urban
DOMINANT CLIMATE TYPE: Average Moisture
DOMINANT SEASON: Winter

ALBEDO: 0.35
BOWEN RATIO: 1.50
ROUGHNESS LENGTH: 1.000 (meters)

SURFACE FRICTION VELOCITY (U*) NOT ADUSTED

METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT

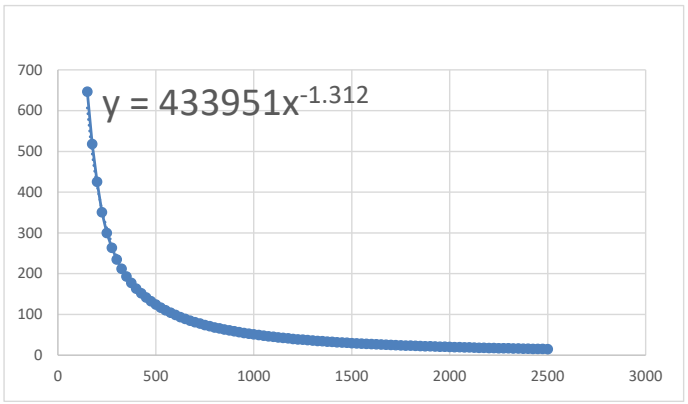
YR MO DY JDY HR
-- -- -- --- --
10 01 10 10 01

H0 U* W* DT/DZ ZICNV ZIMCH M-O LEN Z0 BOWEN ALBEDO REF WS

```
 ---------------------------------------
 -1.27  0.043 -9.000  0.020 -999.   21.     5.9 1.000   1.50   0.35    0.50

   HT  REF TA    HT
 ------------
  10.0  296.0   2.0
 ---------------------------------------------------------------------------
 ************************ AERSCREEN AUTOMATED DISTANCES **********************
              OVERALL MAXIMUM CONCENTRATIONS BY DISTANCE
 ---------------------------------------------------------------------------
```

DIST (m)	MAXIMUM 1-HR CONC (ug/m3)	DIST (m)	MAXIMUM 1-HR CONC (ug/m3)
1	457.8	2525	14.78
25	496.2	2550	14.58
50	534.1	2575	14.39
75	569.5	2600	14.2
100	600.8	2625	14.02
125	627.7	2650	13.84
150	646.4	2675	13.66
175	518.3	2700	13.49
200	425.6	2725	13.33
225	350.5	2750	13.16
250	299.9	2775	13
275	263.3	2800	12.84
300	235	2825	12.69
325	212.1	2850	12.54
350	193.1	2875	12.39
375	177.2	2900	12.25
400	163.5	2925	12.11
425	151.7	2950	11.97
450	141.4	2975	11.84
475	132.3	3000	11.7
500	124.1	3025	11.57
525	116.8	3050	11.44
550	110.1	3075	11.32
575	104.1	3100	11.19
600	98.67	3125	11.07
625	93.68	3150	10.95
650	89.11	3175	10.84
675	84.94	3200	10.72
700	81.02	3225	10.61
725	77.46	3250	10.5
750	74.15	3275	10.39
775	71.05	3300	10.28
800	68.22	3325	10.18
825	65.54	3350	10.07
850	63.03	3375	9.974
875	60.68	3400	9.875
900	58.49	3425	9.777
925	56.44	3450	9.681
950	54.49	3475	9.587
975	52.68	3500	9.494
1000	50.95	3525	9.403
1025	49.32	3550	9.313
1050	47.78	3575	9.306
1075	46.32	3600	9.218
1100	44.94	3625	9.131
1125	43.62	3650	9.045
1150	42.37	3675	8.961
1175	41.18	3700	8.879
1200	40.05	3725	8.797
1225	38.97	3750	8.717
1250	37.95	3775	8.638
1275	36.96	3800	8.561
1300	36.01	3825	8.484



1325	35.11	3850	8.409
1350	34.25	3875	8.335
1375	33.42	3900	8.262
1400	32.63	3925	8.19
1425	31.87	3950	8.119
1450	31.13	3975	8.049
1475	30.43	4000	7.981
1500	29.76	4025	7.913
1525	29.11	4050	7.846
1550	28.49	4075	7.78
1575	27.89	4100	7.716
1600	27.31	4125	7.652
1625	26.75	4150	7.589
1650	26.21	4175	7.527
1675	25.69	4200	7.465
1700	25.18	4225	7.405
1725	24.69	4250	7.346
1750	24.21	4275	7.287
1775	23.75	4300	7.229
1800	23.31	4325	7.172
1825	22.88	4350	7.116
1850	22.47	4375	7.06
1875	22.07	4400	7.005
1900	21.68	4425	6.951
1924.99	21.3	4449.99	6.898
1950	20.93	4475	6.845
1975.01	20.58	4500	6.793
2000.01	20.23	4525	6.742
2025	19.89	4550	6.691
2050	19.57	4575	6.641
2075	19.25	4600	6.592
2100	18.94	4625	6.543
2125	18.64	4650	6.495
2150	18.35	4675	6.448
2175	18.07	4700	6.401
2200	17.79	4725	6.355
2225	17.52	4750	6.309
2250	17.26	4775	6.264
2275	17	4800	6.219
2300	16.76	4825	6.175
2325	16.52	4850	6.132
2350	16.28	4875	6.089
2375	16.05	4900	6.047
2400	15.83	4924.99	6.005
2425	15.61	4950	5.963
2450	15.39	4975	5.922
2475	15.18	5000	5.882
2500	14.98		

********** AERSCREEN MAXIMUM IMPACT SUMMARY **********

3-hour, 8-hour, and 24-hour scaled
concentrations are equal to the 1-hour concentration as referenced in
SCREENING PROCEDURES FOR ESTIMATING THE AIR QUALITY
IMPACT OF STATIONARY SOURCES, REVISED (Section 4.5.4)
Report number EPA-454/R-92-019
http://www.epa.gov/scram001/guidance_permit.htm
under Screening Guidance

CALCULATION PROCEDURE	MAXIMUM 1-HOUR CONC (ug/m3)	SCALED 3-HOUR CONC (ug/m3)	SCALED 8-HOUR CONC (ug/m3)	SCALED 24-HOUR CONC (ug/m3)	SCALED ANNUAL CONC (ug/m3)
FLAT TERRAIN	647.4	647.4	647.4	647.4	N/A

DISTANCE FROM SOURCE 153.00 meters

IMPACT AT THE AMBIENT BOUNDARY	457.8	457.8	457.8	457.8	N/A

DISTANCE FROM SOURCE 1.00 meters

920 San Juan Road Residential Project - AERSCREEN Inputs

	Construction		
	Off-Road Equip + Trucks		
Title	920 San Juan Construction		
Units	M		
Source Type	A		
DPM emission rate (g/s)	1		
Center of volume height (meters)	n/a		
Initial Lateral Dimension (meters)	n/a		
Initial Vertical Dimension (meters)	n/a		
Release Height above ground OR stack height (meters)	5		
Maximum horizontal dimension of area source (meters)	244	800	feet
Minimum horizontal dimension of area source (meters)	207	680	feet
Initial Vertical Dimension (meters)	1.4		
Stack diameter (meters)	n/a		
Stack temperature (K)	n/a		
Exit velocity (m/s)	n/a		
rural/urban	urban		
population of urban area	*513,624*		
min distance to ambient air (meters)	default		
NO_2 chemistry	1		
Include building downwash?	n/a		
Include terrain heights?	n/a		
max distance to probe	default		
include discrete receptors	no		
use flagpole receptors	yes		
flagpole receptor height (meters)	1.8		
source elevation	default		
min ambient temperature (K)	282	48.1	F
max ambient temperature (K)	296	73.6	F
min wind speed (m/s)	default		
anemometer height (m)	default		
surface characteristics	2		
Dominant surface profile	7		
dominant climate profile	1		
adjust	no		
debug	no		
Output file name	920SanJuanCons.out		


SACRAMENTO
METROPOLITAN
SACRAMENTO
AQMD
VALLEY

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

920 San Juan Residential Project

Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Racquet Club	2.00	1000sqft	0.02	2,000.00	0
Condo/Townhouse	28.00	Dwelling Unit	0.83	28,000.00	75
Single Family Housing	12.00	Dwelling Unit	1.86	21,600.00	32
Single Family Housing	42.00	Dwelling Unit	6.49	75,600.00	112

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2024
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	374.84	**CH4 Intensity (lb/MWhr)**	0.013	**N2O Intensity (lb/MWhr)**	0.002

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Proposed project uses and areas

Construction Phase - Default construction schedule adjusted to account for no demolition

Off-road Equipment - Phase not used

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading -

Vehicle Trips - Trip generation adjusted based on project traffic study

Energy Use - Electricity use adjusted to account for no natural gas

Construction Off-road Equipment Mitigation - Tier 4 Final engines used for BACT

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	3/24/2023	2/24/2023
tblConstructionPhase	PhaseEndDate	1/27/2023	12/30/2022

tblConstructionPhase	PhaseEndDate	1/28/2022	1/2/2022
tblConstructionPhase	PhaseEndDate	3/11/2022	2/11/2022
tblConstructionPhase	PhaseEndDate	2/24/2023	1/27/2023
tblConstructionPhase	PhaseEndDate	2/11/2022	1/14/2022
tblConstructionPhase	PhaseStartDate	2/25/2023	1/28/2023
tblConstructionPhase	PhaseStartDate	3/12/2022	2/12/2022
tblConstructionPhase	PhaseStartDate	2/12/2022	1/15/2022
tblConstructionPhase	PhaseStartDate	1/28/2023	12/31/2022
tblConstructionPhase	PhaseStartDate	1/29/2022	1/3/2022
tblEnergyUse	NT24E	3,795.01	4,582.49
tblEnergyUse	NT24E	7.20	10.84
tblEnergyUse	NT24E	6,155.97	6,943.45
tblEnergyUse	NT24NG	2,687.00	0.00
tblEnergyUse	NT24NG	12.42	0.00
tblEnergyUse	NT24NG	2,687.00	0.00
tblEnergyUse	T24E	80.14	4,823.50
tblEnergyUse	T24E	3.05	9.83
tblEnergyUse	T24E	142.58	6,288.81
tblEnergyUse	T24NG	16,185.01	0.00
tblEnergyUse	T24NG	23.15	0.00
tblEnergyUse	T24NG	20,971.81	0.00
tblGrading	MaterialExported	0.00	1,196.00
tblLandUse	LotAcreage	0.05	0.02
tblLandUse	LotAcreage	1.75	0.83
tblLandUse	LotAcreage	3.90	1.86
tblLandUse	LotAcreage	13.64	6.49
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00

tblVehicleTrips	ST_TR	8.14	6.83
tblVehicleTrips	ST_TR	21.35	0.00
tblVehicleTrips	ST_TR	9.54	11.04
tblVehicleTrips	SU_TR	6.28	5.27
tblVehicleTrips	SU_TR	17.40	0.00
tblVehicleTrips	SU_TR	8.55	9.90
tblVehicleTrips	WD_TR	7.32	6.14
tblVehicleTrips	WD_TR	14.03	0.00
tblVehicleTrips	WD_TR	9.44	10.93

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					
2022	0.249	2.2527	2.275	4.15E-03	0.2121	0.1114	0.3235	0.0963	0.1044	0.2008	0	363.2179	363.2179	0.0794	4.56E-03	366.5607
2023	0.8056	0.1154	0.1693	2.70E-04	1.69E-03	5.82E-03	7.51E-03	4.50E-04	5.41E-03	5.86E-03	0	23.9352	23.9352	6.67E-03	4.00E-05	24.1136
Maximum	**0.8056**	**2.2527**	**2.275**	**4.15E-03**	**0.2121**	**0.1114**	**0.3235**	**0.0963**	**0.1044**	**0.2008**	**0**	**363.2179**	**363.2179**	**0.0794**	**4.56E-03**	**366.5607**

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					
2022	0.0611	0.3657	2.4318	4.15E-03	0.119	6.35E-03	0.1254	0.0497	6.30E-03	0.056	0	363.2175	363.2175	0.0794	4.56E-03	366.5604
2023	0.7964	0.0139	0.1966	2.70E-04	1.69E-03	4.20E-04	2.11E-03	4.50E-04	4.20E-04	8.70E-04	0	23.9352	23.9352	6.67E-03	4.00E-05	24.1136
Maximum	**0.7964**	**0.3657**	**2.4318**	**4.15E-03**	**0.119**	**6.35E-03**	**0.1254**	**0.0497**	**6.30E-03**	**0.056**	**0**	**363.2175**	**363.2175**	**0.0794**	**4.56E-03**	**366.5604**

	ROG	NOx	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	18.68	83.97	-7.53	0.00	43.54	94.22	61.48	48.18	93.88	72.47	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	1-3-2022	4-2-2022	0.7220	0.1050
2	4-3-2022	7-2-2022	0.5866	0.1069
3	7-3-2022	10-2-2022	0.5931	0.1081
4	10-3-2022	1-2-2023	0.5873	0.1074
5	1-3-2023	4-2-2023	0.9089	0.8087
		Highest	0.9089	0.8087

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	0.6015	9.74E-03	0.8453	4.00E-05		4.69E-03	4.69E-03		4.69E-03	4.69E-03	0	1.3814	1.3814	1.33E-03	0	1.4145
Energy	0.0000	0	0	0		0	0		0	0	0	194.3887	194.3887	6.74E-03	1.04E-03	194.8664
Mobile	0.3677	0.4784	3.3708	6.97E-03	0.7175	5.57E-03	0.723	0.1918	5.20E-03	0.197	0	655.4624	655.4624	0.0449	0.0325	666.276
Waste						0	0		0	0	15.4517	0	15.4517	0.9132	0	38.2809
Water						0	0		0	0	1.9321	6.6738	8.6059	6.88E-03	4.24E-03	10.0406
Total	**0.9692**	**0.4882**	**4.2161**	**7.01E-03**	**0.7175**	**0.0103**	**0.7277**	**0.1918**	**9.89E-03**	**0.2017**	**17.3838**	**857.9063**	**875.2901**	**0.973**	**0.0378**	**910.8783**

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	0.6015	9.74E-03	0.8453	4.00E-05		4.69E-03	4.69E-03		4.69E-03	4.69E-03	0	1.3814	1.3814	1.33E-03	0	1.4145
Energy	0.0000	0	0	0		0	0		0	0	0	194.3887	194.3887	6.74E-03	1.04E-03	194.8664

Mobile	0.3677	0.4784	3.3708	6.97E-03	0.7175	5.57E-03	0.723	0.1918	5.20E-03	0.197	0	655.4624	655.4624	0.0449	0.0325	666.276
Waste						0	0		0	0	15.4517	0	15.4517	0.9132	0	38.2809
Water						0	0		0	0	1.9321	6.6738	8.6059	6.88E-03	4.24E-03	10.0406
Total	**0.9692**	**0.4882**	**4.2161**	**7.01E-03**	**0.7175**	**0.0103**	**0.7277**	**0.1918**	**9.89E-03**	**0.2017**	**17.3838**	**857.9063**	**875.2901**	**0.973**	**0.0378**	**910.8783**

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

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	1/3/2022	1/2/2022	5	0	
2	Site Preparation	Site Preparation	1/3/2022	1/14/2022	5	10	
3	Grading	Grading	1/15/2022	2/11/2022	5	20	
4	Building Construction	Building Construction	2/12/2022	12/30/2022	5	230	
5	Paving	Paving	12/31/2022	1/27/2023	5	20	
6	Architectural Coating	Architectural Coating	1/28/2023	2/24/2023	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 20

Acres of Paving: 0

Residential Indoor: 253,530; Residential Outdoor: 84,510; Non-Residential Indoor: 3,000; Non-Residential Outdoor: 1,000; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Concrete/Industrial Saws	0	0.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Demolition	Excavators	0	0.00	158	0.38

Grading	Excavators	1	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
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
Demolition	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	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	150.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	40.00	9.00	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	8.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Demolition - 2022

Phase not used

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0159	0.1654	0.0985	1.9000e-004		8.0600e-003	8.0600e-003		7.4200e-003	7.4200e-003	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	**0.0159**	**0.1654**	**0.0985**	**1.9000e-004**	**0.0983**	**8.0600e-003**	**0.1064**	**0.0505**	**7.4200e-003**	**0.0579**	**0.0000**	**16.7197**	**16.7197**	**5.4100e-003**	**0.0000**	**16.8549**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	1.8000e-004	2.2700e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.8000e-004	0.0000	1.8000e-004	0.0000	0.5443	0.5443	2.0000e-005	2.0000e-005	0.5496
Total	**2.8000e-004**	**1.8000e-004**	**2.2700e-003**	**1.0000e-005**	**6.6000e-004**	**0.0000**	**6.6000e-004**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.5443**	**0.5443**	**2.0000e-005**	**2.0000e-005**	**0.5496**

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					0.0442	0.0000	0.0442	0.0227	0.0000	0.0227	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.3300e-003	0.0101	0.1043	1.9000e-004		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	**2.3300e-003**	**0.0101**	**0.1043**	**1.9000e-004**	**0.0442**	**3.1000e-004**	**0.0445**	**0.0227**	**3.1000e-004**	**0.0230**	**0.0000**	**16.7197**	**16.7197**	**5.4100e-003**	**0.0000**	**16.8549**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	1.8000e-004	2.2700e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.8000e-004	0.0000	1.8000e-004	0.0000	0.5443	0.5443	2.0000e-005	2.0000e-005	0.5496
Total	**2.8000e-004**	**1.8000e-004**	**2.2700e-003**	**1.0000e-005**	**6.6000e-004**	**0.0000**	**6.6000e-004**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.5443**	**0.5443**	**2.0000e-005**	**2.0000e-005**	**0.5496**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0710	0.0000	0.0710	0.0343	0.0000	0.0343	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0195	0.2086	0.1527	3.0000e-004		9.4100e-003	9.4100e-003		8.6600e-003	8.6600e-003	0.0000	26.0548	26.0548	8.4300e-003	0.0000	26.2654
Total	**0.0195**	**0.2086**	**0.1527**	**3.0000e-004**	**0.0710**	**9.4100e-003**	**0.0804**	**0.0343**	**8.6600e-003**	**0.0429**	**0.0000**	**26.0548**	**26.0548**	**8.4300e-003**	**0.0000**	**26.2654**

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	3.1000e-004	0.0138	2.5800e-003	5.0000e-005	1.2700e-003	1.1000e-004	1.3800e-003	3.5000e-004	1.1000e-004	4.6000e-004	0.0000	4.8198	4.8198	1.9000e-004	7.6000e-004	5.0523
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6000e-004	3.0000e-004	3.7800e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9072	0.9072	3.0000e-005	3.0000e-005	0.9161
Total	**7.7000e-004**	**0.0141**	**6.3600e-003**	**6.0000e-005**	**2.3700e-003**	**1.2000e-004**	**2.4900e-003**	**6.4000e-004**	**1.2000e-004**	**7.6000e-004**	**0.0000**	**5.7269**	**5.7269**	**2.2000e-004**	**7.9000e-004**	**5.9683**

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					0.0319	0.0000	0.0319	0.0154	0.0000	0.0154	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6300e-003	0.0157	0.1775	3.0000e-004		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	26.0547	26.0547	8.4300e-003	0.0000	26.2654
Total	**3.6300e-003**	**0.0157**	**0.1775**	**3.0000e-004**	**0.0319**	**4.8000e-004**	**0.0324**	**0.0154**	**4.8000e-004**	**0.0159**	**0.0000**	**26.0547**	**26.0547**	**8.4300e-003**	**0.0000**	**26.2654**

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	3.1000e-004	0.0138	2.5800e-003	5.0000e-005	1.2700e-003	1.1000e-004	1.3800e-003	3.5000e-004	1.1000e-004	4.6000e-004	0.0000	4.8198	4.8198	1.9000e-004	7.6000e-004	5.0523
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6000e-004	3.0000e-004	3.7800e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9072	0.9072	3.0000e-005	3.0000e-005	0.9161
Total	**7.7000e-004**	**0.0141**	**6.3600e-003**	**6.0000e-005**	**2.3700e-003**	**1.2000e-004**	**2.4900e-003**	**6.4000e-004**	**1.2000e-004**	**7.6000e-004**	**0.0000**	**5.7269**	**5.7269**	**2.2000e-004**	**7.9000e-004**	**5.9683**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1962	1.7958	1.8818	3.1000e-003		0.0930	0.0930		0.0875	0.0875	0.0000	266.4840	266.4840	0.0638	0.0000	268.0801
Total	**0.1962**	**1.7958**	**1.8818**	**3.1000e-003**		**0.0930**	**0.0930**		**0.0875**	**0.0875**	**0.0000**	**266.4840**	**266.4840**	**0.0638**	**0.0000**	**268.0801**

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	2.2100e-003	0.0594	0.0173	2.0000e-004	6.0600e-003	5.5000e-004	6.6100e-003	1.7500e-003	5.3000e-004	2.2800e-003	0.0000	19.8686	19.8686	5.2000e-004	2.9100e-003	20.7496
Worker	0.0142	9.2300e-003	0.1160	3.0000e-004	0.0338	1.9000e-004	0.0340	8.9900e-003	1.7000e-004	9.1600e-003	0.0000	27.8195	27.8195	9.5000e-004	8.4000e-004	28.0928
Total	**0.0164**	**0.0686**	**0.1333**	**5.0000e-004**	**0.0398**	**7.4000e-004**	**0.0406**	**0.0107**	**7.0000e-004**	**0.0114**	**0.0000**	**47.6882**	**47.6882**	**1.4700e-003**	**3.7500e-003**	**48.8424**

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	0.0377	0.2570	2.0079	3.1000e-003		4.6900e-003	4.6900e-003		4.6900e-003	4.6900e-003	0.0000	266.4837	266.4837	0.0638	0.0000	268.0798
Total	**0.0377**	**0.2570**	**2.0079**	**3.1000e-003**		**4.6900e-003**	**4.6900e-003**		**4.6900e-003**	**4.6900e-003**	**0.0000**	**266.4837**	**266.4837**	**0.0638**	**0.0000**	**268.0798**

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	2.2100e-003	0.0594	0.0173	2.0000e-004	6.0600e-003	5.5000e-004	6.6100e-003	1.7500e-003	5.3000e-004	2.2800e-003	0.0000	19.8686	19.8686	5.2000e-004	2.9100e-003	20.7496
Worker	0.0142	9.2300e-003	0.1160	3.0000e-004	0.0338	1.9000e-004	0.0340	8.9900e-003	1.7000e-004	9.1600e-003	0.0000	27.8195	27.8195	9.5000e-004	8.4000e-004	28.0928
Total	**0.0164**	**0.0686**	**0.1333**	**5.0000e-004**	**0.0398**	**7.4000e-004**	**0.0406**	**0.0107**	**7.0000e-004**	**0.0114**	**0.0000**	**47.6882**	**47.6882**	**1.4700e-003**	**3.7500e-003**	**48.8424**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	0.0000	0.0000	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	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	0.0000	0.0000	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	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2023

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	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0269	20.0269	6.4800e-003	0.0000	20.1888
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0103**	**0.1019**	**0.1458**	**2.3000e-004**		**5.1000e-003**	**5.1000e-003**		**4.6900e-003**	**4.6900e-003**	**0.0000**	**20.0269**	**20.0269**	**6.4800e-003**	**0.0000**	**20.1888**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	2.7000e-004	3.5000e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.8838	0.8838	3.0000e-005	3.0000e-005	0.8920
Total	**4.3000e-004**	**2.7000e-004**	**3.5000e-003**	**1.0000e-005**	**1.1000e-003**	**1.0000e-005**	**1.1100e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**0.8838**	**0.8838**	**3.0000e-005**	**3.0000e-005**	**0.8920**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.8000e-003	0.0122	0.1730	2.3000e-004		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	20.0268	20.0268	6.4800e-003	0.0000	20.1888
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.8000e-003**	**0.0122**	**0.1730**	**2.3000e-004**		**3.7000e-004**	**3.7000e-004**		**3.7000e-004**	**3.7000e-004**	**0.0000**	**20.0268**	**20.0268**	**6.4800e-003**	**0.0000**	**20.1888**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	2.7000e-004	3.5000e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.8838	0.8838	3.0000e-005	3.0000e-005	0.8920
Total	**4.3000e-004**	**2.7000e-004**	**3.5000e-003**	**1.0000e-005**	**1.1000e-003**	**1.0000e-005**	**1.1100e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**0.8838**	**0.8838**	**3.0000e-005**	**3.0000e-005**	**0.8920**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7927					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	**0.7946**	**0.0130**	**0.0181**	**3.0000e-005**		**7.1000e-004**	**7.1000e-004**		**7.1000e-004**	**7.1000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.5000e-004**	**0.0000**	**2.5571**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.4000e-004	1.8700e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4713	0.4713	1.0000e-005	1.0000e-005	0.4757
Total	**2.3000e-004**	**1.4000e-004**	**1.8700e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**5.9000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4713**	**0.4713**	**1.0000e-005**	**1.0000e-005**	**0.4757**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7927					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0000e-004	1.2900e-003	0.0183	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	**0.7930**	**1.2900e-003**	**0.0183**	**3.0000e-005**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**2.5533**	**2.5533**	**1.5000e-004**	**0.0000**	**2.5571**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.4000e-004	1.8700e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4713	0.4713	1.0000e-005	1.0000e-005	0.4757
Total	**2.3000e-004**	**1.4000e-004**	**1.8700e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**5.9000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4713**	**0.4713**	**1.0000e-005**	**1.0000e-005**	**0.4757**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3677	0.4784	3.3708	6.9700e-003	0.7175	5.5700e-003	0.7230	0.1918	5.2000e-003	0.1970	0.0000	655.4624	655.4624	0.0449	0.0325	666.2760
Unmitigated	0.3677	0.4784	3.3708	6.9700e-003	0.7175	5.5700e-003	0.7230	0.1918	5.2000e-003	0.1970	0.0000	655.4624	655.4624	0.0449	0.0325	666.2760

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	171.92	191.24	147.56	439,318	439,318
Racquet Club	0.00	0.00	0.00		

Single Family Housing	131.16	132.48	118.80	332,524	332,524
Single Family Housing	459.06	463.68	415.80	1,163,833	1,163,833
Total	762.14	787.40	682.16	1,935,675	1,935,675

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
Condo/Townhouse	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3
Racquet Club	10.00	5.00	6.50	11.50	69.50	19.00	52	39	9
Single Family Housing	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3
Single Family Housing	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.542485	0.056811	0.183752	0.130945	0.025591	0.005989	0.013266	0.009393	0.000917	0.000565	0.025954	0.000983	0.003351
Racquet Club	0.542485	0.056811	0.183752	0.130945	0.025591	0.005989	0.013266	0.009393	0.000917	0.000565	0.025954	0.000983	0.003351
Single Family Housing	0.542485	0.056811	0.183752	0.130945	0.025591	0.005989	0.013266	0.009393	0.000917	0.000565	0.025954	0.000983	0.003351

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive 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	194.3887	194.3887	6.7400e-003	1.0400e-003	194.8664
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	194.3887	194.3887	6.7400e-003	1.0400e-003	194.8664
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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					
Condo/Townhouse	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Racquet Club	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
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
Condo/Townhouse	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Racquet Club	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
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	291399	49.5449	1.7200e-003	2.6000e-004	49.6666
Racquet Club	50480	8.5828	3.0000e-004	5.0000e-005	8.6039
Single Family Housing	178093	30.2802	1.0500e-003	1.6000e-004	30.3546
Single Family Housing	623326	105.9808	3.6800e-003	5.7000e-004	106.2412
Total		**194.3887**	**6.7500e-003**	**1.0400e-003**	**194.8664**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	291399	49.5449	1.7200e-003	2.6000e-004	49.6666
Racquet Club	50480	8.5828	3.0000e-004	5.0000e-005	8.6039
Single Family Housing	178093	30.2802	1.0500e-003	1.6000e-004	30.3546
Single Family Housing	623326	105.9808	3.6800e-003	5.7000e-004	106.2412
Total		**194.3887**	**6.7500e-003**	**1.0400e-003**	**194.8664**

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	0.6015	9.7400e-003	0.8453	4.0000e-005		4.6900e-003	4.6900e-003		4.6900e-003	4.6900e-003	0.0000	1.3814	1.3814	1.3300e-003	0.0000	1.4145
Unmitigated	0.6015	9.7400e-003	0.8453	4.0000e-005		4.6900e-003	4.6900e-003		4.6900e-003	4.6900e-003	0.0000	1.3814	1.3814	1.3300e-003	0.0000	1.4145

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	0.0793					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4968					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	0.0254	9.7400e-003	0.8453	4.0000e-005		4.6900e-003	4.6900e-003		4.6900e-003	4.6900e-003	0.0000	1.3814	1.3814	1.3300e-003	0.0000	1.4145
Total	**0.6015**	**9.7400e-003**	**0.8453**	**4.0000e-005**		**4.6900e-003**	**4.6900e-003**		**4.6900e-003**	**4.6900e-003**	**0.0000**	**1.3814**	**1.3814**	**1.3300e-003**	**0.0000**	**1.4145**

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	0.0793					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4968					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	0.0254	9.7400e-003	0.8453	4.0000e-005		4.6900e-003	4.6900e-003		4.6900e-003	4.6900e-003	0.0000	1.3814	1.3814	1.3300e-003	0.0000	1.4145
Total	**0.6015**	**9.7400e-003**	**0.8453**	**4.0000e-005**		**4.6900e-003**	**4.6900e-003**		**4.6900e-003**	**4.6900e-003**	**0.0000**	**1.3814**	**1.3814**	**1.3300e-003**	**0.0000**	**1.4145**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	8.6059	6.8800e-003	4.2400e-003	10.0406
Unmitigated	8.6059	6.8800e-003	4.2400e-003	10.0406

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	1.82431 / 1.15011	2.8754	2.3000e-003	1.4200e-003	3.3547
Racquet Club	0.118286 / 0.0724981	0.1852	1.5000e-004	9.0000e-005	0.2163
Single Family Housing	3.51832 / 2.21807	5.5453	4.4300e-003	2.7300e-003	6.4697
Total		**8.6059**	**6.8800e-003**	**4.2400e-003**	**10.0406**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	1.82431 / 1.15011	2.8754	2.3000e-003	1.4200e-003	3.3547
Racquet Club	0.118286 / 0.0724981	0.1852	1.5000e-004	9.0000e-005	0.2163
Single Family Housing	3.51832 / 2.21807	5.5453	4.4300e-003	2.7300e-003	6.4697
Total		**8.6059**	**6.8800e-003**	**4.2400e-003**	**10.0406**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	15.4517	0.9132	0.0000	38.2809
Unmitigated	15.4517	0.9132	0.0000	38.2809

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	12.88	2.6145	0.1545	0.0000	6.4774
Racquet Club	11.4	2.3141	0.1368	0.0000	5.7331
Single Family Housing	51.84	10.5231	0.6219	0.0000	26.0704
Total		**15.4517**	**0.9132**	**0.0000**	**38.2809**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	12.88	2.6145	0.1545	0.0000	6.4774
Racquet Club	11.4	2.3141	0.1368	0.0000	5.7331
Single Family Housing	51.84	10.5231	0.6219	0.0000	26.0704
Total		**15.4517**	**0.9132**	**0.0000**	**38.2809**

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

920 San Juan Residential Project - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

920 San Juan Residential Project

Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Racquet Club	2.00	1000sqft	0.02	2,000.00	0
Condo/Townhouse	28.00	Dwelling Unit	0.83	28,000.00	75
Single Family Housing	12.00	Dwelling Unit	1.86	21,600.00	32
Single Family Housing	42.00	Dwelling Unit	6.49	75,600.00	112

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2024
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	374.84	**CH4 Intensity (lb/MWhr)**	0.013	**N2O Intensity (lb/MWhr)**	0.002

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Proposed project uses and areas

Construction Phase - Default construction schedule adjusted to account for no demolition

Off-road Equipment - Phase not used

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading -

Vehicle Trips - Trip generation adjusted based on project traffic study

Energy Use - Electricity use adjusted to account for no natural gas

Construction Off-road Equipment Mitigation - Tier 4 Final engines used for BACT

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	3/24/2023	2/24/2023
tblConstructionPhase	PhaseEndDate	1/27/2023	12/30/2022

tblConstructionPhase	PhaseEndDate	1/28/2022	1/2/2022
tblConstructionPhase	PhaseEndDate	3/11/2022	2/11/2022
tblConstructionPhase	PhaseEndDate	2/24/2023	1/27/2023
tblConstructionPhase	PhaseEndDate	2/11/2022	1/14/2022
tblConstructionPhase	PhaseStartDate	2/25/2023	1/28/2023
tblConstructionPhase	PhaseStartDate	3/12/2022	2/12/2022
tblConstructionPhase	PhaseStartDate	2/12/2022	1/15/2022
tblConstructionPhase	PhaseStartDate	1/28/2023	12/31/2022
tblConstructionPhase	PhaseStartDate	1/29/2022	1/3/2022
tblEnergyUse	NT24E	3,795.01	4,582.49
tblEnergyUse	NT24E	7.20	10.84
tblEnergyUse	NT24E	6,155.97	6,943.45
tblEnergyUse	NT24NG	2,687.00	0.00
tblEnergyUse	NT24NG	12.42	0.00
tblEnergyUse	NT24NG	2,687.00	0.00
tblEnergyUse	T24E	80.14	4,823.50
tblEnergyUse	T24E	3.05	9.83
tblEnergyUse	T24E	142.58	6,288.81
tblEnergyUse	T24NG	16,185.01	0.00
tblEnergyUse	T24NG	23.15	0.00
tblEnergyUse	T24NG	20,971.81	0.00
tblGrading	MaterialExported	0.00	1,196.00
tblLandUse	LotAcreage	0.05	0.02
tblLandUse	LotAcreage	1.75	0.83
tblLandUse	LotAcreage	3.90	1.86
tblLandUse	LotAcreage	13.64	6.49
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00

tblVehicleTrips	ST_TR	8.14	6.83
tblVehicleTrips	ST_TR	21.35	0.00
tblVehicleTrips	ST_TR	9.54	11.04
tblVehicleTrips	SU_TR	6.28	5.27
tblVehicleTrips	SU_TR	17.40	0.00
tblVehicleTrips	SU_TR	8.55	9.90
tblVehicleTrips	WD_TR	7.32	6.14
tblVehicleTrips	WD_TR	14.03	0.00
tblVehicleTrips	WD_TR	9.44	10.93

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					
2022	3.2354	33.1165	20.2301	0.0393	19.7939	1.6133	21.4073	10.1388	1.4843	11.623	0	3,817.60	3,817.60	1.1961	0.087	3,848.51
2023	79.4864	10.2159	14.993	0.0238	0.1141	0.5108	0.6249	0.0303	0.4699	0.5002	0	2,314.34	2,314.34	0.7169	2.62E-03	2,333.04
Maximum	**79.4864**	**33.1165**	**20.2301**	**0.0393**	**19.7939**	**1.6133**	**21.4073**	**10.1388**	**1.4843**	**11.623**	**0**	**3,817.60**	**3,817.60**	**1.1961**	**0.087**	**3,848.51**

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					
2022	0.5308	2.905	21.4014	0.0393	8.9826	0.0628	9.0454	4.5824	0.0628	4.6452	0	3,817.60	3,817.60	1.1961	0.087	3,848.51
2023	79.3244	1.2397	17.7045	0.0238	0.1141	0.038	0.1521	0.0303	0.0379	0.0682	0	2,314.34	2,314.34	0.7169	2.62E-03	2,333.04
Maximum	**79.3244**	**2.905**	**21.4014**	**0.0393**	**8.9826**	**0.0628**	**9.0454**	**4.5824**	**0.0628**	**4.6452**	**0**	**3,817.60**	**3,817.60**	**1.1961**	**0.087**	**3,848.51**

	ROG	NOx	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	**3.47**	**90.44**	**-11.02**	**0.00**	**54.31**	**95.25**	**58.25**	**54.64**	**94.85**	**61.12**	**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	3.3598	0.0779	6.7625	3.6000e-004		0.0375	0.0375		0.0375	0.0375	0.0000	12.1817	12.1817	0.0117	0.0000	12.4740
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	2.5914	2.5267	20.8825	0.0430	4.2608	0.0319	4.2927	1.1360	0.0298	1.1658		4,452.0895	4,452.0895	0.2705	0.1973	4,517.6551
Total	**5.9512**	**2.6046**	**27.6450**	**0.0433**	**4.2608**	**0.0694**	**4.3302**	**1.1360**	**0.0673**	**1.2033**	**0.0000**	**4,464.2713**	**4,464.2713**	**0.2822**	**0.1973**	**4,530.1291**

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	3.3598	0.0779	6.7625	3.6000e-004		0.0375	0.0375		0.0375	0.0375	0.0000	12.1817	12.1817	0.0117	0.0000	12.4740
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	2.5914	2.5267	20.8825	0.0430	4.2608	0.0319	4.2927	1.1360	0.0298	1.1658		4,452.0895	4,452.0895	0.2705	0.1973	4,517.6551
Total	**5.9512**	**2.6046**	**27.6450**	**0.0433**	**4.2608**	**0.0694**	**4.3302**	**1.1360**	**0.0673**	**1.2033**	**0.0000**	**4,464.2713**	**4,464.2713**	**0.2822**	**0.1973**	**4,530.1291**

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

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	1/3/2022	1/2/2022	5	0	
2	Site Preparation	Site Preparation	1/3/2022	1/14/2022	5	10	
3	Grading	Grading	1/15/2022	2/11/2022	5	20	
4	Building Construction	Building Construction	2/12/2022	12/30/2022	5	230	
5	Paving	Paving	12/31/2022	1/27/2023	5	20	
6	Architectural Coating	Architectural Coating	1/28/2023	2/24/2023	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 20

Acres of Paving: 0

Residential Indoor: 253,530; Residential Outdoor: 84,510; Non-Residential Indoor: 3,000; Non-Residential Outdoor: 1,000; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Concrete/Industrial Saws	0	0.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Demolition	Excavators	0	0.00	158	0.38
Grading	Excavators	1	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
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
Demolition	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	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	150.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	40.00	9.00	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	8.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Demolition - 2022

Phase not used

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

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	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
Worker	0.0652	0.0329	0.5324	1.2900e-003	0.1369	7.4000e-004	0.1377	0.0363	6.8000e-004	0.0370		131.5353	131.5353	3.9000e-003	3.4000e-003	132.6458
Total	**0.0652**	**0.0329**	**0.5324**	**1.2900e-003**	**0.1369**	**7.4000e-004**	**0.1377**	**0.0363**	**6.8000e-004**	**0.0370**		**131.5353**	**131.5353**	**3.9000e-003**	**3.4000e-003**	**132.6458**

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					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0380		0.0621	0.0621		0.0621	0.0621	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**0.4656**	**2.0175**	**20.8690**	**0.0380**	**8.8457**	**0.0621**	**8.9077**	**4.5461**	**0.0621**	**4.6082**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

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	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
Worker	0.0652	0.0329	0.5324	1.2900e-003	0.1369	7.4000e-004	0.1377	0.0363	6.8000e-004	0.0370		131.5353	131.5353	3.9000e-003	3.4000e-003	132.6458
Total	**0.0652**	**0.0329**	**0.5324**	**1.2900e-003**	**0.1369**	**7.4000e-004**	**0.1377**	**0.0363**	**6.8000e-004**	**0.0370**		**131.5353**	**131.5353**	**3.9000e-003**	**3.4000e-003**	**132.6458**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Fugitive Dust					7.0950	0.0000	7.0950	3.4266	0.0000	3.4266			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656		2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**7.0950**	**0.9409**	**8.0358**	**3.4266**	**0.8656**	**4.2922**		**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

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	0.0312	1.3038	0.2560	4.8700e-003	0.1308	0.0112	0.1421	0.0358	0.0108	0.0466		531.2548	531.2548	0.0213	0.0842	556.8827
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
Worker	0.0544	0.0275	0.4436	1.0800e-003	0.1141	6.2000e-004	0.1147	0.0303	5.7000e-004	0.0308		109.6128	109.6128	3.2500e-003	2.8300e-003	110.5382
Total	**0.0855**	**1.3313**	**0.6996**	**5.9500e-003**	**0.2449**	**0.0119**	**0.2568**	**0.0661**	**0.0113**	**0.0774**		**640.8675**	**640.8675**	**0.0246**	**0.0870**	**667.4209**

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					3.1927	0.0000	3.1927	1.5420	0.0000	1.5420			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0297		0.0484	0.0484		0.0484	0.0484	0.0000	2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**0.3632**	**1.5737**	**17.7527**	**0.0297**	**3.1927**	**0.0484**	**3.2412**	**1.5420**	**0.0484**	**1.5904**	**0.0000**	**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

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	0.0312	1.3038	0.2560	4.8700e-003	0.1308	0.0112	0.1421	0.0358	0.0108	0.0466		531.2548	531.2548	0.0213	0.0842	556.8827
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

Worker	0.0544	0.0275	0.4436	1.0800e-003	0.1141	6.2000e-004	0.1147	0.0303	5.7000e-004	0.0308		109.6128	109.6128	3.2500e-003	2.8300e-003	110.5382
Total	**0.0855**	**1.3313**	**0.6996**	**5.9500e-003**	**0.2449**	**0.0119**	**0.2568**	**0.0661**	**0.0113**	**0.0774**		**640.8675**	**640.8675**	**0.0246**	**0.0870**	**667.4209**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.0000
Vendor	0.0195	0.4902	0.1476	1.7800e-003	0.0542	4.7600e-003	0.0590	0.0156	4.5600e-003	0.0202		190.4572	190.4572	4.9800e-003	0.0279	198.8933
Worker	0.1449	0.0732	1.1830	2.8700e-003	0.3043	1.6500e-003	0.3059	0.0807	1.5200e-003	0.0822		292.3007	292.3007	8.6800e-003	7.5500e-003	294.7685
Total	**0.1644**	**0.5634**	**1.3306**	**4.6500e-003**	**0.3585**	**6.4100e-003**	**0.3649**	**0.0963**	**6.0800e-003**	**0.1024**		**482.7579**	**482.7579**	**0.0137**	**0.0354**	**493.6618**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**0.3278**	**2.2347**	**17.4603**	**0.0269**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.0000
Vendor	0.0195	0.4902	0.1476	1.7800e-003	0.0542	4.7600e-003	0.0590	0.0156	4.5600e-003	0.0202		190.4572	190.4572	4.9800e-003	0.0279	198.8933
Worker	0.1449	0.0732	1.1830	2.8700e-003	0.3043	1.6500e-003	0.3059	0.0807	1.5200e-003	0.0822		292.3007	292.3007	8.6800e-003	7.5500e-003	294.7685
Total	**0.1644**	**0.5634**	**1.3306**	**4.6500e-003**	**0.3585**	**6.4100e-003**	**0.3649**	**0.0963**	**6.0800e-003**	**0.1024**		**482.7579**	**482.7579**	**0.0137**	**0.0354**	**493.6618**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1028**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

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	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
Worker	0.0544	0.0275	0.4436	1.0800e-003	0.1141	6.2000e-004	0.1147	0.0303	5.7000e-004	0.0308		109.6128	109.6128	3.2500e-003	2.8300e-003	110.5382
Total	**0.0544**	**0.0275**	**0.4436**	**1.0800e-003**	**0.1141**	**6.2000e-004**	**0.1147**	**0.0303**	**5.7000e-004**	**0.0308**		**109.6128**	**109.6128**	**3.2500e-003**	**2.8300e-003**	**110.5382**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2805**	**1.2154**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

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	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
Worker	0.0544	0.0275	0.4436	1.0800e-003	0.1141	6.2000e-004	0.1147	0.0303	5.7000e-004	0.0308		109.6128	109.6128	3.2500e-003	2.8300e-003	110.5382
Total	**0.0544**	**0.0275**	**0.4436**	**1.0800e-003**	**0.1141**	**6.2000e-004**	**0.1147**	**0.0303**	**5.7000e-004**	**0.0308**		**109.6128**	**109.6128**	**3.2500e-003**	**2.8300e-003**	**110.5382**

3.6 Paving - 2023

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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

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	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
Worker	0.0505	0.0243	0.4088	1.0400e-003	0.1141	5.9000e-004	0.1147	0.0303	5.4000e-004	0.0308		106.7548	106.7548	2.9300e-003	2.6200e-003	107.6093
Total	**0.0505**	**0.0243**	**0.4088**	**1.0400e-003**	**0.1141**	**5.9000e-004**	**0.1147**	**0.0303**	**5.4000e-004**	**0.0308**		**106.7548**	**106.7548**	**2.9300e-003**	**2.6200e-003**	**107.6093**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2805**	**1.2154**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

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	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
Worker	0.0505	0.0243	0.4088	1.0400e-003	0.1141	5.9000e-004	0.1147	0.0303	5.4000e-004	0.0308		106.7548	106.7548	2.9300e-003	2.6200e-003	107.6093
Total	**0.0505**	**0.0243**	**0.4088**	**1.0400e-003**	**0.1141**	**5.9000e-004**	**0.1147**	**0.0303**	**5.4000e-004**	**0.0308**		**106.7548**	**106.7548**	**2.9300e-003**	**2.6200e-003**	**107.6093**

3.7 Architectural Coating - 2023

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	79.2678					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**79.4594**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

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	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
Worker	0.0270	0.0130	0.2180	5.6000e-004	0.0609	3.1000e-004	0.0612	0.0161	2.9000e-004	0.0164		56.9359	56.9359	1.5600e-003	1.4000e-003	57.3916
Total	**0.0270**	**0.0130**	**0.2180**	**5.6000e-004**	**0.0609**	**3.1000e-004**	**0.0612**	**0.0161**	**2.9000e-004**	**0.0164**		**56.9359**	**56.9359**	**1.5600e-003**	**1.4000e-003**	**57.3916**

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	79.2678					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**79.2975**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

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	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
Worker	0.0270	0.0130	0.2180	5.6000e-004	0.0609	3.1000e-004	0.0612	0.0161	2.9000e-004	0.0164		56.9359	56.9359	1.5600e-003	1.4000e-003	57.3916
Total	**0.0270**	**0.0130**	**0.2180**	**5.6000e-004**	**0.0609**	**3.1000e-004**	**0.0612**	**0.0161**	**2.9000e-004**	**0.0164**		**56.9359**	**56.9359**	**1.5600e-003**	**1.4000e-003**	**57.3916**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.5914	2.5267	20.8825	0.0430	4.2608	0.0319	4.2927	1.1360	0.0298	1.1658		4,452.0895	4,452.0895	0.2705	0.1973	4,517.6551
Unmitigated	2.5914	2.5267	20.8825	0.0430	4.2608	0.0319	4.2927	1.1360	0.0298	1.1658		4,452.0895	4,452.0895	0.2705	0.1973	4,517.6551

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	171.92	191.24	147.56	439,318	439,318
Racquet Club	0.00	0.00	0.00		
Single Family Housing	131.16	132.48	118.80	332,524	332,524
Single Family Housing	459.06	463.68	415.80	1,163,833	1,163,833
Total	762.14	787.40	682.16	1,935,675	1,935,675

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
Condo/Townhouse	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3
Racquet Club	10.00	5.00	6.50	11.50	69.50	19.00	52	39	9
Single Family Housing	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3
Single Family Housing	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.542485	0.056811	0.183752	0.130945	0.025591	0.005989	0.013266	0.009393	0.000917	0.000565	0.025954	0.000983	0.003351
Racquet Club	0.542485	0.056811	0.183752	0.130945	0.025591	0.005989	0.013266	0.009393	0.000917	0.000565	0.025954	0.000983	0.003351
Single Family Housing	0.542485	0.056811	0.183752	0.130945	0.025591	0.005989	0.013266	0.009393	0.000917	0.000565	0.025954	0.000983	0.003351

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Condo/Townhouse	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Racquet Club	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
Condo/Townhouse	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Racquet Club	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	3.3598	0.0779	6.7625	3.6000e-004		0.0375	0.0375		0.0375	0.0375	0.0000	12.1817	12.1817	0.0117	0.0000	12.4740
Unmitigated	3.3598	0.0779	6.7625	3.6000e-004		0.0375	0.0375		0.0375	0.0375	0.0000	12.1817	12.1817	0.0117	0.0000	12.4740

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	0.4343					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.7221					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	0.2033	0.0779	6.7625	3.6000e-004		0.0375	0.0375		0.0375	0.0375		12.1817	12.1817	0.0117		12.4740
Total	**3.3598**	**0.0779**	**6.7625**	**3.6000e-004**		**0.0375**	**0.0375**		**0.0375**	**0.0375**	**0.0000**	**12.1817**	**12.1817**	**0.0117**	**0.0000**	**12.4740**

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	0.4343					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.7221					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	0.2033	0.0779	6.7625	3.6000e-004		0.0375	0.0375		0.0375	0.0375		12.1817	12.1817	0.0117		12.4740
Total	**3.3598**	**0.0779**	**6.7625**	**3.6000e-004**		**0.0375**	**0.0375**		**0.0375**	**0.0375**	**0.0000**	**12.1817**	**12.1817**	**0.0117**	**0.0000**	**12.4740**

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

List of Biological Special-Status Species

TABLE 1
REGIONALLY OCCURRING SPECIAL-STATUS SPECIES IN THE VICINITY OF THE PROJECT SITE

Common Name *Scientific Name*	Status (Federal/ State)	Habitat Requirements	Potential to Occur
Fish			
Delta smelt *Hypomesus transpacificus*	CH, FT/SE	Inhabits open surface waters in the Delta. Seasonally in Suisun Bay, the Carquinez Strait, and San Pablo Bay. Found in Delta estuaries with dense aquatic vegetation and low occurrence of predators. May be affected by downstream sedimentation.	**None**. The project site occurs outside of the known extant geographic range and does not provide habitat for this species.
California Central Valley DPS steelhead *Oncorhynchus mykiss*	FT/–	Inhabits rivers and streams tributary to the Sacramento and San Joaquin Rivers and Delta ecosystems.	**None**. The project site does not provide habitat for this species.
Central Valley ESU spring-run Chinook salmon *Oncorhynchus tshawytscha*	FT/ST	Inhabits rivers and streams tributary to the Sacramento and San Joaquin Rivers and Delta ecosystems.	**None**. The project site does not provide habitat for this species.
Longfin smelt *Spirinchus thaleichthys*	--/ST	Spawns from November to June in freshwater over sandy-gravel substrates, rocks, or aquatic plants. After hatching, larvae move up into surface waters and are transported downstream into brackish-water nursery areas. In the San Francisco estuary, longfin smelt are usually found downstream of Rio Vista on the Sacramento River and from the vicinity of Medford Island downstream on the San Joaquin River. They are occasionally found upstream of these locations.	**None**. The project site does not provide habitat for this species.
Sacramento perch *Archoplites interruptus*	–/CSC	Inhabits freshwater sloughs, slow-moving rivers, lakes, reservoirs, and farm ponds. Often found near submerged or emergent vegetation. Tolerates variable conditions, including a wide range of turbidity, temperature, salinity, and pH. Occurs mainly in inshore areas of larger lakes.	**None**. The project site does not provide habitat for this species.
Sacramento River ESU winter-run Chinook salmon *Oncorhynchus tshawytscha*	FE/SE	Inhabits rivers and streams tributary to the Sacramento and San Joaquin Rivers and Delta ecosystems.	**None**. The project site does not provide habitat for this species.
Sacramento splittail *Pogonichthysmacrolepidotus*	--/CSC	Inhabits aquatic, estuary, freshwater marsh, and Sacramento/San Joaquin River flowing waters.	**None**. The project site does not provide habitat for this species.
Invertebrates			
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	FT/–	Occurs only in the Central Valley of California, in association with blue elderberry (*Sambucus nigra* ssp. *caerulea*). Prefers to lay eggs in elderberry shrubs 2–8 inches in diameter; some preference shown for "stressed" elderberry shrubs.	**None**. The project site does not provide habitat for this species. No elderberry shrubs are present within the project site.

Common Name *Scientific Name*	Status (Federal/ State)	Habitat Requirements	Potential to Occur
Vernal pool fairy shrimp *Branchinecta lynchi*	FT/–	Endemic to the grasslands of the Central Valley, central coast mountains, and south coast mountains, in astatic rain-filled pools. Inhabits small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	**None**. The project site does not provide habitat for this species.
Vernal pool tadpole shrimp *Lepidurus packardi*	FE/–	Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass-bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	**None**. The project site does not provide habitat for this species.
Amphibians/Reptiles			
California red-legged frog *Rana draytonii*	FT/CSC	Found in permanent and temporary pools of streams, marshes, and ponds with dense grassy and/or shrubby vegetation.	**None.** The project site occurs outside of the known extant geographic range for this species.
California tiger salamander *Ambystoma californiense*	FT/CT	Found in vernal pools, ephemeral wetlands, and seasonal ponds, including constructed stock ponds, in grassland and oak savanna plant communities from 10 to 3,450 feet.	**None.** The project site does not provide habitat for this species.
Giant garter snake *Thamnophis gigas*	FT/CT	Found in permanent waterways including agricultural wetlands, irrigation and drainage canals, low-gradient streams, marshes, ponds, sloughs, small lakes, and their associated uplands. Upland habitat should have burrows or other soil crevices suitable for snakes to reside during their dormancy period (November–mid-March).	**Low.** The project site does not provide suitable aquatic habitat for this species. The cement-lined canal to the west of the project site does not provide aquatic habitat because it lacks a semi-permanent water source, emergent vegetation, soil substrate. Therefore, this species is unlikely to utilize the canal. There are CNDDB occurrences within 5 miles of the project site.
Western pond turtle *Emys marmorata*	–/CSC	Agricultural wetlands and other wetlands such as irrigation and drainage canals, low-gradient streams, marshes, ponds, sloughs, small lakes, and their associated uplands.	**Low.** The project site does not provide suitable aquatic habitat for this species. The cement-lined canal to the west of the project site does not provide aquatic habitat because it lacks a semi-permanent water source, emergent vegetation, soil substrate. Therefore, this species is unlikely to utilize the canal. There are CNDDB occurrences within 5 miles of the project site.
Western spadefoot *Spea hammondi*	–/CSC	May occur in the Central Valley and adjacent foothills. Occurs primarily in grasslands but may occur in valley-foothill woodlands. Primarily found in lowland washes, floodplains, alluvial fans, and playas. Breeding and egg laying occur almost exclusively in vernal pools or similar seasonal wetlands.	**None**. The project site does not provide suitable soils for this species.
Birds			
Bank swallow *Riparia riparia*	–/CT	Nests in riverbanks and forages over riparian areas and adjacent uplands.	**None.** The project site does not provide suitable nesting habitat for this species.
Burrowing owl *Athene cunicularia*	–/CSC	Yearlong resident of open, dry grassland and desert habitat, and in grass, forb, and open shrub stages of pinyon-juniper and Ponderosa pine habitats, from sea level to 5,300 feet.	**Moderate.** The few small mammal burrows within the grassland within the project site provide suitable nesting and wintering habitat for this species. The

Common Name *Scientific Name*	Status (Federal/ State)	Habitat Requirements	Potential to Occur
		Uses small mammal burrows, often those of ground squirrels, for roosting and nesting cover. Nest boxes, pipes, and culverts may be used if burrows are scarce. Occurs throughout CA except the high mountains and northwestern coastal forests.	disturbed areas along the irrigation canal to the west of the project site provide suitable nesting habitat for this species. There are CNDDB occurrences within 5 miles of the project site.
California black rail *Laterallus jamaicensis coturniculus*	–/CT	Found in saltwater, brackish, and freshwater marshes. Nests in high portions of salt marshes, shallow freshwater marshes, wet meadows, and flooded grassy vegetation.	**None.** The project site does not provide suitable nesting habitat for this species.
Golden eagle *Aquila chrysaetos*	--; CFP; --; -- (nesting and winterin g)	Open and semi-open areas up to 12,000 feet in elevation. Builds stick nests on cliffs, in trees, or on man-made structures.	**None.** The project site does not provide suitable nesting habitat for this species.
Grasshopper sparrow *Ammodramus savannarum*	–/CSC	An uncommon local summer resident and breeder in foothills and lowlands west of the Cascade-Sierra Nevada crest from Mendocino and Trinity counties, south to San Diego County. Occurs in dry, dense grasslands, especially with scattered shrubs for sitting perches. A thick cover of grasses and forbs is essential for concealment. Nests are built of grasses and forbs in slight depressions in ground hidden by a clump of grasses or forbs. Usually nests solitarily from early April to mid-July.	**Moderate.** The grassland provides suitable nesting habitat for this species. There are CNDDB occurrences within 5 miles of the project site.
Least Bell's vireo *Vireo bellii pusillus*	FE/CE	Inhabits willow thickets and other dense riparian habitat below ± 2,000 feet. Considered extirpated from the Central Valley (rare recent nesting in the San Joaquin Valley) (USFWS 2006), and most nesting occurs in southwestern California, from Santa Barbara County southward (mainly in San Diego and Riverside counties), and from northwestern Baja California south to at least Cataviña.	**None.** The project site occurs outside of the extant geographical range for this species.
Purple martin *Progne subis*	–/CSC	In the western U.S.- occurs in the Rocky Mountains, Sonoran Desert, Central Mexico, and Pacific Coast states. Breeding occurs from April into August. Inhabits open areas with an open water source nearby. Purple martins nest colonially or singly in cavities both natural and human-made in a variety of open and partly open situations, frequently near water or around town.	**None.** The project site does not provide suitable nesting habitat for this species.
Swainson's hawk *Buteo swainsoni*	–/CT	Nests peripherally to valley riparian systems in lone trees or groves of trees in agricultural fields. Valley oak, Fremont cottonwood, walnut, and large willow trees, ranging in height from 41 to 82 feet, are the most commonly used nest trees in the Central Valley.	**Moderate.** The mature trees in the vicinity of the project site provide suitable nesting habitat. The grassland provides marginal foraging habitat for this species due to its small size and proximity to surrounding residential development. There are CNDDB occurrences within 5 miles of the project site.
Tricolored blackbird *Agelaius tricolor*	–/CT (nesting colony)	Nests in dense blackberry, cattail, tules, bulrushes, sedges, willow, or wild rose in freshwater marshes. Nests in large colonies of	**None.** The project site does not provide suitable nesting habitat for this species.

Common Name *Scientific Name*	Status (Federal/ State)	Habitat Requirements	Potential to Occur
		at least 50 pairs (up to thousands of individuals).	
Western snowy plover *Charadrius alexandrinus nivosus*	--/CSC	Nests, feeds, and takes cover on sandy or gravelly beaches along the Pacific coast, at sand pits, dune-backed beaches at creek and river mouths, salt pans at lagoons and estuaries, and alkali lakes. Common on sandy marine and estuarine shores in fall and winter. Inland nesting areas occur at the Salton Sea, Mono Lake, and at isolated sites on the shores of alkali lakes in northeastern California, the Central Valley, and southeastern California deserts. Requires a sandy, gravelly or friable soil substrate for nesting.	**None.** The project site does not provide suitable nesting habitat for this species.
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	FT/CE/--	Found in riparian forest (willow-cottonwood dominated).	**None.** The project site does not provide suitable nesting habitat for this species.
White-tailed kite *Elanus leucurus*	--/CFP	Yearlong resident in coastal and valley lowlands and is rarely found away from agricultural areas. Nests in trees near open foraging areas in lowland grasslands, agricultural areas, wetlands, oak-woodland and savannah habitats, and riparian areas associated with open areas.	**Moderate.** The trees within and in the vicinity of the project site provide suitable nesting habitat for this species. There are CNDDB occurrences within 5 miles of the project site.
Mammals			
American badger *Taxidea taxus*	--/CSC	Found throughout most of California except the northern North Coast. Abundant in drier open stages of many shrub, forest, and herbaceous habitats with friable soils. Feeds on fossorial rodents, some reptiles, insects, earthworms, bird eggs, and carrion. Friable soils are required to dig burrows for refugia and rearing young.	**Low.** The project site provides marginal denning habitat within the grassland given the dense vegetation and clay soils.
Plants			
Ahart's dwarf rush *Juncus leiospermus* var. *ahartii*	--/--/1B.1	Annual herb found in mesic valley, foothill grasslands, and vernal pools from 100 to 750 feet. Known from the Central Valley. Blooms March through May.	**None.** While the nonnative grassland provides marginal habitat, this species was not observed during the April 14, 2021 biological survey that was conducted within the evident and identifiable period.
Ferris' milk-vetch *Astragalus tener* var. *ferrisiae*	--/--/1B.1	Annual herb found in vernally mesic meadows and subalkaline flats from 5 to 250 feet. Known from the Sacramento Valley. Blooms April through May.	**None.** The project site does not provide suitable habitat for this species.
Big-scale balsamroot *Balsamorhiza macrolepis*	--/--/1B.2	Perennial herb found in chaparral, cismontane woodland, and valley and foothill grassland, sometimes on serpentine soils, from 295 to 5,102 feet. Blooms March through July.	**None.** The project site occurs outside of the known extant elevation range. This species was not observed during the April 14, 2021 biological survey that was conducted within the evident and identifiable period.
Boggs Lake hedge-hyssop *Gratiola heterosepala*	--/CE/ 1B.2	Annual herb found in clay soils in vernal pools and along lake margins from 30 to 7,800 feet. Blooms April through August.	**None.** The project site does not provide suitable habitat and this species was not observed during the April 14, 2021 biological survey that was conducted within the evident and identifiable period.

Common Name *Scientific Name*	Status (Federal/ State)	Habitat Requirements	Potential to Occur
Dwarf downingia *Downingia pusilla*	--/--/ 2B.2	Annual herb found in mesic valley and foothill grassland and vernal pools from 3 to 1,500 feet. Known from the north Coast Ranges, Central Valley, and Bay Area. Blooms March through May	**None.** While the nonnative grassland provides marginal habitat, this species was not observed during the April 14, 2021 biological survey that was conducted within the evident and identifiable period.
Ferris' milk-vetch *Astragalus tener* var. *ferrisiae*	--/--/1B.1	Annual herb found in vernally mesic meadows and subalkaline flats from 5 to 250 feet. Known from the Sacramento Valley. Blooms April through May.	**None.** The project site does not provide suitable habitat and this species was not observed during the April 14, 2021 biological survey that was conducted within the evident and identifiable period.
Hispid bird's-beak *Chloropyron molle* ssp. *hispidum*	--/--/1B.1	Annual hemiparasitic herb found in alkaline conditions of meadows and seeps, playas, and valley and foothill grasslands from 3 to 510 feet. Blooms June through September.	**Low.** The project site does not provide suitable soils required for this species to inhabit.
Legenere *Legenere limosa*	--/--/1B.1	Annual herb found in vernal pools and similar mesic areas from 3 to 2,900 feet. Blooms April through June.	**None.** The project site does not provide suitable habitat for this species. This species was not observed during the April 14, 2021 biological survey that was conducted within the evident and identifiable period.
Pappose tarplant *Centromadia parryi* ssp. *parryi*	--/--/1B.2	Annual herb generally found in alkaline areas of chaparral, coastal prairie, meadows and seeps, coastal salt marshes and swamps, and vernally mesic valley and foothill grasslands from 0 to 1,400 feet. Blooms from May through November.	**Low.** The project site does not provide suitable habitat for this species.
Red Bluff dwarf rush *Juncus leiospermus* var. *leiospermus*	--/--/1B.1	Annual herb found in vernally mesic chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and vernal pools from 110 to 3,350 feet. Blooms March through May.	**None.** While the nonnative grassland provides marginal habitat, this species was not observed during the April 14, 2021 biological survey that was conducted within the evident and identifiable period.
Sacramento Orcutt grass *Orcuttia viscida*	FE/CE/1 B.1	Annual grass found in vernal pools from 100–330 feet. Known from northern hardpan and volcanic mudflow vernal pools, only in Sacramento County, and in pools of at least 0.25 acre (68 FR 46684). Blooms April through July, and sometimes into September.	**None.** The project site does not provide suitable habitat for this species. This species was not observed during the April 14, 2021 biological survey that was conducted within the evident and identifiable period.
Sanford's arrowhead *Sagittaria sanfordii*	--/--/1B.2	Emergent perennial rhizomatous herb found in freshwater marshes, swamps, ponds, and ditches from 0 to 2,200 feet. Blooms May through October, and sometimes into November.	**Low.** The manmade seasonal swale contains all upland herbaceous vegetation and therefore does not provide suitable habitat for this species.
Suisun Marsh aster *Symphyotrichum lentum*	--/--/1B.2	Perennial rhizomatous herb found in freshwater or brackish marshes and swamps from 0 to 10 feet. Known from the Sacramento Valley, Bay Area, and central coast. Blooms from May to November, and sometimes as early as April.	**Low.** The project site does not provide suitable habitat for this species.
Woolly rose-mallow *Hibiscus lasiocarpos* ssp. *occidentalis*	--/--/1B.2	Perennial rhizomatous herb found in freshwater marshes and swamps, often in riprap on the sides of levees, from 0 to 400 feet. Known from the Central Valley and Cascade Range foothills. Blooms June through September.	**Low.** The project site does not provide suitable habitat for this species.

NOTES:
Delta = Sacramento–San Joaquin Delta; DPS = distinct population segment; ESU = evolutionarily significant unit

STATUS CODES:

Federal:

FE = federal endangered
FEET = federal threatened
FC = candidate
PT = proposed threatened
FPD = proposed for delisting
FD = delisted
EFH = essential fish habitat
CH = critical habitat

California:

CE = State endangered
CT = State threatened
CR = State rare
CSC = California species of special concern
CCT = State threatened candidate
CFP = California fully protected

CALIFORNIA DEPARTMENT OF FISH and WILDLIFE RareFind

Query Summary:
Quad IS (Rio Linda (3812164) OR Taylor Monument (3812165) OR Sacramento East (3812154) OR Sacramento West (3812155) OR Carmichael (3812153) OR Citrus Heights (3812163) OR Roseville (3812173) OR Pleasant Grove (3812174) OR Verona (3812175))

Print Close

CNDDB Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
Accipiter cooperii	Cooper's hawk	Birds	ABNKC12040	118	3	None	None	G5	S4	null	CDFW_WL-Watch List, IUCN_LC-Least Concern	Cismontane woodland, Riparian forest, Riparian woodland, Upper montane coniferous forest
Agelaius tricolor	tricolored blackbird	Birds	ABPBXB0020	955	35	None	Threatened	G1G2	S1S2	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_EN-Endangered, NABCI_RWL-Red Watch List, USFWS_BCC-Birds of Conservation Concern	Freshwater marsh, Marsh & swamp, Swamp, Wetland
Alkali Meadow	Alkali Meadow	Herbaceous	CTT45310CA	8	1	None	None	G3	S2.1	null	null	Meadow & seep, Wetland
Alkali Seep	Alkali Seep	Herbaceous	CTT45320CA	10	1	None	None	G3	S2.1	null	null	Meadow & seep, Wetland
Ammodramus savannarum	grasshopper sparrow	Birds	ABPBXA0020	27	1	None	None	G5	S3	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Valley & foothill grassland
Andrena subapasta	An andrenid bee	Insects	IIHYM35210	5	2	None	None	G1G2	S1S2	null	null	null
Aquila chrysaetos	golden eagle	Birds	ABNKC22010	323	1	None	None	G5	S3	null	BLM_S-Sensitive, CDF_S-Sensitive, CDFW_FP-Fully Protected, CDFW_WL-Watch List, IUCN_LC-Least Concern, USFWS_BCC-Birds of Conservation Concern	Broadleaved upland forest, Cismontane woodland, Coastal prairie, Great Basin grassland, Great Basin scrub, Lower montane coniferous forest, Pinon & juniper woodlands, Upper montane coniferous forest, Valley & foothill grassland
Archoplites interruptus	Sacramento perch	Fish	AFCQB07010	5	1	None	None	G2G3	S1	null	AFS_TH-Threatened, CDFW_SSC-Species of Special Concern	Aquatic, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters
Ardea alba	great egret	Birds	ABNGA04040	43	5	None	None	G5	S4	null	CDF_S-Sensitive, IUCN_LC-Least Concern	Brackish marsh, Estuary, Freshwater marsh, Marsh & swamp, Riparian forest, Wetland
Ardea herodias	great blue heron	Birds	ABNGA04010	156	7	None	None	G5	S4	null	CDF_S-Sensitive, IUCN_LC-Least Concern	Brackish marsh, Estuary, Freshwater marsh, Marsh & swamp, Riparian forest, Wetland
Astragalus tener var. ferrisiae	Ferris' milk-vetch	Dicots	PDFAB0F8R3	18	1	None	None	G2T1	S1	1B.1	null	Meadow & seep, Valley & foothill

												grassland, Wetland
Athene cunicularia	burrowing owl	Birds	ABNSB10010	2011	40	None	None	G4	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFWS_BCC-Birds of Conservation Concern	Coastal prairie, Coastal scrub, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, Valley & foothill grassland
Balsamorhiza macrolepis	big-scale balsamroot	Dicots	PDAST11061	51	1	None	None	G2	S2	1B.2	BLM_S-Sensitive, USFS_S-Sensitive	Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland
Branchinecta lynchi	vernal pool fairy shrimp	Crustaceans	ICBRA03030	791	74	Threatened	None	G3	S3	null	IUCN_VU-Vulnerable	Valley & foothill grassland, Vernal pool, Wetland
Branchinecta mesovallensis	midvalley fairy shrimp	Crustaceans	ICBRA03150	144	6	None	None	G2	S2S3	null	null	Vernal pool, Wetland
Buteo regalis	ferruginous hawk	Birds	ABNKC19120	107	1	None	None	G4	S3S4	null	CDFW_WL-Watch List, IUCN_LC-Least Concern, USFWS_BCC-Birds of Conservation Concern	Great Basin grassland, Great Basin scrub, Pinon & juniper woodlands, Valley & foothill grassland
Buteo swainsoni	Swainson's hawk	Birds	ABNKC19070	2535	130	None	Threatened	G5	S3	null	BLM_S-Sensitive, IUCN_LC-Least Concern, USFWS_BCC-Birds of Conservation Concern	Great Basin grassland, Riparian forest, Riparian woodland, Valley & foothill grassland
Chloropyron molle ssp. hispidum	hispid salty bird's-beak	Dicots	PDSCR0J0D1	35	1	None	None	G2T1	S1	1B.1	null	Alkali playa, Meadow & seep, Wetland
Cicindela hirticollis abrupta	Sacramento Valley tiger beetle	Insects	IICOL02106	6	1	None	None	G5TH	SH	null	null	Sand shore
Coccyzus americanus occidentalis	western yellow-billed cuckoo	Birds	ABNRB02022	165	1	Threatened	Endangered	G5T2T3	S1	null	BLM_S-Sensitive, NABCI_RWL-Red Watch List, USFS_S-Sensitive, USFWS_BCC-Birds of Conservation Concern	Riparian forest
Desmocerus californicus dimorphus	valley elderberry longhorn beetle	Insects	IICOL48011	271	30	Threatened	None	G3T2	S3	null	null	Riparian scrub
Downingia pusilla	dwarf downingia	Dicots	PDCAM060C0	132	21	None	None	GU	S2	2B.2	null	Valley & foothill grassland, Vernal pool, Wetland
Dumontia oregonensis	hairy water flea	Crustaceans	ICBRA23010	2	1	None	None	G1G3	S1	null	null	Vernal pool
Egretta thula	snowy egret	Birds	ABNGA06030	20	1	None	None	G5	S4	null	IUCN_LC-Least Concern	Marsh & swamp, Meadow & seep, Riparian forest, Riparian woodland, Wetland
Elanus leucurus	white-tailed kite	Birds	ABNKC06010	180	23	None	None	G5	S3S4	null	BLM_S-Sensitive, CDFW_FP-Fully Protected, IUCN_LC-Least Concern	Cismontane woodland, Marsh & swamp, Riparian woodland, Valley & foothill grassland, Wetland
Elderberry Savanna	Elderberry Savanna	Riparian	CTT63440CA	4	3	None	None	G2	S2.1	null	null	Riparian scrub
Emys marmorata	western pond turtle	Reptiles	ARAAD02030	1398	4	None	None	G3G4	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_VU-Vulnerable, USFS_S-Sensitive	Aquatic, Artificial flowing waters, Klamath/North coast flowing waters, Klamath/North coast standing

												waters, Marsh & swamp, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, South coast flowing waters, South coast standing waters, Wetland
Fritillaria agrestis	stinkbells	Monocots	PMLIL0V010	32	4	None	None	G3	S3	4.2	null	Chaparral, Cismontane woodland, Pinon & juniper woodlands, Ultramafic, Valley & foothill grassland
Gonidea angulata	western ridged mussel	Mollusks	IMBIV19010	157	1	None	None	G3	S1S2	null	null	Aquatic
Gratiola heterosepala	Boggs Lake hedge-hyssop	Dicots	PDSCR0R060	99	4	None	Endangered	G2	S2	1B.2	BLM_S-Sensitive	Freshwater marsh, Marsh & swamp, Vernal pool, Wetland
Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	Riparian	CTT61410CA	56	1	None	None	G2	S2.1	null	null	Riparian forest
Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	Dicots	PDMAL0H0R3	173	2	None	None	G5T3	S3	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_UCBG-UC Botanical Garden at Berkeley	Freshwater marsh, Marsh & swamp, Wetland
Hydrochara ricksecker i	Ricksecker's water scavenger beetle	Insects	IICOL5V010	13	2	None	None	G2?	S2?	null	null	Aquatic, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters
Juncus leiospermus var. ahartii	Ahart's dwarf rush	Monocots	PMJUN011L1	13	1	None	None	G2T1	S1	1B.2	null	Valley & foothill grassland
Juncus leiospermus var. leiospermus	Red Bluff dwarf rush	Monocots	PMJUN011L2	62	1	None	None	G2T2	S2	1B.1	BLM_S-Sensitive, USFS_S-Sensitive	Chaparral, Cismontane woodland, Meadow & seep, Valley & foothill grassland, Vernal pool, Wetland
Lasiurus cinereus	hoary bat	Mammals	AMACC05030	238	1	None	None	G3G4	S4	null	IUCN_LC-Least Concern, WBWG_M-Medium Priority	Broadleaved upland forest, Cismontane woodland, Lower montane coniferous forest, North coast coniferous forest
Laterallus jamaicensis coturniculus	California black rail	Birds	ABNME03041	303	1	None	Threatened	G3G4T1	S1	null	BLM_S-Sensitive, CDFW_FP-Fully Protected, IUCN_NT-Near Threatened, NABCI_RWL-Red Watch List, USFWS_BCC-Birds of Conservation Concern	Brackish marsh, Freshwater marsh, Marsh & swamp, Salt marsh, Wetland
Legenere limosa	legenere	Dicots	PDCAM0C010	83	12	None	None	G2	S2	1B.1	BLM_S-Sensitive, SB_UCBG-UC Botanical Garden at Berkeley	Vernal pool, Wetland
Lepidurus packardi	vernal pool tadpole shrimp	Crustaceans	ICBRA10010	324	33	Endangered	None	G4	S3S4	null	IUCN_EN-Endangered	Valley & foothill grassland, Vernal pool, Wetland
		Crustaceans	ICBRA06010	508	81	None	None	G2G3	S2S3	null		Vernal pool

Linderiella occidentalis	California linderiella										IUCN_NT-Near Threatened	
Melospiza melodia	song sparrow ("Modesto" population)	Birds	ABPBXA3010	92	2	None	None	G5	S3?	null	CDFW_SSC-Species of Special Concern	null
Northern Claypan Vernal Pool	Northern Claypan Vernal Pool	Herbaceous	CTT44120CA	21	1	None	None	G1	S1.1	null	null	Vernal pool, Wetland
Northern Hardpan Vernal Pool	Northern Hardpan Vernal Pool	Herbaceous	CTT44110CA	126	12	None	None	G3	S3.1	null	null	Vernal pool, Wetland
Northern Volcanic Mud Flow Vernal Pool	Northern Volcanic Mud Flow Vernal Pool	Herbaceous	CTT44132CA	7	3	None	None	G1	S1.1	null	null	Vernal pool, Wetland
Nycticorax nycticorax	black-crowned night heron	Birds	ABNGA11010	37	2	None	None	G5	S4	null	IUCN_LC-Least Concern	Marsh & swamp, Riparian forest, Riparian woodland, Wetland
Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	Fish	AFCHA0209K	31	6	Threatened	None	G5T2Q	S2	null	AFS_TH-Threatened	Aquatic, Sacramento/San Joaquin flowing waters
Oncorhynchus tshawytscha pop. 11	chinook salmon - Central Valley spring-run ESU	Fish	AFCHA0205L	13	2	Threatened	Threatened	G5T1T2Q	S2	null	AFS_TH-Threatened	Aquatic, Sacramento/San Joaquin flowing waters
Oncorhynchus tshawytscha pop. 7	chinook salmon - Sacramento River winter-run ESU	Fish	AFCHA0205B	2	1	Endangered	Endangered	G5T1Q	S1	null	AFS_EN-Endangered	Aquatic, Sacramento/San Joaquin flowing waters
Orcuttia viscida	Sacramento Orcutt grass	Monocots	PMPOA4G070	12	1	Endangered	Endangered	G1	S1	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Vernal pool, Wetland
Pogonichthys macrolepidotus	Sacramento splittail	Fish	AFCJB34020	15	1	None	None	GNR	S3	null	AFS_VU-Vulnerable, CDFW_SSC-Species of Special Concern, IUCN_EN-Endangered	Aquatic, Estuary, Freshwater marsh, Sacramento/San Joaquin flowing waters
Progne subis	purple martin	Birds	ABPAU01010	71	11	None	None	G5	S3	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Broadleaved upland forest, Lower montane coniferous forest
Riparia riparia	bank swallow	Birds	ABPAU08010	298	5	None	Threatened	G5	S2	null	BLM_S-Sensitive, IUCN_LC-Least Concern	Riparian scrub, Riparian woodland
Sagittaria sanfordii	Sanford's arrowhead	Monocots	PMALI040Q0	126	21	None	None	G3	S3	1B.2	BLM_S-Sensitive	Marsh & swamp, Wetland
Spea hammondii	western spadefoot	Amphibians	AAABF02020	1409	15	None	None	G2G3	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened	Cismontane woodland, Coastal scrub, Valley & foothill grassland, Vernal pool, Wetland
Spirinchus thaleichthys	longfin smelt	Fish	AFCHB03010	46	1	Candidate	Threatened	G5	S1	null	null	Aquatic, Estuary
Symphyotrichum lentum	Suisun Marsh aster	Dicots	PDASTE8470	175	1	None	None	G2	S2	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_USDA-US Dept of Agriculture	Brackish marsh, Freshwater marsh, Marsh & swamp, Wetland
Taxidea taxus	American badger	Mammals	AMAJF04010	594	2	None	None	G5	S3	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Alkali marsh, Alkali playa, Alpine, Alpine dwarf scrub, Bog & fen, Brackish marsh, Broadleaved upland forest, Chaparral, Chenopod scrub,

												Cismontane woodland, Closed-cone coniferous forest, Coastal bluff scrub, Coastal dunes, Coastal prairie, Coastal scrub, Desert dunes, Desert wash, Freshwater marsh, Great Basin grassland, Great Basin scrub, Interior dunes, Ione formation, Joshua tree woodland, Limestone, Lower montane coniferous forest, Marsh & swamp, Meadow & seep, Mojavean desert scrub, Montane dwarf scrub, North coast coniferous forest, Oldgrowth, Pavement plain, Redwood, Riparian forest, Riparian scrub, Riparian woodland, Salt marsh, Sonoran desert scrub, Sonoran thorn woodland, Ultramafic, Upper montane coniferous forest, Upper Sonoran scrub, Valley & foothill grassland
Thamnophis gigas	giant gartersnake	Reptiles	ARADB36150	366	79	Threatened	Threatened	G2	S2	null	IUCN_VU-Vulnerable	Marsh & swamp, Riparian scrub, Wetland
Vireo bellii pusillus	least Bell's vireo	Birds	ABPBW01114	503	2	Endangered	Endangered	G5T2	S2	null	IUCN_NT-Near Threatened, NABCI_YWL-Yellow Watch List	Riparian forest, Riparian scrub, Riparian woodland

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:
Consultation Code: 08ESMF00-2021-SLI-1536
Event Code: 08ESMF00-2021-E-04501
Project Name: 920 San Juan Residential Project

April 14, 2021

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to

utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2021-SLI-1536
Event Code: 08ESMF00-2021-E-04501
Project Name: 920 San Juan Residential Project
Project Type: DEVELOPMENT
Project Description: Residential Development
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.62870395,-121.48264034584365,14z

Counties: Sacramento County, California

Endangered Species Act Species

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Reptiles

NAME	STATUS
Giant Garter Snake *Thamnophis gigas* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander *Ambystoma californiense* Population: U.S.A. (Central CA DPS) There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus*	Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.
Species profile: https://ecos.fws.gov/ecp/species/7850

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp *Branchinecta lynchi*	Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.
Species profile: https://ecos.fws.gov/ecp/species/498

Vernal Pool Tadpole Shrimp *Lepidurus packardi*	Endangered

There is **final** critical habitat for this species. The location of the critical habitat is not available.
Species profile: https://ecos.fws.gov/ecp/species/2246

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

CNPS California Native Plant Society

*The database used to provide updates to the Online Inventory is under construction. View updates and changes made since May 2019 here.

Plant List

15 matches found. *Click on scientific name for details*

Search Criteria

Found in Quads 3812175, 3812174, 3812173, 3812165, 3812164, 3812163, 3812155 3812154 and 3812153;

Modify Search Criteria | Export to Excel | Modify Columns | Modify Sort | Display Photos

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Astragalus tener var. ferrisiae	Ferris' milk-vetch	Fabaceae	annual herb	Apr-May	1B.1	S1	G2T1
Balsamorhiza macrolepis	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	1B.2	S2	G2
Brodiaea rosea ssp. vallicola	valley brodiaea	Themidaceae	perennial bulbiferous herb	Apr-May(Jun)	4.2	S3	G5T3
Centromadia parryi ssp. rudis	Parry's rough tarplant	Asteraceae	annual herb	May-Oct	4.2	S3	G3T3
Chloropyron molle ssp. hispidum	hispid bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Sep	1B.1	S1	G2T1
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	Mar-May	2B.2	S2	GU
Fritillaria agrestis	stinkbells	Liliaceae	perennial bulbiferous herb	Mar-Jun	4.2	S3	G3
Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	Apr-Aug	1B.2	S2	G2
Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	Malvaceae	perennial rhizomatous herb (emergent)	Jun-Sep	1B.2	S3	G5T3
Juncus leiospermus var. ahartii	Ahart's dwarf rush	Juncaceae	annual herb	Mar-May	1B.2	S1	G2T1
Juncus leiospermus var. leiospermus	Red Bluff dwarf rush	Juncaceae	annual herb	Mar-Jun	1B.1	S2	G2T2
Legenere limosa	legenere	Campanulaceae	annual herb	Apr-Jun	1B.1	S2	G2
Navarretia nigelliformis ssp. nigelliformis	adobe navarretia	Polemoniaceae	annual herb	Apr-Jun	4.2	S3	G4T3
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	1B.2	S3	G3
Symphyotrichum lentum	Suisun Marsh aster	Asteraceae	perennial rhizomatous herb	(Apr)May-Nov	1B.2	S2	G2

Suggested Citation

California Native Plant Society, Rare Plant Program. 2021. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 14 April 2021].

Search the Inventory
Simple Search
Advanced Search
Glossary

Information
About the Inventory
About the Rare Plant Program
CNPS Home Page
About CNPS
Join CNPS

Contributors
The Calflora Database
The California Lichen Society
California Natural Diversity Database
The Jepson Flora Project
The Consortium of California Herbaria
CalPhotos

Questions and Comments
rareplants@cnps.org

Appendix C

Vehicle Miles Traveled Technical Memorandum

City of SACRAMENTO
Department of Public Works

Transportation Division

City Hall
915 I Street, 2nd Floor
Sacramento, CA
95814-2604
916-808-8502

VMT TECHNICAL MEMORANDUM

DATE: May 20, 2021

TO: Scott Johnson, Community Development Department

FROM: Matthew Ilagan, Public Works – Transportation

CC: Pelle Clarke, Public Works - Transportation

SUBJECT: **P21-008 920 San Juan Road**

Public Works has reviewed the application for the above referenced project. The project proposes an 82 single-unit and duplex-dwellings development with 143 parking spaces at 920 San Juan Road. The site is currently vacant.

Vehicle Miles Traveled Thresholds

Based on current practice of the City of Sacramento for residential projects, transportation impacts for CEQA purposes are considered significant if the proposed project would generate Household VMT per capita figures that exceed 85% of the regional average for Household VMT per capita, consistent with technical advisory guidance published by the Governor's Office of Planning and Research (OPR) in 2018.

VMT Screening Criteria

Based on current practice of the City of Sacramento, several "screening thresholds" are used to quickly determine whether a project may be presumed to have a less-than-significant VMT impact without conducting a detailed projected generated VMT analysis. For residential projects, screening criteria include:

- Small Projects – Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact.
- Map-Based Screening – Maps created with VMT data can illustrate areas that are currently below threshold VMT. Output from the SACOG regional travel demand model may be generalized to simplify project VMT estimates as well as producing screening maps. Because new development in such locations would likely result in a similar level of VMT, such maps can be used to screen out residential and office projects from needing to prepare a detailed VMT analysis.
- Near Transit Stations – presumption that certain projects proposed within ½ mile of an existing major transit stop or an existing stop along a high-quality transit corridor will have a less-than-

Transportation Division

City Hall
915 I Street, 2nd Floor
Sacramento, CA
95814-2604
916-808-8502

significant impact on VMT. Additionally, the project would need to have a floor area ratio of at least 0.75, without excessive parking, is consistent with the adopted regional SCS, and does not result in a reduction of citywide affordable housing.

- Affordable Residential Development – adding affordable housing to infill locations generally improves jobs-housing match, in turn shortening commutes and reducing VMT.

VMT Screening Evaluation

The project was evaluated against the following screening criteria to determine if it could be presumed to have a less-than-significant VMT impact:

- Map-Based Screening – The proposed project's VMT was determined using the residential VMT SACOG maps derived from the traffic analysis zone results from SACOG's travel demand model, known as SACSIM. These maps use hexagonal shaped geographic areas (HEX) to establish a uniform grid of Household VMT per capita by tallying all household VMT's generated by residents within the HEX and dividing by the total population in the HEX. As evidenced in Figure 1, the proposed project falls within a HEX calculated to produce between 50% to 85% of the Regional Average which is less than the average household VMT per capita for the region.

Because of the project meeting screening criteria using the Map-Based screening, a VMT analysis for the proposed project is not required.

If you have any questions, please call me at (916) 808-8502, or contact me via e-mail at MIlagan@cityofsacramento.org.

Transportation Division

City Hall
915 I Street, 2nd Floor
Sacramento, CA
95814-2604
916-808-8502

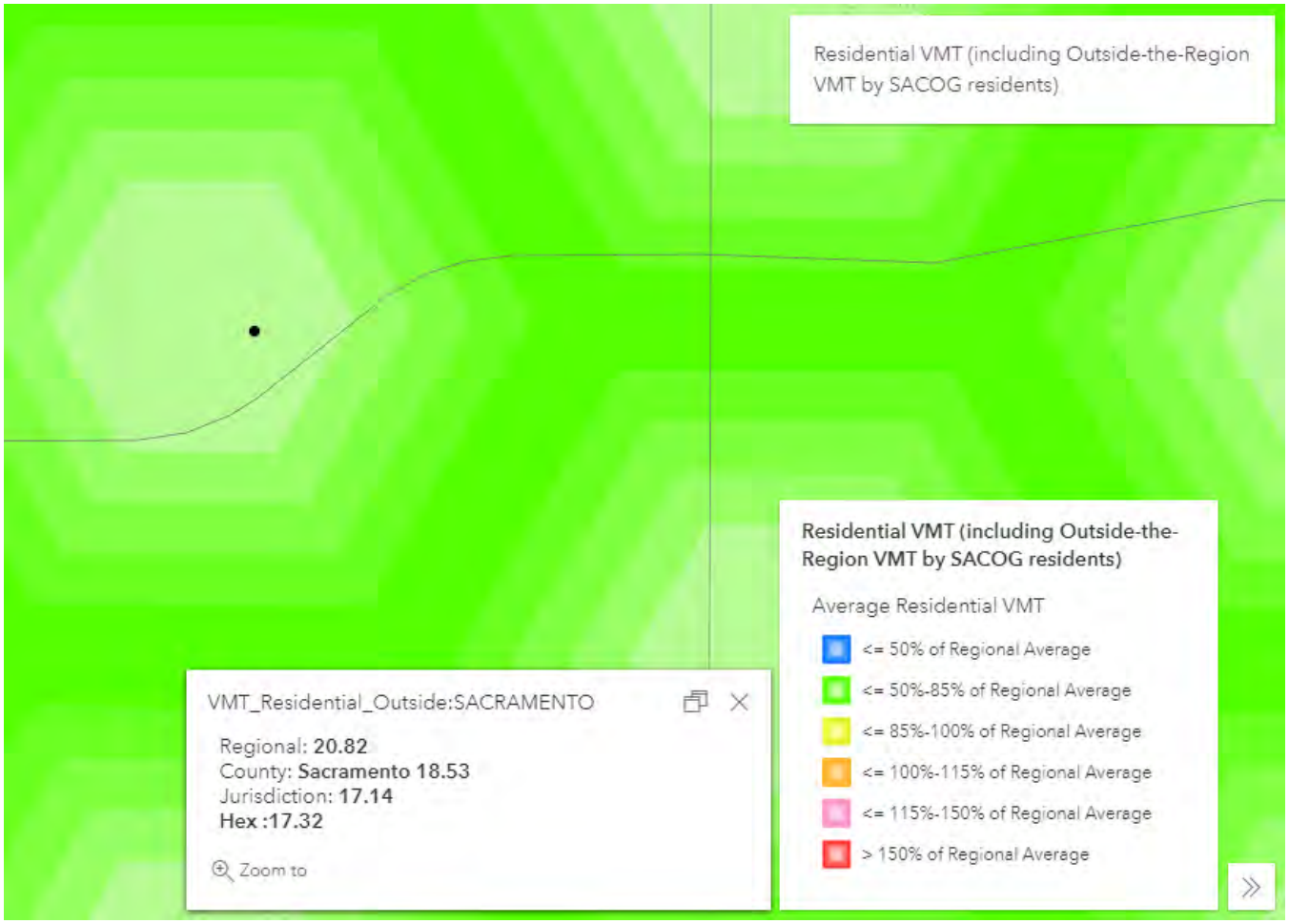


Figure 1 – SACOG VMT Residential Screening Map

Appendix D
Local Transportation Analysis

Kimley»Horn

Memorandum

To: Matthew Ilagan
Assistant Civil Engineer, Transportation Division
Department of Public Works
City of Sacramento

From: Chris Gregerson, P.E., T.E., PTOE, PTP
Tyler Mickelson, EIT

Re: **920 San Juan Road (P21-008)**
Local Transportation Analysis

Date: June 4, 2021

In accordance with our Scope of Services we have prepared this memorandum to document the findings of the local transportation analysis to address access, circulation, queuing, and safety for the proposed housing project at 920 San Juan Road in Sacramento, California.

Existing Conditions

The study area as defined in **Exhibit 1** shows the following study intersection:

1. San Juan Road @ Project Driveway/Church Driveway

In the absence of readily available peak-period intersection turning movement counts, an alternate approach was applied to obtain existing facility volumes. Past weekday peak-period roadway segment traffic volumes were collected via Streetlight Data to determine pre-COVID-19 traffic through volumes on San Juan Road at the Project Driveway. The volumes were synthesized directly from Streetlight Data, using the months of September through December 2019 and January 2020 as an aggregate of weekday (Tuesday-Thursday) conditions and can be seen in **Appendix A**. In addition, trip generation for the Church driveway during weekday AM and PM peak-hour conditions was estimated using data included in the Trip Generation Manual 10th Edition published by the institute of Transportation Engineers (ITE). These trips were added to the Streetlight data volumes to approximate existing conditions at the study intersection.

Project Description

Kimley-Horn understands that the project applicant proposes to construct 82 single-family and multi-family housing units ("the Project") located at 920 San Juan Road in Sacramento, California. The existing vacant parcel will be developed as a rental community with a leasing/club house, pool, dog park, 143 parking spaces, internal circulation roadways, and one (1) gated access driveway. The Project driveway is proposed on the northern side of San Juan Road, west of the San Juan Road intersection with Binghampton Drive, and east of the San Juan Road intersection with Zenobia Way. The project location is depicted in **Exhibit 1. Exhibit 2** depicts the proposed project site plan.

Trip Generation

The number of trips anticipated to be generated by the proposed project was approximated using data included in the *Trip Generation Manual, 10th Edition,* published by the Institute of Transportation Engineers (ITE). The project General Plan Land Use designation is proposed to be changed to Suburban Neighborhood Medium Density (SNMD). It is currently Suburban Neighborhood Low Density (SNLD). ITE Land Use Code 210 (Single-Family Detached Housing) was used to represent the single-family units while

ITE Land Use Code 220 (Multifamily Housing, Low-Rise) was used to represent the multi-family units making up the proposed project. The trips anticipated to be generated by the proposed project are presented in **Table 1**. As shown in **Table 1**, the proposed project is estimated to generate 762 daily trips, with 57 trips occurring during the AM peak-hour, and 75 trips occurring during the PM peak-hour.

Table 1 – Proposed Project Trip Generation

ITE Land Use Code	Land Use	Size	Units	Daily Trips	AM Peak			PM Peak		
					Total	In	Out	Total	In	Out
210	Single-Family Detached Housing	54	Dwelling Unit(s)	590	43	11	32	56	35	21
220	Multifamily Housing (Low-Rise)	28	Dwelling Unit(s)	172	14	3	11	19	12	7
			Total Project Trips	**762**	**57**	**14**	**43**	**75**	**47**	**28**
Note: Trip Ends calculated using the ITE Trip Generation Manual 10th Edition + Supplement based on fitted curve equations for each land use by time period.										

Trip Distribution and Assignment

Trip distribution of proposed project trips was based on existing conditions traffic volumes and knowledge of the study area. The proposed project trip distribution percentages and trip assignment are illustrated in **Exhibit 3** and are as follows:

- 60 percent to/from west of the project via San Juan Road
- 40 percent to/from east of the project via San Juan Road

Existing Plus Project Conditions

Exhibit 4 shows the proposed lane geometry and traffic control for Existing plus Project conditions, as well as the peak-hour roadway segment volumes obtained from Streetlight Data and the subsequent intersection turning movement volumes for Existing plus Project conditions.

Level of Service and Signal Warrant Analysis

Based on volumes presented in **Exhibit 4**, intersection approach delays estimated using the Highway Capacity Manual (HCM) 6th Edition methodologies using the Synchro 11 software, and the peak-hour warrant analysis methodology contained within the California Manual on Uniform Traffic Control Devices (CaMUTCD[1]), the need for a traffic signal was assessed for the study intersection. CaMUTCD signal warrant analysis worksheets and Synchro analysis worksheets are included in **Attachment B**. As shown in **Table 2**, the San Juan Road intersection with the Project Driveway/Church Driveway does not meet peak hour signal warrants under plus project conditions.

Table 2 – Existing Plus Project Conditions Intersection Delay and Signal Warrant

Intersection	AM Peak Hour			PM Peak Hour		
	LOS	Delay (sec/veh)	Signal Warranted?	LOS	Delay (sec/veh)	Signal Warranted?
San Juan Road @ Project Driveway/Church Driveway	C	17.2	No	D	34.6	No
Note: LOS and delay results are from the northbound approach which represents the worst delay from either stop-controlled side street.						

[1] *California Manual on Uniform Traffic Control Devices, 2014 Edition, Revision 4*. Caltrans. March 29, 2019.

Queuing Analysis

Queueing for select turning movements was analyzed for the purpose of providing recommendations on turning movement storage lengths. **Table 3** summarizes the expected 95th percentile queues for Project traffic turning movements. Kimley-Horn recommends the existing two-way left-turn lane (TWLTL) on San Juan Road be restriped to include an eastbound left-turn lane with at least 25 feet of storage to provide access to the Project site. There is a current city project to extend the Niños Parkway Trail that currently terminates at San Juan Road. This extension would result in a new pedestrian and bicycle crossing across San Juan Road that is located 600 feet west of the proposed project driveway. Based on the results of the queueing analysis there are no concerns for entering eastbound left turn project traffic queueing to block the planned trail crossing.

Table 3 – Turning Lane 95th Percentile Queues

Intersection	Movement	Available Storage (ft)	AM Peak-Hour 95th % Queue (ft)	PM Peak-Hour 95th % Queue (ft)
San Juan Road @ Project Driveway/Church Driveway	EBL	TWLTL	<25	<25
	SB(LTR)	150*	<25	<25

Source: *Highway Capacity Manual (HCM)* methodology per Synchro 11.
Note: Queue lengths are rounded to nearest assumed car length of 25 feet.
TWLTL = Two-way left-turn lane
*Storage Length is proposed by project and does not currently exist

Entry Gate Queuing Storage Analysis

The project site plan shows approximately 75 feet between the project driveway entrance off of San Juan Road and the entry gate. One concern is the potential for vehicles queuing at this gated entrance backing up onto San Juan Road resulting in unsafe conditions. Therefore, a queueing analysis was performed on the gated driveway to ensure safe operations.

For analysis of the entrance gate queueing, the PM peak-hour ingress volumes were analyzed because these are expected to be the highest arrival rates for the Project. As was shown in **Table 1**, there are 47 entering vehicles expected to access the Project during the PM peak-hour. For the queueing analysis, the trips entering the site were assigned to one of the following user groups:

- Resident – those who live at the site. These users are assumed to have familiarity with the gate operations, and may even have a keycard, gate FOB, or other automatic gate operation technology to assist them in entering the project. These entering vehicles are expected to queue at the gate for a short period (4.5-8.3 seconds per vehicle).
- Non-resident – any other vehicles entering the site who do not live at the Project, those who may not be familiar with gate operations, or those who need authorization to enter the site. This would include visitors of residents, as well as any delivery vans or maintenance workers. These entering vehicles are expected to have a longer queueing time at the gate than a resident (8.0-18.0 seconds per vehicle).

It should be noted that the site plan shows a pull-out space in the ingress driveway that may be for non-resident entering vehicles. However, for this queuing analysis it was conservatively assumed that all entering vehicles would need to join the same queue waiting to enter the gate. It was assumed that 95-percent of entering vehicles during the PM peak-hour are residents, and the remaining 5-percent are non-residents.

A detailed queueing simulation was conducted to determine the PM peak-hour 95th percentile queue, which is the queue length that is expected to be exceeded during a PM peak-hour less than 5-percent of the time. To calculate this 95th percentile queue, an arrival time and a service time was randomly assigned to each entering vehicle during the peak-hour. Service times for this analysis were based on a range of rates reported in the reference manual *Parking Structures 3rd Edition (2001)*. This manual listed the range of service rates for residents (those familiar with gate operations) as ranging from 4.5-8.3 seconds per vehicle (sec/veh) while non-residents (those unfamiliar with gate operations) as ranging from 8.0-18.0 sec/veh. The assumed "queueing length" of each vehicle was assumed to be 25 feet. The analysis contained 1,000 iterations of the gated entry queuing and results are shown in **Table 4**.

Table 4 – Gated Entry 95th Percentile Queues

Peak-hour	Max Queue (ft)	95th% Queue (ft)	Distribution of Maximum Queue Length (%)				
			25ft	50ft	75ft	100ft	125ft
PM	125	75	3.5	78.7	17.4	0.3	0.1

During the PM peak-hour, the maximum queue was found to be 125 feet (5 vehicles). However, as shown in **Table 4**, this is expected to occur 0.1% or less of the time. The 95th percentile queue was found to be 75 feet or 3 vehicles. It is standard is to provide enough storage to accommodate the 95th percentile queue length. The existing site plan shows adequate queue storage for expected 95th percentile queues during the weekday PM peak hour.

Multimodal Access and Site Circulation

Project impacts to transit, bicycle facilities, and pedestrian circulation were determined based on the standards of significance defined in the City's Traffic Impact Analysis Guidelines (City of Sacramento, February 1996, updated with the adopted LOS policies of the Sacramento 2035 General Plan). Considerations were given to offsite bicycle and pedestrian facilities and connectivity in the immediate vicinity of the project site.

Transit

Sacramento Regional Transit provides bus service on San Juan Road and would be the main transit provider for access to the project site. The project frontage is located approximately 500 feet west of the San Juan Road & Binghamton Drive (EB/WB) Bus Stop. This bus stop is serviced by the following routes:

- Route 13 Natomas/Arden provides weekday and weekend service between Natomas and the Arden Fair Mall Transit center. Weekday hourly headways increased to 40 min headways during AM and PM peak commute hours start at 6:00 AM and terminate at 9:00 PM.
- Route 86 Grand provides weekday and weekend service between Marconi Arcade and Downtown 9th & K stations. Weekday hourly headways increased to 15 min headways during AM and PM peak commute hours start at 5:30 AM and terminate at 10:00 PM.

The project proposes onsite connectivity that would allow for bus transit ridership to easily access the site via the main project driveway. The project causes no impacts on the surrounding transit network.

Bicycles
Consistent with the City's Bikeways Map (2020) there is an existing bike lane along San Juan Road. In addition, the Niños Parkway Bike Trail provides connectivity to the regional bike network as a separated bike path located 600 feet west of the project driveway on San Juan Road. The existing Niños Parkway trail currently only runs to the south of San Juan Road, however future plans will include a pedestrian/bicycle mid-block crossing that crosses San Juan Road and the trail will continue north of San Juan Road as a part of Niños Parkway Bike Trail Phase 2. The Project entrance will be gate operated with keypad entry; therefore, bicycles will be able to access the project via keypad entry and have connectivity to the internal project roadways. As discussed in the vehicle queuing section, no project ingress queues are anticipated to interfere with operations of the Niños Parkway trail San Juan Road mid-block pedestrian/bicycle crossing. The project causes no impacts on the surrounding bicycle network and is consistent with the city general plan goals and policies.

Pedestrians
The project proposes internal connected pedestrian facilities including sidewalks and crosswalks for all internal project roadways. Pedestrians will access the project site through a key-code pedestrian gate located at theproject driveway. There is an existing sidewalk on the north side of San Juan Road along the project frontage that is to remain under project conditions. The project causes no impacts on the surrounding pedestrian network and is consistent with the city general plan goals and policies.

Emergency Vehicles
The project site plan shows two emergency vehicle access driveways located approximately 300 feet east and 300 feet west of the proposed project driveway. Connectivity and circuity of internal project roadways combined with the three points of emergency vehicle access (one main driveway and two emergency vehicle driveways) provide sufficient circulation for emergency vehicles.

Construction
Construction of the project site is consistent with adopted general plan goals and policies. The project is proposed to be constructed in one phase and construction traffic in not anticipated to affect the traffic operations of the study area.

Sight Distance and Auxiliary Lane Analysis

San Juan Road operates at a posted speed limit of 40 mph along the Project frontage, so a design speed of 50 mph per the City's Design Procedures Manual was used to perform the sight distance analysis. As shown in **Table 5**, there is adequate sight distance for Project traffic exiting the driveway to safely turn onto San Juan Road with no need for acceleration lanes for the turning vehicles. It should also be noted that this assumes that the marked two-way left-turn lane (TWLTL) along San Juan Road is in place and may be used by project traffic for acceleration/deceleration purposes when entering and exiting the site. However, if a physical median is constructed along the Project frontage along San Juan Road, vehicles turning left from the project site would not have a refuge and there would not be adequate sight distance when looking right. Therefore, any proposed physical median should preserve the TWLTL east of the project driveway to allow for its continued use for vehicles turning left from the project site and vehicles turning left into the Church.

The need for deceleration lanes was analyzed for westbound right entering vehicles to the Project site. According to the American Association of State Highway and Transportation Officials (AASHTO) *A Policy on Geometric Design of Highways and Streets Manual (2011)* Table 3.1 and Table 3.3, the stopping sight

distance for a level 50 mph roadway is 425 feet. The decision sight distance for a vehicle to see another slowing vehicle preparing to turn into the project driveway and to slow or change lanes to avoid collision is 600 feet. Based on the proposed site plan and analysis of existing conditions geometry on San Juan Road, there is adequate sight distance for these maneuvers. Therefore, there are no safety concerns that would require the addition of right-in deceleration lane.

Table 5 – Driveway Sight Distance Requirements

Movement	Design Speed (mph)	Time Gap (sec)	Corner Sight Distance (ft)	Existing Site Distance at Project Driveway (ft)
Left-turn from Stop, looking left	50	8.0	625	>700
Right-turn from Stop	50	6.5	478	>700

Crash History

As shown in Table 6, based on collision data provided by the City for collisions occurring between 2012 and 2015 (inclusive), the calculated collision rate along San Juan Road (within the general project limits) is less than the statewide rate for similar facilities. As shown in Exhibit 5, there were three collisions that occurred at the intersection of San Juan Road with Rancho Robles Way, likely caused by the inadequate sight distance from that driveway. The remaining 8 crashes occurs just west of the intersection of San Juan Road with Northgate Boulevard and can be attributed to the close driveway spacing of adjacent retail land uses to the intersection. It should be noted that there were no observed crashes along the project frontage. The City is also proposing that raised medians be installed on San Juan Road between Northgate Boulevard and Pelican Court with turning lanes and full access provided at the Project driveway. The raised median includes pedestrian fencing near Northgate Boulevard and is estimated to correct at least 6 of the observed crashes, further reducing the overall crash rate of San Juan Road within the project study area. The addition of a project driveway access onto San Juan Road does not introduce any new vehicular safety issues to be addressed by the project.

Table 6 – San Juan Road Crash Data Summary

Road Segment (project limits only)	Total Collisions in 4 years	Calculated Collision Rate (ACC/MVM)	Statewide Rate* (ACC/MVM)
San Juan Road	11	1.28	1.71
Note: ACC/MVM = Accidents per Million Vehicle Miles *Per 2016 Collision Data on California State Highways Urban 4+ lane undivided			

Conclusions

- The proposed project is estimated to generate 762 daily trips, with 57 trips occurring during the AM peak-hour, and 75 trips occurring during the PM peak-hour.
- The San Juan Road intersection with the Project Driveway/Church Driveway does not meet peak hour signal warrants under plus Project conditions.
- Based on the results of the queueing analysis there are no concerns for entering eastbound left turn project traffic queueing back and blocking the planned pedestrian/bicycle mid-block crossing for the Niños Parkway Trail across San Juan Road.
- The project site plan shows approximately 75 feet between the project driveway entrance off of San Juan Road and the entry gate. The calculated 95th percentile ingress gate queues during the

weekday PM peak-hour were 75 feet. Therefore, the Project provides adequate off-site storage for entering vehicles.

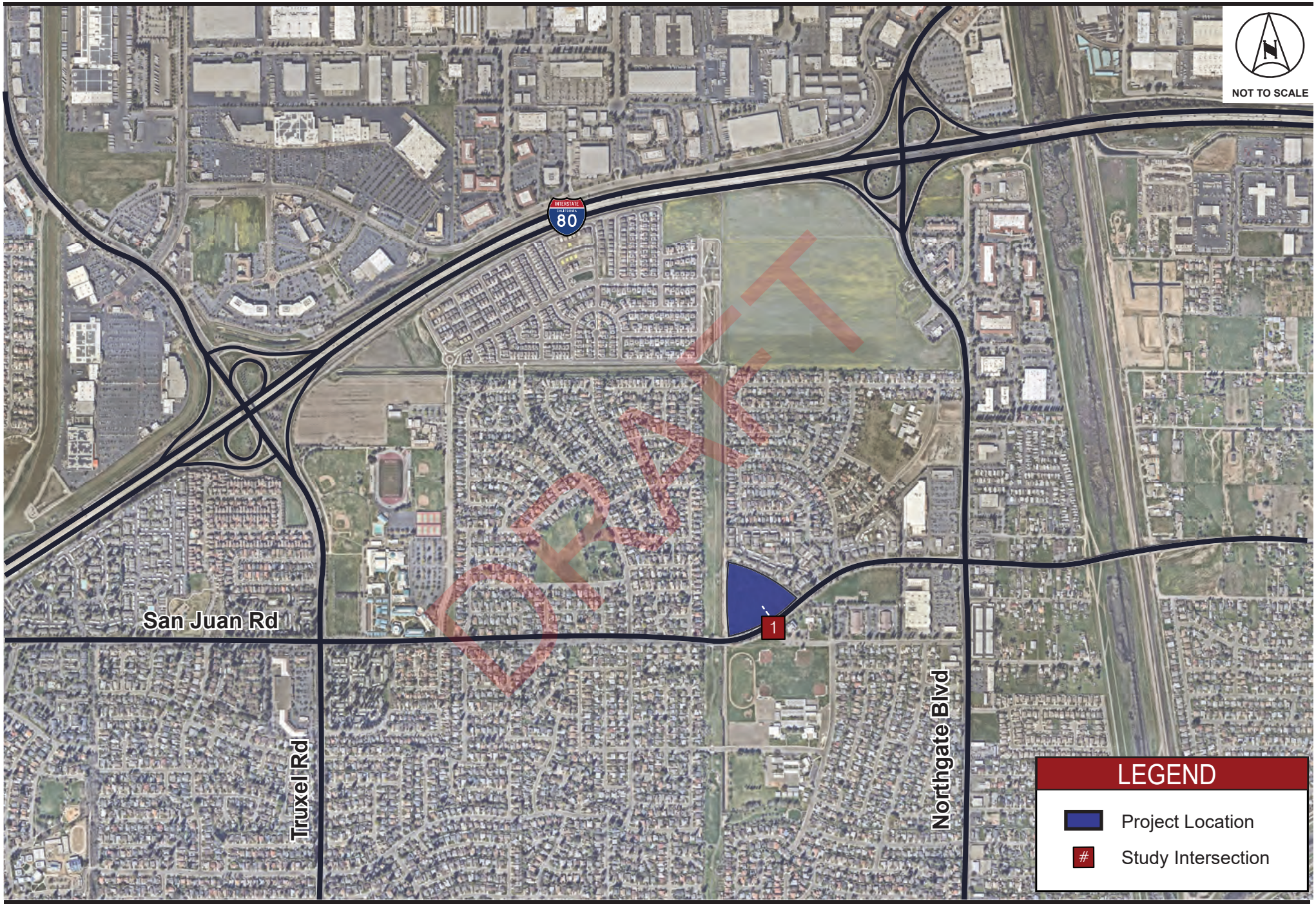
- The project is expected to have no impacts on the surrounding transit, bicycle, or pedestrian facilities.
- The project is expected to have no impacts due to construction or on emergency vehicle access to the site.
- There is adequate sight distance for Project traffic exiting the driveway to safely turn onto San Juan Road. However, if a physical median is constructed along the Project frontage along San Juan Road, vehicles turning left from the project site would not have a refuge and there would not be adequate sight distance when looking right. Therefore, any proposed physical median should preserve the TWLTL east of the project driveway to allow for its continued use for vehicles turning left from the project site and vehicles turning left into the Church.
- There are no safety concerns that would require the addition of right-in deceleration lane.
- There are no vehicular safety concerns based on historical crash rates on San Juan Road near the project when compared to crash rates of similar roads from across the state.

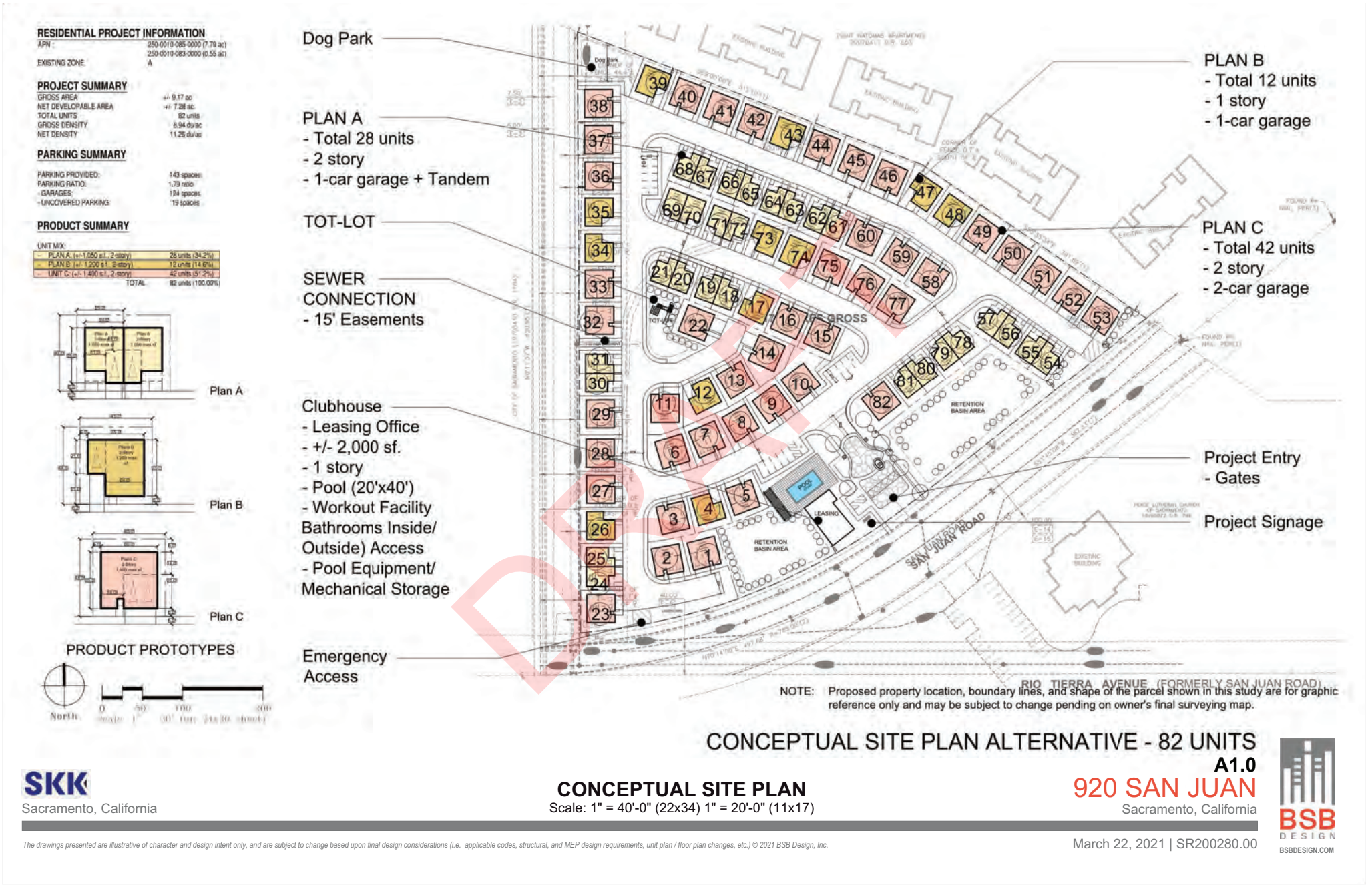
Exhibits:

Exhibit 1 – Project Vicinity Map
Exhibit 2 – Project Site Plan
Exhibit 3 – Project Trip Distribution and Assignment
Exhibit 4 – Existing Plus Project Lane Geometry and Turning Movement Volumes
Exhibit 5 – Study Area Crash Diagram

Attachments:

Attachment A – Traffic Count Data Sheet
Attachment B – Existing Plus Project LOS Worksheets
Attachment C – Existing Plus Project Signal Warrants
Attachment D – Gate Queueing Analysis Worksheet


NOT TO SCALE
INTERSTATE
CALIFORNIA
80
San Juan Rd
Truxel Rd
Northgate Blvd
1
LEGEND
Project Location
Study Intersection



CONCEPTUAL SITE PLAN ALTERNATIVE - 82 UNITS

A1.0

SKK
Sacramento, California

CONCEPTUAL SITE PLAN
Scale: 1" = 40'-0" (22x34) 1" = 20'-0" (11x17)

920 SAN JUAN
Sacramento, California

BSB DESIGN
BSBDESIGN.COM

March 22, 2021 | SR200280.00

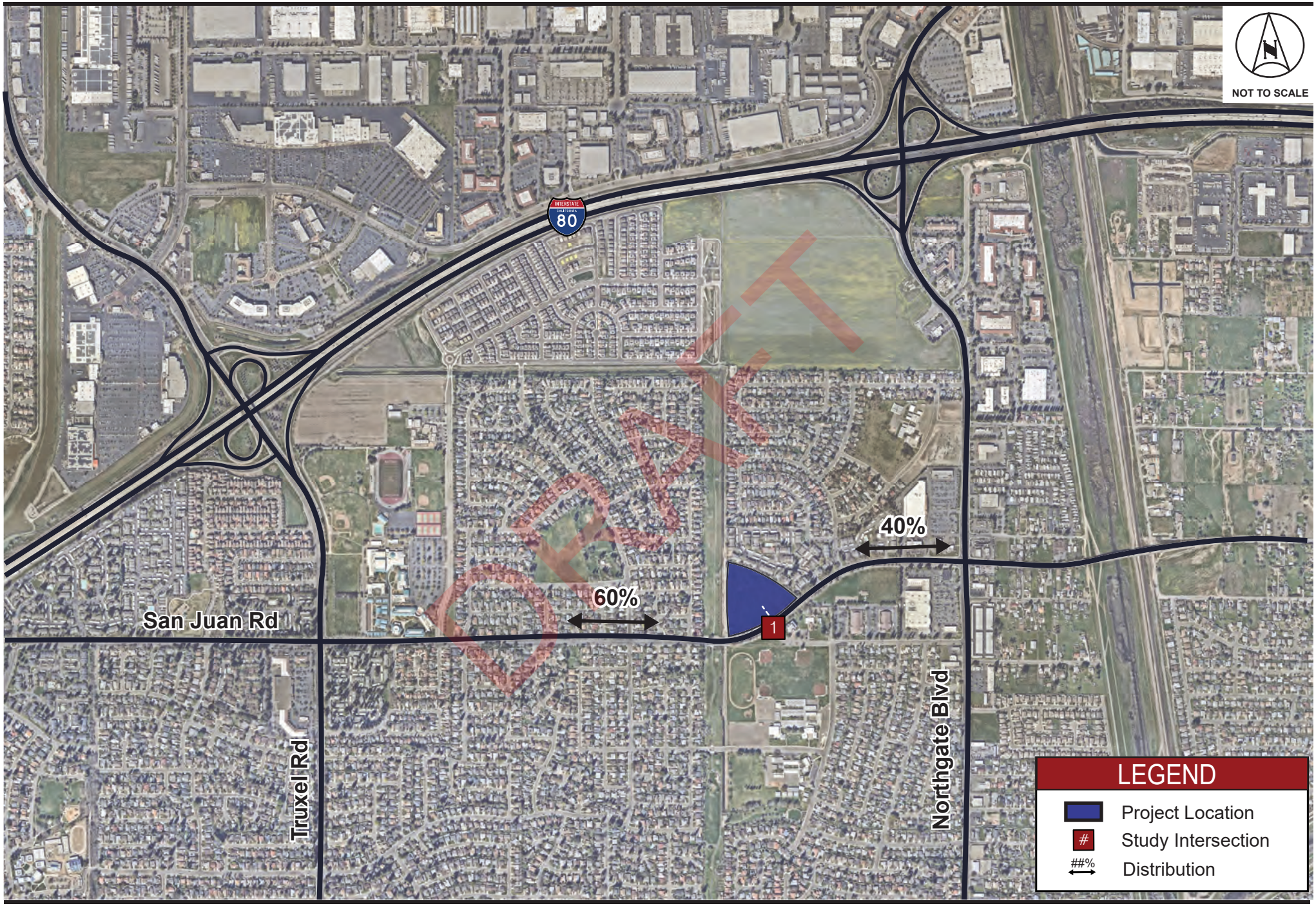


Exhibit 3
Project Trip Distribution and Assignment

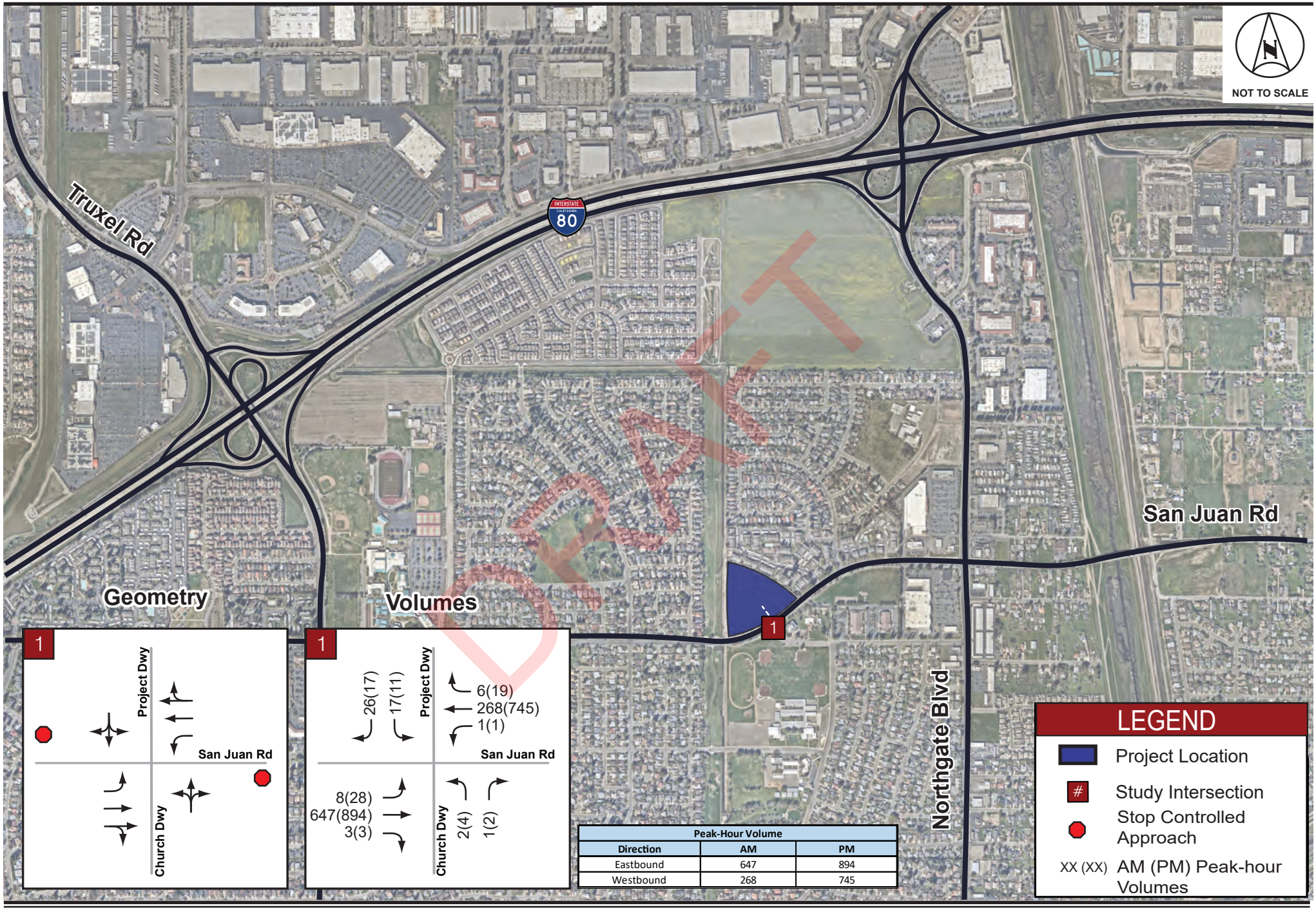
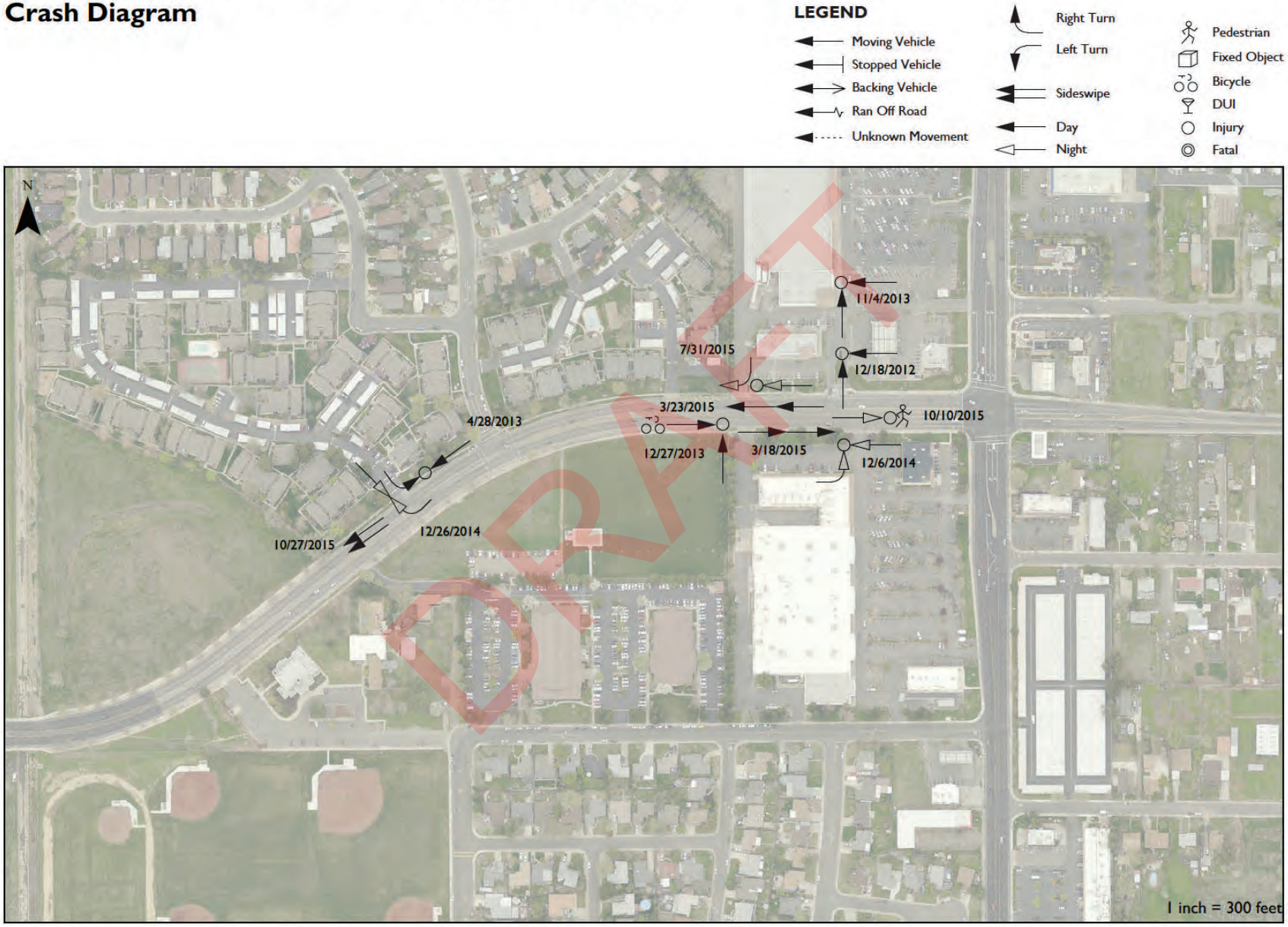


Exhibit 4

Existing Plus Project Intersection Lane Geometriy and Turning Movement Volumes

Duckhorn Drive: Rio Tierra Park to West of Northgate Boulevard
Crash Diagram



Appendix A

Traffic Count Data Sheet

Time	Eastbound Volume	Westbound Volume
12am (12am-1am)	69	64
1am (1am-2am)	55	20
2am (2am-3am)	30	14
3am (3am-4am)	18	12
4am (4am-5am)	30	21
5am (5am-6am)	125	40
6am (6am-7am)	279	169
7am (7am-8am)	647	268
8am (8am-9am)	485	283
9am (9am-10am)	347	233
10am (10am-11am)	388	287
11am (11am-12noon)	411	320
12pm (12noon-1pm)	520	384
1pm (1pm-2pm)	530	424
2pm (2pm-3pm)	553	420
3pm (3pm-4pm)	683	552
4pm (4pm-5pm)	862	639
5pm (5pm-6pm)	894	745
6pm (6pm-7pm)	627	544
7pm (7pm-8pm)	491	398
8pm (8pm-9pm)	322	342
9pm (9pm-10pm)	221	293
10pm (10pm-11pm)	148	153
11pm (11pm-12am)	101	73

Peak-Hour Volume		
Direction	**AM**	**PM**
Eastbound	647	894
Westbound	268	745

Appendix B

Existing Plus Project LOS Worksheets

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	647	3	1	268	6	2	0	1	17	0	26
Future Vol, veh/h	8	647	3	1	268	6	2	0	1	17	0	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	703	3	1	291	7	2	0	1	18	0	28

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	298	0	0	706	0	0	871	1023	353	667	1021	149
Stage 1	-	-	-	-	-	-	723	723	-	297	297	-
Stage 2	-	-	-	-	-	-	148	300	-	370	724	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1260	-	-	888	-	-	245	234	643	344	235	871
Stage 1	-	-	-	-	-	-	384	429	-	687	666	-
Stage 2	-	-	-	-	-	-	840	664	-	622	429	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1260	-	-	888	-	-	235	232	643	341	233	871
Mov Cap-2 Maneuver	-	-	-	-	-	-	235	232	-	341	233	-
Stage 1	-	-	-	-	-	-	381	426	-	682	665	-
Stage 2	-	-	-	-	-	-	812	663	-	617	426	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	17.2	12.3
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	298	1260	-	-	888	-	-	539
HCM Lane V/C Ratio	0.011	0.007	-	-	0.001	-	-	0.087
HCM Control Delay (s)	17.2	7.9	-	-	9.1	-	-	12.3
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	894	3	1	745	19	4	0	2	11	0	17
Future Vol, veh/h	28	894	3	1	745	19	4	0	2	11	0	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	972	3	1	810	21	4	0	2	12	0	18

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	831	0	0	975	0	0	1441	1867	488	1369	1858	416
Stage 1	-	-	-	-	-	-	1034	1034	-	823	823	-
Stage 2	-	-	-	-	-	-	407	833	-	546	1035	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.4	6.54	6.94	7.4	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	797	-	-	703	-	-	99	72	526	111	73	585
Stage 1	-	-	-	-	-	-	248	308	-	334	386	-
Stage 2	-	-	-	-	-	-	592	382	-	490	307	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	797	-	-	703	-	-	93	69	526	107	70	585
Mov Cap-2 Maneuver	-	-	-	-	-	-	93	69	-	107	70	-
Stage 1	-	-	-	-	-	-	239	296	-	321	386	-
Stage 2	-	-	-	-	-	-	572	382	-	470	295	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	34.6	24.8
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	128	797	-	-	703	-	-	212
HCM Lane V/C Ratio	0.051	0.038	-	-	0.002	-	-	0.144
HCM Control Delay (s)	34.6	9.7	-	-	10.1	-	-	24.8
HCM Lane LOS	D	A	-	-	B	-	-	C
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.5

Appendix C

Existing Plus Project Signal Warrants

Kimley»Horn

PEAK HOUR SIGNAL WARRANT ANALYSIS (Warrant #3, California MUTCD 2012 Edition)

INT #1

PROJECT NAME: *920 San Juan Road Local Traffic Analysis*

SCENARIO: *Existing Plus Project Conditions*

COMMENTS:

MAJOR STREET:	*San Juan Road*	☐ NB/SB	☑ EB/WB	# OF APPROACH LANES: 2
MINOR STREET:	*Project Dwy/Church Dwy*	☑ NB/SB	☐ EB/WB	# OF APPROACH LANES: 1

THE STUDY INTERSECTION HAS MORE THAN THREE APPROACHES (Y OR N): Y

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

WORST CASE DELAY FOR MINOR STREET APPROACH:	AM		PM	
	17.2	sec/veh	34.6	sec/veh
	0.21	veh-hr	0.27	veh-hr

			MAJOR STREET			MINOR STREET				
			EB Approach	WB Approach	Total	NB Approach	SB Approach	Heavy Leg	Total	Intersection Total
06:00 AM	TO	07:00 AM			0			0	0	0
07:00 AM	TO	08:00 AM	658	275	933	3	43	43	46	979
08:00 AM	TO	09:00 AM			0			0	0	0
09:00 AM	TO	10:00 AM			0			0	0	0
10:00 AM	TO	11:00 AM			0			0	0	0
11:00 AM	TO	12:00 PM			0			0	0	0
12:00 PM	TO	01:00 PM			0			0	0	0
01:00 PM	TO	02:00 PM			0			0	0	0
02:00 PM	TO	03:00 PM			0			0	0	0
03:00 PM	TO	04:00 PM			0			0	0	0
04:00 PM	TO	05:00 PM			0			0	0	0
05:00 PM	TO	06:00 PM	925	765	1690	6	28	28	34	1724
06:00 PM	TO	07:00 PM			0			0	0	0
07:00 PM	TO	08:00 PM			0			0	0	0
08:00 PM	TO	09:00 PM			0			0	0	0
09:00 PM	TO	10:00 PM			0			0	0	0

	MAJOR STREET	MINOR STREET		INTERSECTION
	Total	Heavy Leg	Total	Total
AM MAX	933	43	46	979
PM MAX	1690	28	34	1724

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2012 California Supplement

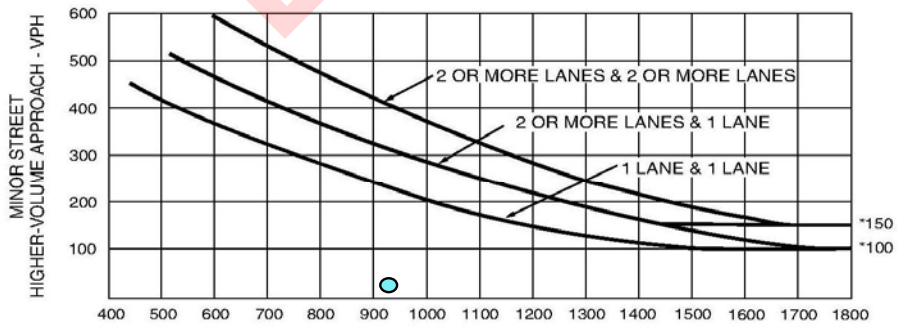
Scenario: Existing Plus Project Conditions AM
Intersection: San Juan Road AND Project Dwy/Church Dwy
Comments:

	PART A or PART B	SATISFIED	**NO**
PART A (All parts 1, 2, and 3 below must be satisfied)		SATISFIED	**NO**
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND			No
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND			No
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.			Yes
PART B		SATISFIED	**NO**

APPROACH LANES	One	2 or More
Both Approaches - Major Street		933
Highest Approach - Minor Street	43	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2012 California Supplement

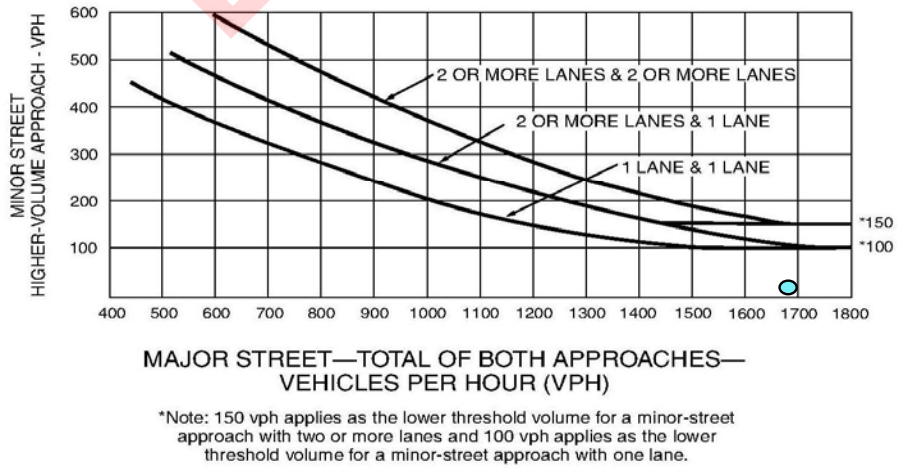
Scenario: Existing Plus Project Conditions PM
Intersection: San Juan Road AND Project Dwy/Church Dwy
Comments:

	PART A or PART B	SATISFIED	**NO**
PART A (All parts 1, 2, and 3 below must be satisfied)		SATISFIED	**NO**
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND			No
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND			No
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.			Yes
PART B		SATISFIED	**NO**

APPROACH LANES	One	2 or More
Both Approaches - Major Street		1690
Highest Approach - Minor Street	28	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Appendix D

Gate Queueing Analysis Worksheet

If you decide to use a custom service time distribution, enter the service times in this table.

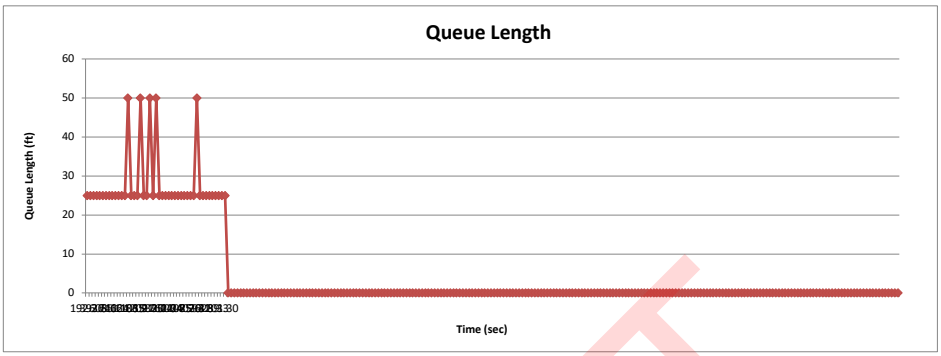
Bin Number	Time Value
1.00	4.50
2.00	4.50
3.00	4.50
4.00	4.50
5.00	4.50
6.00	4.50
7.00	4.50
8.00	4.50
9.00	4.50
10.00	4.50
11.00	4.50
12.00	4.50
13.00	4.50
14.00	4.50
15.00	4.50
16.00	4.50
17.00	4.50
18.00	4.50
19.00	4.50
20.00	4.50
21.00	4.50
22.00	4.50
23.00	4.50
24.00	4.50
25.00	4.50
26.00	4.50
27.00	4.50
28.00	4.50
29.00	4.50
30.00	4.50
31.00	4.50
32.00	4.50
33.00	4.50
34.00	4.50
35.00	4.50
36.00	4.50
37.00	4.50
38.00	4.50
39.00	4.50
40.00	4.50
41.00	4.50
42.00	4.50
43.00	4.50
44.00	4.50
45.00	4.50
46.00	4.50
47.00	4.50
48.00	4.50
49.00	4.50
50.00	4.50
51.00	4.50
52.00	4.50
53.00	4.50
54.00	4.50
55.00	4.50
56.00	4.50
57.00	4.50
58.00	4.50
59.00	4.50
60.00	4.50
61.00	4.50
62.00	4.50
63.00	4.50
64.00	4.50
65.00	4.50
66.00	4.50
67.00	4.50
68.00	4.50
69.00	4.50
70.00	4.50
71.00	4.50
72.00	4.50
73.00	4.50
74.00	4.50
75.00	4.50
76.00	4.50
77.00	4.50
78.00	4.50
79.00	4.50
80.00	4.50
81.00	4.50
82.00	4.50
83.00	4.50
84.00	4.50
85.00	4.50
86.00	4.50
87.00	4.50
88.00	4.50
89.00	4.50
90.00	4.50
91.00	4.50
92.00	4.50
93.00	4.50
94.00	4.50
95.00	8.30
96.00	8.30
97.00	8.30
98.00	8.30
99.00	8.30
100.00	8.30

Pedestrian Information	
Hourly Volume (vph) =	47
Peak Hour Factor =	1.00
Analysis Period (minutes) =	60
% of Vehicles with a Monthly Pass =	95%
Average Vehicle Length (feet) =	25

Service Time Information			Random Service Times (sec)		
Service Times for Ticketholders…				Min	Max
…with a pass =	R	(C for custom distribution, R for	with pass	4.5	8.3
… without a pass =	R	random between two numbers)	w/o pass	8.0	18.0
Initial Queue (vehicles) =	0		Residual Queue (Vehicles) =	0.04	
Average Service Time =	9.70				

Output - Deveop a formula for the information you want to record.
The value that you want to record should end up in this box: 50
The default value in the blue box is the maximum queue length.
When you have the right formula, click the button to record 100 runs of this simulation.

Run Macro



Arrival Number	Time Between Arrivals (sec)	Arrival Time (sec)	Service Start Time (sec)	Pass (Y/N)	Bin Value	Service Time (sec)	Service End Time (sec)	Time in Queue (sec)	Time in System (sec)	Cumulative Time in Q (sec)	Average Time in Q (sec)	Vehicles in Q	Q Length (feet)	Last Value (feet)
1	192.26	192.26	192.26	Y	13.00	6.00	198.26	0.00	6.00	0.00	0.00	1.00	25	
2	19.01	211.27	211.27	Y	49.00	5.00	216.27	0.00	5.00	0.00	0.00	1.00	25	
3	125.40	336.67	336.67	Y	35.00	5.00	341.67	0.00	5.00	0.00	0.00	1.00	25	
4	56.88	393.55	393.55	Y	26.00	8.00	401.55	0.00	8.00	0.00	0.00	1.00	25	
5	67.60	461.15	461.15	Y	100.00	7.00	468.15	0.00	7.00	0.00	0.00	1.00	25	
6	51.44	512.58	512.58	Y	17.00	7.00	519.58	0.00	7.00	0.00	0.00	1.00	25	
7	96.08	608.66	608.66	Y	35.00	8.00	616.66	0.00	8.00	0.00	0.00	1.00	25	
8	70.67	679.33	679.33	Y	2.00	7.00	686.33	0.00	7.00	0.00	0.00	1.00	25	
9	45.00	724.34	724.34	Y	88.00	6.00	730.34	0.00	6.00	0.00	0.00	1.00	25	
10	16.84	741.18	741.18	Y	14.00	7.00	748.18	0.00	7.00	0.00	0.00	1.00	25	
11	187.58	928.76	928.76	Y	57.00	8.00	936.76	0.00	8.00	0.00	0.00	1.00	25	
12	49.06	977.82	977.82	Y	31.00	5.00	982.82	0.00	5.00	0.00	0.00	1.00	25	
13	46.83	1024.65	1024.65	Y	13.00	8.00	1032.65	0.00	8.00	0.00	0.00	1.00	25	
14	3.02	1027.68	1032.65	Y	56.00	8.00	1040.65	4.98	12.98	4.98	0.36	2.00	50	
15	57.72	1085.39	1085.39	Y	24.00	5.00	1090.39	0.00	5.00	4.98	0.33	1.00	25	
16	18.51	1103.91	1103.91	Y	4.00	7.00	1110.91	0.00	7.00	4.98	0.31	1.00	25	
17	58.90	1162.81	1162.81	Y	77.00	7.00	1169.81	0.00	7.00	4.98	0.29	1.00	25	
18	0.17	1162.97	1169.81	Y	51.00	6.00	1175.81	6.83	12.83	11.81	0.66	2.00	50	
19	39.38	1202.35	1202.35	Y	39.00	6.00	1208.35	0.00	6.00	11.81	0.62	1.00	25	
20	77.81	1280.16	1280.16	N	56.00	11.00	1291.16	0.00	11.00	11.81	0.59	1.00	25	
21	5.81	1285.97	1291.16	Y	38.00	6.00	1297.16	5.19	11.19	17.00	0.81	2.00	50	
22	246.07	1532.04	1532.04	Y	17.00	6.00	1538.04	0.00	6.00	17.00	0.77	1.00	25	
23	0.53	1532.57	1538.04	Y	98.00	8.00	1546.04	5.47	13.47	22.47	0.98	2.00	50	
24	208.33	1740.90	1740.90	Y	10.00	8.00	1748.90	0.00	8.00	22.47	0.94	1.00	25	
25	20.14	1761.04	1761.04	Y	92.00	5.00	1766.04	0.00	5.00	22.47	0.90	1.00	25	
26	34.14	1795.18	1795.18	Y	83.00	5.00	1800.18	0.00	5.00	22.47	0.86	1.00	25	
27	133.98	1929.16	1929.16	Y	77.00	6.00	1935.16	0.00	6.00	22.47	0.83	1.00	25	
28	74.69	2003.85	2003.85	Y	41.00	5.00	2008.85	0.00	5.00	22.47	0.80	1.00	25	
29	22.95	2026.79	2026.79	Y	28.00	6.00	2032.79	0.00	6.00	22.47	0.77	1.00	25	
30	138.96	2165.75	2165.75	Y	21.00	6.00	2171.75	0.00	6.00	22.47	0.75	1.00	25	
31	41.51	2207.26	2207.26	Y	88.00	6.00	2213.26	0.00	6.00	22.47	0.72	1.00	25	
32	27.76	2235.02	2235.02	N	18.00	13.00	2248.02	0.00	13.00	22.47	0.70	1.00	25	
33	112.42	2347.43	2347.43	Y	11.00	7.00	2354.43	0.00	7.00	22.47	0.68	1.00	25	
34	59.98	2407.41	2407.41	Y	25.00	8.00	2415.41	0.00	8.00	22.47	0.66	1.00	25	
35	72.90	2480.31	2480.31	Y	26.00	8.00	2488.31	0.00	8.00	22.47	0.64	1.00	25	
36	1.55	2481.86	2488.31	Y	21.00	5.00	2493.31	6.45	11.45	28.92	0.80	2.00	50	
37	111.52	2593.39	2593.39	Y	88.00	8.00	2601.39	0.00	8.00	28.92	0.78	1.00	25	
38	149.70	2743.09	2743.09	Y	27.00	5.00	2748.09	0.00	5.00	28.92	0.76	1.00	25	
39	61.85	2804.94	2804.94	N	42.00	17.00	2821.94	0.00	17.00	28.92	0.74	1.00	25	
40	223.39	3028.33	3028.33	Y	4.00	6.00	3034.33	0.00	6.00	28.92	0.72	1.00	25	
41	85.84	3114.18	3114.18	Y	49.00	5.00	3119.18	0.00	5.00	28.92	0.71	1.00	25	
42	69.80	3183.97	3183.97	Y	61.00	6.00	3189.97	0.00	6.00	28.92	0.69	1.00	25	
43	17.33	3201.30	3201.30	Y	83.00	8.00	3209.30	0.00	8.00	28.92	0.67	1.00	25	
44	134.75	3336.06	3336.06	Y	16.00	7.00	3343.06	0.00	7.00	28.92	0.66	1.00	25	
45	260.62	3596.68	3596.68	Y	97.00	7.00	3603.68	0.00	7.00	28.92	0.64	1.00	25	1