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Initial Study/Mitigated Negative Declaration:

Yolanda Industrial Project
324, 324, 326, 328, 330, 340, 350 and 368 Yolanda Avenue
Santa Rosa, California 95404
Sonoma County APNs: 044-081-029, 044-081-024, 044-072-006
044-072-007, 044-072-008, 044-072-009 and 044-390-061

Prepared for:
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Prepared by:
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Project No. 0698,002.18

May 26, 2020

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Table of Contents

FIGURES

APPENDICES

ACRONYMS AND ABBREVIATIONS

AB:	Assembly Bill
ABAG:	Association of Bay Area Governments
APN:	Assessor's Parcel Number
BAAQMD:	Bay Area Air Quality Management District
bgs:	below ground surface
BMPs:	Best Management Practices
BTU:	British Thermal Unit
CAFE:	Corporate Average Fuel Economy
CALGreen:	California Green Building Standards
Caltrans:	California Department of Transportation
CAP:	Climate Action Plan
CARB:	California Air Resources Board
CBC:	California Building Code
CCR:	California Code of Regulations
CEC:	California Energy Commission
CEQA:	California Environmental Quality Act
CFCs:	Chlorofluorocarbons
CG:	General Commercial
CH_4:	Methane
CHHSL:	California Human Health Screening Level
CO_2:	Carbon dioxide
CO_2e:	Carbon dioxide equivalent
CPS-SLIC:	Cleanup Program Sites
CPUC:	California Public Utilities Commission
CUP:	Conditional Use Permit
CUPA:	Consolidated Unified Protection Agency
dBA:	A-Weighted Sound Level
DEIR:	Draft Environmental Impact Report
DPM:	Diesel particulate matter
DPR:	Department of Parks and Recreation
DTSC:	Department of Toxic Substances Control
DWR:	Department of Water Resources
EDR:	Environmental Data Resources, Inc.
EIR:	Environmental Impact Report
EISA:	Energy Independence and Security Act
EPA:	Environmental Protection Agency
ESLs:	Environmental Screening Levels
EV:	Electric vehicle
ft:	Feet
GHGs:	Greenhouse Gasses
GWH:	Gigawatt-hours
GWP:	Global Warming Potential
HFCs:	Hydrofluorocarbons

hp:	horsepower
HVAC:	Heating, Ventilation and Air Conditioning systems
HVOCs:	Halogenated Volatile Organic Compounds
IBC:	International Building Code
IL:	Light Industrial
in/sec:	Inches per second
lbs:	Pounds
L_{dn}:	Day-Night noise Level
L_{eq}:	Average noise levels
LID:	Low Impact Development
LOS:	Level Of Service
M^3:	Cubic meter
mgd:	million gallons per day
mg/kg:	milligrams per kilogram
mi:	miles
MLD:	Most Likely Descendant
MPH:	miles per hour
MRZ:	Mineral Resource Zone
msl:	mean sea level
MT:	Metric tons
N_2O:	Nitrous Oxide
ND:	Non-detect
NO_x:	Nitrogen Oxides
NCRWQCB:	North Coast Regional Water Quality Control Board
NAHC:	Native American Heritage Commission
NPDES:	National Pollutant Discharge Elimination System
O_3:	Ozone
OHP:	Office of Historic Preservation
PBA:	Plan Bay Area
PFCs:	Perfluorocarbons
PG&E:	Pacific Gas and Electric
PM:	Particulate matter
PPMW:	Parts per million by weight
PPV:	Peak Particle Velocity
PRC:	Public Resources Code
R-3-15:	Multi-family Residential (Medium High Density)
RECs:	Recognized Environmental Condition
ROG:	Reactive Organic Gasses
RPS:	Renewable Portfolio Standard
RSL:	Regional Screening Level
RTP:	Regional Transportation Plan
RV:	Recreational vehicle
SB:	Senate Bill
SCHMP:	Sonoma County Hazard Mitigation Plan
SCP:	Sonoma Clean Power
SCS:	Sustainable Communities Strategy

SCT:	Sonoma County Transit
SCWA:	Sonoma County Water Agency (now Sonoma Water)
SF:	Square foot
SF_6:	Sulfur hexafluoride
SFBRWQCB:	San Francisco Bay Regional Water Quality Control Board
SGMP:	Soil and Groundwater Management Plan
SHPO:	State Historic Preservation Office
SMARA:	Surface Mining and Reclamation Act
SR:	State Route
SRCC:	Santa Rosa City Code
SRPCSP:	Santa Rosa Plain Conservation Strategy Plan
SSA:	Solvent Storage Area
SUSMP:	Standard Urban Stormwater Mitigation Plan
SWPPP:	Storm Water Pollution Prevention Program
TACs:	Toxic Air Contaminants
TCE:	Trichloroethene
TIS:	Traffic Impact Study
TOC:	Total organic carbon
µg/l:	Micrograms per liter
UGB:	Urban Growth Boundary
ULSD:	Ultra-low sulfur diesel
USEPA:	United States Environmental Protection Agency
VDECS:	Verified Diesel Emissions Control Strategy
VMT:	Vehicle Miles Traveled
WQOs:	Water Quality Objectives
WUI:	Wildland-Urban Interface
WWTP:	Wastewater Treatment Plant

SECTION I: INTRODUCTION

1.0 Project Title

Yolanda Industrial Project

2.0 Lead Agency Name and Address

City of Santa Rosa
Planning & Economic Development
100 Santa Rosa Avenue #3
Santa Rosa, California 95404
(707) 543-3200

3.0 Contact Person and Phone Number

Andrew Trippel – City Planner
(707) 543-3223

4.0 Project Location

The project site (site), consisting of seven contiguous parcels, totaling approximately 5.877-acres of land, is known as 324, 324 (two parcels have the same address), 328/340, 330, 350/358 and 368/326 Yolanda Avenue, Santa Rosa, California. The site is further designated by Sonoma County Assessor's Parcel Numbers (APNs) 044-081-029, 044-081-024, 044-072-006, 044-072-007, 044-072-008, 044-072-009 and 044-390-061. The site is located as shown on Figure 1 – Site Location Map, and Figure 2 identifies general site features and approximate parcel boundaries. Figure 3 illustrates current land use and zoning districts, and Figure 4 illustrates proposed General Plan and Zoning amendments. Figure 5 labels these parcels A-G, which reflects how the parcels shall be referenced as such throughout this document.

5.0 Project Sponsor's Name and Address

Allan Henderson
6025 Starr Rd
Windsor, California 95492

6.0 General Plan Designations

Retail and Business Services (4 parcels)
Light Industry (1 parcel)
Medium High Density Residential (1 parcel)
Undesignated (1 parcel)

7.0 Zoning

General Commercial (4 parcels)
Light Industrial (1 parcel)
R-3-15 (1 parcel)
Undesignated (1 parcel)

Figure 1: Site Location Map

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N 0 2,000 feet

Job Number 0698,002.18	Reviewed By EC&A, EJVB	Date November 2019	Revised Date -

Figure 2: Site Vicinity Map

(TRACE #1533, 25 Nov '19)

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JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	PAGE
0698,002.18	EC&A, E.J. VandenBosch	November 2018	November 2019	1 OF 1

Figure 3: Site Vicinity Map with Current Land Use and Zoning Parcel Areas

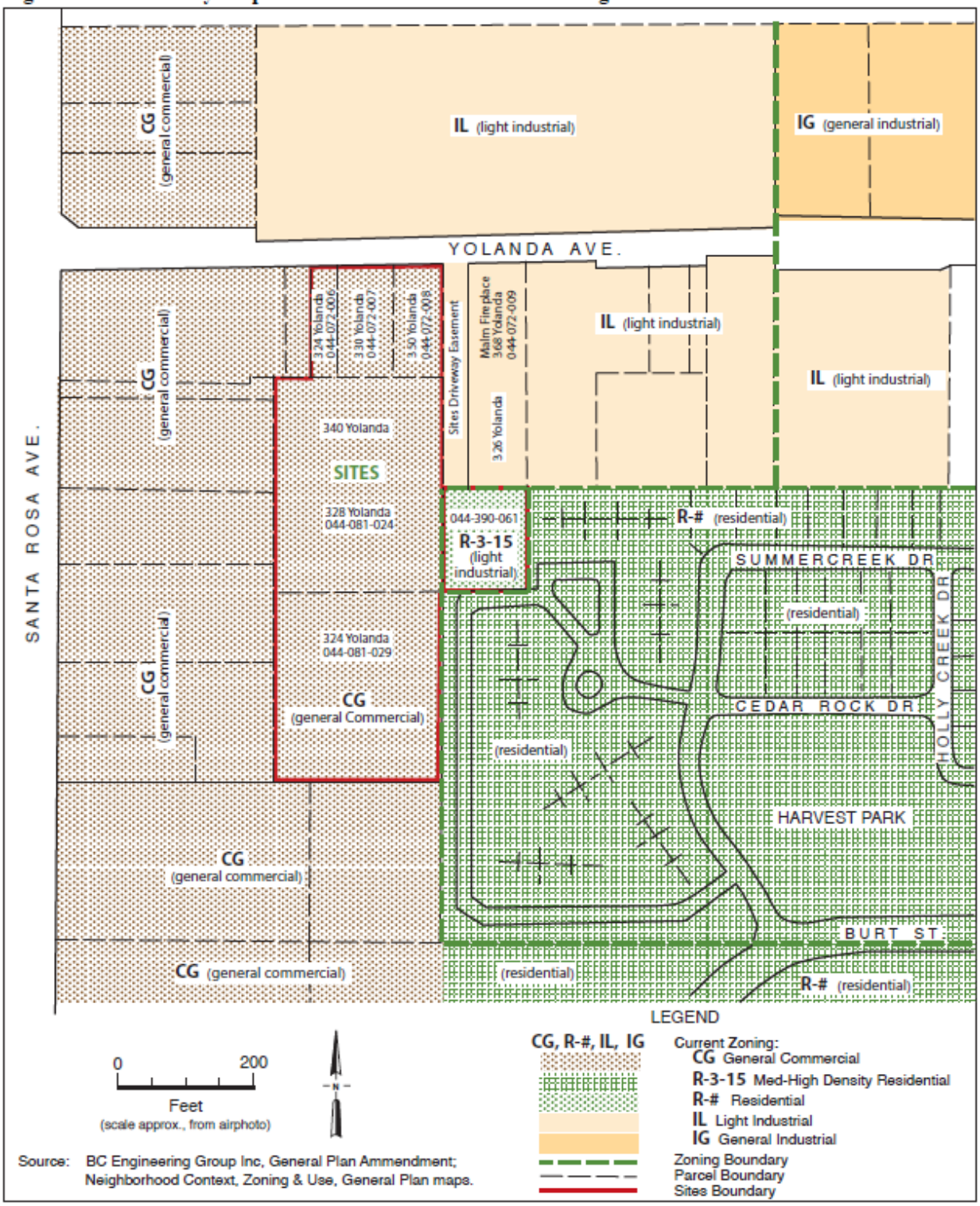
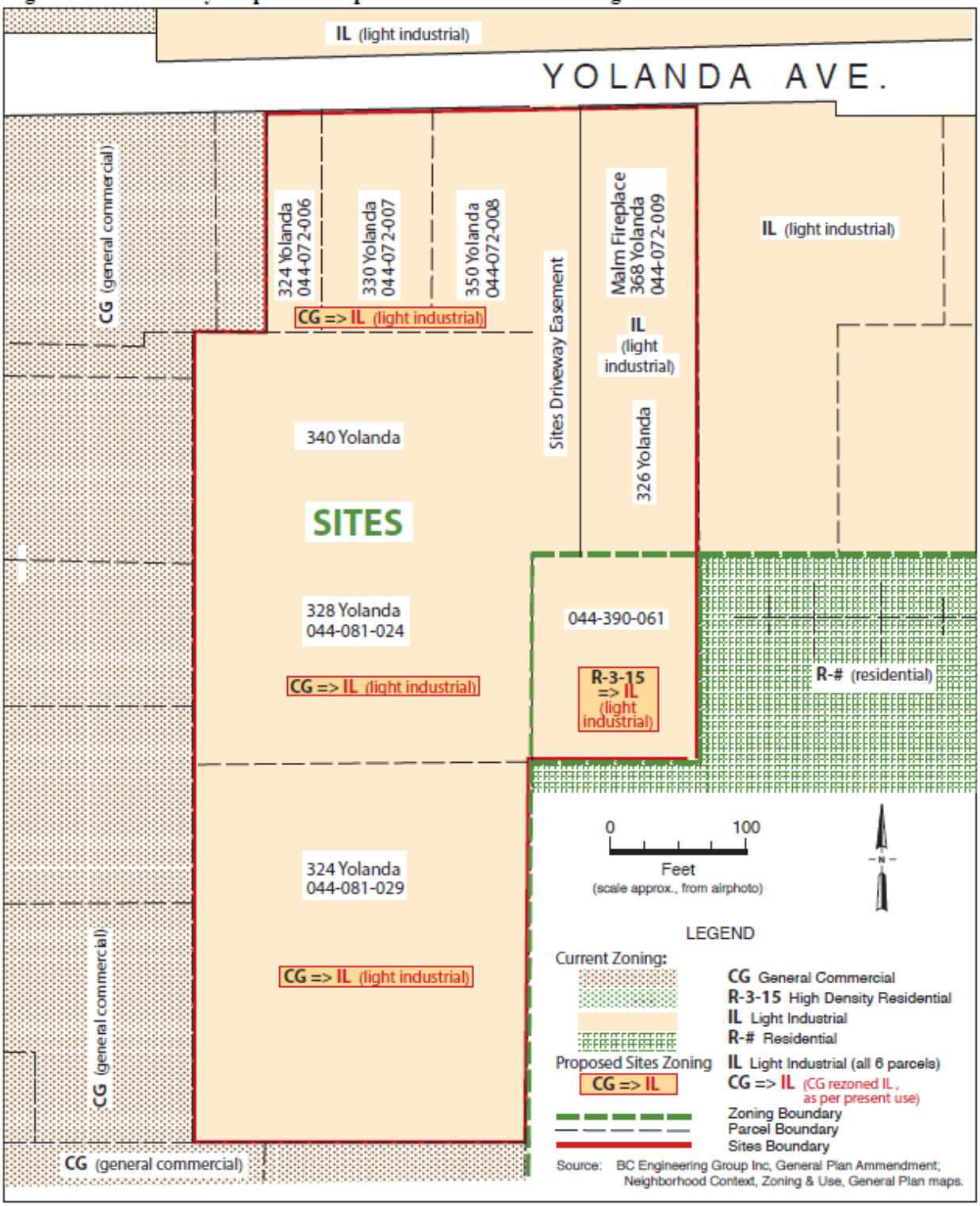


Figure 4: Site Vicinity Map with Proposed Land Use and Zoning Amendments



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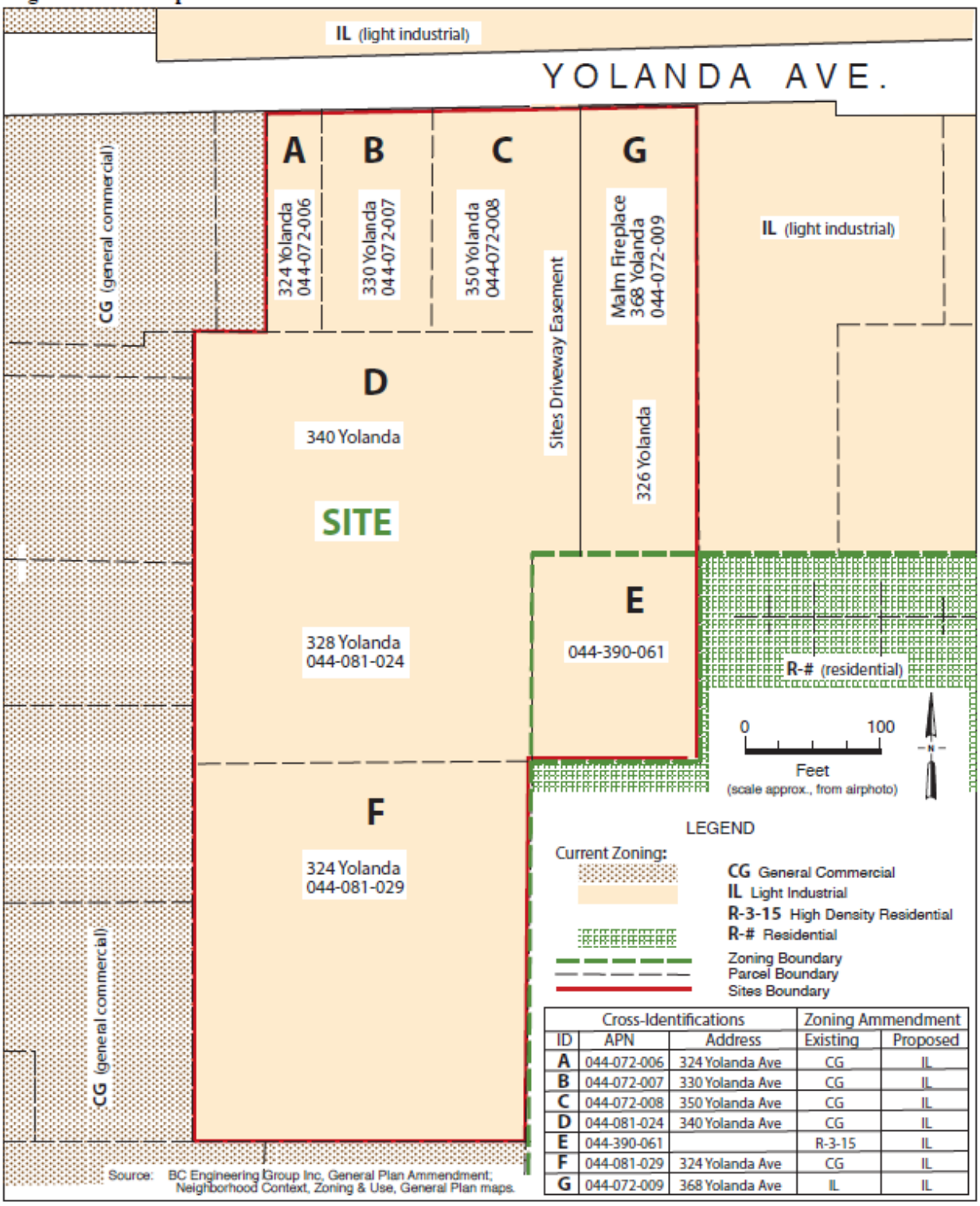
JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	PAGE
0698,002.18	EC&A, EJ VandenBosch	November 2018		1 OF 1

Figure 5: Site Map with Cross Identifications



Cross-Identifications			Zoning Ammendment	
ID	APN	Address	Existing	Proposed
A	044-072-006	324 Yolanda Ave	CG	IL
B	044-072-007	330 Yolanda Ave	CG	IL
C	044-072-008	350 Yolanda Ave	CG	IL
D	044-081-024	340 Yolanda Ave	CG	IL
E	044-390-061		R-3-15	IL
F	044-081-029	324 Yolanda Ave	CG	IL
G	044-072-009	368 Yolanda Ave	IL	IL

(TRACE #1587, 26 Nov '19)

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JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	PAGE
0698,002.18	EC&A, EJ VandenBosch	November 2018		1 OF 1

8.0 Project Description

The project proposes amending the General Plan Land Use designations of six parcels (Parcels A-F in Table A below) to Light Industry and rezoning those same parcels to Light Industrial (IL). Redevelopment would include the demolition of the existing building at 358/350 Yolanda Avenue (parcels B and C) and the demolition of the existing industrial building at 368 Yolanda Avenue (parcel G). At 358/350 Yolanda Avenue (parcels B and C), the project proposes new construction of a 8,442 square foot (SF) commercial/industrial building at 330 and 358/350 Yolanda Avenue (parcels A, B, and C). At 368 Yolanda Avenue (parcel G), the project proposes new construction of an industrial building that would replace the existing industrial building and add approximately 2,894 SF (parcels E and G). The new 8,442 SF building would include three separate suites, of which two are proposed for use: a cannabis dispensary (4,744 SF), cannabis Manufacturing (non-volatile) and Distribution uses (1,419 SF), and a vacant/untenanted space (2,279 SF). For the purposes of this CEQA analysis, the most conservative uses were assumed for the untenanted space. Proposed development would also include 61 new parking stalls, including 7 ADA parking stalls, planting of 50 new trees, and improvements to two existing buildings totaling 32,000 SF (parcel D) to create multi-unit industrial buildings. An existing approximately 30,000 SF industrial building is to remain on parcel 044-081-029 (parcel F) at 324 Yolanda Avenue. The complete project description, and design plans prepared by Henderson Architect Inc., are presented in Appendix A.

Table A – Current Land Uses

Parcel Identification	APN	Lot Size (acres)	Current Land Use	General Plan	Zoning Code	Buildings/ Improvements (~ sq. ft.)	Year Built
A	044-072-006	0.16	Vacant Commercial Land w/Utilities	Undesignated	CG General Commercial	vacant; asphalt lot	N/A
B	044-072-007	0.336	Commercial Use/ No Other Category	Retail & Business Service	CG General Commercial	vacant; asphalt lot	N/A
C	044-072-008	0.331	One Story Office Building	Retail & Business Service	CG General Commercial	One residential structure (business use) ±1,696 ft^2	1938
D	044-081-024	1.92	Light Manufacturing & Industrial	Retail & Business Service	CG General Commercial	Two industrial buildings totaling ±29,400 ft^2	1971
E	044-390-061	0.45	Vacant Commercial Land w/Utilities	Med-High Residential	R-3-15	Mobile/Trailer office	N/A
F	044-081-029	1.68	Warehousing/Active	Retail & Business Service	CG General Commercial	One industrial building ±27,000 ft^2	1977
G	044-072-009	1.0	Light Manufacturing & Industrial	Light Manufacturing	IL Light Industrial	Two attached industrial buildings ±22,800 ft^2	1964

Utilities to support the proposed development will include City of Santa Rosa water and sewer, Pacific Gas and Electric (PG&E) gas, Sonoma Clean Power (SCP) electric delivered by PG&E's distribution system, telephone and internet. To reduce storm water pollution, protect water quality, and promote groundwater recharge, the proposed development will adhere to the City of Santa Rosa's Low Impact Development (LID) requirements, including implementation of Best

Management Practices (BMPs), and it would utilize the City of Santa Rosa's storm drain system where necessary.

The project requires multiple discretionary Planning entitlement applications to the City of Santa Rosa, including a General Plan Amendment; a Rezoning; a Major Conditional Use Permit for Cannabis Retail (Dispensary) and Delivery, Manufacturing (non-volatile), and Distribution; and Design Review for the new 8,442 square foot building and proposed redevelopment of the existing industrial building. General Plan Amendment and Rezoning permit applications are reviewed by the Planning Commission, then presented to the City Council for approval. Conditional use permits are reviewed by the Planning Commission. Design Review permit applications are reviewed by the Design Review Board. The following is a list of the permits associated with this project:

- GPAM18-007: General Plan Amendment
- REZ19-003: Rezoning
- DR17-057: Minor Design Review (Retail Building)
- CUP18-070: Conditional Use Permit (Retail/Dispensary)
- CUP17-063: Conditional Use Permit (Manufacturing [nonvolatile] and Distribution)
- DR19-068: Major Design Review (Industrial Building)

8.1 General Plan Amendment and Rezoning

The purpose of the General Plan Amendment (File No. GPAM18-007) is to amend the current General Plan designations for six of the seven of the project Assessor's parcels (Table A, A-F) from undesignated, Retail & Business Services, and Medium-High Density Residential, to Light Industry (see section 11.1 below for analysis of City housing and industrial needs). The General Plan Amendment would support proposed development of the six Assessor's parcels, as described in the Site Plan prepared by Henderson Architect, Inc. (Appendix A). In addition to the General Plan Amendment, a request for Rezoning (File No. REZ19-003) would rezone the six Assessor's parcels from General Commercial (CG), Undesignated and Medium-High (Multi-Family) Residential (R-3-15) to Light Industrial (IL), which would be consistent with the proposed General Plan Amendment.

The proposed redevelopment of the existing 15,088 SF industrial building, which will expand by approximately 2,894 SF, is part of the overall proposed development; however, only a portion of the proposed redeveloped industrial building is located on one of the six Assessor's parcels proposed for General Plan Amendment, that parcel being 044-390-061 (lot E). The remainder of the proposed building would be located on 044-072-009 (lot G), which already has the same zoning and General Plan designations as those designations proposed for the six Assessor's parcels associated with the General Plan Amendment and Rezoning applications.

8.2 Major Conditional Use Permit

Proposed cannabis uses for the new 8,442 SF commercial/industrial building would include Cannabis Retail (Dispensary) and Delivery uses (4,744 SF) and Cannabis Cultivation and Manufacturing uses (1,419 SF). The proposed dispensary plans hours of operation from 10am to 6pm, 7 days a week. The applicant would seek a State Microbusiness license for these uses. The highest level of use permit required for these uses is a Major Conditional Use Permit (CUP). The

current Major CUP for the proposed cannabis uses is not intended to include the untenanted space. However, for the purpose of this CEQA analysis, the most conservative uses for the untenanted space were applied for the traffic, noise and greenhouse gas independent studies (Neighborhood Commercial). A proposed use of the Vacant/Untenanted Space (2,279 SF) may require a separate Conditional Use Permit application.

8.3 Use Permit Project Summary

The dispensary facility will include a retail storefront (cannabis dispensary permit), type 6 (Level 1) non-volatile manufacturing area (cannabis manufacturing permit), a small (476 SF), glass greenhouse that will serve as a demonstration garden for educational purposes (cannabis craft cultivation and small nursery permit), and private health consultations (not including smoking or vaping).

8.4 Cultivation and Nursery

The applicant proposes a Cultivation and Nursery area of roughly 476 SF. A glass greenhouse will serve as an educational showpiece, offering the chance for visitors to see the cannabis plant in its various stages of plant growth and to learn about the differences between cultivars, terpene development and growing techniques (Nursery use). Customers would be able to look in through the glass to see the plants and other herbs that they will have growing for demonstration purposes. Some plants will be harvested and dried for packaging and sale on-site with demonstrations on harvesting, curing and trimming (Cultivation use). The project will grow plants to full-term, as well as have the ability to cut and plant clones, and sell them to customers (Nursery use).

The State of California Code of Regulations, Title 3, Division 8, Chapter One (Cannabis Cultivation Program) defines Cultivation as "any activity involving the planting, growing, harvesting, drying, curing, grading, or trimming of cannabis." Nursery is defined as "all activities associated with producing clones, immature plants, seeds, and other agricultural products used specifically for the propagation and cultivation of cannabis."

8.5 Manufacturing

Onsite manufacturing (1,419 SF), including nonvolatile (Level 1), CO2 extraction will be conducted onsite. Activities will include extraction, processing, sorting, packaging and grading. This use is permitted in IL zones.

8.6 Distribution

Onsite distribution of cultivated and manufactured cannabis and cannabis products will be conducted on-site with a Type 11 Distribution license. Activities include interacting with lab facilities to ensure quality control and lab testing, collection of taxes, and logistics. This use is permitted in the IL zones.

8.7 Retail

The applicant proposes to operate a cannabis retail dispensary which will utilize 4,744 SF of the proposed building. Visitors to the cannabis retail dispensary will check in at the reception area and have their identification and age verified. Visitors will be accompanied by a designated security person and either go directly to the retail floor or be offered a private seated consultation. A walk-up service counter and pick-up counter for online or phone orders will be available. There

is a separate area from the main retail floor that's designed as a private consultation area to host customers and patients who have more complicated health needs, who may be reluctant to share their most personal details in a larger public space. This area will be large enough to also be used as a conference room, meeting room or lounge area, to accommodate larger groups, celebrities, and members looking for a private location to meet - overlooking the greenhouse. Since this will be a
private area, customers, patients and guests, will have the chance to try products allowable by the on-site consumption regulations including CBD, tinctures, sublingual, topicals and edibles (excluding vape or smoking options).

A separate vacant/untenanted space is contained within the proposed building. At this time, it is undetermined what will occupy the vacant/untenanted space. As noted above, for the purposes of this CEQA analysis, the most intensive use for this space (Neighborhood Commercial) was used for the traffic, noise and greenhouse gas independent studies.

8.8 Environmental Sustainability

Multiple environmental sustainability commitments have been made as a part of the project, including, electrical vehicle (EV) charging stations, bike stands, upgraded pedestrian access, solar panels, LED lights, drought tolerant landscaping, low flow toilets, water wise appliances, non-toxic cleaning agents, and employee carpool planning.

8.9 Design Review

The proposed project will be subject to design review. The review authority is the Zoning Administrator. Below is the Design Concept Narrative developed by Henderson Architect:

The Yolanda Avenue dispensary project will be a newly constructed retail building at the location of the former auto sales business located at 358 Yolanda Avenue. The new 8,442 SF building is being built by the property owner as a shell retail building with the intent of leasing the building to a cannabis micro-business that will include a Dispensary, Distribution, a small Demonstration Manufacturing and Grow area within the building. A portion of the building will be leased to a separate tenant yet to be identified. The space is currently identified as vacant on the floor plan.

This project incorporates the City requirements for the road enlargement and new frontage improvements along Yolanda Avenue. The applicant has submitted a separate design review package for a new industrial building located to the east of this retail building project. The new industrial building and this retail building will be the new Yolanda "frontage façade" for the entire industrial parcel comprised of multiple buildings. The design of this retail building and the industrial building have been coordinated so that there is uniformity of the architecture on the site when viewed from Yolanda Avenue.

The City of Santa Rosa Design Guidelines for site development of Business and Light Industrial Parks and Buildings (Section 3.4) include the following elements, which are addressed throughout this document in the appropriate sections:

- Existing Conditions/Site Constraints;

- Neighborhood and Street Pattern;
- General Site Considerations;
- Landscaping; and
- Lighting.

The Design Review Findings that must be made in order to approve the project are summarized below (Santa Rosa City Code, Title 20, Division 5, Chapter 20-52.030 [Design Review], Subsection J) and are addressed throughout this document.

1. The design and layout of the proposed development is of superior quality, and is consistent with the General Plan, any applicable specific plan, applicable Zoning Code standards and requirements, the City's Design Guidelines, architectural criteria for special areas, and other applicable City requirements (e.g., City policy statements and development plans);

2. The design is appropriate for the use and location of the proposed development and achieves the goals, review criteria and findings for approval as set forth in the framework of Design Review (Design Guidelines, Introduction, subsection C);

3. The design and layout of the proposed development will not interfere with the use and enjoyment of neighboring existing or future developments;

4. The architectural design of the proposed development is compatible with the character of the surrounding neighborhood;

5. The design of the proposed development will provide a desirable environment for its occupants, visiting public, and its neighbors through the appropriate use of materials, texture, and color, and would remain aesthetically appealing and be appropriately maintained;

6. The proposed development will not be detrimental to the public health, safety, or welfare or materially injurious to the properties or improvements in the vicinity; and

7. The proposed project has been reviewed in compliance with the California Environmental Quality Act (CEQA).

8.10 Site: Natural and Built Environment – Proposed Retail Building

Parcels B and C, the proposed location of the retail building containing a cannabis dispensary, are currently comprised of a small commercial building that appears to be a converted residence, and asphalt parking areas. The existing structure is very residential in form and scale and is surrounded by asphalt with chain link fencing to separate this parcel from the adjacent parcels under the same ownership. The new retail building will be set back away from Yolanda in order to allow for the frontage improvements that will accommodate a new center turn lane, bike lane, generous landscape buffer and sidewalk. Interior to the frontage improvements is parking adjacent to the building landscape buffer and walkways for access around the retail building. There will be a central landscape peninsula at the center entrance to the retail building that will have polished

basalt stone benches, decomposed granite walkways, and landscaping. This central outdoor area will provide a gathering area in front of the retail building's central entrance.

8.11 Architecture

The building design is based on a modification of the form of a traditional horse barn that can be seen throughout the rural area of Sonoma County. The tall roofed central section will serve as an open-air courtyard and reception area for people using the retail functions within the two "wings" of the horse barn form. This central section is open to the exterior with a large opening that can be closed off by the large sliding barn doors. On the front façade above the sliding barn doors are large square glazed windows that reference a hay loft barn door you would see on traditional horse barns. The same windows can be found on the upper area of the rear side of the large central volume. There are also clerestory windows along both sides of the taller central form.

Each side of the central tall form is a separate retail lease space. It is intended that the West lease space will be the location of the future dispensary and the East space will be leased to a yet to be determined tenant. See the attached color floor plan diagram that illustrates the locations of the proposed building uses (Appendix A).

For the potential dispensary tenant there will be a greenhouse built at the rear of the central tall open-air space. This will be the location of the nursery/grow portion of the microbusiness. The manufacturing space will be located within the Dispensary wing of the retail space. The Distribution Office (182 SF) and Distribution Storage area (80 SF) is carved out of the vacant retail space intended for a future tenant. It is separate but within the wing to be leased to the future tenant.

The building materials are proposed to be a grey patinaed cedar board and batten siding with black accents at the roof brackets, window frames, and door hardware. The barn doors will be "weathered" white paint color. The roof will be a light grey metal roof.

8.12 Landscaping

The site access and landscaping for both the retail building and the adjacent new industrial building will be developed at the same time and will be landscaped with the same palette to provide continuity to the site and to assist in working towards a comprehensive campus feel. All landscaping will conform to Santa Rosa City Code 20-34 (Landscape Standards), including low water-usage, automatic irrigation system requirements, and drought-tolerant and native plant selections. Groundcover, shrubs, drought tolerant turf, or other types of plans will make up the majority of areas required to be landscaped. Non-turf area (e.g., shrub beds) will be dressed with a bark chip mulch or approved alternative.

The landscape frontage around the sidewalk will be planted with Chinese Pistache along the street and some intermittent Redbuds interior to the site from the sidewalk. There will be shrubs and ground cover among these trees along the frontage.

Interior to the site and more adjacent to the building will be larger Chinese Elm trees, Chinese Pistache, Western Redbud and Sweet Bay trees. A few accent trees near the outdoor seating area in front of the building entrance include Gravenstein Apple and Olease Europea located to

reinforce the "farm to table" concept that will be reinforced in the concept of the Dispensary interior. Among these trees will be a variety of drought-tolerant shrubs and ground cover to provide visual interest to the site.

On the Yolanda side of the building wings there will be a wood trellis built in front of each wing that will be used to grow vines and foliage to soften the façade of the building.

8.13 Placemaking/Livability

This project proposes a major upgrade to this site. Currently it is very uninviting and almost dangerous as it is a field of asphalt connected to Yolanda way with a maze of chain link fences.

The new frontage with bike lane, sidewalk and landscaping will improve the existing condition and provide a buffer between the roadway and the pedestrian sidewalk improving pedestrian safety and offering a more pleasant neighborhood experience when traveling along the sidewalk. Sidewalk connections are provided at two locations along the frontage of the retail and industrial building to provide pedestrian access into the site.

Street and parking trees will provide shade for the sidewalk and the parking lot to help in reducing the heat island effect of the current site.

8.14 Sustainability

The buildings will be very energy efficient and will exceed title 24 requirements for HVAC, lighting, and building shell requirements. Thermally broken storefront and fixed window frames will be utilized. The exterior cedar siding is a natural renewable material that is pest resistant. The metal roof will be a cool roof and will require almost no future maintenance. The materials that will be used within the building will exceed the requirements for Volatile Organic Compound (VOC) content and off-gassing.

Please refer to the Design Review submittal drawings, renderings, and material board for more information.

8.15 Surrounding Land Uses and Setting

The site is situated near the southern boundary of the City limits of Santa Rosa, California, in an area developed with a mix of commercial, light industrial, and residential properties. The site is bordered by Yolanda Avenue to the north, beyond which are commercial and light industrial properties; by a residential property along the northeastern project boundary, beyond which are light industrial businesses; by Harvest Park Apartment complex to the southeast; by Garden Essential, a commercial garden and pottery retail business, to the south, beyond which are commercial businesses, and multi-family residences; by a single-family residence along the northwestern project boundary, beyond which is a fueling service station; and by several commercial businesses bordering the west and southwestern project boundary. Vehicular access to the site is from the north off of Yolanda Avenue via asphalt paved entrance driveways. The site is currently developed with several commercial/light industrial businesses or vacant, as shown in Table A above, and in Figures 2 and 3. The current use of each building and number of full/part time employees are shown in Table B below. Areas of the site not covered with building footprints

consist of asphalt and concrete surfaces; there are no permeable surfaces, trees, vegetation or rock outcroppings at the site.

Table B –Current Building Uses

Parcel Identification	Property Address	APN	Buildings/ Improvement	Building Use/Tenant	Full/Part Time Employees
A	324 Yolanda Ave	044-072-006	vacant; asphalt lot	vacant; asphalt lot	---
B	330 Yolanda	044-072-007	vacant; asphalt lot	vacant; asphalt lot	---
C	350 & 358 Yolanda Ave	044-072-008	1 Building/ tenant space	Magic Motors, used car sales	2 full time
D	340 & 328 Yolanda Ave	044-081-024	1 Building/ tenant space Building separated into 4 units	Malm Fireplaces manufacturing Suite A - James Gachu, used apparel distr. Suite B - Exotic Angels, swimsuit design Suite C - Vacant Suite D - RV Specialists, RV & Camper repair	5 to 6 full time employees Suite A - 3 to 4 part time Suite B - 1 full time, 3 part time Suite C - Vacant Suite D - 3 full time
E	---	044-390-061	vacant; asphalt lot	vacant; asphalt lot	---
F	324 Yolanda Ave	044-081-029	Building separated into 4 units	Suite A - Coordinated Project Installation, office furniture distr. Suite B - Vacant Suite C - Vacant Suite D - Dave Merz Porsche restoration	Suite A - 7 full time Suite B - Vacant Suite C - Vacant Suite D - 1 full time
G	368/326 Yolanda Ave	044-072-009	Building separated into 2 units	Malm Fireplaces Inc. & Malm Fireplaces Center	22 full time

Topography at the site is generally flat, with a gentle overall slope to the south. Surface elevations range from approximate 140 feet (ft) above mean sea level (msl) near the norther property extents to 132 ft above msl near the southern property extents. The nearest surface water body is the Colgan Creek Flood Control Channel, located approximately 2,400 ft to the northeast of the site. Surface water and/or sheet flow at the site and vicinity is directed to the Municipal storm drain system and, ultimately, to regional flood control facilities.

9.0 Other Public Agencies Whose Approval May Be Required

None

10.0 Starting and Ending Dates for the review period during which the lead agency will receive comments

A 30-day Public Notice Period shall commence on June 30, 2020. Written comments must be sent to the City of Santa Rosa Economic Development Department, Planning Division, 100 Santa Rosa Avenue, Room 3, Santa Rosa, California, 95404 by July 30, 2020.

11.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, as indicated by the checklist and corresponding discussion on the following pages.

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

12.0 DETERMINATION

On the basis of this initial evaluation:

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

☒ 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 of NEGATIVE DECLARATION, including revisions or Mitigation Measures that are imposed upon the proposed project, nothing further is required.

J Murray
Signature

6/25/2020
Date

SECTION II: ENVIRONMENTAL CHECKLIST AND EVALUATION

1.0 AESTHETICS

IMPACT QUESTIONS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	Less than Significant Impact	No Impact
IV. Aesthetics - Would the project:					
a). Have a substantial adverse effect on a scenic vista?				X	
b). Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?					X
c). In nonurbanized 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 points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations				X	

governing scenic quality?					
d). Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X	

1.1 Aesthetics Setting

The project site is located near the southern boundary of the City limits of Santa Rosa, California, and is located in an area developed with a mix of commercial, light industrial, and residential properties. The site is bordered by Yolanda Avenue to the north, beyond which are commercial and light industrial properties; by a residential property along the northeastern project boundary, beyond which are light industrial businesses; by Harvest Park Apartment complex to the southeast; by Garden Essential, a commercial garden and pottery business, to the south, beyond which are commercial businesses and multi-family residences; by a single-family residence along the northwestern project boundary, beyond which is a fueling service station; and by several commercial businesses bordering the west and southwestern project boundary. Currently present at the project site are several commercial and light industrial warehouse buildings, all generally oriented to the north, towards Yolanda Avenue. The current character of the project site is one primarily of a commercial/light industrial business park.

A scenic vista is typically a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. Mountain view corridors to natural ridgelines and landmarks, such as the Taylor and Bennett Mountains, are considered part of Santa Rosa's scenic character. Taylor Mountain is located 6.26 miles south of the project site, while Bennet Mountain is located 7.22 miles southeast. Views of the Sonoma Mountains, visible from many flatland areas of the City, are also recognized as a scenic resource. The Sonoma Mountains are 15.93 miles southeast of the project site.

The California Department of Transportation (Caltrans) identifies officially designated scenic highways through the California Scenic Highway Mapping System. While the project is located in the vicinity of an officially eligible State Scenic Highway (State Route 12), it is not visible from the project site. Currently, State Route (SR) 12 is only designated as a scenic highway from its intersection with Danielli Avenue east of Santa Rosa to its junction with London Way near Agua Caliente.

The City's General Plan and Municipal Code identify a number of scenic corridors, including US Route 101 (US-101), SR-12, Mendocino Avenue/Old Redwood Highway, Fulton Road, Calistoga Road, Guerneville Road, Piner Road, Hall Road/West Third Street, Santa Rosa Avenue, Stony Point Road, Petaluma Hill Road, and Bennett Valley Road.

1.2 Impact Questions

1.2.1 a). Less than Significant

Would the project have a substantial adverse effect on a scenic vista?

The proposed project is not expected to impact scenic vistas at the site. From the project site, partial views of the top approximate third of the Sonoma Mountains and foothills to the south/southeast, are visible. However, the viewshed is significantly obstructed by two-story apartments located east and southeast of the site, and large commercial and light industrial businesses to the south and east. Since the site is not located along a hillside or ridgeline, the project is not expected to result in impacts to the already limited scenic vistas at the site, or from any other properties in the site vicinity.

Existing project building heights vary from approximately 18 feet (ft) to 25 ft. The commercial businesses to the west and southwest of the project site range in height from approximately 19 ft to 23 ft. The residential units to the east and southeast of the site are approximately 32-ft high.

The proposed project would construct a ±37.75-ft high building to replace the existing ±18-ft high residential/commercial structure, and a ±28-ft high industrial building that would replace an existing ±21-ft high industrial structure. While the two new proposed project buildings would increase in height compared to existing building heights, the project is not expected to significantly obstruct scenic vistas visible from residences in the immediate vicinity. The notable scenic vistas described above are to the south and southeast of the project location, and the project would not be expected to obstruct scenic views from the residential complex to the east and southeast, or the residence to the northwest, of the project location. While it is possible that the project would impact the scenic vistas from the residence to the northeast of the project site (372 Yolanda Avenue), given the distance and orientation of the views from that location and the relatively modest increase in height of the proposed industrial building, the impact is expected to be less than significant.

1.2.2 b). No Impact

Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The site is not located within a State Scenic Highway. US Highway 101, located approximately 950 ft to the west of the site, is designated as a Scenic Roadway in the General Plan. There are no views of Highway 101 from the site. The entire site is either covered with buildings footprints or asphalt and concrete surfaces; there are no trees, vegetation, rock outcroppings, or other scenic resources located at the site. No impact is expected.

1.2.3 c). Less than Significant

Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

The visual character of the site and vicinity is currently predominantly one of large warehouse-style buildings. Located to the south are commercial warehouse buildings, single-family homes and two-story apartments to the east/southeast and a single-family home and commercial buildings and fueling service station to the west. The project would result in improvements to the existing visual character, appearance and quality of the site and its surrounding areas by redeveloping an existing industrial building constructed in 1964 and a commercial building constructed in 1938 and engaging in new development, both of which would be subject to Design Review. Both buildings that will be demolished and replaced are along the Yolanda Avenue frontage. The project is in an urbanized area and is required to comply with Zoning Code development standards and other regulations for the proposed use/development.

1.2.4 d). Less than Significant

Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The project site is bound by existing commercial and light industrial businesses, all of which currently contain limited on-site lighting and street lighting. Exterior lights installed in conjunction with the project buildout will result in a minimal increase of artificial light in the vicinity. The proposed project is required to conform to Santa Rosa's Zoning Ordinance § 20-30.080 Outdoor Lighting, which specifies lighting standards for all new exterior lighting, such as the provision that lighting in commercial and retail districts be limited to a height of 16 feet. The Outdoor Lighting Ordinance requires that the light source (e.g., bulb, etc.) is not visible from off the site, and each light fixture shall be directed downward and away from adjoining properties and public rights-of-way, so that no on-site light fixture directly illuminates an offsite area.

Lighting and glare levels are not expected to exceed typical levels within the surrounding urban environment and will be regulated by the City's lighting standards. The project will be designed according to the City's Zoning Ordinance and will properly shield light fixtures to minimize spillage onto adjacent properties. The Zoning Ordinance and design standards will be incorporated to assure that project light and glare impacts will be less than significant.

Resources

City of Santa Rosa General Plan 2035
California Scenic Highway Mapping System
Santa Rosa City Codes
City of Santa Rosa GIS Zoning Map
City of Santa Rosa Zoning Ordinance

2.0 AGRICULTURE AND FORESTRY RESOURCES

IMPACT QUESTIONS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	Less than Significant Impact	No Impact
II. AGRICULTURE AND FORESTRY RESOURCES - 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?					X
b). Conflict with existing zoning for agricultural use, or a Williamson Act contract??					X
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					X

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?					X
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?					X

2.1 Impact Questions

2.1.1 a-e). No Impact

The project is located within the Urban Growth Boundary (UGB) on non-agricultural land. The project is not located on Prime Farmland, Unique Farmland or Farmland of Statewide Importance, and is not part of a Williamson Act contract. This project will not conflict with existing zoning for agricultural use or forest or timber land use. Therefore, this project will have no impact on farm or timber land.

Resources

US Department of Agriculture (USDA)
California Department of Conservation
Natural Resource Conservation Service
Federal Emergency Management Agency (FEMA)

3.0 AIR QUALITY

IMPACT QUESTIONS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	Less than Significant Impact	No Impact
III. AIR QUALITY - Would the project:					
a). Conflict with or obstruct implementation of the applicable air quality plan?				X	
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?		X			
c). Expose sensitive receptors to substantial pollutant concentrations?		X			
d). Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?		X			

3.1 Air Quality Setting

The project is in the City of Santa Rosa, which is in the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the State and federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$).

Air Pollutants of Concern

High ozone levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO_x). These precursor pollutants react under certain meteorological conditions to form high ozone levels. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce ozone levels. The highest ozone levels in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources. High ozone levels aggravate respiratory and cardiovascular diseases, reduce lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant of the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM_{10}) and fine particulate matter where particles have a diameter of 2.5 micrometers or less ($PM_{2.5}$). Elevated concentrations of PM_{10} and $PM_{2.5}$ are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Toxic Air Contaminants

Toxic air contaminants (TACs) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer) and include, but are not limited to, the criteria air pollutants. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs.

Federal Regulations

The United States Environmental Protection Agency (EPA) sets nationwide emission standards for mobile sources, which include on-road (highway) motor vehicles such as trucks, buses, and automobiles, and non-road (off-road) vehicles and equipment used in construction, agricultural, industrial, and mining activities (such as bulldozers and loaders). The EPA also sets nationwide fuel standards. California also has the ability to set motor vehicle emission standards and standards for fuel used in California, as long as they are the same or more stringent than the federal standards.

In the past decade the EPA has established a number of emission standards for on- and non-road heavy-duty diesel engines used in trucks and other equipment. This was done in part because diesel engines are a significant source of NO_X and particulate matter (PM_{10} and $PM_{2.5}$) and because

the EPA has identified diesel particulate matter (DPM) as a probable carcinogen. Implementation of the heavy-duty diesel on-road vehicle standards and the non-road diesel engine standards are estimated to reduce particulate matter and NO_X emissions from diesel engines up to 95 percent in 2030 when the heavy-duty vehicle fleet is completely replaced with newer heavy-duty vehicles that comply with these emission standards.

In concert with the diesel engine emission standards, the EPA has also substantially reduced the amount of sulfur allowed in diesel fuels. The sulfur contained in diesel fuel is a significant contributor to the formation of particulate matter in diesel-fueled engine exhaust. The new standards reduced the amount of sulfur allowed by 97 percent for highway diesel fuel (from 500 parts per million by weight [ppmw] to 15 ppmw), and by 99 percent for off-highway diesel fuel (from about 3,000 ppmw to 15 ppmw). The low sulfur highway fuel (15 ppmw sulfur), also called ultra-low sulfur diesel (ULSD), is currently required for use by all vehicles in the U.S.

Each of the above federal diesel engine and diesel fuel requirements have been adopted by California, in some cases with modifications making the requirements more stringent or the implementation dates sooner.

State Regulations

To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, a significant component of the plan involves application of emission control strategies to existing diesel vehicles and equipment. Many of the measures of the Diesel Risk Reduction Plan have been approved and adopted, including the federal on-road and non-road diesel engine emission standards for new engines, as well as adoption of regulations for low sulfur fuel in California.

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy-duty diesel trucks that represent the bulk of DPM emissions from California highways. CARB regulations require on-road diesel trucks to be retrofitted with particulate matter controls or replaced to meet 2010 or later engine standards that have much lower DPM and $PM_{2.5}$ emissions. With this regulation, older, more polluting trucks would be removed from the roads sooner.

CARB has also adopted and implemented regulations to reduce DPM and NO_X emissions from in-use (existing) and new off-road heavy-duty diesel vehicles (e.g., loaders, tractors, bulldozers, backhoes, off-highway trucks, etc.). The regulations apply to diesel-powered off-road vehicles with engines 25 horsepower (hp) or greater. The regulations are intended to reduce particulate matter and NO_X exhaust emissions by requiring owners to turn over their fleet (replace older equipment with newer equipment) or retrofit existing equipment in order to achieve specified fleet-averaged emission rates. Implementation of this regulation, in conjunction with stringent federal off-road equipment engine emission limits for new vehicles, will significantly reduce emissions of DPM and NO_X.

Bay Area Air Quality Management District (BAAQMD)

BAAQMD has jurisdiction over an approximately 5,600-square mile area, commonly referred to as the San Francisco Bay Area (Bay Area). The District's boundary encompasses the nine San Francisco Bay Area counties, including Alameda County, Contra Costa County, Marin County, San Francisco County, San Mateo County, Santa Clara County, Napa County, southwestern Solano County, and southern Sonoma County.

BAAQMD is the lead agency in developing plans to address attainment and maintenance of the National Ambient Air Quality Standards and California Ambient Air Quality Standards. The District also has permit authority over most types of stationary equipment utilized for the proposed project. The BAAQMD is responsible for permitting and inspection of stationary sources; enforcement of regulations, including setting fees, levying fines, and enforcement actions; and ensuring that public nuisances are minimized.

The BAAQMD California Environmental Quality Act (*CEQA) Air Quality Guidelines* were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process consistent with CEQA requirements including thresholds of significance, Mitigation Measures, and background air quality information. They also include assessment methodologies for air toxics, odors, and greenhouse gas emissions.

Plan Bay Area 2040

Plan Bay Area (PBA) is a state-mandated long-range Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS) that meets CARB GHG reduction targets. PBA 2040 is the four-year update of the original PBA adopted by ABAG and the Metropolitan Transportation Commission on July 18, 2019. PBA 2040 was adopted on July 26, 2017. This document addresses how the Bay Area will meet its long-range transportation and land use goals, while accommodating for the projected employment and residential growth expected in the area. To meet SCS criteria, the independent Air Quality and GHG study done for this project integrates Mitigation Measures from the Draft Environmental Impact Study (DEIR) PBA 2040 to show project consistency with the PBA and reduce project impacts to a level of *less than significant with mitigation.* Chapter 2.2 and 2.5 of the PBA 2040 address air quality and GHG impacts, respectively. The following impacts Mitigation Measures from these chapters are applicable to the project.

> Mitigation Measures 2.2-2:
> When screening levels are exceeded (see Table 2.2-8 or those most currently updated by BAAQMD), implementing agencies and/or project sponsors shall implement measures, where applicable, feasible, and necessary based on project- and site-specific considerations, that include, but are not limited to the following:
>
> *Construction Best Practices for Exhaust:*
> *The applicant/general contractor for the project shall submit a list of all off-road equipment greater than 25 horsepower (hp) that would be operated for more than 20 hours over the entire duration of project construction, including equipment from subcontractors, to BAAQMD for review and certification. The list shall include all information necessary to ensure the equipment meets the following requirement:*

- *1) Be zero emissions OR 2) have engines that meet or exceed either EPA or ARB Tier 2 off-road emission standards; and 3) have engines that are retrofitted with an ARB Level 3 Verified Diesel Emissions Control Strategy (VDECS), if one is available for the equipment being used. Equipment with engines that meet Tier 4 Interim or Tier 4 Final emission standards automatically meet this requirement; therefore, a VDECS would not be required.*

- *Idling time of diesel-powered construction equipment and trucks shall be limited to no more than two minutes. Clear signage of this idling restriction shall be provided for construction workers at all access points.*

- *All construction equipment shall be maintained and properly tuned in accordance with the manufacturers' specifications.*

- *Portable diesel generators shall be prohibited. Grid power electricity should be used to provide power at construction sites; or propane and natural gas generators may be used when grid power electricity is not feasible.*

  Construction Best Practices for Dust:
  All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. For projects over five acres in size, soil moisture should be maintained at a minimum of 12 percent. Moisture content can be verified by lab samples or a moisture probe.

- *All haul trucks transporting soil, sand, or other loose material off-site shall be covered.*

- *All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. Dry power sweeping should only be performed in conjunction with thorough watering of the subject roads.*

- *All vehicle speeds on unpaved roads and surfaces shall be limited to 15 mph.*

- *All roadway, driveway, and sidewalk paving shall be completed as soon as possible. Building pads shall be paved as soon as possible after grading.*

- *All construction sites shall provide a posted sign visible to the public with the telephone number and person to contact at the Lead Agency regarding dust complaints. The recommended response time for corrective action shall be within 48 hours. BAAQMD's*

Complaint Line (1-800-334-6367) shall also be included on posted signs to ensure compliance with applicable regulations.

- *All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.*
- *Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.*
- *Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.*
- *The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.*
- *All trucks and equipment, including their tires, shall be washed off before leaving the site.*
- *Site accesses to a distance of 100 feet from the paved road shall be treated with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel.*
- *Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.*

These BMPs are consistent with recommendations in BAAQMD's CEQA guidelines and Planning Healthy Places (BAAQMD 2010b, BAAQMD 2016). Applicable mitigation measures shall be required at the time grading permits are issued.

Significance after PBA DEIR Mitigation 2.2-2

The measures described above would minimize PM_{10} and $PM_{2.5}$ dust emissions and minimize exhaust emissions of diesel PM through the use of readily available, lower-emitting diesel equipment, and/or equipment powered by alternative cleaner fuels (e.g., propane) or electricity, as well as on-road trucks using particulate exhaust filters.

To the extent that an individual project adopts and implements all feasible mitigation measures described above, the project's impact would be less than significant with mitigation (LS-M).

Projects taking advantage of CEQA Streamlining provisions of SB 375 (Public Resources sections 21155.1, 21155.2, and 21159.28) must apply the mitigation measures described above to address site-specific conditions.

Santa Rosa 2035 General Plan

The Santa Rosa 2035 General Plan includes goals, policies, and actions to help Santa Rosa achieve and maintain ambient air quality standards. The following goals, policies, and actions are applicable to the proposed project:

OSC-J Take appropriate actions to help Santa Rosa and the larger Bay Area region achieve and maintain all ambient air quality standards.

OSC-J-1 Review all new construction projects and require dust abatement actions as contained in the CEQA Handbook of the BAAQMD.

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 14, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, elementary schools, and parks. The closest sensitive receptors to the project site are single- and multi-family residences immediately east and southeast of the project site.

Significance Thresholds

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA and these significance thresholds were contained in the District's 2011 *CEQA Air Quality Guidelines*. The thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA. The thresholds were challenged through a series of court challenges and were mostly upheld. BAAQMD updated the *CEQA Air Quality Guidelines* in 2017 to include the latest significance thresholds that are used in this document and are summarized in the Table below.

The BAAQMD's *CEQA Air Quality Guidelines* do not use quantified thresholds for projects that are in a jurisdiction with a qualified GHG reductions plan (i.e., a Climate Action Plan). The plan has to address emissions associated with the period that the project would operate (e.g., beyond year 2020). For quantified emissions, the guidelines recommended a GHG threshold of 1,100 metric tons or 4.6 metric tons (MT) per capita. These thresholds were developed based on meeting the 2020 GHG targets set in the scoping plan that addressed AB 32. Development of the project would occur beyond 2020, so a threshold that addresses a future target is appropriate.

Although BAAQMD has not published a quantified threshold for 2030 yet, this assessment uses a "Substantial Progress" efficiency metric of 2.8 MT CO_{2e}/year/service population and a bright-line threshold of 660 MT CO_{2e}/year based on the GHG reduction goals of EO B-30-15. The service population metric of 2.8 is calculated for 2030 based predictions from BAAQMD. The 2030 bright-line threshold is a 40 percent reduction of the 2020 1,100 MT CO_{2e}/year threshold.

Additionally, the City of Santa Rosa has a Climate Action Plan (CAP) that outlines and address GHG reduction targets for the City. It is a recognized Qualified GHG Reduction Strategy. This assessment uses the City of Santa Rosa's efficiency metric of 2.3 MT CO_{2e}/year/service population for the year 2035 as stated within the City's CAP.

Significance of this project will also be determined by completing and complying with the City's CAP checklist. If the project does comply with the New Development Checklist (Appendix E in the CAP), then it can be determined that the project is less than significant since the project will comply with a qualified GHG reduction strategy.

Air Quality Significance Thresholds

Criteria Air Pollutant	**Construction Thresholds**	**Operational Thresholds**	
	Average Daily Emissions (lbs./day)	**Average Daily Emissions (lbs./day)**	**Annual Average Emissions (tons/year)**
ROG	54	54	10
NO_x	54	54	10
PM_{10}	82 (Exhaust)	82	15
$PM_{2.5}$	54 (Exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	
Health Risks and Hazards	**Single Sources Within 1,000-foot Zone of Influence**	**Combined Sources (Cumulative from all sources within 1,000-foot zone of influence)**	
Excess Cancer Risk	>10 per one million	>100 per one million	
Hazard Index	>1.0	>10.0	
Incremental annual $PM_{2.5}$	>0.3 µg/m^3	>0.8 µg/m^3	
Greenhouse Gas Emissions			
Land Use Projects – direct and indirect emissions	Compliance with a Qualified GHG Reduction Strategy OR 1,100 metric tons annually or 4.6 metric tons per capita (for 2020) and adjusted to 2.8 metric tons per capita (for 2030)*		
Note: ROG = reactive organic gases, NOx = nitrogen oxides, PM_{10} = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, $PM_{2.5}$ = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less. GHG = greenhouse gases. *BAAQMD does not have a recommended post-2020 GHG threshold. The adjusted thresholds are explained in in the discussion above.			

3.2 Impact Questions

3.2.1 a). Less than Significant

Would the project conflict with or obstruct implementation of the applicable air quality plan?

The BAAQMD adopted the Bay Area 2010 Clean Air Plan (CAP) in September 2010 to comply with state air quality planning requirements set forth in the California Health & Safety Code. The 2010 CAP serves to update the 2005 Ozone Strategy and provides control strategies to address air

quality pollutants including ozone (O_3), PM, TACs and greenhouse gases (GHGs). A total of 55 control strategies have been developed as part of the CAP for land use, energy and climate, stationary sources, transportation, and mobile sources. Control strategies are designed to reduce emissions of ozone precursors, PM, air toxics, and greenhouse gases, work towards attainment of state ozone standards, reduce transport of ozone to neighboring basins, and to protect public health and the climate. Measures to implement control strategies include the use of clean and efficient vehicles, Green Construction Fleets, enhanced bicycle and pedestrian access, energy efficiency, and others. The project meets all of the CAP Appendix E checklist items for New Development (the checklist is included in section 8.2 below).

As discussed above, the BAAQMD CEQA Guidelines set forth criteria for determining consistency with the CAP. In general, a project is considered consistent if a) the project supports the primary goals of the CAP, b) includes control measures and c) does not interfere with implementation of the CAP measures. Development of this project is expected to be consistent with the CAP, as it supports the primary goals, includes basic control measures, and would not result in any conflicts in implementing the CAP. Since the City's CAP meets the BAAQMD requirements for a qualified greenhouse gas reduction strategy, this project would result in a less than significant impact under CEQA.

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The BAAQMD *CEQA Air Quality Guidelines* consider these impacts to be less than significant if best management practices are implemented to reduce these emissions. **Mitigation Measure AQ-1** would implement BAAQMD-recommended best management practices. Therefore, the project would have a less than significant impact due to a conflict with the regional air quality plan.

3.2.2 b). Less than Significant with Mitigation Incorporated

Would the project 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?

In addition to the General Plan Amendment, the proposed project includes a new ±18,000 square ft industrial building, a new ±8,400 square ft building that will ultimately include three separate uses, and improvements to the existing buildings to create multi-unit industrial buildings (±32,000 square feet). An existing ±30,000 square ft building is to remain onsite.

The Bay Area is considered a non-attainment area for ground-level ozone and $PM_{2.5}$ under both the Federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for PM_{10} under the California Clean Air Act, but not the federal act. The area has attained both State and federal ambient air quality standards for carbon monoxide. As part of an effort to attain and maintain ambient air quality standards for ozone and PM_{10}, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. These

thresholds are for ozone precursor pollutants (ROG and NO_X), PM_{10}, and $PM_{2.5}$ and apply to both construction period and operational period impacts.

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less than significant if best management practices are implemented to reduce these emissions. **Mitigation Measure AQ-1** would implement BAAQMD-recommended best management practices.

The individual project components are well below the screening sizes indicated in the BAAQMD CEQA Air Quality Guidelines; however, since there would be demolition, construction emissions were modeled and compared to the thresholds identified in the Table above (Air Quality Significance Thresholds). The California Emissions Estimator Model (CalEEMod) Version 2016.3.2 was used to estimate emissions from construction and operation of the project assuming full build-out conditions. The project land use types and size, and anticipated construction schedule were input to CalEEMod. The complete air quality assessment report, including model output from CalEEMod, is in Appendix B.

CalEEMod Modeling

CalEEMod provided annual emissions for construction and project operation.

Construction Period Emissions

CalEEMod provides emission estimates for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. A construction build-out scenario, including equipment list and schedule, was based a construction data sheet provided by the project applicant. The construction modeling took a conservative approach by assuming that the industrial and commercial land uses would be constructed simultaneously. Note that in the scenario where both land uses are constructed separately, emissions would be less than the construction emissions modeled for this assessment of simultaneous construction. Note that individually both the industrial and the commercial (i.e., retail or strip mall) land uses are under the BAAQMD construction-related screening size. For significant construction-related criteria air pollutant impacts, the screening size is identified as 277,000-sf for “General Light Industry” and 99,000-sf for “Strip Mall.” Since the project components are far less than those sizes; each land use’s individual construction period emissions would not exceed the BAAQMD significance thresholds for construction-related criteria air pollutants.

The CalEEMod construction schedule assumed that the project would be built out over a period of approximately one year. The start of construction was assumed to be early 2020. There were an estimated 260 construction workdays. Average daily emissions were calculated by dividing the total construction emissions by the number of construction days. The Table below shows average daily construction emissions of ROG, NO_X, PM_{10} exhaust, and $PM_{2.5}$ exhaust during construction

of the project. The calculated construction period emissions would not exceed the BAAQMD significance thresholds and have a less than significant impact.

Construction Period Emissions

Scenario	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Total Construction Emissions (tons)	0.4 tons	2.3 tons	0.11 tons	0.11 tons
Average Daily Emissions (pounds/day)[1]	3 lbs./day	19 lbs./day	1 lbs./day	1 lbs./day
BAAQMD Thresholds (pounds per day)	*54* lbs./day	*54* lbs./day	*82* lbs./day	*54* lbs./day
Exceed Threshold?	No	No	No	No

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less than significant if best management practices are implemented to reduce these emissions. **Mitigation Measure AQ-1** would implement BAAQMD-recommended best management practices. Due to implementation of the BAAQMD BMPs, particulates and emissions would be reduced to the extent practicable. Mitigation Measures are presented in section 3.3 below.

<u>Operational Emissions Calculations</u>

Operational air emissions from the project would be generated primarily from autos driven by future employees and customers. Evaporative emissions from architectural coatings and maintenance products (classified as consumer products) are typical emissions from these types of uses. CalEEMod was also used to estimate emissions from operation of the proposed project assuming full build-out and operation of the project.

Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CalEEMod. The earliest the project site could possibly be constructed and begin operating would be 2022 since construction would extend to February 2022. Emissions associated with build-out later than 2022 would be lower.

CalEEMod allows the user to enter specific vehicle trip generation rates, which were input to the model using the daily trip generation rate provided in the project trip generation Table. For each land use type, the daily trips forecasted with trip reductions applied was divided by the quantity of that land use to identify the weekday daily trip rate.

The project traffic analysis provided the project daily trip generation rates of 252.7 trips per day for the Cannabis Dispensary and 4.96 trips per day for the General Light Industry use. The trip rate for the Cannabis Dispensary was assumed to reflect an average rate. The rate for the General

Light Industry use was assumed to represent a weekday rate and adjustments were made for Saturday and Sunday trips by multiplying the ratio of the CalEEMod default rates for each of those days.

The CalEEMod model uses the CARB EMFAC2014 vehicle fleet mix for the Bay Area. This fleet mix includes a large portion of heavy truck trips that would not be represented by the Cannabis Dispensary traffic. On the other hand, this mix would be representative of the light-industrial uses. The traffic fleet mix assigned to the Cannabis Dispensary was adjusted to reflect a light-dusty auto, light-duty truck and medium-duty truck mix. The mix of medium heavy duty and heavy heavy-duty truck percentages were set to 0.1 percent for the Cannabis Dispensary. Default trip types, trip purposes and trip lengths assigned by CalEEMod were used in the modeling. Additional calculation inputs and variables, including energy, current land use and other inputs are discussed in detail in Appendix B.

Predicted Project Operational Emissions

The Table below shows the operational period emissions for the project that includes the Cannabis Dispensary and Light Industrial uses. The annual emissions predicted by CalEEMod were divided by the number of days the project would operate, which is assumed to be 365 days per year. As shown in the Table below, operational emissions would not exceed the BAAQMD significance thresholds. This would be considered a less than significant impact.

Operational Period Emissions

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2021 Project Operational Emissions (tons/year)	0.5 tons	0.7 tons	0.8 tons	0.2 tons
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*15 tons*	*10 tons*
2023 Project Operational Emissions (*lbs/day*)[1]	3 lbs.	4 lbs.	4 lbs.	1 lbs.
BAAQMD Thresholds (pounds/day)	*54 lbs.*	*54 lbs.*	*82 lbs.*	*54 lbs.*
Exceed Thresholds?	*No*	*No*	*No*	*No*
Notes: Assumes 365-day operation.				

3.2.3 c). Less than Significant with Mitigation Incorporated

Would the project expose sensitive receptors to substantial pollutant concentrations?

Project impacts related to increased community risk can occur either by introducing a new source of TAC emissions with the potential to adversely affect existing sensitive receptors in the project vicinity or by significantly exacerbating existing cumulative TAC impacts.

Currently, there are light-industrial uses at the project site. The project would demolish two existing buildings and replace them with new buildings (one industrial building and one dispensary/retail building). Construction activities would be a temporary source of TAC

emissions. Operation of the project is not anticipated to generate substantial TAC emissions that would lead to long-term impacts.

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These exhaust air pollutant emissions would not be considered to contribute substantially to existing or projected air quality violations as shown in the Table above. However, construction exhaust emissions may pose health risks for sensitive receptors such as nearby residences that could include infants and small children that are most susceptible to TAC exposure. The primary community risk impact issue associated with construction emissions are cancer risk and exposure to $PM_{2.5}$. DPM from exhaust poses both a potential health and nuisance impact to nearby receptors.

TAC and fine particulate matter emissions from construction activity can be greatly reduced by using newer, less polluting, construction equipment and employing best management practices to control fugitive dust emissions. The Plan Bay Area EIR, described previously, includes recommended Mitigation Measures to reduce these impacts to a less than significant level. With implementation of **Mitigation Measure AQ-2**, this project will reduce the impact to sensitive receptors to less than significant. Mitigation Measures are presented below.

3.2.4 d). Less than Significant with Mitigation Incorporated

Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

There is the potential for odors from both construction and allowable uses, including proposed Cannabis uses, on the project site. During construction, localized emissions of diesel exhaust during diesel equipment operation and truck activity would cause localized odors. These emissions may be noticeable from time to time by adjacent receptors. However, they would be localized and are not likely to adversely affect people off-site or result in confirmed odor complaints.

The cultivation, processing, and storage of cannabis in conjunction with proposed cannabis uses is a potential source of odors from the site. As communities develop regulations, zoning ordinances and guidelines for cannabis cultivation, odor is one of the issues being considered. The primary concern identified appears to be odors detectable from outside of buildings or off-site from cultivation during budding, harvest and processing.

The odor of cannabis could be described as a skunk-like smell. This odor is produced by terpenes, which are volatile unsaturated hydrocarbons found in the oils of various plants. Naturally, these oils are most present late in the budding cycle and at harvest and processing. Without proper controls, indoor cultivation can lead to a buildup of these odors because of the reduced ventilation, heat and humidity conditions created within the facilities. To control odor so that it is undetectable off-site, exhaust air from these facilities would have to be treated. In this case, control means to ventilate exhaust air through air handling systems, filter the air or treat with odor suppressants, or a combination of the two methods.

BAAQMD's Regulation 7: Odiferous Substances would apply to this project. This regulation prohibits discharge of any odorous substance that causes the ambient air at or beyond the property line to be odorous and to remain odorous after dilution with four parts of odor-free air. Odor impacts could occur if nearby persons experience frequent objectionable odors and make complaints. Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, there are no quantitative methodologies to determine the presence of a significant odor impact. The significance of odor impacts is based on the potential to cause odor complaints.

The City of Santa Rosa's Cannabis Ordinance is contained in Chapter 20-46 of the City Code. Section 20-46.050 (H) are the odor control requirements:

> Odor control. Cannabis Businesses shall incorporate and maintain adequate odor control measures such that the odors of Cannabis cannot be detected from outside of the structure in which the Business operates. Applications for Cannabis Businesses shall include an odor mitigation plan certified by a licensed professional engineer that includes the following:
>
> 1. Operational processes and maintenance plan, including activities undertaken to ensure the odor mitigation system remains functional;
>
> 2. Staff training procedures; and
>
> 3. Engineering controls, which may include carbon filtration or other methods of air cleansing, and evidence that such controls are sufficient to effectively mitigate odors from all odor sources. All odor mitigation systems and plans submitted pursuant to this subsection shall be consistent with accepted and best available industry-specific technologies designed to effectively mitigate cannabis odors.

Appendix C to this report includes the draft odor control plan prepared by the project applicant's design engineer. An odor control plan that is reviewed and approved by the City is a requirement of the project per the City's Cannabis ordinance.

To ensure that odor is controlled by reducing it to a level undetectable, the applicant shall submit the odor control plan to the City and obtain appropriate approvals of the odor control plan prior to occupancy of the Cannabis Dispensary and Cannabis Micro Business portions of the project. Without such an approved odor control plan, the impact with respect to odors would be significant. With the effective implementation of the odor control plan, the impact would be less than significant.

3.3 Mitigation Measures

AQ-1: Include measures to control dust and exhaust during construction. During any construction period ground disturbance, the applicant shall ensure that the project contractor implement

measures to control dust and exhaust. Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less than significant level. Additional measures are identified to reduce construction equipment exhaust emissions and fugitive dust. The contractor shall implement the following Best Management Practices that are required of all projects:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).

- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points regarding this information. Most idling times are reduced to two minutes in **Mitigation Measure AQ-2** below.

- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

- Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

The measures included above would be consistent with BAAQMD-recommended basic control measures for reducing fugitive particulate matter that are contained in the BAAQMD CEQA Air Quality Guidelines. **Mitigation Measure AQ-1** would ensure that construction related air quality impacts are reduced to less than significant levels by reducing dust generated by construction activities, and by reducing construction vehicle emissions through reduced engine activity and proper maintenance.

AQ-2: The applicant/general contractor for the project shall maintain a list of all off-road equipment greater than 25 horsepower (hp) that would be operated for more than 20 hours over the entire duration of project construction, including equipment from subcontractors. This equipment list shall be made available upon request by the City for review and certification. The list shall include all information necessary to ensure the equipment meets the following requirement:

- Be zero emissions, or 2) have engines that meet or exceed EPA Tier 2 off-road emission standards; and 3) have engines that are retrofitted with an ARB Level 3 Verified Diesel Emissions Control Strategy (VDECS), if one is available for the equipment being used. Equipment with engines that meet Tier 4 Interim or Tier 4 Final emission standards meet this requirement; therefore, a VDECS on Tier 4 engines is not required.

- Idling time of diesel-powered construction equipment and trucks shall be limited to no more than two minutes. Clear signage of this idling restriction shall be provided for construction workers at all access points.

- All construction equipment shall be maintained and properly tuned in accordance with the manufacturers' specifications.

- Portable diesel generators used for more than 100 hours shall be prohibited. Grid power electricity should be used to provide power at construction sites; or propane and natural gas generators may be used when grid power electricity is not feasible.

Resources

324-350 YOLANDA AVENUE, GENERAL PLAN AMMENDMENT & USE PERMIT, AIR QUALITY AND GREENHOUSE GAS EMISSIONSASSESSMENT (Appendix B)
ODOR CONTROL & MITIGATION PLAN, September 12, 2019, Friends & Farmers, 328 Yolanda Avenue, Santa Rosa, CA 95404 (Appendix C)

4.0 BIOLOGICAL RESOURCES

IMPACT QUESTIONS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	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?					X
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?					X
c). Have a substantial adverse					X

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?					X
e). Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?					X
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?					X

4.1 Impact Questions

4.1.1 a-f).: No Impact

a) Would the project 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) Would the project 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) Would the project 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) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The site is not located in an area identified as containing any wetlands, endangered, sensitive or special status plant or animal species and there is no suitable habitat onsite; the project area as it exists is impervious and devoid of vegetation. As a result of the existing development on the project site, no identified biological resources exist on the site or in the immediate vicinity. The project will, in fact, add approximately 50 trees to the property. The project will not conflict with any local policies or ordinances protecting biological resources and will not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan or other local, regional or state habitat conservation plan, including the Santa Rosa Plain Conservation Strategy Plan (SRPCSP).

Although not formally adopted, the SRPCSP map was reviewed to evaluate the project's potential to impact any endangered plant or animal species. EC&A's review of the SRPCSP indicates that no sensitive animal or plant species have been identified within the project boundary or vicinity. The project does not contain any known biological resources and would not interfere with any adopted conservation plan. There are no endangered plants or animal species located within the project boundaries. Therefore, the project would have no impact to any adopted conservation plan or natural community plan.

Resources

Santa Rosa Plain Conservation Strategy
Laguna de Santa Rosa Foundation
US Fish and Wildlife Service
City of Santa Rosa General Plan 2035, Figure 7-2

5.0 CULTURAL RESOURCES

IMPACT QUESTIONS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	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?		X			
b). Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		X			
c). Disturb any human remains, including those interred outside of formal cemeteries?		X			

5.1 Cultural Resources Setting

The importance of a resource is measured in terms of criteria for inclusion on the California Register of Historical Resources (California Register) (Title 14 CCR, §4852) as listed below. A resource may be important if it meets any one of the criteria below, or if it is already listed on the California Register of Historical Resources or on a local register of historical resources.

An important historical resource is one which:

1. Is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.

2. Is associated with the lives of persons important to local, California, or national history.

3. Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of a master or possesses high artistic values.

4. Has yielded, or may be likely to yield, information important to the pre-history or history of the local area, California, or the nation.

In addition to meeting one or more of the above criteria, eligibility for the California Register requires that a resource retain sufficient integrity to convey a sense of its significance or importance. Seven elements are considered key in considering a property's integrity: location, design, setting, materials, workmanship, feeling, and association. Additionally, the California Office of Historic Preservation (OHP) advocates that all historical resources over 45 years old be recorded for inclusion in the OHP filing system.

Historic resources within the Planning Area consist of 21 local historic landmarks, and eight historic districts with 14 buildings and one district listed on the National Register of Historic Places. Additionally, up to 40 individual resources have been identified as potentially eligible for local landmark status, and seven neighborhoods as potential historic districts. The eight identified Historic Districts in Santa Rosa are generally clustered around the downtown area, with State Highway 12 forming the southern boundary of the districts. The subject property is located over approximately 1.2 miles to the south of Highway 12 and the southernmost Historic Districts within the Planning Area (Burbank Gardens and Olive Park Historical Preservation Districts). According to the City of Santa Rosa's website, Santa Rosa's architectural heritage includes the Carrillo Adobe from the Mexican Period; Gothic and Greek Revival Style houses from the late 1800s; imposing residences in the Greek Revival, Queen Anne, Italianate, and Stick/Eastlake Styles at the turn of the century; stone buildings constructed by Italian stone masons in Railroad Square; Craftsman and California Bungalow Styles after 1910; and Spanish and Mission Revival styles in the 1920s and 1930s.

As part of this evaluation, EC&A reviewed the current inventories of the National Register of Historic Places, the California Register of Historic Resources, California Historical Resources, the California Points of Historical Interest List, the California State Historic Resources Inventory, and available information at the City of Santa Rosa, the Sonoma County Permit and Resource Management Department, and other publicly available documents for the Santa Rosa Planning Area. In addition, an independent Historic Property Survey and CEQA Evaluation was prepared for this project because the two existing buildings that would be demolished for this project are both over 50 years of age. The City of Santa Rosa requires that historic property surveys be performed for buildings over 50-year-old. The Historic Property Survey and CEQA Evaluation, prepared by J Longfellow Consulting dated November 19, 2019, is in Appendix D.

Potentially significant cultural resources include stone, bone, glass, ceramics, wood or shell artifacts, or features including hearths, structural remains, or historic dumpsites. Paleontological resources are discussed in section 7.2.9 below. Section 18.0 below discusses tribal cultural resources.

5.2 Impact Questions

5.2.1 a). Less than Significant with Mitigation Incorporated

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

The project site is not located within a designated Historic District, does not contain any historically significant resources, and does not constitute a historic site. The independent Historic Property Survey states that neither of the two buildings that would be demolished as part of this project is eligible for listing on national, state, or local historic registers. The subject property is located over approximately 1.2-miles to the south of Highway 12 and the southernmost Historic Districts within the Planning Area (Burbank Gardens and Olive Park Historical Preservation Districts). The only identified Historical Landmark in District 3, the district within which the site is located, is known as The Gables, 4257 Petaluma Hill Road, over approximately 1.5 miles to the southeast of the site. As such, the project is expected to have a less than significant impact due to an adverse change in the significance of a historical resource. However, since encountering an historical resource during project development cannot be definitively ruled out, as a precautionary measure, **Mitigation Measure CUL-1** will be implemented. **Mitigation Measure CUL-1** will reduce the impact of the project to less than significant. Mitigation Measures are presented in section 5.3 below.

<u>350/358 and 368 Yolanda Avenue</u>

According to the independent Historic Property Survey conducted by J Longfellow Consulting, under Criterion 1 above, neither of the subject properties that contain the two buildings to be demolished are associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States. The small residence at 350/358 Yolanda Avenue appears not to be associated with important events in history. The Malm company had a historical presence and is still active in the Santa Rosa business community. It has enjoyed acclaim as the fabricator and marketer of an internationally popular fireplace type, but the iconic fireplace did not originate at this site.

Under Criterion 2 above, neither of the properties that contain the two buildings to be demolished are associated with the lives of persons important to local, California, or national history. The property at 350/358 Yolanda Avenue has been owned or occupied by a series of part-time farmers and ordinary tradesmen, none of whom is associated with the lives of persons important to local, California, or national history. The property at 368 Yolanda Avenue is associated with the Malm family, successful in business but not significantly distinguished from other such business families in Sonoma County.

Under Criterion 3 above, neither the residence at 350/358 Yolanda nor the showroom and warehouse at 368 Yolanda Avenue represents the work of a master nor do they possess high artistic values. The house and garage at 350/358 Yolanda Avenue, while an early example of a Minimal Traditional residence, which style would flood the national and local housing stock post-World War II, it is an unremarkable iteration of a common style in Santa Rosa and does not possess high

artistic values. The showroom and warehouse are also structural types that are common to light industrial areas of Santa Rosa.

Under Criterion 4 above, the property is unlikely to yield information important to the pre-history or history of the local area, California, or the nation. Therefore, the demolition of the buildings located at 350/358 and 368 Yolanda Avenue will have a less than significant impact on the significance of a historical resource.

5.2.2 b). Less than Significant with Mitigation Incorporated

Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

The Santa Rosa Planning area contains 190 identified Native American resources, concentrated in and around Santa Rosa Creek and its tributaries, the alluvial flats, hills around Trione Annadel State Park, the Laguna de Santa Rosa and the Windsor area. As such, undisturbed lands in these areas have a greater possibility of containing archeological resources. The project site is not undisturbed and is not located within any of these areas. The requirements of Senate Bill SB 18 and Assembly Bill AB 52 were adhered to during the course of this CEQA analysis and the Northwest Information Center (NWIC) was consulted in order to notify local Native American Tribes. The NWIC provided a comprehensive list of Native American tribes that may have cultural resources or cultural interests in the project area. Of the eight tribes contacted (see Appendix E), none requested consultation concerning the proposed project except the Federated Indians of Graton Rancheria (Graton Rancheria). The City received a request for consultation from the Graton Rancheria dated March 3, 2020. An initial consultation meeting was scheduled with the City by the Graton Rancheria and held on April 29, 2020. At that meeting, the Graton Rancheria requested all General Plan Amendment project information, as well as any information concerning cultural resources. This information is being compiled to share with Graton Rancheria. This document will be updated as that consultation is received.

The project is expected to have a less than significant impact on the significance of archaeological resources based on the information presented above. However, since encountering an archaeological resource during project development cannot be definitively ruled out, as a precautionary measure, **Mitigation Measure CUL-1** will be implemented. **Mitigation Measure CUL-1** will reduce the impact of the project to less than significant. Mitigation Measures are presented in section 5.3 below.

5.2.3 c). Less than Significant with Mitigation Incorporated

Would the project disturb any human remains, including those interred outside of formal cemeteries?

No human remains or cemeteries are known to exist within or near the project site. The project site has been developed since at least 1938, based on information from the Sonoma County Assessor's office. Hardscape (concrete and asphalt) cover those portions of the project site not covered with building footprints. Since the site is not located within any areas of elevated potential for the occurrence of historical or archeological resources, the project is expected to have a less

than significant impact on potentially disturbing human remains. However, it is still possible that human remains could be encountered during earth-moving activity. Therefore, as a precautionary measure, **Mitigation Measures CUL-2** and **CUL-3** would be implemented should human remains be discovered. Mitigation Measures are presented below.

5.3 Mitigation Measures

CUL-1: If cultural resources are discovered during the project construction (inadvertent discoveries), all construction activities within a 100-ft radius of the find shall cease, and a qualified archaeologist and representatives of the culturally affiliated tribe(s), if applicable, shall be retained by the project sponsor to investigate the find, and make recommendations as to treatment and mitigation of any impacts to those resources. Workers should avoid disturbing the materials until a qualified archaeologist who meets the Secretary of Interior's Professional Qualification Standards for archaeology and/or tribal representative has evaluated the situation. The applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Any previously undiscovered resources found during construction activities shall be recorded on appropriate Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of CEQA criteria by a qualified archeologist and assessed by the tribal representatives to determine whether the resource is a Tribal Cultural Resource under CEQA.

If the resource is determined to be a Tribal Cultural Resource under PRC Section 21074(a), the City and tribal representatives shall further confer on appropriate treatment. If the resource is determined to be significant under CEQA, the City, tribal representatives and the qualified archaeologist shall meet and confer regarding the appropriate Mitigation Measures to be added for the resource. Such Mitigation Measures might include preservation in place or further analysis. Any report prepared regarding the find shall be submitted to the City of Santa Rosa, the Northwest Information Center, and the State Historic Preservation Office (SHPO), if required.

CUL-2: If human remains are encountered, all activity shall stop, and the Sonoma County Coroner must be notified immediately. All activity must cease within 100 ft of the find until the County Coroner has determined the origin and disposition of said remains. The Coroner shall determine if the remains are prehistoric, shall notify the State Native American Heritage Commission if applicable, and shall determine if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the most likely MLD of the deceased Native American. The MLD may make recommendations to the landowner or the person responsible for the excavation work within 48 hours, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code (PRC) Section 5097.98.

CUL-3: The Public Improvement Plans and Building Plans shall contain the following note: "In the event that any remains of prehistoric or historic human activities are encountered during project-related activities, work in the immediate vicinity of the finds shall halt and the contractor shall immediately notify the project superintendent and the City of Santa Rosa liaison. Work shall not resume until a qualified archaeologist or historic archaeologist, as appropriate, approved by

the City of Santa Rosa, has evaluated the situation and made recommendations for treatment of the resource, which recommendations are carried out. If human burials are encountered, the contractor must also contact the Sonoma County Coroner."

Resources

City of Santa Rosa General Plan 2035
National Register of Historic Places
California Register of Historic Resources
California Historical Resources
California Points of Interest List
California State Historic Resources Inventory
Sonoma County Permit and Resource Management Department (PRMD)
Historic Property Survey and CEQA Evaluation for 350/358 Yolanda Avenue (APN 044-072-008) and 368 Yolanda Avenue (APN 044-072-009) Santa Rosa, California 95404, November 19, 2019

6.0 ENERGY

IMPACT QUESTIONS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	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?				X	
b). Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				X	

6.1 Energy Setting

Energy resources include fuels such as natural gas, renewable resources such as solar, and production of electricity. Electricity production requires the conversion of energy resources, including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources, into energy. Energy production and energy use both result in depletion of non-renewable energy resources (e.g. oil, coal, natural gas, etc.) and emission of pollutants. Sustainable usage of energy resources can be fostered through conservation of non-renewable energy resources and development of alternative or renewable energy resources (e.g. wind, solar, geothermal, etc.). Energy use provides lighting, heating and cooling for indoor environments, and powers transportation systems. Energy consumption is typically quantified using the British Thermal Unit (BTU). The BTU is the amount of energy that is required to raise the temperature of one pound of water by one-degree Fahrenheit. As points of reference, the approximate amount of energy contained in a gallon of gasoline, 100 cubic feet (one therm) of natural gas, and a kilowatt hour of electricity are 123,000 BTUs, 100,000 BTUs, and 3,400 BTUs, respectively.

According to the California Energy Commission (CEC), in 2018 (the most recent year for which there are published data) the total system electric generation (in-state plus imports) was 285,488 gigawatt-hours (GWh). The state's non-CO_2 emitting electric generation accounted for 53 percent of the total electric generation.

Pacific Gas and Electric (PG&E) is the energy and natural gas supplier in the City of Santa Rosa; Sonoma Clean Power (SCP) also supplies energy through PG&E's power grid in Santa Rosa. In 2018, California's power mix was comprised of 39 percent renewable, 34 percent nuclear, 15 percent natural gas (and other fuels) and 13 percent large hydroelectric. SCP offers customers their "CleanStart" or "EverGreen" power programs that consist of 49 percent and 100 percent renewable energy sources (as defined in California), respectively. A significant portion of SCP's energy resources comes from large hydroelectric power (42 percent); in the State of California, large hydroelectric power stations do not qualify as eligible renewable resources.

The City of Santa Rosa General Plan 2035 Environmental Impact Report (EIR) determined that if compliance with the CEC Title 24, and General Plan policies aimed at energy reduction are achieved, the General Plan would not result in wasteful, inefficient, or unnecessary consumption of energy by residential, commercial, industrial, or public uses. The proposed project will result in the efficient use of energy by meeting or exceeding CalGreen standards for energy efficiency in building design and introducing roof-mounted photo-voltaic arrays. As the proposed project is within the scope of development projected under the General Plan, there would be no additional impacts to energy consumption beyond those analyzed in the General Plan EIR.

Regulatory Setting

Energy conservation is embodied in many federal, state and local statutes and policies. At the federal level, energy standards apply to numerous products (e.g., the EnergyStar program) and transportation (e.g., fuel efficiency standards). The National Energy Policy addresses energy conservation, repair and expansion of energy infrastructure, as well as ways to increase renewable energy supplies. The Energy Independence and Security Act of 2007 (EISA) includes mileage standards for corporate fleets (CAFE), the Renewable Fuel Standard (Section 202), Appliance and Lighting Efficiency Standards (Sections 301-325), Building Energy Efficiency (Sections 411-441) and other provisions that address energy savings in government and public institutions and encourage research in alternative energy and carbon capture.

At the state level, Title 24 of the California Administrative Code sets energy standards for buildings, rebates/tax credits are provided for installation of renewable energy systems, and the Flex Your Power program promotes conservation in multiple areas. California's primary energy planning and policy document is the *California 2008 Energy Action Plan Update*. The document updated the 2005 *Energy Action Plan II* and includes action plans for the use of renewable sources of power and distributed generation. With the adoption of SB 1078 in 2002, California established its Renewable Portfolio Standard (RPS) program, which aims to increase the percentage of renewable energy in the State's electricity mix. The RPS program is implemented jointly by the California Public Utilities Commission (CPUC) and the CEC, and puts the energy industry in California on a path toward increasing sustainability.

Constantly updated energy efficiency technologies and methods standards for residential and non-residential buildings are specified in Title 24, Part 6, of the California Code of Regulations (CCR). Compliance with these standards is mandatory at the time new building permits are issued by City and County governments. In addition, the California Green Building Standards Code (CALGreen) establishes mandatory green building standards for all buildings in California. CALGreen covers five categories (planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and indoor environmental quality). The 2019 California Building Energy Efficiency Standards (2019 California Energy Code) went into effect on January 1, 2020 and are applicable to building permit applications submitted on or after that date. The California Energy Code, as it applies to this project, updates indoor and outdoor lighting standards, and is expected to result in approximately 30 percent less energy consumption in non-residential buildings due to lighting upgrades.

AB 1007 required the CEC to prepare a plan to increase the use of alternative fuels in California (State Alternative Fuels Plan). The CEC prepared the State Alternative Fuels Plan, published in 2007, in partnership with the CARB and in consultation with other State, federal and local agencies. The Plan attempts to achieve an 80-percent reduction in GHG emissions associated with personal transportation, even as the State's population increases.

The California Code of Regulations Title 13, Motor Vehicles, Section 2449(d)(2) – General Requirement for In-Use Off-Road Diesel-Fueled Fleets – states that engines subject to the regulation may not idle for more than 5 consecutive minutes with the exception of the following:

1. idling when queuing
2. idling to verify that the vehicle is in safe operating condition
3. idling for testing, servicing, repairing or diagnostic purposes
4. idling necessary to accomplish work for which the vehicle was designed (such as operating a crane)
5. idling required to bring the machine system to operating temperature
6. idling necessary to ensure safe operation of the vehicle.

The purpose of this regulation is to reduce NOx, DPM, and other criteria pollutant emissions from in-use off-road diesel-fueled vehicles.

The City of Santa Rosa General Plan contains a number of policies which directly and indirectly serve to reduce energy consumption. Policies aimed at the reduction of GHG emissions and traffic congestion also help reduce energy consumption, as do policies that promote water conservation, solid waste reduction and green building practices.

Conserving energy is defined in Appendix F of the CEQA Guidelines as decreasing overall per capita energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources. Neither Appendix F of the CEQA Guidelines nor Public Resources Code Section 21100(b)(3) present a quantitative threshold of significance that could be used to evaluate the potential significance of energy consumption of a project. Rather, the emphasis is on reducing "the wasteful, inefficient, and unnecessary consumption of energy."

The project would be considered wasteful, inefficient, or unnecessary use of energy if construction activities included the use of old or not well maintained equipment, if equipment is left to idle when not in use, if travel routes are not planned to minimize vehicle miles traveled, or if excess lighting or water is used during construction activities. The project would also be considered wasteful, inefficient, or unnecessary use of energy if during operation, federal, State and/or local standards, including the 2019 California Standards were violated, if pedestrian or bicycle mobility or access to public transit were inhibited, if feasible opportunities to use alternative energy sources, such as solar energy, were inhibited, or if project operation otherwise inhibited the conservation of energy.

Project operation emissions were estimated using CalEEMod as part of the independent Air Quality and Greenhouse Gas Emissions Assessment. The CalEEMod outputs included the following information for unmitigated and mitigated operational energy uses.

Operational Energy Uses

CalEEMod Output	Unmitigated	Mitigated
Annual Vehicle Miles Traveled	2,129,579 miles	1,982,638 miles
Natural Gas Consumption	631,010 kBTU/year	536,717 kBTU/year
Electricity Consumption	257,431 kWh/year	247,701 kWh/year
Water Consumption	6.104965 Mgal/year	4.914262 Mgal/year

The mitigated values are with implementation of Best Management Practices, compliance with the 2019 Energy Code and federal, State and City regulatory mandates.

6.2 Impact Questions

6.2.1 a).: Less than Significant

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

Construction

Fuel consumed by construction equipment would be the primary energy resource expended over the course of project construction. The project will adhere to California Code of Regulations Title 13, Motor Vehicles, Section 2449(d)(2), discussed above. In addition, energy consumption for construction activities will cease after construction is complete. Project construction equipment will also be required to comply with the BAAQMD's Best Management Practices (described as **Mitigation Measure AQ-1** in section 3.3 above), and the latest EPA and CARB engine emissions standards (described in **Mitigation Measure AQ-2** in section 3.3 above). These requirements would result in fuel savings. Given that the project would comply with regulations and would implement **Mitigation Measures AQ-1 and AQ-2** that will reduce the project's energy consumption, the project would not result in the unnecessary consumption of energy resources due to wasteful or inefficient consumption of energy resources during construction. Therefore, construction energy usage would be less than significant.

Operation

Energy consumption of or related to project operations would include the demand for natural gas, electricity and gasoline for motor vehicle trips. Operational use of energy includes HVAC systems, indoor and outdoor lighting, water heating, operation of electrical systems and plug-in appliances, and the transport of electricity, natural gas and water to the project areas where they would be consumed. This type of energy use is typical for urban environments and no operational activities or land uses would occur that would result in extraordinary or wasteful energy consumption.

Regarding odor control equipment for the proposed cannabis dispensary and microbusiness use, Pursuant to State of California ("State") regulations [California Energy Code, Section 120.1(b)2], mechanical fresh air ventilation must meet 0.15 cubic feet per minute ("CFM") per square foot of conditioned floor area. Since existing State air quality regulations do not contain provisions specific to cannabis businesses, the Applicant would comply with these general State standards when designing the ventilation systems and air filtrations systems for the entire Facility. Each separate operation within the Facility building w have its own individual "air-scrubber" systems, as described in the Odor Control Plan in Appendix C. The combination of activated carbon exhaust air filtration and building pressure control represent the current best available technology. The proposed cannabis dispensary and microbusiness use areas shall be provided with MERV-8 filters on the fresh air intake side to limit particulate intake to the space and to enhance the overall quality of the supply air to the occupants. This proposed facility shall utilize the most energy efficient equipment available and shall always have no operable windows or be kept locked and sealed, thereby reducing energy consumption. All doors shall be sealed with proper weather stripping, keeping circulating and filtered air inside the facility. In addition, in compliance with City of Santa Rosa Ordinances, California law, and all future ordinances, laws, and regulations would always be maintained. Sunstone Advisors, Inc., will be responsible for the upkeep of knowledge of accepted industry standards and practices, as well as machinery safety enhancements or upgrades on an ongoing basis (including energy efficiency).

The proposed cannabis uses would have solar as the primary energy source for the facility, combined with passive heating/cooling as part of the building design. The cannabis cultivation and nursery components (the greenhouse) would recycle water used for irrigation of plants. A mix of

20 to 50 pre-flowering and full-term plants at any time would be anticipated. Each mature plant would take approximately 1 to 2 gallons of water per watering, depending on maturity and temperature. Water usage for the proposed cultivation and nursery uses is expected to equal approximately 20 gallons of water per day, or 60 gallons per week, as watering does not occur daily.

The project will be required to comply with the 2019 California Standards, which relate to various building features, including building insulation and roofing, appliances, lighting and water and space heating and cooling equipment. As discussed above, implementation of the standards would result in significantly reduced energy usage. In complying with the 2019 California Standards, impacts to energy consumption would be less than significant. In addition, the project will be purchasing electricity from Sonoma Clean Power (SCP), which is the community choice program for Sonoma and Mendocino counties established under Community Choice Aggregation (CCA) to meet climate action goals, provide residents and businesses with more energy options, ensure local transparency and accountability, and drive economic development. SCP offers electricity generated from renewable resources such as solar, wind and geothermal. Utilization of SCP as the preferred power source further ensures that this project will reduce its reliance on non-renewable energy sources. This project would not result in a substantial increase in demand or transmission service that would result in the need for new or expanded sources of energy supply or new or expanded energy delivery systems or infrastructure.

Transportation

As evidenced by the independent Traffic Impacts Study in Appendix F, the change in land use and zoning from CG and R-3-15 to IL will result in a net reduction in trips at full build-out potential of the General Plan. The calculated reduction in trip generation is an average of 6,683 daily trips, including an increase of 60 trips during the a.m. peak hour and a reduction of 649 trips during the p.m. peak hour. Detailed traffic impacts associated with the various aspects of the project are presented in section 17.0 below.

The CalEEMod model, using proposed project land uses and square footages, estimated that the dispensary is expected to generate 1,396 daily trips, the proposed new industrial building to generate 89 daily trips and the existing buildings to remain to generate 308 daily trips. The estimated daily trips associated with the dispensary were based on a default “dispensary” modeling category and assumes that dispensary locations will serve a significant portion of a City. However, the City of Santa Rosa has multiple dispensaries in various locations and will therefore serve a smaller segment of the population. As such, it is expected that the estimated daily trips will be far fewer. In addition, existing and future regulations are likely to result in more efficient vehicle fuels and vehicle fuel mileage, thereby further reducing energy consumption.

In addition, other regulations, including the Federal EISA, the State Long Term Energy Efficiency Strategic Plan, SB 350 and AB 1007, are likely to result in more efficient use of all types of energy and a reduction in the reliance on non-renewable sources of energy within the project area over the implementation period of the project. As such, operation of the proposed project would not use large amounts of energy or fuel in a wasteful manner within buildings or other on-site operations, and impacts would be less than significant.

6.2.2 b).: Less than Significant

Would the project conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

This project would be subject to all relevant provisions of the most recent update of CALGreen, including the 2016 or 2019 California Standards (dependent upon when permit applications are submitted – permit applications submitted after December 31, 2019, are subject to the 2019 Standards). This ensures that the project would consume energy efficiently through the incorporation of energy efficient features such as direct digital controls for HVAC systems, door and window interlocks, and high efficiency outdoor lighting. Compliance with CALGreen in connection with the goals and policies set forth in the Santa Rosa General Plan 2035 and Santa Rosa Climate Action Plan and compliance with Title 24 would ensure that the building energy use associated with the project would not be wasteful, inefficient, or unnecessary. In addition, the project would purchase electricity from SCP, which exceeds current State renewable energy requirements. As such, the project will not conflict with, or obstruct, a State or local plan for renewable energy or energy efficiency and impacts would be less than significant.

Resources

California Energy Commission
PG&E website
Sonoma Clean Power website
City of Santa Rosa General Plan 2035
City of Santa Rosa General Plan 2035 Environmental Impact Report
California Green Building Standards Commission
California Green Building Standards Code
California 2008 Energy Action Plan Update
California Code of Regulations, Titles 13 and 24
2019 California Building Energy Efficiency Standards
California Air Resources Board
CEQA Guidelines
California Code, Public Resources Code
Bay Area Air Quality Management District
Santa Rosa Climate Action Plan, June 5, 2012

7.0 GEOLOGY AND SOILS

IMPACT QUESTIONS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	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:					
ai). 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?				X	
aii). Strong seismic ground shaking?		X			
aiii). Seismic-related ground failure, including liquefaction?				X	
aiv). Landslides?					X
b). Result in substantial soil erosion or the loss of topsoil?				X	
c). Be located on a geologic unit or soil that is unstable, or that would become				X	

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?				X	
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?					X
f). Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X	

7.1 Geology and Soils Setting

The greater Bay Area is one of the most seismically active regions in the Country. The City of Santa Rosa is in the San Andreas Fault system, which is 44 miles wide and extends throughout much of the North Bay. The project site is located within Seismic Design Category D indicating a potential for very strong seismic ground shaking. The nearest active faults are the Rodgers Creek Fault Zone, located approximately 1.5 miles to the northeast of the proposed project, and the San Andreas Fault zone, located approximately18 miles southwest of the project site. The branches of

the Rodgers Creek fault zone have not been historically active, but there is evidence of activity within the last 11,000 years, a relatively short time period in terms of geologic activity. The Rodger's Creek fault traverses a portion of the City's UGB. Potential exists for geologic hazards in and around the UGB associated with ground shaking, including liquefaction, ground failure, and seismically induced landslides. Significant ground shaking would be expected from earthquakes generated by nearby faults including the Mayacama fault (12 miles [mi]. N), San Andreas fault (18 mi. SW), and the West Napa fault (23 mi. SE). Ground movement during an earthquake can vary depending on the overall magnitude, distance to the fault, focus of earthquake energy, and type of geologic material.

Based on previous investigations of the project site (SCS, 2012b), the site is underlain by layers of clay, silt, sand, and gravel, and mixtures of these materials to 64 ft below ground surface (bgs), the maximum depth explored. To a depth of 30 feet bgs, clay and silt with thin lenses of slightly permeable to significantly more permeable material are dominant. SCS reported (SCS, 2011b) that free groundwater was typically encountered in the shallow borings at depths between approximately 15 to 25 feet bgs; however, where the material drilled consisted of clay, silt, and/or silty sand, little or no water would be evident until greater depths up to 40 feet bgs. It appeared that saturated conditions were generally encountered below a depth of approximately 20 feet bgs at the time of drilling.

Regulatory Setting

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 requires the State Geologist to compile detailed maps of surface traces of known active fault zones, requires property owners or their agents to legally and formally disclose that their property lies within the zones defined on those maps prior to selling of the property, and prohibits new construction of houses within these zones unless a comprehensive geologic investigation shows that the fault does not pose a hazard to the proposed structure.

The Seismic Hazards Mapping Act of 1990 addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically induced landslides. The act resulted in a mapping program identifying areas that have the potential for liquefaction, landslide, strong ground shaking or other earthquake and geologic hazards. The composition of underlying soils, even those relatively distant from faults, can intensify ground shaking. Liquefaction is the process by which water-saturated soil materials lose strength and fail during strong seismic ground shaking. According to the Association of Bay Area Governments (ABAG) Liquefaction Susceptibility map, the project site is in a very low susceptibility area. Also, according to ABAG maps, the project site is in an area of violent ground shaking severity if there were an earthquake on the Rodgers Creek Fault and strong ground shaking severity if there were an earthquake on the San Andreas Fault. In addition, the ABAG Landslide Susceptibility map shows that the project site is situated in an area that has a low risk susceptibility to landslides.

The California Building Standards Code, also known as Title 24 of the California Code of Regulations, reflects various building criteria that have been derived from different sources. One of these sources is the International Building Code (IBC), a model building code adopted across the United States that has been modified to suit conditions in the state, thereby creating what is known as the California Building Code (CBC), or Part 2 of CCR Title 24. The CBC is updated

every three years, and the current 2016 edition of the CBC went into effect on January 1, 2017. The 2019 edition of the CBC will go into effect on January 1, 2020. Through the CBC, the State provides a minimum standard for building design and construction. The CBC contains specific requirements for seismic safety, excavation, foundations, retaining walls, and site demolition. It also regulates grading activities, including drainage and erosion control.

The Santa Rosa City Code's (SRCC) provisions apply to building structure and safety with regards to reducing impacts related to geologic hazards. Like similar jurisdictional authorities that issue building permits, the City of Santa Rosa is required to enforce the California Building Standards Code (which includes the current CBC). The City of Santa Rosa has adopted all sections of the CBC Title 24, Part 2, in Chapter 18-16, California Building Code, of the SRCC. In addition, the City has enacted local amendments to the CBC in the SRCC. These amendments include, but are not limited to, design requirements for retaining walls, creation of a permit appeals board, building address identification requirements, and use of automated fire sprinklers. The SRCC also includes requirements for the performance and review of geological investigations prior to the issuance of building permits in a State-designated Alquist-Priolo fault zone.

7.2 Impact Questions

7.2.1 ai): Less than Significant

Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving 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?

The project does not lie within the Alquist-Priolo fault zone. Active faults known to have ruptured or experienced seismic activity within the past 11,000 years are not known to traverse the site. The Rodgers Creek Fault zone is located approximately 1.5 miles northeast of the project site and the San Andreas Fault zone is located approximately 18 miles southwest of the project site. Therefore, there is no risk of fault-related ground rupture during earthquakes within the limits of the project site due to a known Alquist-Priolo Earthquake Fault Zone.

7.2.2 aii).: Less than Significant with Mitigation Incorporated

Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

The City of Santa Rosa, including the project site is located within Zones VIII (very strong) to X (very violent) of the Mercalli Intensity Shaking Severity Level. According to the ABAG's Shaking Severity map, the project site is located outside of the "area of *very violent* ground shaking during an earthquake on Rodger's Creek," but inside the limits of "area of *violent* ground shaking during an earthquake on Rodger's Creek" as also delineated in Figure 12-3 of the 2035 General Plan. As such, the project site holds moderate potential to expose people or structures to potentially substantial adverse effects resulting from strong seismic ground shaking. The vibrations resulting from a 7.0 magnitude earthquake would likely cause primary damage to buildings and infrastructure with secondary effects being ground failure in loose alluvium, landslide deposits or

poorly compacted fill. However, conformance with standards set forth in the Seismic Hazards Mapping Act and the 2019 California Building Standards Code will ensure that potential impacts from seismic shaking are reduced to less than significant levels with **Mitigation Measure GEO-1**. Foundation and structural design for buildings shall meet the Uniform Building Code regulations as well as state and local ordinances for seismic safety (i.e., reinforcing perimeter and/or load bearing walls, bracing parapets, etc.). Construction plans shall be subject to review and approval by the Building Division prior to the issuance of a building permit.

7.2.3 aiii).: Less than Significant

Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

The California State Department of Conservation GIS map of Earthquake Zones (Liquefaction layer) and the ABAG GIS Liquefaction Susceptibility map show the project site to be located in an area with a low susceptibility of liquefaction hazard. Therefore, the risk of loss, injury or death involving seismic-related ground failure is less than significant.

7.2.4 aiv).: No Impact

Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

According to the ABAG Landslide Susceptibility map and the Department of Conservation Landslide Inventory map, the project site is not located in or near areas susceptible to landslides. The project is located in a relatively flat area; the nearest known landslide area is approximately 0.5 miles to the east of the subject property. Therefore, there is no risk of loss, injury or death involving landslides.

7.2.5 b).: Less than Significant

Would the project result in substantial soil erosion or the loss of topsoil?

The project site is relatively flat, and all grading and excavation activities will be in conformance with applicable provisions of the Municipal Code and Best Management Practices will be implemented. Therefore, the project will have a less than significant impact due to soil erosion or the loss of topsoil.

7.2.6 c).: Less than Significant

Would the project 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?

The project is located in a relatively flat area that has been developed since at least 1938 according to information from the Sonoma County Assessor's office. The California Division of Mines and Geology (now the California Geological Survey), Special Report 120, Plate 3B shows that the project site is located on geologic unit Qyfo, defined as "fluvial deposits at the outer edge of alluvial fans; forms levees between basin deposits; characterized by fine, but variable, grain size;

composed mainly of fine sand, silt and silty clay." As discussed above, based on previous environmental investigations of the project site (SCS, 2012b), the site is underlain by layers of clay, silt, sand, and gravel, and mixtures of these materials to 64 ft bgs, the maximum depth explored. The project site is not located in a Landslide Complex (previous failure) as identified in Figure 12-3 of the General Plan. The project site is not located in an area known to be susceptible to landslides, lateral spreading, subsidence or collapse. The project site does not contain an especially unstable geologic unit or a geologic unit that may become unstable as a result of development activities.

7.2.7 d).: Less than Significant

Would the project 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?

Expansive soils possess a "shrink-swell" characteristic. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments from the process of wetting and drying. Structural damage may occur over a long period of time, usually the result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils. Expansion and contraction of volume can occur when expansive soils undergo alternating cycles of wetting (swelling) and drying (shrinking). As a consequence of such volume changes, structural damage to buildings and infrastructure may occur if the potentially expansive soils were not considered in project design and during construction. Expansive soils are defined in Table 18-1-B of the Uniform Building Code (1994), later adapted in the California Building Code adopted by the City of Santa Rosa. Compliance with the City-mandated requirements would ensure that this impact is less than significant.

7.2.8 e).: No Impact

Would the project 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?

The proposed project would connect to the existing sanitary sewer system that would convey effluent to the City's wastewater treatment facility. There are no onsite septic tanks or alternative wastewater treatment facilities proposed as part of this project. Therefore, there would be no impacts due to the disposal of wastewater.

7.2.9 f).: Less than Significant

Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The project location is not expected to contain paleontological resources due to its location and does not contain unique geologic features. In the Santa Rosa area, fossils are generally only present in the Pliocene age Merced Formation. The Merced Formation is described by the California Department of Water Resources as a marine deposit of fine sand and sandstone with thin interbeds of clay and silty clay, some lenses of gravel, and localized fossils. The formation ranges in thickness from 300 to greater than 1,500 ft thick. The project is not underlain by the Merced

formation, and therefore is not likely to contain fossils. The project site is underlain by recent alluvium (Santa Rosa Groundwater Master Plan, Plate 1). In addition, grading activities would only be occurring at shallow depths (10 ft below ground surface or less). However, since it is not possible to rule out the possibility of encountering fossils or fossil-bearing deposits, **Mitigation Measure GEO-2** would reduce the impact to less than significant. Mitigation Measures are presented below.

7.3 Mitigation Measures

GEO-1: Foundation and structural design for buildings shall meet the Uniform Building Code regulations as well as state and local ordinances for seismic safety (i.e., reinforcing perimeter and/or load bearing walls, bracing parapets, etc.). Construction plans shall be subject to review and approval by the Building Division prior to the issuance of a building permit.

GEO-2: In the event that fossils or fossil-bearing deposits are discovered during construction activities, excavations within a 100-foot radius of the find shall be temporarily halted or diverted. The project contractor shall notify a qualified paleontologist to examine the discovery. The applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The paleontologist shall document the discovery as needed in accordance with Society of Vertebrate Paleontology standards and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction activities are allowed to resume at the location of the find. If the applicant determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of construction activities on the discovery. The plan shall be submitted to the City of Santa Rosa for review and approval prior to implementation, and the applicant shall adhere to the recommendations in the plan.

Resources

SCS, 2011b.: Revised Results of Additional Subsurface Investigation and 3rd Quarter 2010 Groundwater Monitoring and Sampling Event with Workplan for TCE Impact Extent Assessment, Malm Fireplaces, Inc., 368 Yolanda Avenue, Santa Rosa, CA, September 2.
SCS, 2012b.: Revised Interim Remedial Action Plan, Malm Fireplaces, Inc., 368 Yolanda Avenue, Santa Rosa, CA, September 12.
Association of Bay Area Governments – various hazard maps
California Building Standards Code
Santa Rosa City Code
Alquist-Priolo Fault Zone Map
California Department of Conservation, various maps
US Geological Survey, Special Report 120
City of Santa Rosa General Plan 2035, various Figures
Sonoma County Assessor's Office
California Department of Water Resources
City of Santa Rosa Groundwater Master Plan, September 2013
CEQA Guidelines
Office of Statewide Health Planning and Development, US Seismic Design Maps
City of Santa Rosa Local Hazard Mitigation Plan, October 2016, various maps and data

8.0 GREENHOUSE GAS EMISSIONS

IMPACT QUESTIONS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	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?		X			
b). Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?		X			

8.1 Greenhouse Gas Emissions Setting

Gases that trap heat in the atmosphere, Greenhouse gases (GHGs), regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. The most common GHGs are carbon dioxide (CO_2) and water vapor but there are also several others, most importantly methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO_2 and N_2O are byproducts of fossil fuel combustion.
- N_2O is associated with agricultural operations such as fertilization of crops.
- CH_4 is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents but their production has been stopped by international treaty.

- HFCs are now used as a substitute for CFCs in refrigeration and cooling.

- PFCs and sulfur hexafluoride emissions are commonly created by industries such as aluminum production and semi-conductor manufacturing.

Each GHG has its own potency and effect upon the earth's energy balance. This is expressed in terms of a global warming potential (GWP), with CO_2 being assigned a value of 1 and sulfur hexafluoride being several orders of magnitude stronger. In GHG emission inventories, the weight of each gas is multiplied by its GWP and is measured in units of CO_2 equivalents (CO_2e).

An expanding body of scientific research supports the theory that global climate change is currently affecting changes in weather patterns, average sea level, ocean acidification, chemical reaction rates, and precipitation rates, and that it will increasingly do so in the future. The climate and several naturally occurring resources within California are adversely affected by the global warming trend. Increased precipitation and sea level rise will increase coastal flooding, saltwater intrusion, and degradation of wetlands. Mass migration and/or loss of plant and animal species could also occur. Potential effects of global climate change that could adversely affect human health include more extreme heat waves and heat-related stress, an increase in climate-sensitive diseases, more frequent and intense natural disasters such as flooding, hurricanes and drought; wildfires and increased levels of air pollution.

To address GHG's at the State level, the California legislature passed the California Global Warming Solutions Act in 2006 (Assembly Bill [AB] 32), which requires that statewide GHG emissions be reduced to 1990 levels by 2020. As directed by AB 32, CARB has also approved a statewide GHG emissions limit. California enacted legislation (Senate Bill [SB] 375) to expand the efforts of AB 32 by controlling indirect GHG emissions caused by urban sprawl. California's SB 350 increases the standard for electrical generation to 50 percent renewable by the year 2030. In 2016, Governor Brown signed SB 32, which legislatively established the GHG reduction target of 40 percent of 1990 levels by 2030. Executive Order S-3-05 provides the California Environmental Protection Agency with the regulatory authority to coordinate the State's effort to achieve GHG reduction targets. S-3-05 goes beyond AB 32 and calls for an 80 percent reduction below 1990 levels by 2050. Senate Bill 375 has also been adopted, which seeks to curb GHGs by reducing urban sprawl and vehicle miles traveled.

<u>Santa Rosa 2035 General Plan: Greenhouse Gas</u>
The following greenhouse gas emission reduction goals and policies from the Santa Rosa General Plan 2035 are applicable to the proposed project.

Land Use and Livability

LUL-G-1 Develop the following areas as mixed-use centers (see General Plan Land Use diagram): South of Hearn Avenue, at Dutton Meadow Avenue, West of Corporate Center Parkway, at Northpoint Parkway, Piner Road at Marlow Road, and Petaluma Hill Road, at Yolanda Avenue.

Open Space and Conservation

OSC-J Take appropriate actions to help Santa Rosa and the larger Bay Area region achieve and maintain all ambient air quality standards

OSC-J-1 Review all new construction projects and require dust abatement actions as contained in the CEQA Handbook of the Bay Area Air Quality Management District

OSC-J-3 Reduce particulate matter emissions from wood burning appliances through implementation of the city's Wood Burning Appliance code.

OSC-M Reduce Greenhouse Gas Emissions

OSC-M-1 Meet local, regional, and state targets for reduction of greenhouse gas emissions through implementation of the Climate Action Plan

City of Santa Rosa Climate Action Plan

Adopted by the City of Santa Rosa on June 5, 2012, the Climate Action Plan (CAP) is a document that presents measures that will reduce local GHG measures that will meet state, regional, and local reduction targets. The CAP focuses on three target years: 2015, 2020, and 2035. The 2015 year was to determine if the City could meet the reduction target of 25% below 1990 levels by 2015. The 2020 year is included for consistency with AB 32 targets, while a 2035 GHG emission forecast was developed to be consistent with the 2035 General Plan. The City includes several reduction measures that apply to a variety of sectors within the CAP to help sources of GHGs reduce their emissions in a multitude of ways. There is also a CAP checklist that was developed by the City to ensure that new development projects comply with the measures outlined in the CAP. Therefore, if a project complies with the City's CAP checklist, then the new development would be found to have a less than significant impact since the City's CAP meets the BAAQMD requirements for a qualified greenhouse gas reduction strategy.

Declaration of a Climate Emergency and Immediate Emergency Mobilization to Restore a Safe Climate

On January 14, 2020, the Santa Rosa City Council adopted a resolution (Resolution No. RES-2020-002) endorsing the declaration of a climate emergency and immediate emergency mobilization to restore a safe climate. The City joins a nationwide call for a just transition away from fossil fuels and joins efforts to mobilize efforts to enact policies that reduce GHG emissions. City will contribute to the development of a countywide 2030 Climate Emergency Mobilization Strategy that focuses on identifying key local actions, including a ten-year Emergency Policy Package to prioritize a short list of the most impactful local policies that will drive changes and identify key areas for state level advocacy.

Significance Thresholds

The BAAQMD's CEQA Air Quality Guidelines do not use quantified thresholds for projects that are in a jurisdiction with a qualified GHG reductions plan (i.e., a Climate Action Plan). The plan has to address emissions associated with the period that the project would operate (e.g., beyond

year 2020). For quantified emissions, the guidelines recommended a GHG threshold of 1,100 metric tons or 4.6 metric tons (MT) per capita. These thresholds were developed based on meeting the 2020 GHG targets set in the scoping plan that addressed AB 32. Development of the project would occur beyond 2020, so a threshold that addresses a future target is appropriate.

Although BAAQMD has not published a quantified threshold for 2030 yet, this assessment uses a "Substantial Progress" efficiency metric of 2.8 MT CO_2e/year/service population and a bright-line threshold of 660 MT CO_{2e}/year based on the GHG reduction goals of EO B-30-15. The service population metric of 2.8 is calculated for 2030 based predictions from BAAQMD. The 2030 bright-line threshold is a 40 percent reduction of the 2020 1,100 MT CO_{2e}/year threshold. Additionally, the City of Santa Rosa has a CAP that outlines and address GHG reduction targets for the city. This assessment uses the City of Santa Rosa's efficiency metric of 2.3 MT CO_{2e}/year/service population for the year 2035 as stated within the City's CAP.

Significance of this project will also be determined by completing and complying with the City's CAP checklist. If the project does comply with the New Development Checklist (Appendix E in the CAP), then it can be determined that the project is less than significant since the project will comply with a qualified GHG reduction strategy.

Project-Level GHG Emissions

GHG emissions associated with development of the proposed project would occur over the short-term from construction activities, consisting primarily of emissions from equipment exhaust and worker and vendor trips. There would also be long-term operational emissions associated with vehicular traffic within the project vicinity, energy and water usage, and solid waste disposal. Emissions for the proposed project are discussed below and were analyzed using the methodology recommended in the BAAQMD CEQA Air Quality Guidelines.

Construction Emissions

GHG emissions associated with construction were computed to be 297 MT of CO_2e for the total construction period (includes construction of both commercial and industrial components). These are the emissions from on-site operation of construction equipment, vendor and hauling truck trips, and worker trips. Neither the City nor BAAQMD have an adopted threshold of significance for construction-related GHG emissions, though BAAQMD recommends quantifying emissions and disclosing that GHG emissions would occur during construction. BAAQMD also encourages the incorporation of best management practices to reduce GHG emissions during construction where feasible and applicable.

Operational Emissions

The CalEEMod model, along with the project-specific vehicle trip generation rates, that was used to estimate average daily air pollutant emissions associated with operation of the project was also used to compute annual GHG emissions. Annual GHG emissions were reported for the opening year of the project, assumed to be 2021 at the earliest, and in year 2030.

Annual Project GHG Emissions (CO_2e) in Metric Tons

Source Category	Proposed Project in 2021	Proposed Project in 2030
Area	<1	<1
Energy Consumption	51	51
Mobile	781	582
Solid Waste Generation	17	17
Water Usage	6	6
Total	855	656
Significance Threshold	***1,056 MT CO_{2e}/yr****	***660 MT CO_{2e}/yr***
Exceeds both thresholds?	***No***	***No***

*: The 2021 thresholds are derived by calculating the yearly reduction to meet the 2030 goals

Consistency with the City's Climate Action Plan is addressed by using the Plan's *New Development Checklist* contained in Appendix E of the Climate Action Plan. That Checklist is provided below. Note that the GHG emissions reported in the Table above do not include effects of project features included to reduce GHG emissions per the Checklist. These include a reduction in vehicle trips or emissions due to features such as promoting bicycling, walking and transit use, employee carpooling, and electric vehicle charging stations. In addition, the project would be required to meet new Title 24 building codes that become effective in 2020 and would further reduce project energy demand.

8.2 Climate Action Plan New Development Checklist

Description	Complies	Discussion
1.1.1 Complies with CalGreen Tier 1 Standards*	Yes	Will meet latest Title 24 standards that exceed these – see discussion below in Checklist item 1.1.3
1.1.3 Meet net zero electricity*	Yes	Project will use Sonoma Clean Power (SCP) and no natural gas usage for dispensary. GHG emissions from electrical use would be less than existing and existing General Plan projected uses. CAP Goal 1.1 requires projects to comply with Tier 1 CALGreen requirements, as amended, for new non-residential and residential development. Tier 1 CALGreen does not include "net zero" GHG assumptions for development. In addition, current CA Green Building Code Standards apply to all projects and has been determined by the Director to be an acceptable substitution for CAP Goal 1 – 1.1.3. Therefore, strict compliance with CAP Goal 1 – 1.1.3 is not achievable and not required.
1.3.1 Install real-time energy monitors to track energy usage*	Yes	Available through PG&E services
1.4.2 Comply with City's tree preservation ordinance*	Yes	Project adding approximately 50 trees
1.4.3 Provide public and private trees*	Yes	Project adding approximately 50 trees
1.5 Install new sidewalks and paving with high solar reflectivity materials*	Yes	Project adding sidewalks and paving materials will be high solar reflectivity
2.1.3 Pre-wire and pre-plumb for solar thermal or PV systems	Yes	To be included in final design

Description	Complies	Discussion
3.1.2 Support implementation of station plans and corridor plans	NA	Any necessary measures to be identified by City
3.2.1 Provide on-site services	NA	Project too small to provide these services which are abundant in surrounding neighborhood
3.2.2 Improve non-vehicular network to promote biking and walking	Yes	Project to provide bike lane, sidewalks with landscaping and connections and bicycle parking
3.2.3 Support mixed-use, higher density development near services	Yes	Project adds to the diversity of uses in this mixed use neighborhood and is near services.
3.3.1 Provide affordable housing near transit	NA	Project is non-residential
3.5.1 Unbundle parking from property cost	NA	Project provides parking for customers and employees while offering incentives for not using parking
3.6.1 Install calming features to improve ped/bike experience	Yes	Project includes new bike lane and sidewalk with landscaping
4.1.1 Implement Bicycle and Pedestrian Master Plan	NA	Bike lanes and sidewalks provided
4.1.2 Install bicycle parking consistent with regulations*	Yes	Bicycle parking provided
4.1.3 Provide bicycle safety training to residents, employees, motorists	Yes	Bicycle safety training will be provided to employees
4.2.2 Provide safe spaces to wait for bus arrival	NA	Bus stops are on the other side of Yolanda Avenue
4.3.2 Work with large Employers to provide Rideshare Programs	NA	This is a small project with less than 50 employees
4.3.3 Consider expanding employee programs promoting transit use	Yes	Transit use will be encouraged through incentives such as bus passes
4.3.4 Provide awards for employee use of alternative commute options	Yes	Employees using alternative commute options will be rewarded through special recognition or monetary awards
4.3.5 Encourage new employers of 50+ to provide subsidized transit passes	NA	This is a small project with less than 50 employees
4.3.7 Provide space for additional park and ride lots	NA	This is a small project at less than 5 acres
4.5.1 Include facilities for employees that promote telecommuting	NA	This is a small project with less than 50 employees
5.1.2 Install electric vehicle charging equipment	Yes	The project will install 1 electric vehicle charging station per 25 parking spaces
5..2.1 Provide alternative fuels at new filling stations*	NA	This is a small project with no fueling stations
6.1.3 Increase the version of construction waste*	Yes	City required policy
7.1.1 Reduce water use for outdoor landscaping*	Yes	Project includes drought tolerant landscaping
7.1.3 Use water meters that track real-time water usage*	Yes	Per City requirement
7.3.2 Meet onsite meter separation requirements and locations with current or future recycled water capabilities*	Yes	If applicable, on-site meter separations will be met. Currently, there are no available City urban reuse water mains in the project vicinity
8.1.3 Establish community gardens and urban farms	Yes	Commercial and industrial use. Project includes active greenhouse gardening, and edible fruit trees that are available to the public

Description	Complies	Discussion
9.1.2 Provide outdoor electric outlets for charging lawn equipment	Yes	Per building code requirements, although lawns are not part of this project
9.1.3 Install low water use landscapes*	Yes	Per building code requirements
9.2.1 Minimize construction equipment idling time to 5 minutes or less*	Yes	Per Mitigation Measure AQ-1 and AQ-2
9.2.2 Maintain construction equipment per manufacturer specs*	Yes	Per Mitigation Measure AQ-1 and AQ-2
9.2.3 Limit GHG construction equipment emissions by using electrified equipment or alternative fuels*	Yes	Per Mitigation Measure AQ-1 and AQ-2

** To be in compliance with the CAP, all measures denoted with an asterisk are required in all new development projects unless otherwise specified.*

8.3 Impact Questions

8.3.1 a-b).: Less than Significant with Mitigation Incorporated

a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? b) Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?

For this project, a less than significant GHG impact would occur if the project complies with the City's Climate Action Plan detailed above since the project will comply with a qualified GHG reduction strategy.

The City's Climate Action Plan addresses year 2020 goals that are currently being attained. To demonstrate compliance with the 2030 State goals, the project emissions are compared to the 2020 threshold that is adjusted downward by 40 percent in 2030 to represent progress toward meeting the State's goals. Although BAAQMD has not published a quantified threshold for 2030 yet, this assessment uses a "Substantial Progress" efficiency metric of 2.8 MT CO_2e/year/service population and a bright-line threshold of 660 MT CO_{2e}/year based on the GHG reduction goals of EO B-30-15. The service population metric of 2.8 is calculated for 2030 based predictions from BAAQMD. As stated above, the 2030 bright-line threshold is a 40 percent reduction of the 2020 1,100 MT CO_{2e}/year threshold. Additionally, the City's CAP outlines and address GHG reduction targets for the City. As previously stated, it is a recognized Qualified GHG Reduction Strategy. This assessment used the City of Santa Rosa's efficiency metric of 2.3 MT CO_{2e}/year/service population for the year 2035 as stated within the City's CAP.

Project GHG emissions are below the 2030 thresholds in 2030; and therefore, considered not to conflict with State efforts to achieve those goals.

The implementation of **Mitigation Measures AQ-1** and **AQ-2**, detailed in section 3.3, would reduce project impacts to less than significant.

Resources

City of Santa Rosa General Plan 2035
City of Santa Rosa Climate Action Plan, June 5, 2012
CEQA Guidelines
Bay Area Air Quality Management District
324-350 Yolanda Avenue General Plan Ammendment & Use Permit, Air Quality and Greenhouse Gas Emissions Assessment, Santa Rosa, California, October 23, 2019

9.0 HAZARDS AND HAZARDOUS MATERIALS

IMPACT QUESTIONS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	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?		X			
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?		X			
c). Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?					X
d). Be located on a site which is included on a list of hazardous materials sites compiled pursuant to		X			

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?					X
f). Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?					X
g). Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				X	

9.1 Hazardous Materials Setting

The California Department of Toxic Substances Control (DTSC) defines a hazardous material as: "a substance or combination of substances that, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may either: 1) cause, or significantly contribute to an increase in mortality or an increase in serious, irreversible, or incapacitating illness; or 2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, disposed of, or otherwise managed." Regulations governing the use,

management, handling, transportation and disposal of hazardous waste and materials area administered by State, Federal and local government agencies.

Pursuant to the Planning and Zoning Law, the DTSC maintains a hazardous waste and substances site list, also known as the "Cortese List." Hazardous waste management in the City of Santa Rosa is administered by the Sonoma County Waste Management Agency through the Countywide Integrated Waste Management Plan. The Consolidated Unified Protection Agency (CUPA), under the auspices of the Santa Rosa Fire Department, manages the acquisition, maintenance and control of hazardous waste for all businesses.

Lot G (326/368 Yolanda Avenue) is currently the subject of an ongoing environmental investigation under the Cleanup Program Sites (CPS-SLIC) program and overseen by the North Coast Regional Water Quality Control Board (NCRWQCB). It should be noted that under CEQA, only the effect(s) of the project on the environment is considered, as opposed to the effect of the environment on the project. However, the analysis below provides details regarding the current environmental status of the site for informational purposes.

Below is a summary of site investigative and remedial activities conducted at the site as of 26 April 2020.

9.2 Environmental Investigative & Remedial Activities Summary

In response to domestic well sampling historically performed by the NCRWQCB at residences in the site vicinity, the NCRWQCB conducted a soil gas survey at the site in April and May 2000 (NCRWQCB, 2000). The survey indicated the presence of a soil gas plume of chlorinated solvents centered on the site. Several smaller isolated plumes or parts of plumes were also identified in the general vicinity of the site. Malm has reportedly occupied various large buildings at the site since their construction and sheet metal fabrication processes have been on-going at the site for at least 25 years. EC&A understands that as part of the fabrication process, metal-cleaning solvents with Trichloroethene (TCE) constituents have been used to strip oil and grease from the metal. Cleaning materials were generally stored and used in the solvent storage area (SSA), located in the southeast corner of the northernmost building at 340 Yolanda Avenue (Lot D, Figures 5 through 9). Lot E to the east of this area was pasture and was subsequently developed to supplement parking and storage associated with on-site activities. Surface drainage was reportedly to the south prior to the development of the site.

An approximately 50-gallon capacity dip tank was reportedly located in the northernmost building on lot D (340 Yolanda Avenue). Pipes were dipped and then rolled in the solvents stored in this dip tank, after which they were removed from the tank, placed on a table, and wiped down by hand. EC&A understands that excess solvent was allowed to drain off the table and back into the dip tank. Most of the excess solvent reportedly evaporated before it returned to the tank.

9.2.1 TCE Soil Impacts

Based on investigations previously conducted at the site, TCE-impacted soil at the site has been documented to extend vertically from approximately 5 ft to 40 ft bgs, with the most substantial TCE -impacted soil mass identified at depths ranging from 5 to 15 ft bgs in the area adjacent to

the east sides of the buildings known as 328 and 340 Yolanda Avenue (lot D, Figures 5 through 9). Soil boring data previously collected in this area indicated that soils from a depth of 5 ft within this area had reported TCE at maximum concentrations of 1.4 milligrams per kilogram (mg/kg) in soil boring B-14, and 0.210 mg/kg in B-22, and soil samples collected from 10 ft have reported TCE at maximum concentrations of 3.0 mg/kg in B-14, and 2.1 mg/kg in B-21, and 2.5 mg/kg in B-22.

All of these areas were subsequently over-excavated in September 2018 under the direction of EC&A. Given the relatively shallow depth to groundwater at the site (ranging seasonally from approximately 6 to 15 ft bgs in the upper water-bearing zone), EC&A concluded that the TCE concentrations in soil below 10 ft are likely in saturated soils and most likely represent dissolved-phase TCE conditions.

9.2.2 Soil Vapor Impacts

In August 2012, TCE was detected at 11,000 micrograms per cubic meter (µg/m^3) in a soil vapor sample collected from soil vapor well SVS-101, which was installed to a depth of 5-ft below ground surface (bgs) adjacent to the building known as 328 Yolanda Avenue (southernmost building on lot D). The USEPA Regional Screening Level (RSL) for TCE is 3000 µg/m^3 for industrial land use (USEPA RSL, May 2016). This soil vapor well was located within the area over-excavated in September 2018 and was subsequently removed. Based on the August 2012 soil vapor study conducted by SCS Engineers, EC&A has concluded that TCE soil vapor concentrations at or above the California Human Health Screening Level (CHHSL) for TCE (1,800 µg/m^3, CalEPA, 2010) did not appear to be present in shallow soil beneath the buildings known as 328 and 340 Yolanda Avenue (lot D).

9.2.3 Soil Over-excavation – September 2018

Between September 4 and 14, 2018, under the direction of EC&A, John's Excavating of Santa Rosa, California, over-excavated TCE-impacted soils, transported excavated soils to Potrero Hills Landfill for disposal, backfilled and compacted the excavation with clean imported fill material, and restored the site to its original asphalt condition on October 14, 2018. At the conclusion of over-excavation activities, a total of 14 discrete soil samples were collected from the excavation sidewalls and floor, and a total of 2,684 tons (approximately 1,789 cubic yards) of TCE-impacted soil were delivered to Potrero Hills Landfill for disposal. Groundwater, which was noted at a depth of 13 ft bgs in MMW-103, did not enter the open excavation.

Based on EC&A's field observations and soil sample analytical results, the September 2018 over-excavation removed TCE-impacted soils to below San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) Environmental Screening Levels (ESLs) for residential and commercial/industrial land use, for leaching to groundwater at sites where groundwater is a potential source of drinking water, and to below USEPA RSLs for residential and commercial land use. The locations of soil borings B-11, B-12, B-14, B-21, and B-22, which reported the historic maximum concentrations of TCE, 1,1-DCE, and cis-1,2-DCE were removed during the over-excavation. Additionally, the location of soil vapor well SVS-101, where TCE soil vapor was detected at 11,000 µg/m^3 in August 2012, was over-excavated.

The removal of the top approximately 7 to 12 ft of TCE-impacted soils in the September 2018 over-excavation should mitigate potential health threats associated with direct contact with soil during any future grading or other site development activities, and vapor intrusion concerns to current and/or future occupants of existing and any proposed site buildings within the areas previously reporting elevated TCE impacts. In addition, removal of TCE-impacted soils eliminated the ongoing source of TCE contributing to groundwater impacts which is expected to result in further reduction of TCE concentrations in groundwater.

9.2.4 Groundwater Impacts

9.2.4.1 Shallow Groundwater

The maximum TCE concentration reported in shallow groundwater to date is 4900 micrograms per liter (µg/l) (MMW-103, July 2010). In February 2019 (the last time the monitoring wells were sampled), TCE was detected in shallow groundwater at a maximum concentration of 2,200 µg/l in MMW-103 (Figure 6). Except for non-detect (ND) results in MMW-102, the plume is unconstrained on all sides and possibly extends downgradient to the south beyond the location of offsite monitoring well MMW-109, where TCE at 1.3 µg/l was detected during the February 2019 sampling event.

The maximum concentration of Cis-1,2-DCE, which is a breakdown product of TCE, reported in shallow groundwater to date is 610 µg/l (MMW-103, January 2008). In February 2019, Cis-1,2-DCE, was detected in shallow groundwater at a maximum concentration of 140 µg/l (MMW-103). 1,1-DCE, another breakdown product of TCE, was detected in shallow groundwater at a maximum concentration of 250 µg/l in MMW-103 in February 2019. The maximum 1,1-DCE concentration reported to date in shallow groundwater is 620 µg/l (MMW-103, September 2011).

In previous groundwater monitoring events, concentrations of trans-1,2-Dichloroethane, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane and/or 1,2-Dichloroethane have been detected in shallow groundwater, primarily in monitoring well MMW-103. Although these halogenated volatile organic compounds (HVOCs) have not been reported in MMW-103 since September 2011, elevated laboratory reporting limits for HVOCs in MMW-103 for recent sampling events have likely obscured the presence of these HVOCs.

At the request of the NCRWQCB, analysis for 1,4-dioxane was added to the groundwater monitoring program in March 2014. In February 2019, the maximum concentration of 1,4-dioxane was detected in MMW-103 at 73 µg/l (Figure 7). 1,4-dioxane concentrations in MMW-103 have ranged from 60 µg/l (July 2017) to 78 µg/l (February 2016) in the four sample events conducted to date where groundwater has been analyzed for 1,4-dioxane. Monitoring well MMW-103 is located in the source area. In February 2019, 1,4-dioxane concentrations ranged from <0.50 µg/l to 8.4 µg/l in the other shallow monitoring wells. Except for non-detect (ND) results in MMW-101 and MMW-102, the plume is unconstrained on all sides (Figure 7) and possibly extends downgradient to the south beyond the location of offsite monitoring well MMW-109 where 1,4-dioxane at 0.54 µg/l was detected during the February 2019 sampling event.

9.2.4.2 Deep Groundwater

The maximum TCE concentration reported in deeper groundwater to date is 370 µg/l (MMW-103A, December 2007). In February 2019, TCE was detected in deeper groundwater at a maximum concentration of 140 µg/l in MMW-105A. Except for ND results in MMW-102A, the plume is unconstrained on all sides (Figure 8), and possibly extends downgradient to the south beyond the location of well MMW-109A, where 7.0 µg/l was detected during the February 2019 sampling event.

The maximum concentration of Cis-1,2-DCE, reported in deeper groundwater to date is 84 µg/l (MMW-105A, March 2014). Cis-1,2-DCE was detected in deeper groundwater at a maximum concentration of 46 µg/l in MMW-105A in February 2019. 1,1-DCE was detected in deeper groundwater at a maximum concentration of 18 µg/l in MMW-105A in February 2019. The maximum 1,1-DCE concentration reported to date in deeper groundwater is 58 µg/l (MMW-103A, December 2007).

In February 2019, 1,4-dioxane concentrations in deeper groundwater ranged from <0.50 µg/l to 8 µg/l (Figure 9). The maximum 1,4-dioxane concentration detected to date in deeper groundwater is 8.2 µg/l (MMW-105A, February 2016). Except for ND results in MMW-101A and MMW-102A, the plume is unconstrained on all sides (Figure 9), and possibly extends downgradient to the south beyond the location of well MMW-109A, where 1.3 µg/l was detected during the February 2019 sampling event.

9.2.4.3 Current Trends

Overall, TCE concentrations are decreasing in the shallow and deeper groundwater monitoring wells, and the 1,4-dioxane plume appears to be stable to slightly decreasing in shallow and deeper groundwater.

TCE breakdown products in both shallow and deeper groundwater indicate that natural reductive dechlorination is likely occurring to a limited extent in both zones. The slightly higher levels of total organic carbon (TOC) reported in deeper well MMW-105A coupled with the presence of ethane in this well, is evidence dechlorination is occurring in this location. Additionally, the presence of ferrous iron and depleted nitrate and sulfate concentrations support reductive dechlorination is occurring.

EC&A's Feasibility Study/Site Conceptual Model/Remedial Action Plan, dated October 11, 2019, for 368 Yolanda Avenue (lot G) can be accessed at:

https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6301321208/T0609793468.PDF

This report assessed a variety of remedial alternatives, and proposed the following:

To remediate onsite TCE and 1,4-dioxin impacted groundwater, enhanced reductive dechlorination and sodium persulfate technologies will be implemented as pilot tests. Sodium persulfate solution will be injected into shallow and deeper groundwater in the locations of MMW-103/103A and MMW-105/105A using temporary injection probes. A remediation mixture composed of carbon substrate, a microbial nutrient supplement and KB-1 Dhc bacteria will be injected into shallow and deeper groundwater using injection wells in the locations of MMW-

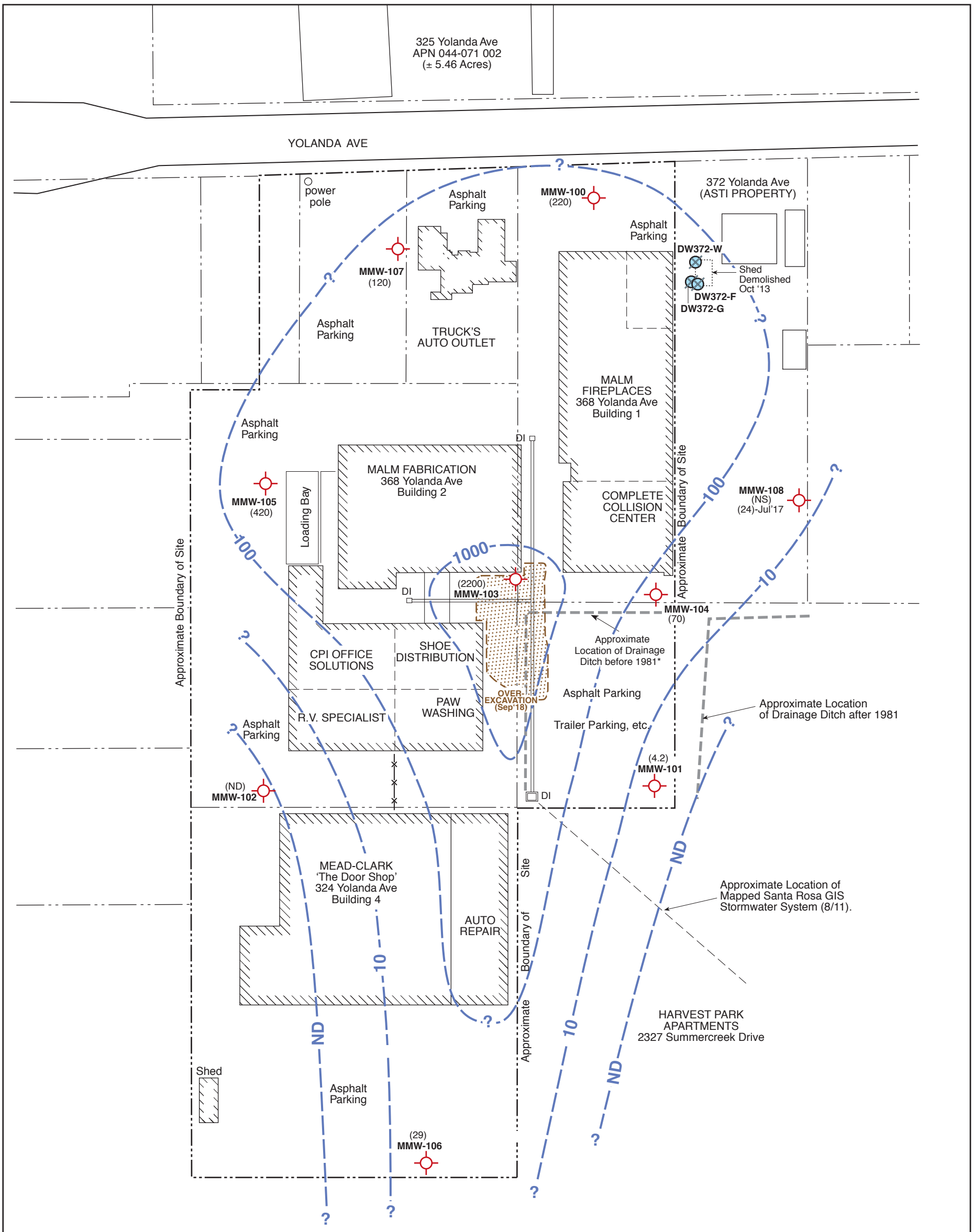
101/101A, MMW-104/104A, MMW-106/106A, and MMW-107/107A. Remediation mixture will also be injected into shallow groundwater in the location of MMW-100 and MMW108. TCE concentrations in deeper groundwater in the locations of MMW-100A and MMW108A are below the NCRWQCB Water Quality Objectives (WQOs). Remediation mixture will also be injected into deeper groundwater in the location of MMW-109A; TCE concentrations in shallow groundwater in this location are below WQOs. Wells MMW-108/MMW-108A and MMW-109/MMW-109A are offsite wells and will require an access agreement to install injection wells and conduct an injection event.

9.2.5 Implementation of Remedial Action Plan

On April 20-23, 2020, the onsite injection wells were installed, and subsequently developed, by EC&A personnel.

On April 27-29, 2020, sodium persulfate was injected into temporary injection points, as proposed in EC&A's Feasibility Study/Site Conceptual Model/Remedial Action Plan, dated October 11, 2019.

The remediation mixture composed of carbon substrate, a microbial nutrient supplement and KB-1 Dhc bacteria was injected into shallow and deeper groundwater using the newly installed injection wells in June 2020.



LEGEND

- Shallow Groundwater Monitoring Well Location
- Water Supply Well Location (Destroyed Oct 2013)
- Approximate Boundary of Site
- Approximate Parcel Boundary
- DI — Drain Inlet System, to Santa Rosa Storm Drain
- (220) — Concentration in Shallow Groundwater of TCE (µg/l), 07 Feb '19
- ND — Not Detected above Reporting Limit of 0.5 µg/l
- NS — Not Sampled
- 10 — Line of Equal Concentration

* Note suspected contamination due to use of dip tank and solvent storage area prior to 1981.

Map Source: SCS Engineers, Environmental Consultants Prj. No. 01210096.00, Figs 2 & 3,17 Aug 2012

All locations are approximate; Not a product of survey. Approximate parcel lines and building outlines adapted from Snta Rosa GIS orthophotograph flown by Merrick, 2009.

N

0 80 ft

EDD CLARK & ASSOCIATES, INC.
ENVIRONMENTAL CONSULTANTS

(TRACE #1533, 01 May '19)

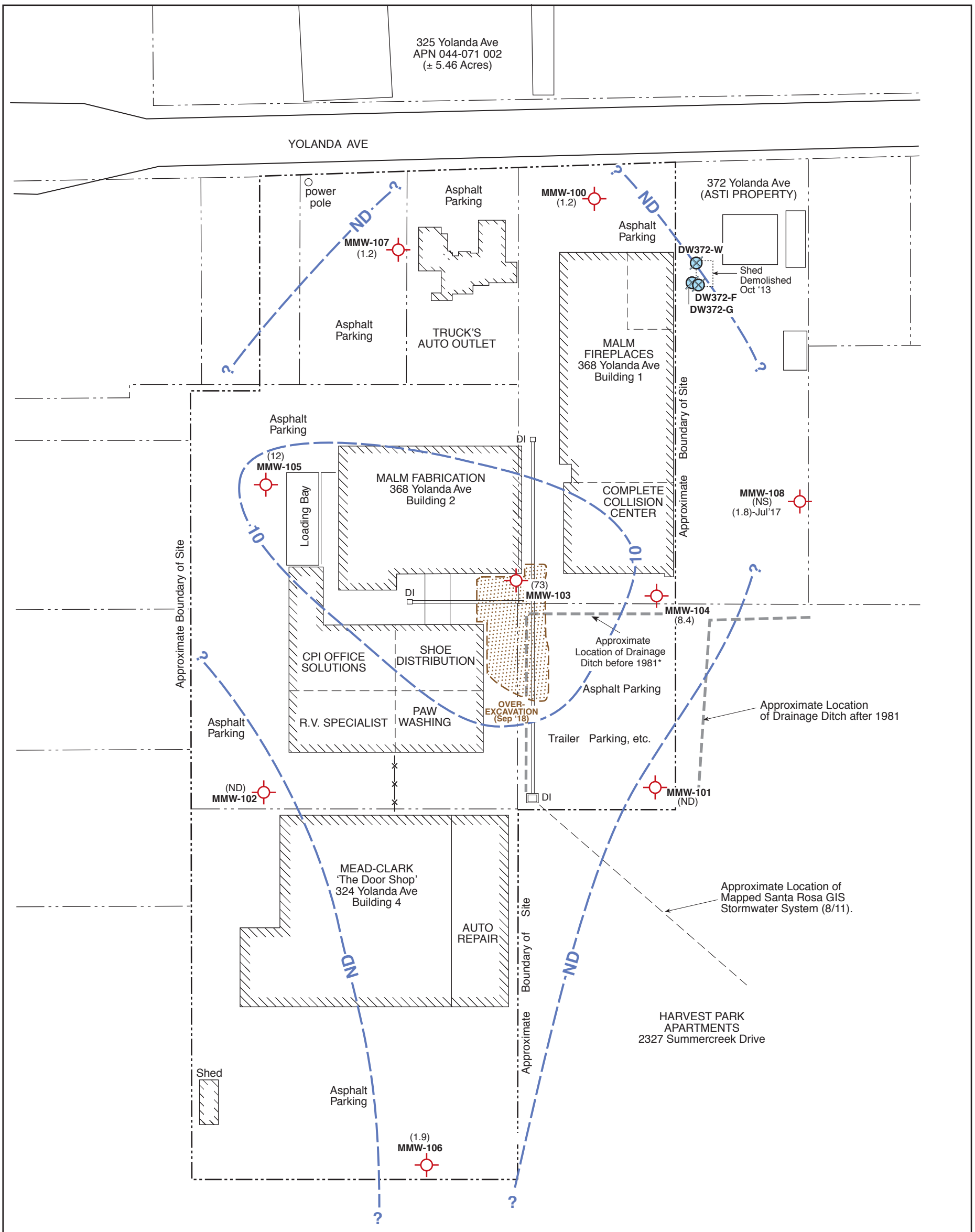
ISOCONCENTRATION MAP
of TCE in Shallow Groundwater, 07 February, 2019

Malm Fireplaces
368 Yolanda Avenue
Santa Rosa, California

FIGURE 6

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	PAGE
0698,001.13	EC&A, Stephen Knuttel	March 2013	May 2019	1 OF 1

FIGURE 6 PAGE 1 OF 1



N

0 80 ft

LEGEND

- Shallow Groundwater Monitoring Well Location
- Water Supply Well Location (Destroyed Oct 2013)
- Approximate Boundary of Site
- Approximate Parcel Boundary
- DI — Drain Inlet System, to Santa Rosa Storm Drain
- (1.2) — Concentration in Shallow Groundwater of 1,4-Dioxane (µg/l), 07 Feb '19
- ND — Not Detected above Reporting Limit of 0.5 µg/l
- NS — Not Sampled
- 10 — Line of Equal Concentration

* Note suspected contamination due to use of dip tank and solvent storage area prior to 1981.

Map Source: SCS Engineers, Environmental Consultants Prj. No. 01210096.00, Figs 2 & 3,17 Aug 2012

All locations are approximate; Not a product of survey. Approximate parcel lines and building outlines adapted from Santa Rosa GIS orthophotograph flown by Merrick, 2009.

FIGURE 7

PAGE 1 OF 1

(TRACE #1533, 01 May '19)

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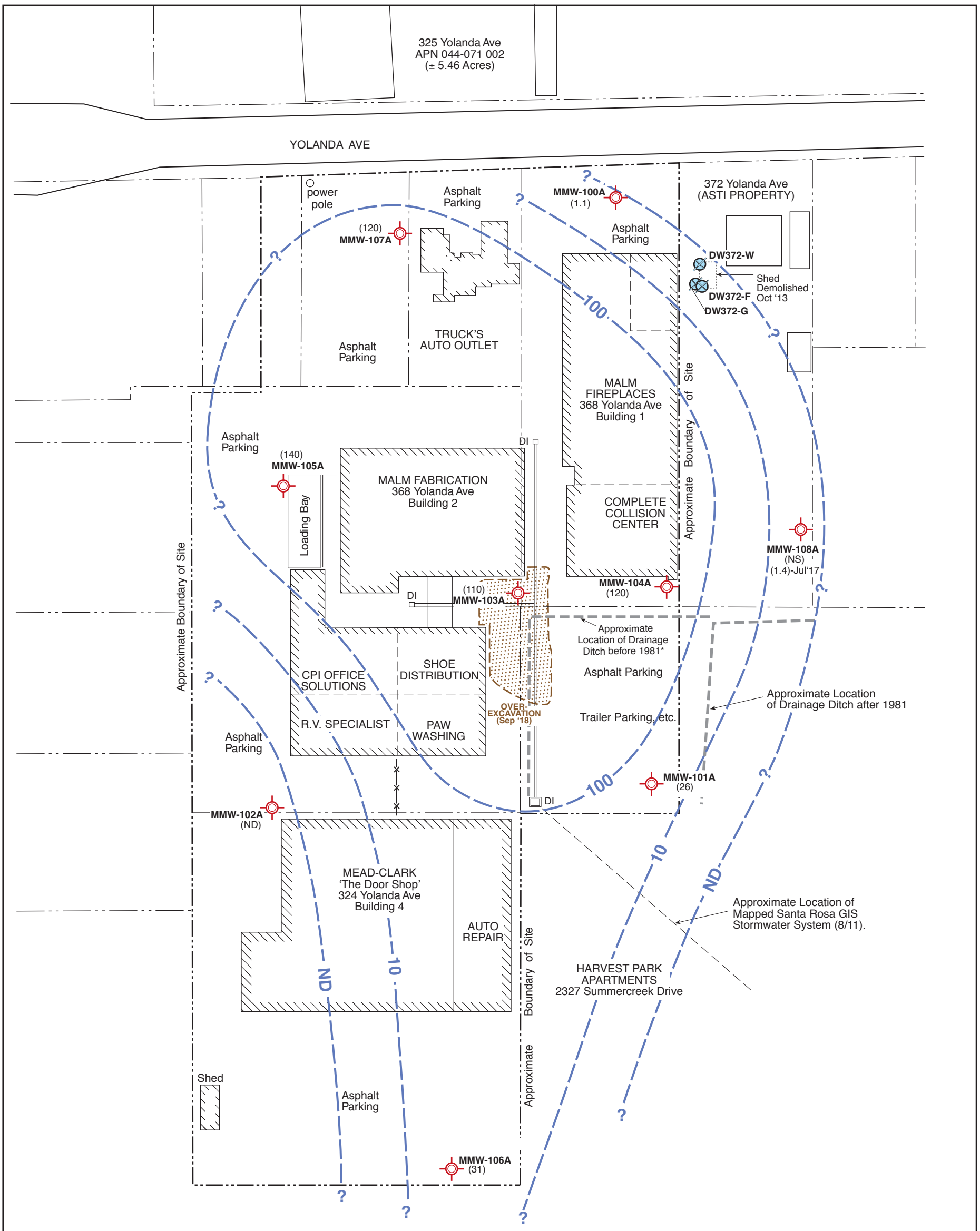
ISOCONCENTRATION MAP of 1,4-Dioxane in Shallow Groundwater, 07 February, 2019

Malm Fireplaces
368 Yolanda Avenue
Santa Rosa, California

FIGURE 7

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	PAGE OF
0698,001.13	EC&A, Stephen Knuttel	March 2013	May 2019	1 1



LEGEND

- Deep Groundwater Monitoring Well Location
- Water Supply Well Location (Destroyed Oct 2013)
- Approximate Boundary of Site
- Approximate Parcel Boundary
- DI — Drain Inlet System, to Santa Rosa Storm Drain
- (110) — Concentration in Deep Groundwater of TCE (µg/l), 07 Feb '19
- ND — Not Detected above Reporting Limit of 0.5 µg/l
- NS — Not Sampled
- 10 — Line of Equal Concentration

* Note suspected contamination due to use of dip tank and solvent storage area prior to 1981.

Map Source: SCS Engineers, Environmental Consultants Prj. No. 01210096.00, Figs 2 & 3,17 Aug 2012

All locations are approximate; Not a product of survey. Approximate parcel lines and building outlines adapted from Snta Rosa GIS orthophotograph flown by Merrick, 2009.

N

0 80 ft

FIGURE 8

PAGE 1 OF 1

(TRACE #1533, 01 May '19)

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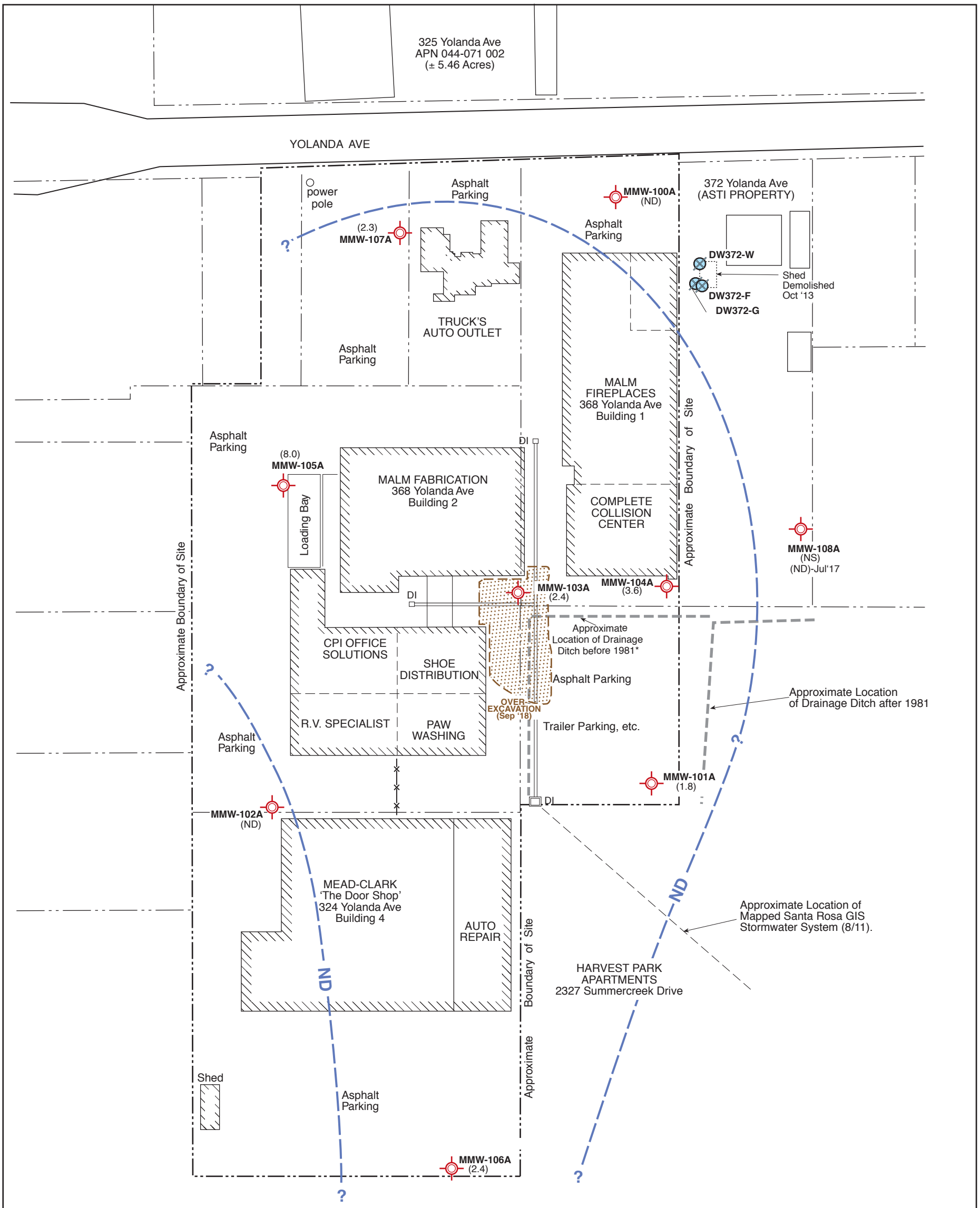
ISOCONCENTRATION MAP
of TCE in Deep Groundwater, 07 February, 2019

Malm Fireplaces
368 Yolanda Avenue
Santa Rosa, California

FIGURE 8

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	PAGE OF
0698,001.13	EC&A, Stephen Knuttel	March 2013	May 2019	1 1



LEGEND

- Deep Groundwater Monitoring Well Location
- Water Supply Well Location (Destroyed Oct 2013)
- Approximate Boundary of Site
- Approximate Parcel Boundary
- DI — Drain Inlet System, to Santa Rosa Storm Drain
- (1.8) — Concentration in Deep Groundwater of 1,4-Dioxane (µg/l), 07 Feb '19
- ND — Not Detected above Reporting Limit of 0.5 µg/l
- NS — Not Sampled
- ND — Line of Equal Concentration

* Note suspected contamination due to use of dip tank and solvent storage area prior to 1981.

Map Source: SCS Engineers, Environmental Consultants Prj. No. 01210096.00, Figs 2 & 3,17 Aug 2012

All locations are approximate; Not a product of survey. Approximate parcel lines and building outlines adapted from Santa Rosa GIS orthophotograph flown by Merrick, 2009.

N

0 80 ft

EDD CLARK & ASSOCIATES, INC.
ENVIRONMENTAL CONSULTANTS

(TRACE #1533, 01 May '19)

ISOCONCENTRATION MAP of 1,4-Dioxane in Deep Groundwater, 07 February, 2019

Malm Fireplaces
368 Yolanda Avenue
Santa Rosa, California

FIGURE 9

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	PAGE OF
0698,001.13	EC&A, Stephen Knuttel	March 2013	May 2019	1 OF 1

FIGURE 9 PAGE 1 OF 1

9.3 Impact Questions

9.3.1 a-b). Less than Significant with Mitigation Incorporated

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? b) Would the project 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?

During proposed project construction activities, limited quantities of miscellaneous hazardous substances, such as gasoline, diesel fuel, hydraulic fluid, solvents, oils, etc. would be used to fuel and maintain vehicles and motorized equipment. Accidental spill of any of these substances could impact soil and/or groundwater quality. As with any liquid, during handling and transfer from one container to another, the potential for an accidental release would exist. Depending on the relative hazard of the material, if a spill were to occur of significant quantity, the accidental release could pose a hazard to construction workers and the public, as well as the environment. While the proposed project would not require long-term operational use, storage, treatment, disposal, or transport of significant quantities of hazardous materials, hazardous materials would be used during the proposed project construction activities. With the implementation of **Mitigation Measure HAZ-1**, the impact would be less than significant.

Limited quantities of paints, solvents, architectural coatings, and similar agents will be transported to and used on the project site during the development phase. The applicant is required to comply with all existing federal, state and local safety regulations governing the transportation, use, handling, storage and disposal of potentially hazardous materials. In the event that construction activities involve the on-site storage of potentially hazardous materials a declaration form will be filed with the Fire Marshall's office and a hazardous materials storage permit will be obtained.

Light industrial tenants could potentially involve use and storage of common hazardous substances such as lubricants, paints, solvents, custodial products, pesticides, herbicides, vehicle fuels, oils, and other commonly used petroleum products. If any future site tenants involve the onsite storage of potentially hazardous materials, a site declaration form would be required to be filed with the governing regulatory agency(s) and a Hazardous Materials Storage Permit obtained. Workers would be required to comply with applicable federal, State, and local standards/regulations and adhere to the manufacturer's instructions related to the transport, use, or disposal of hazardous materials. Additionally, workers would be required to comply with federal and State environmental and workplace safety laws, including OSHA and Uniform Building Codes. Compliance with required regulations governing hazardous materials will ensure that potential hazards to the public or the environment through the routine transport, use, or disposal of hazardous materials will be reduced to less than significant levels.

Construction activities could potentially release previously unidentified hazardous materials into the environment, although taking into consideration the soil and groundwater investigations and remedial activities that have been conducted to date at the site, it is unlikely. With implementation of **Mitigation Measure HAZ-2**, the impact would be less than significant. Mitigation Measures are presented at the end of this section.

9.3.2 c). No Impact

Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The project site is not located within a quarter mile of an existing or proposed school and, as such, would not result in any increased risk of exposure to existing or planned schools as a result of the proposed project. Therefore, no impacts related to the emission or handling of hazardous, or acutely hazardous materials, within one quarter mile of an existing or proposed school, are expected.

9.3.3 d). Less than Significant with Mitigation Incorporated

Would the project 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?

<u>On-site</u>

A government database search was performed in order to identify any sites, including the project area, listed as a Cortese site or as a hazardous materials site. The findings of the database search indicate properties both on-site and off-site have been, or are presently, listed on one or more government databases. EC&A ordered an environmental database search from Environmental Data Resources, Inc. (EDR) in November 2018. The property known as 326 and 368 Yolanda Avenue (lot G) is listed on the following databases searched by EDR: HAZNET (a DTSC Hazardous Waste Tracking System), RCRA-SQG (RCRA Small Quantity Generator), FINDS (US EPA's Facility Index System), ECHO (Enforcement and Compliance History Online), Cortese, EMI, ENF, Hist Auto, CERS and CPS-SLIC. Most of these listings are associated with the generation and disposal of hazardous materials and wastes by Malm Fireplaces, which operates out of the building known as 368 Yolanda Avenue (lot G).

The CPS-SLIC listing (Cleanup Program Site) for 368 Yolanda Avenue (lot G) is the result of an ongoing environmental investigation associated with a historical release of metal cleaning solvents containing trichloroethene (TCE) constituents reportedly used in sheet-metal fabrication activities historically performed in the building known as 340 Yolanda Avenue (northernmost building on lot D; Figures 5 through 9). Although listed as 368 Yolanda Avenue, the area of the historical release of metal cleaning solvents is located south/southeast of the building known as 340 Yolanda Avenue (lot D, Figures 5 through 9).

As discussed above, the September 2018 over-excavation removed TCE-impacted soils to below San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), Environmental Screening Levels (ESLs) for residential and commercial/industrial land use, and for leaching to groundwater at sites where groundwater is a potential source of drinking water, and to below USEPA RSLs for residential and commercial land use. Therefore, impacts associated with hazardous materials are expected to be less than significant.

EC&A's review of investigative and remedial activities conducted to date for the ongoing CPS-SLIC investigation associated with portions of the project site indicates low risk of an impact to health and safety or the environment as a result of the documented TCE and 1,4-dioxane impacts to soil and groundwater at the project site. Groundwater at the project site is not used for potable purposes (the City provides water to the project site) and is generally present at depths of or greater than 15 ft below ground surface (bgs); as such, an exposure pathway for humans (excluding environmental professionals) to contact impacted groundwater is not expected. Environmental professionals collect periodic groundwater samples from monitoring wells in order to track the progress of remediation.

Although residual TCE-impacted soils appear to have been successfully removed during the September 2018 over-excavation activities performed at the site, the potential exists for previously unidentified soils containing TCE to be encountered during grading activities, trenching, or other disturbance of site soils. In order to protect worker health, the project applicant will prepare and implement a Soil and Groundwater Management Plan (SGMP) that includes contingencies in the event that undetected contaminated soil is encountered.

If suspected contaminated soil were to be discovered during construction activities, work in that area would immediately halt, and soil samples would be collected by an environmental professional. The analytical results from the soil samples would confirm or deny the presence of contamination; if contamination above the applicable Environmental Screening Levels were to be encountered, the soil in that area would be excavated and hauled to an appropriate landfill for disposal.

Mitigation Measure HAZ-2 detailed below will ensure proper consideration of health and safety concerns associated with residual TCE impacts in site soils, and provide information and procedures for workers conducting subsurface work. With implementation of **Mitigation Measure HAZ-2**, potential health and safety risks from worker exposure to undetected contaminated soils will be less than significant.

<u>Off-Site</u>
There are several adjacent and/or nearby properties identified on one or more government databases as hazardous materials sites. However, none of the identified properties constitute Recognized Environmental Conditions (RECs) with respect to the project property based on distance, media affected, direction relative to groundwater flow direction or case status such as "closed" or "no further action required." As such, the project will not create a significant hazard to the public or the environment by virtue of it being located on an identified Cortese site or identified as a hazardous materials site.

9.3.4 e). No Impact

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

The project site is not located within the boundaries of an airport land use plan or located in direct proximity to a private airstrip; the nearest airport is Charles M. Schulz Sonoma County Airport located approximately 9-miles to the northwest of the site. As such, no impacts associated with airport-related hazards exist.

9.3.5 f). No Impact

Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The proposed zoning and land use amendment is not expected to impair the implementation of, or physically interfere with, any adopted emergency response plan or emergency evacuation plan. No roadways that could be used by people evacuating the area during an emergency would be closed or otherwise blocked at any time by proposed construction activities or operations of the proposed project. Therefore, no impacts due to conflicts with an emergency response plan or emergency evacuation plan are expected.

9.3.6 g). Less than Significant

Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

The project site, located within the Urban Growth Boundary (UGB), is bounded by commercial, light industrial and residential developments. There are no wildlands located within or adjacent to the site. As such, a less than significant impact related to the exposure of people or structures to a significant risk of loss, injury or death involving wildland fires are expected. Wildland fires are discussed further in section 20.0 below.

9.4 Mitigation Measures

HAZ-1: Follow manufacturer's recommendations on use, storage and disposal of chemical products used in construction; avoid overtopping construction equipment fuel tanks; use tarps and adsorbent pads under vehicles when refueling to contain and capture any spilled fuel; during routine maintenance of construction equipment, properly contain and remove grease and oils; and properly dispose of discarded containers of fuels and other chemicals.

HAZ-2: Prepare and implement a Soil and Groundwater Plan (SGMP) that specifies procedures in the event that TCE-impacted, or previously undetected contaminants are encountered. The SGMP shall address potential health and safety concerns and provide information and procedures for site workers performing subsurface work at the subject property. Provisions outlined in the plan will include immediately stopping work in the contaminated area and contacting appropriate resource agencies, including EC&A, upon discovery of subsurface hazardous materials. The plan shall include the phone numbers of local, regional, and State agencies and primary, secondary, and final cleanup procedures.

Resources

NCRWQCB, 2000. Soil-gas Data from Gore-Sorber Screening Survey, May 19.
EC&A, 2018. September 2018 Over-excavation Report, Malm Fireplaces, 368 Yolanda Avenue, Santa Rosa, CA, November 6.
USEPA, 2016b. United States environmental Protection Agency, Regional Screening Levels (RSLs), Summary Table (TR=1E-06, HQ=1) May.
CalEPA, 2010. Website (http://oehha.ca.gov/risk/chhsltable.html), Office of Environmental Health Hazard Assessment (OEHHA), Soil-Gas-Screening Numbers for Volatile Chemicals Below Buildings Constructed Without Engineered Fill Below Sub-Slab Gravel, September 23.

Department of Toxic Substances Control
City of Santa Rosa Emergency Operations Plan, June 2017
City of Santa Rosa Evacuation Planning Map
Sonoma County Department of Transportation and Public Works – Integrated Waste

10.0 HYDROLOGY AND WATER QUALITY

IMPACT QUESTIONS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	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 groundwater quality?				X	
b). Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?				X	

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:					
ci). Result in substantial erosion or siltation on- or off-site?				X	
cii). Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?				X	
ciii). 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?				X	
civ). Impede or redirect flood flows?					X
d). In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?					X

e). Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				X	

10.1 Hydrology and Water Quality Setting

The City of Santa Rosa is located within the Santa Rosa Creek watershed, which drains runoff from the Mayacamas Mountains to the east and discharges to Laguna de Santa Rosa. The primary drainage course is the Santa Rosa Creek and its tributaries. Mark West Creek drains the northern portion of the city; Naval Creek the westernmost portion, and Todd Creek the southernmost portion of the city's planning area. All these tributaries drain through Laguna de Santa Rosa to the Russian River, which ultimately discharges to the Pacific Ocean.

The Sonoma County Water Agency (SCWA) – now called Sonoma Water - manages flood control facilities throughout the County, including flood Zone 1A, which encompasses the entire City of Santa Rosa. SCWA is responsible for structural repairs to culverts and spillways, grading and reshaping channels, and debris removal to maintain hydraulic capacity of all waterways within Zone 1A. The project site is not in the immediate proximity to any creeks or tributaries. The nearest creeks are the Kawana Springs Creek approximately 0.5 miles to the northeast of the project site, and Todd Creek, approximately 0.55 miles to the southeast of the project site.

At the regional level, the NCRWQCB serves Del Norte, Glenn, Humboldt, Lake, northern Marin, Mendocino, Modoc, Siskiyou, Sonoma, and Trinity Counties. The City of Santa Rosa's current National Pollutant Discharge Elimination System (NPDES) stormwater permit (Order No. R1-2009-0050) regulates both stormwater and non-stormwater discharges from public and private projects into the Santa Rosa municipal storm drain system. The permit requires a minimum set of BMPs to be implemented at all construction sites, as well as permanent stormwater low impact development BMPs.

At the local level, the City of Santa Rosa General Plan 2035 outlines strategies to reduce and manage stormwater runoff. The Storm Water Pollution Prevention Plan (SWPPP) includes a description of BMPs to prevent the discharge of silt and sediment from point and non-point sources into receiving waters. The SWPPP aims to minimize the discharge of pollutants during construction, which includes, but is not limited to, activities such as: clearing, grading, demolition, excavation, construction of new structures, and reconstruction of existing facilities involving removal and replacement that results in soil disturbance. The City's Standard Urban Stormwater Mitigation Plan (SUSMP) requires projects to design and implement post-development measures to reduce the potential stormwater impacts to local drainages.

SCS reported (SCS, 2011b) that free groundwater was typically encountered at the project location in the shallow borings that were drilled at depths between approximately 15 to 25 feet bgs; however, where the material drilled consisted of clay, silt, and/or silty sand, little or no water would be evident until greater depths up to 40 feet bgs. It appeared that saturated conditions were generally encountered below a depth of approximately 20 feet bgs at the time of drilling. Depth to groundwater in the shallow and deep monitoring wells has ranged from between 6 ft to 16 ft, after they wells have equilibrated. Therefore, it is not anticipated that this project will require dewatering.

10.2 Impact Questions

10.2.1 a).: Less than Significant

Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Construction of the project would require demolition, grading and construction of new structures. Extensive soil removal during the construction period may cause erosion and temporary impacts to water quality. Since the project would disturb more than one acre of soil, compliance with the Construction and Development Effluent Guidelines within the NPDES permit would be required. Developments that create or replace a combined total of one acre or more of impervious surface are also subject to follow the City's SUSMP. The SUSMP requires implementation of Low Impact Development (LID) BMPs that aim to decentralize stormwater treatment and to integrate it into the overall site design. The LID Technical Design Manual encourages the use of LID techniques to both retain and treat runoff water from impervious surfaces. Compliance with these guidelines would prevent the discharge of pollutants to stormwater during construction.

During project operation, changes to the amount of stormwater infiltration that occurs on the site would have the potential to affect long-term water quality by increasing the amount of pollutants that are discharged from the site. However, implementation of permanent stormwater quality features as required under the SUSMP, and implementation of post-construction BMPs as required under the NPDES permit would ensure that no stormwater discharge requirements are violated. Therefore, the project would not violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality and impacts would be less than significant.

10.2.2 b).: Less than Significant

Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

The project will utilize potable water from the City's water system for onsite water needs. The proposed project is expected to result in a negligible change to water demands onsite. Additionally, the project's water demand is consistent with what is anticipated in the General Plan and Urban Water Management Plan. The project would not substantially increase water use or deplete groundwater supplies. The project will enhance groundwater recharge through the removal

of approximately 16,550 square ft of impervious surface, which will be replaced with landscaping consistent with BMPs. Therefore, the project's impacts to groundwater supplies would be less than significant.

10.2.3 ci).: Less than Significant

Would the project 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 result in substantial erosion or siltation on- or off-site?

The nearest water body to the project site is approximately 0.5 miles away, and the project will reduce the quantity of existing impervious surfaces at the project location. Onsite drainage will be improved by the proposed project in the form of LID BMPs. The existing drainage pattern of the project site will not be significantly altered by the proposed project. Therefore, the project will have a less than significant impact.

10.2.4 cii).: Less than Significant

Would the project 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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

As noted above, the project will improve the drainage of stormwater at the project location through the addition of landscaped areas (almost the entirety of the site is currently covered with asphalt or buildings) and through modification/modernization of the on-site stormwater drainage system. Therefore, the project will, in fact, decrease the rate or amount of surface runoff. As such, the impact to flooding will be less than significant.

10.2.5 ciii).: Less than Significant

Would the project 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 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?

In 2010, Santa Rosa was issued a joint Municipal Separate Storm Sewer (MS4) NPDES permit with the County of Sonoma and the SCWA by the NCRWQCB. The City must comply with the provisions of the permit by ensuring that new development and redevelopment mitigate water quality impacts to stormwater runoff both during and after construction. The project would install bioretention areas, and improve the existing private structural storm drain infiltration system, both of which would retain storm waters and allow the runoff to infiltrate into the soil in compliance with the MS4 requirements. The volume of stormwater that is required to be treated will be determined in the SUSMP analysis, which takes into account pervious and impervious surfaces, both existing and proposed, as well as annual rainfall and the site soil's stormwater runoff potential. The quantity of new pervious surfaces is currently expected to be approximately 16,550 square ft, but will likely increase when the stormwater BMPs are finalized during the design phase

of the project. Compliance with the permit conditions would ensure that impacts would be less than significant.

10.2.6 civ).: No Impact

Would the project impede or redirect flood flows?

The project does not include any components that would significantly alter the flow of water. The project location is not known to flood, is not in a flood hazard zone, and the new buildings would replace existing ones. In addition, the project includes improvements to the site stormwater collection system. As such, there would be no impact to flood flows.

10.2.7 d).: No Impact

Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

The project site is not in a FEMA 100-year or 500-year flood zone, is not in a tsunami or seiche zone, and has not flooded in recent history according to the current property owner. Furthermore, the City of Santa Rosa does not identify the site as being located in a flood danger zone or a dam inundation area, as outlined in the 2016 City of Santa Rosa Local Hazard Mitigation Plan. Therefore, there is no known threat of inundation at the project site.

10.2.8 e).: Less than Significant

Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The project would not conflict with the NPDES program or the SUSMP. The project would disturb more than one acre of soil, and as such, compliance with the Construction and Development Effluent Guidelines within the NPDES permit would be required. Developments that create or replace a combined total of one acre or more of impervious surface are also subject to follow the City's SUSMP. The SUSMP requires implementation of Low Impact Development (LID) BMPs that aim to decentralize stormwater treatment and to integrate it into the overall site design. The LID Technical Design Manual encourages the use of LID techniques to both retain and treat runoff water from impervious surfaces. Compliance with local requirements would ensure that impacts related to consistency with a water quality control plan or groundwater management plan would be less than significant.

Resources

SCS, 2011b. Revised Results of Additional Subsurface Investigation and 3rd Quarter 2010 Groundwater Monitoring and Sampling Event with Workplan for TCE Impact Extent Assessment, Malm Fireplaces, Inc., 368 Yolanda Avenue, Santa Rosa, CA, September 2.
EPA – Construction and Development Effluent Guidelines
National Pollutant Discharge Elimination System (NPDES)
City of Santa Rosa Low Impact Development Technical Design Manuel
Guidelines for the Standard Urban Storm Water Mitigation Plan, June 3, 2005
City of Santa Rosa 2015 Urban Water Management Plan
FEMA flood zone maps
City of Santa Rosa Local Hazard Mitigation Plan, October 2016
City of Santa Rosa General Plan 2035, Figure 12-4
Sonoma County Regional Parks website

11.0 LAND USE AND PLANNING

IMPACT QUESTIONS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	Less than Significant Impact	No Impact
XI. LAND USE AND PLANNING - Would the project:					
a). Physically divide an established community?					X
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?				X	

11.1 Land Use and Planning Setting

Land use in Santa Rosa is currently weighted toward residential development, which accounts for approximately 50% of the acreage within the City's Urban Growth Boundary (UGB). Currently, commercial uses account for 7% of the acreage, with 4% of the acreage devoted to industrial uses. Excluding the front lots of the project site, all of the development is industrial in nature. Table A (also presented above), lists the current land uses, General Plan designations and zoning codes of the project site.

Table A – Current Land Uses

Parcel Identification	APN	Lot Size (acres)	Current Land Use	General Plan	Zoning Code	Buildings/ Improvements (~ sq. ft.)	Year Built
A	044-072-006	0.16	Vacant Commercial Land w/Utilities	---	CG General Commercial	vacant; asphalt lot	N/A
B	044-072-007	0.336	Commercial Use/ No Other Category	Retail & Business Service	CG General Commercial	vacant; asphalt lot	N/A
C	044-072-008	0.331	One Story Office Building	Retail & Business Service	CG General Commercial	One residential structure (business use) ±1,696 ft^2	1938
D	044-081-024	1.92	Light Manufacturing & Industrial	Retail & Business Service	CG General Commercial	Two industrial buildings totaling ±29,400 ft^2	1971
E	044-390-061	0.45	Vacant Commercial Land w/Utilities	Med-High Residential	R-3-15	Mobile/Trailer office	N/A
F	044-081-029	1.68	Warehousing/Active	Retail & Business Service	CG General Commercial	One industrial building ±27,000 ft^2	1977
G	044-072-009	1.0	Light Manufacturing & Industrial	Light Manufacturing	IL Light Industrial	Two attached industrial buildings ±22,800 ft^2	1964

The current Land Uses are as follows:

Lot A Vacant
Lot B Miscellaneous
Lot C Office
Lot D Industrial
Lot E Vacant
Lot F Industrial
Lot G Industrial

Table B (in Section I – Introduction, above) lists the current project parcel use(s), which include used car sales (lot C), Malm Fireplaces manufacturing and showroom/sales (lots D and G), clothing distribution and design (lot D), recreational vehicle (RV) and camper repair (lot D), office furniture distribution (lot F) and vehicle restoration (lot F). Lots A, B and E are vacant.

The project is situated near the southern boundary of the City limits of Santa Rosa, California, and is located in an area developed with a mix of commercial, light industrial, and residential properties. The site is bordered by Yolanda Avenue to the north, beyond which are commercial and light industrial properties; by a residential property along the northeastern project boundary, beyond which are light industrial businesses; by Harvest Park Apartment complex to the southeast; by Garden Essential, a commercial garden and pottery business, to the south, beyond which are commercial businesses, and multi-family residences; by a single-family residence along the northwestern project boundary, beyond which is a fueling service station; and by several commercial businesses bordering the west and southwestern project boundary. Vehicular access

to the site is from the north off of Yolanda Avenue via asphalt paved entrance driveways. The five of the seven parcels comprising the project site are currently developed with several commercial/light industrial businesses, as shown below, and in Figures 2 and 3. The three undeveloped parcels (A, B & E) are paved with asphalt. Areas of the site not covered with building footprints consist of asphalt and concrete surfaces; there are no permeable surfaces, trees, vegetation, or rock outcroppings at the site.

Housing

The project would amend the General Plan land use designation of Parcel E (APN: 044-390-061, see Figure 5: Site Map with Cross Identification) from Medium-High Density Residential to Light Industry, and it would rezone the parcel to the Light Industrial zoning district. Parcel E is a 0.45-acre generally square, level parcel that is currently undeveloped. It is bordered by existing multi-family residential development on its east and south boundaries and by existing industrial development and uses on its west and north boundaries. There is no direct access to a public right-of-way from any location on the parcel; therefore, access to the parcel would have to be granted by at least one adjacent property owner. Development consistent with the parcel's current General Plan land use designation would produce a maximum of 13 multi-family dwelling units (0.45 acres at 30 units/acre); however, the parcel's current zoning would only allow a maximum of six dwelling units (0.45 acres at maximum 1 unit per 2,900 gross square feet). A Zoning Code map amendment would be needed for the maximum residential development allowed under the General Plan to be achieved.

The General Plan's (GP's) Housing Element, in part, provides an overview of available resources and potential constraints to housing development. It states that "any amendment proposed to the General Plan during the Housing Element period will be reviewed to ensure it does not compromise the plan's internal consistency" (2035 General Plan, p. 4-1). Regional Housing Needs Allocation presents the Association of Bay Area Governments- (ABAG-) identified fair share allocation of the Regional Housing Needs Allocation (RHNA) (Section 4-4 of the GP). Regional Housing Needs Allocation, 2014-2022, indicates that Santa Rosa's distribution of housing needs as assigned by ABAG is 4,662 units. The City's quantified housing objective, or its response to its RHNA assignment, is 4,917 new units by 2023 (Table 4-33: Quantified Objectives, 2015-2023).

The City's Land Inventory analysis concludes that there are "more than 2,600 acres of land are available for residential development in Santa Rosa's city limits and nearly than 13,000 units can be developed on that land" (p. 4-57). Additionally, 48 acres of undeveloped land designated Medium High Density and 11 acres of undeveloped land designated Transit Village Medium and Transit Village Mixed Use in the city limits are zoned consistent with the General Plan land use designations and are expected to yield 1,516 units to meet the RHNA for very low- and low-income households. These sites are listed in Table 4-38 of the GP: Sites Zoned for Residential Development at 30 or More Units per Acre. The sites are identified by APN, and APN 044-390-061 is not listed as a potential development site. Based upon the data and analysis presented in the General Plan's Housing Element and because Parcel E was not included in data analyzed, one can conclude that amending the General Plan land use designation of Parcel E from Medium-High Density Residential to Light Industry would neither impact the City's ability to meet its RHNA affordable housing or overall housing requirement nor compromise the plan's internal consistency.

The City's Economic Development Division reports on land use vacancy rates for all land use categories in the City. Reflecting on data provided to the City in October 2019, it reports that industrial vacancy rates have hovered below 5% for longer than the 8 quarters shown in the October 2019 data. Compression remains a factor with the cannabis industry further compounding limited availability for pre-existing (that is non-cannabis) business expansion or even just regular business development needs for those needing or limited to industrial type land uses. It concludes that with little to no new industrial development on the horizon, the City is essentially out of industrial space (based on email communication with City of Santa Rosa Economic Development Division, October 16, 2019).

11.1.1 a). No Impact

Would the project physically divide an established community?

The project proposes the conversion of six contiguous parcels from General Commercial (parcels A-F) and one contiguous Med-High Residential parcel E to Light Industrial. As discussed above, the site is located in an area consisting of a mix of residential, commercial, and light industrial properties, with a residential property bordering the northeastern project boundary, Harvest Park Apartment complex bordering the site to the southeast, and a single-family residence bordering the site along the northwestern project boundary. These residential properties operate independently of the project site and will not be physically divided by the proposed project. Re-zoning of the project parcels will encourage continuity and uniformity within the site vicinity. There are no aspects of the project that would significantly reduce mobility or access. Therefore, the project would have no impact due to the division of an established community.

11.1.2 b). Less than Significant

Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the LRDP, general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

The proposed project is required to comply with all General Plan policies and City Ordinances and is consistent with goals of the 2035 General Plan, thereby avoiding conflict with applicable regulations and policies established by the City. In addition, the project is not subject to an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

As redevelopment of an existing, underutilized lot within the UGB the project is able to achieve several of the goals set forth in the 2035 General Plan, including, but not limited to, the following:

LUL-A-1: *As part of plan implementation – including development review, capital improvements programming, and preparation of detailed area plans – foster close land use/transportation relationships to promote use of alternative transportation modes and discourage travel by automobile.*

LUL-I-1: *Provide a range of commercial services that are easily accessible and attractive, that satisfies the needs of people who live and work in Santa Rosa and that also attracts a regional clientele.*

LUL-L-3: *Create pedestrian friendly environments and provide convenient connections to the transit facility for all modes of transportation.*

UD-A-5: *Require superior site and architectural design of new development projects to improve visual quality in the city.*

UD-A-12: *Promote green building design and low impact development projects.*

T-K-3: *Orient building plans and pedestrian facilities to allow for easy pedestrian access from street sidewalks, transit stops, and other pedestrian facilities, in addition to access from parking lots.*

T-K-4: *Require construction of attractive pedestrian walkways and areas in new residential, commercial, office, and industrial developments. Provide landscaping or other appropriate buffers between sidewalks and heavily traveled vehicular traffic lanes, as well as through and to parking lots. Include pedestrian amenities to encourage and facilitate walking.*

T-L-8: *Require new development to dedicate land and/or construct/install bicycle facilities and provide bicycle parking as specified in the Zoning Code, where a rough proportionality to demand from the project is established. Facilities such as showers and bicycle storage shall also be considered.*

OSC-H-5: *Plant trees on public property including park strips, open space and park areas and encourage tree planting on private property to help offset carbon emissions.*

OSC-K-1: *Promote the use of site planning, solar orientation, cool roofs, and landscaping to decrease summer cooling and winter heating needs. Encourage the use of recycled content construction materials.*

OSC-K-2: *Identify opportunities for decreasing energy use through installation of energy efficient lighting, reduced thermostat settings, and elimination of unnecessary lighting in public facilities.*

EV-D-2: *Maintain space in business parks for distribution and research uses. Attract a wide range of industries which serve local and regional needs and contribute to the community's economic vitality, and at the same time protect the local environment and quality of life.*

The project is not expected to conflict with any applicable land use plan, policy, or regulation, including the City's ability to meet its RHNA affordable housing or overall housing requirement, nor compromise the City's General Plan's internal consistency. Therefore, impacts will be less than significant.

Resources

City of Santa Rosa General Plan 2035
Sonoma County Assessor's Office
Santa Rosa City Ordinances
City of Santa Rosa General Plan Land Use Diagram

12.0 MINERAL RESOURCES

IMPACT QUESTIONS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	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?					X
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?					X

12.1 Mineral Resources Setting

According to the California Division of Mine Reclamation, California Department of Conservation, minerals that have been found in substantial quantities in Sonoma County include chromic iron, copper, quicksilver, galena, lignite, borax, kaolinite, agate, gypsum, and limestone. Geothermal resources in Sonoma County consist of hot water, steam, and heat found at or below the earth's surface. The Geyser Geothermal Resource Area is located in northeastern Sonoma County in the Mayacamas Mountains and is the largest steam-powered geothermal development in the world. Sand, gravel, crushed rock, and building stone are considered the most valuable mineral resources in the county. The California Surface Mining and Reclamation Act (SMARA) of 1975 requires that the State Geologist classify land into mineral resource zones (MRZ) according to the known or inferred mineral potential of the land. Aggregate resources associated with river deposits, mainly the Russian River and other major streams, are the dominant minerals mined in this area to use in concrete and high-quality base and fill. The project is not in a classified

MRZ and there are no known important mineral resources in the immediate vicinity of the project site, nor are there active mining operations. In addition, according to the Sonoma County Aggregate Resources Management Plan there are no known economically viable sources of rock materials in the immediate project area. In addition, there are no unique geologic features identified within the project area.

12.2 Impact Questions

12.2.1 a-b).: No Impact

Would the project 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? Would the project 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?

There are no known mineral resources within the project site boundaries or in the surrounding properties. The project site has not been delineated as a locally important resource recovery site. It is not expected that the project will result in the loss of availability of known mineral resources, including those designated as "locally important". Therefore, the proposed project will have no impact that results in the loss of availability of mineral resources.

Resources

California Department of Conservation
Division of Mine Reclamation
Sonoma County PRMD
California Geological Survey, Special Report 205, 2013
City of Santa Rosa General Plan 2035, Area Plan Boundaries, Figure 2-3

13.0 NOISE

IMPACT QUESTIONS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	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?		X			
b). Generation of excessive groundborne vibration or groundborne noise levels?				X	
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					X

excessive noise levels?					

13.1 Noise Setting

Noise is generally characterized as unwanted sound. It is characterized as disturbing or annoying. Sources of Noise within the Santa Rosa UGB include vehicular traffic, aircraft, trains, industrial activities, and background city noise. Sources of unwanted sounds can intermittently be encountered as a result of the use of leaf blowers, helicopters, train whistles, chain saws, un-muffled motor vehicles, and other similar sources. Commercial and light industrial land uses are typically considered the least noise-sensitive, while residential properties, schools, hospitals, hotels and other tourist lodging facilities are considered to be the most noise-sensitive. Most people can detect a change in sound level at about 3 dB; an increase of 10 dB is perceived as a doubling of loudness.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends upon the distance the receptor is from the noise source. Close to the noise source, the models are accurate to within about plus or minus 1 to 2 dBA.

Since the sensitivity to noise increases during the evening and at night -- because excessive noise interferes with the ability to sleep -- 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The Community Noise Equivalent Level (CNEL) is a measure of the cumulative noise exposure in a community, with a 5 dB penalty added to evening (7:00 pm - 10:00 pm) and a 10 dB addition to nocturnal (10:00 pm - 7:00 am) noise levels. The Day/Night Average Sound Level (DNL or L_{dn}) is essentially the same as CNEL, with the exception that the evening time period is dropped and all occurrences during this three-hour period are grouped into the daytime period.

<u>Effects of Noise</u>

The thresholds for speech interference indoors are about 45 dBA if the noise is steady and above 55 dBA if the noise is fluctuating. Outdoors the thresholds are about 15 dBA higher. Steady noises of sufficient intensity (above 35 dBA) and fluctuating noise levels above about 45 dBA have been shown to affect sleep. Interior residential standards for multi-family dwellings are set by the State of California at 45 dBA L_{dn}. Typically, the highest steady traffic noise level during the daytime is about equal to the L_{dn} and nighttime levels are 10 dB lower. The standard is designed for sleep and speech protection and most jurisdictions apply the same criterion for all residential uses. Typical structural attenuation is 12 to 17 dB with open windows. With standard construction and closed windows in good condition, the noise attenuation factor is around 20 dB for an older structure and 25 dB for a newer dwelling. Sleep and speech interference is therefore of concern when exterior noise levels are about 57 to 62 dBA L_{dn} with open windows and 65 to 70 dBA L_{dn} if the windows

are closed. Levels of 55 to 60 dBA are common along collector streets and secondary arterials, while 65 to 70 dBA is a typical value for a primary/major arterial. Levels of 75 to 80 dBA are normal noise levels at the first row of development outside a freeway right-of-way.

Regulatory Background – Noise

The State of California and the City of Santa Rosa have established regulatory criteria that are applicable in this assessment. The State CEQA Guidelines, Appendix G, are used to assess the potential significance of impacts pursuant to local General Plan policies, Municipal Code standards, or the applicable standards of other agencies. A summary of the applicable regulatory criteria is provided below.

Current State CEQA Guidelines

The CEQA contains guidelines to evaluate the significance of effects of environmental noise attributable to a proposed project. Under CEQA, noise impacts would be considered significant if the project would 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, if the project would expose people residing or working in the project area to excessive noise levels.

Checklist items (a) and (b) are applicable to the proposed project. The project would not expose people residing or working in the project area to excessive aircraft noise levels; therefore, item (c) is not carried further in this analysis.

CEQA does not define what noise level increase would be considered substantial. Typically, project-generated noise level increases of 3 dBA L_{dn} or greater would be considered significant where exterior noise levels would exceed the compatible noise level standard (60 dBA L_{dn} for residential land uses and 70 dBA L_{dn} for industrial land uses). Where noise levels would remain at or below the compatible noise level standard with the project, noise level increases of 5 dBA L_{dn} or greater would be considered significant.

2019 California Building Code Title 24, Part 2

The current version of the California Building Code (CBC) requires interior noise levels within residences attributable to exterior environmental noise sources to be limited to a level not exceeding 45 dBA L_{dn}/CNEL in any habitable room.

2019 California Green Building Standards Code (Cal Green Code)

The State of California established exterior sound transmission control standards for new non-residential buildings as set forth in the 2019 California Green Building Standards Code (Section 5.507.4.1 and 5.507.4.2). Section 5.507 states that either the prescriptive (Section 5.507.4.1) or the

performance method (Section 5.507.4.2) shall be used to determine environmental control at indoor areas. The prescriptive method is very conservative and not practical in most cases; however, the performance method can be quantitatively verified using exterior-to-interior calculations. For the purposes of this analysis, the performance method is utilized to determine consistency with the Cal Green Code. The sections that pertain to this project are as follows:

5.507.4.1 Exterior noise transmission, prescriptive method. Wall and roof-ceiling assemblies exposed to the noise source making up the building envelope shall meet a composite STC rating of at least 50 or a composite OITC rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 when the building falls within the 65 dBA L_{dn} noise contour of a freeway or expressway, railroad, industrial source or fixed-guideway noise source, as determined by the local general plan noise element.

5.507.4.2 Performance method. For buildings located, as defined by Section 5.507.4.1, wall and roof-ceiling assemblies exposed to the noise source making up the building envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level (L_{eq} [1-hr]) of 50 dBA in occupied areas during any hour of operation.

The performance method, which establishes the acceptable interior noise level, is the method typically used when applying these standards.

City of Santa Rosa General Plan

The Noise and Safety Element of the City of Santa Rosa's General Plan identifies policies that are intended to "maintain an acceptable community noise level to protect the health and comfort of people living, working and/or visiting in Santa Rosa, while maintaining a visually appealing community." Multi-family residential uses normally acceptable in areas with a noise environment of L_{dn} of 65 dBA or less, General Commercial uses are normally acceptable in areas with a noise environment of L_{dn} of 70 dBA or less, and Light Industrial uses are normally acceptable in areas with a noise environment of L_{dn} of 75 dBA or less. (see Figure 12-1 of the General Plan). The following policies are applicable to the proposed project:

NS-B Maintain an acceptable community noise level to protect the health and comfort of people living, working and/or visiting in Santa Rosa, while maintaining a visually appealing community.

NS-B-3 Prevent new stationary and transportation noise sources from creating a nuisance in existing developed areas. Use a comprehensive program of noise prevention through planning and mitigation and consider noise impacts as a crucial factor in project approval.

NS-B-4 Require new projects in the following categories to submit an acoustical study, prepared by a qualified acoustical consultant:

> • *All new projects that could generate noise whose impacts on other existing uses would be greater than those normally acceptable.*

NS-B-5 Pursue measures to reduce noise impacts primarily through site planning. Engineering solutions for noise mitigation, such as sound walls, are the least desirable alternatives.

NS-B-6 Do not permit existing uses to generate new noises exceeding normally acceptable levels unless:

- *Those noises are mitigated to acceptable levels; or*
- *The activities are specifically exempted by the City Council on the basis of community health, safety, and welfare.*

NS-B-10 Work with private enterprises to reduce or eliminate nuisance noise from industrial and commercial sources that impact nearby residential areas. If progress is not made within a reasonable time, the City shall issue abatement orders or take other legal measures.

NS-B-14 Discourage new projects that have potential to create ambient noise levels more than 5 dBA L_{dn} above existing background, within 250 feet of sensitive receptors

City of Santa Rosa Municipal Code

The City of Santa Rosa has adopted a quantitative noise ordinance in Chapter 17-16 of the Municipal Code. Section 17-16.120 regulates noise from machinery and equipment:

"It is unlawful for any person to operate any machinery, equipment, pump, fan, air conditioning apparatus, or similar mechanical device in any manner so as to create any noise which would cause the noise level at the property line of any property to exceed the ambient base noise level by more than five decibels."

The ambient base noise levels for residential, office, commercial, and industrial areas are established in Section 17-16.030. The applicable ambient noise level criteria are shown in the Table below.

Land Use Zone	**Daytime Level** (7am to 7pm)	**Evening Level** (7pm to 10pm)	**Nighttime Level** (10pm to 7am)
Single-Family Residential (R1 and R2)	55 dBA	50 dBA	45 dBA
Multi-Family Residential	55 dBA	55 dBA	50 dBA
Office and Commercial	60 dBA	60 dBA	55 dBA
Intensive Commercial	65 dBA	65 dBA	55 dBA

Industrial	70 dBA	70 dBA	70 dBA
Source: City of Santa Rosa, City of Santa Rosa Municipal Code 17-16.030			

The Noise Ordinance defines ambient noise as follows:
"Ambient noise is the all-encompassing noise associated with a given environment usually a composite of sounds from many sources near and far. For the purpose of this chapter, ambient noise level is the level obtained when the noise level is averaged over a period of 15 minutes without inclusion of noise from isolated identifiable sources at the location and time of day near that at which a comparison is to be made."

The noise descriptor, L_{eq}, is used in this report for the purposes of determining noise with respect to these limits.

The primary sources of noise in Santa Rosa throughout the General Plan include, but are not limited to:

- U.S. Highway 101 and State Highway 12;
- Regional/Arterial Streets. Major regional/arterial streets with substantial noise levels have been identified as Fulton Road, Guerneville Road, Bellevue Avenue, Stony Point Road, Mendocino Avenue, Fountaingrove Parkway, Calistoga Road, Summerfield Road, College Avenue and the part of Yolanda Avenue where the project is located (Figure 5-1 of the City of Santa Rosa General Plan 2035); and
- Railroad Operations. With the resumption of passenger rail service by SMART, railroad noise is most noticeable from horn soundings at grade crossings.

The project site is located approximately 8.5 miles southeast of the Charles M. Schulz Sonoma County Airport, 2,500 ft east of the SMART railroad tracks, approximately 975 ft east of Highway 101, and approximately 320 ft east of Santa Rosa Avenue. The project site is located within the 65 dB noise contours of Highway 101, as indicated in the Santa Rosa General Plan noise contours map. Sensitive receptors in the site vicinity include a residential property along the northeastern project boundary; Harvest Park Apartment complex to the southeast; and a non-conforming single-family residence along the northwestern project boundary.

<u>Existing Noise Environment</u>
A site-specific Environmental Noise and Vibration Assessment was conducted by Illingworth & Rodkin, Inc., of Cotati, California, between June 20th and June 24th, 2019. The report of the study evaluates the potential significance of noise impacts that could result from the General Plan Amendment, Rezoning and Project Conditional Use Permit, including the noise and land use compatibility of proposed uses, as well as the potential for temporary or permanent noise level increases at nearby sensitive receptors. The complete assessment is in Appendix G.

As discussed above, the project site is located to the southeast of intersection of Yolanda Avenue and Santa Rosa Avenue and is surrounded by General Commercial zoned land to the northwest and south, and by a multifamily residential use (Harvest Park Apartments) and a Light Industrial zoned parcel to the east. Apparently non-conforming single-family residential uses are situated on the Yolanda Avenue frontage west of the parcel A and industrially zoned parcels to the east. The noise monitoring survey, which included one long-term and two short-term measurements as shown in Figure 2 in Appendix G, was conducted to document existing ambient noise conditions at the proposed site and adjacent existing residential uses.

The long-term measurement was conducted between 3 p.m. on Thursday, June 20th and 2 p.m. on Monday May 24th, 2019 in a tree at a height of 10 feet above grade 5 feet inside the property line shared between the Parcel E and the Harvest Park Apartment complex. The primary noise source in this area was resident and parking lot noise at the Harvest Park Apartment complex and occasional noise from adjacent commercial uses. Distant traffic noise from Yolanda and Santa Rosa Avenues contributed to the background noise environment. The hourly trend in noise levels measured, including L_{eq}, and the noise levels exceeded 01, 10, 50 and 90 percent of the time (indicated as L1, L10, L50 and L90), for this measurement is shown in Chart 1 in Appendix G. The L_{eq} noise level is typically considered the average noise level, while the L1 is considered the intrusive level, the L50 is considered the median noise level and the L90 is considered the background noise level.

The noise study indicates that daytime, evening and nighttime average (L_{eq}) noise levels ranged from 47 to 61 dBA, 46 to 54 dBA, and 38 to 51 dBA, respectively, with respective peak hour and average daytime L_{eq} of 61 dBA and 52 dBA, an average evening level of 51 dBA, and an average nighttime level of 43 dBA. The average Day-Night noise Level (L_{dn}) for individual 24-hour periods over the entire 95-hour measurement period ranged from 53 to 56 dBA, with an average L_{dn} of 54 dBA.

The Short-term measurements (ST-1 and ST-2 in Figure 2) were made along Yolanda Avenue at setbacks of 30 and 60 feet from the centerline of Yolanda Avenue (ST-1and ST-2 in Figure 2) at a height of 5 feet above grade to document Yolanda Avenue traffic noise exposure at the proposed site and adjacent existing residential uses. The results of these short-term measurements are shown in the Table below.

ID	Location (Start Time)	Measured Noise Levels, dBA					Primary noise source
		L_{10}	L_{50}	L_{90}	L_{eq}	L_{dn}	
ST-1	30 feet from Yolanda Avenue centerline (6/24/19, 1:50 p.m. to 2:00 p.m.)	75	68	61	72	**73**	Traffic on Yolanda Avenue
ST-2	60 feet from Yolanda Avenue centerline (6/24/19, 1:40 p.m. to 1:50 p.m.)	70	64	55	68	**69**	Traffic on Yolanda Avenue

L_{10} – Noise level exceeded 10% of the time
L_{50} – Noise level exceeded 50% of the time
L_{90} – Noise level exceeded 90% of the time
L_{eq} – Equivalent noise level (average A-weighted noise level)
L_{dn} – Day/night average sound level

13.2 General Plan Consistency Analysis

The impacts of site constraints such as exposure of the proposed project to excessive levels of noise and vibration are not considered under CEQA. This section addresses Noise and Land Use Compatibility for consistency with the policies set forth in the City's General Plan.

The Noise and Safety Element of City of Santa Rosa's General Plan sets forth policies with the goal of minimizing the impact of noise on people through noise reduction and suppression techniques, and through appropriate land use policies in the City of Santa Rosa. The applicable General Plan policies were presented in detail in the Regulatory Background section and are summarized below for the proposed project:

• The City's acceptable exterior noise level objective is 60 dBA Ldn or less for single-family residential uses,

• The City's acceptable exterior noise level objective is 65 dBA Ldn or less for multi-family residential uses,

• The City's acceptable exterior noise level objective is 75 dBA Ldn for the proposed Light Industrial uses.

• The Cal Green Code standards specify an interior noise environment attributable to exterior sources not to exceed an hourly equivalent noise level (L_{eq} [1-hr]) of 50 dBA in occupied areas of non-residential uses during any hour of operation.

13.2.1 Future Exterior Noise Environment

The primary sources of noise at the project site will continue to be vehicular traffic. Assuming a 1 to 2 % increase in traffic volume per year, the future noise environment on the project site is expected to increase by approximately 1 dB over existing levels. Considering this increase and the proposed setbacks of new Dispensary/Retail and warehouse industrial buildings, these new uses are expected to be exposed to an L_{dn} of 67 dBA and a peak hour L_{eq} of 73 dBA due to traffic on Yolanda Avenue. Future exterior noise levels at the project site would be expected to meet Santa Rosa's acceptable exterior noise level objective for light industrial uses of 75 dBA L_{dn}.

Under these future conditions (without the project) the multifamily residential uses to the southeast of the project site would be exposed to an L_{dn} of 55 dBA and would clearly meet Santa Rosa's acceptable exterior noise level objective. However, under these future conditions (without the project), the adjacent (non-conforming) single family residential uses along Yolanda Avenue would be exposed to an L_{dn} of 69 dBA and would be considered "Conditionally Acceptable" for such a use.

13.2.2 Future Interior Noise Environment

Based on the 105-ft setback of the Cannabis Dispensary/Retail building from Yolanda Avenue, the exterior noise level exposure of the closest building façade to Yolanda Avenue is expected to be exposed to an L_{dn} of 67 dBA and a peak hour L_{eq} of 73 dBA. Based on the conceptual building

plans for this project and elevations, and considering typical California construction techniques, this building façade is expected to provide a minimum of 25 dBA of exterior to interior noise reduction. Therefore, it is expected that the interior noise levels within the proposed Cannabis Dispensary/Retail building and warehouse industrial building will meet the CAL Green Code-required interior hourly equivalent noise level ($L_{eq\text{-}1Hr}$) limit of 50 dBA during any hour of operation.

13.2.3 Impact Significance Criteria for Noise Increases

Significance criteria are based on noise standards presented in the Santa Rosa General Plan and Municipal Code. Temporary or permanent noise increases in excess of established standards would result in a "significant impact" in the following cases:

1. A significant permanent noise impact would be identified if the project operations would generate noise levels that would exceed applicable noise standards presented in the Santa Rosa General Plan or Municipal Code.

2. A significant permanent noise increase would be identified if the project traffic resulted in an increase of 3 dBA L_{dn} or greater at noise-sensitive land uses where existing or projected noise levels would equal or exceed the noise level considered satisfactory for the affected land use (60 dBA L_{dn} for single-family residential areas) and/or an increase of 5 dBA L_{dn} or greater at noise-sensitive land uses where noise levels would continue to be below those considered satisfactory for the affected land use.

3. A significant temporary noise impact would be identified if construction-related noise would temporarily increase ambient noise levels at sensitive receptors. Hourly average noise levels exceeding 60 dBA L_{eq} at the property lines shared with residential land uses, and the ambient by at least 5 dBA L_{eq}, for a period of more than one year would constitute a significant temporary noise increase at adjacent residential land uses. Though the City of Santa Rosa nor the State of California specify a quantitative measure of what temporary in terms of the duration of a building construction project means, based on experience with construction noise, Illingworth & Rodkin (I&R - authors of the independent Environmental Noise and Vibration Assessment) has considered construction activities which conclude within one year to be considered temporary in nature. Construction projects which extend for multiple building seasons or years are typically not experienced by surrounding uses as 'temporary' and thus are not considered temporary in this analysis. Over the last 15 or more years, this qualitative metric has consistently used this approach to determine temporary versus non-temporary construction in Environmental Noise Assessments reports, including projects completed and approved within the City of Santa Rosa.

4. Hourly average noise levels exceeding 70 dBA L_{eq} at the property lines shared with residential land uses, and the ambient by at least 5 dBA L_{eq}, for a period of more than one

year would constitute a significant temporary noise increase at adjacent commercial land uses.

13.3 Impact Questions

13.3.1 a). Less than Significant with Mitigation Incorporated

Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

The project would not result in a substantial permanent traffic noise level increase at existing noise-sensitive land uses in the project vicinity. However, on-site operational noise could exceed City limits and existing noise-sensitive land uses would be exposed to construction noise levels in excess of the temporary noise increase significance thresholds for a period of more than one year. This is a potentially significant impact.

Operational

Noise generating on-site operational components of the project would include mechanical equipment, potential outside operation and maintenance activities, and parking lot activities. The City of Santa Rosa Municipal Code Section 17-16.030 defines an ambient base noise levels of 55 dBA L_{eq} from 7:00 a.m. to 7:00 p.m., 50 dBA Leq from 7:00 p.m. to 10:00 p.m., and 45 dBA Leq from 10:00 p.m. to 7:00 a.m. for single-family residential areas and 55 dBA Leq from 7:00 a.m. to 7:00 p.m., 55 dBA L_{eq} from 7:00 p.m. to 10:00 p.m., and 50 dBA L_{eq} from 10:00 p.m. to 7:00 a.m. for multi-family residential areas. Mechanical equipment noise is limited to not exceed the ambient base noise level by more than 5 dBA. Because ambient noise levels at the single-family home along Yolanda Avenue adjacent to the project site are expected to be higher than nighttime ambient base level of 45 dBA, this analysis assesses all operational components of the project against the most conservative nighttime residential threshold of 55 dBA L_{eq} (5 dBA above the multi-family ambient base noise level of 50 dBA).

Mechanical Equipment

Mechanical equipment such as heating, ventilation, and air condition systems (HVAC) are expected to be installed in the proposed buildings. Typical HVAC units generate noise levels of 50 to 60 dBA at 50 ft from the equipment, depending on the equipment selection. A 10 to 15 dBA noise reduction can be achieved with shielding from equipment enclosures. The existing single-family residences to the west of the proposed Cannabis Dispensary/Retail use may be as close as 50 ft from the building. The proposed industrial building to extend onto parcel number 044-390-061 may be as close as 30 ft from multi-family residential structures in the Harvest Park Apartment complex to the east of the site.

Assuming a worst-case scenario with unshielded HVAC equipment placed outdoors at ground level adjacent to the proposed buildings, mechanical equipment noise associated with the proposed dispensary building could reach noise levels as high as 50 to 60 dBA L_{eq} at single-family residences to the west. Mechanical equipment noise associated with the proposed industrial building extended onto parcel 004-390-061 could reach noise levels as high as 53 to 63 dBA L_{eq} at multi-family residences in the Harvest Park Apartment complex. This is a potentially significant

impact. With implementation of **Mitigation Measure NOI-1**, the impact would be reduced to less than significant.

Parking Lot

Surface parking lots currently exist, but increased parking lot activities are expected as a result of the proposed site improvements. Access to the parking lots of the Cannabis/Retail building, the new industrial warehouse building, and existing industrial buildings beyond will be provided from Yolanda Avenue. Noise sources associated with the parking lot include vehicular circulation, louder engines, car alarms, squealing tires, door slams and human voices. The typical sound of a passing car at 15 mph would be about 50 to 60 dBA L_{max} at a distance of 50 feet. The noise of an engine start is similar. Door slams typically produce noise levels lower than engine starts. The hourly average noise level resulting from these activities in a small parking lot is expected to reach 40 dBA L_{eq} at a distance of 50 ft from the parking area. The nearest single-family residential land use may be as close as 50 ft from the nearest parking space of the lots. Considering this distance, these residences are expected to be exposed to hourly average noise levels of 40 dBA L_{eq} or less. Therefore, noise from parking lot activities would not exceed even the more restrictive, nighttime residential threshold of 55 dBA L_{eq} at the adjacent residences.

These residences would experience hourly average noise levels of 38 dBA L_{eq}. from parking activities. Maximum noise levels would range from about 48 to 58 dBA L_{max}. Parking lot activity noise would not exceed the established nighttime residential threshold of 55 dBA L_{eq} at residences. This is a less than significant impact.

Traffic

A significant permanent traffic noise increase would occur if the project would increase noise levels at a sensitive receptor by 3 dBA L_{dn} or greater where ambient noise levels exceed the "normally acceptable" noise level standard. Where ambient noise levels are at or below the "normally acceptable" noise level standard, increases of 5 dBA L_{dn} or greater would be considered significant. To cause a 3-dBA increase in noise along Yolanda or Santa Rosa Avenues, the project would have to generate enough traffic to double the current roadway volumes. Given the size of the project and the current amount of traffic, this is not considered possible. In addition, the Traffic Impact Study conducted for this project concluded that the proposed project would decrease traffic overall (see section 17.0 below). This is a less than significant impact.

Temporary Noise Increases from Project Construction

Neither the City of Santa Rosa nor the State of California specify quantitative thresholds for the impact of temporary noise increases due to construction. Based on standard residential (15 dB with windows open) and commercial (25 dB with windows closed) exterior-to-interior noise reductions and the threshold for speech interference indoors (45 dBA), the exterior threshold for residential land uses is 60 dBA L_{eq}, and 70 dBA L_{eq} for commercial land uses. Therefore, the project would be considered to generate a significant temporary construction noise impact if construction activities exceeded 60 dBA L_{eq} at nearby residences or exceeded 70 dBA L_{eq} at nearby commercial land uses and exceeded the ambient noise environment by 5 dBA L_{eq} or more for a period longer than one year. Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day, the construction occurs in areas

immediately adjoining noise-sensitive land uses, or when construction lasts over extended periods of time.

Project construction activities may occur over a period of more than one year and are anticipated to include demolition of existing structures and pavement, site preparation, grading and excavation, trenching, building erection and paving. The hauling of excavated materials and construction materials would generate truck trips on local roadways as well. Pile driving is not anticipated in any phase of construction for this project. Construction activities will be carried out in stages. During each stage, a different mix of equipment operation would occur, and noise levels would vary based on the amount of equipment in operation and the location at which the equipment is operating. Construction-generated noise levels drop off at a rate of approximately 6 dBA per doubling of the distance between the source and receptor. Shielding by buildings or terrain can provide an additional 5 to 10 dBA noise reduction at distant receptors. Typical construction equipment noise levels are included in Appendix G.

Construction activities could take place as close as 30 ft from existing residential uses. At this closest range, construction activities are expected to range from 82 to 94 dBA L_{max} at the source location of the noise, and hourly average noise levels are calculated to range from 78 to 89 dBA L_{eq} without any barriers or Mitigation Measures. Noise levels will be lower as construction moves away from shared property lines or into shielded areas. However, construction noise could exceed 60 dBA L_{eq} at residences and 70 dBA L_{eq} at commercial areas and the ambient noise environment by 5 dBA L_{eq}, for a period greater than one year, without Mitigation Measures. This is a potentially significant temporary impact. Implementation of **Mitigation Measure NOI-2** would reduce the impact to less than significant by reducing site construction noise levels, limiting construction hours and minimizing disruption and annoyance. Mitigation Measures are presented in section 13.4 below.

13.3.2 b). Less than Significant Impact

Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

<u>Impact Criteria for Generation of Excessive Groundborne Vibration</u>

A significant impact would be identified if the construction of the project would expose persons to excessive vibration levels. Groundborne vibration levels exceeding 0.3 inches/second (in/sec) Peak Particle Velocity (PPV) would have the potential to result in cosmetic damage to buildings.

The City of Santa Rosa's General Plan does not specify a construction vibration limit. Based on the thresholds provided by CalTrans, a construction vibration limit of 0.3 in/sec PPV would minimize damage at buildings of normal conventional construction. Construction-related vibration levels would not exceed 0.3 in/sec PPV at the nearest structures. This is a less than significant impact. Typical construction equipment and activity vibration source levels are detailed in Appendix G.

Construction activities at the project site may generate perceptible vibration when heavy equipment or impact tools (e.g. jackhammers, hoe rams) are used. Construction activities would

include site demolition work, preparation work, excavation of below-grade levels, foundation work and new building framing and finishing.

The nearest existing structures are residences located approximately 30 ft from anticipated project construction areas. Pile driving is not anticipated for this project. At a distance of 30 ft, vibration levels from construction are anticipated to be less than 0.20 in/sec PPV. Vibration levels may be perceptible to occupants, but would be below the 0.3 in/sec PPV threshold. Construction-related vibration is not anticipated to cause architectural or structural damage to the nearest buildings, and would not be considered excessive. As construction moves away from the shared property lines, vibration levels would be even lower.

13.3.3 c). No Impact

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?

The project site is located approximately 8.5-miles southeast of the Charles M. Schulz Sonoma County Airport and is not located in the vicinity of a private airstrip. Figure 12-2 of the Santa Rosa General Plan (Noise Contours) indicates that the project site is outside of the noise contours generated by the Charles M. Schulz Sonoma County Airport. As such, current and/or future workers and customers at the site would not be exposed to excessive noise levels generated by the airport and no impacts would occur.

13.4 Mitigation Measures

NOI-1: Mechanical equipment shall be selected and designed to reduce impacts on surrounding uses to meet the City's requirements prior to the issuance of building permits. A qualified acoustical consultant may be retained to review mechanical noise as the equipment systems are selected in order to determine specific noise reduction measures necessary to reduce noise to comply with the City's noise limits at shared property lines. These noise reduction measures could include, but are not limited to, selection of equipment that emits low noise levels and/or installation of noise barriers such as enclosures and parapet walls to block the line of sight between the noise source and the nearest receptors.

NOI-2: Implementation of the following would reduce site construction noise levels, limit construction hours and minimize disruption and annoyance.

- Limit construction activities to weekdays, during the hours of 7:00 AM to 6:00 PM. Prohibit construction during weekends and holidays.

- Limit use of construction equipment which can generate noise levels of 90 dBA or more at 50 ft, such as concrete saws, hoe rams, or others, to a distance of 50 ft or greater from residences where feasible. Construct temporary noise barriers to screen stationary noise-generating equipment, such as concrete saws and generators, when located near adjoining

sensitive land uses. Temporary noise barriers could reduce construction noise levels by 5 dBA or more.

- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Prohibit unnecessary idling of internal combustion engines.
- Locate stationary noise-generating equipment such as air compressors and portable generators as far as possible from sensitive receptors.
- Utilize "quiet" air compressors and other stationary noise sources where technology exists.
- Control noise from construction workers' radios to a point where they are not audible at existing residences bordering the project site.
- Notify in writing all adjacent businesses, residences and other noise-sensitive land uses of the construction schedule and provide a written schedule of "noisy" construction activities to the adjacent land uses and nearby residences.
- Designate a coordinator who would be responsible for responding to any complaints about construction noise. The coordinator will determine the source of the noise complaint and will require that reasonable measures be implemented to correct the problem. Post a telephone number for the coordinator in a conspicuous place and include it in the notice sent to neighbors regarding the construction schedule.

Resources

City of Santa Rosa General Plan 2035
City of Santa Rosa Municipal Code – Noise Ordinance
Traffic Impact Study for the Yolanda Avenue Industrial Project, W-Trans, September 30, 2019 (in Appendix G)

14.0 POPULATION AND HOUSING

IMPACT QUESTIONS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	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)?					X
b). Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?					X

14.1 Population and Housing Setting

The 2035 Santa Rosa General Plan anticipates a population increase to 233,520 by 2035, at an annual growth of 0.95% per year. A detailed discussion of land use demand, including housing, is in section 11.1 above.

14.2 Impact Questions

14.2.1 a). No Impact

Would the project induce substantial population growth in the area, either directly (for example, by proposing new homes or businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The proposed project does not include new homes or businesses that would directly induce population growth. The project does not induce indirect population growth through extension of roads or infrastructure, or by other means. Therefore, the project would not directly or indirectly induce population growth in the project area, and no impact would occur.

14.2.2 b-c). No Impact

b) Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? c) Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

The project does not include the elimination of any existing housing, would not displace existing housing or people and, as such, no impact would occur.

Resources

City of Santa Rosa General Plan 2035

15.0 PUBLIC SERVICES

IMPACT QUESTIONS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	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 public services:					
Fire protection?				X	
Police protection?				X	

Schools?				X	
Parks?				X	
Other public facilities?				X	

15.1 Public Services Setting

Public services provided by the City include fire protection, police protection, education, recreation and parks, and libraries. The Santa Rosa Fire Department (SRFD) provides fire protection services in the City of Santa Rosa. The SRFD responds to all fires, hazardous materials incidents, and medical emergencies (including injury accidents) in the City. Accoring to the SRFD website, the senior command structure consists of a Fire Chief, an Emergency Preparedness Coordinator, a Deputy Fire Chief, an Administrative Services Officer, and a Division Chief Fire Marshal. The SRFD consists of three Bureaus—Operations, Administration, and Prevention—and two divisions—Training and Safety Division and Support Services Division. Ten fire engines and two truck companies respond to emergencies. The SRFD has 138 employees.

The Santa Rosa General Plan 2035 establishes a response time goal for first resource arrival within 5 minutes of dispatch 90 percent of the time. A secondary goal, pertaining to larger incidents, is to provide a full assignment within 8 minutes 90 percent of the time.

Santa Rosa Fire Department (SRFD)

Station 1, located at 955 Sonoma Avenue, is the SRFD responding truck company that would respond to the project location. According to information provided by the SRFD on May 21, 2020, the following are the 2019 response time statistics for Station 1. The Table below illustrates the data by incident type.

Incident Summary by Incident Type (Station 1)

Incident Type	Incident Count	Used in Average Response	Average Response Time (hh:mm:ss)
Fire	75	64	00:04:03
Rupture/Explosion	1	1	00:05:49
EMS/Rescue	2,920	2,184	00:03:40
Hazardous Conditions	113	49	00:04:47
Service Call	265	108	00:04:16
Good Intent	1,169	242	00:03:46
False Call	278	233	00:04:00
Other	1	0	-----
TOTALS	**4,822**	**2,881**	**00:03:46**

Santa Rosa Police Department (SRPD)

The Santa Rosa Police Department (SRPD), located at 965 Sonoma Avenue, provides police protection services throughout the City. The SRPD consists of four divisions—Administration, Field Services, Special Services, and Technical Services—consisting of seven Bureaus—Patrol, Investigations, Communications, Records, Technology, Traffic, and Support Services. The SRPD has 260.5 employees with 83 patrol officers and is also comprised of civilian staff within the Administration, Procurement, Dispatch Center, and Records Department. The remaining sworn personnel are either supervisors or investigators. The SRPD would provide police services to the project site. Based on correspondence from the SRPD dated May, 19, 2020, citing data for the month of February 2020 (as revised on 4/22/2020), the SRPD has an average response time for: (1) Priority 1 calls (emergency calls) of 6 minutes and 27 seconds, (2) Priority 2 calls (urgent) of 11 minutes and 47 seconds, and (3) Priority 3 call (non-urgent) of 24 minutes and 28 seconds (Santa Rosa Police, May 19, 2020, Response to Public Records Act Request).

The project site is located in Bellevue Union School District, one of 10 districts serving the City of Santa Rosa. Within the Bellevue Union School District, there are five elementary schools, one middle school, and one high school. The closest school to the project site is Kawana Elementary, located approximately 0.8 miles away (2121 Moraga Drive).

According to the City of Santa Rosa website, the Santa Rosa Recreation & Parks Department operates and maintains over 1,100 acres of City park lands, open space, civic space and roadside landscaping along with over 10,000 trees. City crews care-take 72 neighborhood and community parks and a large number of special recreational and historic facilities, including Howarth Memorial Park, Luther Burbank Home & Gardens, Church of One Tree, DeTurk Round Barn, Santa Rosa Rural Cemetery, Finley Community Center with the Person Senior Wing, Steele Lane Community Center, Ridgway Swim Center, Finley Aquatic Center and the Bennett Valley Golf Course. The closest park to the project location is Harvest Park (245 Burt Street), approximately 750 feet from the southernmost project boundary. According to the City of Santa Rosa website, Harvest Park is approximately 3.3 acres in size, and features barbecues, a dog park, a large grass area, picnic tables and a playground.

The Sonoma County Library System operates five libraries in Santa Rosa, including the Central Library and four branch libraries. The nearest library to the project site is Roseland Community Library at 779 Sebastopol Road.

The City charges one-time impact fees on new private development in order to offset the cost of improving or expanding City facilities. Development Impact fees are used to fund the construction or expansion of needed capital improvements. Santa Rosa collects impact fees such as the Capitol Facilities fees and School Impact fees necessary to finance required public facilities and service improvements and to pay for new development's fair share of the costs of the required public facilities and service improvements.

Cannabis Uses

Building and Fire Codes

The applicant for the proposed cannabis uses (parcels B and C) would obtain a building permit to conform with the appropriate occupancy classification; would obtain all annual operating fire permits with inspections prior to operation; would comply with all Health and Safety Code and California Fire Code requirements, including obtaining CUPA permits and filing CERS submissions; and would provide the Santa Rosa Fire Department with a lock box for gates and doors.

Proposed Cannabis Uses - Onsite Security Measures

The Building will employ security measures as required by Section 20-46.050(G) and Title 17, Division 1, Chapter 13, Subchapter 3, of the California Code of Regulations, as amended from time to time, including:

- twenty-four hour security cameras covering all areas where cannabis is handled;
- a professionally monitored robbery alarm system;
- card- or fob- based system to control and log access through all doors, integrated with the cameras and security system
- secure storage for all cannabis products and waste;
- procedures for secure and safe transportation of cannabis products and currency as required under state law;
- commercial-grade door and window locks; and
- emergency access measures in compliance with California Fire Code and Santa Rosa Fire Department standards.

A complete security plan was submitted in connection with the retail application. The Security Plan is kept confidential and not released to the public for safety considerations.

All staff will be trained in safety measures to ensure the proper handling and mitigation of any potential hazard, thereby reducing any potential additional demand on Public Services. All personnel will strictly adhere to safety protocols. These include, but are not limited to, the following:

- Precautionary safety measures
- Adherence to State and Local laws as well as industry standards
- Machinery training and supervision (machinery is only to be operated in the presence of lead engineer)
- Personnel safety training and accident avoidance/mitigation training
- Protective equipment (e.g. eyewear, gloves, masks) where appropriate
- Training in the safe handling of chemical materials and volatile compounds

- Scheduled safety checks by lead engineer
- Frequent cleaning schedule
- Evacuation plan and notification system
- Third party engineer safety checks as required by law
- Monitoring systems (smoke, CO2, and gas detectors/sensors)
- Sprinkler system
- Secure premises with dual entry method required (e.g. two separate keys)
- Fire extinguishers present and maintained
- Monitored security system (e.g. video surveillance, alarm)

Additionally, compliance with Santa Rosa Ordinances, California law, and all future ordinances, laws, and regulations will be maintained at all times. Additional security measures are included in Appendix H.

15.2 Impact Questions

15.2.1 a).: Less than Significant

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 rations, response times or other performance objectives for any of the public services: 1) Fire protection; 2) Police protection; 3) Schools; 4) Parks; or 5) other Public facilities?

The project site is located within an existing mixed-use area that is currently well served by public services. There is no anticipated increase in population resulting from the proposed project. Furthermore, demands on fire and police service have been previously anticipated as part of General Plan buildout and are met with impact fees that provide funding for the incremental expansion of services.

The project's addition of vehicle trips to the adjacent grid street network is not expected to cause a reduction in travel speeds that would result in significant delays for emergency vehicles. As a standard condition of project approval, the applicant shall pay all development impact fees applicable to commercial development. These funds are sufficient to offset any cumulative increase in demands to fire and police protection services and ensure that impacts are less than significant.

The project is not expected to result in substantial adverse impacts associated with any other public facilities including schools and parks. The proposed project area is located within an established mixed-use area and is well served by existing public utilities. The project will not generate a substantial increase in demands that warrant the expansion or construction of new public facilities. Any additional public services will be acquired through use of impact fees.

Resources

City of Santa Rosa General Plan 2035
City of Santa Rosa Fire Department website
City of Santa Rosa Police Department website
Santa Rosa Recreation and Parks

16.0 RECREATION

IMPACT QUESTIONS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	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?					X
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?					X

16.1 Impact Questions

16.1.1 a-b).: No Impact

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?

As a commercial development on an underutilized site, the project is not expected to result in significant impacts to recreational facilities. The project involves the redevelopment of an underutilized site where the proposed use does not depart significantly from the previous use, with the exception of the cannabis dispensary. Regardless, the proposed dispensary is not expected to

have any impact on recreational facilities. Therefore, it is anticipated that an existing labor force will be available to staff the commercial development and will not result in population growth by requiring an outside labor force. Because the project will not incite population growth there is little expectation that it would put further pressure on recreational amenities thereby requiring construction or expansion of facilities. No impacts related to the use, construction or expansion of recreational facilities are expected.

Resources

City of Santa Rosa General Plan 2035
Santa Rosa Recreation and Parks

17.0 TRANSPORTATION/TRAFFIC

IMPACT QUESTIONS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	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?				X	
b). Would the project conflict or be inconsistent with CEQA Guildelines section 15064.3, subdivision (b)?				X	
c). Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X	
d). Result in inadequate emergency access?				X	

17.1 Transportation/Traffic Setting

The City of Santa Rosa General Plan classifies streets into four categories: freeways (including highways and expressways), regional/arterial streets, transitional/collector streets, and local streets. U.S. Highway 101 is a freeway in the vicinity of the project site; streets classified as regional/arterial streets in the vicinity include Santa Rosa Avenue, and the portion of Yolanda Avenue that borders the project site to the north (Figure 5-1 of the City of Santa Rosa General Plan 2035). Santa Rosa Avenue is approximately 400 feet to the west of the westernmost project location boundary. Highway 101 is approximately 1,100 feet west of the westernmost project boundary. Access to the project site would remain via existing driveways on Yolanda Avenue.

Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, pedestrian signal phases, curb ramps, curb extensions, and various streetscape amenities such as lighting, benches, etc. In general, a network of sidewalks, crosswalks, pedestrian signals, and curb ramps provide access for pedestrians near the proposed project site; however, sidewalk gaps, obstacles, and barriers can be found along some of the roadways connecting to the project site. Existing gaps and obstacles along the connecting roadways impact convenient and continuous access for pedestrians and present safety concerns in those locations where appropriate pedestrian infrastructure would address potential conflict points.

- **Yolanda Avenue –** Intermittent sidewalk coverage is provided on Yolanda Avenue with substantial gaps on both sides of the street between Santa Rosa Avenue and Petaluma Hill Road. Sidewalks are provided along developed commercial property frontages on the west end of Yolanda Avenue. Curb ramps and crosswalks at side street approaches are not provided in all locations. Lighting is provided by intermittent overhead streetlights.

Given that the site is surrounded by primarily commercial land uses, with some residential land uses to the south and east of the site, it is reasonable to assume that some people would want to walk, bicycle, and/or use transit to reach their destinations. The project includes construction of a sidewalk along the Yolanda Avenue frontage. From the site, pedestrians are currently required to walk along the shoulder to access the existing sidewalk along the Yolanda Avenue frontage of the 7-11. In the surrounding area, the pedestrian network is well-connected and provides adequate access for pedestrians.

Finding: Pedestrian access would be improved by the construction of the sidewalk along the Yolanda Avenue frontage (which the project proposes). Since this access would end at the edge of the project site, a paved shoulder or other all-weather surface walkway would be provided to connect the project site to the existing sidewalk along the frontage of the 7-11 if sufficient public right-of-way is available. Upon completion of the remainder of the sidewalk along with the proposed City's Yolanda Avenue Widening project, pedestrian facilities serving the project site would be adequate and would be tied into the areawide network of facilities.

Bicycle Facilities

In the project area, Class II bike lanes (striped and signed lanes for one-way bike travel) exist on Santa Rosa Avenue and Petaluma Hill Road. Table 12 of the TIS in Appendix F summarizes the existing and planned bicycle facilities in the project vicinity, as contained in the City of Santa Rosa Bicycle and Pedestrian Master Plan Update 2018. There are currently no bicycle facilities along the project frontage, but bike lanes are planned along the entire length of Yolanda Avenue in the City of Santa Rosa Bicycle & Pedestrian Master Plan Update 2018. Existing bike lanes on Petaluma Hill Road and Santa Rosa Avenue along with planned future bicycle facilities provide adequate access for bicyclists in the area surrounding the project.

Transit Services

Transit Services in the City of Santa Rosa, and throughout Sonoma County, are provided by Santa Rosa "CityBus" and Sonoma County Transit (SCT). CityBus Routes 3 and 5 provide loop service

to destinations throughout Santa Rosa and stop on Santa Rosa Avenue just south of the Yolanda Avenue intersection, and on Yolanda Avenue just west of the project site. These routes operate Monday through Friday with 30-minute headways between 6:00 a.m. and 8:00 p.m. Saturday and Sunday service operates with approximately one-hour headways between 6:00 a.m. and 8:00 p.m. and 10:00 a.m. and 4:30 p.m., respectively.

SCT Routes 44, 48, and 54 provide regional service to destinations throughout Santa Rosa and Petaluma. These routes operate on weekdays between 5:30 a.m. and 10:30 p.m. with half-hourly headways. Routes 44 and 48 operate on weekends with one hour to one-and-a-half hour headways between 7:00 a.m. and 10:00 p.m. Two to three bicycles can be carried on most CityBus and SCT buses. Bike rack space is on a first-come, first-served basis. Additional bicycles are allowed on SCT buses at the discretion of the driver.

Dial-a-ride, also known as paratransit, or door-to-door service, is available for those who are unable to independently use the transit system due to a physical or mental disability. SCT Paratransit is designed to serve the needs of individuals with disabilities within Sonoma and the greater County of Sonoma area.

In summary, the existing transit routes are adequate. Existing stops are within an acceptable walking distance of the site, although there are no sidewalks along the project frontage to provide access to the bus stops at this time (the proposed project would add sidewalks, subject to City requirements and in accordance with the Yolanda Avenue Widening project).

As part of the proposed project's new construction, pedestrian access would be improved along the Yolanda Avenue frontage and beyond, if necessary, to provide a complete connection of pedestrian facilities from the project site to the closest bus stops near the intersection of Yolanda Avenue/Santa Rosa Avenue.

Traffic Impact Study (TIS)

W-Trans of Santa Rosa, California, conducted a Traffic Impact Study (TIS) for this project, dated May 22, 2020 (Appendix F). The study presents an analysis of the potential traffic impacts that would be associated with a General Plan Amendment (GPA) and Rezoning of six parcels. In addition to the GPA, the study compares the proposed total development on the project site to buildout estimates based on the site's potential under its current zoning and land use designations. Finally, the potential traffic impacts associated with the two proposed new buildings that requires a CUP, were evaluated.

The analyses for the GPA and CUP aspects of the project are presented separately in the TIS so that the information for each action is readily identifiable. The traffic study was completed in accordance with the criteria established by the City of Santa Rosa and is consistent with standard traffic engineering techniques. In summary, three analyses were conducted: baseline, cumulative, and development under current versus proposed land use designations (Existing Conditions, Future Conditions and Project Conditions).

The purpose of a traffic impact study is to provide City staff and policy makers with data they can use to make an informed decision regarding the potential traffic impacts of a proposed project, and

any associated improvements that would be required to mitigate these impacts to a level of insignificance as defined by the City's General Plan or other policies.

Vehicular traffic impacts were evaluated by determining the number of new trips that the proposed use would be expected to generate, distributing these trips to the surrounding street system based on existing travel patterns or anticipated travel patterns specific to the proposed project, then analyzing the impact the new traffic would be expected to have on critical intersections. In the case of the proposed GPA, the comparison was made between conditions with development (potential buildout) under the existing land use designation versus the one being proposed.

The study area for the GPA and rezoning aspects of the project consisted of two intersections: Yolanda Avenue-US 101 North Ramps/Santa Rosa Avenue, and Petaluma Hill Road/Yolanda Avenue.

The study area for the CUP aspect of the project consisted of three intersections: Yolanda Avenue-US 101 North Ramps/Santa Rosa Avenue, Petaluma Hill Road/Yolanda Avenue and Santa Rosa Avenue/Hearn Avenue. Existing lane configurations are included in Appendix F.

The TIS evaluated operating conditions during the peak a.m. and p.m. periods in order to capture the highest potential impacts for the proposed change in land use as well as the highest volumes on the local transportation network. The morning peak hour occurs between the hours of 7:00 and 9:00 p.m. and reflect conditions during the home to work or school commute. The peak p.m. hours occur between 4:00 and 6:00 p.m., and typically reflect the highest level of congestion during the homeward bound commute. Please refer to Appendix F for further details.

Level of Service (LOS) is used to rank traffic operation on various types of facilities based on traffic volumes and roadway capacity using a series of letter designations ranging from A to F. In general, LOS A represents free flow conditions, while LOS F represents forced flow or breakdown conditions. The City of Santa Rosa LOS Standard in the Santa Rosa General Plan 2035 (TD-1) states that the City will try to maintain a LOS D or better along all major corridors. A LOS D is defined as a delay of 35 to 55 seconds (average seconds per vehicle); the influence of congestion is noticeable, and most vehicles have to stop.

<u>Trip Generation (GPA)</u>
The anticipated trip generation for the proposed change in land use associated with the GPA was estimated using standard rates published by the Institute of Transportation Engineers (ITE) in Trip Generation Manual, 10th Edition, 2017. The trip generation potential of the existing General Plan Designation maximum development was determined using the published standard rates for General Commercial (Land Use #820) and Multi-Family Residential (Land Use #220). The trip generation potential of the proposed General Plan Designation maximum development was determined using the published rate for General Light Industrial (Land Use #110).

When compared to General Plan Buildout conditions the proposed project would be expected to generate fewer trips than with full buildout of the project site under existing land use designations. The calculated reduction in trip generation is an average of 6,683 daily trips, including a reduction of 60 trips during the a.m. peak hour and a reduction of 649 trips during the p.m. peak hour. Based

on the large magnitude in trip reduction, the project would reasonably be expected to have no additional impact on traffic operation, therefore further analysis was not performed for this TIS. These results of the trip generation analysis are summarized in Table 5 in Appendix F.

Trip Generation (CUP)
For the proposed cannabis dispensary/industrial building, the proposed project's trip generation potential was determined using the published standard rates for Marijuana (Cannabis) Dispensary (Land Use #882) and General Light Industrial (Land Use #110) for the cannabis microbusiness. The use for the remaining space is to be determined, so the standard rate for Shopping Center (Land Use #820) was selected to provide a conservative (most intensive) estimate of the trip generation based on the permitted uses.

Because ITE rates were developed based on data collected at sites that open for business at 8:00 a.m. and dispensaries in the City of Santa Rosa are not allowed to open for business until 9:00 a.m., custom a.m. peak hour trip generation rates specific to the City of Santa Rosa were developed based on data collected at three existing dispensaries in the City.

For comparative purposes, and to review short-term impacts, the anticipated trip generation was estimated for existing land uses on the project site, which include a used car dealership and a fireplace supply business. Standard ITE rates for Automobile Sales – Used (ITE LU #841) and Warehousing (ITE LU #150), respectively, were used to estimate existing trip generation, as they were determined to be the most similar land uses available.

Based on the application of these rates and assumptions, the proposed project would be expected to generate an average of 1,396 daily trips, including 28 trips during the a.m. peak hour and 126 trips during the p.m. peak hour. These results are presented in Table 7 of Appendix F.

As discussed above, when compared to buildout conditions under the proposed GPA, the proposed project would be expected to generate fewer trips than with full buildout of the project site under existing land use designations. As a result, no analysis of future conditions was necessary for the GPA aspect of the proposed project.

17.1.1 Existing Conditions

The existing conditions scenario provides an evaluation of current operation based on existing traffic volumes during the a.m. and p.m. peak periods. Volume data were collected in June 2018, February 2019 and June 2019. Under the existing traffic volumes, the study intersections are currently operating acceptably at LOS D or better during both peak periods studied. A summary of the intersection LOS calculations is below; the calculations are included in Appendix F.

Existing Peak Hour Intersection LOS	AM Peak		PM Peak	
	Delay	LOS	Delay	LOS
Yolanda Ave-US 101N Ramps/Santa Rosa Ave	27.5	C	27.1	C
Petaluma Hill Rd/Yolanda Ave	22.3	C	31.9	C
Santa Rosa Ave/Hearn Ave	19.1	B	29.9	C

17.1.2 Future (Baseline) Conditions

Baseline (Existing plus Approved plus Pending) operating conditions were determined with traffic from approved and pending projects in and near the study area added to the existing volumes. The same trip generation and distribution assumptions used in the traffic studies for the various projects, where available, were used in this analysis. Standard rates as published in Trip Generation Manual, 10th Edition, 2017, were applied. Segment volumes for the horizon year of 2040 were obtained from the Sonoma County Transportation Authority's (SCTS's) gravity demand model and translated to turning movement volumes at each of the study intersections using the "Furness" method (Appendix F).

The following projects contained in the Citywide Summary of Pending Development Report were considered for the Baseline Conditions.

GPA Analysis

- Farmers Lane Extension
- Yolanda Avenue widening

CUP Analysis

- Kawana Meadows
- Kawana Springs Apartment Homes
- Kawana Town Center
- Residences at Taylor Mountain
- Taylor Mountain Estates
- The Inn at Santa Rosa
- Yolanda Apartments

Descriptions of these projects and a summary of their anticipated traffic impacts are on page 16 of the TIS in Appendix F. Upon adding the trips associated with the above projects to existing volumes, all three study intersections are expected to continue operating acceptably (Figure 7 in Appendix F). The LOS analysis is summarized in the Table below.

Baseline Peak Hour Intersection LOS	AM Peak		PM Peak	
	Delay	LOS	Delay	LOS
Yolanda Ave-US 101N Ramps/Santa Rosa Ave	33.1	C	30.9	C
Petaluma Hill Rd/Yolanda Ave	26.2	C	43.7	D
Santa Rosa Ave/Hearn Ave	19.9	B	32.2	C

17.1.3 Existing Plus Project Conditions

Upon the addition of project-related traffic to the Existing volumes, the study intersections are expected to operate acceptably. The results are summarized in the Table below. CUP Existing plus Project traffic volumes are shown on Figure 8 of Appendix F.

Existing and Existing Plus Project Peak Hour Intersection LOS	**Existing Conditions**		**Existing Plus Project**	
Study Intersection	**AM Peak Delay LOS**	**PM Peak Delay LOS**	**AM Peak Delay LOS**	**PM Peak Delay LOS**
Yolanda Ave-US 101N Ramps/Santa Rosa Ave	27.5 C	27.1 C	27.8 C	32.4 C
Petaluma Hill Rd/Yolanda Ave	22.3 C	31.9 C	22.4 C	33.0 C
Santa Rosa Ave/Hearn Ave	19.1 B	29.9 C	19.3 B	30.6 C

With project-related traffic added to Baseline volumes (Baseline and Baseline plus Project Peak Hour Intersection LOS), the study intersections are expected to operate acceptably. The results are summarized in the Table below; CUP Baseline plus Project traffic volumes are illustrated on Figure 9 in Appendix F.

Study Intersection	**Baseline Conditions**		**Baseline Plus Project**	
Existing and Existing Plus Project Peak Hour Intersection LOS	**AM Peak Delay LOS**	**PM Peak Delay LOS**	**AM Peak Delay LOS**	**PM Peak Delay LOS**
Yolanda Ave-US 101N Ramps/Santa Rosa Ave	33.1 C	30.9 C	33.4 C	35.6 C
Petaluma Hill Rd/Yolanda Ave	26.2 C	43.7 D	26.5 C	45.9 D
Santa Rosa Ave/Hearn Ave	19.9 B	32.2 C	20.1 C	34.3 C

The study intersections are expected to continue operating acceptably upon the addition of project-generated trips to both Existing and Baseline volumes, resulting in an acceptable (less than significant) impact on traffic operation.

17.1.4 Vehicle Miles Traveled (VMT)

While the City has not yet adopted a policy regarding vehicle miles traveled (VMT), the project's contribution was estimated for informational purposes. Vehicle miles traveled associated with the project were calculated by multiplying the estimated number of trips and the average trip distance for the Traffic Analysis Zone (TAZ) in which the project is located. Using the net increase in the number of daily trips generated for the proposed cannabis dispensary/industrial/commercial building in the requested CUP as determined above using the standard trip generation rate, and an average distance of 4.47 miles traveled per daily trip in the project's location as available from the

Sonoma County Transportation Authority (SCTA) travel demand model, the estimated VMT for the project is 5,851.

17.1.5 Collision History Summary

The collision history for the study area was reviewed to determine any trends or patterns that may indicate a safety issue. Collision rates were calculated based on records available from the California Highway Patrol as published in their Statewide Integrated Traffic Records System (SWITRS) reports. The most current five-year period available is December 1, 2013 through November 30, 2018.

The calculated collision rates for the study intersections were compared to average collision rates for similar facilities statewide as indicated in 2014 Collision Data on California State Highways, California Department of Transportation (Caltrans). Two of the three intersections exhibited above-average crash rates. The collision rate calculations are provided in Appendix F and are summarized in the Table below.

Study Intersection – Collision Rates	Number of Collisions (2014-2019)	Calculated Collision Rate (c/mve)	Statewide Average Collision Rate (c/mve)
Yolanda Ave-US 101N Ramps/Santa Rosa Ave	31	**0.44**	0.27
Petaluma Hill Rd/Yolanda Ave	10	**0.30**	0.27
Santa Rosa Ave/Hearn Ave	19	0.26	0.27

Note: c/mve = collisions per million vehicles entering; **bold text** indicates a collision rate that exceeds the statewide average for similar facilities

Further review of the collisions recorded at Yolanda Avenue-US 101 North Ramps/Santa Rosa Avenue indicates that of the 31 collisions, 13 were rear-end collisions, including 12 that occurred on the northbound and southbound approaches to the intersection. This type of crash is common at signalized intersections where there is congestion, especially during peak periods. It is suggested that the City consider investigating improvements to signal coordination on Santa Rosa Avenue and increasing enforcement in the area to address this situation.

Of the 10 reported collisions that occurred at the intersection of Petaluma Hill Road/Yolanda Avenue, five were rear-end collisions, three were sideswipe collisions, and two were hit object collisions. These collisions generally resulted from unsafe speed and are typical of conditions at a congested intersection. During the study period, 60.0 percent of collisions resulted in injuries, compared to a 37.3 percent average statewide. The City of Santa Rosa Capital Improvement Program has identified improvements to the Hearn Avenue interchange at US 101 that would reasonably be expected to ease traffic congestion and enhance operations.

17.1.6 Parking

The project was analyzed to determine whether the proposed parking supply would be sufficient for the anticipated parking demand for the proposed 8,500 square foot building including the cannabis dispensary, cannabis microbusiness and neighborhood commercial uses, and the proposed 18,000 square foot industrial building. The project site as proposed would provide a total

of 24 parking spaces immediately adjacent to the dispensary/industrial building and 32 spaces adjacent to the new industrial building.

Jurisdiction parking supply requirements are based on the City of Santa Rosa City Code, Chapter 20-36.040; Number of Parking Spaces Required. The municipal code requires cannabis dispensaries to provide parking at a rate of one space per 250 square feet, or 19 spaces for this project. For the commercial (untenanted) portion of the building the parking requirements for shopping center were applied; the rate of one space per 250 square feet translates to a required nine spaces.

The municipal code requires industrial uses of 50,000 square feet or more to provide one space per 700 square feet. As indicated on the site plan, the parcels where the two proposed buildings would be located are a component of the larger project area. The buildings would be in close proximity to one another and vehicles would be able to circulate between the parcels and access parking adjacent to any of the buildings. Taken together, the industrial portion of the dispensary/industrial/commercial building, the proposed new industrial building, and the two existing industrial buildings total approximately 54,000 square feet. With one parking space required for each 700 square feet, a total of 77 parking spaces would be required for the industrial uses. There are 32 spaces proposed for the new industrial building and 71 spaces adjacent to the existing industrial buildings. Adjacent to the dispensary/industrial/commercial building, 24 spaces have been proposed. Based on the square footage of each of the building's land uses, the City code requires 19 spaces for the dispensary, four spaces for the industrial portion of the building, and nine spaces for the commercial use. For the entire site, 104 parking spaces would therefore be required; since 127 spaces would be provided by the project and existing uses, the project would exceed the City parking requirements. These requirements are broken down by parcel and use in Table 15 of Appendix F.

Bicycle Parking

The City of Santa Rosa's Municipal Code Section 20-36.040 stipulates the City's bicycle parking requirements for new developments. For cannabis dispensaries and shopping centers, this requirement is one space per 5,000 SF. For industrial uses, one bicycle parking space is required for each 14,000 SF. Based on these requirements, the dispensary/industrial/commercial building would be required to provide two bicycle parking spaces, and the new industrial building would be required to provide one bicycle parking space. The proposed project includes the addition of one bicycle rack per building, which exceeds City codes.

The TIS for this project identified the following Findings regarding Alternative Modes, which the project would comply with:

- Pedestrian access would be improved by the construction of the sidewalk along the Yolanda Avenue frontage. Since this access would end at the edge of the project site, a paved shoulder or other all-weather surface walkway should be provided to connect the project site to the existing sidewalk along the frontage of the 7-11 if sufficient public right-of-way is available. Upon completion of the remainder of the sidewalk along with the

proposed Yolanda Avenue Widening, pedestrian facilities serving the project site would be adequate and would be tied into the areawide network of facilities.

- Adequate width should be provided along the project frontage to accommodate the City's planned bike lanes along Yolanda Avenue. Upon completion of the bike lanes along Yolanda Avenue, bicycle facilities serving the project site would be adequate.

- Transit facilities serving the project site are adequate. As part of the project's new construction, pedestrian access should be improved along the Yolanda Avenue frontage and beyond, if necessary, to provide a complete connection of pedestrian facilities from the project site to the closest bus stops near the intersection of Yolanda Avenue/Santa Rosa Avenue.

- With the provision of one bicycle rack per building, bicycle parking would be adequate.

17.1.7 Access

As discussed above, the City has plans to widen Yolanda Avenue, which includes the project frontage, so the future sight distance could not be evaluated in the field. However, Yolanda Avenue is straight and flat, which would provide adequate sight distance in both directions for vehicles exiting and entering the project driveway. As the City's planned cross-section for Yolanda Avenue includes bike lanes adjacent to the curb and no on-street parking, potential obstructions near the driveway entrance would be minimized. Access to and from the project site is expected to be adequate. A detailed discussion of pedestrian, bicycle and transit facilities is included on pages 21 and 22 in Appendix F.

17.2 Impact Questions

At the City of Santa Rosa's direction, and for ease of understanding the different components of this project, the TIS evaluated the traffic portion of the CEQA checklist separately for the GPA and the CUP aspects of this project. In accordance with CEQA Guidelines, the entirety of the project impacts is discussed below.

17.2.1 a). Less than Significant

Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

As demonstrated above, the proposed project is consistent with adopted policies and plans regarding roadway, public transit, bicycle, and pedestrian facilities. The Santa Rosa General Plan 2035 Policy T-D-1 establishes LOS D as the minimum overall roadway performance level during peak travel periods along all major corridors. The project intersections are anticipated to meet City standards under all scenarios tested (LOS D or better).

As described above, pedestrian network improvements would be constructed during the widening of Yolanda Avenue along with providing Class II bike lanes along Yolanda Avenue. The City will

require a travel lane, a bike lane, sidewalk and an easement behind the sidewalk as a condition of approval for this project.

Any improvements to pedestrian and bicycle facilities are expected to enhance access to the project site and would adequately accommodate any change in pedestrian and bicycle activity in the vicinity of the project site.

The proposed sidewalk that would be constructed on Yolanda Avenue as part of the City's Yolanda Avenue Widening project would effectively connect the site to the surrounding pedestrian network. In general, the pedestrian network surrounding the project site is well-connected and provides adequate access for pedestrians. Existing bike lanes on Petaluma Hill Road and Santa Rosa Avenue, along with City-planned future bicycle facilities, provide adequate access for bicyclists.

Existing transit routes are adequate. Existing stops are within an acceptable walking distance of the project site. As such, the proposed project is consistent with adopted policies and plans regarding public transit, bicycle, and pedestrian facilities.

As demonstrated above, the study intersections are expected to operate acceptably upon the addition of project trips to Existing, Baseline, and Future scenarios, resulting in a less than significant impact on traffic operation. In addition, the project would enhance pedestrian connectivity in the project area.

In summary, the project would not have significant adverse impacts on the performance of the transportation system for any travel mode, and impacts with respect to conflicts with measures of transportation system effectiveness would be less than significant.

17.2.2 b).: Less than Significant

Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

CEQA Guidelines § 15064.3, subdivision (b) indicates that land use projects would have a significant impact if the project resulted in vehicle miles traveled (VMT) exceeding an applicable threshold of significance. It further notes that if existing models or methods are not available to estimate the vehicle miles traveled for the project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively.

While the City has not yet adopted a policy regarding vehicle miles traveled (VMT), the project's contribution was estimated for informational purposes only. Vehicle miles traveled associated with the project were calculated by multiplying the estimated number of trips and the average trip distance for the Traffic Analysis Zone (TAZ) in which the project is located. Using the net increase in the number of daily trips generated for the proposed cannabis dispensary/industrial building in the requested CUP as determined above using the standard trip generation rate, and an average distance of 4.47 miles traveled per daily trip in the project's location as available from the Sonoma

County Transportation Authority (SCTA) travel demand model, the estimated VMT for the project is 5,851.

Overall, the project would have a less than significant impact on vehicle miles traveled, as the project would be anticipated to result in significantly fewer vehicle trips to the project site when comparing buildout potential with the current land use designations versus the proposed project land uses. The independent TIS shows that the reduction in trips is anticipated to be greater than 15 percent.

The project is in an area with a high level of public transit. In addition, the project will be easily accessible to bicyclists (and those that use other modes of alternative transportation), thereby reducing VMT. Therefore, the project will have a less than significant transportation impact.

17.2.3 c). Less than Significant

Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The proposed project does not include any modifications to the existing transportation and street network or propose to change existing driveway geometrics that could increase hazards related to design features. The proposed project includes improvements along the site's frontage to meet City requirements and supplement the City's proposed Yolanda Avenue Widening project. These improvements would be constructed to meet applicable design standards.

17.2.4 d). Less than Significant

Would the project result in inadequate emergency access?

The proposed project does not include any modifications to the existing transportation and street network. The Land Use Designation change de-intensifies the development potential, which would result in fewer trips to the project site overall, resulting in no expected increase, but potentially a minor decrease, in roadway delay that would affect emergency response times. The most recent emergency personnel response times available are detailed in section 15.1 above.

The TIS found that the study intersections would be expected to continue operating acceptably and at the same LOS (D or better) under Future plus Project operating conditions, during both peak periods (Appendix F), and will therefore not substantially affect emergency response times or access. This is a less than significant impact. The proposed project would result in modest increases to delay at nearby intersections, though all would continue to operate at acceptable service levels (LOS D or better) and therefore be considered as providing adequate access. Drive aisles would be provided around all sides of the cannabis dispensary/industrial/commercial building, providing adequate (and enhanced) emergency vehicle access. The project site would be designed to meet all applicable City and State standards and would improve project site access.

Resources

City of Santa Rosa General Plan 2035
City of Santa Rosa Bicycle and Pedestrian Master Plan Update 2018
City of Santa Rosa CityBus System Map
Sonoma County Transit website
Traffic Impact Study for the Yolanda Avenue Industrial Project, W-Trans, February 14, 2020

18.0 TRIBAL CULTURAL RESOURCES

IMPACT QUESTIONS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	Less than Significant Impact	No Impact
XVIII. TRIBAL CULTURAL RESOURCES					
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, or 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:					
ai). 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		X			

section 5020.1(k), or					
aii). A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		X			

18.1 Tribal Cultural Resources Setting

The City of Santa Rosa General Plan provides a summary of cultural and historical resources for the Santa Rosa Planning Area, with initial Native American habitation dating back approximately 7000 years. At the time of initial contact between Europeans in approximately the early 1800s, the Planning Area was occupied by the Southern Pomo, who reportedly occupied an area beginning approximately 5-miles south of Santa Rosa Creek, and extending approximately 40-miles north, and easterly to Big Sulphur Creek; the coastal territory of the Southern Pomo reportedly extended along the coastline from approximately Gualala to just north of Stewarts Point.

Beginning in approximately the early 1800s, the Spanish missionaries moved into the area, permanently altering the Southern Pomo way of life. With the discovery of gold in the 1840s, came an influx of non-natives to the area, and the subsequent establishment of agricultural and commercial ventures to the Santa Rosa area, with increasing density of development occurring up through the late 1800s.

Within the Santa Rosa Planning Area are six primary drainages, along which human habitation has generally been concentrated, although Native American archeological sites have also been identified along ridge tops, midslope terraces, the base of hills, and near transition zones between biomes. The Santa Rosa Planning area contains 190 identified Native American resources, concentrated in and around Santa Rosa Creek and its tributaries, the alluvial flats, hills around Trione Annadel State Park, the Laguna de Santa Rosa, and the Windsor area.

Tribal cultural resources are defined as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion in the California Register of Historical Resources (California Register) or included in a local register of historical resources, or a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant. A cultural landscape that meets these criteria is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. Historical resources, unique archaeological resources, or non-unique archaeological resources may also be tribal cultural resources if they meet these criteria.

An independent Historic Property Survey was performed for the two buildings that will be demolished for this project because they are over 50 years old. The *Historic Property Survey and CEQA Evaluation for 350/358 Yolanda Avenue (APN44-072-008) and 368 Yolanda Avenue (APN 044-072-009), Santa Rosa, California, 95405*, dated November 19, 2019, and performed by J Longfellow Consulting, is provided in Appendix D. The results of the study are discussed below; no cultural resources were identified.

The City of Santa Rosa notified California Historical Resources Information System (CHRIS) of the proposed project. Their response, dated January 14, 2020, and presented in Appendix E, stated that the project area has a low possibility of containing unrecorded archaeological sites, and that further study for cultural resources or archaeological sites is not recommended. In accordance with SB 18 Tribal Consultation Guidelines, the entirety of the project was referred; in accordance with AB 52, all discretionary entitlements were referred. On January 30, 2020, the Native American Heritage Commission (NAHC) notified the City that the result of the Sacred Lands File (SLF) check conducted through the NAHC was negative. It provided contact information for eight tribes with traditional lands or cultural places located within the boundaries of Sonoma County where the project site is located. The eight tribes that were contacted were Coverdale Rancheria of Pomo Indians, Dry Creek Rancheria Band of Pomo Indians, Federated Indians of Graton Rancheria, Guidiville Indian Rancheria, Kashia Band of Pomo Indians of the Stewarts Point Rancheria, Lytton Rancheria, Middletown Rancheria and Mishewal-Wappo Tribe of Alexander Valley. At the close of the 90-day response period, five tribes responded that consultation would not be requested and one tribe, the Mishewal-Wappo Tribe of Alexander Valley, neither retrieved the letter mailed via certified mail within the U.S. Post Office's allotted timeframe nor responded to email and telephone contact attempts by the City. See Appendix E for consultation letters and responses.

Lytton Rancheria requested that the project be conditioned such that if cultural resources are discovered during the project construction (inadvertent discoveries), all construction activities within a 100-ft radius of the fine shall cease, and a qualified archaeologist and representatives of

the culturally affiliated tribe(s), if applicable, shall be retained by the project sponsor to investigate the find, and make recommendations as to treatment and mitigation of any impacts to those resources. This request is contained in **Mitigation Measure CUL-1** in section 5.3 above.

The City received a request for consultation regarding the proposed project from the Federated Indians of Graton Rancheria on March 3, 2020. An initial consultation meeting was scheduled by Graton Rancheria and held on April 29, 2020. As of May 26, 2020, this information is being compiled by the City to share with Graton Rancheria.

18.2 Impact Questions

18.2.1 ai).: Less than Significant with Mitigation Incorporated

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, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

The independent Historic Property Survey, which studied two of the project parcels (parcels C and G), states that neither of the two parcels are listed, or eligible for listing, as a historical resource. The study also states that the two parcels that were studied are unlikely to yield information important to the pre-history or history of the local area, California, or the nation. Although these are only two of the seven parcels involved with this project, the parcels are contiguous, and the study would likely apply to them as well, as it relates to Native American significance. The CHRIS response, which reviewed all seven parcels involved with this project, stated that further study for cultural or archeological resources is not recommended. In addition, as stated above, neither the Lytton nor Graton Rancheria tribes requested further consultation. Furthermore, **Mitigation Measures CUL-1**, **CUL-2** and **CUL-3**, detailed in section 5.3 above, will be implemented. As such, the project impact would be less than significant.

18.2.2 aii).: Less than Significant with Mitigation Incorporated

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, or 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 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.

As discussed above, the project site is not known to contain any tribal cultural resources. In the unlikely event that something of cultural value is discovered during project development, **Mitigation Measures CUL-1**, **CUL-2** and **CUL-3** will be implemented, thereby reducing the

impact to less than significant. **Mitigation Measure CUL-1** states, in part, that if cultural resources are discovered during the project construction (inadvertent discoveries), all work within 100 ft of the find shall cease, and a qualified archaeologist and representatives of the culturally affiliated tribe shall be retained by the project sponsor to investigate the find, and make recommendations as to treatment and mitigation of any impacts to those resources.

Resources

City of Santa Rosa General Plan 2035
City of Santa Rosa GIS map
Historic Property Survey and CEQA Evaluation for 350/358 Yolanda Avenue (APN 044-072-008) and 368 Yolanda Avenue (APN 044-072-009) Santa Rosa, California 95404, J Longfellow Consulting, November 19, 2019
Responses from the California Historic Resources Information System and the Graton Rancheria and Lytton Rancheria Tribes (Appendix E)

19.0 UTILITIES AND SERVICE SYSTEMS

IMPACT QUESTIONS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	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?				X	
b). Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?				X	
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				X	

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?				X	
e). Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				X	

19.1 Utilities and Service Systems Setting

The City of Santa Rosa collects impact fees for open space, parkland, traffic, wastewater, water supply, storm drains, public art, and other municipal services. The one-time development impact fee is intended to offset the cost of improving or expanding City facilities needed to accommodate new private development. The proposed project is located in an area that is well served by existing utilities and service systems. The project would tie into existing sewer and water services. Development of the site is not anticipated to require substantial infrastructure improvements or enhancement to provide adequate public utilities and service systems.

According to the City of Santa Rosa 2015 Urban Water Management Plan, a majority of the City's water supply is derived from the Russian River watershed and is delivered under contractual agreement by the Sonoma County Water Agency (SCWA) – now called Sonoma Water. The SCWA holds water rights to divert 92 million gallons of water per day (mgd) with an annual maximum of 75,000 acre-feet per year from the Russian River. The SCWA also has three groundwater wells in the Santa Rosa Plain, which provide an average additional supply of 3,870 acre-feet per year. The City of Santa Rosa demanded 16,679 acre-feet in 2015 and expects the demand to rise to 28,280 acre-feet by 2040.

According to the General Plan, stormwater generated in Santa Rosa drains through six drainage basins to the Laguna de Santa Rosa. The largest drainage basin includes Santa Rosa Creek, which drains the northern Santa Rosa area via six major creeks and various tributaries. Four creeks (Brush, Austin, Spring, and Matanzas) primarily drain the easterly portion, while Paulin and Piner Creeks drain the westerly portion. Santa Rosa Creek also drains stormwater runoff generated

downtown and in surrounding neighborhoods. The number and location of creeks in northern Santa Rosa result in adequate stormwater drainage capacity in the northern area. The City's Standard Urban Storm Water Mitigation Plan (SUSMP) requires projects to design and implement post-development measures to reduce the potential stormwater impacts to local drainages.

For solid waste, within the City of Santa Rosa, Recology provides solid waste and recycling collection services to commercial and residential customers. The City of Santa Rosa and Recology maintain an exclusive franchise agreement for the collection of solid waste, organic waste and recyclable materials in the City pursuant to Chapter 9-12 of the Santa Rosa City Code.

The State of California has mandated a 50 percent waste diversion rate that must be met by all counties. The waste diversion rate is expected to rise, due to continued waste reduction programs such as composting, special waste and household toxics. The County has also adopted several waste reduction initiatives, including the Carryout Bags Ordinance and Sonoma Green Business Program, to promote and divert the amount of waste away from landfills.

The City's existing water distribution system is divided into 18 major pressure zones and several smaller sub-zones served by pipelines ranging in diameter from 4 to 24 inches. The majority of services are provided via 6-inch to 12-inch diameter mains. The City's Utilities Department is responsible for the operation and management of the Santa Rosa Subregional Water Reclamation System, which operates the Laguna Wastewater Treatment Plant (WWTP). The Laguna WWTP is a tertiary level treatment facility permitted for 21.34 million gallons per day (mgd) average daily dry weather flow, according to the City of Santa Rosa 2015 Urban Water Management Plan. The Laguna WWTP serves the cities of Santa Rosa, Rohnert Park, Sebastopol, and Cotati. The NCRWQCB regulates wastewater discharges.

The project would not require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities. All utilities currently exist to service the site. The project is not growth inducing and would not increase demand for utilities in the service area.

The proposed cannabis uses, which are generally considered to be the most potentially water-intensive uses of this project, would implement the most current environmentally conscious practices. Aside from low-flow appliances such as toilets and sinks, solar would be the primary energy provider for the facility, combined with passive heating/cooling as part of the building design. The proposed greenhouse includes an onsite water recycling system and is estimated to require approximately 20 gallons every few days, or 60 gallons per week in total.

The proposed project wouldn't trigger the need for a Water Supply Assessment under California Water Code Sec. 10910. Water Assessments are required for larger demand projects (e.g., 500 dwelling units, 1,000-person manufacturing plants, etc.). A "project" requiring a water assessment is defined by Water Code Section 10912 and includes the following:

(a) "Project" means any of the following:

(1) A proposed residential development of more than 500 dwelling units.

(2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.

(3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.

(4) A proposed hotel or motel, or both, having more than 500 rooms.

(5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.

(6) A mixed-use project that includes one or more of the projects specified in this subdivision.

(7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

(b) If a public water system has fewer than 5,000 service connections, then "project" means any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of the public water system's existing service connections, or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system's existing service connections.

(c) "Public water system" means a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections. A public water system includes all of the following:

(1) Any collection, treatment, storage, and distribution facility under control of the operator of the system that is used primarily in connection with the system.

(2) Any collection or pretreatment storage facility not under the control of the operator that is used primarily in connection with the system.

(3) Any person who treats water on behalf of one or more public water systems for the purpose of rendering it safe for human consumption.

(d) This section shall become operative on January 1, 2018.

(https://codes.findlaw.com/ca/water-code/wat-sect-10912.html)

19.2 Impact Questions

19.2.1 a-e).: Less than Significant

a) Would the project 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) Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? c) Would the project 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) Would the project 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) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

The project is located within an urbanized area within the City limits of Santa Rosa. Utilities and services exist or are available through local City services, Recology solid waste removal, Pacific Gas & Electric utilities, Sonoma Clean Power and other providers. In anticipating full build-out of the site, the General Plan indicates that adequate services, including water, wastewater treatment, sewer, and landfill capacity, exist to service the proposed facility. Standard City conditions of approval require compliance with National Pollution Discharge Elimination System (NPDES) Guidelines, including the installation of permanent, post-construction BMPs, as regulated through the Regional Water Quality Control Board.

Recology provides separate collection containers to its customers for organic and recyclable materials, thereby allowing them to be separated from the solid waste stream. Recology would provide the project with dumpsters (or other containers) for organics and recycling. This would further City and State efforts to meeting recycling and waste reduction targets.

Because sufficient services exist for development and the project will be subject to development impact fees and all applicable federal, state and local management and reduction statutes and regulations, any impacts to utilities and service systems, including solid waste management, would be considered less than significant.

Resources

City of Santa Rosa 2015 Urban Water Management Plan, June 2016
Sonoma County Water Agency
Guidelines for the Standard Urban Storm Water Mitigation Plan Storm Water Best Management Practices for New Development and Redevelopment for the Santa Rosa Area and Unincorporated Areas around Petaluma and Sonoma June 3, 2005
Santa Rosa City Code
City of Santa Rosa Groundwater Master Plan, Final Report, September 2013

20.0 WILDFIRE

IMPACT QUESTIONS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	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?				X	
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?				X	
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				X	

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?				X	

20.1 Wildfire Setting

The City has identified Wildland-Urban Interface (WUI) Zones and Very High Fire Hazard Severity Zones. The project site is not located in either of these zones (Figure 12-5 of the City's General Plan 2035). The project is located in a Local Fire Responsibility Area (City of Santa Rosa); the nearest State Fire Responsibility Area is located approximately 0.35 miles to the east of the project site according to the Sonoma County Hazard Mitigation Plan's (SCHMP) Figure 8.8. This map also shows that the project location is not in a High or Moderate Fire Hazard Severity Zone. In addition, the project would install and/or upgrade onsite fire suppression systems in accordance with all applicable building codes, plans, ordinances, statutes and regulations.

20.2 Impact Questions

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 results of runoff, post-fire slope instability, or drainage changes?

20.2.1 a-d).: Less than Significant

As noted above, the project location is not in an identified High Fire Hazard Severity Zone or WUI, and the nearest State Responsibility Area is approximately 0.35 miles to the east of the project site. The project would not impair emergency response or evacuation plans as it will not alter any roadways. The project would improve fire emergency access to the project site through the addition of connected access drives throughout the project location, with the express goal of facilitating fire truck access.

The project location is not near a slope, and therefore would not expose people or structures to significant wildfire risks, including downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability or drainage changes. The project will be surrounded with fire breaks in the form of asphalt parking areas. The project is not expected to exacerbate any wildfire risks. Therefore, wildfire impacts will be less than significant.

Resources

City of Santa Rosa General Plan 2035
Sonoma County Hazard Mitigation Plan

21.0 MANDATORY FINDINGS OF SIGNIFICANCE

IMPACT QUESTIONS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	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?		X			
b). Does the project have impacts that are individually limited, but cumulatively considerable?		X			
c). Does the project have environmental effects which will cause substantial				X	

adverse effects on human beings, either directly or indirectly?					

21.1 Impact Questions

21.1.1 a).: Less than Significant with Mitigation Incorporated

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?

The site is not located in an area identified as containing any wetlands, endangered, sensitive or special status plant or animal species and there is no suitable habitat onsite; the project area as it exists is impervious and devoid of vegetation. As a result of the existing development on the project site, no identified biological resources exist on the site or in the immediate vicinity. With implementation of the proposed Mitigation Measures presented above, impacts to air quality and cultural resources would be reduced to a less than significant level. While unlikely, there is the potential to uncover undiscovered archaeological, paleontological or human remains in the course of construction activities on-site; however, the Mitigation Measures presented above would avoid the accidental destruction or disturbance of previously undiscovered cultural resources. Overall, with implementation of these Mitigation Measures, the project would not substantially degrade the quality of the environment and associated impacts would be less than significant.

21.1.2 b).: Less than Significant with Mitigation Incorporated

Does the project have impacts that are individually limited, but cumulatively considerable?

Potentially significant site-specific and cumulative impacts to air quality, previously undiscovered historical or cultural resources, geology and soils, hazardous materials and noise would be mitigated to less than significant levels with the implementation of **Mitigation Measures AQ-1, AQ-2, CUL-1, CUL-2, CUL-3, GEO-1, GEO-2, HAZ-1, HAZ-2** and **NOI-1**. Overall, with implementation of these Mitigation Measures, the project would not substantially degrade the quality of the environment and associated impacts would be less than significant. Other projects constructed within the City of Santa Rosa would be required to demonstrate regulatory compliance and implement similar Mitigation Measures as needed. Therefore, this project would not have impacts that are individually limited, but cumulatively considerable.

21.1.3 c).: Less than Significant

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

Compliance with existing regulations and implementation of the City of Santa Rosa's standard permit conditions coupled with Mitigation Measures presented in this report would ensure that the

project would not result in substantial adverse effects on human beings, including effects related to air pollution, cultural resources, seismic and geologic hazards, hazardous materials, flooding and natural disasters, or noise and vibration. Therefore, impacts would be less than significant.

APPENDIX A

Project Description and Design Plans

BC Engineering Group
Civil Engineering & Land Planning

Project Description

This Project Description details the proposed development involving seven Assessor's parcels along Yolanda Avenue in Santa Rosa. Assessor's parcels associated with the project are as follows:

044-072-006
044-072-007
044-072-008
044-072-009
044-081-024
044-081-029
044-390-061

The project will include a new 17,982 square foot industrial building, a new 8,442 square foot building with three separate uses and premises; a cannabis dispensary (4,744 SF), a cannabis microbusiness (1,419 SF), and a vacant/untenanted space (2,279 SF). The proposed development also includes 61 new parking stalls, including 7 ADA parking stalls, proposed planting of 50 trees, and improvements to two existing buildings totaling 32,000 square feet to create a multi-unit industrial alteration building. An existing approximately 30,000 square foot industrial building is to remain on parcel 044-081-029.

Utilities to support the proposed development will include, but are not limited to, City of Santa Rosa water and sewer, and PG&E gas and electric. To reduce storm water pollution, protect water quality, and promote groundwater recharge, the proposed development will adhere to the City of Santa Rosa's low impact development requirements and utilize the City of Santa Rosa's storm drain system where necessary.

The project will require multiple applications to the City of Santa Rosa, including General Plan Amendment and Rezoning, Major Conditional Use Permit, and Minor Design Review for the new 8,442 square foot building.

General Plan Amendment and Rezoning

The purpose of the General Plan amendment under GPAM18-007 is to modify the current General Plan designations for six of the project Assessor's parcels. The General Plan amendment is intended to support the proposed development of the six Assessor's parcels, as demonstrated on the attached Site Plan developed by Henderson Architect, Inc. The Assessor's parcel numbers for the six Assessor's parcels included in the General Plan amendment are 044-070-006, 044-072-007, 044-072-008, 044-081-024, 044-081-029, and 044-390-061. In addition to the General Plan Amendment, a Rezoning application has been submitted under REZ19-003 to rezone the six Assessor's parcels to conform to the proposed General Plan designations.

The proposed 17,982 square foot industrial building is part of the overall proposed development; however, only a portion of the building is located on one of the six Assessor's parcels proposed for General Plan amendment, that parcel being 044-390-061. The remainder of the proposed building is located on 044-072-009, which already has the same zoning and General Plan designations as those designations proposed for the six Assessor's parcels associated with the General Plan amendment and Rezoning applications.

Following is a summary of each of the parcels included in the General Plan amendment (GPAM18-007) and Rezoning (REZ19-003), including existing and proposed designations and uses:

044-072-006 – 324 Yolanda Avenue
Parcel Area: 0.17 Acres
Current GP Designation: Undesignated
Proposed GP Designation: Light Industrial
Current Zoning: CG
Proposed Zoning: IL
Current Use: Light Industrial
Proposed Use: Light Industrial - Access Drive

044-072-007 – 330 Yolanda Avenue
Parcel Area: 0.34 Acres
Current GP Designation: Retail and Business Services
Proposed GP Designation: Light Industrial
Current Zoning: CG
Proposed Zoning: IL
Current Use: Light Industrial
Proposed Use: Light Industrial - Cannabis Dispensary, Cannabis Microbusiness, and Vacant/Untenanted Space

044-072-008 – 350/358 Yolanda Avenue
Parcel Area: 0.33 Acres
Current GP Designation: Retail and Business Services
Proposed GP Designation: Light Industrial
Current Zoning: CG
Proposed Zoning: IL
Current Use: Light Industrial
Proposed Use: Light Industrial - Cannabis Dispensary, Cannabis Microbusiness, and Vacant/Untenanted Space

044-081-024 – 328 Yolanda Avenue
Parcel Area: 1.92 Acres
Current GP Designation: Retail and Business Services
Proposed GP Designation: Light Industrial
Current Zoning: CG
Proposed Zoning: IL
Current Use: Light Industrial
Proposed Use: Light Industrial - Industrial Alteration Building (multi-unit)

044-081-029 – 324 Yolanda Avenue
Parcel Area: 1.68 Acres
Current GP Designation: Retail and Business Services
Proposed GP Designation: Light Industrial
Current Zoning: CG
Proposed Zoning: IL
Current Use: Light Industrial

Proposed Use: Light Industrial – Existing Building

044-390-061 – No Address Assigned
Parcel Area: 0.45 Acres
Current GP Designation: Med-High Residential
Proposed GP Designation: Light Industrial
Current Zoning: R-3-15
Proposed Zoning: IL
Current Use: Light Industrial
Proposed Use: Light Industrial – Portion of Proposed 17,982 SF Industrial Building

Major Conditional Use Permit

The proposed 8,442 square foot building with three separate uses and premises; a cannabis dispensary (4,744 SF), a cannabis microbusiness (1,419 SF), and a vacant/untenanted space (2,279 SF), will require submittal of a Major Conditional Use Permit. The submittal is to permit the uses associated with the single building which proposes hours of operation of 10am to 6pm, 7 days a week.

Use Permit Project Summary

A purpose-built, immersive retail destination, the Friends & Farmers facility offers a rare opportunity to instill, from inception, a commitment to health, wellness and sustainable development with a sophisticated and welcoming atmosphere, where patients and consumers can learn about the truly remarkable attributes of this therapeutic plant – within a thoughtfully designed, naturally engaging, and inspiring environment.

Offering exceptionally pure, locally grown and high quality cannabis products, Friends & Farmers will provide an experiential retail destination that serves as a home for the new cannabis culture, and a focal point for the renewal of Santa Rosa's Yolanda Avenue district.

Modeled after the great wineries of the region, and in alignment with the agrarian roots of the community, Friends & Farmers will be a place to engage with, learn about and purchase the highest quality, sun grown and craft cannabis products from our NorCal region. The applicant is committed to this facility serving as a flagship location in support of the heritage and legacy of cannabis in Northern California, innovative green building design, and the health of our community.

The facility will be inclusive of a beautifully designed retail storefront (cannabis dispensary permit), type 6 non-volatile manufacturing area (cannabis manufacturing permit), a small, glass greenhouse that will serve as a demonstration garden for educational purposes (cannabis craft cultivation and small nursery permit), a private member's consumption lounger for guided tasting experiences and private health consultations (not including smoking or vaping), and a non-cannabis licensed lifestyle storefront for showcasing other locally produced market-style, lifestyle goods for health and wellness.

Built from the ground up, the store will be designed to educate, engage and inspire a deeper understanding of cannabis, and its wide-reaching therapeutic potential. Taking cues from the applicant's extensive work in the wine industry, and three-years of hands-on experience running their own virtual cannabis dispensary, they know how to provide

exceptional customer service with informed and personalized health consultations suited to each individual's needs and desires.

A beautiful, comfortable and inviting retail environment, the store will offer a thoughtfully curated product selection – defined by absolute purity, standardized potency and full-spectrum therapeutic effect. Our product curation will continue to include best-of-class products supporting Northern California's heritage of the local craft farmer, and biodynamic, sun grown and regenerative farming practices.

Cultivation and Nursery

The applicant proposes a cultivation canopy of roughly 476 square feet. A glass greenhouse will serve as an educational showpiece, offering the chance for visitors to see the plant in its various stages of plant growth and to learn about the differences between cultivars, terpene development and growing techniques. Customers will be able to look in through the glass to see the plants and other herbs that they will have growing for demonstration purposes. Some plants will be harvested and dried for packaging and sale on site with demonstrations on harvesting, curing and trimming. The project will grow plants to full-term, as well as have the ability to cut and plant clones, and sell them to customers in hand-made pots etc.

Manufacturing

Onsite manufacturing, including nonvolatile, CO2 extraction will be conducted onsite. Activities will include extraction, processing, sorting, packaging and grading. This use is permitted in the IL-Light Industrial zones, but is included in the Use Permit project description in order to provide a complete perspective on operations and to be clear that since the parcel is in the midst of rezoning, it is allowed in the IL zones.

Distribution

Onsite distribution of cultivated and manufactured cannabis and cannabis products will be conducted onsite. Activities include interacting with lab facilities to ensure quality control and lab testing, collection of taxes, and logistics. This use is permitted by right in the IL-Light Industrial zones, but is included in the Use Permit project description in order to provide a complete perspective on operations since the parcel is in the midst of rezoning from CG to IL.

Retail

The applicant proposes to operate a cannabis retail dispensary which will utilize 4,744 SF of the proposed building. Visitors to the cannabis retail dispensary will check in at the reception area and have their identification and age verified. Visitors will be accompanied by a designated security person and either go directly to the retail floor or be offered a private seated consultation. A walk up service counter and pick up counter for online or phone orders will be available. There is a separate area from the main retail floor that's designed as a private consultation area to host customers and patients who have more complicated health needs, who may be remiss to share their most personal details in a larger public space. This area will be large enough to also be used as a conference room, meeting room or lounge area, to accommodate larger groups, celebrities, and members looking for a private location to meet - overlooking the greenhouse. Since this will be a private area, customers, patients and guests, will have the chance to try products allowable by the on site consumption regulations including CBD, tinctures, sublingual, topicals and edibles (excluding vape or smoking options).

A separate vacant/untenanted space is contained within the proposed building. At this time, it is undetermined what will occupy the vacant/untenanted space.

Environmental Sustainability

Multiple environmental sustainability commitments have been made as a part of the project, including, EV charging stations, bike stands, upgraded pedestrian access, solar panels, LED lights, drought tolerant landscaping, low flow toilets, water wise appliances, non-toxic cleaning agents, and employee carpool planning.

Minor Design Review

The proposed 8,442 square foot building requires a Minor Design Review submittal to the City of Santa Rosa. Below is the Design Concept Narrative developed by Henderson Architect:

Design Concept Narrative
The Yolanda avenue dispensary project will be a newly constructed retail building at the location of the former auto sales business located at 358 Yolanda Avenue. The site is currently in the approval process for a General Plan amendment and Zoning change to convert the site from CG zoning to IL zoning. The anticipated hearing date is in October.

The building is being built by the property owner as a shell retail building with the intent of leasing the building to cannabis micro-business that will include a Dispensary, Distribution, a small Demonstration Manufacturing and Grow area within the building. A portion of the building will be leased to a separate tenant yet to be identified. The space is currently identified as vacant on the floor plan.

This project incorporates the City requirements for the road enlargement and new frontage improvements along Yolanda Avenue. In a separate design review package, we will be submitting a new industrial building located to the East of this retail building project. The new industrial building and this retail building will be the new Yolanda "frontage façade" for the entire industrial parcel comprised of multiple buildings. The design of this retail building and the industrial building have been coordinated so that there is uniformity of the architecture on the site when viewed from Yolanda Avenue.

Site: Natural and Built Environment
The site is currently comprised of a small commercial building that appears to be a converted residence. The existing structure is very residential in form and scale and is entirely surrounded by asphalt with chain link fencing to separate this parcel from the adjacent parcels under the same ownership. The new retail building will be set back away from Yolanda in order to allow for the frontage improvements that will accommodate a new center turn lane, bike lane, generous landscape buffer and sidewalk. Interior to the frontage improvements is parking adjacent to the building landscape buffer and walkways for access around the retail building. There is a central landscape peninsula at the center entrance to the retail building that will have polished basalt stone benches, decomposed granite walkways, and landscaping. This central outdoor area will provide a nice gathering area in front of the retail buildings central entrance.

Architecture

The building design is based on a modification of the form of a traditional horse barn that can be seen throughout the rural area of Sonoma County. The tall roofed central section will serve as an open-air courtyard and reception area for people using the retail functions within the two "wings" of the horse barn form. This central section is open to the exterior with a large opening that can be closed off by the large sliding barn doors. On the front façade above the sliding barn doors are large square glazed windows that reference a hay loft barn door you would see on traditional horse barns. The same windows can be found on the upper area of the rear side of the large central volume. There are also clerestory windows along both sides of the taller central form.

Each side of the central tall form is a separate retail lease space. It is intended that West lease space will be the location of the future dispensary and the East space will be leased to a yet to be determined tenant. See the attached color floor plan diagram that illustrates the locations of the proposed building uses.

For the potential dispensary tenant there will be a greenhouse built at the rear of the central tall open-air space. This will be the location of the nursery/grow portion of the microbusiness. The manufacturing space will be located with the Dispensary wing of the retail space. The Distribution office is carved out of the vacant space intended for a future tenant. It is separate but within the wing to be leased to the a future tenant.

The building materials are proposed to be a grey patinaed cedar board and batten siding with black accents at the roof brackets, window frames, and door hardware. The barn doors will be "weathered" white paint color. The roof will be a light grey metal roof.

Landscaping

The site access and landscaping for both the retail building and the adjacent new industrial building will be developed at the same time and will be landscaped with the same palette to provide continuity to the site and to assist in working towards a comprehensive campus feel.

The landscape frontage around the sidewalk will be planted with Chinese Pistache along the street and some intermittent Redbuds interior to the site from the sidewalk. There will be shrubs and ground cover among these trees along the frontage.

Interior to the site and more adjacent to the building will be larger Chinese Elm trees, Chinese Pistache, Western Redbud and Sweet Bay trees. A few accent trees near the outdoor seating area in front of the building entrance include Gravenstein Apple and Olease Europea located to reinforce the "farm to table" concept that will be reinforced in the concept of the Dispensary interior. Among these trees will be a variety of shrubs and ground cover to provide visual interest to the site.

On the Yolanda side of the building wings there will be a wood trellis built in front of each wing that will be used to grow vines and foliage to soften the façade of the building.

Placemaking/Livability:

This project proposes a major upgrade to this site. Currently it is very uninviting and almost dangerous as it is a field of asphalt connected to Yolanda way with a maze of chain link fences.

The new frontage with bike lane, sidewalk and landscaping will be an immense improvement and provide a needed buffer between the roadway and the pedestrian sidewalk providing for a safer and more pleasant neighborhood experience when traveling along the sidewalk. Sidewalk connections are provided at two locations along the frontage of the retail and industrial building to provide pedestrian access into the site.

The fruit bearing accent trees near the entrance area available to anyone who chooses to pick a piece of fruit to take with them.

Street and parking trees with provide shade for the sidewalk and the parking lot to help in reducing with the heat island effect of the current site.

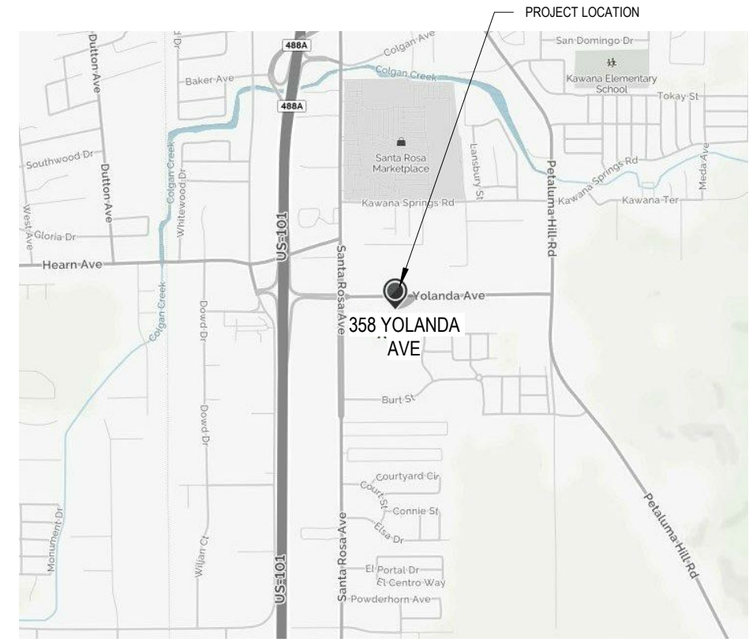
Sustainability

The buildings will be very energy efficient and will exceed title 24 requirements for HVAC, lighting, and building shell requirements. Thermally broken storefront and fixed window frames are utilized. The exterior cedar siding is a natural renewable material that is pest resistant. The metal roof will be a cool roof and will require almost no future maintenance. The materials that will be used within the building will exceed the requirements for VOC content and off-gassing.

Please refer to the Design Review submittal drawings, renderings, and material board for more information.

2 LOCATION MAP

N.T.S.



1 VICINITY MAP

N.T.S.

3 NEIGHBORHOOD CONTEXT MAP

N.T.S.

DRAWING LIST	
PLANNING	
DR-001	MAPS/DRAWING INDEX
DR-002	APN DIAGRAM
DR-003	COLORS AND MATERIALS
DR-004	COLOR RENDERING
DR-100	SITE PLAN
DR-110	SITE ANALYSIS MAP
DR-200	AREA FLOOR PLAN
DR-300	EXTERIOR ELEVATIONS
DR-400	EXISTING SITE PHOTOGRAPHS
LANDSCAPE	
L1.0	PLANTING PLAN
L1.1	PLANTING NOTES & LEGEND

HENDERSON ARCHITECT
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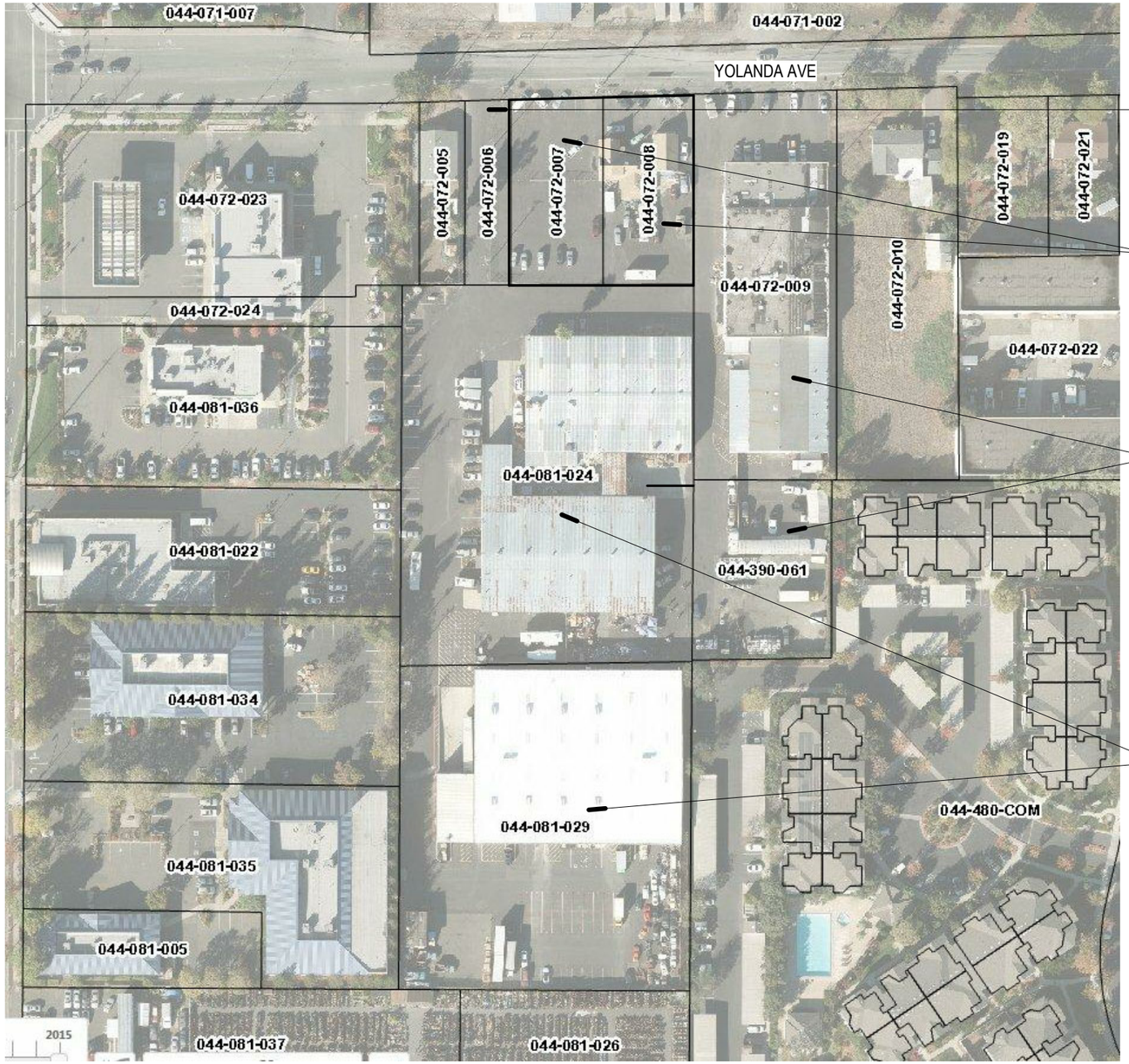
DISPENSARY/RETAIL BUILDING
358 YOLANDA AVE, SANTA ROSA, CA 95404

08.23.2019

DR-001

MAPS/DRAWING INDEX



THIS PARCEL TO REMAIN AS ACCESS DRIVE LOCATION

DISPENSARY / CAFE BUILDING,
SUBJECT PARCELS: 044-072-007, 044-072-008.

FUTURE INDUSTRIAL BUILDING UNDER SEPARATE PERMIT
SUBJECT PARCELS: 044-072-009, 044-390-061

ADDITIONAL PARCELS UNDER SAME OWNERSHIP.

NEW FIRE LANE STRIPING IS SHOWN ON THE FOLLOWING DOCUMENTS TO PROVIDE A COMPLETE FIRE ACCESS LOOP DRIVE THROUGH THE NEW AND EXISTING BUILDINGS.

1 **APN DIAGRAM**

12" = 1'-0"

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DISPENSARY/RETAIL BUILDING
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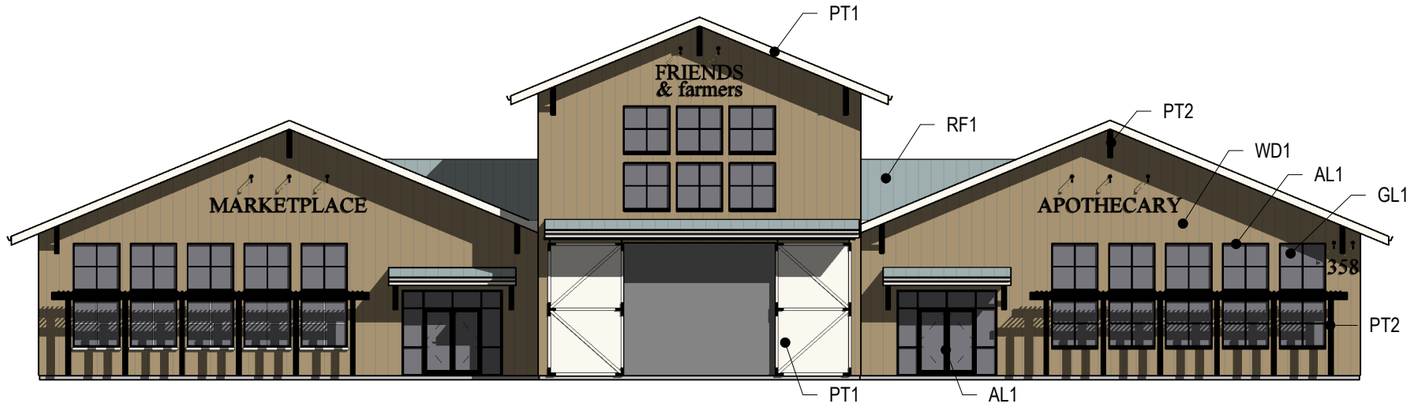
08.23.2019

DR-002

APN DIAGRAM



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DR-003

COLORS AND MATERIALS

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08.23.2019

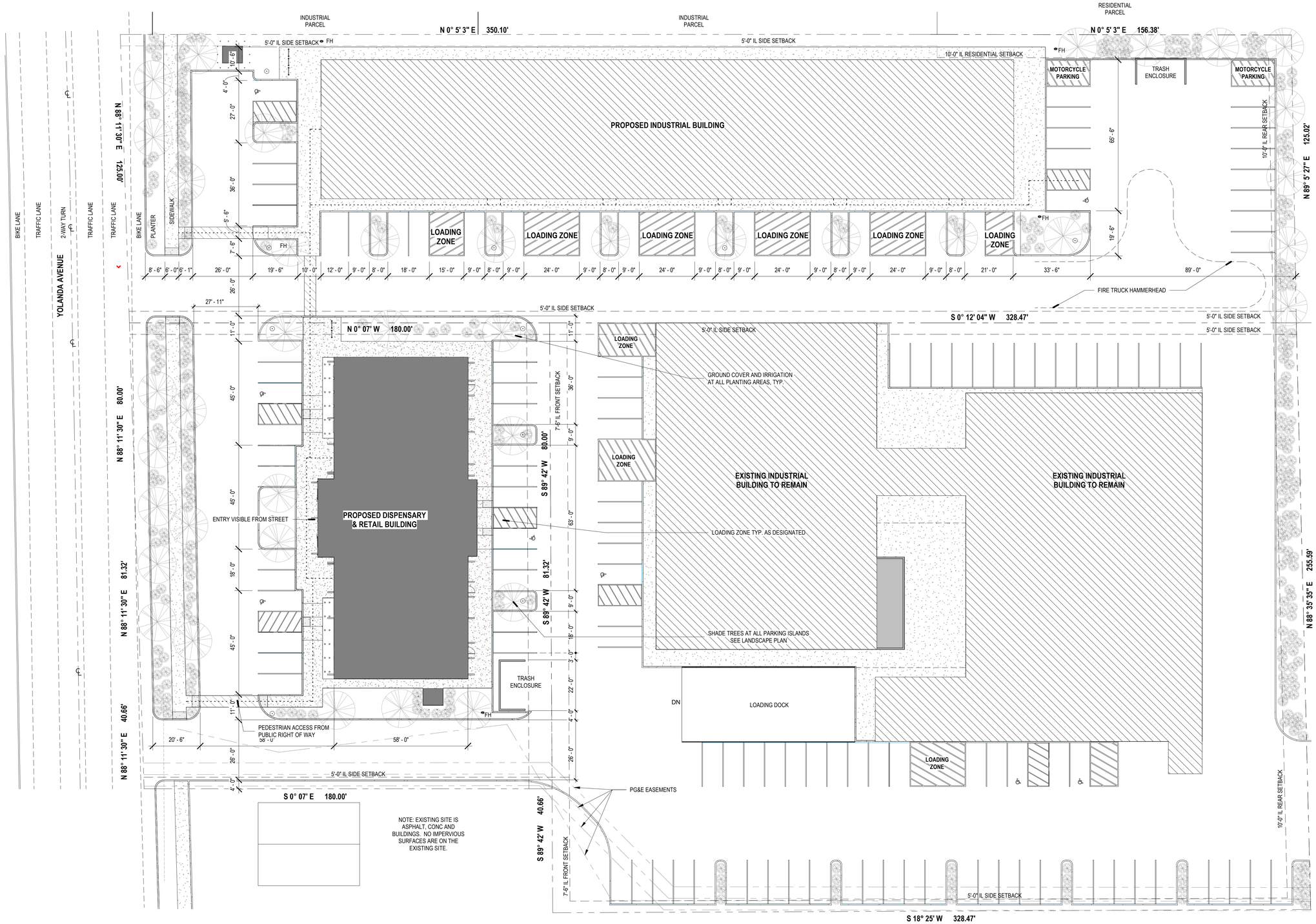
1

PERSPECTIVE FROM STREET

N.T.S.

DR-004

COLOR RENDERING



PROJECT DATA

***NOTE: THE TWO APN PARCELS ARE BEING MERGED AND A GENERAL PLAN AMENDMENT IS REVIZING THE ZONING TO IL IN OCTOBER 2019**

APN:	044-072-007 & 044-072-008 (TO BE MERGED)
JURISDICTION:	CITY
ZONING CURRENT: **ZONING AMENDED*:**	CG IL
LAND USE CURRENT: **LAND USE AMENDED*:**	COMMERCIAL & ONE STORY OFFICE BUILDING LIGHT MANUF. INDUSTRIAL
LOT SIZE (MERGED):	36,227 S.F.
GROSS BUILDING AREA:	8,441 S.F.
LOT COVERAGE ACTUAL:	23.3%
OCCUPANCY:	A,B,F-1&M

PARKING CALCULATIONS

****NOTE: SEE TRAFFIC AND PARKING STUDY BY WTRANS FOR FULL CAMPUS ANALYSIS**

DISPENSARY: 3965 GROSS SF/ 250 = 16 SPACES (ONE VAN ACCESSIBLE)
CULTIVATION: 476 GROSS SF/1000 = 1 SPACE
CANNABIS MANUF.: 889 GROSS SF/350 = 3 SPACES
RECEPTION: 702 GROSS SF/ 250 = 3 SPACES
SUB TOTAL DISPENSARY & COURTYARD = 23 SPACES REQUIRED
BICYCLE: 1/5000 SF = 1 SPACE

RETAIL: 2279 SF/ 250 = 9 SPACES (ONE VAN ACCESSIBLE)
SUB TOTAL RETAIL BUILDING = 9 SPACES REQUIRED
BICYCLE: 1/5000 SF = 1 SPACE

TOTAL PARKING REQUIRED = 32 SPACES
TOTAL PARKING PROVIDED = 24 SPACES (TWO VAN ACCESSIBLE) & 30 OVERFLOW (SEE SITE PLAN FOR OVERFLOW PARKING AREA)
BICYCLE: 2 SPACES REQUIRED AND PROVIDED

1 SITE PLAN - DISPENSARY/RETAIL

1" = 20'-0"

H | A

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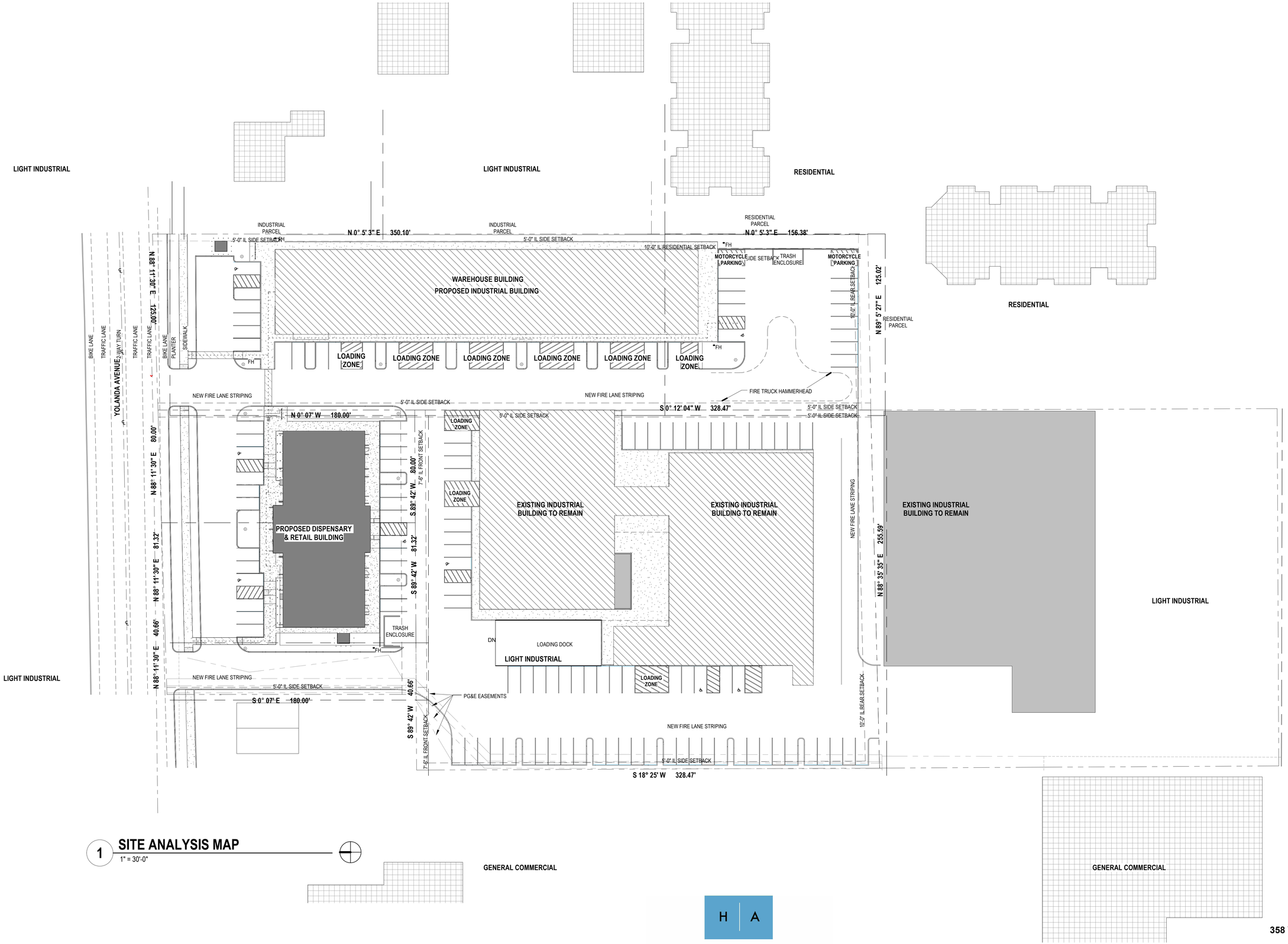
SITE PLAN
DISPENSARY/RETAIL BUILDING
358 YOLANDA AVE, SANTA ROSA, CA 95404
DR-100

08.23.2019



1 **SITE ANALYSIS MAP**

1" = 30'-0"

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SITE ANALYSIS MAP

DISPENSARY/RETAIL BUILDING

358 YOLANDA AVE, SANTA ROSA, CA 95404

DR-110

08.23.2019

1 FLOOR PLAN WITH USE DESIGNATION

1/8" = 1'-0"

Building Area Legend

- CANNABIS PRODUCTION/ MANUFACTURING
- DISPENSARY
- RETAIL

KEYNOTES	
KEY	NOTE
1	WOOD COLUMNS AT ARBOR TYP. SEE ELEVATIONS
2	DASH LINE OF SHED ROOFS ABOVE TYP. SEE ELEVATIONS

PARKING CALCULATIONS

DISPENSARY: 3965 GROSS SF/ 250 = 16 SPACES (ONE VAN ACCESSIBLE)
CULTIVATION: 476 GROSS SF/1000 = 1 SPACE
CANNABIS MANUF.: 889 GROSS SF/350 = 3 SPACES
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SUB TOTAL RETAIL BUILDING = 9 SPACES REQUIRED
BICYCLE: 1/5000 SF = 1 SPACE

TOTAL PARKING REQUIRED = 32 SPACES
TOTAL PARKING PROVIDED = 24 SPACES (TWO VAN ACCESSIBLE)
& 30 OVERFLOW (SEE SITE PLAN FOR OVERFLOW PARKING AREA)
BICYCLE: 2 SPACES REQUIRED AND PROVIDED

H A

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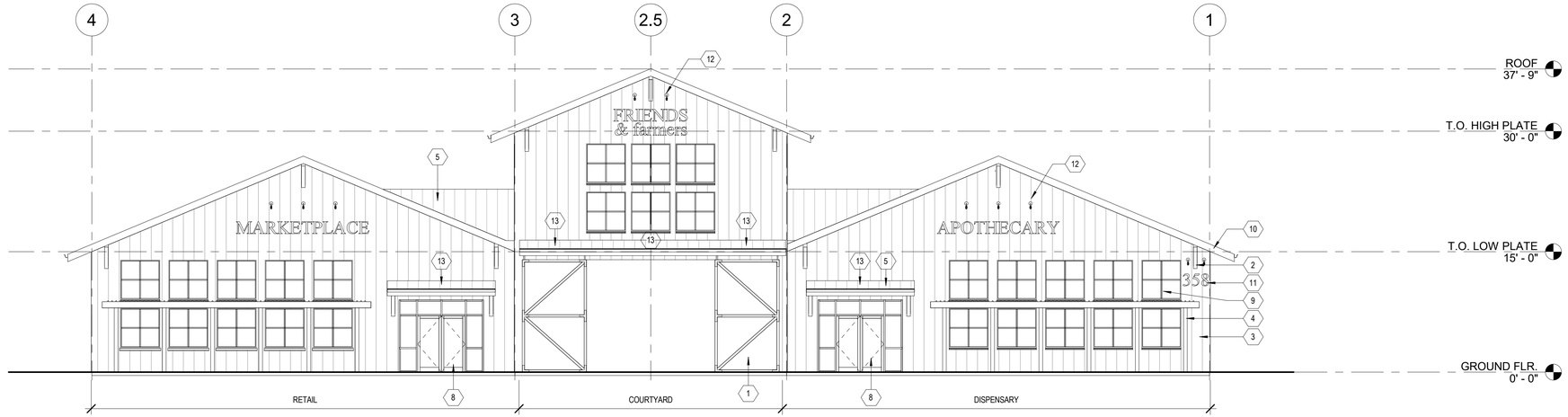
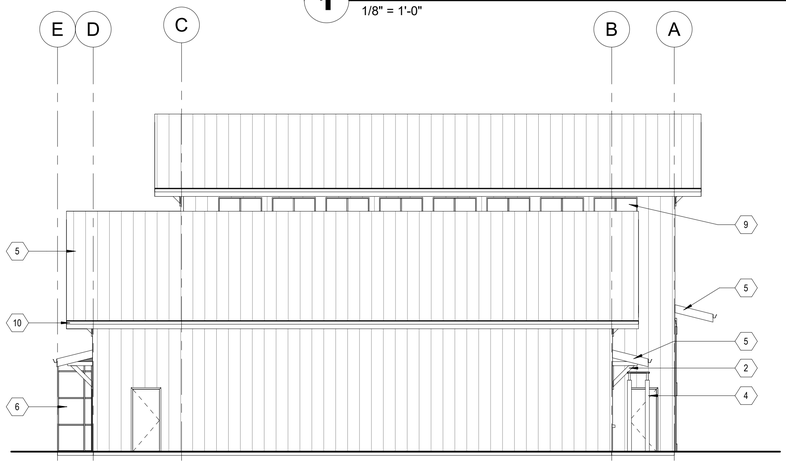
AREA FLOOR PLAN
DISPENSARY/RETAIL BUILDING
358 YOLANDA AVE, SANTA ROSA, CA 95404
DR-200

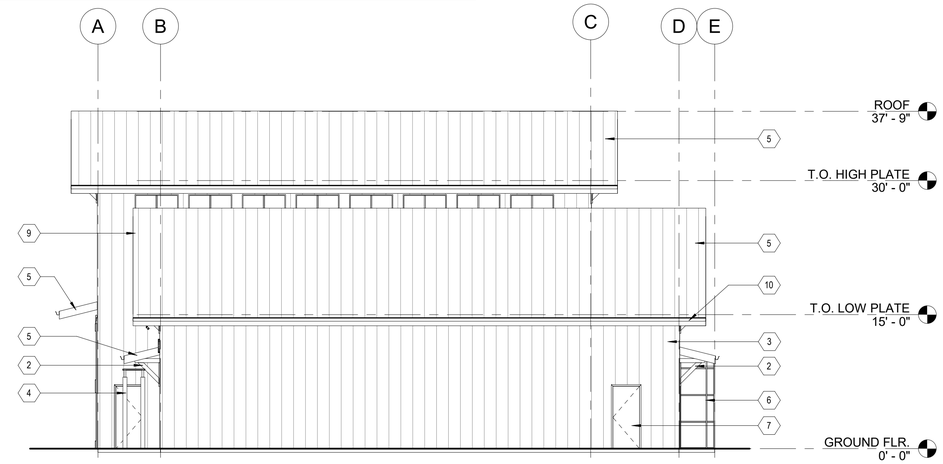
08.23.2019



1 NORTH
1/8" = 1'-0"



2 EAST
1/8" = 1'-0"



3 WEST
1/8" = 1'-0"

4 SOUTH
1/8" = 1'-0"

KEYNOTES	
KEY	NOTE
1	SLIDING BARN DOORS, COLOR: DOOR, 'LATTE FROTH', HARDWARE, 'BLACK'
2	CUSTOM WOOD KNEE BRACE, COLOR: 'BLACK'
3	WEATHERED ATLANTIC WHITE CEDAR, COLOR: ROARING 40'S
4	WOOD ARBOR-TRELLIS, COLOR: 'BLACK'
5	STANDING SEAM COOL ROOF, MEDIUM GRAY, COLOR: 'TUNDRA'
6	GREENHOUSE STRUCTURE, BLACK ANODIZED ALUMINUM, GLAZING COLOR: CLEAR
7	STEEL DOOR/FRAME , COLOR: DOOR, 'LATTE FROTH', FRAME & HARDWARE, 'BLACK'
8	STOREFRONT ENTRY, BLACK ANODIZED ALUMINUM
9	FIXED WINDOWS, BLACK ANODIZED ALUMINUM
10	FASCIA & GUTTER (AS OCCURS), COLOR: 'LATTE FROTH'
11	ILLUMINATED ADDRESS SIGN, COLOR: 'BLACK'
12	LED BULLET HEAD WALL MOUNT LIGHT FIXTURE TYPE F2 BY TROY LIGHTING. DOWNWARD CASTING, DARK SKY COMPLIANT
13	SOFFIT MOUNTED, LED FLUSH LIGHT FIXTURE TYPE F3 BY CANARM. DOWNWARD CASTING, DARK SKY COMPLIANT

H A

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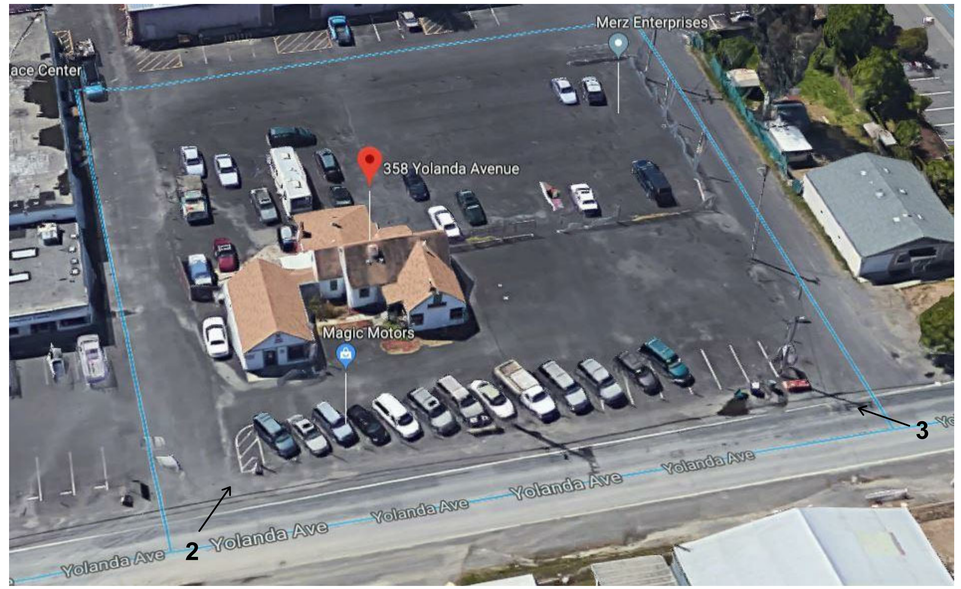
EXTERIOR ELEVATIONS

DISPENSARY/RETAIL BUILDING

358 YOLANDA AVE, SANTA ROSA, CA 95404

DR-300

08.23.2019



1 - SITE AERIAL

2 - FROM YOLANDA, LOOKING SOUTH WEST

3 - FROM YOLANDA, LOOKING SOUTH EAST

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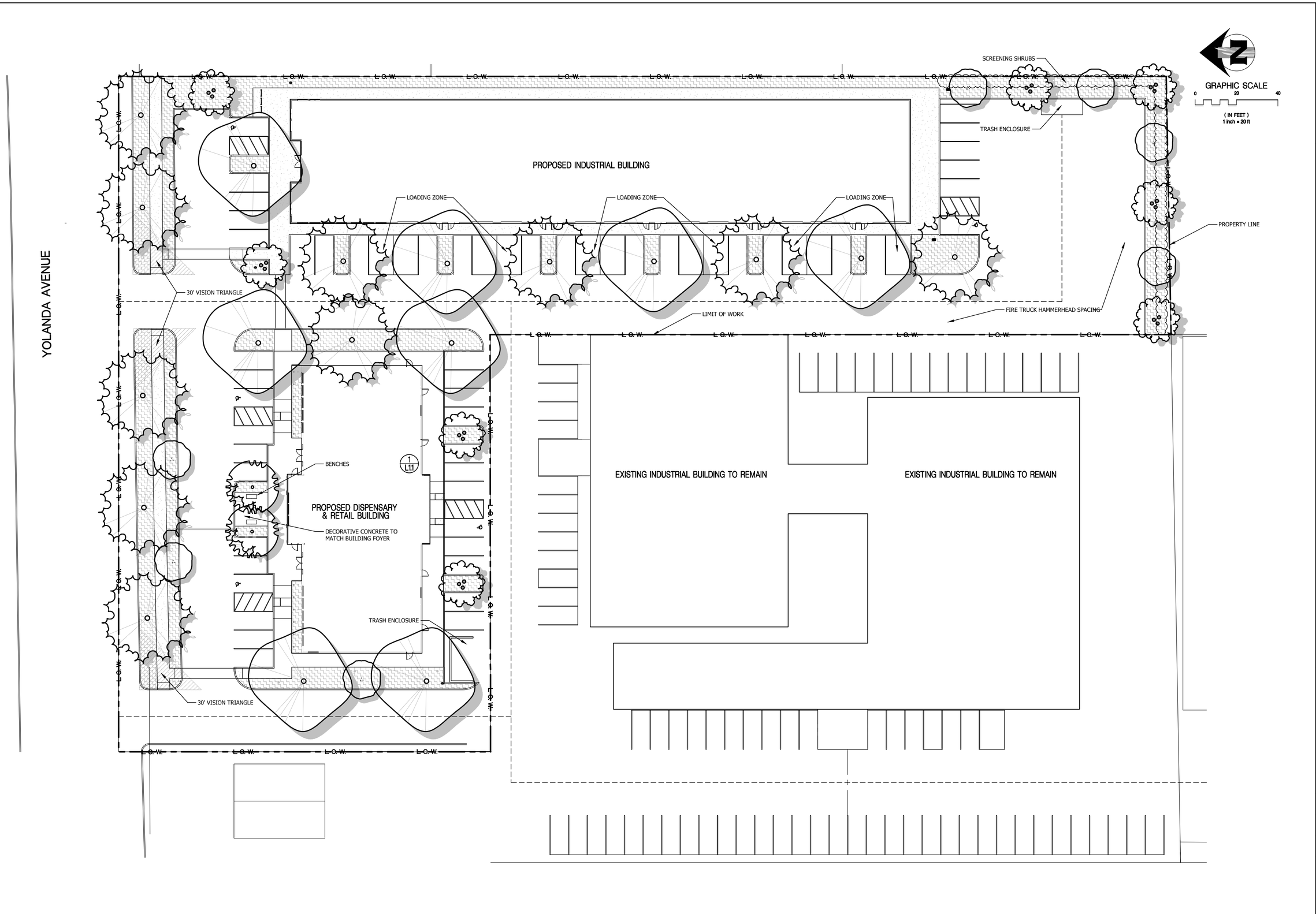
EXISTING SITE PHOTOGRAPHS
DISPENSARY/RETAIL BUILDING
358 YOLANDA AVE, SANTA ROSA, CA 95404
DR-400

08.23.2019



REV.	DESCRIPTION	BY	DATE

BC ENGINEERING GROUP, INC.
CIVIL ENGINEERING & LAND PLANNING
www.bcengineeringgroup.com
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SANTA ROSA OFFICE:
2800 Cleveland Ave, Suite C, Santa Rosa CA 95403
UKIAH OFFICE:
603 S. State Street, Ukiah CA 95482

368 YOLANDA, SANTA ROSA, CA. 95404
PRELIMINARY DESIGN REVIEW

PLANTING PLAN

LICENSED LANDSCAPE ARCHITECT
SCOTT T. GRAEFEN
R. L. A. 3841
Signature
5/21/2020
Renewal Date
Date
STATE OF CALIFORNIA

Scott T. Graefen
RLA 3841 Exp. 5/21/20

Date:	06/12/2019
Job:	0132-16
Drawn:	SG, JS
Scale:	1" = 20'
APN:	044-072-009
Sheet #:	L1.0
Sheet:	1 OF 2

S:\Clients\132-16 Mike Gasparini - Yolanda Avenue\132-16 CAD\0132-16\Dwg_DesignReview\0132-16_PLNT.dwg, 8/23/2019 10:06:35 AM, sabrinas,
DWG To PDF.pc3

IRRIGATION CONCEPT STATEMENT

WE WILL DESIGN THE IRRIGATION SYSTEM TO UTILIZE THE LATEST TECHNOLOGY FOR ACHIEVING MAXIMUM WATER USE EFFICIENCY IN APPLICATION AND WATER MANAGEMENT. SYSTEM COMPONENTS WILL INCLUDE A WEATHER BASED SMART IRRIGATION CONTROLLER, ISOLATION VALVES ON THE MAIN LINE, BUBBLERS FOR TREES WHICH WILL BE ON SEPARATE ZONES FROM THE REST OF THE LANDSCAPE, AND LOW FLOW DRIP IRRIGATION.

OUR PLANTING PLAN INFLUENCES THE IRRIGATION PLAN BY PROVIDING PLANTING AREAS WITH DISTINCT HYDROZONES. HYDROZONES ARE GROUPINGS OF PLANTS WITH SIMILAR WATER REQUIREMENTS. THIS GREATLY AIDS IN THE EFFICIENT USE OF LANDSCAPE WATER. THE PLANTING PLAN ALSO TAKES INTO CONSIDERATION SOLAR EXPOSURE AND ASPECT, ADJACENT LANDSCAPE FEATURES AND BUILDINGS, SOIL TYPES AND MICROCLIMATES, ALL OF WHICH FACTOR INTO THE DESIGN OF HIGHLY EFFICIENT IRRIGATION SYSTEMS.

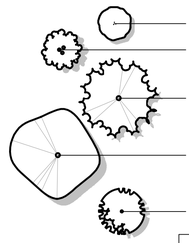
CITY OF SANTA ROSA STANDARD NOTES

1. *Upon completion of the installation, the contractor shall submit to the Engineering Development Services inspector a completed and signed "Certificate of Completion" stating that the project has been installed as designed.*
2. *The Certificate of Completion shall be accompanied by an irrigation audit, irrigation schedule and maintenance schedule, as described in the City ordinance.*
3. *A final City inspection shall be performed. The installation contractor shall attend this inspection and make all required repairs and adjustments to achieve approval and completion from the City. To schedule an inspection, contact Engineering Development Services at (707) 543-4611.*

PLANTING NOTES

1. *Contractor shall bid and install planting materials per these plans and specifications, unless given further written instructions, or written instruction by Landscape Architect. Work includes, but is not limited to all labor, general liability insurance, workman's compensation, equipment, and materials necessary to furnish, install and guarantee planting, as shown on the drawings and specified herein.*
2. *Coordinate field observations with Landscape Architect (minimum 2 visits), call to provide 48 hour notice.*
   A. *Review finished grade w/ Landscape Architect prior to plant placement. All plants shall be inspected by arborist/ Landscape Architect for health, pests and size prior to layout.*
   B. *Layout plantings for approval in full quantities, prior to digging holes. Adjust layout as directed by Landscape Architect.*
3. *Contractor shall provide submittals/samples to Landscape Architect of all specimen trees (photographs with human scale), soil, mulch, stakes, ties, agriform tablets, grass pave materials, steel edging, and other materials.*
4. *All work shall conform to the latest applicable Sonoma County Water Agency ordinances relating to planting and irrigation. All plant materials to be installed per City of Santa Rosa standards and planting details. The plant materials shall conform to the plant legend specification for size & latest edition of the American nurseryman standards.*
5. *Prior to removing any plants, contractor shall obtain approval of owner and Landscape Architect to determine specimens to remain or be transplanted. All planting areas are to be free of deleterious materials and weeds prior to planting.*
6. *A soil fertility test shall be required for review by the Landscape Architect after grading is complete and before any plant work. A soil test shall be performed to determine the final amendment and fertilizer formula. The soils report conducted by Wagpoint Analytical, (408) 727-0330, unless otherwise approved) must contain the following information:*
   A. *Soil permeability rate in inches per hour*
   B. *Soil texture test*
   C. *Cation exchange capacity*
   D. *Soil fertility including tests for nitrogen, potassium, phosphorous, ph, organic matter*
   E. *Total soluble salts and sodium content*
   F. *Contractor to request a "Bay-Friendly" Recommendation for amendments to the planting area soil*
7. *A minimum of 8" of non-mechanically compacted soil shall be available for water absorption and root growth in planted areas. Within the limits of new planting areas, the top 12" of existing soil or to the extent of existing topsoil, which ever is less, shall be stripped and stockpiled on the site for re-use. All planting areas to be tilled so that soil is loose and not compacted. All planting beds to receive a minimum of 12" of approved topsoil. To prepare planting beds and lawn areas, cultivate into top 12" of soil: 6 cubic yards of organic compost per 1,000 square feet. Compost is to have the US Composting Council's Seal of Testing Assurance (STA) and the Organic Materials Review Institute (OMRI) listing. Incorporate compost or natural fertilizer into the soil to a minimum depth of 8" at a minimum rate of 6 cubic yards per 1000 square feet or per specific amendment recommendations from a soils laboratory report. Any additional amendments shall be certified organic by OMRI.*
8. *All plant locations to be confirmed in the field by the Landscape Architect. Contractor is to coordinate all planting with utility locations not shown on this plan. Any conflicts between locations of proposed planting and site utilities or lighting to be called to the attention of the Landscape Architect.*
9. *Layout of plantings is diagrammatic and may need field adjustment for existing site conditions not shown on plans, or as directed by the Landscape Architect. Adjustments will be made for views, access, etc. All plantings shall be field adjusted to meet the minimum state regulations for planting and maintaining a fire defensible space, Dept. of Forestry. Plant quantities are for informational use only. Any discrepancies shall be brought to the attention of the Landscape Architect. The contractor shall be responsible for all plants as shown on the drawings.*
10. *Plants shall be sufficiently rooted to the edge of the container and to an extent sufficient to hold the rootball intact when removed from the container. No plants shall be acceptable that show signs of circling or girdling of roots, or any other root-bound condition. Plants shall be free from all pests and diseases.*
11. *All plants shall be placed in a triangular spaced pattern, unless otherwise specified.*
12. *Excavate planting pits 1" less than the depth of the plant container and two times the width of the plant container. Prepare hole backfill material by using 1 part existing soil to 1 part organic compost. Thoroughly mix this combination before backfilling. Set plant plumb in planting pit and brace rigidly in position, tamping backfill mix solidly around the ball and roots. Place top of rootball 1" above surrounding grade. (see planting details for trees, shrubs and groundcovers on this sheet). Do not over compact soil.*

13. *All trees are to be staked and trees and shrubs are to have watering basins. All trees closer than 8'-0" to buildings, walks, paving, curbs or footings shall be installed with a deep root barrier. Use Deep Root barrier, type UB 24-2 per manufacturer's recommendations.*
14. *After planting, water new plantings deeply and thoroughly.*
15. *A minimum 3"layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, creeping or rooting groundcovers or direct seeding applications. Mulch shall be "Cedar-Fir Chips" Mix from United Forest Products (707) 585-6056, natural color.*
16. *The Contractor shall maintain the planting and irrigation installations for 60 days from the date of final acceptance. All plant materials shall be guaranteed for a minimum period of 6 months from date of final acceptance.*



PLANTING LEGEND

KEY	BOTANICAL NAME	WUCOLS	COMMON NAME	SIZE	QTY	REMARKS
STREET / SHADE TREES						
CO	CERCIS OCCIDENTALIS	L	WESTERN REDBUD	15 G.C.	7	STANDARD TRUNKED FORM
LN	LAURUS NOBILIS	L	SWEET BAY TREE	24" BOX	8	STANDARD TRUNKED FORM
PC	PISTACIA CHINENSIS	L	CHINESE PISTACHE	24" BOX	10	STANDARD TRUNKED FORM
UP	ULMUS PARVIFOLIA	L	CHINESE ELM	24" BOX	8	STANDARD TRUNKED FORM
ACCENT TREES						
MD	MALUS DOMESTICA 'GRAVENSTEIN'	M	GRAVENSTEIN APPLE	24" BOX	–	STANDARD TRUNKED FORM
OE	OLEA EUROPAEA 'SWAN HILL'	M	OLEA EUROPAEA	36" BOX	2	MULTI-TRUNKED FORM
SHRUBS						
DO	DODONAEA VISCOSA 'PURPURAEA'	L	PURPLE HOPSEED BUSH	5 G.C.	–	6" O.C. Δ SPACING
EK	ERIGERON KARVINSKIANUS	L	SANTA BARBARA DAISY	1 G.C.	–	4" O.C. Δ SPACING
LC	LAVANDULA 'PROVENCE'	L	PROVENCE LAVENDER	5 G.C.	–	3" O.C. Δ SPACING
PH	PHORMIUM TENAX 'JESTER'	L	NEW ZEALAND FLAX	5 G.C.	–	3" O.C. Δ SPACING
RI	ROSA 'ICEBERG'	M	ICEBERG ROSE	5 G.C.	–	4" O.C. Δ SPACING
RO	ROSMARINUS OFFICINALIS 'BARBEQUE'	L	BARBEQUE ROSEMARY	5 G.C.	–	6" O.C. Δ SPACING
SA	SALVIA 'ALLEN CHICKERING'	L	ALLEN CHICKERING SAGE	5 G.C.	–	3-4' O.C. Δ SPACING
SC	SALVIA CLEVELANDII	L	CLEVELAND SAGE	5 G.C.	–	5' O.C. Δ SPACING
VL	VERBENA LILACINA 'DE LA MINA'	L	DE LA MINA VERBENA	1 G.C.	–	3" O.C. Δ SPACING
GROUNDCOVERS						
AM	ACHILLEA MILLEFOLIUM	L	COMMON YARROW	1 G.C.	–	2" O.C. Δ SPACING
EC	ECHEVERIA SP.	L	HENS & CHICKS	1 G.C.	–	1' O.C. Δ SPACING
NF	NEPETA 'WALKERS LOW'	L	CAT MINT	1 G.C.	–	3" O.C. Δ SPACING
TY	THYMUS VULGARIS	L	COMMON THYME	FLAT	–	1' O.C. Δ SPACING
VINES						
VI	VITIS LABRUSCA 'CONCORD'	L	CONCORD GRAPE	5 G.C.	–	10' O.C. Δ SPACING
CONTAINER PLANTS						
	AGAVE DESMETTIANA	L	SMOOTH AGAVE	5 G.C.	–	4" O.C. Δ SPACING
	CALANDRINIA SPECTABILIS	L	ROCK PURSLANE	1 G.C.	–	2" O.C. Δ SPACING
	CITRUS 'MEYERS LEMON'	M	LEMON TREE	1 G.C.	–	6" O.C. Δ SPACING
	CITRUS 'MEXICAN LIME'	M	LIME TREE	1 G.C.	–	6" O.C. Δ SPACING
	HESPERALOE PARVIFLORA	L	RED YUCCA	1 G.C.	–	4" O.C. Δ SPACING
	KALANCHOE LUCIAE	L	PADDLE PLANT	1 G.C.	–	3" O.C. Δ SPACING
	KUMQUAT 'NAGAMI'	M	KUMQUAT	15 G.C.	–	6" O.C. Δ SPACING
	FESTUCA GLAUCA	L	ELIJAH BLUE'S FESCUE	1 G.C.	–	1" O.C. Δ SPACING

1 BENCH

2 TERRACOTTA & CONCRETE PLANTERS

REV.	DESCRIPTION	BY	DATE

BC ENGINEERING GROUP, INC.
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PRELIMINARY DESIGN REVIEW

PLANTING NOTES, & LEGEND

LICENSED LANDSCAPE ARCHITECT
Scott T. Graefen
R. L. A. 3841
Signature
5/21/2020
Renewal Date
Date
STATE OF CALIFORNIA

Scott T. Graefen
RLA 3841 Exp. 5/21/20

Date: 06/12/2019

Job: 0132-16

Drawn: SG, JS

Scale: 1" = 20'

APN: 044-072-009

Sheet #: L1.1

Sheet: 2 OF 2

APPENDIX B

Air Quality and Greenhouse Gas Emissions Assessment

324-350 YOLANDA AVENUE GENERAL PLAN AMMENDMENT & USE PERMIT

AIR QUALITY AND GREENHOUSE GAS EMISSIONS ASSESSMENT

--

Santa Rosa, California

November 6, 2019

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Project 19-110

INTRODUCTION

The purpose of this report is to address air quality, odor, and greenhouse gas (GHG) impacts associated with the proposed project that would construct new light industrial uses and cannabis cultivation, manufacturing, distribution facility with parking at several parcels along the south side of Yolanda Avenue near Santa Rosa Avenue in Santa Rosa, California. The air quality impacts would be associated with demolition of the existing uses at the site, construction of the new buildings and infrastructure, and operation of the project. The potential odor impacts would be associated with the cultivation, storage and distribution of cannabis products. The potential construction health risk impact to nearby sensitive receptors and the impact of existing toxic air contaminant (TAC) sources affecting the proposed residences were evaluated. In addition, the proposed uses would change the level of greenhouse gas (GHG) emissions from the project site. This analysis addresses those issues following the guidance provided by the Bay Area Air Quality Management District (BAAQMD).[1]

PROJECT DESCRIPTION

The proposed project will involve development on seven parcels along Yolanda Avenue in Santa Rosa and includes a General Plan Amendment and Rezoning of six parcels along Yolanda Avenue, and a Major Conditional Use Permit and Minor Design review for a proposed multi-use building containing cannabis cultivation, manufacturing, distribution and vacant/untenanted space on two parcels.

The General Plan Amendment and Rezoning reviewed for this study would amend the City of Santa Rosa General Plan to modify the current General Plan designations for six parcels 044-070-006 (Parcel A), 044-072-007 (Parcel B), 044-072-008 (Parcel C), 044-081-024 (Parcel D), 044-081-061(Parcel E), and 044-390-029 (Parcel F) as shown in Figure 1. The project proposes to modify the General Plan designations of these parcels to Light Industrial (IL) designations and zoning to facilitate the proposed development, which will include;

- Parcel A: A new light industrial access drive,
- Parcels B and C: A 8,442 square feet (sf) multi-use building with cannabis cultivation, manufacturing, distribution and vacant/untenanted space,
- Parcel D: Improvements to two existing buildings totaling 32,000-sf to create a multi-unit industrial alteration building,
- Parcel E: A portion of a proposed 17,982-sf warehouse industrial building extending from the currently designated and zoned Light Industrial parcel immediately north[2] which will be setback approximately 110 feet from the centerline of Yolanda Avenue, and
- Parcel F: An existing approximately 30,000-sf industrial building, with no alterations is to remain.

[1] Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, May 2017.

[2] This parcel is identified as APN 044-072-009 as identified in Figure 1.

	APN	ADDRESS	EXISTING ZONING	PROPOSED ZONING
A	044-072-006	324 YOLANDA AVENUE	CG	IL
B	044-072-007	330 YOLANDA AVENUE	CG	IL
C	044-072-008	350 YOLANDA AVENUE	CG	IL
D	044-081-024	328 YOLANDA AVENUE	CG	IL
E	044-390-061		R-3-15	IL
F	044-081-029	324 YOLANDA AVENUE	CG	IL

Figure 1. General Plan Amendment & Use Map

The air quality, odor, and GHG impacts were evaluated from the proposed project described as the components that would be constructed under the Major Conditional Use Permit and Minor Design review application. Submittals of this application evaluated for this study include a new 8,442-sf multi-use building setback approximately 105 feet from the centerline of Yolanda Avenue with three separate uses and premises; a cannabis dispensary (4,744-sf), a cannabis microbusiness (1,419-sf), and vacant/untenanted space (2,279-sf). Figure 2 shows the location of this proposed building and other project improvements overlaid on an aerial photo of the site and vicinity. The full project description is attached to this report as Attachment 1.

This report evaluates the potential significance of air quality and greenhouse gas emissions impacts that could result from the General Plan Amendment, Rezoning and Project Conditional Use Permit.

Figure 2. Proposed Project Improvements in relation to the Site Vicinity

SETTING

The project is located in Santa Rosa, which is in the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the State and federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$).

Air Pollutants of Concern

High ozone levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO_x). These precursor pollutants react under certain meteorological conditions to form high ozone levels. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce ozone levels. The highest ozone levels in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources. High ozone levels aggravate respiratory and cardiovascular diseases, reduced lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant of the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM_{10}) and fine particulate matter where particles have a diameter of 2.5 micrometers or less ($PM_{2.5}$). Elevated concentrations of PM_{10} and $PM_{2.5}$ are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Toxic Air Contaminants

Toxic air contaminants (TACs) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer) and include, but are not limited to, the criteria air pollutants. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs.

Regulatory Agencies

Federal Regulations

The United States Environmental Protection Agency (EPA) sets nationwide emission standards for mobile sources, which include on-road (highway) motor vehicles such as trucks, buses, and automobiles, and non-road (off-road) vehicles and equipment used in construction, agricultural, industrial, and mining activities (such as bulldozers and loaders). The EPA also sets nationwide

fuel standards. California also has the ability to set motor vehicle emission standards and standards for fuel used in California, as long as they are the same or more stringent than the federal standards.

In the past decade the EPA has established a number of emission standards for on- and non-road heavy-duty diesel engines used in trucks and other equipment. This was done in part because diesel engines are a significant source of NO_X and particulate matter (PM_{10} and $PM_{2.5}$) and because the EPA has identified DPM as a probable carcinogen. Implementation of the heavy-duty diesel on-road vehicle standards and the non-road diesel engine standards are estimated to reduce particulate matter and NO_X emissions from diesel engines up to 95 percent in 2030 when the heavy-duty vehicle fleet is completely replaced with newer heavy-duty vehicles that comply with these emission standards.[3]

In concert with the diesel engine emission standards, the EPA has also substantially reduced the amount of sulfur allowed in diesel fuels. The sulfur contained in diesel fuel is a significant contributor to the formation of particulate matter in diesel-fueled engine exhaust. The new standards reduced the amount of sulfur allowed by 97 percent for highway diesel fuel (from 500 parts per million by weight [ppmw] to 15 ppmw), and by 99 percent for off-highway diesel fuel (from about 3,000 ppmw to 15 ppmw). The low sulfur highway fuel (15 ppmw sulfur), also called ultra-low sulfur diesel (ULSD), is currently required for use by all vehicles in the U.S.

All of the above federal diesel engine and diesel fuel requirements have been adopted by California, in some cases with modifications making the requirements more stringent or the implementation dates sooner.

State Regulations

To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.[4] In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, a significant component of the plan involves application of emission control strategies to existing diesel vehicles and equipment. Many of the measures of the Diesel Risk Reduction Plan have been approved and adopted, including the federal on-road and non-road diesel engine emission standards for new engines, as well as adoption of regulations for low sulfur fuel in California.

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy-duty diesel trucks that represent the bulk of DPM emissions from California highways. CARB regulations require on-road diesel trucks to be retrofitted with particulate matter controls or replaced to meet 2010 or later engine standards that have much lower DPM and $PM_{2.5}$ emissions. This regulation will substantially reduce these emissions between 2013 and 2023. While new trucks and buses will meet strict federal standards, this measure is intended to accelerate the rate

[3] USEPA, 2000. Regulatory Announcement, Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements. EPA420-F-00-057. December.

[4] California Air Resources Board, 2000. Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. October.

at which the fleet either turns over so there are more cleaner vehicles on the road or is retrofitted to meet similar standards. With this regulation, older, more polluting trucks would be removed from the roads sooner.

CARB has also adopted and implemented regulations to reduce DPM and NO_X emissions from in-use (existing) and new off-road heavy-duty diesel vehicles (e.g., loaders, tractors, bulldozers, backhoes, off-highway trucks, etc.). The regulations apply to diesel-powered off-road vehicles with engines 25 horsepower (hp) or greater. The regulations are intended to reduce particulate matter and NO_X exhaust emissions by requiring owners to turn over their fleet (replace older equipment with newer equipment) or retrofit existing equipment in order to achieve specified fleet-averaged emission rates. Implementation of this regulation, in conjunction with stringent federal off-road equipment engine emission limits for new vehicles, will significantly reduce emissions of DPM and NO_X.

Bay Area Air Quality Management District (BAAQMD)

BAAQMD has jurisdiction over an approximately 5,600-square mile area, commonly referred to as the San Francisco Bay Area (Bay Area). The District's boundary encompasses the nine San Francisco Bay Area counties, including Alameda County, Contra Costa County, Marin County, San Francisco County, San Mateo County, Santa Clara County, Napa County, southwestern Solano County, and southern Sonoma County.

BAAQMD is the lead agency in developing plans to address attainment and maintenance of the National Ambient Air Quality Standards and California Ambient Air Quality Standards. The District also has permit authority over most types of stationary equipment utilized for the proposed project. The BAAQMD is responsible for permitting and inspection of stationary sources; enforcement of regulations, including setting fees, levying fines, and enforcement actions; and ensuring that public nuisances are minimized.

The BAAQMD California Environmental Quality Act (*CEQA) Air Quality Guidelines*[5] were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process consistent with CEQA requirements including thresholds of significance, mitigation measures, and background air quality information. They also include assessment methodologies for air toxics, odors, and greenhouse gas emissions.

Plan Bay Area 2040 Draft Environmental Impact Report (DEIR)

Plan Bay Area (PBA) is a state-mandated long-range Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS) that meets CARB GHG reduction targets. This document addresses how the Bay Area will meet its long-range transportation and land use goals, while accommodating for the projected employment and residential growth expected in the area. The nine counties that encompass the Bay Area include Sonoma County, Napa County, Solano County, Contra Costa County, Alameda County, Santa Clara County, San Mateo County, San Francisco County, and Marin County. PBA 2040 is the four-year update of the original PBA adopted by the

[5] Bay Area Air Quality Management District, 2017. *CEQA Air Quality Guidelines*. May.

Association of the Bay Area Government (ABAG) and the Metropolitan Transportation Commission in July 18, 2019. PBA 2040 was adopted by ABAG and MTC on July 26, 2017.

To meet SCS criteria, this technical air quality and GHG analysis integrates mitigation measures from the DEIR PBA 2040 to show project consistency with the PBA and reduce project impacts to a level of less-than-significant with mitigation. Chapter 2.2 and 2.5 of the PBA 2040 address air quality and GHG impacts, respectively. The following impacts mitigation measures from these chapters are applicable to the project.

> Mitigation Measures 2.2-2:
> When screening levels are exceeded (see Table 2.2-8 or those most currently updated by BAAQMD),[6] implementing agencies and/or project sponsors shall implement measures, where applicable, feasible, and necessary based on project- and site-specific considerations, that include, but are not limited to the following:
>
> Construction Best Practices for Exhaust:
> The applicant/general contractor for the project shall submit a list of all off-road equipment greater than 25 horsepower (hp) that would be operated for more than 20 hours over the entire duration of project construction, including equipment from subcontractors, to BAAQMD for review and certification. The list shall include all information necessary to ensure the equipment meets the following requirement:
>
> - 1) Be zero emissions OR 2) have engines that meet or exceed either EPA or ARB Tier 2 off-road emission standards; and 3) have engines that are retrofitted with an ARB Level 3 Verified Diesel Emissions Control Strategy (VDECS), if one is available for the equipment being used. Equipment with engines that meet Tier 4 Interim or Tier 4 Final emission standards automatically meet this requirement; therefore, a VDECS would not be required.
>
> - Idling time of diesel-powered construction equipment and trucks shall be limited to no more than two minutes. Clear signage of this idling restriction shall be provided for construction workers at all access points.
>
> - All construction equipment shall be maintained and properly tuned in accordance with the manufacturers' specifications.
>
> - Portable diesel generators shall be prohibited. Grid power electricity should be used to provide power at construction sites; or propane and natural gas generators may be used when grid power electricity is not feasible.
>
> Construction Best Practices for Dust:
> All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. For projects over five acres in

[6] BAAQMD CEQA Air Quality Guidelines, May 2017 version.

size, soil moisture should be maintained at a minimum of 12 percent. Moisture content can be verified by lab samples or a moisture probe.

- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. Dry power sweeping should only be performed in conjunction with thorough watering of the subject roads.

- All vehicle speeds on unpaved roads and surfaces shall be limited to 15 mph.

- All roadway, driveway, and sidewalk paving shall be completed as soon as possible. Building pads shall be paved as soon as possible after grading.

- All construction sites shall provide a posted sign visible to the public with the telephone number and person to contact at the Lead Agency regarding dust complaints. The recommended response time for corrective action shall be within 48 hours. BAAQMD's Complaint Line (1-800-334-6367) shall also be included on posted signs to ensure compliance with applicable regulations.

- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.

- Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.

- Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.

- The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.

- All trucks and equipment, including their tires, shall be washed off before leaving the site.

- Site accesses to a distance of 100 feet from the paved road shall be treated with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel.

- Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.

These BMPs are consistent with recommendations in BAAQMD's CEQA guidelines and Planning Healthy Places (BAAQMD 2010b, BAAQMD 2016). Applicable mitigation measures shall be required at the time grading permits are issued.

Significance after PBA DEIR Mitigation 2.2-2

The measures described above would minimize PM10 and PM2.5 dust emissions and minimize exhaust emissions of diesel PM through the use of readily available, lower-emitting diesel equipment, and/or equipment powered by alternative cleaner fuels (e.g., propane) or electricity, as well as on-road trucks using particulate exhaust filters.

To the extent that an individual project adopts and implements all feasible mitigation measures described above, the project's impact would be less than significant with mitigation (LS-M). Projects taking advantage of CEQA Streamlining provisions of SB 375 (Public Resources sections 21155.1, 21155.2, and 21159.28) must apply the mitigation measures described above to address site-specific conditions.

Santa Rosa 2035 General Plan

The Santa Rosa 2035 General Plan includes goals, policies, and actions to help Santa Rosa achieve and maintain ambient air quality standards. The following goals, policies, and actions are applicable to the proposed project:

<u>Air Quality</u>

OSC-J Take appropriate actions to help Santa Rosa and the larger Bay Area region achieve and maintain all ambient air quality standards.

OSC-J-1 Review all new construction projects and require dust abatement actions as contained in the CEQA Handbook of the BAAQMD.

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 14, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, elementary schools, and parks. The closest sensitive receptors to the project site are single- and multi-family residences immediately east and southeast of the project site. In addition, new residential development has recently been approved along the north side of Yolanda Avenue.

Significance Thresholds

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA and these significance thresholds were contained in the District's 2011 *CEQA Air*

Quality Guidelines. These thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA. The thresholds were challenged through a series of court challenges and were mostly upheld. BAAQMD updated the *CEQA Air Quality Guidelines* in 2017 to include the latest significance thresholds that were used in this analysis are summarized in Table 1.

Table 1. Air Quality Significance Thresholds

Criteria Air Pollutant	**Construction Thresholds**	**Operational Thresholds**	
	Average Daily Emissions (lbs./day)	**Average Daily Emissions (lbs./day)**	**Annual Average Emissions (tons/year)**
ROG	54	54	10
NO_x	54	54	10
PM_{10}	82 (Exhaust)	82	15
$PM_{2.5}$	54 (Exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	
Health Risks and Hazards	**Single Sources Within 1,000-foot Zone of Influence**	**Combined Sources (Cumulative from all sources within 1,000-foot zone of influence)**	
Excess Cancer Risk	>10 per one million	>100 per one million	
Hazard Index	>1.0	>10.0	
Incremental annual $PM_{2.5}$	>0.3 µg/m^3	>0.8 µg/m^3	
Greenhouse Gas Emissions			
Land Use Projects – direct and indirect emissions	Compliance with a Qualified GHG Reduction Strategy OR 1,100 metric tons annually or 4.6 metric tons per capita (for 2020) and adjusted to 2.8 metric tons per capita (for 2030)*		
Note: ROG = reactive organic gases, NOx = nitrogen oxides, PM_{10} = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, $PM_{2.5}$ = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less. GHG = greenhouse gases. *BAAQMD does not have a recommended post-2020 GHG threshold. The adjusted thresholds are explained in more detail in the GHG discussion.			

AIR QUALITY IMPACTS AND MITIGATION MEASURES

General Plan Amendment

The project as proposed would amend the General Plan land use designations of six parcels from their current designations to Light Industry and rezone the parcels from their current zoning classifications to Light Industrial (IL). Five of the six parcels are currently zoned and designated for general commercial and one is zoned R-3/15 and designated medium density residential. The proposed project would de-intensify the land use designations and zoning. The project is expected to generate substantially fewer trips at full buildout of the General Plan than the existing land use

designations[7]. The changes in land uses under the General Plan Amendment would result in lower potential air quality impacts.

Project Air Quality Impacts

In addition to the General Plan Amendment, the proposed project includes a new 18,000 square foot industrial building, a new 8,400 square foot building that will ultimately include three separate uses, and improvements to the existing buildings to create a multi-unit industrial building (32,000 square feet). An existing 30,000 square foot building is to remain onsite.

Impact: Emissions of Criteria Air Pollutants from Project Construction & Operation

The Bay Area is considered a non-attainment area for ground-level ozone and $PM_{2.5}$ under both the Federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for PM_{10} under the California Clean Air Act, but not the federal act. The area has attained both State and federal ambient air quality standards for carbon monoxide. As part of an effort to attain and maintain ambient air quality standards for ozone and PM_{10}, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for ozone precursor pollutants (ROG and NO_X), PM_{10}, and $PM_{2.5}$ and apply to both construction period and operational period impacts.

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The BAAQMD *CEQA Air Quality Guidelines* consider these impacts to be less-than-significant if best management practices are implemented to reduce these emissions. *Mitigation Measure AQ-1 would implement BAAQMD-recommended best management practices*.

The individual project components are well below the screening sizes indicated in the BAAQMD CEQA Air Quality Guidelines; however, since there would be demolition, construction emissions were modeled and compared to the thresholds identified in Table 1. The California Emissions Estimator Model (CalEEMod) Version 2016.3.2 was used to estimate emissions from construction and operation of the project assuming full build-out conditions. The project land use types and size, and anticipated construction schedule were input to CalEEMod. The model output from CalEEMod is included as *Attachment 2*.

<u>CalEEMod Modeling</u>

CalEEMod provided annual emissions for construction and project operation. The proposed project land uses and earthwork volumes were entered into CalEEMod as follows:

[7] W-Trans. 2019. *Draft Traffic Impact Study for the Yolanda Avenue Industrial Project*. September 30.

- Industrial uses including Marijuana Microbusiness entered as "General Light Industry" that is 23,982-sf in size8,
- Cannabis Dispensary of 4,800-sf, assumed to function similar to a retail use, entered as "Strip Mall,"
- 61 parking spaces entered as "Parking Lot", and
- 25,000-sf of buildings that would be demolished.

Construction Period Emissions

CalEEMod provides emission estimates for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. A construction build-out scenario, including equipment list and schedule, was based a construction data sheet provided by the project applicant. The construction modeling took a conservative approach by assuming that the industrial and commercial land uses would be constructed simultaneously. Note that in the scenario where both land uses are constructed separately construction, emissions would be less than the construction emissions modeled for this assessment of simultaneous construction. Note that individually both the industrial and the commercial (i.e., retail or strip mall) land uses are under the BAAQMD construction-related screening size. For significant construction-related criteria air pollutant impacts, the screening size is identified as 277,000-sf for "General Light Industry" and 99,000-sf for "Strip Mall." Since the project components are far less than those sizes; each land use's individual construction period emissions would not exceed the BAAQMD significance thresholds for construction-related criteria air pollutants.

The CalEEMod construction schedule assumed that the project would be built out over a period of approximately one year. The start of construction was assumed to be early 2020. There were an estimated 246 construction workdays. Average daily emissions were calculated by dividing the total construction emissions by the number of construction days. Table 2 shows average daily construction emissions of ROG, NO_X, PM_{10} exhaust, and $PM_{2.5}$ exhaust during construction of the project. The calculated construction period emissions would not exceed the BAAQMD significance thresholds and have a *less-than-significant* impact.

Table 2 Construction Period Emissions

Scenario	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Total Construction Emissions (tons)	0.4 tons	2.3 tons	0.11 tons	0.11 tons
Average Daily Emissions (pounds/day)[1]	3 lbs./day	19 lbs./day	1 lbs./day	1 lbs./day
BAAQMD Thresholds (pounds per day)	*54* lbs./day	*54* lbs./day	*82* lbs./day	*54* lbs./day
Exceed Threshold?	No	No	No	No

However, construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. Sources of fugitive dust would

[8] Based on 17,982 sf, 3,700 sf,

include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be *less-than-significant* if best management practices are implemented to reduce these emissions. *Mitigation Measure AQ-1 would implement BAAQMD-recommended best management practices*.

Mitigation Measure AQ-1: Include measures to control dust and exhaust during construction.

During any construction period ground disturbance, the applicant shall ensure that the project contractor implement measures to control dust and exhaust. Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less-than-significant level. Additional measures are identified to reduce construction equipment exhaust emissions. The contractor shall implement the following best management practices that are required of all projects:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).

5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Effectiveness of Mitigation Measure AQ-1

The measures included above would be consistent with BAAQMD-recommended basic control measures for reducing fugitive particulate matter that are contained in the BAAQMD CEQA Air Quality Guidelines. Mitigation measure AQ-1 would ensure that construction related air quality impacts are reduced to *less than significant* levels.

CalEEMod Modeling of Operational Emissions

Operational air emissions from the project would be generated primarily from autos driven by future residents, employees, and customers. Evaporative emissions from architectural coatings and maintenance products (classified as consumer products) are typical emissions from these types of uses. CalEEMod was also used to estimate emissions from operation of the proposed project assuming full build-out and operation of the project.

Model Year

Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CalEEMod. The earliest the project site could possibly be constructed and begin operating would be 2022 since construction would extend to February 2022. Emissions associated with build-out later than 2022 would be lower.

Traffic

CalEEMod allows the user to enter specific vehicle trip generation rates, which were input to the model using the daily trip generation rate provided in the project trip generation table. For each land use type, the daily trips forecasted with trip reductions applied was divided by the quantity of that land use to identify the weekday daily trip rate.

The project traffic analysis provided the project daily trip generation rates of 252.7 trips per day for the Marijuana Dispensary and 4.96 trips per day for the General Light Industry use[9]. The trip rate for the Marijuana Dispensary was assumed to reflect an average rate. The rate for the General Light Industry use was assumed to represent a weekday rate and adjustments were made for Saturday and Sunday trips by multiplying the ratio of the CalEEMod default rates for each of those days.

The CalEEMod model uses the CARB EMFAC2014 vehicle fleet mix for the Bay Area. This fleet mix includes a large portion of heavy truck trips that would not be represented by the Marijuana Dispensary traffic. On the other hand, this mix would be representative of the light-industrial uses. The traffic fleet mix assigned to the Marijuana Dispensary was adjusted to reflect a light-duty auto, light-duty truck and medium-duty truck mix. The mix of medium heavy duty and heavy heavy duty truck percentages were set to 0.1 percent for the Marijuana Dispensary.

Default trip types, trip purposes and trip lengths assigned by CalEEMod were used in the modeling.

[9] W-Trans. 2019. *Draft Traffic Impact Study for the Yolanda Avenue Industrial Project*. September 30.

Energy

CalEEMod defaults for energy use were used, which include the 2016 Title 24 Building Standards. Indirect emissions from electricity were computed in CalEEMod. The model has a default rate of 641.3 pounds of CO_2 per megawatt of electricity produced, which is based on PG&E's 2008 emissions rate. The derived 2020 rate for PG&E was estimated at 290 pounds of CO_2 per megawatt of electricity delivered.[10] The rate was adjusted to account for the Sonoma Clean Power (SCP) intensity rate, which is the main energy provider within the Sonoma County area. Depending on the program a customer or business is enrolled in with SCP, the electricity provided by SCP can be 91 percent carbon-free (i.e. CleanStart program) or 100 percent carbon-free (i.e. EverGreen program).

For this analysis, it was assumed the project would be enrolled in the CleanStart program, which has an intensity rate of 127.97 pounds CO_2/MWh. SCP's EverGreen program has a reported intensity factor of 53 pounds CO_2/MWh. The SCP participation rate is unknown, but it was assumed that SCP has a 90 percent participation rate and the remaining 10 percent of customers use PG&E. An aggregate intensity factor of 144 pounds CO_2/MWh was calculated by multiplying the SCP and PG&E intensity factors by their assumed participation rates and then summing the values. This analysis used the calculated 144 pounds CO_2/MWh intensity factor.

Other Inputs

Default model assumptions for emissions associated with solid waste generation and water/wastewater use were applied to the project. Water/wastewater use were changed to 100% aerobic conditions to represent wastewater treatment plant conditions. All hearths were assumed to be gas-powered.

Existing Uses

The site currently includes older industrial uses and a residential building that is currently used as an auto dealership. Although these land uses generate some emissions, they were assumed to generate little traffic and were not included in the analysis.

Predicted Project Operational Emissions

Table 3 shows the operational period emissions for the project that includes the Marijuana Dispensary and Light Industrial uses. The annual emissions predicted by CalEEMod were divided by the number of days the project would operate, which is assumed to be 365 days per year. As shown in Table 3, operational emissions would not exceed the BAAQMD significance thresholds. This would be considered a *less-than-significant* impact.

[10] Pacific Gas & Electric, 2015. Greenhouse Gas Emission Factors: Guidance for PG&E Customers. November.

Table 3. Operational Period Emissions

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2021 Project Operational Emissions (tons/year)	0.5 tons	0.7 tons	0.8 tons	0.2 tons
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*15 tons*	*10 tons*
2023 Project Operational Emissions (*lbs/day*)[1]	3 lbs.	4 lbs.	4 lbs.	1 lbs.
BAAQMD Thresholds (pounds/day)	*54 lbs.*	*54 lbs.*	*82 lbs.*	*54 lbs.*
Exceed Thresholds?	*No*	*No*	*No*	*No*
Notes: [1] Assumes 365-day operation.				

Impact: Community Risk Assessment – Toxic Air Containments

Project impacts related to increased community risk can occur either by introducing a new source of TAC emissions with the potential to adversely affect existing sensitive receptors in the project vicinity or by significantly exacerbating existing cumulative TAC impacts.

Currently, there are light-industrial uses at the project site. The project would demolish existing buildings and construct the project. Construction activities would be a temporary source of TAC emissions. Operation of the project is not anticipated to generate substantial TAC emissions that would lead to long-term impacts.

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These exhaust air pollutant emissions would not be considered to contribute substantially to existing or projected air quality violations as shown in Table 2. However, construction exhaust emissions may pose health risks for sensitive receptors such as nearby residences that could include infants and small children that are most susceptible to TAC exposure. The primary community risk impact issue associated with construction emissions are cancer risk and exposure to $PM_{2.5}$. DPM from exhaust poses both a potential health and nuisance impact to nearby receptors.

TAC and fine particulate matter emissions from construction activity can be greatly reduced by using newer, less polluting, construction equipment and employing best management practices to control fugitive dust emissions. The Plan Bay Area EIR, described previously, includes recommended mitigation measures to reduce these impacts to a *less-than-significant* level.

Mitigation Measure AQ-2: **Selection of construction equipment with low emissions during construction.**

The applicant/general contractor for the project shall maintain a list of all off-road equipment greater than 25 horsepower (hp) that would be operated for more than 20 hours over the entire duration of project construction, including equipment from subcontractors. This equipment list shall be made available upon request by the City for review and certification. The list shall include all information necessary to ensure the equipment meets the following requirement (i.e., EIN):

- 1) Be zero emissions, OR 2) have engines that meet or exceed EPA Tier 2 off-road emission standards; and 3) have engines that are retrofitted with an ARB Level 3 Verified Diesel Emissions Control Strategy (VDECS), if one is available for the equipment being used. Equipment with engines that meet Tier 4 Interim or Tier 4 Final emission standards meet this requirement; therefore, a VDECS on Tier 4 engines is not required.

- Idling time of diesel-powered construction equipment and trucks shall be limited to no more than two minutes. Clear signage of this idling restriction shall be provided for construction workers at all access points.

- All construction equipment shall be maintained and properly tuned in accordance with the manufacturers' specifications.

- Portable diesel generators used for more than 100 hours shall be prohibited. Grid power electricity should be used to provide power at construction sites; or propane and natural gas generators may be used when grid power electricity is not feasible.

Impact: Create objectionable odors affecting a substantial number of people? ***Less-than-significant.***

There is the potential for odors from both construction and operation of the project. During construction, localized emissions of diesel exhaust during diesel equipment operation and truck activity would cause localized odors. These emissions may be noticeable from time to time by adjacent receptors. However, they would be localized and are not likely to adversely affect people off site by resulting in confirmed odor complaints.

The processing, storage and cultivation of cannabis is a potential source of odors from the project. As communities develop regulations, zoning ordinances and guidelines for cannabis cultivation, odors are one of the issues being considered. Since this is a relatively new industry, there is not much experience addressing this issue. Communities in California are developing ordinances to address odors from this type of operation (e.g., Monterey and Yolo counties). The primary concern identified appears to be odors from cultivation during budding, harvest and processing. While the proposed project would be considered a dispensary, there is the microbusiness aspect that would cultivate and process the product; although; at relatively low quantities.

The odor of cannabis could be described as an offensive skunk-like smell. This odor is produced by terpenes, which are volatile unsaturated hydrocarbons found in the oils of various plants. Naturally, these oils are most present late in the budding cycle and at harvest and processing. Without proper controls, indoor cultivation can lead to a buildup of these odors because of the reduced ventilation, heat and humidity conditions created within the facilities. To reduce odor emissions, the exhaust air from these facilities would have to be controlled and treated. In this case, control means to ventilate exhaust air through air handling systems and filter this air or treat with odor suppressants, or a combination of the two methods.

BAAQMD's Regulation 7: Odiferous Substances would apply to this project. This regulation prohibits discharge of any odorous substance that causes the ambient air at or beyond the property line to be odorous and to remain odorous after dilution with four parts of odor-free air. Odor impacts could occur if nearby persons experience frequent objectionable odors and make complaints. Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, there are no quantitative methodologies to determine the presence of a significant odor impact. The significance of odor impacts is based on the potential to cause odor complaints.

The City of Santa Rosa's Cannabis Ordinance is contained in Chapter 20-46 of the City Code. Section 20-46.050 (H) are the odor control requirements:

> Odor control. Cannabis Businesses shall incorporate and maintain adequate odor control measures such that the odors of Cannabis cannot be detected from outside of the structure in which the Business operates. Applications for Cannabis Businesses shall include an odor mitigation plan certified by a licensed professional engineer that includes the following:
>
> 1. Operational processes and maintenance plan, including activities undertaken to ensure the odor mitigation system remains functional;
> 2. Staff training procedures; and
> 3. Engineering controls, which may include carbon filtration or other methods of air cleansing, and evidence that such controls are sufficient to effectively mitigate odors from all odor sources. All odor mitigation systems and plans submitted pursuant to this subsection shall be consistent with accepted and best available industry -specific technologies designed to effectively mitigate cannabis odors.

Attachment 3 to this report includes the draft odor control plan prepared by the project applicant's design engineer. An odor control plan that is reviewed and approved by the City is a requirement of the project per the City's Cannabis ordinance.

Recommended Conditions of Approval

To ensure adequate odor control, the applicant shall submit the odor control plan to the City and obtain appropriate approvals of the odor control plan prior to occupancy of the Marijuana Dispensary and Cannabis Micro Business portions of the project. Without such an approved odor control plan, the impact with respect to odors would be a *significant*.

GREENHOUSE GAS EMISSIONS

Setting

Gases that trap heat in the atmosphere, Greenhouse gases (GHGs), regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. The most common GHGs are carbon dioxide (CO_2) and water vapor but there are also several others, most importantly methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These are released into the earth's

atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO_2 and N_2O are byproducts of fossil fuel combustion.
- N_2O is associated with agricultural operations such as fertilization of crops.
- CH_4 is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents but their production has been stopped by international treaty.
- HFCs are now used as a substitute for CFCs in refrigeration and cooling.
- PFCs and sulfur hexafluoride emissions are commonly created by industries such as aluminum production and semi-conductor manufacturing.

Each GHG has its own potency and effect upon the earth's energy balance. This is expressed in terms of a global warming potential (GWP), with CO_2 being assigned a value of 1 and sulfur hexafluoride being several orders of magnitude stronger. In GHG emission inventories, the weight of each gas is multiplied by its GWP and is measured in units of CO_2 equivalents (CO_2e).

An expanding body of scientific research supports the theory that global climate change is currently affecting changes in weather patterns, average sea level, ocean acidification, chemical reaction rates, and precipitation rates, and that it will increasingly do so in the future. The climate and several naturally occurring resources within California are adversely affected by the global warming trend. Increased precipitation and sea level rise will increase coastal flooding, saltwater intrusion, and degradation of wetlands. Mass migration and/or loss of plant and animal species could also occur. Potential effects of global climate change that could adversely affect human health include more extreme heat waves and heat-related stress; an increase in climate-sensitive diseases; more frequent and intense natural disasters such as flooding, hurricanes and drought; wildfires and increased levels of air pollution.

Recent Regulatory Actions

Assembly Bill 32 (AB 32), California Global Warming Solutions Act (2006)

AB 32, the Global Warming Solutions Act of 2006, codified the State's GHG emissions target by directing CARB to reduce the State's global warming emissions to 1990 levels by 2020. AB 32 was signed and passed into law by Governor Schwarzenegger on September 27, 2006. Since that time, the CARB, California Energy Commission (CEC), California Public Utilities Commission (CPUC), and Building Standards Commission have all been developing regulations that will help meet the goals of AB 32 and Executive Order S-3-05.

A Scoping Plan for AB 32 was adopted by CARB in December 2008. It contains the State's main strategies to reduce GHGs from business-as-usual emissions projected in 2020 back down to 1990 levels. Business-as-usual (BAU) is the projected emissions in 2020, including increases in emissions caused by growth, without any GHG reduction measures. The Scoping Plan has a range of GHG reduction actions, including direct regulations, alternative compliance mechanisms,

monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system.

As directed by AB 32, CARB has also approved a statewide GHG emissions limit. On December 6, 2007, CARB staff resolved an amount of 427 million metric tons (MMT) of CO_2e as the total statewide GHG 1990 emissions level and 2020 emissions limit. The limit is a cumulative statewide limit, not a sector- or facility-specific limit. CARB updated the future 2020 BAU annual emissions forecast, in light of the economic downturn, to 545 MMT of CO_2e. Two GHG emissions reduction measures currently enacted that were not previously included in the 2008 Scoping Plan baseline inventory were included, further reducing the baseline inventory to 507 MMT of CO_2e. Thus, an estimated reduction of 80 MMT of CO_2e is necessary to reduce statewide emissions to meet the AB 32 target by 2020.

Senate Bill 375, California's Regional Transportation and Land Use Planning Efforts (2008)

California enacted legislation (SB 375) to expand the efforts of AB 32 by controlling indirect GHG emissions caused by urban sprawl. SB 375 provides incentives for local governments and applicants to implement new conscientiously planned growth patterns. This includes incentives for creating attractive, walkable, and sustainable communities and revitalizing existing communities. The legislation also allows applicants to bypass certain environmental reviews under CEQA if they build projects consistent with the new sustainable community strategies. Development of more alternative transportation options that would reduce vehicle trips and miles traveled, along with traffic congestion, would be encouraged. SB 375 enhances CARB's ability to reach the AB 32 goals by directing the agency in developing regional GHG emission reduction targets to be achieved from the transportation sector for 2020 and 2035. CARB works with the metropolitan planning organizations (e.g. Association of Bay Area Governments [ABAG] and Metropolitan Transportation Commission [MTC]) to align their regional transportation, housing, and land use plans to reduce vehicle miles traveled and demonstrate the region's ability to attain its GHG reduction targets. A similar process is used to reduce transportation emissions of ozone precursor pollutants in the Bay Area.

SB 350 Renewable Portfolio Standards

In September 2015, the California Legislature passed SB 350, which increases the states Renewables Portfolio Standard (RPS) for content of electrical generation from the 33 percent target for 2020 to a 50 percent renewables target by 2030.

Executive Order EO-B-30-15 (2015) and SB 32 GHG Reduction Targets

In April 2015, Governor Brown signed Executive Order which extended the goals of AB 32, setting a greenhouse gas emissions target at 40 percent of 1990 levels by 2030. On September 8, 2016, Governor Brown signed SB 32, which legislatively established the GHG reduction target of 40 percent of 1990 levels by 2030. In November 2017, CARB issued *California's 2017 Climate Change Scoping Plan*. While the State is on track to exceed the AB 32 scoping plan 2020 targets, this plan is an update to reflect the enacted SB 32 reduction target.

SB 32 was passed in 2016, which codified a 2030 GHG emissions reduction target of 40 percent below 1990 levels. CARB is currently working on a second update to the Scoping Plan to reflect the 2030 target set by Executive Order B-30-15 and codified by SB 32. The proposed Scoping Plan Update was published on January 20, 2017 as directed by SB 32 companion legislation AB 197. The mid-term 2030 target is considered critical by CARB on the path to obtaining an even deeper GHG emissions target of 80 percent below 1990 levels by 2050, as directed in Executive Order S-3-05. The Scoping Plan outlines the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure, providing a blueprint to continue driving down GHG emissions and obtain the statewide goals.

The new Scoping Plan establishes a strategy that will reduce GHG emissions in California to meet the 2030 target (note that the AB 32 Scoping Plan only addressed 2020 targets and a long-term goal). Key features of this plan are:

- Cap and Trade program places a firm limit on 80 percent of the State's emissions;
- Achieving a 50-percent Renewable Portfolio Standard by 2030 (currently at about 29 percent statewide);
- Increase energy efficiency in existing buildings;
- Develop fuels with an 18-percent reduction in carbon intensity;
- Develop more high-density, transit-oriented housing;
- Develop walkable and bikable communities;
- Greatly increase the number of electric vehicles on the road and reduce oil demand in half;
- Increase zero-emissions transit so that 100 percent of new buses are zero emissions;
- Reduce freight-related emissions by transitioning to zero emissions where feasible and near-zero emissions with renewable fuels everywhere else; and
- Reduce "super pollutants" by reducing methane and hydrofluorocarbons or HFCs by 40 percent.

In the updated Scoping Plan, CARB recommends statewide targets of no more than 6 metric tons CO_2e per capita (statewide) by 2030 and no more than 2 metric tons CO_2e per capita by 2050. The statewide per capita targets account for all emissions sectors in the State, statewide population forecasts, and the statewide reductions necessary to achieve the 2030 statewide target under SB 32 and the longer-term State emissions reduction goal of 80 percent below 1990 levels by 2050.

<u>Santa Rosa 2035 General Plan: Greenhouse Gas Appendix</u>

The following greenhouse gas emission reduction goals and policies from the Santa Rosa General Plan 2035 are applicable to the proposed project.

Land Use and Livability

LUL-G-1 Develop the following areas as mixed-use centers (see General Plan Land Use diagram): South of Hearn Avenue, at Dutton Meadow Avenue, West of Corporate Center Parkway, at Northpoint Parkway, Piner Road at Marlow Road, and Petaluma Hill Road, at Yolanda Avenue.

Open Space and Conservation

OSC-J	Take appropriate actions to help Santa Rosa and the larger Bay Area region achieve and maintain all ambient air quality standards
OSC-J-1	Review all new construction projects and require dust abatement actions as contained in the CEQA Handbook of the Bay Area Air Quality Management District
OSC-J-3	Reduce particulate matter emissions from wood burning appliances through implementation of the city's Wood Burning Appliance code.
OSC-M	Reduce Greenhouse Gas Emissions
OSC-M-1	Meet local, regional, and state targets for reduction of greenhouse gas emissions through implementation of the Climate Action Plan

City of Santa Rosa Climate Action Plan

Adopted by the City of Santa Rosa on June 5, 2012, the Climate Action Plan (CAP) is a document that presents measures that will reduce local GHG measures that will meet state, regional, and local reduction targets. The CAP focuses on three target years: 2015, 2020, and 2035. The 2015 year was to determine if the City could meet the reduction target of 25% below 1990 levels by 2015. The 2020 year is included for consistency with AB 32 targets, while a 2035 GHG emission forecast was developed to be consistent with the 2035 General Plan. The City includes several reduction measures that apply to a variety of sectors within the CAP to help sources of GHGs reduce their emissions in a multitude of ways. There is also a CAP checklist that was developed by the City to ensure that new construction projects comply with the measures outlined in the CAP. Therefore, if a project complies with the City's CAP checklist, then the new development would be found to have a less-than-significant impact since the City's CAP meets the BAAQMD requirements for a qualified greenhouse gas reduction strategy.

Significance Thresholds

The BAAQMD's CEQA Air Quality Guidelines do not use quantified thresholds for projects that are in a jurisdiction with a qualified GHG reductions plan (i.e., a Climate Action Plan). The plan has to address emissions associated with the period that the project would operate (e.g., beyond year 2020). For quantified emissions, the guidelines recommended a GHG threshold of 1,100 metric tons or 4.6 metric tons (MT) per capita. These thresholds were developed based on meeting the 2020 GHG targets set in the scoping plan that addressed AB 32. Development of the project would occur beyond 2020, so a threshold that addresses a future target is appropriate.

Although BAAQMD has not published a quantified threshold for 2030 yet, this assessment uses a "Substantial Progress" efficiency metric of 2.8 MT CO_2e/year/service population and a bright-line threshold of 660 MT CO_{2e}/year based on the GHG reduction goals of EO B-30-15. The service population metric of 2.8 is calculated for 2030 based predictions from BAAQMD.[11] The 2030 bright-line threshold is a 40 percent reduction of the 2020 1,100 MT CO_{2e}/year threshold.

11 Bay Area Air Quality Management District, 2016. *CLE International 12th Annual Super-Conference CEQA Guidelines, Case Law and Policy Update*. December.

Additionally, the City of Santa Rosa has a Climate Action Plan (CAP) that outlines and address GHG reduction targets for the city. It is a recognized Qualified GHG Reduction Strategy. This assessment uses the City of Santa Rosa's efficiency metric of 2.3 MT CO_{2e}/year/service population for the year 2035 as stated within the City's CAP.

Significance of this project will also be determined by completing and complying with the City's CAP checklist. If the project does comply with the New Development Checklist (Appendix E in the CAP), then it can be determined that the project is less-than-significant since the project will comply with a qualified GHG reduction strategy.

Project-Level GHG Emissions

GHG emissions associated with development of the proposed project would occur over the short-term from construction activities, consisting primarily of emissions from equipment exhaust and worker and vendor trips. There would also be long-term operational emissions associated with vehicular traffic within the project vicinity, energy and water usage, and solid waste disposal. Emissions for the proposed project are discussed below and were analyzed using the methodology recommended in the BAAQMD CEQA Air Quality Guidelines.

CalEEMod Modeling

CalEEMod was used to predict GHG emissions from operation of the site assuming full build-out of the project. The project land use types and size and other project-specific information were input to the model, as described above within the operational period emissions. CalEEMod output is included in *Attachment 2*.

Construction Emissions

GHG emissions associated with construction were computed to be 297 MT of CO_2e for the total construction period (includes construction of both commercial and industrial components). Separate construction models were not run to estimate construction GHG emissions. Construction GHG emissions would be lower if the residential and commercial land uses were modeled separately. These are the emissions from on-site operation of construction equipment, vendor and hauling truck trips, and worker trips. Neither the City nor BAAQMD have an adopted threshold of significance for construction-related GHG emissions, though BAAQMD recommends quantifying emissions and disclosing that GHG emissions would occur during construction. BAAQMD also encourages the incorporation of best management practices to reduce GHG emissions during construction where feasible and applicable.

Operational Emissions

The CalEEMod model, along with the project-specific vehicle trip generation rates, that was used to estimate average daily air pollutant emissions associated with operation of the project was also used to compute annual GHG emissions. Annual GHG emissions were reported for the opening year of the project, assumed to be 2021 at the earliest, and in year 2030.

For this project, a less-than-significant impact would occur if the project complies with the City's Climate Action Plan. The City's Climate Action Plan addresses year 2020 goals that are currently being attained. To demonstrate compliance with the 2030 State goals, the project emissions are compared to the 2020 threshold that is adjusted downward by 40 percent in 2030 to represent progress toward meeting the State's goals. Project GHG emissions are below the 2030 thresholds in 2030; and therefore, considered not to conflict with State efforts to achieve those goals.

Table 4. Annual Project GHG Emissions (CO_2e) in Metric Tons

Source Category	Proposed Project in 2021	Proposed Project in 2030
Area	<1	<1
Energy Consumption	51	51
Mobile	781	582
Solid Waste Generation	17	17
Water Usage	6	6
Total	855	656
Significance Threshold		***660 MT CO_{2e}/yr***
Exceeds both thresholds?		***No***

Consistency with the City's Climate Action Plan is addressed by using the Plan's *New Development Checklist* contained in Appendix E of the Climate Action Plan. That Checklist is provided in Attachment 4. Note that the GHG emissions reported in Table 4 do not include effects of project features included to reduce GHG emissions per the the Checklist. These include a reduction in vehicle trips or emissions due to features such as promoting bicycling, walking and transit use, employee carpooling, and electric vehicle charging stations. In addition, the project would be required to meet new Title 24 building codes that become effective in 2020 and would further reduce project energy demand.

Supporting Documentation

Attachment 1 is the project description.

Attachment 2 includes the CalEEMod output for project construction and operational emissions.

Attachment 3 is the project's draft odor control plan.

Attachment 4 is the New Development Checklist contained in the Climate Action Plan.

Attachment 1: Project Description

BC Engineering Group
Civil Engineering & Land Planning

Project Description

This Project Description details the proposed development involving seven Assessor's parcels along Yolanda Avenue in Santa Rosa. Assessor's parcels associated with the project are as follows:

044-072-006
044-072-007
044-072-008
044-072-009
044-081-024
044-081-029
044-390-061

The project will include a new 17,982 square foot industrial building, a new 8,442 square foot building with three separate uses and premises; a cannabis dispensary (4,744 SF), a cannabis microbusiness (1,419 SF), and a vacant/untenanted space (2,279 SF). The proposed development also includes 61 new parking stalls, including 7 ADA parking stalls, proposed planting of 50 trees, and improvements to two existing buildings totaling 32,000 square feet to create a multi-unit industrial alteration building. An existing approximately 30,000 square foot industrial building is to remain on parcel 044-081-029.

Utilities to support the proposed development will include, but are not limited to, City of Santa Rosa water and sewer, and PG&E gas and electric. To reduce storm water pollution, protect water quality, and promote groundwater recharge, the proposed development will adhere to the City of Santa Rosa's low impact development requirements and utilize the City of Santa Rosa's storm drain system where necessary.

The project will require multiple applications to the City of Santa Rosa, including General Plan Amendment and Rezoning, Major Conditional Use Permit, and Minor Design Review for the new 8,442 square foot building.

General Plan Amendment and Rezoning

The purpose of the General Plan amendment under GPAM18-007 is to modify the current General Plan designations for six of the project Assessor's parcels. The General Plan amendment is intended to support the proposed development of the six Assessor's parcels, as demonstrated on the attached Site Plan developed by Henderson Architect, Inc. The Assessor's parcel numbers for the six Assessor's parcels included in the General Plan amendment are 044-070-006, 044-072-007, 044-072-008, 044-081-024, 044-081-029, and 044-390-061. In addition to the General Plan Amendment, a Rezoning application has been submitted under REZ19-003 to rezone the six Assessor's parcels to conform to the proposed General Plan designations.

The proposed 17,982 square foot industrial building is part of the overall proposed development; however, only a portion of the building is located on one of the six Assessor's parcels proposed for General Plan amendment, that parcel being 044-390-061. The remainder of the proposed building is located on 044-072-009, which already has the same zoning and General Plan designations as those designations proposed for the six Assessor's parcels associated with the General Plan amendment and Rezoning applications.

Following is a summary of each of the parcels included in the General Plan amendment (GPAM18-007) and Rezoning (REZ19-003), including existing and proposed designations and uses:

044-072-006 – 324 Yolanda Avenue
Parcel Area: 0.17 Acres
Current GP Designation: Undesignated
Proposed GP Designation: Light Industrial
Current Zoning: CG
Proposed Zoning: IL
Current Use: Light Industrial
Proposed Use: Light Industrial - Access Drive

044-072-007 – 330 Yolanda Avenue
Parcel Area: 0.34 Acres
Current GP Designation: Retail and Business Services
Proposed GP Designation: Light Industrial
Current Zoning: CG
Proposed Zoning: IL
Current Use: Light Industrial
Proposed Use: Light Industrial - Cannabis Dispensary, Cannabis Microbusiness, and Vacant/Untenanted Space

044-072-008 – 350/358 Yolanda Avenue
Parcel Area: 0.33 Acres
Current GP Designation: Retail and Business Services
Proposed GP Designation: Light Industrial
Current Zoning: CG
Proposed Zoning: IL
Current Use: Light Industrial
Proposed Use: Light Industrial - Cannabis Dispensary, Cannabis Microbusiness, and Vacant/Untenanted Space

044-081-024 – 328 Yolanda Avenue
Parcel Area: 1.92 Acres
Current GP Designation: Retail and Business Services
Proposed GP Designation: Light Industrial
Current Zoning: CG
Proposed Zoning: IL
Current Use: Light Industrial
Proposed Use: Light Industrial - Industrial Alteration Building (multi-unit)

044-081-029 – 324 Yolanda Avenue
Parcel Area: 1.68 Acres
Current GP Designation: Retail and Business Services
Proposed GP Designation: Light Industrial
Current Zoning: CG
Proposed Zoning: IL
Current Use: Light Industrial

Proposed Use: Light Industrial – Existing Building

044-390-061 – No Address Assigned
Parcel Area: 0.45 Acres
Current GP Designation: Med-High Residential
Proposed GP Designation: Light Industrial
Current Zoning: R-3-15
Proposed Zoning: IL
Current Use: Light Industrial
Proposed Use: Light Industrial – Portion of Proposed 17,982 SF Industrial Building

Major Conditional Use Permit

The proposed 8,442 square foot building with three separate uses and premises; a cannabis dispensary (4,744 SF), a cannabis microbusiness (1,419 SF), and a vacant/untenanted space (2,279 SF), will require submittal of a Major Conditional Use Permit. The submittal is to permit the uses associated with the single building which proposes hours of operation of 10am to 6pm, 7 days a week.

Use Permit Project Summary

A purpose-built, immersive retail destination, the Friends & Farmers facility offers a rare opportunity to instill, from inception, a commitment to health, wellness and sustainable development with a sophisticated and welcoming atmosphere, where patients and consumers can learn about the truly remarkable attributes of this therapeutic plant – within a thoughtfully designed, naturally engaging, and inspiring environment.

Offering exceptionally pure, locally grown and high quality cannabis products, Friends & Farmers will provide an experiential retail destination that serves as a home for the new cannabis culture, and a focal point for the renewal of Santa Rosa's Yolanda Avenue district.

Modeled after the great wineries of the region, and in alignment with the agrarian roots of the community, Friends & Farmers will be a place to engage with, learn about and purchase the highest quality, sun grown and craft cannabis products from our NorCal region. The applicant is committed to this facility serving as a flagship location in support of the heritage and legacy of cannabis in Northern California, innovative green building design, and the health of our community.

The facility will be inclusive of a beautifully designed retail storefront (cannabis dispensary permit), type 6 non-volatile manufacturing area (cannabis manufacturing permit), a small, glass greenhouse that will serve as a demonstration garden for educational purposes (cannabis craft cultivation and small nursery permit), a private member's consumption lounger for guided tasting experiences and private health consultations (not including smoking or vaping), and a non-cannabis licensed lifestyle storefront for showcasing other locally produced market-style, lifestyle goods for health and wellness.

Built from the ground up, the store will be designed to educate, engage and inspire a deeper understanding of cannabis, and its wide-reaching therapeutic potential. Taking cues from the applicant's extensive work in the wine industry, and three-years of hands-on experience running their own virtual cannabis dispensary, they know how to provide

exceptional customer service with informed and personalized health consultations suited to each individual's needs and desires.

A beautiful, comfortable and inviting retail environment, the store will offer a thoughtfully curated product selection – defined by absolute purity, standardized potency and full-spectrum therapeutic effect. Our product curation will continue to include best-of-class products supporting Northern California's heritage of the local craft farmer, and biodynamic, sun grown and regenerative farming practices.

Cultivation and Nursery
The applicant proposes a cultivation canopy of roughly 476 square feet. A glass greenhouse will serve as an educational showpiece, offering the chance for visitors to see the plant in its various stages of plant growth and to learn about the differences between cultivars, terpene development and growing techniques. Customers will be able to look in through the glass to see the plants and other herbs that they will have growing for demonstration purposes. Some plants will be harvested and dried for packaging and sale on site with demonstrations on harvesting, curing and trimming. The project will grow plants to full-term, as well as have the ability to cut and plant clones, and sell them to customers in hand-made pots etc.

Manufacturing
Onsite manufacturing, including nonvolatile, CO2 extraction will be conducted onsite. Activities will include extraction, processing, sorting, packaging and grading. This use is permitted in the IL-Light Industrial zones, but is included in the Use Permit project description in order to provide a complete perspective on operations and to be clear that since the parcel is in the midst of rezoning, it is allowed in the IL zones.

Distribution
Onsite distribution of cultivated and manufactured cannabis and cannabis products will be conducted onsite. Activities include interacting with lab facilities to ensure quality control and lab testing, collection of taxes, and logistics. This use is permitted by right in the IL-Light Industrial zones, but is included in the Use Permit project description in order to provide a complete perspective on operations since the parcel is in the midst of rezoning from CG to IL.

Retail
The applicant proposes to operate a cannabis retail dispensary which will utilize 4,744 SF of the proposed building. Visitors to the cannabis retail dispensary will check in at the reception area and have their identification and age verified. Visitors will be accompanied by a designated security person and either go directly to the retail floor or be offered a private seated consultation. A walk up service counter and pick up counter for online or phone orders will be available. There is a separate area from the main retail floor that's designed as a private consultation area to host customers and patients who have more complicated health needs, who may be remiss to share their most personal details in a larger public space. This area will be large enough to also be used as a conference room, meeting room or lounge area, to accommodate larger groups, celebrities, and members looking for a private location to meet - overlooking the greenhouse. Since this will be a private area, customers, patients and guests, will have the chance to try products allowable by the on site consumption regulations including CBD, tinctures, sublingual, topicals and edibles (excluding vape or smoking options).

A separate vacant/untenanted space is contained within the proposed building. At this time, it is undetermined what will occupy the vacant/untenanted space.

Environmental Sustainability

Multiple environmental sustainability commitments have been made as a part of the project, including, EV charging stations, bike stands, upgraded pedestrian access, solar panels, LED lights, drought tolerant landscaping, low flow toilets, water wise appliances, non-toxic cleaning agents, and employee carpool planning.

Minor Design Review

The proposed 8,442 square foot building requires a Minor Design Review submittal to the City of Santa Rosa. Below is the Design Concept Narrative developed by Henderson Architect:

Design Concept Narrative
The Yolanda avenue dispensary project will be a newly constructed retail building at the location of the former auto sales business located at 358 Yolanda Avenue. The site is currently in the approval process for a General Plan amendment and Zoning change to convert the site from CG zoning to IL zoning. The anticipated hearing date is in October.

The building is being built by the property owner as a shell retail building with the intent of leasing the building to cannabis micro-business that will include a Dispensary, Distribution, a small Demonstration Manufacturing and Grow area within the building. A portion of the building will be leased to a separate tenant yet to be identified. The space is currently identified as vacant on the floor plan.

This project incorporates the City requirements for the road enlargement and new frontage improvements along Yolanda Avenue. In a separate design review package, we will be submitting a new industrial building located to the East of this retail building project. The new industrial building and this retail building will be the new Yolanda "frontage façade" for the entire industrial parcel comprised of multiple buildings. The design of this retail building and the industrial building have been coordinated so that there is uniformity of the architecture on the site when viewed from Yolanda Avenue.

Site: Natural and Built Environment
The site is currently comprised of a small commercial building that appears to be a converted residence. The existing structure is very residential in form and scale and is entirely surrounded by asphalt with chain link fencing to separate this parcel from the adjacent parcels under the same ownership. The new retail building will be set back away from Yolanda in order to allow for the frontage improvements that will accommodate a new center turn lane, bike lane, generous landscape buffer and sidewalk. Interior to the frontage improvements is parking adjacent to the building landscape buffer and walkways for access around the retail building. There is a central landscape peninsula at the center entrance to the retail building that will have polished basalt stone benches, decomposed granite walkways, and landscaping. This central outdoor area will provide a nice gathering area in front of the retail buildings central entrance.

Architecture

The building design is based on a modification of the form of a traditional horse barn that can be seen throughout the rural area of Sonoma County. The tall roofed central section will serve as an open-air courtyard and reception area for people using the retail functions within the two "wings" of the horse barn form. This central section is open to the exterior with a large opening that can be closed off by the large sliding barn doors. On the front façade above the sliding barn doors are large square glazed windows that reference a hay loft barn door you would see on traditional horse barns. The same windows can be found on the upper area of the rear side of the large central volume. There are also clerestory windows along both sides of the taller central form.

Each side of the central tall form is a separate retail lease space. It is intended that West lease space will be the location of the future dispensary and the East space will be leased to a yet to be determined tenant. See the attached color floor plan diagram that illustrates the locations of the proposed building uses.

For the potential dispensary tenant there will be a greenhouse built at the rear of the central tall open-air space. This will be the location of the nursery/grow portion of the microbusiness. The manufacturing space will be located with the Dispensary wing of the retail space. The Distribution office is carved out of the vacant space intended for a future tenant. It is separate but within the wing to be leased to the a future tenant.

The building materials are proposed to be a grey patinaed cedar board and batten siding with black accents at the roof brackets, window frames, and door hardware. The barn doors will be "weathered" white paint color. The roof will be a light grey metal roof.

Landscaping

The site access and landscaping for both the retail building and the adjacent new industrial building will be developed at the same time and will be landscaped with the same palette to provide continuity to the site and to assist in working towards a comprehensive campus feel.

The landscape frontage around the sidewalk will be planted with Chinese Pistache along the street and some intermittent Redbuds interior to the site from the sidewalk. There will be shrubs and ground cover among these trees along the frontage.

Interior to the site and more adjacent to the building will be larger Chinese Elm trees, Chinese Pistache, Western Redbud and Sweet Bay trees. A few accent trees near the outdoor seating area in front of the building entrance include Gravenstein Apple and Olease Europea located to reinforce the "farm to table" concept that will be reinforced in the concept of the Dispensary interior. Among these trees will be a variety of shrubs and ground cover to provide visual interest to the site.

On the Yolanda side of the building wings there will be a wood trellis built in front of each wing that will be used to grow vines and foliage to soften the façade of the building.

Placemaking/Livability:

This project proposes a major upgrade to this site. Currently it is very uninviting and almost dangerous as it is a field of asphalt connected to Yolanda way with a maze of chain link fences.

The new frontage with bike lane, sidewalk and landscaping will be an immense improvement and provide a needed buffer between the roadway and the pedestrian sidewalk providing for a safer and more pleasant neighborhood experience when traveling along the sidewalk. Sidewalk connections are provided at two locations along the frontage of the retail and industrial building to provide pedestrian access into the site.

The fruit bearing accent trees near the entrance area available to anyone who chooses to pick a piece of fruit to take with them.

Street and parking trees with provide shade for the sidewalk and the parking lot to help in reducing with the heat island effect of the current site.

Sustainability

The buildings will be very energy efficient and will exceed title 24 requirements for HVAC, lighting, and building shell requirements. Thermally broken storefront and fixed window frames are utilized. The exterior cedar siding is a natural renewable material that is pest resistant. The metal roof will be a cool roof and will require almost no future maintenance. The materials that will be used within the building will exceed the requirements for VOC content and off-gassing.

Please refer to the Design Review submittal drawings, renderings, and material board for more information.

Attachment 2: CalEEMod Output

Attachment 3: Draft Odor Control Plan

Yolanda Industrial

Sonoma-San Francisco County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	23.92	1000sqft	0.00	23,920.00	0
Parking Lot	61.00	Space	0.00	24,400.00	0
Strip Mall	4.80	1000sqft	2.00	4,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	75
Climate Zone	4			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	144	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Sonoma Clean Energy

Land Use - Cannibis dispensary modeled as retail use or "Strip Mall" with "General Light Industrial" use to reflect other land uses = 21.7ksf

Demolition - Estimated 25,000sf total

Grading - assumed some import and export

Vehicle Trips - Dispensary = 252.7Light Industrial = 4.96,0.94,0.48

Energy Use - No Nontitle 24 Nat Gas usage for dispensary

Construction Off-road Equipment Mitigation - Tier 4i and BMPs

Mobile Land Use Mitigation - Used parking supply to represent effect of electric charging stations

Energy Mitigation - New Title 24 to require more efficient buildings

Water Mitigation -

Fleet Mix - Use light duty fleet for Dispensary=

Water And Wastewater - WTP treatment

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblEnergyUse	T24NG	2.37	0.00
tblFleetMix	HHD	0.03	1.0000e-003
tblFleetMix	LDA	0.58	0.59
tblFleetMix	LDT1	0.04	0.06
tblFleetMix	LDT2	0.17	0.19
tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD2	6.7160e-003	6.0000e-003
tblFleetMix	MCY	5.3250e-003	6.0000e-003
tblFleetMix	MDV	0.11	0.12
tblFleetMix	MH	1.1120e-003	1.0000e-003
tblFleetMix	MHD	0.03	1.0000e-003
tblFleetMix	OBUS	3.0710e-003	0.00
tblFleetMix	SBUS	8.7400e-004	0.00
tblFleetMix	UBUS	1.8380e-003	0.00
tblGrading	MaterialExported	0.00	1,000.00
tblGrading	MaterialImported	0.00	1,000.00
tblLandUse	LotAcreage	0.55	0.00
tblLandUse	LotAcreage	0.55	0.00
tblLandUse	LotAcreage	0.11	2.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	144
tblVehicleTrips	ST_TR	1.32	0.94
tblVehicleTrips	ST_TR	42.04	252.70
tblVehicleTrips	SU_TR	0.68	0.48

tblVehicleTrips	SU_TR	20.43	252.70
tblVehicleTrips	WD_TR	6.97	4.96
tblVehicleTrips	WD_TR	44.32	252.70
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.4341	2.2520	1.8593	3.4900e-003	0.0552	0.1139	0.1691	0.0164	0.1086	0.1251	0.0000	298.4424	298.4424	0.0549	0.0000	299.8152
Maximum	**0.4341**	**2.2520**	**1.8593**	**3.4900e-003**	**0.0552**	**0.1139**	**0.1691**	**0.0164**	**0.1086**	**0.1251**	**0.0000**	**298.4424**	**298.4424**	**0.0549**	**0.0000**	**299.8152**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.4341	2.2520	1.8593	3.4900e-003	0.0403	0.1139	0.1542	0.0116	0.1086	0.1202	0.0000	298.4421	298.4421	0.0549	0.0000	299.8149
Maximum	**0.4341**	**2.2520**	**1.8593**	**3.4900e-003**	**0.0403**	**0.1139**	**0.1542**	**0.0116**	**0.1086**	**0.1202**	**0.0000**	**298.4421**	**298.4421**	**0.0549**	**0.0000**	**299.8149**

	ROG	NOx	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**	**27.00**	**0.00**	**8.82**	**29.42**	**0.00**	**3.86**	**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	**1-1-2020**	**3-31-2020**	0.7690	0.7690
2	**4-1-2020**	**6-30-2020**	0.6825	0.6825
3	**7-1-2020**	**9-30-2020**	0.6900	0.6900
		Highest	0.7690	0.7690

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	0.1293	1.0000e-005	8.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-003	1.6000e-003	0.0000	0.0000	1.7100e-003
Energy	3.4000e-003	0.0309	0.0260	1.9000e-004		2.3500e-003	2.3500e-003		2.3500e-003	2.3500e-003	0.0000	50.4878	50.4878	4.0300e-003	1.3200e-003	50.9813
Mobile	0.3917	0.7024	3.8479	8.6100e-003	0.7779	8.5500e-003	0.7865	0.2077	7.9700e-003	0.2157	0.0000	779.9835	779.9835	0.0331	0.0000	780.8099
Waste						0.0000	0.0000		0.0000	0.0000	7.0438	0.0000	7.0438	0.4163	0.0000	17.4507
Water						0.0000	0.0000		0.0000	0.0000	2.0829	2.1305	4.2133	7.6000e-003	4.6200e-003	5.7795

Total	**0.5244**	**0.7333**	**3.8747**	**8.8000e-003**	**0.7779**	**0.0109**	**0.7888**	**0.2077**	**0.0103**	**0.2180**	**9.1266**	**832.6033**	**841.7300**	**0.4610**	**5.9400e-003**	**855.0232**

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	0.1293	1.0000e-005	8.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-003	1.6000e-003	0.0000	0.0000	1.7100e-003
Energy	2.8900e-003	0.0263	0.0221	1.6000e-004		2.0000e-003	2.0000e-003		2.0000e-003	2.0000e-003	0.0000	44.8204	44.8204	3.8100e-003	1.2000e-003	45.2730
Mobile	0.3847	0.6671	3.6742	8.0500e-003	0.7242	8.0600e-003	0.7323	0.1934	7.5100e-003	0.2009	0.0000	728.8436	728.8436	0.0313	0.0000	729.6266
Waste						0.0000	0.0000		0.0000	0.0000	7.0438	0.0000	7.0438	0.4163	0.0000	17.4507
Water						0.0000	0.0000		0.0000	0.0000	1.6663	1.7113	3.3776	6.0800e-003	3.6900e-003	4.6307
Total	**0.5169**	**0.6935**	**3.6972**	**8.2100e-003**	**0.7242**	**0.0101**	**0.7343**	**0.1934**	**9.5100e-003**	**0.2029**	**8.7101**	**775.3770**	**784.0871**	**0.4575**	**4.8900e-003**	**796.9827**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.42**	**5.43**	**4.58**	**6.70**	**6.90**	**7.71**	**6.91**	**6.90**	**7.85**	**6.94**	**4.56**	**6.87**	**6.85**	**0.75**	**17.68**	**6.79**

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	1/1/2020	1/28/2020	5	20	
2	Site Preparation	Site Preparation	1/29/2020	1/30/2020	5	2	
3	Grading	Grading	1/31/2020	2/5/2020	5	4	
4	Building Construction	Building Construction	2/6/2020	11/11/2020	5	200	
5	Paving	Paving	11/12/2020	11/25/2020	5	10	

6	Architectural Coating	Architectural Coating	11/26/2020	12/9/2020	5	10	

Acres of Grading (Site Preparation Phase): 3

Acres of Grading (Grading Phase): 2

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 43,080; Non-Residential Outdoor: 14,360; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	114.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	250.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	22.00	9.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0123	0.0000	0.0123	1.8600e-003	0.0000	1.8600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0213	0.2095	0.1466	2.4000e-004		0.0115	0.0115		0.0108	0.0108	0.0000	21.0677	21.0677	5.4200e-003	0.0000	21.2031
Total	**0.0213**	**0.2095**	**0.1466**	**2.4000e-004**	**0.0123**	**0.0115**	**0.0238**	**1.8600e-003**	**0.0108**	**0.0126**	**0.0000**	**21.0677**	**21.0677**	**5.4200e-003**	**0.0000**	**21.2031**

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	4.5000e-004	0.0168	3.4300e-003	4.0000e-005	9.5000e-004	6.0000e-005	1.0100e-003	2.6000e-004	6.0000e-005	3.2000e-004	0.0000	4.3910	4.3910	2.7000e-004	0.0000	4.3977
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	6.2000e-004	4.5000e-004	4.5300e-003	1.0000e-005	1.0200e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.9399	0.9399	3.0000e-005	0.0000	0.9407
Total	**1.0700e-003**	**0.0173**	**7.9600e-003**	**5.0000e-005**	**1.9700e-003**	**7.0000e-005**	**2.0400e-003**	**5.3000e-004**	**7.0000e-005**	**6.0000e-004**	**0.0000**	**5.3308**	**5.3308**	**3.0000e-004**	**0.0000**	**5.3384**

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					5.5400e-003	0.0000	5.5400e-003	8.4000e-004	0.0000	8.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0213	0.2095	0.1466	2.4000e-004		0.0115	0.0115		0.0108	0.0108	0.0000	21.0676	21.0676	5.4200e-003	0.0000	21.2030
Total	**0.0213**	**0.2095**	**0.1466**	**2.4000e-004**	**5.5400e-003**	**0.0115**	**0.0171**	**8.4000e-004**	**0.0108**	**0.0116**	**0.0000**	**21.0676**	**21.0676**	**5.4200e-003**	**0.0000**	**21.2030**

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	4.5000e-004	0.0168	3.4300e-003	4.0000e-005	9.5000e-004	6.0000e-005	1.0100e-003	2.6000e-004	6.0000e-005	3.2000e-004	0.0000	4.3910	4.3910	2.7000e-004	0.0000	4.3977

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	6.2000e-004	4.5000e-004	4.5300e-003	1.0000e-005	1.0200e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.9399	0.9399	3.0000e-005	0.0000	0.9407
Total	**1.0700e-003**	**0.0173**	**7.9600e-003**	**5.0000e-005**	**1.9700e-003**	**7.0000e-005**	**2.0400e-003**	**5.3000e-004**	**7.0000e-005**	**6.0000e-004**	**0.0000**	**5.3308**	**5.3308**	**3.0000e-004**	**0.0000**	**5.3384**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.5900e-003	0.0000	1.5900e-003	1.7000e-004	0.0000	1.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6500e-003	0.0199	0.0113	2.0000e-005		7.8000e-004	7.8000e-004		7.1000e-004	7.1000e-004	0.0000	2.1527	2.1527	7.0000e-004	0.0000	2.1701
Total	**1.6500e-003**	**0.0199**	**0.0113**	**2.0000e-005**	**1.5900e-003**	**7.8000e-004**	**2.3700e-003**	**1.7000e-004**	**7.1000e-004**	**8.8000e-004**	**0.0000**	**2.1527**	**2.1527**	**7.0000e-004**	**0.0000**	**2.1701**

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	4.0000e-005	3.0000e-005	2.8000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0578	0.0578	0.0000	0.0000	0.0579
Total	**4.0000e-005**	**3.0000e-005**	**2.8000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0578**	**0.0578**	**0.0000**	**0.0000**	**0.0579**

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					7.2000e-004	0.0000	7.2000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6500e-003	0.0199	0.0113	2.0000e-005		7.8000e-004	7.8000e-004		7.1000e-004	7.1000e-004	0.0000	2.1527	2.1527	7.0000e-004	0.0000	2.1701
Total	**1.6500e-003**	**0.0199**	**0.0113**	**2.0000e-005**	**7.2000e-004**	**7.8000e-004**	**1.5000e-003**	**8.0000e-005**	**7.1000e-004**	**7.9000e-004**	**0.0000**	**2.1527**	**2.1527**	**7.0000e-004**	**0.0000**	**2.1701**

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	4.0000e-005	3.0000e-005	2.8000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0578	0.0578	0.0000	0.0000	0.0579
Total	**4.0000e-005**	**3.0000e-005**	**2.8000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0578**	**0.0578**	**0.0000**	**0.0000**	**0.0579**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Fugitive Dust					0.0132	0.0000	0.0132	6.7500e-003	0.0000	6.7500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8400e-003	0.0427	0.0199	4.0000e-005		1.9800e-003	1.9800e-003		1.8200e-003	1.8200e-003	0.0000	3.6222	3.6222	1.1700e-003	0.0000	3.6515
Total	**3.8400e-003**	**0.0427**	**0.0199**	**4.0000e-005**	**0.0132**	**1.9800e-003**	**0.0152**	**6.7500e-003**	**1.8200e-003**	**8.5700e-003**	**0.0000**	**3.6222**	**3.6222**	**1.1700e-003**	**0.0000**	**3.6515**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.9000e-004	0.0369	7.5200e-003	1.0000e-004	2.0700e-003	1.3000e-004	2.2000e-003	5.7000e-004	1.3000e-004	6.9000e-004	0.0000	9.6293	9.6293	5.9000e-004	0.0000	9.6441
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	7.0000e-005	7.0000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1446	0.1446	1.0000e-005	0.0000	0.1447
Total	**1.0900e-003**	**0.0370**	**8.2200e-003**	**1.0000e-004**	**2.2300e-003**	**1.3000e-004**	**2.3600e-003**	**6.1000e-004**	**1.3000e-004**	**7.3000e-004**	**0.0000**	**9.7739**	**9.7739**	**6.0000e-004**	**0.0000**	**9.7888**

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					5.9500e-003	0.0000	5.9500e-003	3.0400e-003	0.0000	3.0400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8400e-003	0.0427	0.0199	4.0000e-005		1.9800e-003	1.9800e-003		1.8200e-003	1.8200e-003	0.0000	3.6222	3.6222	1.1700e-003	0.0000	3.6515

Total	**3.8400e-003**	**0.0427**	**0.0199**	**4.0000e-005**	**5.9500e-003**	**1.9800e-003**	**7.9300e-003**	**3.0400e-003**	**1.8200e-003**	**4.8600e-003**	**0.0000**	**3.6222**	**3.6222**	**1.1700e-003**	**0.0000**	**3.6515**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.9000e-004	0.0369	7.5200e-003	1.0000e-004	2.0700e-003	1.3000e-004	2.2000e-003	5.7000e-004	1.3000e-004	6.9000e-004	0.0000	9.6293	9.6293	5.9000e-004	0.0000	9.6441
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	7.0000e-005	7.0000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1446	0.1446	1.0000e-005	0.0000	0.1447
Total	**1.0900e-003**	**0.0370**	**8.2200e-003**	**1.0000e-004**	**2.2300e-003**	**1.3000e-004**	**2.3600e-003**	**6.1000e-004**	**1.3000e-004**	**7.3000e-004**	**0.0000**	**9.7739**	**9.7739**	**6.0000e-004**	**0.0000**	**9.7888**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2288	1.7434	1.4897	2.5000e-003		0.0948	0.0948		0.0909	0.0909	0.0000	207.6444	207.6444	0.0421	0.0000	208.6980
Total	**0.2288**	**1.7434**	**1.4897**	**2.5000e-003**		**0.0948**	**0.0948**		**0.0909**	**0.0909**	**0.0000**	**207.6444**	**207.6444**	**0.0421**	**0.0000**	**208.6980**

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	3.5400e-003	0.1080	0.0273	2.4000e-004	5.8300e-003	5.7000e-004	6.4100e-003	1.6900e-003	5.5000e-004	2.2400e-003	0.0000	23.1714	23.1714	1.4200e-003	0.0000	23.2068
Worker	0.0105	7.6300e-003	0.0766	1.8000e-004	0.0173	1.4000e-004	0.0174	4.6000e-003	1.3000e-004	4.7300e-003	0.0000	15.9052	15.9052	5.8000e-004	0.0000	15.9198
Total	**0.0140**	**0.1156**	**0.1039**	**4.2000e-004**	**0.0231**	**7.1000e-004**	**0.0238**	**6.2900e-003**	**6.8000e-004**	**6.9700e-003**	**0.0000**	**39.0765**	**39.0765**	**2.0000e-003**	**0.0000**	**39.1266**

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	0.2288	1.7434	1.4897	2.5000e-003		0.0948	0.0948		0.0909	0.0909	0.0000	207.6442	207.6442	0.0421	0.0000	208.6977
Total	**0.2288**	**1.7434**	**1.4897**	**2.5000e-003**		**0.0948**	**0.0948**		**0.0909**	**0.0909**	**0.0000**	**207.6442**	**207.6442**	**0.0421**	**0.0000**	**208.6977**

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	3.5400e-003	0.1080	0.0273	2.4000e-004	5.8300e-003	5.7000e-004	6.4100e-003	1.6900e-003	5.5000e-004	2.2400e-003	0.0000	23.1714	23.1714	1.4200e-003	0.0000	23.2068
Worker	0.0105	7.6300e-003	0.0766	1.8000e-004	0.0173	1.4000e-004	0.0174	4.6000e-003	1.3000e-004	4.7300e-003	0.0000	15.9052	15.9052	5.8000e-004	0.0000	15.9198
Total	**0.0140**	**0.1156**	**0.1039**	**4.2000e-004**	**0.0231**	**7.1000e-004**	**0.0238**	**6.2900e-003**	**6.8000e-004**	**6.9700e-003**	**0.0000**	**39.0765**	**39.0765**	**2.0000e-003**	**0.0000**	**39.1266**

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.7700e-003	0.0579	0.0590	9.0000e-005		3.2800e-003	3.2800e-003		3.0300e-003	3.0300e-003	0.0000	7.7529	7.7529	2.4600e-003	0.0000	7.8143
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.7700e-003**	**0.0579**	**0.0590**	**9.0000e-005**		**3.2800e-003**	**3.2800e-003**		**3.0300e-003**	**3.0300e-003**	**0.0000**	**7.7529**	**7.7529**	**2.4600e-003**	**0.0000**	**7.8143**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e-004	2.6000e-004	2.6100e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5422	0.5422	2.0000e-005	0.0000	0.5427
Total	**3.6000e-004**	**2.6000e-004**	**2.6100e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**5.9000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.5422**	**0.5422**	**2.0000e-005**	**0.0000**	**0.5427**

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	5.7700e-003	0.0579	0.0590	9.0000e-005		3.2800e-003	3.2800e-003		3.0300e-003	3.0300e-003	0.0000	7.7529	7.7529	2.4600e-003	0.0000	7.8143
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.7700e-003**	**0.0579**	**0.0590**	**9.0000e-005**		**3.2800e-003**	**3.2800e-003**		**3.0300e-003**	**3.0300e-003**	**0.0000**	**7.7529**	**7.7529**	**2.4600e-003**	**0.0000**	**7.8143**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e-004	2.6000e-004	2.6100e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5422	0.5422	2.0000e-005	0.0000	0.5427
Total	**3.6000e-004**	**2.6000e-004**	**2.6100e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**5.9000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.5422**	**0.5422**	**2.0000e-005**	**0.0000**	**0.5427**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1549					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2100e-003	8.4200e-003	9.1600e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	1.2766	1.2766	1.0000e-004	0.0000	1.2791
Total	**0.1561**	**8.4200e-003**	**9.1600e-003**	**1.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.0000e-004**	**0.0000**	**1.2791**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	7.0000e-005	7.0000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1446	0.1446	1.0000e-005	0.0000	0.1447
Total	**1.0000e-004**	**7.0000e-005**	**7.0000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1446**	**0.1446**	**1.0000e-005**	**0.0000**	**0.1447**

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	0.1549					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	1.2100e-003	8.4200e-003	9.1600e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	1.2766	1.2766	1.0000e-004	0.0000	1.2791
Total	**0.1561**	**8.4200e-003**	**9.1600e-003**	**1.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.0000e-004**	**0.0000**	**1.2791**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	7.0000e-005	7.0000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1446	0.1446	1.0000e-005	0.0000	0.1447
Total	**1.0000e-004**	**7.0000e-005**	**7.0000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1446**	**0.1446**	**1.0000e-005**	**0.0000**	**0.1447**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

Limit Parking Supply

	ROG	NOx	CO	SO2	Fugitive 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	0.3847	0.6671	3.6742	8.0500e-003	0.7242	8.0600e-003	0.7323	0.1934	7.5100e-003	0.2009	0.0000	728.8436	728.8436	0.0313	0.0000	729.6266
Unmitigated	0.3917	0.7024	3.8479	8.6100e-003	0.7779	8.5500e-003	0.7865	0.2077	7.9700e-003	0.2157	0.0000	779.9835	779.9835	0.0331	0.0000	780.8099

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	118.64	22.48	11.48	261,581	243,532
Parking Lot	0.00	0.00	0.00		
Strip Mall	1,212.96	1,212.96	1212.96	1,867,998	1,739,107
Total	1,331.60	1,235.44	1,224.44	2,129,579	1,982,638

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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.578299	0.039453	0.169996	0.109068	0.028307	0.006716	0.029274	0.026666	0.003071	0.001838	0.005325	0.000874	0.001112
Parking Lot	0.578299	0.039453	0.169996	0.109068	0.028307	0.006716	0.029274	0.026666	0.003071	0.001838	0.005325	0.000874	0.001112
Strip Mall	0.588000	0.058000	0.193000	0.121000	0.025000	0.006000	0.001000	0.001000	0.000000	0.000000	0.006000	0.000000	0.001000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	16.1792	16.1792	3.2600e-003	6.7000e-004	16.4615
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	16.8147	16.8147	3.3900e-003	7.0000e-004	17.1082
NaturalGas Mitigated	2.8900e-003	0.0263	0.0221	1.6000e-004		2.0000e-003	2.0000e-003		2.0000e-003	2.0000e-003	0.0000	28.6413	28.6413	5.5000e-004	5.3000e-004	28.8115
NaturalGas Unmitigated	3.4000e-003	0.0309	0.0260	1.9000e-004		2.3500e-003	2.3500e-003		2.3500e-003	2.3500e-003	0.0000	33.6731	33.6731	6.5000e-004	6.2000e-004	33.8732

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					
General Light Industry	631010	3.4000e-003	0.0309	0.0260	1.9000e-004		2.3500e-003	2.3500e-003		2.3500e-003	2.3500e-003	0.0000	33.6731	33.6731	6.5000e-004	6.2000e-004	33.8732
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	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		**3.4000e-003**	**0.0309**	**0.0260**	**1.9000e-004**		**2.3500e-003**	**2.3500e-003**		**2.3500e-003**	**2.3500e-003**	**0.0000**	**33.6731**	**33.6731**	**6.5000e-004**	**6.2000e-004**	**33.8732**

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					
General Light Industry	536717	2.8900e-003	0.0263	0.0221	1.6000e-004		2.0000e-003	2.0000e-003		2.0000e-003	2.0000e-003	0.0000	28.6413	28.6413	5.5000e-004	5.3000e-004	28.8115
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	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		**2.8900e-003**	**0.0263**	**0.0221**	**1.6000e-004**		**2.0000e-003**	**2.0000e-003**		**2.0000e-003**	**2.0000e-003**	**0.0000**	**28.6413**	**28.6413**	**5.5000e-004**	**5.3000e-004**	**28.8115**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	197579	12.9053	2.6000e-003	5.4000e-004	13.1306
Parking Lot	8540	0.5578	1.1000e-004	2.0000e-005	0.5675
Strip Mall	51312	3.3516	6.7000e-004	1.4000e-004	3.4101
Total		**16.8147**	**3.3800e-003**	**7.0000e-004**	**17.1082**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	190499	12.4429	2.5100e-003	5.2000e-004	12.6600
Parking Lot	8540	0.5578	1.1000e-004	2.0000e-005	0.5675

Strip Mall	48662.4	3.1785	6.4000e-004	1.3000e-004	3.2340
Total		**16.1792**	**3.2600e-003**	**6.7000e-004**	**16.4615**

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	0.1293	1.0000e-005	8.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-003	1.6000e-003	0.0000	0.0000	1.7100e-003
Unmitigated	0.1293	1.0000e-005	8.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-003	1.6000e-003	0.0000	0.0000	1.7100e-003

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	0.0155					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.0000e-005	1.0000e-005	8.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-003	1.6000e-003	0.0000	0.0000	1.7100e-003

Total	**0.1293**	**1.0000e-005**	**8.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.6000e-003**	**1.6000e-003**	**0.0000**	**0.0000**	**1.7100e-003**

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	0.0155					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.0000e-005	1.0000e-005	8.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-003	1.6000e-003	0.0000	0.0000	1.7100e-003
Total	**0.1293**	**1.0000e-005**	**8.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.6000e-003**	**1.6000e-003**	**0.0000**	**0.0000**	**1.7100e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			

Mitigated	3.3776	6.0800e-003	3.6900e-003	4.6307
Unmitigated	4.2133	7.6000e-003	4.6200e-003	5.7795

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	5.5315 / 0	3.9121	7.1300e-003	4.3400e-003	5.3829
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.355548 / 0.217917	0.3013	4.7000e-004	2.8000e-004	0.3967
Total		**4.2133**	**7.6000e-003**	**4.6200e-003**	**5.7795**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	4.4252 / 0	3.1297	5.7000e-003	3.4700e-003	4.3063
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.284438 / 0.204624	0.2479	3.8000e-004	2.2000e-004	0.3244
Total		**3.3776**	**6.0800e-003**	**3.6900e-003**	**4.6307**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	7.0438	0.4163	0.0000	17.4507
Unmitigated	7.0438	0.4163	0.0000	17.4507

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	29.66	6.0207	0.3558	0.0000	14.9161
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	5.04	1.0231	0.0605	0.0000	2.5346
Total		**7.0438**	**0.4163**	**0.0000**	**17.4507**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	29.66	6.0207	0.3558	0.0000	14.9161
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	5.04	1.0231	0.0605	0.0000	2.5346
Total		**7.0438**	**0.4163**	**0.0000**	**17.4507**

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

Yolanda Industrial

Sonoma-San Francisco County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	23.92	1000sqft	0.00	23,920.00	0
Parking Lot	61.00	Space	0.00	24,400.00	0
Strip Mall	4.80	1000sqft	2.00	4,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	75
Climate Zone	4			**Operational Year**	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	144	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Sonoma Clean Energy

Land Use - Cannibis dispensary modeled as retail use or "Strip Mall" with "General Light Industrial" use to reflect other land uses = 21.7ksf

Demolition - Estimated 25,000sf total

Grading - assumed some import and export

Vehicle Trips - Dispensary = 252.7Light Industrial = 4.96,0.94,0.48

Energy Use - No Nontitle 24 Nat Gas usage for dispensary

Construction Off-road Equipment Mitigation - Tier 4i and BMPs

Mobile Land Use Mitigation - Used parking supply to represent effect of electric charging stations

Energy Mitigation - New Title 24 to require more efficient buildings

Water Mitigation -

Fleet Mix - Use light duty fleet for Dispensary=

Water And Wastewater - WTP treatment

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblEnergyUse	T24NG	2.37	0.00
tblFleetMix	HHD	0.03	1.0000e-003
tblFleetMix	LDA	0.63	0.60
tblFleetMix	LDT1	0.03	0.06
tblFleetMix	LDT2	0.16	0.19
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD2	4.6320e-003	6.0000e-003
tblFleetMix	MCY	4.3050e-003	6.0000e-003
tblFleetMix	MDV	0.09	0.12
tblFleetMix	MH	6.6200e-004	1.0000e-003
tblFleetMix	MHD	0.03	1.0000e-003
tblFleetMix	OBUS	3.1960e-003	0.00
tblFleetMix	SBUS	8.9700e-004	0.00
tblFleetMix	UBUS	1.3730e-003	0.00
tblGrading	MaterialExported	0.00	1,000.00
tblGrading	MaterialImported	0.00	1,000.00
tblLandUse	LotAcreage	0.55	0.00
tblLandUse	LotAcreage	0.55	0.00
tblLandUse	LotAcreage	0.11	2.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	144
tblVehicleTrips	ST_TR	1.32	0.94
tblVehicleTrips	ST_TR	42.04	252.70
tblVehicleTrips	SU_TR	0.68	0.48

tblVehicleTrips	SU_TR	20.43	252.70
tblVehicleTrips	WD_TR	6.97	4.96
tblVehicleTrips	WD_TR	44.32	252.70
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

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	0.1293	1.0000e-005	8.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-003	1.6000e-003	0.0000	0.0000	1.7100e-003
Energy	3.4000e-003	0.0309	0.0260	1.9000e-004		2.3500e-003	2.3500e-003		2.3500e-003	2.3500e-003	0.0000	50.4878	50.4878	4.0300e-003	1.3200e-003	50.9813
Mobile	0.2247	0.3721	2.0253	6.3900e-003	0.7777	5.6000e-003	0.7833	0.2076	5.2000e-003	0.2128	0.0000	581.2349	581.2349	0.0182	0.0000	581.6896
Waste						0.0000	0.0000		0.0000	0.0000	7.0438	0.0000	7.0438	0.4163	0.0000	17.4507
Water						0.0000	0.0000		0.0000	0.0000	2.0829	2.1305	4.2133	7.6000e-003	4.6200e-003	5.7795

Total	**0.3574**	**0.4030**	**2.0521**	**6.5800e-003**	**0.7777**	**7.9500e-003**	**0.7856**	**0.2076**	**7.5500e-003**	**0.2151**	**9.1266**	**633.8547**	**642.9814**	**0.4461**	**5.9400e-003**	**655.9029**

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	0.1293	1.0000e-005	8.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-003	1.6000e-003	0.0000	0.0000	1.7100e-003
Energy	2.8900e-003	0.0263	0.0221	1.6000e-004		2.0000e-003	2.0000e-003		2.0000e-003	2.0000e-003	0.0000	44.8204	44.8204	3.8100e-003	1.2000e-003	45.2730
Mobile	0.2204	0.3550	1.9287	5.9700e-003	0.7240	5.2800e-003	0.7293	0.1933	4.9100e-003	0.1982	0.0000	543.2060	543.2060	0.0172	0.0000	543.6357
Waste						0.0000	0.0000		0.0000	0.0000	7.0438	0.0000	7.0438	0.4163	0.0000	17.4507
Water						0.0000	0.0000		0.0000	0.0000	1.6663	1.7113	3.3776	6.0800e-003	3.6900e-003	4.6307
Total	**0.3526**	**0.3814**	**1.9516**	**6.1300e-003**	**0.7240**	**7.2800e-003**	**0.7313**	**0.1933**	**6.9100e-003**	**0.2002**	**8.7101**	**589.7393**	**598.4494**	**0.4434**	**4.8900e-003**	**610.9917**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**1.33**	**5.38**	**4.89**	**6.84**	**6.90**	**8.43**	**6.91**	**6.90**	**8.48**	**6.96**	**4.56**	**6.96**	**6.93**	**0.61**	**17.68**	**6.85**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

Limit Parking Supply

	ROG	NOx	CO	SO2	Fugitive 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	0.2204	0.3550	1.9287	5.9700e-003	0.7240	5.2800e-003	0.7293	0.1933	4.9100e-003	0.1982	0.0000	543.2060	543.2060	0.0172	0.0000	543.6357
Unmitigated	0.2247	0.3721	2.0253	6.3900e-003	0.7777	5.6000e-003	0.7833	0.2076	5.2000e-003	0.2128	0.0000	581.2349	581.2349	0.0182	0.0000	581.6896

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	118.64	22.48	11.48	261,581	243,532
Parking Lot	0.00	0.00	0.00		
Strip Mall	1,212.96	1,212.96	1212.96	1,867,998	1,739,107
Total	1,331.60	1,235.44	1,224.44	2,129,579	1,982,638

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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.625329	0.031298	0.162135	0.089092	0.014618	0.004632	0.032111	0.030354	0.003196	0.001373	0.004305	0.000897	0.000662
Parking Lot	0.625329	0.031298	0.162135	0.089092	0.014618	0.004632	0.032111	0.030354	0.003196	0.001373	0.004305	0.000897	0.000662
Strip Mall	0.597000	0.060000	0.186000	0.118000	0.024000	0.006000	0.001000	0.001000	0.000000	0.000000	0.006000	0.000000	0.001000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	16.1792	16.1792	3.2600e-003	6.7000e-004	16.4615
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	16.8147	16.8147	3.3900e-003	7.0000e-004	17.1082
NaturalGas Mitigated	2.8900e-003	0.0263	0.0221	1.6000e-004		2.0000e-003	2.0000e-003		2.0000e-003	2.0000e-003	0.0000	28.6413	28.6413	5.5000e-004	5.3000e-004	28.8115
NaturalGas Unmitigated	3.4000e-003	0.0309	0.0260	1.9000e-004		2.3500e-003	2.3500e-003		2.3500e-003	2.3500e-003	0.0000	33.6731	33.6731	6.5000e-004	6.2000e-004	33.8732

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					
General Light Industry	631010	3.4000e-003	0.0309	0.0260	1.9000e-004		2.3500e-003	2.3500e-003		2.3500e-003	2.3500e-003	0.0000	33.6731	33.6731	6.5000e-004	6.2000e-004	33.8732
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	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		**3.4000e-003**	**0.0309**	**0.0260**	**1.9000e-004**		**2.3500e-003**	**2.3500e-003**		**2.3500e-003**	**2.3500e-003**	**0.0000**	**33.6731**	**33.6731**	**6.5000e-004**	**6.2000e-004**	**33.8732**

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					
General Light Industry	536717	2.8900e-003	0.0263	0.0221	1.6000e-004		2.0000e-003	2.0000e-003		2.0000e-003	2.0000e-003	0.0000	28.6413	28.6413	5.5000e-004	5.3000e-004	28.8115
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	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		**2.8900e-003**	**0.0263**	**0.0221**	**1.6000e-004**		**2.0000e-003**	**2.0000e-003**		**2.0000e-003**	**2.0000e-003**	**0.0000**	**28.6413**	**28.6413**	**5.5000e-004**	**5.3000e-004**	**28.8115**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	197579	12.9053	2.6000e-003	5.4000e-004	13.1306
Parking Lot	8540	0.5578	1.1000e-004	2.0000e-005	0.5675
Strip Mall	51312	3.3516	6.7000e-004	1.4000e-004	3.4101
Total		**16.8147**	**3.3800e-003**	**7.0000e-004**	**17.1082**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	190499	12.4429	2.5100e-003	5.2000e-004	12.6600
Parking Lot	8540	0.5578	1.1000e-004	2.0000e-005	0.5675
Strip Mall	48662.4	3.1785	6.4000e-004	1.3000e-004	3.2340
Total		**16.1792**	**3.2600e-003**	**6.7000e-004**	**16.4615**

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	0.1293	1.0000e-005	8.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-003	1.6000e-003	0.0000	0.0000	1.7100e-003
Unmitigated	0.1293	1.0000e-005	8.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-003	1.6000e-003	0.0000	0.0000	1.7100e-003

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	0.0155					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.0000e-005	1.0000e-005	8.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-003	1.6000e-003	0.0000	0.0000	1.7100e-003
Total	**0.1293**	**1.0000e-005**	**8.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.6000e-003**	**1.6000e-003**	**0.0000**	**0.0000**	**1.7100e-003**

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	0.0155					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.0000e-005	1.0000e-005	8.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-003	1.6000e-003	0.0000	0.0000	1.7100e-003
Total	**0.1293**	**1.0000e-005**	**8.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.6000e-003**	**1.6000e-003**	**0.0000**	**0.0000**	**1.7100e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3.3776	6.0800e-003	3.6900e-003	4.6307
Unmitigated	4.2133	7.6000e-003	4.6200e-003	5.7795

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	5.5315 / 0	3.9121	7.1300e-003	4.3400e-003	5.3829
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.355548 / 0.217917	0.3013	4.7000e-004	2.8000e-004	0.3967
Total		**4.2133**	**7.6000e-003**	**4.6200e-003**	**5.7795**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	MT/yr			
General Light Industry	4.4252 / 0	3.1297	5.7000e-003	3.4700e-003	4.3063
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.284438 / 0.204624	0.2479	3.8000e-004	2.2000e-004	0.3244
Total		**3.3776**	**6.0800e-003**	**3.6900e-003**	**4.6307**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	7.0438	0.4163	0.0000	17.4507
Unmitigated	7.0438	0.4163	0.0000	17.4507

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

General Light Industry	29.66	6.0207	0.3558	0.0000	14.9161
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	5.04	1.0231	0.0605	0.0000	2.5346
Total		**7.0438**	**0.4163**	**0.0000**	**17.4507**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	29.66	6.0207	0.3558	0.0000	14.9161
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	5.04	1.0231	0.0605	0.0000	2.5346
Total		**7.0438**	**0.4163**	**0.0000**	**17.4507**

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

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: Air District
Region: BAY AREA AQMD
Calendar Year: 2021
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

					Total:	176406725.5			Total:	1.68E+08	100.00%				
Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT	Trips	%vmt		adj VMT	%vmt	LDA	58.84%	0.588
BAY AREA AQMD	2021	HHDT	Aggregated	Aggregated	GAS	30.43135	3487.643314	608.8705	0.00%		0	0.00%	LDT1	5.81%	0.058
BAY AREA AQMD	2021	HHDT	Aggregated	Aggregated	DSL	35561.63	4280954.942	373175	2.43%		0	0.00%	LDT2	19.38%	0.193
BAY AREA AQMD	2021	HHDT	Aggregated	Aggregated	NG	1406.664	57325.31214	5485.988	0.03%		0	0.00%	MDV	12.16%	0.121
BAY AREA AQMD	2021	LDA	Aggregated	Aggregated	GAS	2631966	95404535.01	12358567	54.08%		95404535	56.71%	LHD1	2.53%	0.025
BAY AREA AQMD	2021	LDA	Aggregated	Aggregated	DSL	29081.05	1067676.187	136215.6	0.61%		1067676	0.63%	LHD2	0.60%	0.006
BAY AREA AQMD	2021	LDA	Aggregated	Aggregated	ELEC	67632.22	2520506.046	333330.2	1.43%		2520506	1.50%	MHD	0.00%	0.001
BAY AREA AQMD	2021	LDT1	Aggregated	Aggregated	GAS	285346.2	9717025.405	1313699	5.51%		9717025	5.78%	HHD	0.00%	0.001
BAY AREA AQMD	2021	LDT1	Aggregated	Aggregated	DSL	195.0919	3260.495214	648.5624	0.00%		3260.495	0.00%	OBUS	0.00%	-
BAY AREA AQMD	2021	LDT1	Aggregated	Aggregated	ELEC	1541.16	59165.73352	7670.677	0.03%		59165.73	0.04%	UBUS	0.00%	-
BAY AREA AQMD	2021	LDT2	Aggregated	Aggregated	GAS	924639.3	32129693.08	4316861	18.21%		32129693	19.10%	MCY	0.60%	0.006
BAY AREA AQMD	2021	LDT2	Aggregated	Aggregated	DSL	6102.495	242192.0258	29908.02	0.14%		242192	0.14%	SBUS	0.00%	-
BAY AREA AQMD	2021	LDT2	Aggregated	Aggregated	ELEC	7316.459	231548.4269	36865.51	0.13%		231548.4	0.14%	MHD	0.08%	0.001
BAY AREA AQMD	2021	LHDT1	Aggregated	Aggregated	GAS	68972.92	2405937.573	1027594	1.36%		2405938	1.43%		100.0%	100.0%
BAY AREA AQMD	2021	LHDT1	Aggregated	Aggregated	DSL	48726.98	1843327.752	612924.1	1.04%		1843328	1.10%			
BAY AREA AQMD	2021	LHDT2	Aggregated	Aggregated	GAS	9486.427	332040.3638	141333.6	0.19%		332040.4	0.20%			
BAY AREA AQMD	2021	LHDT2	Aggregated	Aggregated	DSL	17533.78	672509.1631	220552.9	0.38%		672509.2	0.40%			
BAY AREA AQMD	2021	MCY	Aggregated	Aggregated	GAS	132071	1014396.248	264142.1	0.58%		1014396	0.60%			
BAY AREA AQMD	2021	MDV	Aggregated	Aggregated	GAS	588617.9	19822207.67	2715471	11.24%		19822208	11.78%			
BAY AREA AQMD	2021	MDV	Aggregated	Aggregated	DSL	13769.07	539192.1086	67041.43	0.31%		539192.1	0.32%			
BAY AREA AQMD	2021	MDV	Aggregated	Aggregated	ELEC	2636.52	87587.33791	13480.58	0.05%		87587.34	0.05%			
BAY AREA AQMD	2021	MH	Aggregated	Aggregated	GAS	11179.78	103234.0143	1118.425	0.06%		103234	0.06%			
BAY AREA AQMD	2021	MH	Aggregated	Aggregated	DSL	3938.189	38355.8783	393.8189	0.02%		38355.88	0.02%			
BAY AREA AQMD	2021	MHDT	Aggregated	Aggregated	GAS	6329.188	336857.5062	126634.4	0.19%		0	0.00%			
BAY AREA AQMD	2021	MHDT	Aggregated	Aggregated	DSL	45753.24	2731514.368	457482.3	1.55%		0	0.00%			
BAY AREA AQMD	2021	OBUS	Aggregated	Aggregated	GAS	2401.87	122983.4402	48056.61	0.07%		0	0.00%			
BAY AREA AQMD	2021	OBUS	Aggregated	Aggregated	DSL	2839.475	203625.2181	26652.73	0.12%		0	0.00%			
BAY AREA AQMD	2021	SBUS	Aggregated	Aggregated	GAS	661.9137	32412.6892	2647.655	0.02%		0	0.00%			
BAY AREA AQMD	2021	SBUS	Aggregated	Aggregated	DSL	3332.884	106530.495	38461.02	0.06%		0	0.00%			
BAY AREA AQMD	2021	UBUS	Aggregated	Aggregated	GAS	190.129	13921.60926	760.5161	0.01%		0	0.00%			
BAY AREA AQMD	2021	UBUS	Aggregated	Aggregated	DSL	2290.265	232164.6596	9161.062	0.13%		0	0.00%			
BAY AREA AQMD	2021	UBUS	Aggregated	Aggregated	ELEC	12.02059	1081.8767	48.08237	0.00%		0	0.00%			
BAY AREA AQMD	2021	UBUS	Aggregated	Aggregated	NG	485.44	49475.1871	1941.76	0.03%		0	0.00%			

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: Air District
Region: BAY AREA AQMD
Calendar Year: 2030
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

					Total:	1.92E+08			Total:	1.82E+08	100.00%			
Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT	Trips	%vmt	adj VMT	%vmt	LDA	59.76%	0.598
BAY AREA AQMD	2030	HHDT	Aggregated	Aggregated	GAS	31.70716	3869.081	634.3969	0.00%	0	0.00%	LDT1	5.95%	0.060
BAY AREA AQMD	2030	HHDT	Aggregated	Aggregated	DSL	42337.46	5172283	447837.6	2.69%	0	0.00%	LDT2	18.73%	0.186
BAY AREA AQMD	2030	HHDT	Aggregated	Aggregated	NG	1822.352	74301.89	7107.174	0.04%	0	0.00%	MDV	11.91%	0.118
BAY AREA AQMD	2030	LDA	Aggregated	Aggregated	GAS	3110952	1.02E+08	14602111	53.15%	1.02E+08	55.97%	LHD1	2.37%	0.024
BAY AREA AQMD	2030	LDA	Aggregated	Aggregated	DSL	37320.09	1247777	176435.9	0.65%	1247777	0.68%	LHD2	0.62%	0.006
BAY AREA AQMD	2030	LDA	Aggregated	Aggregated	ELEC	153574.1	5662888	741932.2	2.95%	5662888	3.10%	MHD	0.00%	0.001
BAY AREA AQMD	2030	LDT1	Aggregated	Aggregated	GAS	345458.1	10544335	1598605	5.49%	10544335	5.78%	HHD	0.00%	0.001
BAY AREA AQMD	2030	LDT1	Aggregated	Aggregated	DSL	52.29472	1471.829	229.7888	0.00%	1471.829	0.00%	OBUS	0.00%	-
BAY AREA AQMD	2030	LDT1	Aggregated	Aggregated	ELEC	8179.174	310390.3	40164.17	0.16%	310390.3	0.17%	UBUS	0.00%	-
BAY AREA AQMD	2030	LDT2	Aggregated	Aggregated	GAS	1073840	33025894	4991215	17.19%	33025894	18.10%	MCY	0.58%	0.006
BAY AREA AQMD	2030	LDT2	Aggregated	Aggregated	DSL	10047.33	324037	47751.43	0.17%	324037	0.18%	SBUS	0.00%	-
BAY AREA AQMD	2030	LDT2	Aggregated	Aggregated	ELEC	31304.37	814142.3	153243	0.42%	814142.3	0.45%	MHD	0.08%	0.001
BAY AREA AQMD	2030	LHDT1	Aggregated	Aggregated	GAS	69987.95	2254673	1042716	1.17%	2254673	1.24%		100.0%	100.0%
BAY AREA AQMD	2030	LHDT1	Aggregated	Aggregated	DSL	61419.95	2076876	772585.7	1.08%	2076876	1.14%			
BAY AREA AQMD	2030	LHDT2	Aggregated	Aggregated	GAS	10311.11	331601	153620.1	0.17%	331601	0.18%			
BAY AREA AQMD	2030	LHDT2	Aggregated	Aggregated	DSL	24334.99	802563.9	306103.6	0.42%	802563.9	0.44%			
BAY AREA AQMD	2030	MCY	Aggregated	Aggregated	GAS	153864.9	1050057	307729.8	0.55%	1050057	0.58%			
BAY AREA AQMD	2030	MDV	Aggregated	Aggregated	GAS	673380.1	20469371	3114234	10.65%	20469371	11.22%			
BAY AREA AQMD	2030	MDV	Aggregated	Aggregated	DSL	22038.02	707084.9	104408	0.37%	707084.9	0.39%			
BAY AREA AQMD	2030	MDV	Aggregated	Aggregated	ELEC	20794.84	554559.9	102661	0.29%	554559.9	0.30%			
BAY AREA AQMD	2030	MH	Aggregated	Aggregated	GAS	10698.87	101772.8	1070.315	0.05%	101772.8	0.06%			
BAY AREA AQMD	2030	MH	Aggregated	Aggregated	DSL	4991.459	43655.02	499.1459	0.02%	43655.02	0.02%			
BAY AREA AQMD	2030	MHDT	Aggregated	Aggregated	GAS	7871.643	406375.2	157495.8	0.21%	0	0.00%			
BAY AREA AQMD	2030	MHDT	Aggregated	Aggregated	DSL	59199.03	3253622	582106.8	1.69%	0	0.00%			
BAY AREA AQMD	2030	OBUS	Aggregated	Aggregated	GAS	2252.471	97751.43	45067.44	0.05%	0	0.00%			
BAY AREA AQMD	2030	OBUS	Aggregated	Aggregated	DSL	3410.281	217515.7	32216.7	0.11%	0	0.00%			
BAY AREA AQMD	2030	SBUS	Aggregated	Aggregated	GAS	1165.756	51596.01	4663.024	0.03%	0	0.00%			
BAY AREA AQMD	2030	SBUS	Aggregated	Aggregated	DSL	4036.281	128359.3	46578.12	0.07%	0	0.00%			
BAY AREA AQMD	2030	UBUS	Aggregated	Aggregated	GAS	190.9072	13978.58	763.6286	0.01%	0	0.00%			
BAY AREA AQMD	2030	UBUS	Aggregated	Aggregated	DSL	2003.785	202184.4	8015.139	0.11%	0	0.00%			
BAY AREA AQMD	2030	UBUS	Aggregated	Aggregated	NG	809.6473	81694.42	3238.589	0.04%	0	0.00%			
									0.00%	0	0.00%			

15000 INC.

2901 cleveland ave., suite 204
santa rosa, ca 95403
phone: 707.577.0363
fax: 707.577.0364

September 12, 2019

To Whom It May Concern:
We have reviewed the attached odor mitigation plan, dated September 12, 2019, for Friends & Farmers of Santa Rosa, CA.

It is our understanding that the attached plan meets, or exceeds, the requirements of the City of Santa Rosa for cannabis odor mitigation.

Sincerely,
Matthew Torre, Registered Professional Engineer
15000 Inc

ODOR CONTROL & MITIGATION PLAN

September 12, 2019

Friends & Farmers

328 Yolanda Avenue
Santa Rosa, CA 95404

Report prepared by
15000 Inc.
2901 Cleveland Avenue, Suite 204
Santa Rosa, CA 95403

Policy

Document a process to limit objectionable odors from the project area utilizing building system components and adopted odor control plan.

Under California Occupational Health and Safety Act ("CalOSHA") and Bay Area Air Quality Management District ("BAAQMD") regulations, cannabis businesses do not have a specific set of regulations that govern their operations. However, Alicia Rose of HerbaBuena (the "Applicant"), will nonetheless maintain a high standard for the air quality plans for all aspects of its proposed Cannabis Cultivation, Manufacturing, Distribution, Dispensary, and Facility (TYPE-1A, TYPE-6, TYPE-10, TYPE-11) at 328 Yolanda Avenue, Santa Rosa, CA 95404 ("Facility").

Generally, the Applicant will meet and/or exceed the standards set by the City of Santa Rosa ("City") Cannabis Ordinance, the Sonoma County ("County") Code (including sections 26-88-250 through 26-88-256), California Labor Code §§6300 et seq., and Title 8, California Code of Regulations §§ 332.2, 332.3, 336, 3203, 3362, 5141 through 5143, 5155, and 14301, as published in the CalOSHA Policy and Procedures Manual C-48, Indoor Air Quality as applicable to other facilities.

Pursuant to State of California ("State") regulations [California Energy Code, Section 120.1(b)2], mechanical fresh air ventilation must meet a minimum of 0.20 cubic feet per minute ("CFM") per square foot of retail conditioned floor area, and 0.15 CFM for all other spaces. Since existing State air quality regulations do not contain provisions specific to cannabis businesses, the Applicant will comply with these general State standards when designing the ventilation systems and air filtrations systems for the entire Facility. Each separate operation within the Facility building will have its own individual "air-scrubber" systems, as described below.

Purpose

To minimize and eliminate the off-site odor of cannabis caused by normal business practices.

Scope

Exterior of facility and surrounding areas.

Responsibilities

Business Owner/Operator (BO/O) is to provide, implement and supervise an odor mitigation plan.

General Procedures

Implementing and maintaining building systems to effectively minimize transmission of odor between building and surrounding areas.

- BO/O shall supervise installment and maintenance of an air treatment system to ensure there is no off-site odor of cannabis overly detectable from adjacent properties or the community. Air treatment systems consist of carbon filtration on the exhaust side of the ventilation system and negatively pressurizing the facility in relation to the exterior ambient condition.
- Staff members should immediately report any odor problems to the BO/O, who will take corrective action, implement upgrades to the system, upgrades to the facility or to the internal handling process of product within the facility to further deter odors.
- If such upgrades require the approval of any Agency Having Jurisdiction (AHJ), the BO/O shall seek and gain such approval prior to implementing new systems and/or procedures.

It is critical to the success of our organization that our various plans remain transparent to the community so all stakeholders are aware of the importance of mitigated cannabis odors.

This mitigation plan and all associated records will be made available to the public for review and documents can be requested at our facility. All requests for documentation shall occur via written request only (email is acceptable).

The Facility will have the following onsite functions: Administrative Processing Areas, Secure Storage, Offices, Lounge Area, Manufacturing, Distribution, Retail, and Cultivation. The company will provide packages within state-approved containers for distribution to distribution centers and/or retail outlets. The handling of product will require a properly engineered odor control system in order to mitigate the release of odors to the surrounding properties and community.

Active Measures

All cannabis products will be securely stored in secure rooms with video camera surveillance. The various HVAC systems serving spatial uses listed in the subsequent section will be tied into their respective exhaust fan systems with activated carbon filter for odor control. Exhaust will be terminated at a minimum of 10’-0” from property lines and from fresh air intakes into the building.

Air Pressure & Carbon Filter Control

The Reception and Courtyard areas (TYPE-10) comprising the main entry will be kept under negative pressure by means of a roof mounted exhaust fan and carbon filter, Koch DuraPURE with impregnated adsorption media (or equal). The exhaust system shall be electrically interlocked with the space conditioning system serving the area with an exhaust air quantity greater than the outside air quantity to ensure negative pressure is maintained whenever the system is operational. The space conditioning system will be provided with MERV-8 rated carbon filters, Koch OdorKleen ES (or equal), to further treat odors which are recirculated within the airstream.

The Retail, Secure Storage, and Vault area classification (TYPE-10) will be kept under negative pressure by similar means as described above serving the Reception and Courtyard areas to minimize nuisance odor proliferation through exfiltration of the building.

The Marketplace, adjacent storage areas and dry storage (TYPE-10) shall be kept under negative pressure by similar means as described within the Reception and Courtyard sections to minimize nuisance odor proliferation through exfiltration of the building.

The Demonstration Lab extraction area (TYPE-6) will be kept under negative pressure by means of a rooftop utility set electrically interlocked with the make up air system which shall exhaust a great quantity of air than what is delivered to the space. The utility set will be provided with Camfil CabCarb CG with broad spectrum activated carbon media (or equal) to treat odors present in the exhaust air stream. The utility set will discharge with a high velocity nozzle directing the discharge air away from the surround area.

The Distribution Office and Distribution Storage (TYPE-11) shall be provided with a recirculation fan and filter within the room (or located above with ducted air outlets) to minimize odors within the space. As these two spaces are all interior (no exterior wall), negative pressure is not required to be maintained within via an exhaust air system, as the adjacent (exterior) spaces will be kept at negative pressure safeguarding against the release of nuisance odors.

The VIP Lounge (TYPE-10) will be provided with a stand-alone HVAC system inclusive of a 'smoke-eater' filtration unit by Pure Natural Systems, Interceptor-2000 (or equal) comprised of three stages of filtration: Stage-1 consists of a MERV-8 filter, Stage-2 consists of a 60% filter capable of removing heavy smoke, and Stage-3 consists of discharge through a HEPA filter to capture any remaining smoke, dust and/or odor particles. The space shall be kept at negative pressure to minimize nuisance odors through exfiltration with an exhaust quantity greater than the outside air quantity and discharged from the space through a Koch DuraPURE (or equal) carbon filter. It should be noted that while onsite consumption in the form of smoke or inhalable products of any kind is currently prohibited in this jurisdiction, this premise will have a system in place to treat odor and/or smoke associated, should that use change.

The Greenhouse (TYPE-1A) will be provided with a stand alone HVAC system with exhaust and carbon filter, Koch DuraPURE (or equal) to maintain negative pressure in order to minimize nuisances odor proliferation through exfiltration of the space.

Each filter will be provided with a magnehelic differential pressure gauge, Dwyer Series 2000 (or equal) to measure the pressure drop across the filter, with pre-filter and final filter set points marked to indicate useable lifespan of the filter. The Applicant shall adhere to the manufacturer's listed guidelines for filter replacement.

Best Available Technology

The combination of activated carbon exhaust air filtration and building pressure control represent the current best available technology. This building shall be provided with MERV-8 filters on the fresh air intake side to limit particulate intake to the space and to enhance the overall quality of the supply air to the occupants. Backdraft dampers shall be provided in the fresh air duct main to further minimize the release of odors if system(s) are not in use.

Air System Design

The Facility shall have no operable windows or be kept locked and sealed at all times. All doors shall be sealed with proper weather stripping, keeping circulating and filtered air inside the facility.

On site usage of cannabis products is strictly prohibited while on the property. This will assist in mitigating odors to the surrounding neighbors.

Monitoring, Detection and Mitigation: Method for Assessing Impact of Odor

The importance of cannabis odor mitigation is very well understood and we shall make decisions that best to prevent the issue of odor to the surrounding areas. If odors are detected outside the facility this plan shall serve as a guideline to provide corrective action.

The manager/supervisor of the Facility shall assess odors on a daily basis (see *Monitoring* for expanded responsibilities).

Monitoring

The manager/supervisor shall assess the on-site and off-site odors daily for the potential release of objectionable odors. The manager/supervisor on duty shall be responsible for assessing and documenting odor impacts on a daily basis.

The closest adjacent businesses include;

- Merz Enterprises: 324 Yolanda Avenue, Santa Rosa, CA 95404
- Kings Auto Sales: 358 Yolanda Avenue, B, Santa Rosa, CA 95404
- Malm Fireplace Center: 368 Yolanda Avenue, Santa Rosa, CA 95404
- Magic Motors: 358 Yolanda Avenue, Santa Rosa, CA 95404
- RV Specialist: 340 Yolanda Avenue, Santa Rosa, CA 95404

Mitigation

Should objectionable off-site cannabis odors be detected by the public and we are notified in writing, the following protocols will take place immediately:

- Investigate the likely source of the odor.
- Utilize on site management practices to resolve the odor event.
- Take steps to reduce the source of objectionable odors.
- Determine if the odor traveled off-site by surveying the perimeter and making observations of existing wind patterns.
- Document the event for further operational review.

If employees are not able to take steps to reduce the odor-generating source, they are to immediately notify the facility manager, who will then notify the BO/O. All communication shall be documented and the team shall create a proper solution, if applicable. If necessary we shall retain our certified engineer to review the problem and make recommendations for corrective action/s.

Staff Training

All employees shall be trained on how to detect, prevent and remediate odor outside our facility and all corrective options outlined herein.

Odor Detection Documentation

The Odor Detection Form (ODF) shall be provided to those who suspect objectionable odors emanating from inside the facility. ODFs are available per request, on-site.

We shall maintain records of all odor detection notifications and/or complaints that will include the remediation measures employed. The records shall be made available to the AHJ or the general public on request. All requests shall be in writing (email is acceptable).

Odor Detection Form

Name of Reporting Party: ______________________________

Phone Number: ______________________________

Email Address: ______________________________

Date: ______________________________

Time: ______________________________

Location of Odor: ______________________________

____

Weather Conditions: ______________________________

____

____

Date/Time of Notification: ______________________________

Notification Method: ○ Email ○ Online ○ In Person

- -

Administrative Use Only

Mitigation Response Taken: ______________________________

Date/Time Measures Employed: ______________________________

Were Mitigation Measures Successful? ______________________________

Signature/Date/Time: ______________________________

Attachment 4: Climate Action Plan New Development Checklist

Description	Complies	Discussion
1.1.1 Complies with CalGreen Tier 1 Standards	Yes	Will meet latest Title 24 standards that exceed these
1.1.3 Meet net zero electricity	Yes	Project will use Sonoma Clean Power (SCP) and no natural gas usage for dispensary. GHG emissions from electrical use would be less than existing and existing General Plan projected uses.
1.3.1 Install real-time energy monitors to track energy usage	Yes	Available through PG&E services
1.4.2 Comply with City's tree preservation ordinance	Yes	Project adding approximately 50 trees
1.4.3 Provide public and private trees	Yes	Project adding approximately 50 trees
1.5 Install new sidewalks and paving with high solar reflectivity materials	Yes	Project adding sidewalks and paving materials to be included in final design
2.1.3 Pre-wire and pre-plumb for solar thermal or PV systems	Yes	To be included in final design
3.1.2 Support implementation of station plans and corridor plans	NA	Any necessary measures to be identified by City
3.2.1 Provide on-site services	NA	Project too small to provide these services which are abundant in surrounding neighborhood
3.2.2 Improve non-vehicular network to promote biking and walking	Yes	Project to provide bike lane, sidewalks with landscaping and connections and bicycle parking
3.2.3 Support mixed-use, higher density development near services	Yes	Project adds to the diversity of uses in this mixed use neighborhood.
3.3.1 Provide affordable housing near transit	NA	Project is non-residential
3.5.1 Unbundle parking from property cost	NA	Project provides parking for customers and employees while offering incentives for not using parking
3.6.1 Install calming features to improve ped/bike experience	Yes	Project includes new bike lane and sidewalk with landscaping
4.1.1 Implement Bicycle and Pedestrian Master Plan	NA	Bike lanes and sidewalks provided
4.1.2 Install bicycle parking consistent with regulations	Yes	Bicycle parking provided
4.1.3 Provide bicycle safety training to residents, employees, motorists	Yes	Bicycle safety training will be provided to employees
4.2.2 Provide safe spaces to wait for bus arrival	NA	Bus stops are on the other side of Yolanda Avenue
4.3.2 Work with large Employers to provide Rideshare Programs	NA	This is a small project with less than 50 employees
4.3.3 Consider expanding employee programs promoting transit use	Yes	Transit use will be encouraged through incentives such as bus passes
4.3.4 Provide awards for employee use of alternative commute options	Yes	Employees who use alternative commute options will be rewarded, through special recognition or monetary awards
4.3.5 Encourage new employers of 50+ to provide subsidized transit passes	NA	This is a small project with less than 50 employees
4.3.7 Provide space for additional park and ride lots	NA	This is a small project at less than 5 acres
4.5.1 Include facilities for employees that promote telecommuting	NA	This is a small project with less than 50 employees

5.1.2 Install electric vehicle charging equipment	Yes	The project will install 1 electric vehicle charging station per 25 parking spaces
5.1.2 Provide alternative fuels at new filling stations	NA	This is a small project with no fueling stations
6.1.3 Increase the version of construction waste	Yes	City required policy
7.1.1 Reduce water use for outdoor landscaping	Yes	Project includes drought tolerant landscaping
7.1.3 Use water meters that track real-time water usage	Yes	Per City requirement
7.3.2 Meet onsite meter separation requirements and locations with current or future recycled water capabilities	Yes	If applicable, on-site meter separations will be met. Currently, there are no available City urban reuse water mains in the project vicinity
8.1.3 Establish community gardens and urban farms	Yes	Commercial and industrial use. Project includes active greenhouse gardening, and edible fruit trees that are available to the public
9.1.2 Provide outdoor electric outlets for charging lawn equipment	Yes	Per building code requirements, although lawns are not part of this project
9.1.3 Install low water use landscapes	Yes	Per building code requirements
9.2.1 Minimize construction equipment idling time to 5 minutes or less	Yes	Per Mitigation Measure AQ-1 and AQ-2
9.2.2 Maintain construction equipment per manufacturer specs	Yes	Per Mitigation Measure AQ-1 and AQ-2
9.2.3 Limit GHG construction equipment emissions by using electrified equipment or alternative fuels	Yes	Per Mitigation Measure AQ-1 and AQ-2

APPENDIX C

Odor Control Plan

15000 INC.

2901 cleveland ave., suite 204
santa rosa, ca 95403
phone: 707.577.0363
fax: 707.577.0364

September 12, 2019

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ODOR CONTROL & MITIGATION PLAN

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328 Yolanda Avenue
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Report prepared by
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Staff Training

All employees shall be trained on how to detect, prevent and remediate odor outside our facility and all corrective options outlined herein.

Odor Detection Documentation

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We shall maintain records of all odor detection notifications and/or complaints that will include the remediation measures employed. The records shall be made available to the AHJ or the general public on request. All requests shall be in writing (email is acceptable).

Odor Detection Form

Name of Reporting Party: ____

Phone Number: ____

Email Address: ____

Date: ____

Time: ____

Location of Odor: ____

____

Weather Conditions: ____

____

____

Date/Time of Notification: ____

Notification Method: ○ Email ○ Online ○ In Person

- -

Administrative Use Only

Mitigation Response Taken: ____

Date/Time Measures Employed: ____

Were Mitigation Measures Successful? ____

Signature/Date/Time: ____

APPENDIX D

Historic Property Survey and CEQA Evaluation

Historic Property Survey and CEQA Evaluation
for
350/358 Yolanda Avenue (APN 044-072-008)
and
368 Yolanda Avenue (APN 044-072-009)
Santa Rosa, California 95404

Prepared for:

Edd Clark and Associates
320 Professional Center Drive
Rohnert Park, CA 94928

Prepared by:

J Longfellow Consulting
614 Forest Drive
Sebastopol, CA. 95472

November 19, 2019

Introduction

This report presents the results of a historic property survey for a proposed demolition of buildings at 350/358 Yolanda Avenue (APN 044-072-008) and 368 Yolanda Avenue (APN 044-072-009) Santa Rosa, Sonoma County, California 95404. The demolition will make way for property development into new warehouses and retail businesses. The purpose of this study is to satisfy California Environmental Quality Act (CEQA) and permitting requirements of the City of Santa Rosa Planning and Economic Development Department and the Santa Rosa Cultural Heritage Board.

Summary of Findings

Neither of the properties is eligible for listing on national, state, or local historic registers.

Methods

This study consisted of background research and a physical survey. Background research was conducted at the following facilities:

- City of Santa Rosa Planning and Economic Development Department
- Sonoma County Public Library Central and History Annex
- Sonoma County Recorder's Office
- Online digital archives

A field survey was conducted on October 23, 2019. The exterior of the buildings and grounds were documented with photographs and descriptive notes.

Survey Area

Adjacent properties 350/358 and 368 Yolanda Avenue are located on level terrain at approximately 140 feet above sea level on the south side of Yolanda Avenue that runs east-west between Santa Rosa Avenue and Petaluma Hill Road. The commercial and light industrial neighborhood is sparsely populated with warehouses and parking lots.

350/358 Yolanda Avenue

The 350/358 split address is an artifact of the City of Santa Rosa (City) records that reference both addresses on the same parcel.

A former single-family residence on 1/3 acre, the property is currently an office for used car sales and contains a house with attached garage. The building is located in the north one-third of the parcel and spans its entire width. The most unusual feature of the asymmetrical building is the juxtaposition of an addition of a different architectural style on the south elevation. For clarity the two building sections will be described separately.

The Minimal Traditional one and one-half-story cross-gabled wood-framed building has a medium pitch roof, is finished in smooth stucco and sits on a slab foundation. The cross-gable shape is arranged in an

east-west-oriented principal block joined to a perpendicular north-south oriented secondary wing. The roof is clad in asphalt shingles and is pierced by a stucco-finished chimney on its north face. A large shed roof dormer tops the south face of the roof. A steel pipe chimney is positioned on the east face of the roof.

A third smaller gable abuts the east elevation and a small connecting corridor extends east, joining the house to the garage. The main entrance is at the intersection of the gables and is accessed via a slightly inset open covered porch. The secondary entrance is at the west corner of the south (rear) façade. A third entry on the south façade of the passageway accesses the interior via a wooden half-lite panel door. Fenestration consists of wide-proportioned hung windows on most façades and in the gables. An oddly narrow, currently blocked window opening on the north façade is the exception. As a classic Minimal Tradition style, it has no eaves and its only exterior decoration is a scalloped detail at the bottom of the gables.

The square-shaped one-story wood-framed addition on the south elevation is attached to the small gable section and partially extends west into the principal gable section. The addition has a shallow-pitch hip roof, exposed rafters, is clad in tongue and groove siding and sits on a perimeter foundation. Its symmetrical fenestration consists of casement windows on the east, south, and west façades. The south façade double casement is currently covered by plywood sheets. A red brick fireplace and chimney dominate the east façade. A wooden half-lite raised panel entry door centered on the west façade is the only access to the interior.

The one-story garage/barn is rectangular-shaped with a medium pitch front gable. It is wood-framed, finished in tongue-and-groove siding, and the roof is clad in asphalt shingles. The main door is an extruded aluminum-framed commercial glass door to the east of the plate glass window. Fenestration consists of a large plate glass window on the north façade, a small square slider set within a rectangular wooden frame that is partially blocked with a wood framed plywood panel. The south façade contains a similar blocked rectangular window and a non-functional wooden door. Apparently once separate from the residence, it is now joined via a small connecting passageway.

The surround of the building is entirely asphalt paving with the exception of small patches of grass adjacent to the north façade. The only remnant of past landscaping is two rose bushes and decorative rocks on the north and east façades.

368 Yolanda Avenue

The one-acre rectangular parcel contains Malm Fireplace, a rectangular-shaped building. [A second address at 326 Yolanda Avenue on the same parcel south of the Malm complex contain a more recently constructed set of buildings and are separated from Malm by a chain link fence and gate. That address is not considered in this report as the buildings are less than 45 years old.] The Malm structure spans about one-half of the length and almost all the width of the one-acre parcel. The northern portion facing onto Yolanda Avenue is a parking lot for the retail business, and a wide asphalt driveway runs the length of the parcel on its western boundary.

The building is composed of three sections: the original barrel-roofed warehouse and former fabrication locus; a parallel and contiguous flat-roofed warehouse extending from the west side of the original building; and a single-story flat-roofed retail showroom. The building is constructed of stucco-clad concrete blocks on a slab foundation and covered with rolled asphalt roofing.

Fenestration on the retail space consists of seven plate glass windows across the north façade and a single barred rectangular hung window on the east façade. Two extruded aluminum-framed glass doors are located between the plate glass windows. One, the access to the showroom, is flanked by clear glass panels on the west end of the front façade, and the other is located to the east and accesses the company's administrative offices. One side door on the west façade is shaded with a blue and white striped awning and is located to the north of a large hung slider warehouse door. Another door sits adjacent and south of the slider door. Stylistically the building is an unadorned product of its 1960s construction. The only exception to the complete box design is a projecting element on the north façade that serves as a weather cover.

Regulatory Context

CEQA

The California Environmental Quality Act (CEQA) requires that cultural resources be considered during the environmental review process. This is accomplished by making an inventory of resources within a study area and by assessing the potential for cultural resources to be affected by development.

This cultural resources survey was designed to satisfy environmental issues specified in the CEQA and its guidelines (Title 14 CCR §15064.5) by: (1) identifying all cultural resources within the project area; (2) offering a preliminary significance evaluation of the identified cultural resources; (3) assessing resource vulnerability to effects that could arise from project activities; and (4) offering suggestions designed to protect resource integrity, as warranted.

Significance Criteria

When a project might affect a cultural resource, the project proponent is required to conduct an assessment to determine whether the effect may be one that is significant. Consequently, it is necessary to determine the importance of resources that could be affected. The importance of a resource is measured in terms of criteria for inclusion on the California Register of Historical Resources (California Register) (Title 14 CCR, §4852) as listed below. A resource may be important if it meets any one of the criteria below, or if it is already listed on the California Register of Historical Resources or on a local register of historical resources.

An important historical resource is one which:

1. Is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.
2. Is associated with the lives of persons important to local, California, or national history.
3. Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of a master or possesses high artistic values.

4. Has yielded, or may be likely to yield, information important to the pre-history or history of the local area, California, or the nation.

In addition to meeting one or more of the above criteria, eligibility for the California Register requires that a resource retain sufficient integrity to convey a sense of its significance or importance. Seven elements are considered key in considering a property's integrity: location, design, setting, materials, workmanship, feeling, and association. Additionally, the California Office of Historic Preservation (OHP) advocates that all historical resources over 45 years old be recorded for inclusion in the OHP filing system.[1]

All locally listed properties are automatically included in the California Register if formal evaluation finds them to be eligible (PRC 5024.1 (e) (4).[2] Neither of the subject properties has been formally evaluated for listing on historical registers.

HISTORIC CONTEXT

Rancho Llano de Santa Rosa

The project area lies within the *Rancho Llano de Santa Rosa*, granted to Joaquin Carrillo in 1843.[3] Carrillo was the eldest son of Doña Maria Carrillo, the first non-native resident of what would become Santa Rosa. She had settled in her own rancho, *Cabeza de Santa Rosa* by 1837, and her sons were granted ranchos in the surrounding area. The ranchos were vast. For example, Maria Carrillo's rancho contained 8,835 acres and the *Llano de Santa Rosa* 13,360 acres, stretching across the Laguna de Santa Rosa flood plain south of the *Cabeza* rancho to the *Cotate* Rancho and west to what is now Sebastopol.

Carrillo raised wheat and other crops on his land. He built a house in 1844, and later, a hotel in what became Analy township.

After statehood in 1850 and the transformation of land laws, American squatters arrived in ever greater numbers, challenging the tenancy of the Californios. Carrillo's rancho was finally confirmed to him in 1865[4] but by then he had sold much of his original holdings, in large part to pay for the legal fees associated with establishing claim to his land. The earliest extant map of Sonoma County created in 1866 shows Joaquin Carrillo still had a large parcel of land, but his holdings had been reduced to a few hundred acres adjacent to Sebastopol.[5]

Yolanda Avenue

Yolanda Avenue was created in 1940 out of an east-west property line common to several residents between Santa Rosa Avenue and Petaluma Hill Road.[6] The area including Yolanda Avenue was annexed to the City of Santa Rosa in 1983.[7]

[1] California Office of Historic Preservation 1995:2
[2] California Office of Historic Preservation 2005:15
[3] LeBaron 1985:6
[4] UC Berkeley 2003
[5] Bowers 1866
[6] Kidd, et al 1940. Book 512:395
[7] Personal communication, City of Santa Rosa Community Development Department October 23, 2019

The Residents

The first recorded occupant of the area south of what would become Yolanda Avenue was Ohio native and farmer Henry Timothy Sturgeon.[8] Sturgeon had 110 acres between the Santa Rosa-Washoe Road (Santa Rosa Avenue) and Petaluma Road (Petaluma Hill Road). There he raised livestock and hay on his farm that was valued at $6,000 in 1880.[9] Sturgeon sold the farm to Ward C. Wetmore, a wealthy rancher, in 1881[10] and moved northwest to Fulton. William Manion, a Santa Rosa pioneer who already had 400 acres in Bennett Valley, acquired 260 acres east of Petaluma Road in 1873,[11] and in 1882 Manion bought the Wetmore piece west of Petaluma Road.[12] The family retained both large parcels after William's death in 1887. This study was unable to confidently determine from which of the large parcels the current project area was derived--either the ten-acre James Cole ranch on the county road or the adjacent eight-acre Richard Duncan parcel--but it is likely the Duncan property.

In 1891 William Manion's son William Henry Manion sold eight of the original 110 acres to his sister Ada and her husband Richard Duncan, a farm laborer.[13] The Duncans lived in Healdsburg and Guerneville during their marriage and probably never lived on their country parcel.

In 1926, Italian Swiss landowner Louis Zamaroni had a dairy farm on his 28 acres west of Petaluma Hill Road. The land on either side of Petaluma Hill Road at that time was largely occupied in dairy production and both Louis and his brother Eugene were so occupied. The subject properties would be located on the northwest corner of Louis Zamaroni's parcel (see Appendix 7). The Zamaronis are memorialized today in Wheeler Zamaroni landscape materials and the Zamaroni quarry on the east side of Petaluma Hill Road.


FOR SALE — K-11 International truck tractor. Air brakes, 10:00-20 rubber, A-1 condition. Will sacrifice for quick sale. Three-bedroom home, six yrs. old, tile sink, hardwood floors, perfect condition, 1-3 acre. 358 Yolanda Avenue, Santa Rosa.

In 1940 a forty-foot strip of land was bought from five landowners between the County Road (Santa Rosa Avenue) and Petaluma Road (Petaluma Hill Road) by the County of Sonoma to form Yolanda Avenue. By 1947, 358 Yolanda had assumed its current 1/3-acre dimension, as described in a classified advertisement in the Press Democrat. That ad asserted that the house was six years old at that time.[14]

Most of the subsequent residents have been untraceable, but one of them was masonry contractor Joseph DeBrotinic, who arrived in Santa Rosa in 1945 and was living at 358 Yolanda Avenue in 1948. He later moved the Belleview neighborhood and was "instrumental" in starting the Santa Rosa Boys Clubs and was a Belleview School District Trustee.[15]

[8] Thompson 1877 and US Census 1880
[9] US Census Farm Schedule 1880
[10] Sonoma Democrat 1881:5
[11] Gregory 1911:662
[12] Wetmore to Manion 1882. Book 78:331
[13] US Census 1910, Washington Township (Oriental Precinct)
[14] Santa Rosa Press Democrat 1947:14
[15] Santa Rosa Press Democrat 1948:B2

.**Malm Fireplace**

Established on Second Street in Santa Rosa in 1933 by Gustave (Gust) Malm, the original business fabricated a wide range of sheet metal products.[16] Called Malm Metals, the already successful business took off in 1960 with a sideline of free-standing fireplaces that not only worked well, but the design of clean lines and bright colors satisfied the mid-century modern zeitgeist. Originally designed by Seattle architect Wendell Lovett and copied around the world, the Malm Firehood became so popular that sales soon reached $1 million and the fireplace division moved to a new 5,000 square foot building on Yolanda Avenue in 1964.[17]

The business grew steadily until its peak in 1975-1977, when it sold 20,000 fireplaces a year, making it the largest freestanding fireplace manufacturer in the world.[18] In response to demand, in 1978 it added a 30,000 square-foot warehouse to its campus on Yolanda.[19]

Malm suffered from the volatility of the economy over the years and the principals sold the property but the fireplace sales and service continue at this location. The manufacturing of Malm Fireplaces is currently conducted at another location.

Construction History

City of Santa Rosa permitting records are scant for either of the addresses and comprise minor mostly electrical renovations and re-zoning applications.

358 Yolanda Avenue

No available occupants have any memory of the residence's history. Therefore, the following is based partially on circumstantial evidence and deduction as well as research. The house was built in approximately 1938[20] and was remodeled and added to many times over the years. As the project area was far south of the City of Santa Rosa until its annexation in 1983, no Sanborn Fire Insurance maps (1885-c1950) or any other maps document the building. The only obtainable photographic evidence is a series of aerials made periodically from c.1937 to 1993, accessed from the Sonoma County Library[21] and Google Earth. The earliest available depiction of the former residence itself is a 1953 low resolution aerial photograph of the then-rural residential neighborhood of small houses and family farms. The photograph is too indistinct to comprehend the building's configuration, but a semi-circular driveway leading from Yolanda Avenue is apparent in that and subsequent aerial

[16] Pardee 1960:27
[17] Santa Rosa Press Democrat 1964:44
[18] Santa Rosa Press Democrat 1976:21
[19] Ibid. 1978:53
[20] City of Santa Rosa 2019a
[21] Sonoma Cunty Library 2019

photographs, and the small residence still had trees in its backyard. By 1977 the driveway had given way to a rectangular parking lot (see Appendix 8).

The house appears to have originated as a Minimal Traditional cross-gabled bungalow with a detached garage or barn. At some point a third gable on the east elevation and a joining passageway was added between the house and the garage, and another stylistically distinct room was added to the south elevation.

The former garage/barn was remodeled to be an office at an unknown date. The dimensions of the original wide opening can be derived from the mis-matched tongue-and-groove siding on the north façade. A plate glass window and an extruded aluminum-frame glass door have been installed in the former opening.

368 Yolanda Avenue

The City of Santa Rosa's records assert a 1964 construction date for the original Malm building, and a 1963 aerial photo depicts a residence and small family farm at this location.[22] The original building was a barrel-roofed fabrication and warehouse space. As production increased, in 1972 a parallel structure adjoining the original building was built on the west elevation to approximately double its workspace and storage capacity.[23] The front retail sales room may have been added at this time as the stucco finish ties all the sections together.

CEQA Evaluation

Neither of the properties qualifies for listing at the local, state, or national level.

Under Criterion 1, neither of the subject properties are associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States. The small residence at 350/358 Yolanda Avenue appears not to be associated with important events in history. The Malm company had a historical presence and is still active in the Santa Rosa business community. It has enjoyed acclaim as the fabricator and marketer of an internationally popular fireplace type, but the iconic fireplace did not originate at this site.

Under Criterion 2, neither of the properties is associated with the lives of persons important to local, California, or national history. The property at 350/358 Yolanda Avenue has been owned or occupied by a series of part-time farmers and ordinary tradesmen, none of whom is associated with the lives of persons important to local, California, or national history. The property at 368 Yolanda Avenue is associated with the Malm family, successful in business but not significantly distinguished from other such business families in Sonoma County.

[22] Sonoma County Library 2019
[23] Santa Rosa Press Democrat 1972:35

Under Criterion 3, neither the residence at 350-358 Yolanda nor the showroom and warehouse at 368 Yolanda Avenue represents the work of a master nor do they possess high artistic values. The house and garage at 350/358 Yolanda Avenue, while an early example of a Minimal Traditional residence, which style would flood the national and local housing stock post-World War II, it is an unremarkable iteration of a common style in Santa Rosa and does not possess high artistic values. The showroom and warehouse are also structural types that are common to light industrial areas of Santa Rosa.

Under Criterion 4, the property is unlikely to yield information important to the pre-history or history of the local area, California, or the nation.

Because neither of the properties has eligibility for historical listing, the standards for integrity of location, design, setting, materials, workmanship, feeling, and association are moot.

Conclusion

The proposed project on Yolanda Avenue contains two buildings over 45 years old and therefore require formal evaluation for historic register listing eligibility. It is the opinion of this report that because neither the buildings nor the parcels meet CEQA's significance criteria, the properties do not qualify as a historic resource and therefore the proposed project will not have an adverse effect on cultural resources and may proceed.

Additional photographs may be found in the California Department of Parks and Recreation 523 forms following the Appendices.

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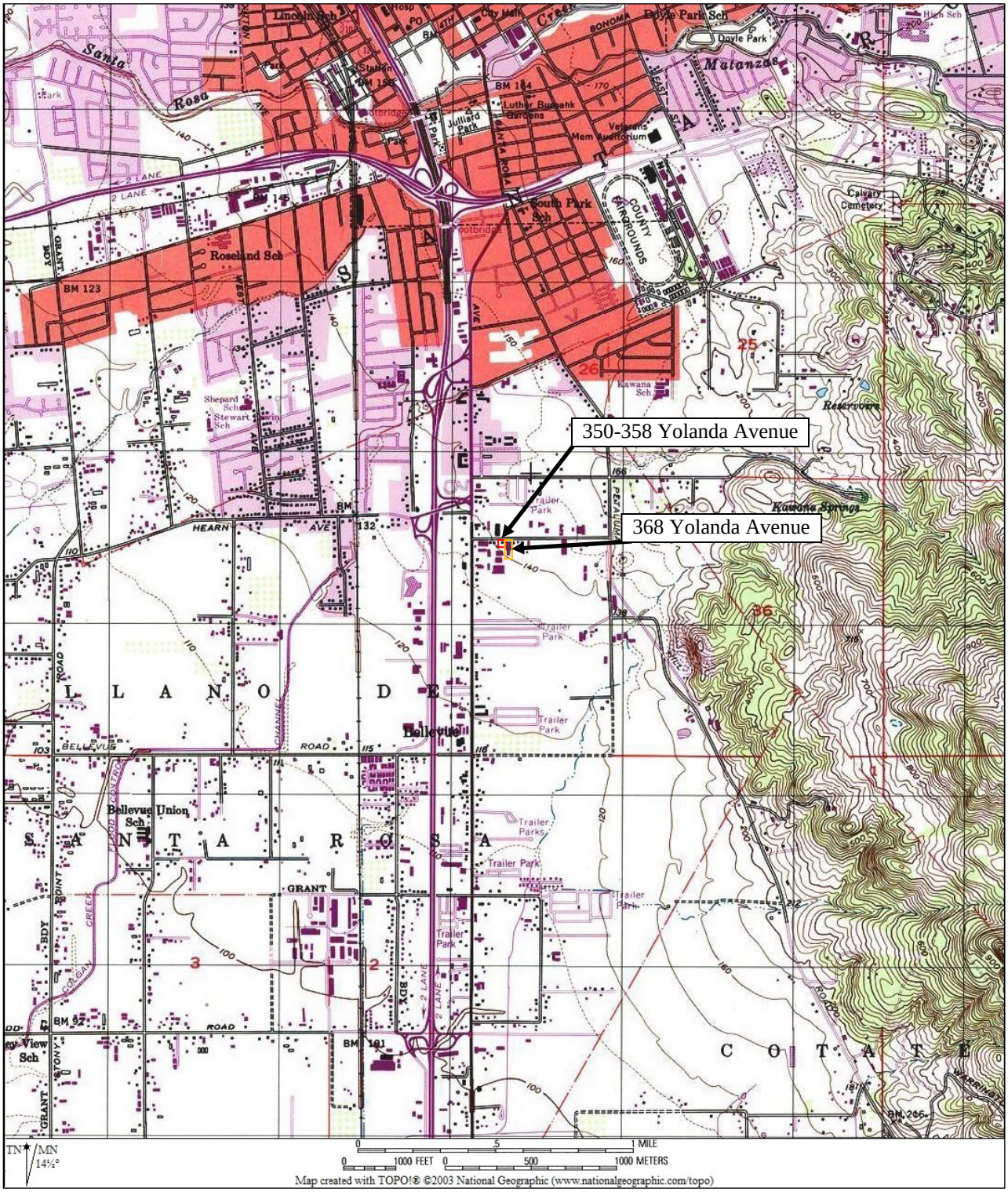
Appendices

1. **Location Map**
2. **Bowers Map 1867**
3. **Thompson Map 1877**
4. **Survey Map for Richard Duncan 1891**
5. **Reynolds and Proctor Map 1898**
6. **McIntire and Lewis Map 1908**
7. **Assessor's Parcel Map**
8. **Aerial Photographs**
9. **Photographs**
10. **California Department of Parks and Recreation 523 Forms**

1. Location Map (source map: *Santa Rosa, CA* 1994 USGS 7.5' topographic quadrangle)



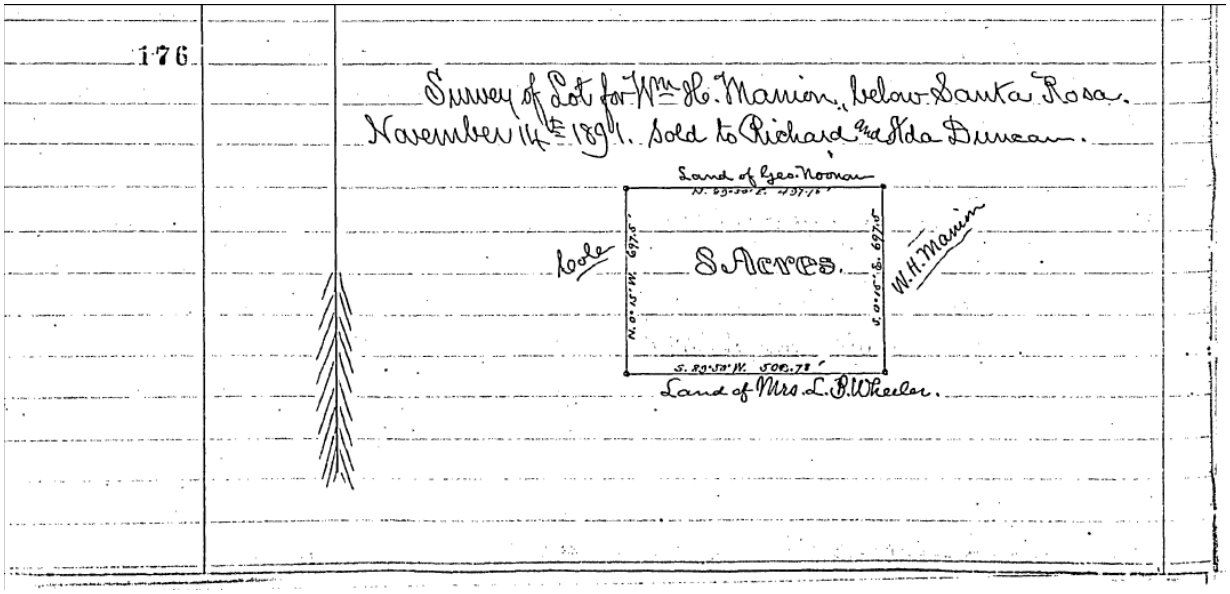
2. Aerial Photograph Source: Google Earth 2018

Note: Ephemeral structures at the rear (south) of main building at 326 Yolanda have been removed

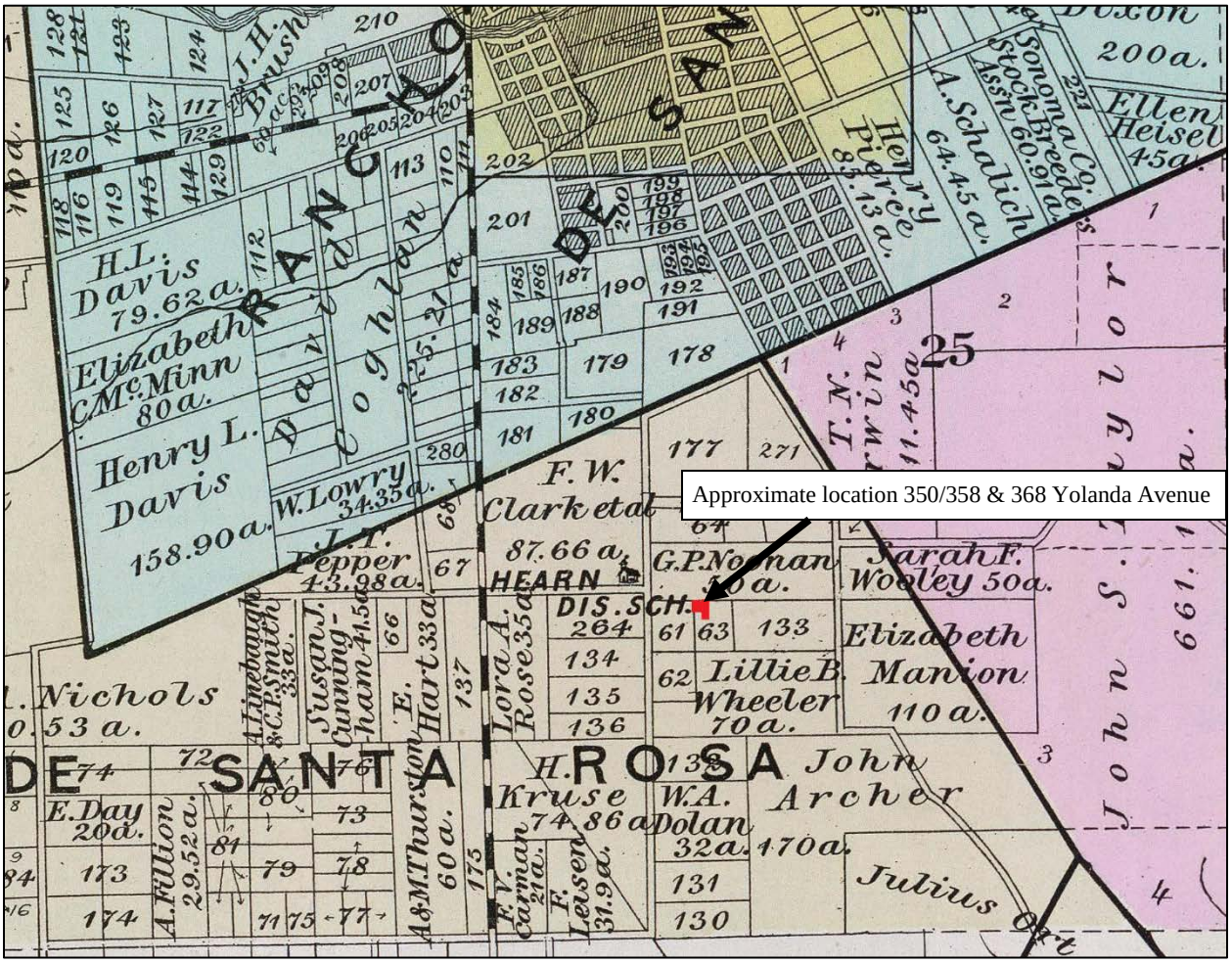
3. Bowers Map 1867

4. Thompson Map 1877

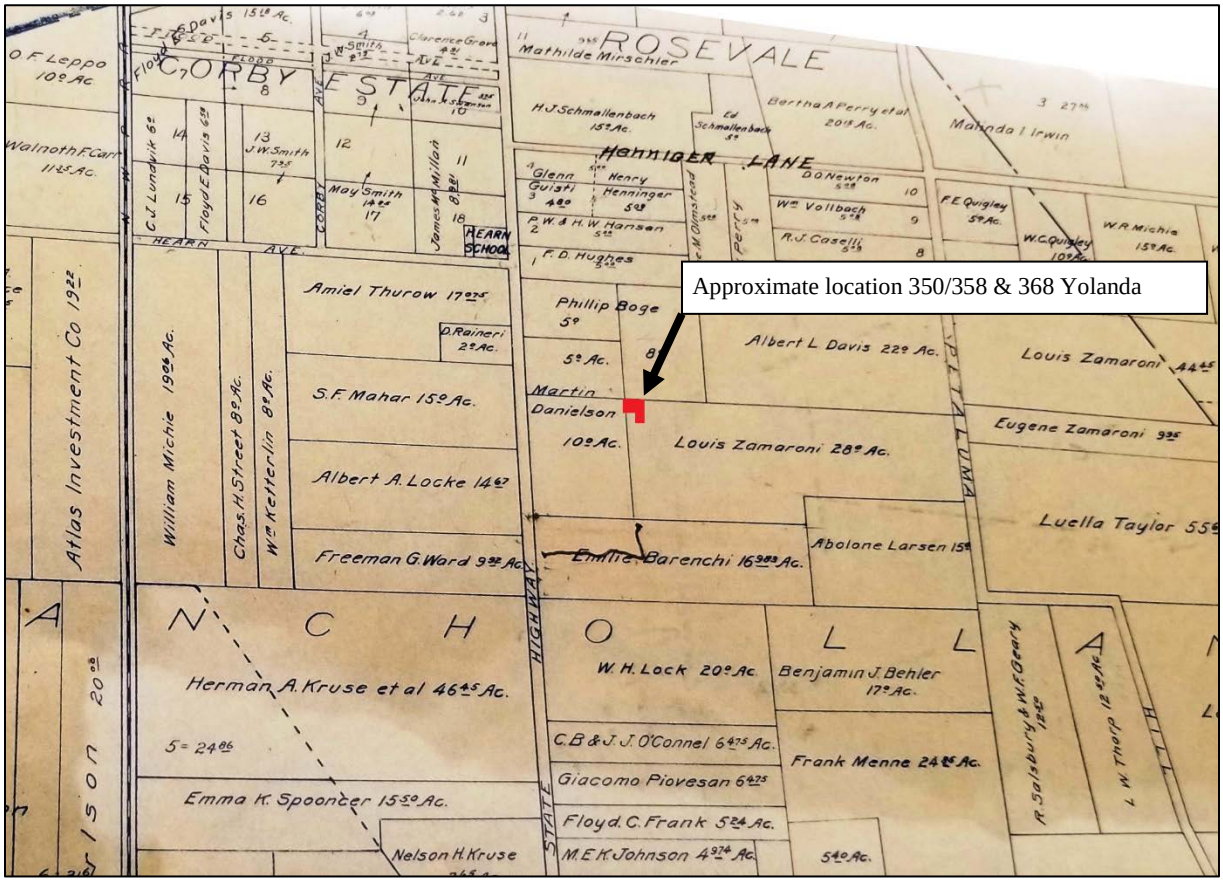
5. Survey Map 1891 (Sonoma County PRMD [nd])



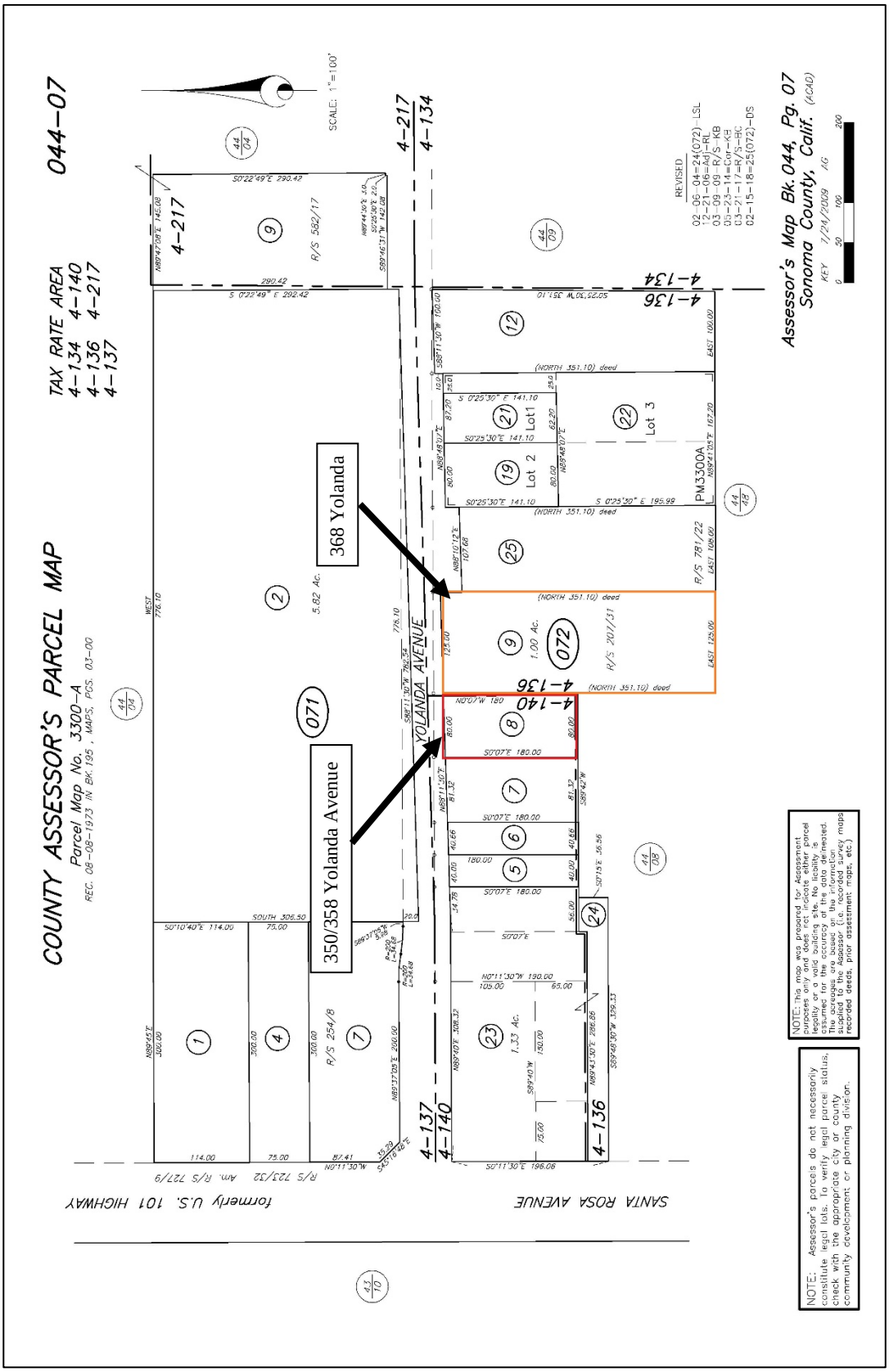
6. Reynolds and Proctor 1898



7. Hearn School District Map 1925

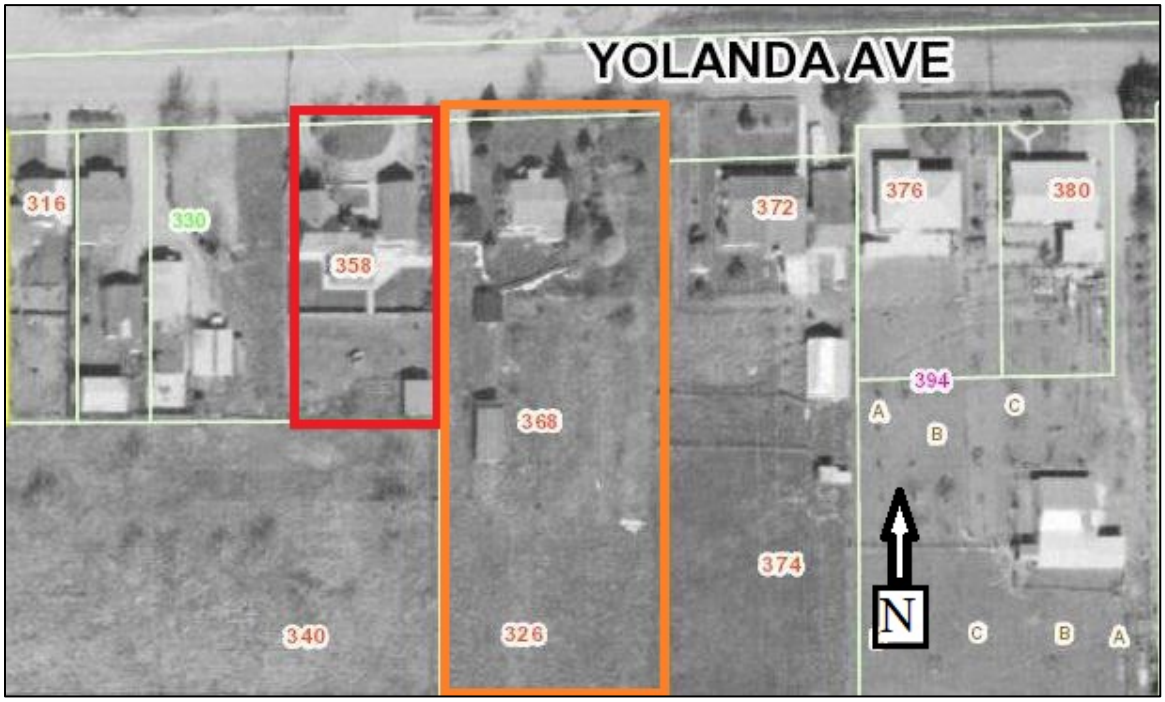


8. Assessor's Parcel Map

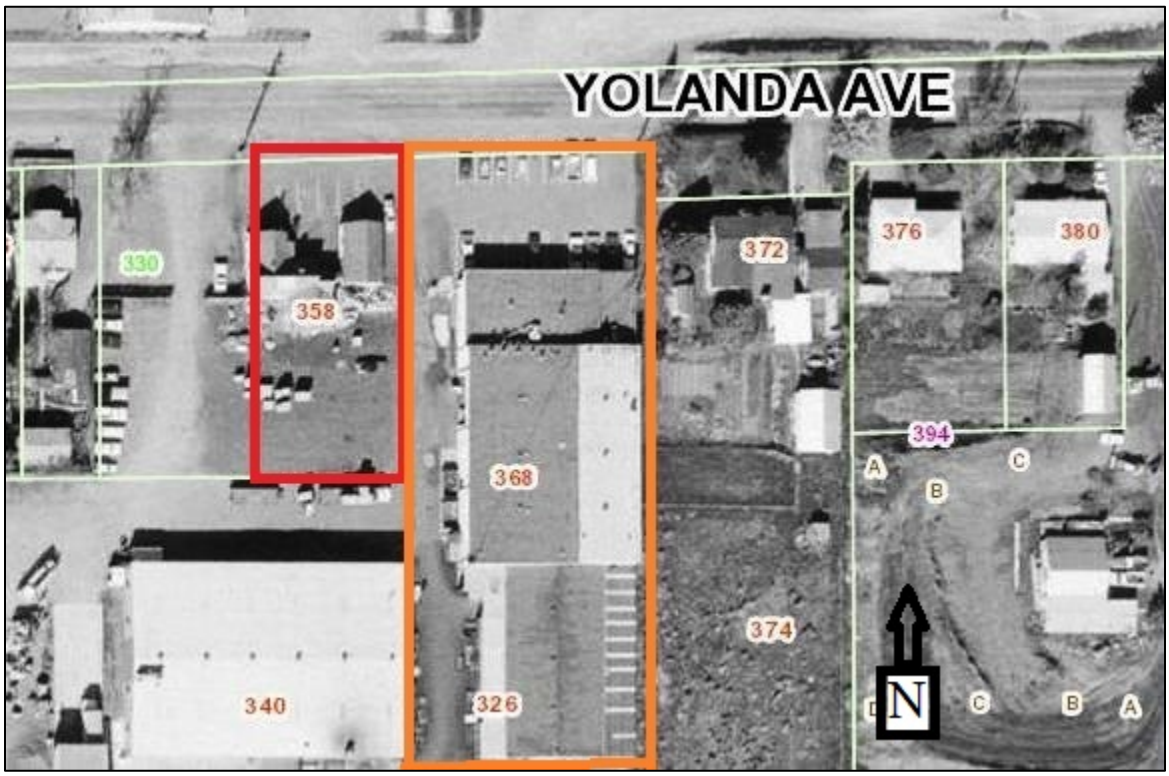


9. Aerial Photographs

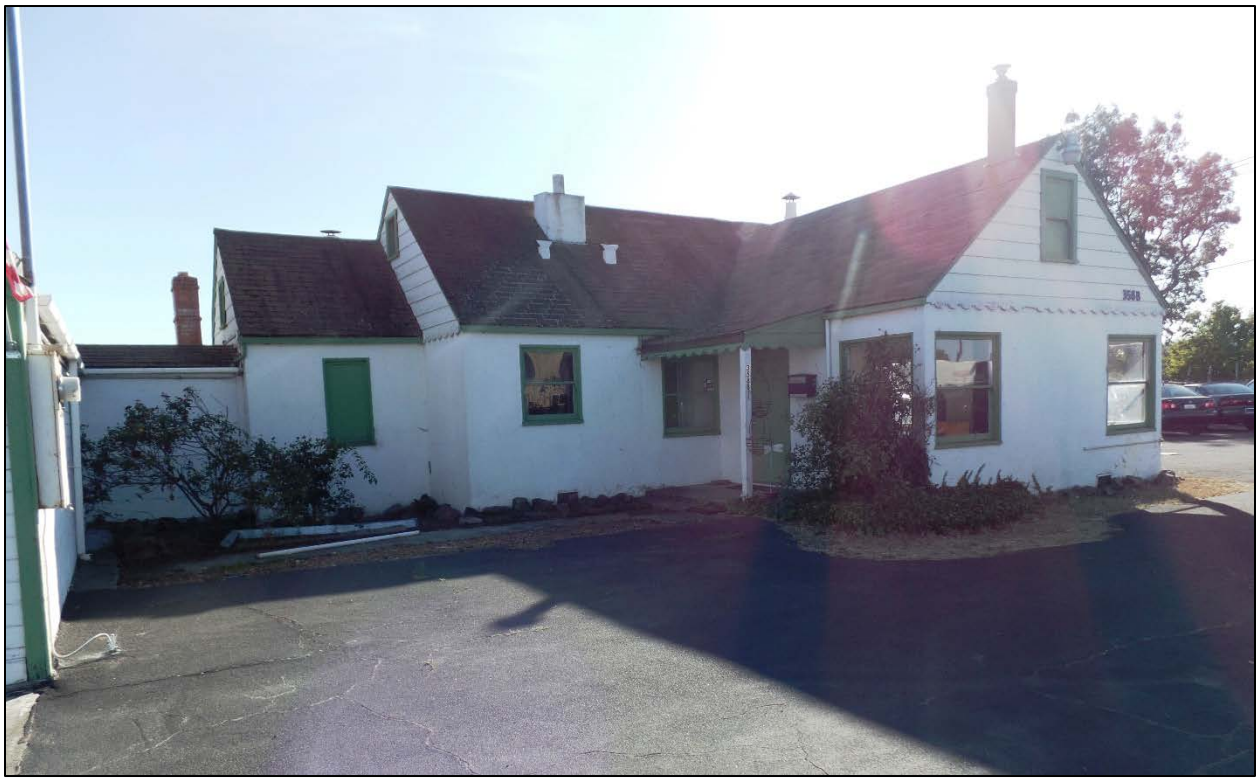
1963



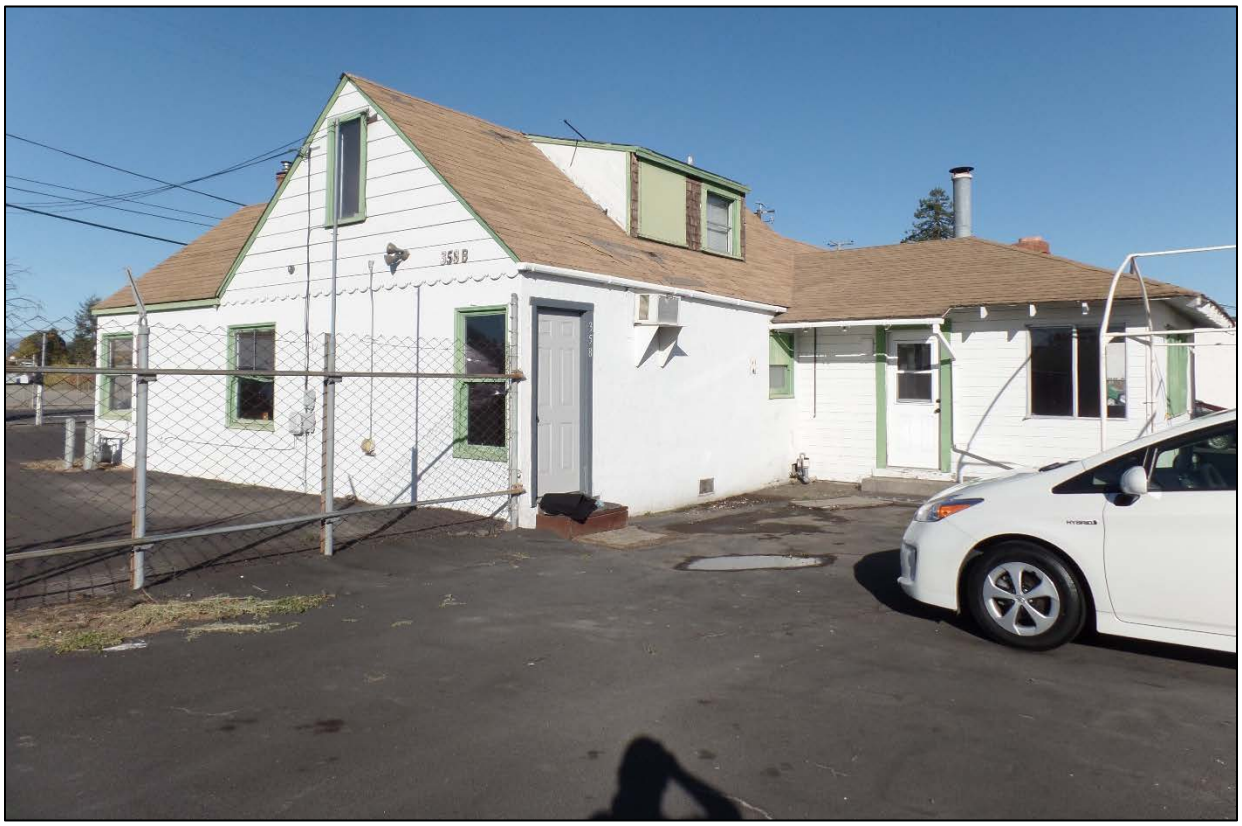
1977



10. Photographs



350-358 Yolanda Avenue, view to southwest



350-358 Yolanda Avenue, view to northeast

368 Yolanda Avenue, view to southeast

368 Yolanda Avenue, view to southwest. Note barrel roof shape.

California Department of Parks and Recreation 523 Forms

State of California — The Resources Agency DEPARTMENT OF PARKS AND RECREATION **PRIMARY RECORD**	Primary # HRI # Trinomial NRHP Status Code	
Other Listings Review Code	Reviewer	Date

 Resource Name: 350/358 Yolanda Avenue

P1. Other Identifier:
P2. Location: ☐ **Not for Publication** ☒ **Unrestricted**
a. County: Sonoma
and
b. USGS 7.5' Quad: Santa Rosa, CA **Date:** 1994 **Unsectioned lands of the *Rancho Llano de Santa Rosa*;** M.D.**B.M.**
c. Address: City: Santa Rosa Zip: 95404
d. UTM: Zone:10**;** 525187 **mE**/ 4251683 **mN** (WGS84 datum)
e. Other Locational Data: APN 044-072-008

P3a. Description: Set within a commercial and light industrial neighborhood that is sparsely populated with warehouses and parking lots. A former single-family residence on 1/3 acre, the property is currently an office for used car sales and contains a house with attached garage. The building is located in the north one-third of the parcel and spans its entire width. The Minimal Traditional style one and one-half-story cross-gabled wood-framed building has a medium pitch roof, is finished in smooth stucco and sits on a slab foundation. The cross-gable shape is arranged in an east-west-oriented principal block joined to a perpendicular north-south oriented secondary wing. The roof is clad in asphalt shingles and is pierced by a stucco-finished chimney on its north face. A large shed roof dormer tops the south face of the roof. A steel pipe chimney is positioned on the east face of the roof. A square-shaped one-story wood-framed addition on the south elevation is attached to the small gable section and partially extends west into the principal gable section. The surround of the building is entirely asphalt paving with the exception of small patches of grass adjacent to the north facade. The only remnant of past landscaping is two rose bushes and decorative rocks on the north and east façades. The building is in fair condition.
P3b. Resource Attributes: HP2 (Single family property); HP6 (1-story commercial building)
P4. Resources Present: ☒ Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other

P5b. Description of Photo: 350-358 Yolanda Avenue north elevation, view to south (Google Earth 2018)

P6. Date Constructed/Age and Sources: ☒Historic ☐Prehistoric ☐Both

P7. Owner and Address:
Allan A. & Kimberly L.Henderson
350 Yolanda Avenue
Santa Rosa, CA 95404

P8. Recorded by:
J Longfellow
J Longfellow Consulting
614 Forest Drive
Sebastopol, CA 95472

P9. Date Recorded: November 18, 2019
P10. Survey Type: Intensive

P11. Report Citation: Longfellow, J 2019 *Historic Property Survey and CEQA Evaluation for 350/358 Yolanda Avenue, APN 044-072-008 and 368 Yolanda Avenue, APN 044-072-009, Santa Rosa, California 95404.* J Longfellow Consulting, Sebastopol, California.

Attachments: ☐NONE ☒Location Map ☐Sketch Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

Primary #
HRI#

BUILDING, STRUCTURE, AND OBJECT RECORD

NRHP Status Code

Resource Name: 350-358 Yolanda Avenue

B1. Historic Name: Unknown **B2**.Common Name: Magic Motors
B3. Original Use: Residence B4. Present Use: Commercial Sales Office
B5. Architectural Style: Minimal Traditional
B6. Construction History: Built ca.1938 Alteration dates unknown

The house appears to have originated as a Minimal Traditional cross-gabled bungalow with a detached garage or barn. At some point a third gable on the east elevation a joining passageway was added between the house and the garage, and another stylistically distinct room was added to the south elevation. The former garage/barn was remodeled to be an office at an unknown date. The dimensions of the original wide opening can be derived from the mis-matched tongue-and-groove siding on the north façade.

B7. Moved? ☒**No** ☐**Yes** ☐**Unknown** **Date:** **Original Location:**
B8. Related Features: None

B9a. Architect: Unknown b. Builder: Unknown
B10. Significance: Theme: Area:
Period of Significance: **Property Type:** Residential/commercial **Applicable Criteria:** N/A

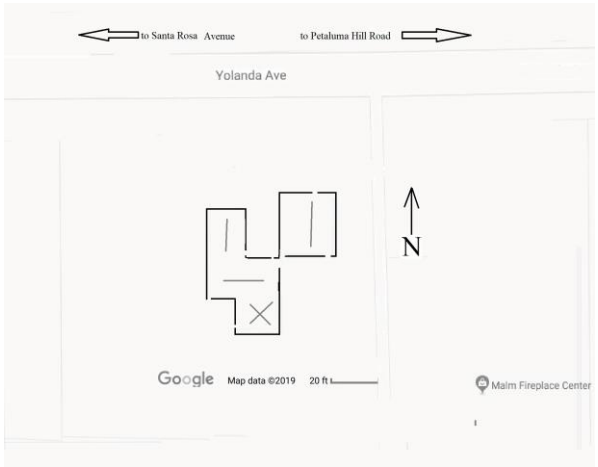
This property does not qualify for listing on local, state, or national historic registers.

Under Criterion 1, while the property is loosely associated with the southward expansion of Santa Rosa, the residence at 350-358 Yolanda Avenue is not associated with any significant contributions to local history, and does not represent specific important events in this context;
Under Criterion 2, owned by a series of part-time farmers and full-time tradesmen, the property is not associated with the lives of persons important to local, California, or national history;
Under Criterion 3, while an early example of a Minimal Traditional residence, which style would flood the national and local housing stock post-World War II, it is an unremarkable iteration of a common style in Santa Rosa and does not possess high artistic values;
Under Criterion 4, it is unlikely to yield, information important to the pre-history or history of the local area, California, or the nation.

B11. Additional Resource Attributes: (List attributes and codes)

B12. References: City of Santa Rosa 2019 *Parcel Report for Assessor Parcel Number 044-072-008*. https://maps.srcity.org/Geocortex/Essentials/REST/TempFiles/Parcel%20Detail%20Report.pdf?guid=d6fec74a-131b-485d-b34e-8dcc1c6fbaa1&contentType=application%2Fpdf.
McAlester, Virginia Savage 2015 *A Field Guide to American Houses*. Alfred A. Knopf. New York.

B13. Remarks: None



B14. Evaluator: J Longfellow, M.A., RPA, RPH

Date of Evaluation: November 18, 2019

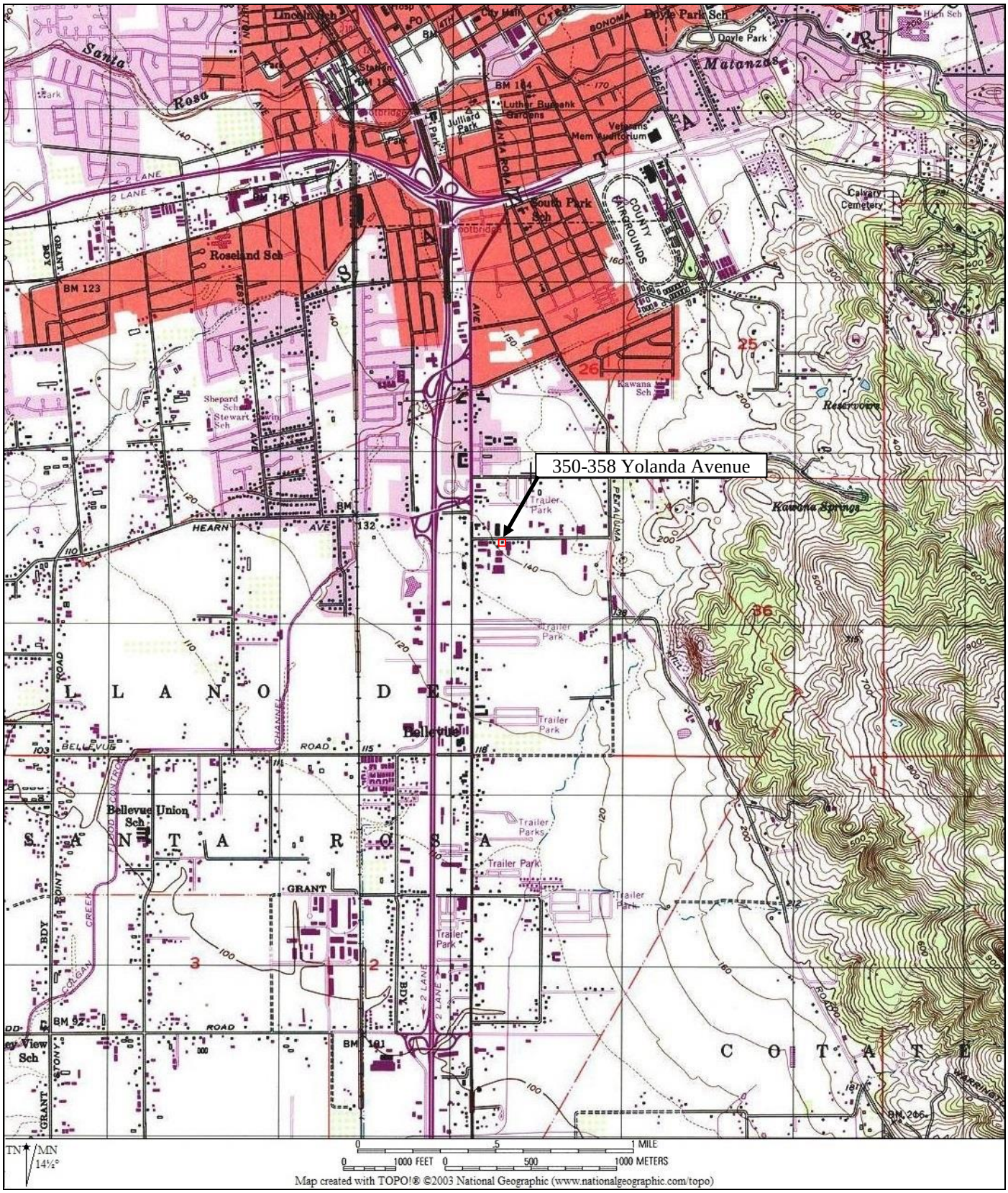
(This space reserved for official comments.)

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI#
Trinomial

Page 3 **of** 5 **Resource Name:** 350-358 Yolanda Avenue
Map Name: *Santa Rosa, CA* **Scale:** 1:24,000 **Date of Maps:** 1994



DPR 523J (1/95)

Recorded by: J Longfellow **Date:** November 18, 2019 ☒ Continuation ☐ Update

Historic Context

Rancho Llano de Santa Rosa

The project area lies within the *Rancho Llano de Santa Rosa*, granted to Joaquin Carrillo in 1843.[1] Carrillo was the eldest son of Doña Maria Carrillo, the first non-native resident of what would become Santa Rosa. She had settled in her own rancho, *Cabeza de Santa Rosa* by 1837, and her sons were granted ranchos in the surrounding area. The ranchos were vast. For example, Maria Carrillo's rancho contained 8,835 acres and the *Llano de Santa Rosa* 13,360 acres, stretching across the Laguna de Santa Rosa flood plain south of the *Cabeza* rancho to the *Cotate* Rancho and west to what is now Sebastopol. Carrillo raised wheat and other crops on his land. He built a house in 1844, and later, a hotel in what became Analy township.

Yolanda Avenue

Yolanda Avenue was created in 1940 out of an east-west property line common to several residents between Santa Rosa Avenue and Petaluma Hill Road.[2] The area including Yolanda Avenue was annexed to the City of Santa Rosa in 1983.[3]

The Residents

The first recorded occupant of the area south of what would become Yolanda Avenue was Ohio native and farmer Henry Timothy Sturgeon.[4] Sturgeon had 110 acres between the Santa Rosa-Washoe Road (Santa Rosa Avenue) and Petaluma Road (Petaluma Hill Road). He raised livestock and hay and his farm was valued at $6,000 in 1880.[5] He sold the farm to Ward C. Wetmore, a wealthy rancher, in 1881[6] and moved northwest to Fulton. William Manion, a Santa Rosa pioneer who already had 400 acres in Bennett Valley, acquired 260 acres east of Petaluma Road in 1873,[7] and in 1882 Manion bought the Wetmore piece west of Petaluma Road.[8] The family retained both large parcels after William's death in 1887.

In 1891 William Manion's son William Henry Manion sold eight of the original 110 acres to his sister Ada and her husband Richard Duncan. The Duncans lived in Healdsburg and Guerneville during their marriage and probably never lived on their country parcel.

In 1926, Italian Swiss landowner Louis Zamaroni had a dairy farm on his 28 acres west of Petaluma Hill Road.[9] The land on either side of Petaluma Hill Road at that time was largely occupied in dairy production and both Louis and his brother Eugene were so occupied. The small residence would be located on the northwest corner of Louis Zamaroni's parcel (see Appendix 7). The Zamaronis are memorialized in Wheeler Zamaroni landscape materials and the Zamaroni quarry on the east side of Petaluma Hill Road.

Most of the subsequent residents have been untraceable, but one of them was masonry contractor Joseph DeBrotinic, who arrived in Santa Rosa in 1945 and was living at 358 Yolanda Avenue in 1948. He later moved the Belleview neighborhood and was "instrumental" in starting the Santa Rosa Boys Clubs and was a Belleview School District Trustee.[10]

References

Gregory, Tom 1911 *History of Sonoma County with Biographical Sketches*. Historic Record Company, Los Angeles.
Reynolds & Proctor 1898 *Illustrated Atlas of Sonoma County*. Reynolds & Proctor, Santa Rosa, California.
Santa Rosa Press Democrat 1948 "Joseph DeBrotinic." Obituaries, April 5, 1996.
Thomas Bros. c.1928 *Sonoma County School District 1926-1928*. Maps compiled by Thomas Brothers Map Col, Oakland.
University of California at Berkeley 2003 *Mexican Land Grants, Sonoma County*. http://vm136.lib.berkeley.edu/ EART/ SonomaRanchos.html.

[1] LeBaron 1985:6
[2] Kidd, et al 1940. Book 512:395
[3] Personal communication, City of Santa Rosa Community Development Department October 23, 2019
[4] Thompson 1877 and US Census 1880
[5] US Census Farm Schedule 1880
[6] Sonoma Democrat 1881:5
[7] Gregory 1911:662
[8] Wetmore to Manion 1882. Book 78:331
[9] Thomas Bros. c. 1928
[10] Santa Rosa Press Democrat 1948:B2

Recorded by: J Longfellow **Date:** November 18, 2019 ☒ Continuation ☐ Update

350/358 Yolanda Avenue west and south façades, view to northeast

350/358 Yolanda Avenue east and south façades, view to northwest.

350/358 Yolanda Avenue former garage/barn east and south façades, view to southwest.

State of California — The Resources Agency DEPARTMENT OF PARKS AND RECREATION **PRIMARY RECORD**	Primary # HRI # Trinomial NRHP Status Code	
Other Listings Review Code	Reviewer	Date

 Resource Name: 368 Yolanda Avenue

P1. Other Identifier:
P2. Location: ☐ **Not for Publication** ☒ **Unrestricted**
a. County: Sonoma
and
b. USGS 7.5' Quad: Santa Rosa, CA **Date:** 1994 **Unsectioned lands of the *Rancho Llano de Santa Rosa*;** M.D.**B.M.**
c. Address: City: Santa Rosa Zip: 95404
d. UTM: Zone:10**;** 525244 **mE**/ 4251646 **mN** (WGS84 datum)
e. Other Locational Data: APN 044-072-009

P3a. Description: The one-acre rectangular parcel contains Malm Fireplace, a rectangular-shaped building. The Malm structure spans about one-half of the length and almost all the width of the parcel. The northern portion facing onto Yolanda Avenue is a parking lot for the retail business and a wide asphalt driveway runs the length of the parcel on its western boundary. The building is composed of three sections: the original barrel-roofed warehouse and former fabrication locus; a parallel and contiguous flat-roofed warehouse extending from the west side of the original building; and a single-story retail showroom. The building is constructed of stucco-clad concrete blocks on a slab foundation and covered with rolled asphalt roofing.

Fenestration on the retail space consists of seven plate glass windows across the north façade and a single barred rectangular hung window on the east façade. Two extruded aluminum-framed glass doors are located between the plate glass windows. One, the access to the showroom, is flanked by clear glass panels on the west end of the front façade, and the other is located to the east and accesses the company's administrative offices. One side door on the west façade is shaded with a blue and white striped awning and is located to the north of a large hung slider warehouse door. Another door sits adjacent and south of the slider door. Stylistically the building is an unadorned product of its 1960s construction. It remains in good condition.

P3b. Resource Attributes: HP6 (1-story commercial building)
P4. Resources Present: ☒ Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other

P5b. Description of Photo: 368 Yolanda Avenue storefront, view to southeast. October 12, 2019

P6. Date Constructed/Age and Sources: ☒Historic
☐Prehistoric ☐Both
1964, City of Santa Rosa Parcel Rept

P7. Owner and Address:
Allan A. & Kimberly L.Henderson
350 Yolanda Avenue
Santa Rosa, CA 95404

P8. Recorded by:
J Longfellow
J Longfellow Consulting
614 Forest Drive
Sebastopol, CA 95472

P9. Date Recorded: October 18, 2019 **P10. Survey Type: Intensive**

P11. Report Citation: Longfellow, J 2019 *Historic Property Survey and CEQA Evaluation for 350 Yolanda Avenue (APN 044-072-008) and 368 Yolanda Avenue (APN 044-072-009), Santa Rosa, California 95404.* J Longfellow Consulting, Sebastopol, California.

Attachments: ☐NONE ☒Location Map ☐Sketch Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

Resource Name: 368 Yolanda Avenue

B1. Historic Name: **B2**. Common Name: Malm Fireplace
B3. Original Use: Warehouse B4. Present Use: Commercial Sales and warehouse
B5. Architectural Style:
B6. Construction History: The City of Santa Rosa's records assert a 1964 construction date for the original Malm building, and a 1963 aerial photo depicts a residence and small family farm at this location. The original building was a barrel-roofed fabrication and warehouse space. In 1972 a parallel structure adjoining the original building was built on the west elevation to approximately double its workspace and storage capacity. The front retail sales room may have been added at this time as the stucco finish ties all the sections together.

B7. Moved? ☒**No** ☐**Yes** ☐**Unknown** **Date:** **Original Location:**
B8. Related Features: None
B9a. Architect: Unknown b. Builder: Unknown
B10. Significance: Theme: Area: Santa Rosa
Period of Significance: **Property Type:** **Applicable Criteria:** N/A
This property does not qualify for listing on local, state, or national historic registers.

Under Criterion 1, 368 Yolanda Avenue is not associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States. The Malm company had a historical presence and is still active in the Santa Rosa business community. It has enjoyed acclaim as the fabricator and marketer of an internationally popular fireplace type, but the iconic fireplace did not originate at this site.

Under Criterion 2, the property is not associated with the lives of persons important to local, California, or national history. The property at 368 Yolanda Avenue is associated with the Malm family, successful in business but not significantly distinguished from other such business families in Sonoma County.

Under Criterion 3, the showroom and warehouse at 368 Yolanda Avenue do not represent the work of a master nor does it possess high artistic values. It is a structural type that is common to light industrial areas of Santa Rosa.

Under Criterion 4, the property is unlikely to yield information important to the pre-history or history of the local area, California, or the nation.

B11. Additional Resource Attributes: (List attributes and codes) None

B12. References: Gregory, Tom 1911 *History of Sonoma County with Biographical Sketches*. Historic Record Co., Los Angeles.
Reynolds & Proctor 1898 *Illustrated Atlas of Sonoma County*.
University of California at Berkeley 2003 *Mexican Land Grants, Sonoma County*. http://vm136.lib.berkeley.edu/ EART/ SonomaRanchos.html.

B13. Remarks: None

B14. Evaluator: J Longfellow, M.A.. RPA, RPH

Date of Evaluation: November 18, 2019

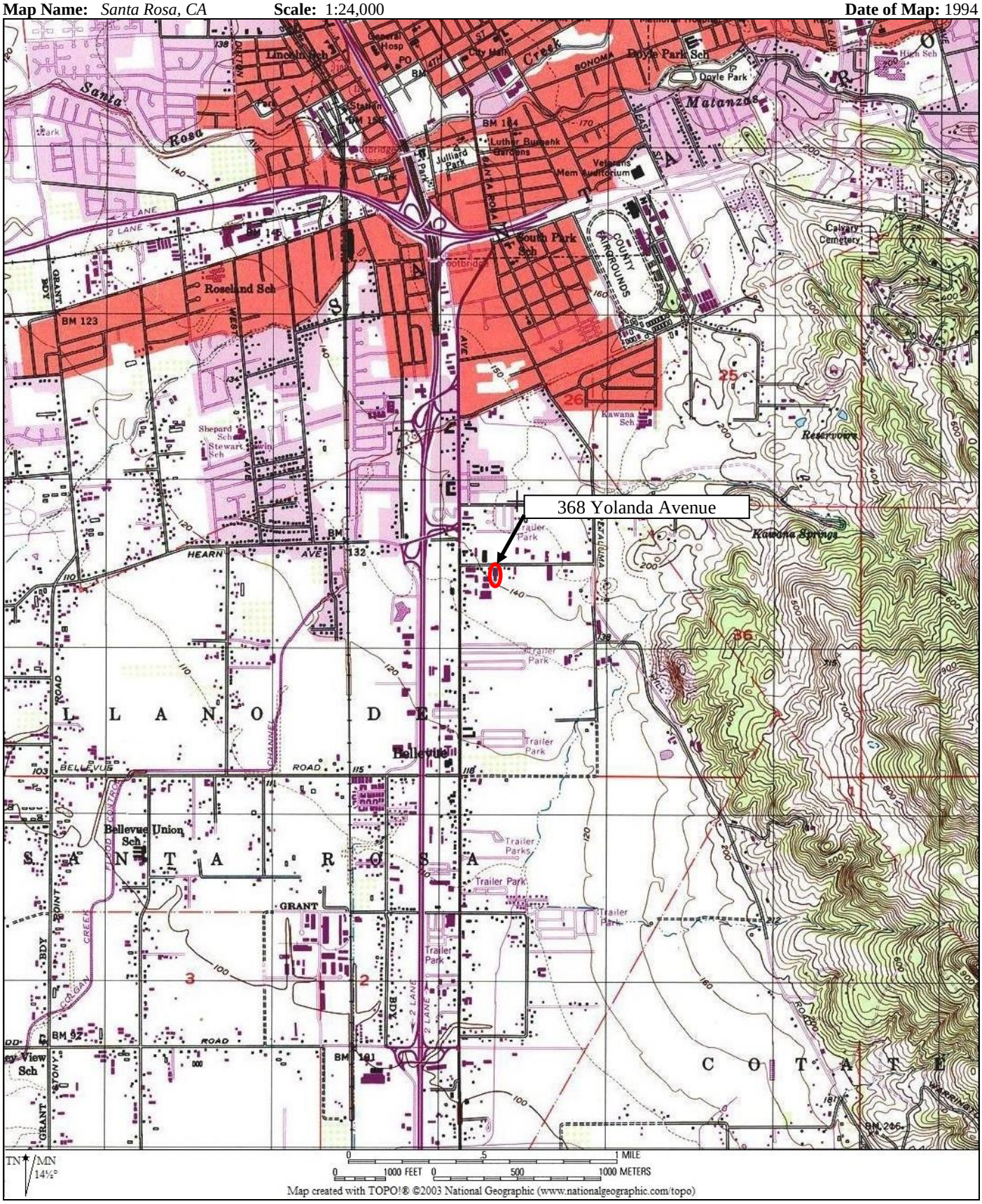
(This space reserved for official comments.)

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI#
Trinomial

Page 3 **of** 5 **Resource Name:** 368 Yolanda Avenue
Map Name: *Santa Rosa, CA* **Scale:** 1:24,000 **Date of Map:** 1994



DPR 523J (1/95)

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Selected References

Gregory, Tom 1911 *History of Sonoma County with Biographical Sketches*. Historic Record Company, Los Angeles.
Reynolds & Proctor 1898 *Illustrated Atlas of Sonoma County*. Reynolds & Proctor, Santa Rosa, California.
Thomas Bros. c.1928. *Sonoma County School District 1926-1928*. Maps compiled by Thomas Brothers Map Col, Oakland.
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[1] LeBaron 1985:6
[2] Kidd, et al 1940. Book 512:395
[3] Personal communication, City of Santa Rosa Community Development Department October 23, 2019
[4] Thompson 1877 and US Census 1880
[5] US Census Farm Schedule 1880
[6] Sonoma Democrat 1881:5
[7] Gregory 1911:662
[8] Wetmore to Manion 1882. Book 78:331

Recorded by: J Longfellow **Date:** November 18, 2019 ☒ Continuation ☐ Update

368 Yolanda Avenue north and east façades, view to southwest.

368 Yolanda Avenue north end of west façade, view to northeast.

368 Yolanda Avenue south end of west façade, view to east.

APPENDIX E

California Historic Resources Information System and Tribal Responses

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

January 30, 2020

Andrew Trippel, City Planner
City of Santa Rosa

Via Email to: atrippel@srcity.org

Re: Native American Consultation, Pursuant to Senate Bill 18, Government Code §65352.3 and §65352.4, Yolanda Avenue Light Industrial Facility General Plan Amendment and Rezoning Project, Sonoma County

Dear Mr. Trippel:

Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above referenced counties.

Government Code §65352.3 and §65352.4 require local governments to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of avoiding, protecting, and/or mitigating impacts to cultural places when creating or amending General Plans, Specific Plans and Community Plans.

The law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction. The NAHC believes that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

The NAHC also believes that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

    - A listing of any and all known cultural resources that have already been recorded or are adjacent to the APE, such as known archaeological sites;
    - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
    - Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the APE; and
    - If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

    - Any report that may contain site forms, site significance, and suggested mitigation measures.

All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code §6254.10.

3. The result of the Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative.

4. Any ethnographic studies conducted for any area including all or part of the APE; and

5. Any geotechnical reports regarding all or part of the APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event, that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we are able to assure that our consultation list remains current.

If you have any questions, please contact me at my email address: Sarah.Fonseca@nahc.ac.gov.

Sincerely,

Sarah Fonseca
Associate Governmental Program Analyst

Attachment

Native American Heritage Commission
Native American Contacts List
January 30, 2020

Cloverdale Rancheria of Pomo Indians
Patricia Hermosillo, Chairperson
555 S. Cloverdale Blvd., Suite A — Pomo
Cloverdale ,CA 95425
info@cloverdalerancheria.com
(707) 894-5775
(707) 894-5727

Dry Creek Rancheria Band of Pomo Indians
Chris Wright, Chairperson
P.O. Box 607 — Pomo
Geyserville ,CA 95441
lynnl@drycreekrancheria.com
(707) 814-4150
(707) 814-4166

Federated Indians of Graton Rancheria
Gene Buvelot
6400 Redwood Drive, Ste 300 — Coast Miwok
Rohnert Park ,CA 94928 — Southern Pomo
gbuvelot@gratonrancheria.com
(415) 279-4844 Cell
(707) 566-2288 ext 103

Federated Indians of Graton Rancheria
Greg Sarris, Chairperson
6400 Redwood Drive, Ste 300 — Coast Miwok
Rohnert Park ,CA 94928 — Southern Pomo
gbuvelot@gratonrancheria.com
(707) 566-2288 Office
(707) 566-2291 Fax

Guidiville Indian Rancheria
Merlene Sanchez, Chairperson
P.O. Box 339 — Pomo
Talmage ,CA 95481
admin@guidiville.net
(707) 462-3682
(707) 462-9183 Fax

Kashia Band of Pomo Indians of the Stewarts Point Rancheria
Dino Franklin Jr.,Chairperson
1420 Guerneville Rd. Ste 1 — Pomo
Santa Rosa ,CA 95403
dino@stewartspoint.org
(707) 591-0580 Office
(707) 591-0583 Fax

Lytton Rancheria
Marjorie Mejia, Chairperson
437 Aviation Blvd. — Pomo
Santa Rosa ,CA 95403
margiemejia@aol.com
(707) 575-5917
(707) 575-6974 - Fax

Middletown Rancheria
Jose Simon III, Chairperson
P.O. Box 1035 — Pomo
Middletown ,CA 95461 — Lake Miwok
sshope@middletownrancheria.com
(707) 987-3670 Office
(707) 987-9091 Fax

Mishewal-Wappo Tribe of Alexander Valley
Scott Gabaldon, Chairperson
2275 Silk Road — Wappo
Windsor ,CA 95492
scottg@mishewalwappotribe.com
(707) 494-9159

This list is current as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code,Section 5097.94 of the Public Resources Code, or Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans Tribes for the proposed:
Yolanda Avenue Light Industrial Facility General Plan Amendment and Rezoning Project, Sonoma County.

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
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January 30, 2020

Andrew Trippel, City Planner
City of Santa Rosa

Via Email to: atrippel@srcity.org

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Dear Mr. Trippel:

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The law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction. The NAHC believes that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

The NAHC also believes that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

    - A listing of any and all known cultural resources that have already been recorded or are adjacent to the APE, such as known archaeological sites;
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All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code §6254.10.

3. The result of the Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative.

4. Any ethnographic studies conducted for any area including all or part of the APE; and

5. Any geotechnical reports regarding all or part of the APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event, that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we are able to assure that our consultation list remains current.

If you have any questions, please contact me at my email address: Sarah.Fonseca@nahc.ac.gov.

Sincerely,

Sarah Fonseca
Associate Governmental Program Analyst

Attachment

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January 30, 2020

Cloverdale Rancheria of Pomo Indians
Patricia Hermosillo, Chairperson
555 S. Cloverdale Blvd., Suite A — Pomo
Cloverdale ,CA 95425
info@cloverdalerancheria.com
(707) 894-5775
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Chris Wright, Chairperson
P.O. Box 607 — Pomo
Geyserville ,CA 95441
lynnl@drycreekrancheria.com
(707) 814-4150
(707) 814-4166

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6400 Redwood Drive, Ste 300 — Coast Miwok
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Guidiville Indian Rancheria
Merlene Sanchez, Chairperson
P.O. Box 339 — Pomo
Talmage ,CA 95481
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(707) 462-9183 Fax

Kashia Band of Pomo Indians of the Stewarts Point Rancheria
Dino Franklin Jr.,Chairperson
1420 Guerneville Rd. Ste 1 — Pomo
Santa Rosa ,CA 95403
dino@stewartspoint.org
(707) 591-0580 Office
(707) 591-0583 Fax

Lytton Rancheria
Marjorie Mejia, Chairperson
437 Aviation Blvd. — Pomo
Santa Rosa ,CA 95403
margiemejia@aol.com
(707) 575-5917
(707) 575-6974 - Fax

Middletown Rancheria
Jose Simon III, Chairperson
P.O. Box 1035 — Pomo
Middletown ,CA 95461 — Lake Miwok
sshope@middletownrancheria.com
(707) 987-3670 Office
(707) 987-9091 Fax

Mishewal-Wappo Tribe of Alexander Valley
Scott Gabaldon, Chairperson
2275 Silk Road — Wappo
Windsor ,CA 95492
scottg@mishewalwappotribe.com
(707) 494-9159

This list is current as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code,Section 5097.94 of the Public Resources Code, or Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans Tribes for the proposed:
Yolanda Avenue Light Industrial Facility General Plan Amendment and Rezoning Project, Sonoma County.

January 31, 2020

Cloverdale Rancheria of Pomo Indians
Patricia Hermosillo, Chairperson
555 S. Cloverdale Blvd., Suite A
Cloverdale, CA 95425

Re: YOLANDA INDUSTRIAL PROJECT

Dear Chairperson Hermosillo:

The intent of this letter is to provide notification to the Cloverdale Rancheria of Pomo Indians to inform the tribe about the proposed project and identify any tribal concerns. This notification addresses the requirements of SB 18 as defined in California Government Code §65350-65362. We request a response within 14 days from your receipt of this letter to request consultation regarding any potential impacts of this project on tribal cultural resources. The formal AB 52 process was conducted by the City of Santa Rosa with individuals who submitted written requests for consultation. We are reaching out to you for your participation and input as a component of the consultation process.

Project Description
The project proposes amending the General Plan Land Use designations of six parcels (Parcels A-F in Table A) to Light Industry and rezoning those same parcels to Light Industrial (IL). Redevelopment would include proposed development of a new 8,442 square foot (SF) commercial/industrial building at 330 and 358/350 Yolanda Avenue (parcels A, B, and C) and future development of a new 17,982 SF industrial building at 368 Yolanda Avenue (parcels E and G). The new 8,442 SF building would include three separate suites, of which two are proposed for use: a cannabis dispensary (4,744 SF), cannabis Manufacturing (non-volatile) and Distribution uses (1,419 SF), and a vacant/untenanted space (2,279 SF). Proposed development would also include 61 new parking stalls, including 7 ADA parking stalls, planting of 50 new trees, and improvements to two existing buildings totaling 32,000 SF (parcel D) to create multi-unit industrial buildings. An existing approximately 30,000 SF industrial building is to remain on parcel 044-081-029 (parcel F) at 324 Yolanda Avenue.

The project will require multiple applications to the City of Santa Rosa, including a General Plan Amendment; a Rezoning; a Major Conditional Use Permit for Cannabis Retail (Dispensary) and Delivery, Manufacturing (non-volatile), and Distribution; Minor Design Review for the new 8,442 square foot building; and Major Design Review for the proposed new industrial building.

Project Location
The project is situated in central Sonoma County within the City of Santa Rosa (Figure 1). The project site is the USGS 7.5' Santa Rosa Quadrangle in an unsectioned portion of Township 7 North, Range 8 West of the Mount Diablo Base and Meridian (MDBM). Specifically, the project site is located at 0, 324 (and unaddressed parcel), 326, 328, 330, 340, 358, and 368 Yolanda Ave. in the City of Santa Rosa.

Table A – Current Land Uses

APN	Lot Size (acres)	Current Land Use	General Plan	Zoning Code	Buildings/ Improvements	Year Built
044-072-006	0.16	Vacant Commercial Land w/Utilities	Undesignated	General Commercial	vacant; asphalt lot	N/A
044-072-007	0.336	Commercial Use/ No Other Category	Retail & Business Service	General Commercial	vacant; asphalt lot	N/A
044-072-008	0.331	One Story Office Building	Retail & Business Service	General Commercial	One residential structure (business use) ±1,696 ft^2	1938
044-081-024	1.92	Light Manufacturing & Industrial	Retail & Business Service	General Commercial	Two industrial buildings totaling ±29,400 ft^2	1971
044-390-061	0.45	Vacant Commercial Land w/Utilities	Med-High Residential	R-3-15	Mobile/Trailer office	N/A
044-081-029	1.68	Warehousing/Active	Retail & Business Service	General Commercial	One industrial building ±27,000 ft^2	1977
044-072-009	1.0	Light Manufacturing & Industrial	Light Manufacturing	Light Industrial	Two attached industrial buildings ±22,800 ft^2	1964

Research Status

The Native American Heritage Commission (NAHC) was contacted on January 29, 2020, to review the Sacred Lands Files (SLF) for any resources present within the project area and to request a Native American Contacts List. The NAHC responded on January 30, 2020 that the search of the SLF was negative; however, there may be additional information to be gained from individuals on the provided Native American Contact List. Your tribe has been identified as one that might attach religious and cultural significance to historic properties within the project area. We are sending this letter seeking your assistance with the identification of sites of cultural significance and if you can provide any additional knowledge regarding the project area. We welcome any information you would be willing to share on resources within the project area and any appropriate management/treatment of the resources identified.

Correspondence

Any exchange of information regarding tribal cultural resources as a result of correspondence with the City will not be included in the environmental review document or otherwise disclosed by the lead agency or any other public agency to the public, without prior consent of the tribe that provided the information. Responses can be done in writing to ATrippel@srcity.org or by mail to:

City of Santa Rosa - Planning and Economic Development
Attention: Andrew Trippel
100 Santa Rosa Avenue, Room 3
Santa Rosa, CA 95404

If you have any questions regarding this Project, please contact me at (707) 543-3223.

Thank you,

January 31, 2020

Dry Creek Rancheria Band of Pomo Indians
Chris Wright, Chairperson
PO Box 607
Geyserville, CA 95441

Re: YOLANDA INDUSTRIAL PROJECT

Dear Chairperson Wright:

The intent of this letter is to provide notification to the Dry Creek Rancheria Band of Pomo Indians to inform the tribe about the proposed project and identify any tribal concerns. This notification addresses the requirements of SB 18 as defined in California Government Code §65350-65362. We request a response within 14 days from your receipt of this letter to request consultation regarding any potential impacts of this project on tribal cultural resources. The formal AB 52 process was conducted by the City of Santa Rosa with individuals who submitted written requests for consultation. We are reaching out to you for your participation and input as a component of the consultation process.

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Attention: Andrew Trippel
100 Santa Rosa Avenue, Room 3
Santa Rosa, CA 95404

If you have any questions regarding this Project, please contact me at (707) 543-3223.

Thank you,

January 31, 2020

Federated Indians of Graton Rancheria
Gene Buvelot
6400 Redwood Drive, Suite 300
Rohnert Park, CA 94928

Re: YOLANDA INDUSTRIAL PROJECT

Dear Mr. Buvelot:

The intent of this letter is to provide notification to the Federated Indians of Graton Rancheria to inform the tribe about the proposed project and identify any tribal concerns. This notification addresses the requirements of SB 18 as defined in California Government Code §65350-65362. We request a response within 14 days from your receipt of this letter to request consultation regarding any potential impacts of this project on tribal cultural resources. The formal AB 52 process was conducted by the City of Santa Rosa with individuals who submitted written requests for consultation. We are reaching out to you for your participation and input as a component of the consultation process.

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City of Santa Rosa
PLANNING & ECONOMIC DEVELOPMENT

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Santa Rosa, CA 95404

If you have any questions regarding this Project, please contact me at (707) 543-3223.

Thank you,

January 31, 2020

Federated Indians of Graton Rancheria
Greg Sarris
6400 Redwood Drive, Suite 300
Rohnert Park, CA 94928

Re: YOLANDA INDUSTRIAL PROJECT

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Thank you,

January 31, 2020

Guidiville Indian Rancheria
Merlene Sanchez, Chairperson
P.O. Box 339
Talmage, CA 95481

Re: YOLANDA INDUSTRIAL PROJECT

Dear Chairperson Sanchez:

The intent of this letter is to provide notification to the Guidiville Indian Rancheria to inform the tribe about the proposed project and identify any tribal concerns. This notification addresses the requirements of SB 18 as defined in California Government Code §65350-65362. We request a response within 14 days from your receipt of this letter to request consultation regarding any potential impacts of this project on tribal cultural resources. The formal AB 52 process was conducted by the City of Santa Rosa with individuals who submitted written requests for consultation. We are reaching out to you for your participation and input as a component of the consultation process.

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Thank you,

January 31, 2020

Mishewal-Wappo Tribe of Alexander Valley
Scott Gabaldon, Chairperson
2275 Silk Road
Windsor, CA 95492

Re: YOLANDA INDUSTRIAL PROJECT

Dear Chairperson Gabaldon:

The intent of this letter is to provide notification to the Mishewal-Wappo Tribe of Alexander Valley to inform the tribe about the proposed project and identify any tribal concerns. This notification addresses the requirements of SB 18 as defined in California Government Code §65350-65362. We request a response within 14 days from your receipt of this letter to request consultation regarding any potential impacts of this project on tribal cultural resources. The formal AB 52 process was conducted by the City of Santa Rosa with individuals who submitted written requests for consultation. We are reaching out to you for your participation and input as a component of the consultation process.

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City of Santa Rosa
PLANNING & ECONOMIC DEVELOPMENT

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Thank you,

City of Santa Rosa
PLANNING & ECONOMIC DEVELOPMENT

January 14, 2020

Lytton Rancheria of California
Brenda Tomaras
Tomaras & Ogas, LLP
10755-F Scripps Poway Parkway #281
San Diego, CA 92131

Re: **328 YOLANDA AVE., SANTA ROSA, CA**
YOLANDA AVENUE GENERAL PLAN AMENDMENT AND REZONE
FILE NO. PRJ19-002

Proposal to amend General Plan and rezone six (6) parcels to Light Industry land use designation and Light Industrial (IL) zoning district to support future development that would include a new 17,982 sq. ft. industrial building and a new 8,422 sq. ft. commercial/industrial building, redevelopment of 32,000 sq. ft. of existing industrial space, addition of 61 new parking spaces, including 7 accessible parking spaces, and associated landscaping.

Ms. Tomaras:

The subject project is being referred to the Lytton Rancheria of California to provide written notification in compliance with AB-52 (Native Americans: California Environmental Quality Act). As such, a request for consultation with the City of Santa Rosa regarding this project and its potential impacts to tribal cultural resources must be made in writing within 30 days of the date of this letter and addressed to the project planner. Within 30 days of the written request, the City will begin the consultation process.

Any exchange of information regarding tribal cultural resources as a result of consultation with the City, will not be included in the environmental review document or otherwise disclosed by the lead agency or any other public agency to the public, without prior consent of the tribe that provided the information.

Please respond in writing no later than Friday, February 14, 2020 to atrippel@srcity.org or by mail to:

City of Santa Rosa
Planning and Economic Development
Attention: Andrew Trippel
100 Santa Rosa Avenue, Room 3
Santa Rosa CA 95404

Best Regards,

Andrew

Andrew Trippel | City Planner
Planning & Economic Development |100 Santa Rosa Ave Rm 3 | Santa Rosa, CA 95404
Tel. (707) 543-3223 | Fax (707) 543-3269 | atrippel@srcity.org

APPENDIX F

Traffic Impact Study

Draft Report

Traffic Impact Study for the Yolanda Avenue Industrial Project

Prepared for the
City of Santa Rosa

May 27, 2020

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505 17th Street, 2nd Floor **OAKLAND**, CA 94612 510.444.2600
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Table of Contents

Appendices

Executive Summary

The project as proposed includes the following two components:

1. Amend the General Plan land use designations of six parcels from their current designations to Light Industry and rezone the parcels from their current zoning classifications to Light Industrial (IL). Five of the six parcels are currently zoned and designated for general commercial and one is zoned R-3/15 and designated medium density residential. The proposed project would de-intensify the land use designations and zoning. The proposed project includes no physical changes to the roadway network; site access would remain via driveways on Yolanda Avenue. Two of the parcels to be rezoned have existing buildings to be retained. Two industrial buildings on one of the parcels are proposed to be modified to create a multi-unit industrial building of 32,000 square feet. There is also a 30,000 square foot industrial building on a second parcel that will not be modified.

2. Construct two new buildings that would require a Conditional Use Permit (CUP). An 8,400 square-foot building would be constructed on two of the rezoned parcels and would include a marijuana dispensary, a marijuana microbusiness, and an undetermined use. On an adjacent parcel (not included in the GPA), an existing 15,100 square-foot building would be demolished and replaced by an 18,000 square-foot building, part of which would be located on one of the rezoned parcels.

General Plan Amendment

The analysis for the change in General Plan designations indicates that under Existing and Future conditions, both study intersections operate or are expected operate at an acceptable Level of Service (LOS) D or better during both the a.m. and p.m. peak hours.

The GPA project is expected to generate fewer trips at full buildout of the General Plan than would be anticipated with the existing land use designations. The calculated reduction in trip generation potential is an average of 6,683 daily trips, including an increase of 60 trips during the a.m. peak hour and a reduction of 649 trips during the p.m. peak hour. Due to the large estimated decrease in trips, the plus project conditions were analyzed assuming no net change in trips for the project site. The Future condition volumes were developed based on full buildout of the City of Santa Rosa General Plan analyzed as part of the Sonoma County Transportation Authority's (SCTA) gravity demand model. This approach provides a conservative analysis.

The Transportation Checklist from the California Environmental Quality Act (CEQA) Guidelines was reviewed and it was determined that the proposed GPA would result in less-than-significant impacts under all four Transportation criteria.

Conditional Use Permit

The development included in the Conditional Use Permit proposal includes a new 8,400 square-foot building on APN 044-072-007 and APN 044-072-008 (consisting of a 4,800 square-foot marijuana dispensary, a 1,420 square-foot marijuana microbusiness, and a 2,280 square-foot vacant/untenanted space). The proposed project would be expected to generate an average of 1,396 daily trips, including 28 trips during the a.m. peak hour and 126 trips during the p.m. peak hour. Upon adding other projects in the area that are reasonably expected to be complete during the same time period as the proposed project as well as project-generated trips to existing volumes, the three study intersections are expected to continue operating acceptably, indicating an acceptable change in traffic operation.

Sidewalks would be provided along the project frontage to provide access for pedestrians, including to nearby transit service, and it is recommended that the project provide interim pedestrian access to connect the site to the existing sidewalks west of the site if sufficient public right-of-way is available. The proposed site plan accounts for the space needed for the City's proposed bike lanes along Yolanda Avenue.

There is adequate parking to serve the site, but an easement may be required to ensure that vehicles can circulate between the parcels, as the number of spaces immediately adjacent to the proposed dispensary/industrial building may not accommodate peak parking demand.

The Transportation Checklist from the California Environmental Quality Act (CEQA) Guidelines was reviewed and it was determined that the proposed project would result in less-than-significant impacts under all four Transportation criteria.

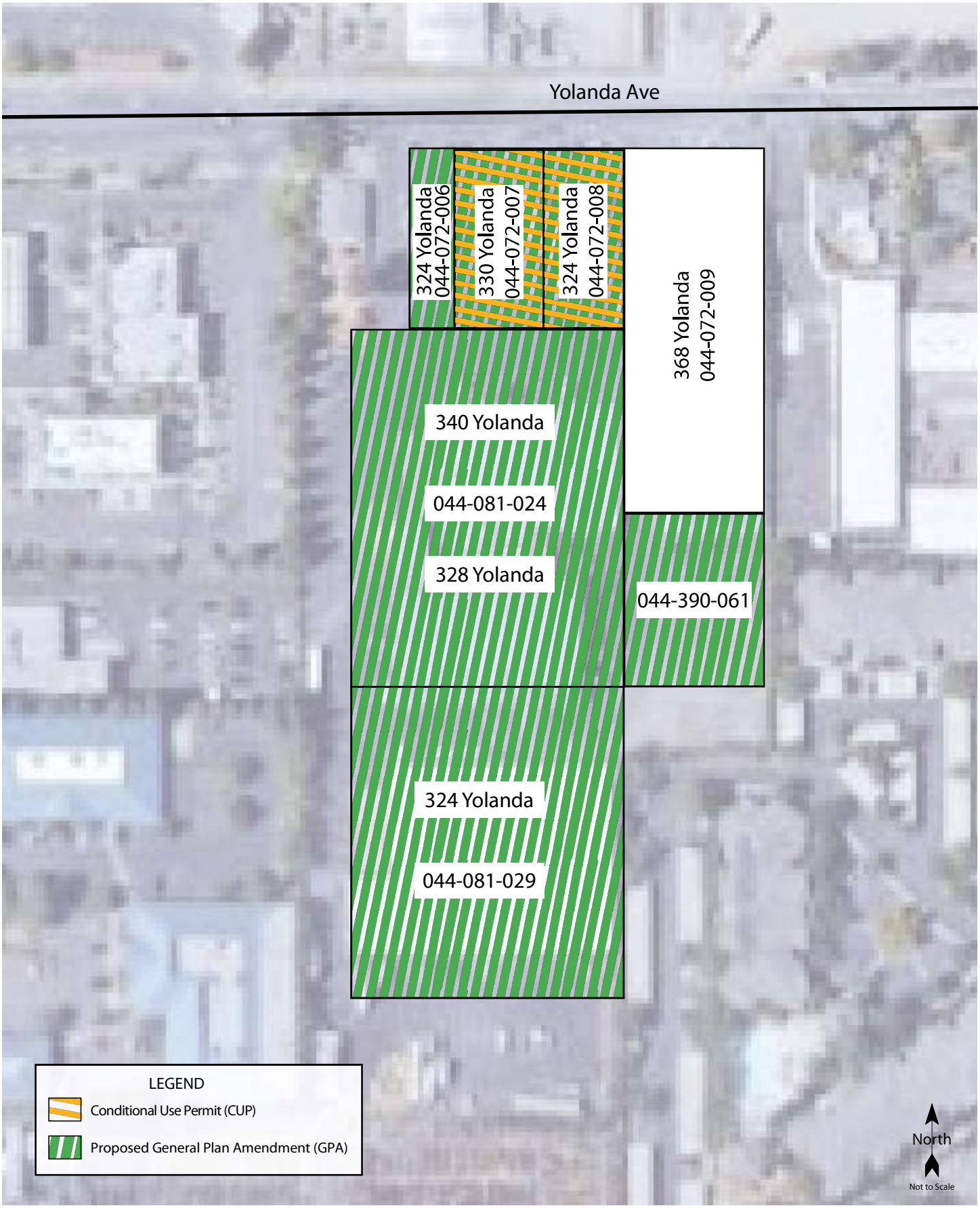
Introduction

This report presents an analysis of the potential traffic impacts that would be associated with a General Plan Amendment (GPA) and Rezoning for six parcels with APNs 044-072-006 thru -008, 044-081-024, 044-028-029, and 044-390-061 in the City of Santa Rosa. In addition to the General Plan Amendment, this report compares the proposed total development on the project site to buildout estimates based on the site's potential under its current zoning and land use designations. Finally, the potential traffic impacts associated with two proposed new buildings, which require a Conditional Use Permit (CUP), were evaluated. The analyses for the GPA and CUP aspects of the project are presented separately so that the information for each action is readily identifiable. Figure 1 provides an overview of the project components, including identification of the parcels associated with the proposed GPA and those associated with the proposed CUP.

The traffic study was completed in accordance with the criteria established by the City of Santa Rosa and is consistent with standard traffic engineering techniques.

Prelude

The purpose of a traffic impact study is to provide City staff and policy makers with data they can use to make an informed decision regarding the potential traffic impacts of a proposed project, and any associated improvements that would be required to mitigate these impacts to a level of insignificance or acceptability as defined by the City's General Plan or other policies. Vehicular traffic impacts are typically evaluated by determining the number of new trips that the proposed use would be expected to generate, distributing these trips to the surrounding street system based on existing travel patterns or anticipated travel patterns specific to the proposed project, then analyzing the impact the new traffic would be expected to have on critical intersections. In the case of a General Plan Amendment, the comparison is made between conditions with development under the existing land use designation versus the one being proposed.



sro504.ai 1/20

Traffic Impact Study for the Yolanda Avenue Industrial Project

Figure 1 – Site Plan

General Plan Amendment

Project Profile

The proposed General Plan Amendment would change the land use designations of six parcels comprising the project site from their current designations (one Undesignated, four Retail and Business Services, and one Medium-High Density Residential), as summarized in Table 1, to Light Industry. These same parcels would also be rezoned from their current zoning classifications [five are General Commercial (CG) and one Multi-family Residential (R-3-15)] to Light Industrial (IL). Access to the site would remain via driveways on Yolanda Avenue. The project site is located at 324, 328, 330, 358, and 368 Yolanda Avenue, as shown in Figure 1.

Table 1 – Existing Development Potential

Assessor's Parcel Number (APN)	GP Designation	Zoning Code	Property Address (Yolanda Ave)	Maximum Density	Max Height	Lot Size (sf)	Maximum Development Potential
044-072-006	Unassigned	GC	324	100%	55 feet	14,500	14,500 sf
044-072-007	Retail and Business Services	GC	330	100%	55 feet	14,637	14,637 sf
044-072-008	Retail and Business Services	GC	350	100%	55 feet	14,400	14,400 sf
044-081-024	Retail and Business Services	GC	328	100%	55 feet	83,635	83,635 sf
044-081-029	Retail and Business Services	GC	324	100%	55 feet	73,181	73,181 sf
044-081-061	Medium-High Density Residential	R-3/15		1 unit per 2900 sf	-	20,000	7 units

Notes: sf = square feet

Operational Analysis

Study Area and Periods

The study area consists of the following intersections:

1. Yolanda Avenue-US 101 North Ramps/Santa Rosa Avenue
2. Petaluma Hill Road/Yolanda Avenue

Operating conditions during the a.m. and p.m. peak periods were evaluated to capture the highest potential changes to operation due to trips associated with the proposed change in land use as well as the highest volumes on the local transportation network. The morning peak hour occurs between 7:00 and 9:00 a.m. and reflects conditions during the home to work or school commute, while the p.m. peak hour occurs between 4:00 and 6:00 p.m. and typically reflects the highest level of congestion during the homeward bound commute.

Study Intersections

Yolanda Avenue-US 101 North Ramps/Santa Rosa Avenue is a four-legged, signalized intersection with protected left-turn phasing on all approaches and a right-turn overlap phase on the southbound Santa Rosa Avenue approach. The northbound US 101 on-ramp includes ramp metering during peak traffic hours. There are marked crosswalks on the south, east, and west legs.

Petaluma Hill Road/Yolanda Avenue is a signalized tee-intersection with protected left-turn phasing on the northbound approach. No pedestrian crosswalks or phasing exists at this intersection.

Existing lane configurations are shown in Figure 2.

Existing Conditions

The Existing Conditions scenario provides an evaluation of current operation based on existing traffic volumes during the a.m. and p.m. peak periods. This condition does not include project-generated traffic volumes. Volume data was collected in March 2017 and June 2018.

Under the existing traffic volumes, the study intersections are currently operating acceptably at LOS D or better during both peak periods studied. A summary of the intersection level of service calculations is contained in Table 2, the methodologies and standards are summarized in Appendix A, and copies of the Level of Service calculations are provided in Appendix B. Existing traffic volumes are shown in Figure 3.

Table 2 – Existing Peak Hour Intersection Levels of Service

Study Intersection	AM Peak		PM Peak	
	Delay	LOS	Delay	LOS
1. Yolanda Ave-US 101N Ramps/Santa Rosa Ave	27.5	C	27.1	C
2. Petaluma Hill Rd/Yolanda Ave	22.3	C	31.9	C

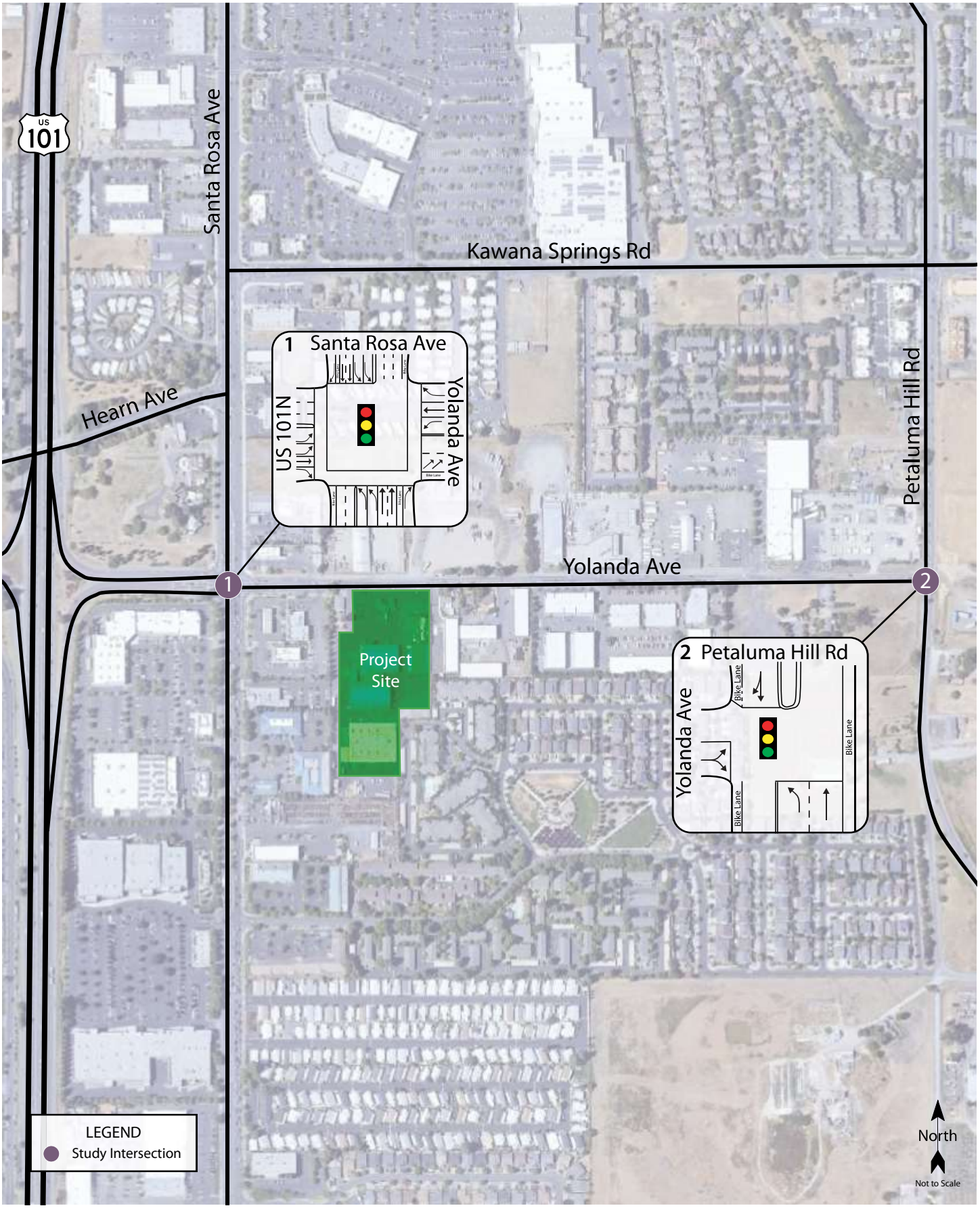
Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service

Future Conditions

Segment volumes for the horizon year of 2040 were obtained from the Sonoma County Transportation Authority's (SCTA) gravity demand model and translated to turning movement volumes at each of the study intersections using the "Furness" method. The Furness method is an iterative process that employs existing turn movement data, existing link volumes, and future link volumes to project likely turning future movement volumes at intersections. These volumes are assumed to incorporate full buildout of the City of Santa Rosa's General Plan.

The following roadway improvements are included in the long-range future modeling conducted for buildout conditions both with and without the project:

Farmers Lane Extension – The intersection of Yolanda Avenue/Petaluma Hill Road is the southwestern terminus for the Farmers Lane extension. As planned, Farmers Lane would be the east leg of the intersection. At full buildout, the four-legged intersection would have left-turn lanes, two through lanes and right-turn lanes in the north-south directions and in the east-west directions, left-turn lanes, through and through/right-turn lanes with bike lanes on all approaches.



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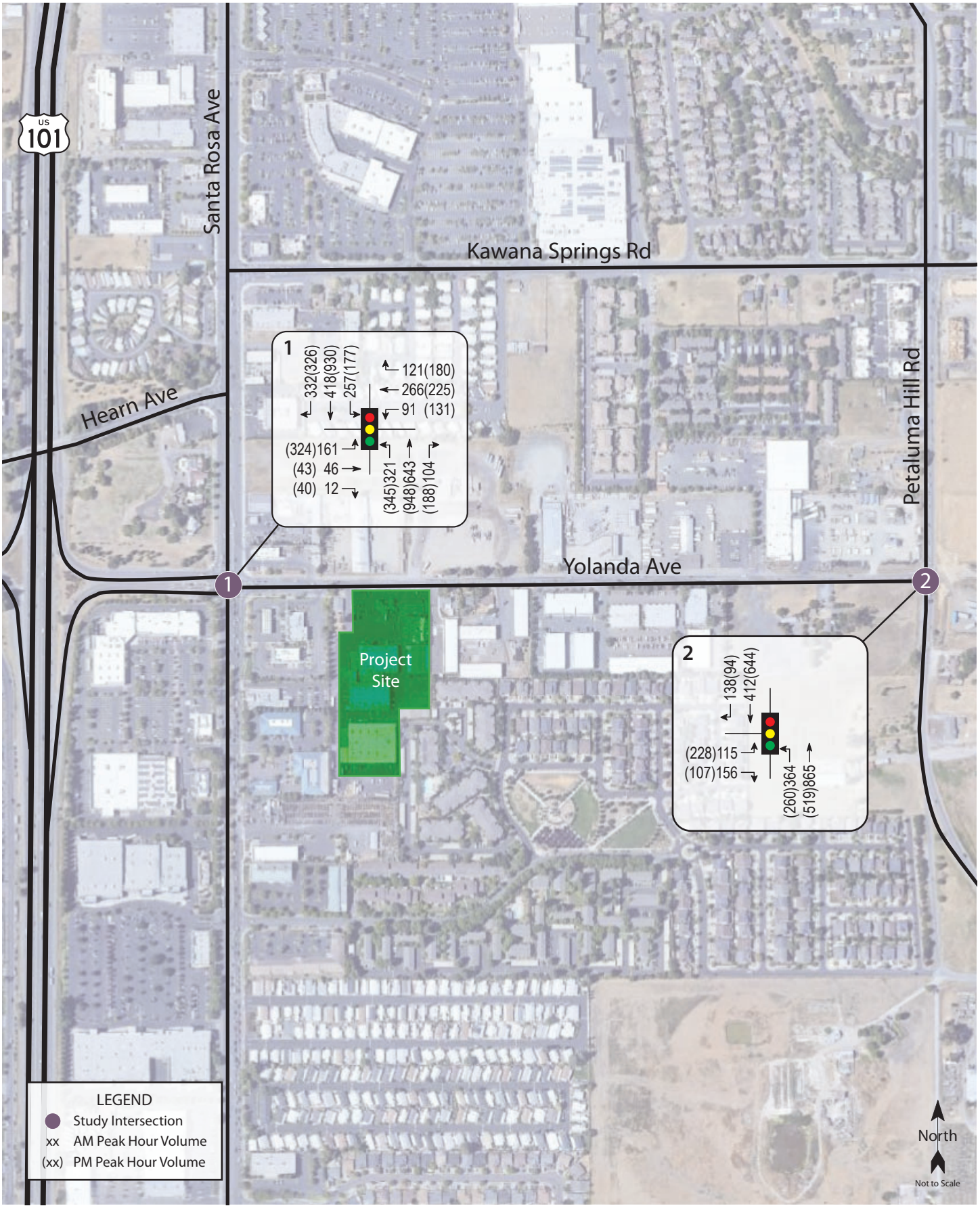
Traffic Impact Study for the Yolanda Avenue Industrial Project

Figure 2 – GPA Study Area and Existing Lane Configurations



sro504.ai 5/20

Traffic Impact Study for the Yolanda Avenue Industrial Project

Figure 3 – GPA Existing Traffic Volumes

Yolanda Avenue Widening – Yolanda Avenue would be widened as a supplement to the Farmers Lane Extension to include two travel lanes in the eastbound direction, a center two-way left-turn lane, and one westbound lane together with six-foot wide bicycle lanes and sidewalks between Santa Rosa Avenue and Petaluma Hill Road.

Under the anticipated Future volumes, and with the addition of improvements described above, the study intersections are expected to operate acceptably at LOS D or better during both peak hours. Operating conditions are summarized in Table 3 and Future traffic volumes are indicated in Figure 4.

Table 3 – Future Peak Hour Intersection Levels of Service

Study Intersection	AM Peak		PM Peak	
	Delay	LOS	Delay	LOS
1. Yolanda Ave-US 101N Ramps/Santa Rosa Ave	43.7	D	43.7	D
2. Petaluma Hill Rd/Yolanda Ave-Farmers Ln	28.4	C	34.2	C

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service

Project Conditions

The proposed General Plan Amendment would change the land use designations of six parcels comprising the project site from their current designations (one Undesignated, four Retail and Business Services, and one Medium-High Density Residential) to Light Industry. These same parcels would also be rezoned from their current zoning classifications [five General Commercial (CG) and one Multi-family Residential (R-3-15)] to Light Industrial (IL), as summarized in Table 4. This change represents a down-zoning in land use as light industrial is a less intense development type than residential or retail.

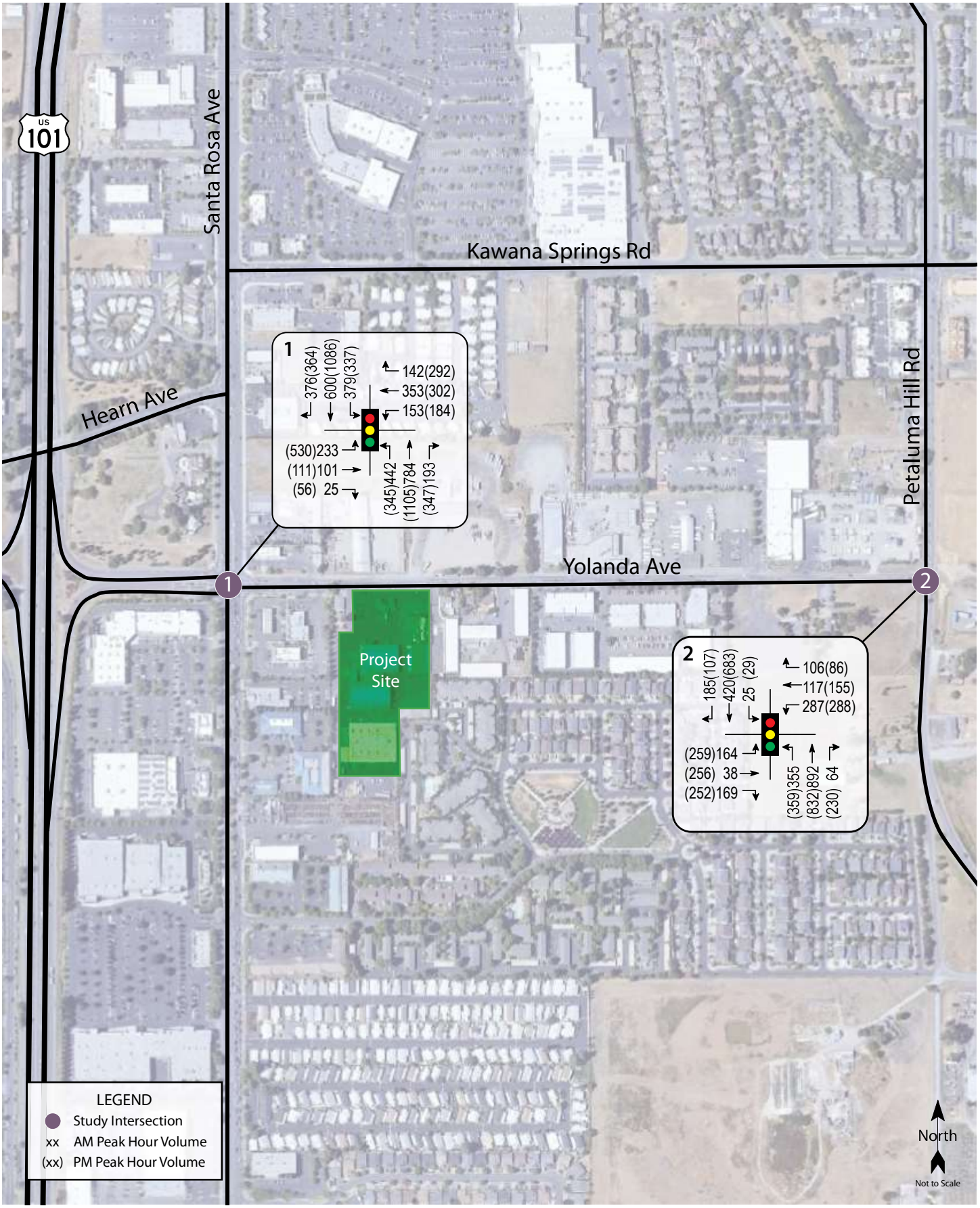
Table 4 – Proposed Development Potential for Parcels Associated with GPA

Assessor's Parcel Number (APN)	Existing Zoning Code	Existing Maximum Density	Existing Maximum Height	Lot Size (sq. ft)	Proposed Zoning Code	Proposed Maximum Density	Proposed Maximum Height	Proposed Maximum Development Potential (sf)
044-072-006	GC	100%	55 feet	14,500	IL	85%	55 feet	12,325
044-072-007	GC	100%	55 feet	14,637	IL	85%	55 feet	12,441
044-072-008	GC	100%	55 feet	14,400	IL	85%	55 feet	12,240
044-081-024	GC	100%	55 feet	83,635	IL	85%	55 feet	71,090
044-081-029	GC	100%	55 feet	73,181	IL	85%	55 feet	62,204
044-081-061	R-3/15	1 unit/ 2900 sf	-	20,000	IL	85%	55 feet	17,000

Notes: sf = square feet

Trip Generation

The anticipated trip generation for the proposed change in land use associated with the GPA was estimated using standard rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual*, 10th Edition, 2017. The trip generation potential of the existing General Plan Designation maximum development was determined using the published standard rates for General Commercial (Land Use #820) and Multi-Family Residential (Land Use #220). The trip generation potential of the proposed General Plan Designation maximum development was determined using the published rate for General Light Industrial (Land Use #110).



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Traffic Impact Study for the Yolanda Avenue Industrial Project

Figure 4 – GPA Future Traffic Volumes

When compared to General Plan Buildout conditions the proposed project would be expected to generate fewer trips than with full buildout of the project site under existing land use designations. The calculated reduction in trip generation is an average of 6,683 daily trips, including a reduction of 60 trips during the a.m. peak hour and a reduction of 649 trips during the p.m. peak hour. Based on the large magnitude in trip reduction, the project would reasonably be expected to result in no change to traffic operation, therefore further analysis was not performed. These results are summarized in Table 5.

Table 5 – Trip Generation – Proposed General Plan Amendment

Land Use	Units	Daily		AM Peak Hour				PM Peak Hour			
		Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Existing General Plan Designation Buildout											
General Commercial [1]	200.4 ksf	-37.75	-7561	-0.94	-188	-117	-71	-3.81	-763	-366	-397
Multi-Family Residential [2]	7 du	-7.32	-51	-0.46	-3	-1	-2	-0.56	-4	-2	-2
Proposed General Plan Designation Buildout											
General Light Industrial [3]	187.3 ksf	4.96	929	0.70	131	115	16	0.63	118	15	103
Net Change			**-6683**		**-60**	**-3**	**-57**		**-649**	**-353**	**-296**

Note: du = dwelling unit; ksf = 1,000 square feet;
[1] APN 044-072-006, 044-072-007, 044-072-008, 044-081-024, 044-081-029
[2] APN 044-081-061
[3] APN044-072-006, 044-072-007, 044-072-008, 044-081-024, 044-081-029, 044-081-061

CEQA Checklist - GPA

The current California Environmental Quality Act (CEQA) Guidelines, adopted in 2018, lists four criteria to be considered when determining if a project would result in a significant impact on transportation, as shown in Table 6.

Table 6 – CEQA Transportation Checklist for the GPA

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X	
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?			X	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d) Result in inadequate emergency access?			X	

(a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Less than significant. The proposed project is consistent with adopted policies and plans regarding public transit, bicycle, and pedestrian facilities. As described, pedestrian network improvements would be constructed during the widening of Yolanda Avenue along with providing Class II bike lanes along Yolanda Avenue. Any improvements to pedestrian and bicycle facilities are expected to enhance access to the project site and would adequately accommodate any change in pedestrian and bicycle activity in the vicinity of the project site.

(b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less than significant. CEQA Guidelines § 15064.3, subdivision (b) indicates that land use projects would have a significant impact if the project resulted in vehicle miles traveled (VMT) exceeding an applicable threshold of significance. It further notes that if existing models or methods are not available to estimate the vehicle miles traveled for the project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively.

The project would have a less than significant impact on vehicle miles traveled as the project would be anticipated to result in significantly fewer vehicle trips to the project site. The reduction in trips is anticipated to be greater than 15 percent.

(c) Substantially increase hazards due to a geometric design feature or incompatible use?

Less than significant. The proposed project does not include any modifications to the existing transportation and street network or propose to change to existing driveway geometrics that could increase hazards related to design features.

(d) Result in inadequate emergency access?

Less than significant. The proposed project does not include any modifications to the exiting transportation and street network. The Land Use Designation change de-intensifies the development potential which would result in fewer trips to the project site, resulting in no expected increase, but potentially a decrease, in roadway delay that would affect emergency response times.

Conditional Use Permit

Project Profile

The CUP project proposal includes two new buildings: 1) an 8,400 square-foot building on APN 044-072-007 and APN 044-072-008 (consisting of a 4,800 square-foot marijuana dispensary, a 1,420 square-foot marijuana microbusiness, and a 2,280 square-foot vacant/untenanted space) on a site that is currently occupied by a used automobile sales business; and 2) an 18,000 square-foot industrial building on APN 044-072-009 (adjacent to the project) and APN 044-390-061 (included in the proposed rezoning). There is an existing 15,100 square-foot industrial building on APN 044-072-009, while the other parcel is currently unoccupied.

Operational Analysis

Study Area and Periods

The study area consists of the following intersections:

1. Yolanda Avenue-US 101 North Ramps/Santa Rosa Avenue
3. Petaluma Hill Road/Yolanda Avenue
4. Santa Rosa Avenue/Hearn Avenue

Operating conditions during the a.m. and p.m. peak periods were evaluated to capture the highest potential impacts for the proposed change in land use as well as the highest volumes on the local transportation network. The morning peak hour occurs between 7:00 and 9:00 a.m. and reflects conditions during the home to work or school commute, while the p.m. peak hour occurs between 4:00 and 6:00 p.m. and typically reflects the highest level of congestion during the homeward bound commute.

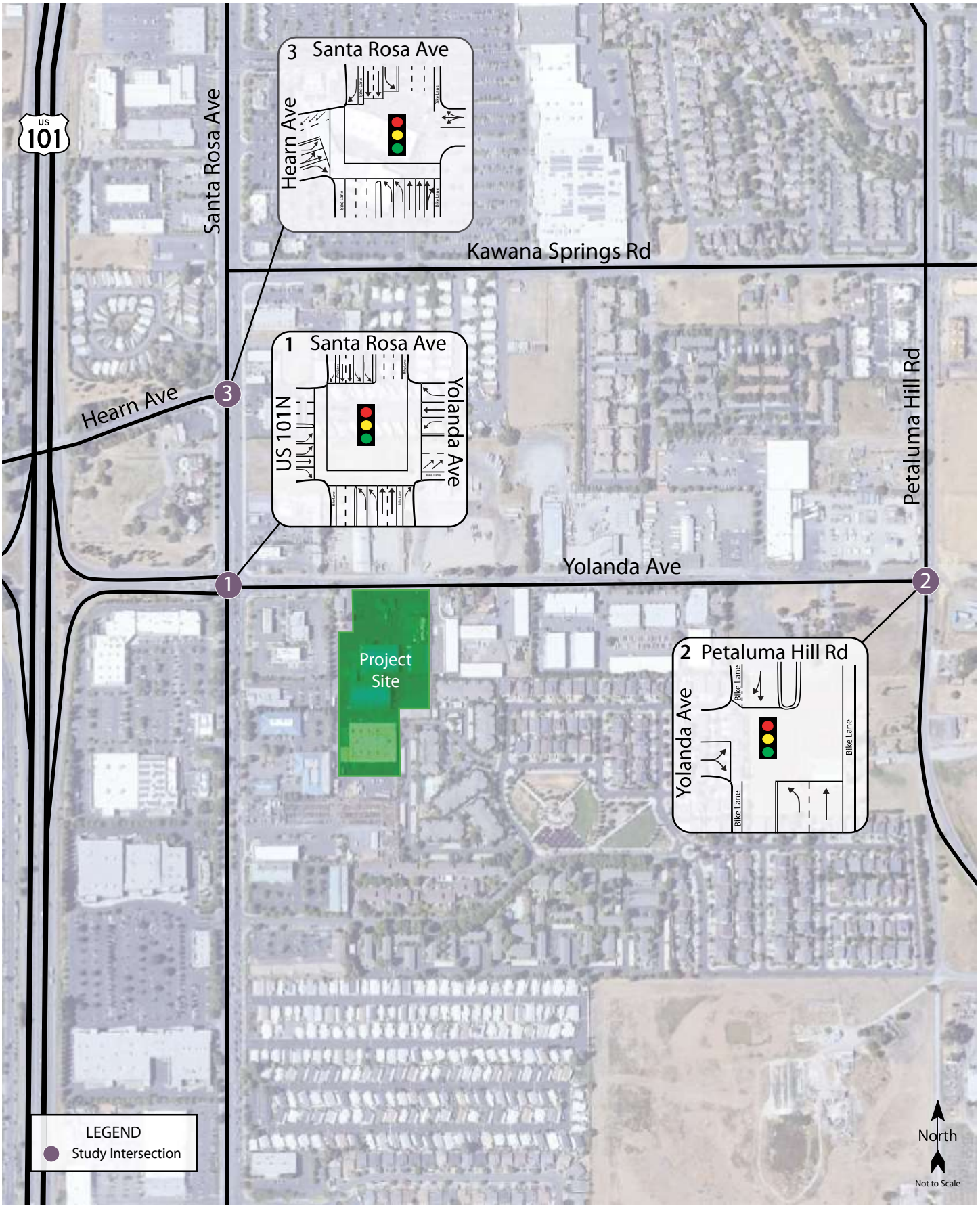
Study Intersections

Yolanda Avenue-US 101 North Ramps/Santa Rosa Avenue is a four-legged, signalized intersection with protected left-turn phasing on all approaches and a right-turn overlap phase on the southbound Santa Rosa Avenue approach. The northbound US 101 on-ramp includes ramp metering during peak traffic hours. There are marked crosswalks on the south, east, and west legs.

Petaluma Hill Road/Yolanda Avenue is a signalized tee-intersection with protected left-turn phasing on the northbound approach. No pedestrian crosswalks or phasing exists at this intersection.

Santa Rosa Avenue/Hearn Avenue is a skewed signalized four-legged intersection. Protected left-turn phasing is provided for the northbound and southbound approaches. The southbound Santa Rosa Avenue and eastbound Hearn Avenue approaches have right-turn overlap phasing and the westbound and eastbound Hearn Avenue approaches operate with split-phasing. The east leg of the intersection is a private commercial driveway. Crosswalks are provided on the south and west legs.

Existing lane configurations are shown in Figure 5.



sro504.ai 1/20

Traffic Impact Study for the Yolanda Avenue Industrial Project

Figure 5 – CUP Study Area and Existing Lane Configurations

Trip Generation

For the proposed marijuana dispensary/industrial building, the proposed project's trip generation potential was determined using the published standard rates for Marijuana Dispensary (Land Use #882) and General Light Industrial (Land Use #110) for the Marijuana Microbusiness. The use for the remaining space is to be determined, so the standard rate for Shopping Center (Land Use #820) was selected to provide a conservative estimate of the trip generation based on the permitted uses.

Note that ITE rates for dispensaries were developed based on data collected at sites that open for business at 8:00 a.m. and dispensaries in the City of Santa Rosa are not allowed to open for business until 9:00 a.m.; therefore custom a.m. peak hour trip generation rates specific to the City of Santa Rosa were developed based on data collected at three existing dispensaries in the City.

For comparative purposes, and to review short-term impacts, the anticipated trip generation was estimated for existing land uses on the project site, which include a used car dealership and a fireplace supply business. Standard ITE rates for Automobile Sales – Used (ITE LU #841) and Warehousing (ITE LU #150), respectively, were used to estimate existing trip generation, as they were determined to be the most similar land uses available.

Based on the application of these rates and assumptions, the proposed project would be expected to generate an average of 1,396 daily trips, including 28 trips during the a.m. peak hour and 126 trips during the p.m. peak hour.

These results are summarized in Table 7.

Table 7 – Trip Generation – Proposed Conditional Use Permit

Land Use	Units	Daily		AM Peak Hour				PM Peak Hour			
		Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Existing Land Use											
Automobile Sales - Used	1 emp	12.48	12	1.16	1	1	0	1.73	2	1	1
Warehousing	5 emp	5.05	25	0.61	3	2	1	0.66	3	1	2
Subtotal			**37**		**4**	**3**	**1**		**5**	**2**	**3**
Proposed Development											
Dispensary/industrial building											
Marijuana Dispensary	4.8 ksf	252.7	1213	2.40	12	11	1	21.83	105	52	53
General Light Industrial	1.4 ksf	4.96	7	0.70	1	1	0	0.63	1	0	1
Shopping Center	2.3 ksf	37.75	87	0.94	2	1	1	3.81	9	4	5
Industrial building											
General Light Industrial	18 ksf	4.96	89	0.70	13	11	2	0.63	11	1	10
Subtotal			**1396**		**28**	**24**	**4**		**126**	**57**	**69**
Net Change			**1359**		**24**	**21**	**3**		**121**	**55**	**66**

Existing Conditions

The Existing Conditions scenario provides an evaluation of current operation based on existing traffic volumes during the a.m. and p.m. peak period. This condition does not include project-generated traffic volumes. Volume data was collected in June 2018, February 2019, and June 2019.

Under the existing traffic volumes, the study intersections are currently operating acceptably at LOS D or better during both peak periods studied. A summary of the intersection Level of Service calculations is contained in Table 8, the methodologies and standards are summarized in Appendix A, and copies of the Level of Service calculations are provided in Appendix B. Existing traffic volumes are shown in Figure 6.

Table 8 – Existing Peak Hour Intersection Levels of Service

Study Intersection	AM Peak		PM Peak	
	Delay	LOS	Delay	LOS
1. Yolanda Ave-US 101N Ramps/Santa Rosa Ave	27.5	C	27.1	C
2. Petaluma Hill Rd/Yolanda Ave	22.3	C	31.9	C
3. Santa Rosa Ave/Hearn Ave	19.1	B	29.9	C

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service

Baseline Conditions

Baseline (Existing plus Approved plus Pending) operating conditions were determined with traffic from approved and pending projects in and near the study area added to the existing volumes. The following projects contained in the *Citywide Summary of Pending Development Report* were considered for the Baseline Conditions. The same trip generation and distribution assumptions used in the traffic studies for the various projects, where available, were used in this analysis. Standard rates as published in *Trip Generation Manual*, 10th Edition, 2017, were applied.

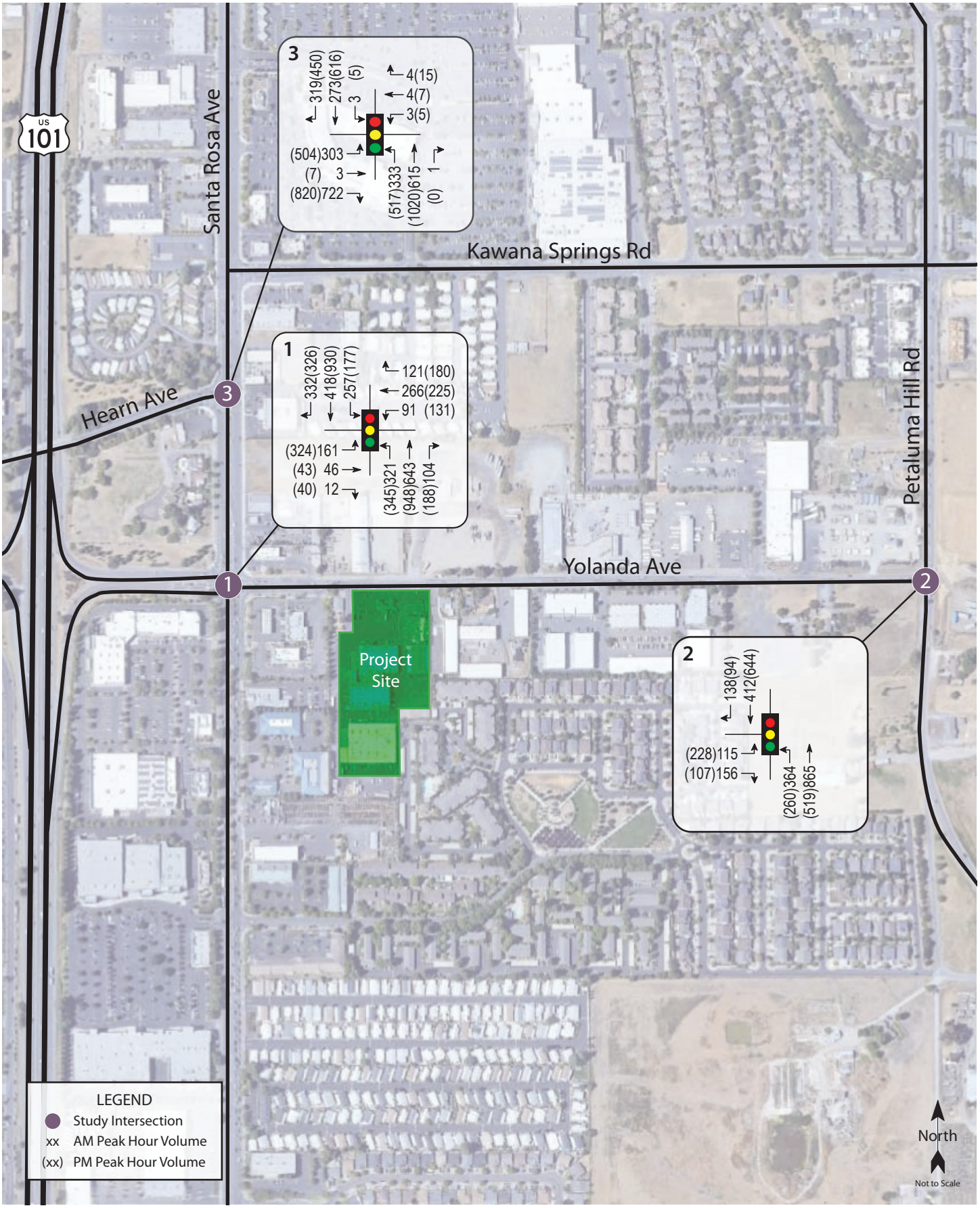
Kawana Meadows is an approved 64-unit single family residential development that would be located at 1162 Kawana Springs Road. Based on the use of ITE rates, the project would be expected to generate 609 daily trips on average, with 48 trips during the morning peak hour and 64 trips during the evening peak hour.

Kawana Springs Apartment Homes is an approved 120-unit multifamily residential development that would be located at 2604 Petaluma Hill Road. The trip generation for this project was estimated using standard ITE rates for "Multifamily Housing (Mid-Rise)" (LU #221). The estimated trip generation would include 798 daily trips on average, with 61 trips during the morning peak period and 74 trips during the evening peak period.

Kawana Town Center is an approved 138-unit multifamily residential development that would be located at 2450 Brookwood Avenue. Based on the use of ITE rates, the project would be expected to generate 653 daily trips on average, with 43 trips during the morning peak period and 53 trips during the evening peak period.

Residences at Taylor Mountain is an approved 93-unit multifamily residential development that would be located at 2880 Franz Kafka Ave. The trip generation for this project was estimated using standard ITE rates for "Multifamily Housing (Mid-Rise)" (LU #221). The estimated trip generation would include 658 daily trips on average, with 50 trips during the morning peak period and 61 trips during the evening peak period.

Taylor Mountain Estates is an approved 5-unit single family residential development that would be located at 2800 Petaluma Hill Road. The estimated trip generation would include 48 daily trips on average, with 4 trips during the morning peak period and 5 trips during the evening peak period.



sro504.ai 5/20

Traffic Impact Study for the Yolanda Avenue Industrial Project

Figure 6 – CUP Existing Traffic Volumes

The Inn at Santa Rosa is an approved 100-room hotel to be located at 111 Commercial Court. Based on application of standard ITE trip generation rates, the project is anticipated to generate 817 daily trips on average, with 60 trips during the weekday p.m. peak hour and 72 trips during weekend p.m. peak hour.

Yolanda Apartments is an approved 252-unit multifamily residential development that would be located at 325 Yolanda Avenue. A 3,867 square-foot In-N-Out Burger fast food restaurant is also an approved development project that would be located at the same site. The trip generation for Yolanda Apartments was estimated using standard ITE rates for "Multifamily Housing (Mid-Rise)" (LU #221). ITE rates for "Fast-Food Restaurant with Drive-Through Window" (LU#934) and average observed daily trips were used for In-N-Out Burger. The estimated trip generation includes 3,630 daily trips on average, with 209 trips during the morning peak period and 279 trips during the evening peak period.

Upon adding the trips associated with the above projects to existing volumes, all three study intersections are expected to continue operating acceptably. These results are shown in Figure 7.

Under Baseline conditions, the study intersections are expected to operate acceptably. The Level of Service analysis is summarized in Table 8.

Table 9 – Baseline Peak Hour Intersection Levels of Service

Study Intersection	AM Peak		PM Peak	
	Delay	LOS	Delay	LOS
1. Yolanda Ave-US 101N Ramps/Santa Rosa Ave	33.1	C	30.9	C
2. Petaluma Hill Rd/Yolanda Ave	26.2	C	43.7	D
3. Santa Rosa Ave/Hearn Ave	19.9	B	32.2	C

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service

Existing plus Project Conditions

Upon the addition of project-related traffic to the Existing volumes, the study intersections are expected to operate acceptably. These results are summarized in Table 10. CUP Existing plus Project traffic volumes are shown in Figure 8.

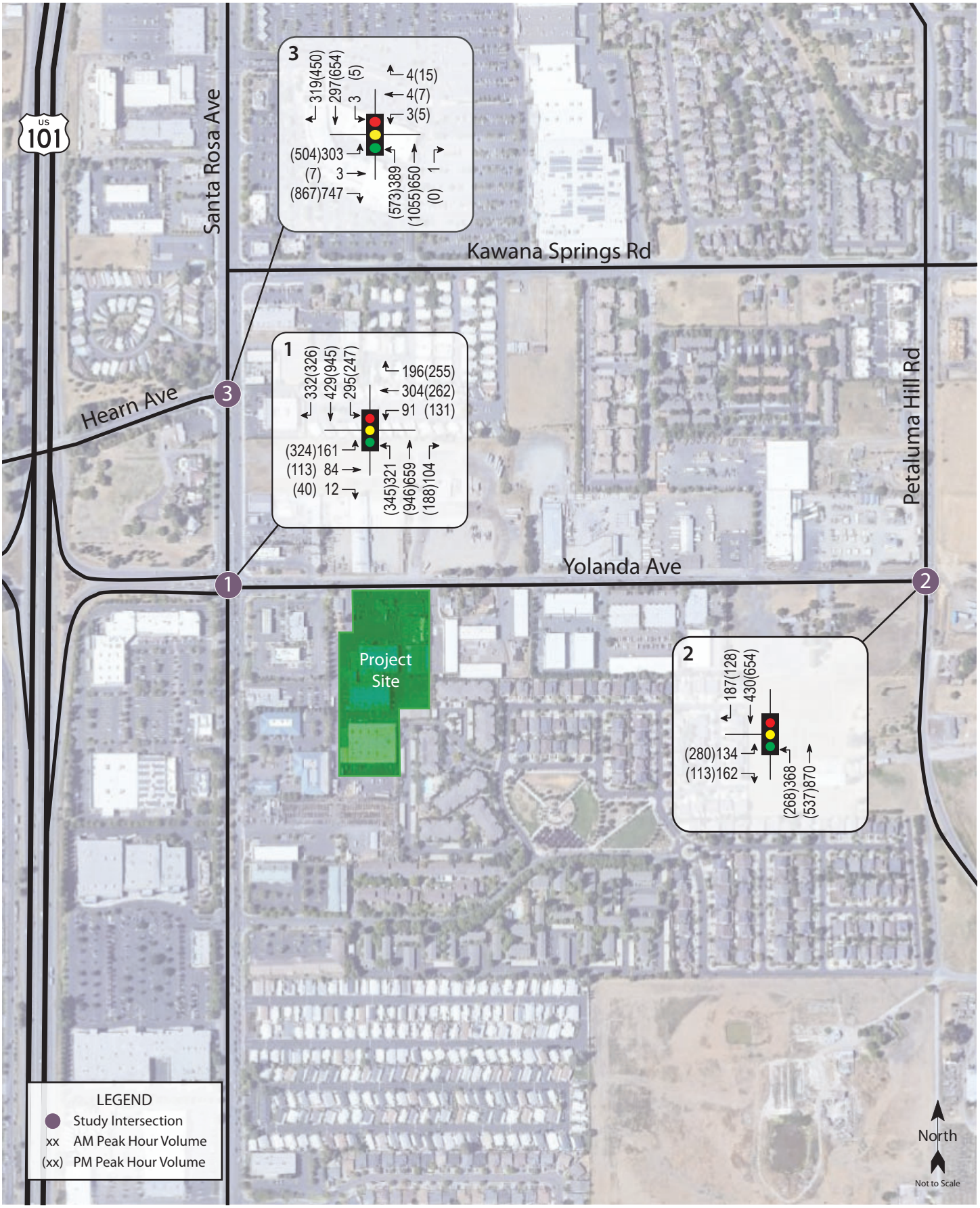
Table 10 – Existing and Existing plus Project Peak Hour Intersection Levels of Service

Study Intersection	Existing Conditions				Existing plus Project			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Yolanda Ave-US 101N Ramps/ Santa Rosa Ave	27.5	C	27.1	C	27.8	C	32.4	C
2. Petaluma Hill Rd/Yolanda Ave	22.3	C	31.9	C	22.4	C	33.0	C
3. Santa Rosa Ave/Hearn Ave	19.1	B	29.9	C	19.3	B	30.6	C

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service

Baseline plus Project Conditions

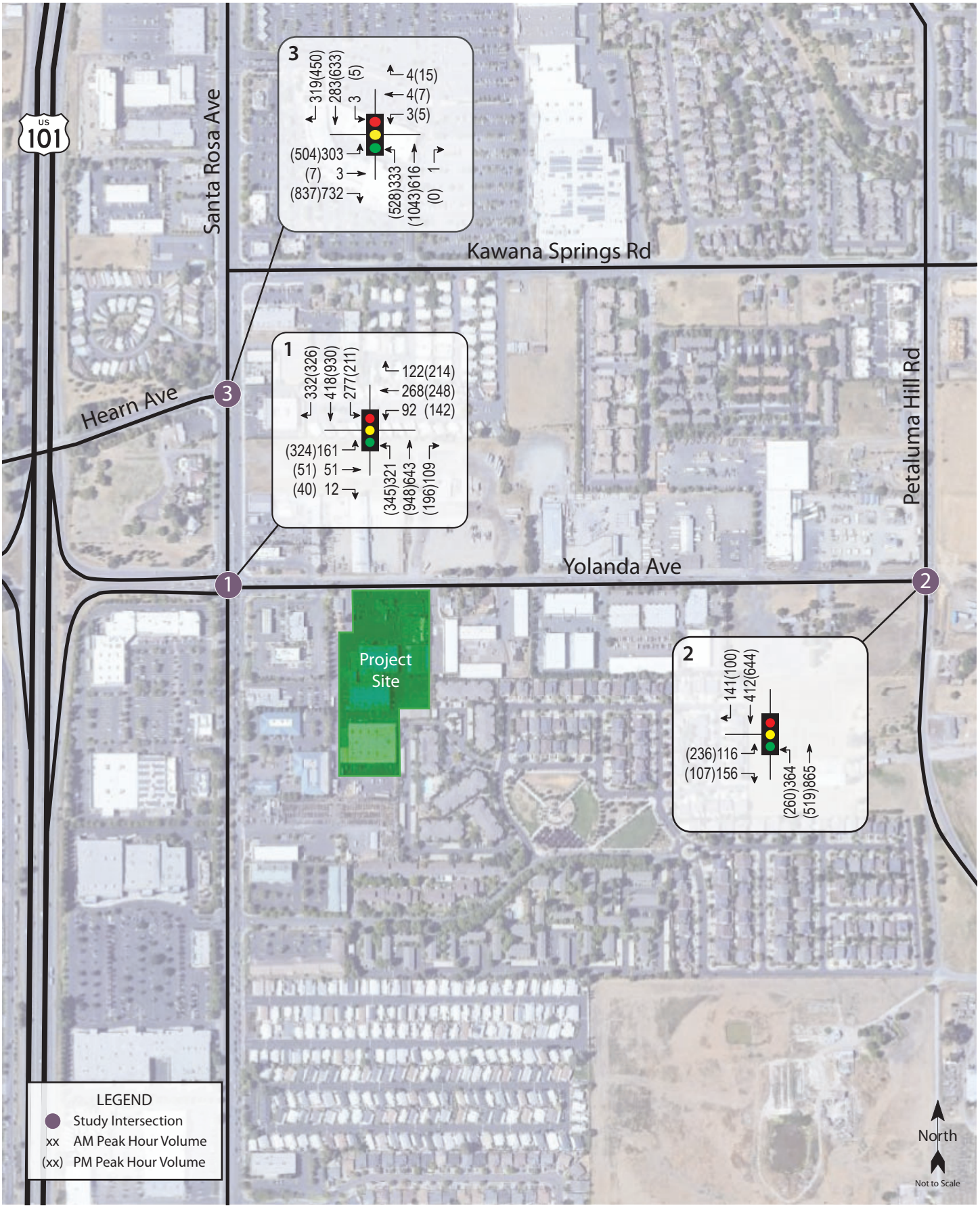
With project-related traffic added to Baseline volumes, the study intersections are expected to operate acceptably. These results are summarized in Table 11. CUP Baseline plus Project traffic volumes are shown in Figure 9.



sro504.ai 5/20

Traffic Impact Study for the Yolanda Avenue Industrial Project

Figure 7 – CUP Baseline Traffic Volumes



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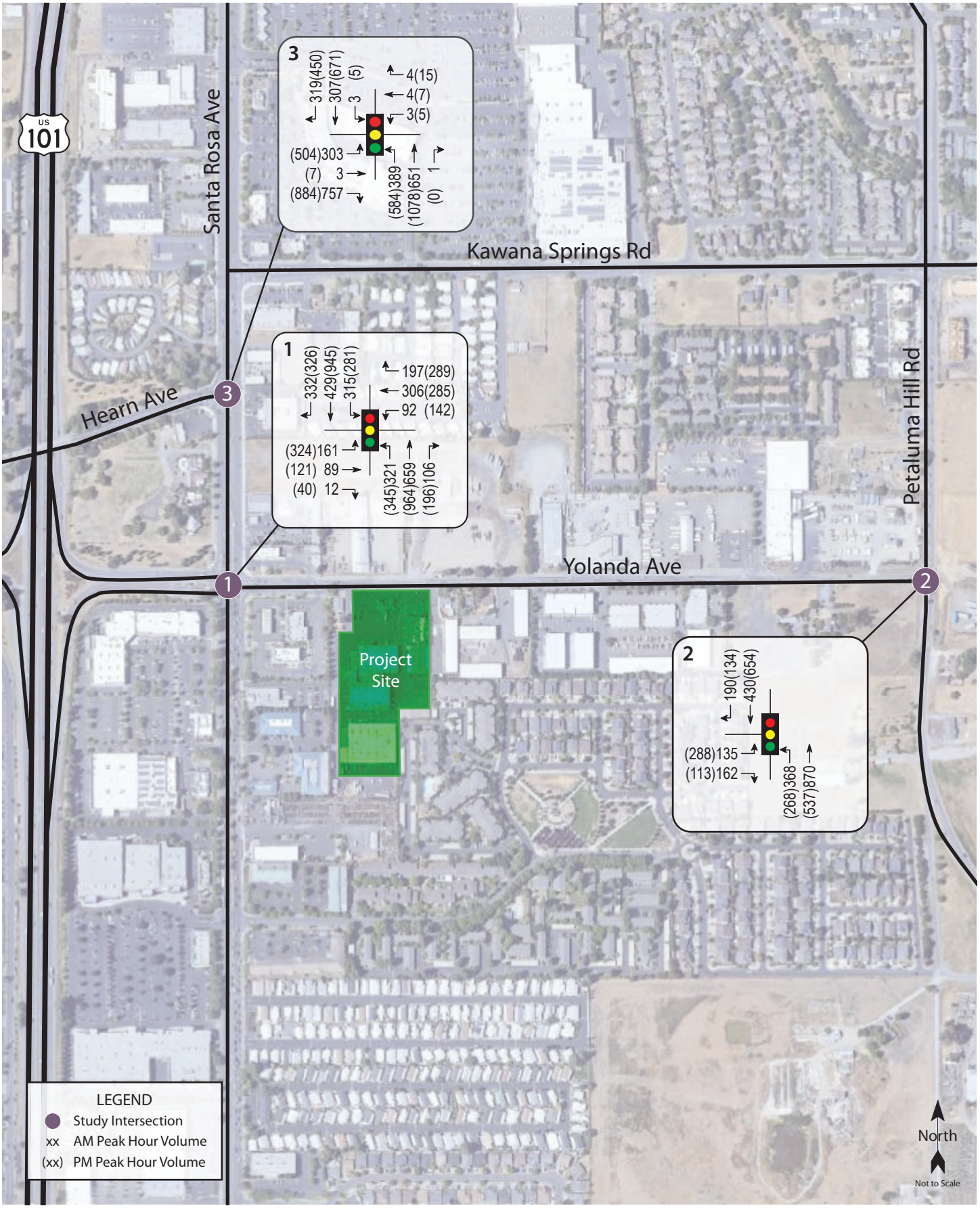
Traffic Impact Study for the Yolanda Avenue Industrial Project

Figure 8 – CUP Existing plus Project Traffic Volumes



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Traffic Impact Study for the Yolanda Avenue Industrial Project

Figure 9 – CUP Baseline plus Project Traffic Volumes

Table 11 – Baseline and Baseline plus Project Peak Hour Intersection Levels of Service								
Study Intersection	**Baseline Conditions**				**Baseline plus Project**			
	AM Peak		**PM Peak**		**AM Peak**		**PM Peak**	
	Delay	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
1. Yolanda Ave-US 101N Ramps/Santa Rosa Ave	33.1	C	30.9	C	33.4	C	35.6	C
2. Petaluma Hill Rd/Yolanda Ave	26.2	C	43.7	D	26.5	C	45.9	D
3. Santa Rosa Ave/Hearn Ave	19.9	B	32.2	C	20.1	C	34.3	C

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service

Finding: The study intersections are expected to continue operating acceptably upon the addition of project-generated trips to both Existing and Baseline volumes, resulting in an acceptable effect on traffic operation.

Alternative Modes

Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, pedestrian signal phases, curb ramps, curb extensions, and various streetscape amenities such as lighting, benches, etc. In general, a network of sidewalks, crosswalks, pedestrian signals, and curb ramps provide access for pedestrians near the proposed project site; however, sidewalk gaps, obstacles, and barriers can be found along some of the roadways connecting to the project site. Existing gaps and obstacles along the connecting roadways impact convenient and continuous access for pedestrians and present safety concerns in those locations where appropriate pedestrian infrastructure would address potential conflict points.

- **Yolanda Avenue** – Intermittent sidewalk coverage is provided on Yolanda Avenue with substantial gaps on both sides of the street between Santa Rosa Avenue and Petaluma Hill Road. Sidewalks are provided along developed commercial property frontages on the west end of Yolanda Avenue. Curb ramps and crosswalks at side street approaches are not provided in all locations. Lighting is provided by intermittent overhead streetlights.

Given that the site is surrounded by primarily commercial land uses, with some residential land uses to the south and east of the site, it is reasonable to assume that some people would want to walk, bicycle, and/or use transit to reach their destinations. The project includes construction of a sidewalk along the Yolanda Avenue frontage. From the site, pedestrians are currently required to walk along the shoulder to access the existing sidewalk along the Yolanda Avenue frontage of the 7-11. In the surrounding area, the pedestrian network is well-connected and provides adequate access for pedestrians.

Finding – Pedestrian access would be improved by the construction of the sidewalk along the Yolanda Avenue frontage. Since this access would end at the edge of the project site, a paved shoulder or other all-weather surface walkway should be provided to connect the project site to the existing sidewalk along the frontage of the 7-11 if sufficient public right-of-way is available. Upon completion of the remainder of the sidewalk along with the proposed Yolanda Avenue Widening, pedestrian facilities serving the project site would be adequate and would be tied into the areawide network of facilities.

Bicycle Facilities

The *Highway Design Manual*, Caltrans, 2017, classifies bikeways into four categories:

- **Class I Multi-Use Path** – a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flows of motorized traffic minimized.
- **Class II Bike Lane** – a striped and signed lane for one-way bike travel on a street or highway.
- **Class III Bike Route** – signing only for shared use with motor vehicles within the same travel lane on a street or highway.
- **Class IV Bikeway** – also known as a separated bikeway, a Class IV Bikeway is for the exclusive use of bicycles and includes a separation between the bikeway and the motor vehicle traffic lane. The separation may include, but is not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking.

In the project area, Class II bike lanes exist on Santa Rosa Avenue and Petaluma Hill Road. Bicyclists ride in the roadway and/or on sidewalks along all other streets within the project study area. Table 12 summarizes the existing and planned bicycle facilities in the project vicinity, as contained in the *City of Santa Rosa Bicycle & Pedestrian Master Plan Update 2018*.

Table 12 – Bicycle Facility Summary				
Status **Facility**	**Class**	**Length (miles)**	**Begin Point**	**End Point**
Existing				
Santa Rosa Ave	II	3.1	E Todd Rd	Maple Ave/S A St
Petaluma Hill Rd	II	1.4	South City Limit	Barham Ave/Pressley St
Planned				
Yolanda Ave	II	0.5	Santa Rosa Ave	Petaluma Hill Rd

Source: *City of Santa Rosa Bicycle & Pedestrian Master Plan Update 2018*, City of Santa Rosa, 2018

There are no bicycle facilities along the project frontage, but bike lanes are planned along the entire length of Yolanda Avenue in the *City of Santa Rosa Bicycle & Pedestrian Master Plan Update 2018*. Existing bike lanes on Petaluma Hill Road and Santa Rosa Avenue along with planned future bicycle facilities provide adequate access for bicyclists in the area surrounding the project.

Finding – Adequate width should be provided along the project frontage to accommodate the City's planned bike lanes along Yolanda Avenue. Upon completion of the bike lanes along Yolanda Avenue, bicycle facilities serving the project site would be adequate.

Transit Facilities

Transit Services in the City of Santa Rosa, and throughout Sonoma County, are provided by Santa Rosa "CityBus" and Sonoma County Transit (SCT). CityBus Routes 3 and 5 provide loop service to destinations throughout Santa Rosa and stop on Santa Rosa Avenue just south of the Yolanda Avenue intersection, and on Yolanda Avenue just west of the project site. These routes operate Monday through Friday with 30-minute headways between 6:00 a.m. and 8:00 p.m. Saturday and Sunday service operates with approximately one-hour headways between 6:00 a.m. and 8:00 p.m. and 10:00 a.m. and 4:30 p.m., respectively.

SCT Routes 44, 48, and 54 provide regional service to destinations throughout Santa Rosa and Petaluma. These routes operate on weekdays between 5:30 a.m. and 10:30 p.m. with half-hourly to hourly headways. Routes 44 and 48 operate on weekends with one hour to one-and-a-half hour headways between 7:00 a.m. and 10:00 p.m.

Two to three bicycles can be carried on most CityBus and SCT buses. Bike rack space is on a first-come, first-served basis. Additional bicycles are allowed on SCT buses at the discretion of the driver.

Dial-a-ride, also known as paratransit, or door-to-door service, is available for those who are unable to independently use the transit system due to a physical or mental disability. SCT Paratransit is designed to serve the needs of individuals with disabilities within Sonoma and the greater County of Sonoma area.

Existing transit routes are adequate. Existing stops are within an acceptable walking distance of the site, although there are no sidewalks along the project frontage to provide access to the bus stops.

Finding – Transit facilities serving the project site are adequate. As part of the project's new construction, pedestrian access should be improved along the Yolanda Avenue frontage and beyond, if necessary, to provide a complete connection of pedestrian facilities from the project site to the closest bus stops near the intersection of Yolanda Avenue/Santa Rosa Avenue.

CEQA Checklist – CUP

The current California Environmental Quality Act (CEQA) Guidelines list four criteria to be considered when determining if a project would result in a significant impact on transportation, as shown in Table 13.

Table 13 – CEQA Transportation Checklist for the CUP

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X	
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?			X	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d) Result in inadequate emergency access?			X	

(e) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Less than significant. The proposed project is consistent with adopted policies and plans regarding roadway, public transit, bicycle, and pedestrian facilities. The project intersections are anticipated to meet City standards under all scenarios tested. As described, pedestrian network improvements would be constructed during the widening of Yolanda Avenue along with providing Class II bike lanes along Yolanda Avenue. Any improvements to pedestrian and bicycle facilities are expected to enhance access to the project site and would adequately accommodate any change in pedestrian and bicycle activity in the vicinity of the project site.

(f) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less than significant. CEQA Guidelines §15064.3, subdivision (b) indicates that land use projects would have a significant impact if the project resulted in vehicle miles traveled (VMT) exceeding an applicable threshold of significance. It further notes that if existing models or methods are not available to estimate the vehicle miles traveled for the project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively.

While the City has not yet adopted a policy regarding vehicle miles traveled (VMT), the project's contribution was estimated for informational purposes only. Vehicle miles traveled associated with the project were calculated by multiplying the estimated number of trips and the average trip distance for the Traffic Analysis Zone (TAZ) in which the project is located. Using the net increase in the number of daily trips generated for the proposed marijuana dispensary/industrial building in the requested CUP as determined above using the standard trip generation rate, and an average distance of 4.47 miles traveled per daily trip in the project's location as available from the Sonoma County Transportation Authority (SCTA) travel demand model, the estimated VMT for the project is 5,851.

(g) Substantially increase hazards due to a geometric design feature or incompatible use?

Less than significant. The proposed project includes improvements along the site's frontage to meet City requirements. These improvements would be constructed to meet applicable design standards. There are no other modifications to the existing transportation and street network or proposed changes to existing driveway geometrics that could increase hazards related to design features.

(h) Result in inadequate emergency access?

Less than significant. The proposed project would result in modest increases to delay at nearby intersections, though all would continue to operate at acceptable service levels and therefore be considered as providing adequate access. Drive aisles would be provided around all sides of the building, providing adequate emergency vehicle access. The site would need to be designed to meet all applicable city and state standards.

Collision History

The collision history for the study area was reviewed to determine any trends or patterns that may indicate a safety issue. Collision rates were calculated based on records available from the California Highway Patrol as published in their Statewide Integrated Traffic Records System (SWITRS) reports. The most current five-year period available is December 1, 2013 through November 30, 2018.

As presented in Table 14, the calculated collision rates for the study intersections were compared to average collision rates for similar facilities statewide as indicated in *2014 Collision Data on California State Highways*, California Department of Transportation (Caltrans). Two of the three intersections exhibited above-average crash rates. The collision rate calculations are provided in Appendix C.

Table 14 – Collision Rates at the Study Intersections

Study Intersection	Number of Collisions (2014-2019)	Calculated Collision Rate (c/mve)	Statewide Average Collision Rate (c/mve)
1. Yolanda Ave-US 101N Ramps/Santa Rosa Ave	31	**0.44**	0.27
2. Petaluma Hill Rd/Yolanda Ave	10	**0.30**	0.27
3. Santa Rosa Ave/Hearn Ave	19	0.26	0.27

Note: c/mve = collisions per million vehicles entering; **bold text** indicates a collision rate that exceeds the statewide average for similar facilities

Further review of the collisions recorded at Yolanda Avenue-US 101 North Ramps/Santa Rosa Avenue indicates that of the 31 collisions, 13 were rear-end collisions, including 12 that occurred on the northbound and southbound approaches to the intersection. This type of crash is common at signalized intersections where there is congestion, especially during peak periods. It is suggested that the City consider investigating improvements to signal coordination on Santa Rosa Avenue and increasing enforcement in the area to address this situation.

Of the 10 reported collisions that occurred at the intersection of Petaluma Hill Road/Yolanda Avenue, five were rear-end collisions, three were sideswipe collisions, and two were hit object collisions. These collisions generally resulted from unsafe speed and are typical of conditions at a congested intersection. During the study period, 60.0 percent of collisions resulted in injuries, compared to a 37.3 percent average statewide. The City of Santa Rosa Capital Improvement Program has identified improvements to the Hearn Avenue interchange at US 101 that would reasonably be expected to ease traffic congestion and enhance operations.

Parking

The project was analyzed to determine whether the proposed parking supply would be sufficient for the anticipated parking demand for the proposed 8,500 square foot building including the marijuana dispensary, marijuana microbusiness, and neighborhood commercial uses and the 18,000 square foot industrial building. The project site as proposed would provide a total of 24 parking spaces immediately adjacent to the dispensary/industrial building and 32 spaces adjacent to the new industrial building.

Jurisdiction parking supply requirements are based on the City of Santa Rosa City Code, Chapter 20-36.040; Number of Parking Spaces Required. The municipal code requires marijuana dispensaries to provide parking at a rate of one space per 250 square feet, or 19 spaces. For the commercial portion of the building the parking requirements for shopping center were applied; the rate of one space per 250 square feet translates to a required nine spaces.

The municipal code requires industrial uses of 50,000 square feet or more to provide one space per 700 square feet. As indicated on the site plan, the parcels where the two proposed buildings would be located are a component of the larger project area. The buildings would be in close proximity to one another and vehicles would be able to circulate between the parcels and access parking adjacent to any of the buildings. Taken together, the industrial portion of the dispensary/industrial/commercial building, the proposed new industrial building, and the two existing industrial buildings total approximately 54,000 square feet. With one parking space required for each 700 square feet, a total of 77 parking spaces would be required for the industrial uses. There are 32 spaces proposed for the new industrial building and 71 spaces adjacent to the existing industrial buildings. Adjacent to the dispensary/industrial/commercial building, 24 spaces have been proposed. Based on the square footage of each of the building's land uses, the City code requires 19 spaces for the dispensary, four spaces for the industrial portion of the building, and nine spaces for the commercial use. For the entire site, 104 parking spaces would therefore be required; since 127 spaces would be provided by the project and existing uses, the project would exceed the City parking requirements. These requirements are broken down by parcel and use in Table 15.

Table 15 – Parking Analysis for Conditional Use Permit Parcels					
Land Use	**Parcel (APN)**	**Units**	**Rate**	**Spaces Required by City**	**Spaces to be Provided or Existing**
Proposed CUP Development					
Dispensary/Industrial Building					
Marijuana dispensary	044-072-008	4.8 ksf	1 space per 250 square feet	19	24*
Industrial	044-072-007 044-072-008	1.4 ksf	1 space per 350 square feet	4	
Neighborhood commercial	044-072-007 044-072-008	2.3 ksf	1 space per 250 square feet	9	
Industrial	044-072-009 044-081-061	18.0 ksf	1 space per 350 square feet	26	32
Subtotal				**58**	**56**
Existing Adjacent Development					
Industrial	044-081-024	32.0 ksf	1 space per 350 square feet	46	71
Total				**104**	**127**

Notes: ksf = 1000 square feet, * all three uses in one building

Finding – The proposed parking supply would be adequate. An easement may be required to maintain access for vehicles between parcels to ensure access to the full parking supply for the site.

Bicycle Parking

The City of Santa Rosa's City Code Section 20-36.040 stipulates the City's bicycle parking requirements for new developments. For marijuana dispensaries and shopping centers, this requirement is one space per 5000 square feet. For industrial uses, one bicycle parking space is required for each 14,000 square feet. Based on these requirements, the dispensary/industrial/commercial building would be required to provide two bicycle parking spaces and the new industrial building would be required to provide one bicycle parking space.

Finding – With the provision of one bicycle rack per building, bicycle parking would be adequate.

Access

The City has plans to widen Yolanda Avenue, which includes the project frontage, so the future sight distance could not be evaluated in the field. However, Yolanda Avenue is straight and flat, which would provide adequate sight distance in both directions for vehicles exiting and entering the project driveway. As the City's planned cross-section for Yolanda Avenue includes bike lanes adjacent to the curb and no on-street parking, potential obstructions near the driveway entrance would be minimized.

Finding – Access to and from the project site is expected to be adequate.

Conclusions and Recommendations

General Plan Amendment

Conclusions

- The proposed change in land use associated with the GPA is expected to result in a substantial reduction in trips generated on a daily basis as well as during both peak hours compared to the existing land use designation.
- Under Existing and Future conditions, the study intersections operate or are expected to operate acceptably at LOS D or better during both peak periods.

Conditional Use Permit

Conclusions

- Under Existing and Baseline conditions, the study intersections operate or are expected to operate acceptably at LOS D or better during both peak periods.
- The study intersections are expected to continue operating acceptably under Existing plus Project and Baseline plus Project volumes.
- The project would leave sufficient space along the Yolanda Avenue frontage to accommodate the City's planned future cross-section for the street, including bike lanes. Upon completion of the bike lanes along Yolanda Avenue, bicycle facilities serving the project site would be adequate.
- With the completion of planned sidewalks and bike lanes along the project frontage, pedestrian and bicycle access for these transportation modes would be adequate, including access to nearby transit stops.
- The proposed parking supply for the project would be adequate.
- Project site access is expected to be adequate.
- The proposed project impacts are considered acceptable under City policies and less than significant according to the 2018 California Environmental Quality Act (CEQA) Guidelines.

Recommendations

- In addition to the sidewalk, curb, and gutter to be provided along the Yolanda Avenue frontage as part of the project, pedestrian access should be improved to connect to the existing sidewalk network and nearby bus stops by installing a paved shoulder or other all-weather surface walkway between the project site and the existing sidewalk along the frontage of the 7-11, assuming sufficient public right-of-way is available. Upon completion of these improvements, pedestrian facilities and transit access would be adequate.
- An easement may be required to maintain access for vehicles between parcels to ensure access to the full parking supply for the site.

Study Participants and References

Study Participants

Principal in Charge	Dalene J. Whitlock, PE, PTOE
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Quality Control	Dalene J. Whitlock, PE, PTOE

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Appendix A

Level of Service Methodologies and Standards

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Intersection Level of Service Methodologies

Level of Service (LOS) is used to rank traffic operation on various types of facilities based on traffic volumes and roadway capacity using a series of letter designations ranging from A to F. Generally, Level of Service A represents free flow conditions and Level of Service F represents forced flow or breakdown conditions. A unit of measure that indicates a level of delay generally accompanies the LOS designation.

The study intersections were analyzed using the signalized methodology published in the *Highway Capacity Manual* (HCM), Transportation Research Board, 2010. This source contains methodologies for various types of intersection control, all of which are related to a measurement of delay in average number of seconds per vehicle. The signalized methodology is based on factors including traffic volumes, green time for each movement, phasing, whether the signals are coordinated or not, truck traffic, and pedestrian activity. Average stopped delay per vehicle in seconds is used as the basis for evaluation in this LOS methodology. For purposes of this study, delays were calculated using signal timing obtained from Caltrans and the City of Santa Rosa for intersections under their respective jurisdictions.

The ranges of delay associated with the various levels of service are indicated in Table 1.

Table 1 – Signalized Intersection Level of Service Criteria

LOS A	Delay of 0 to 10 seconds. Most vehicles arrive during the green phase, so do not stop at all.
LOS B	Delay of 10 to 20 seconds. More vehicles stop than with LOS A, but many drivers still do not have to stop.
LOS C	Delay of 20 to 35 seconds. The number of vehicles stopping is significant, although many still pass through without stopping.
LOS D	Delay of 35 to 55 seconds. The influence of congestion is noticeable, and most vehicles have to stop.
LOS E	Delay of 55 to 80 seconds. Most, if not all, vehicles must stop and drivers consider the delay excessive.
LOS F	Delay of more than 80 seconds. Vehicles may wait through more than one cycle to clear the intersection.

Reference: *Highway Capacity Manual*, Transportation Research Board, 2010

Traffic Operation Standards

City of Santa Rosa

The City of Santa Rosa's adopted Level of Service (LOS) Standard is contained in *Santa Rosa General Plan 2035*. Policy T-D-2 says, "Monitor level of service at intersections to assure that improvements or alterations to improve corridor level of service do not cause severe impacts at any single intersection." Under this policy the impact to an intersection is considered significant if project-related trips result in:

- The level of service (LOS) at an intersection degrading from LOS D or better to LOS E or F, OR
- An increase in average vehicle delay of greater than five (5) seconds at a signalized intersection where the current LOS operates at either LOS E or F.

Queuing impacts are to be assessed based on a comparative analysis between the design queue length and the available queue storage capacity. Impacts include, but are not limited to, spillback queue at project access locations (both ingress and egress), turn lanes at intersections, lane drops, spill back that impacts upstream intersections or interchange ramps.

Exceptions to these standards may be granted under the following conditions:

- Within downtown,
- Where attainment would result in significant degradation,

- Where topography or impacts makes the improvement impossible; or
- Where attainment would ensure loss of an area's unique character.

Caltrans

Caltrans indicates that they endeavor to maintain operation at the transition from LOS C to LOS D.

For the one study intersection that includes freeway ramps, and is therefore under the jurisdiction of Caltrans, for analysis purposes the City's operational standard was applied, as is typically the case for locations that are crucial to a local jurisdiction's circulation system.

Appendix B

Level of Service Calculations

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HCM 6th Signalized Intersection Summary
1: Santa Rosa Avenue & US 101 NB Ramps/Yolanda Ave

02/18/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	161	46	12	91	266	121	321	643	104	257	418	332
Future Volume (veh/h)	161	46	12	91	266	121	321	643	104	257	418	332
Initial Q (Qb), veh	0	0	0	2	2	0	1	1	1	0	1	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	161	46	12	91	266	121	321	643	104	257	418	332
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	240	104	88	316	299	254	402	1764	764	361	1722	863
Arrive On Green	0.07	0.06	0.06	0.18	0.16	0.16	0.12	0.50	0.50	0.10	0.48	0.48
Sat Flow, veh/h	3456	1870	1585	1781	1870	1585	3456	3554	1539	3456	3554	1556
Grp Volume(v), veh/h	161	46	12	91	266	121	321	643	104	257	418	332
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1870	1585	1728	1777	1539	1728	1777	1556
Q Serve(g_s), s	4.1	2.1	0.5	4.0	12.5	4.9	8.1	10.0	3.3	6.5	6.2	10.9
Cycle Q Clear(g_c), s	4.1	2.1	0.5	4.0	12.5	4.9	8.1	10.0	3.3	6.5	6.2	10.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	240	104	88	316	299	254	402	1764	764	361	1722	863
V/C Ratio(X)	0.67	0.44	0.14	0.29	0.89	0.48	0.80	0.36	0.14	0.71	0.24	0.38
Avail Cap(c_a), veh/h	541	341	289	316	299	254	476	1766	764	630	1723	864
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.55	0.55	0.55	1.00	1.00	1.00	0.82	0.82	0.82
Uniform Delay (d), s/veh	40.9	41.2	25.3	32.3	37.2	20.5	38.8	14.0	12.3	39.0	13.6	11.4
Incr Delay (d2), s/veh	3.2	2.9	0.7	0.3	16.4	0.8	8.0	0.6	0.4	2.2	0.3	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.4	2.9	0.0	0.2	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	1.1	0.3	1.9	7.3	2.4	3.9	4.0	1.2	2.8	2.5	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.1	44.1	26.0	32.9	56.5	21.3	47.0	14.6	12.7	41.2	13.9	12.5
LnGrp LOS	D	D	C	C	E	C	D	B	B	D	B	B
Approach Vol, veh/h		219			478			1068			1007	
Approach Delay, s/veh		43.1			43.1			24.1			20.4	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.9	8.6	14.0	47.5	10.2	18.3	12.9	48.6
Change Period (Y+Rc), s	3.9	3.6	3.6	3.9	3.9	* 3.9	3.9	* 3.9
Max Green Setting (Gmax), s	12.1	16.4	12.4	34.1	14.1	* 14	16.4	* 30
Max Q Clear Time (g_c+I1), s	6.0	4.1	10.1	12.9	6.1	14.5	8.5	12.0
Green Ext Time (p_c), s	0.1	0.1	0.3	4.0	0.3	0.0	0.5	4.6

Intersection Summary	
HCM 6th Ctrl Delay	27.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM Signalized Intersection Capacity Analysis
2: Petaluma Hill Rd & Yolanda Ave

02/18/2020

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	115	156	364	865	412	138
Future Volume (vph)	115	156	364	865	412	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.6		3.0	5.8	5.8	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.92		1.00	1.00	0.97	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1682		1770	1863	1790	
Flt Permitted	0.98		0.95	1.00	1.00	
Satd. Flow (perm)	1682		1770	1863	1790	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	115	156	364	865	412	138
RTOR Reduction (vph)	50	0	0	0	12	0
Lane Group Flow (vph)	221	0	364	865	538	0
Confl. Bikes (#/hr)						2
Turn Type	Prot		Prot	NA	NA	
Protected Phases	2		3	8	4	
Permitted Phases						
Actuated Green, G (s)	16.1		21.5	54.0	29.5	
Effective Green, g (s)	16.1		21.5	54.0	29.5	
Actuated g/C Ratio	0.20		0.27	0.68	0.37	
Clearance Time (s)	3.6		3.0	5.8	5.8	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	340		478	1265	664	
v/s Ratio Prot	c0.13		c0.21	0.46	c0.30	
v/s Ratio Perm						
v/c Ratio	0.65		0.76	0.68	0.81	
Uniform Delay, d1	29.1		26.6	7.6	22.5	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	4.2		7.0	1.5	7.4	
Delay (s)	33.3		33.7	9.2	29.9	
Level of Service	C		C	A	C	
Approach Delay (s)	33.3			16.4	29.9	
Approach LOS	C			B	C	

Intersection Summary			
HCM 2000 Control Delay	22.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	79.5	Sum of lost time (s)	12.4
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
3: Santa Rosa Avenue & Hearn Avenue

02/18/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	303	3	722	3	4	4	333	615	1	3	273	319
Future Volume (veh/h)	303	3	722	3	4	4	333	615	1	3	273	319
Initial Q (Qb), veh	0	1	1	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	305	0	722	3	4	4	333	615	1	3	273	319
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1383	0	936	6	8	8	699	2348	4	7	881	1008
Arrive On Green	0.39	0.00	0.39	0.01	0.01	0.01	0.20	0.45	0.45	0.00	0.25	0.25
Sat Flow, veh/h	3563	0	1585	473	630	630	3456	5264	9	1781	3554	1585
Grp Volume(v), veh/h	305	0	722	11	0	0	333	398	218	3	273	319
Grp Sat Flow(s),veh/h/ln	1781	0	1585	1733	0	0	1728	1702	1869	1781	1777	1585
Q Serve(g_s), s	4.9	0.0	11.9	0.5	0.0	0.0	7.2	6.2	6.2	0.1	5.3	7.8
Cycle Q Clear(g_c), s	4.9	0.0	11.9	0.5	0.0	0.0	7.2	6.2	6.2	0.1	5.3	7.8
Prop In Lane	1.00		1.00	0.27		0.36	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	1383	0	936	23	0	0	699	1518	834	7	881	1008
V/C Ratio(X)	0.22	0.00	0.77	0.47	0.00	0.00	0.48	0.26	0.26	0.42	0.31	0.32
Avail Cap(c_a), veh/h	1383	0	936	102	0	0	699	1518	834	105	1187	1145
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.88	0.88	0.88	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	0.0	13.2	41.6	0.0	0.0	29.9	14.8	14.8	42.2	26.0	7.0
Incr Delay (d2), s/veh	0.4	0.0	6.1	14.1	0.0	0.0	0.4	0.4	0.7	34.5	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	10.5	0.3	0.0	0.0	3.0	2.4	2.7	0.1	2.2	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.8	0.0	19.3	55.7	0.0	0.0	30.4	15.1	15.4	76.8	26.2	7.2
LnGrp LOS	B	A	B	E	A	A	C	B	B	E	C	A
Approach Vol, veh/h		1027			11			949			595	
Approach Delay, s/veh		18.9			55.7			20.6			16.3	
Approach LOS		B			E			C			B	

Timer - Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		36.2	20.4	24.3		4.1	3.5	41.1
Change Period (Y+Rc), s		3.2	3.2	3.2		3.0	3.2	3.2
Max Green Setting (Gmax), s		33.0	6.0	28.4		5.0	5.0	29.4
Max Q Clear Time (g_c+I1), s		13.9	9.2	9.8		2.5	2.1	8.2
Green Ext Time (p_c), s		4.2	0.0	2.8		0.0	0.0	4.0

Intersection Summary	
HCM 6th Ctrl Delay	19.1
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
1: Santa Rosa Avenue & US 101 NB Ramps/Yolanda Ave

02/18/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	324	43	40	131	225	180	345	948	188	177	930	326
Future Volume (veh/h)	324	43	40	131	225	180	345	948	188	177	930	326
Initial Q (Qb), veh	0	0	0	2	2	0	1	1	1	0	1	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	324	43	40	131	225	180	345	948	188	177	930	326
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	408	104	88	374	272	228	423	1598	691	403	1585	880
Arrive On Green	0.12	0.06	0.06	0.21	0.14	0.14	0.12	0.45	0.45	0.04	0.15	0.15
Sat Flow, veh/h	3456	1870	1585	1781	1870	1585	3456	3554	1537	3456	3554	1555
Grp Volume(v), veh/h	324	43	40	131	225	180	345	948	188	177	930	326
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1870	1585	1728	1777	1537	1728	1777	1555
Q Serve(g_s), s	8.2	2.0	1.7	5.6	10.5	7.6	8.8	18.0	6.9	4.5	22.0	13.6
Cycle Q Clear(g_c), s	8.2	2.0	1.7	5.6	10.5	7.6	8.8	18.0	6.9	4.5	22.0	13.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	408	104	88	374	272	228	423	1598	691	403	1585	880
V/C Ratio(X)	0.79	0.41	0.45	0.35	0.83	0.79	0.81	0.59	0.27	0.44	0.59	0.37
Avail Cap(c_a), veh/h	541	341	289	373	299	254	476	1601	693	630	1586	881
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	0.60	0.60	0.60	1.00	1.00	1.00	0.55	0.55	0.55
Uniform Delay (d), s/veh	38.6	41.1	25.4	30.5	37.6	21.6	38.5	18.6	15.6	40.4	30.7	17.8
Incr Delay (d2), s/veh	5.9	2.6	3.6	0.3	10.3	8.8	9.5	1.6	1.0	0.4	0.9	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.3	2.3	0.0	0.2	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	1.0	0.9	2.6	5.8	3.2	4.3	7.5	2.6	2.0	10.6	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.5	43.7	29.0	31.1	50.2	30.5	48.3	20.3	16.6	40.8	31.6	18.4
LnGrp LOS	D	D	C	C	D	C	D	C	B	D	C	B
Approach Vol, veh/h		407			536			1481			1433	
Approach Delay, s/veh		42.9			38.9			26.3			29.7	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.7	8.6	14.6	44.1	14.5	16.8	14.2	44.5
Change Period (Y+Rc), s	3.9	3.6	3.6	3.9	3.9	* 3.9	3.9	* 3.9
Max Green Setting (Gmax), s	12.1	16.4	12.4	34.1	14.1	* 14	16.4	* 30
Max Q Clear Time (g_c+I1), s	7.6	4.0	10.8	24.0	10.2	12.5	6.5	20.0
Green Ext Time (p_c), s	0.1	0.2	0.2	5.4	0.4	0.4	0.4	5.1

Intersection Summary	
HCM 6th Ctrl Delay	31.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM Signalized Intersection Capacity Analysis
2: Petaluma Hill Rd & Yolanda Ave

02/18/2020

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	228	107	260	519	644	94
Future Volume (vph)	228	107	260	519	644	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.6		3.0	5.8	5.8	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.96		1.00	1.00	0.98	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1724		1770	1863	1826	
Flt Permitted	0.97		0.95	1.00	1.00	
Satd. Flow (perm)	1724		1770	1863	1826	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	228	107	260	519	644	94
RTOR Reduction (vph)	17	0	0	0	4	0
Lane Group Flow (vph)	318	0	260	519	734	0
Confl. Bikes (#/hr)						2
Turn Type	Prot		Prot	NA	NA	
Protected Phases	2		3	8	4	
Permitted Phases						
Actuated Green, G (s)	20.8		18.4	61.8	40.4	
Effective Green, g (s)	20.8		18.4	61.8	40.4	
Actuated g/C Ratio	0.23		0.20	0.67	0.44	
Clearance Time (s)	3.6		3.0	5.8	5.8	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	389		354	1251	801	
v/s Ratio Prot	c0.18		c0.15	0.28	c0.40	
v/s Ratio Perm						
v/c Ratio	0.82		0.73	0.41	0.92	
Uniform Delay, d1	33.8		34.5	6.9	24.2	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	12.5		7.7	0.2	15.0	
Delay (s)	46.3		42.2	7.1	39.2	
Level of Service	D		D	A	D	
Approach Delay (s)	46.3			18.8	39.2	
Approach LOS	D			B	D	

Intersection Summary			
HCM 2000 Control Delay	31.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	92.0	Sum of lost time (s)	12.4
Intersection Capacity Utilization	84.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
3: Santa Rosa Avenue & Hearn Avenue

02/18/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	504	7	820	5	7	15	517	1020	0	5	616	450
Future Volume (veh/h)	504	7	820	5	7	15	517	1020	0	5	616	450
Initial Q (Qb), veh	0	0	1	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	509	0	820	5	7	15	517	1020	0	5	616	450
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1061	0	806	9	12	26	741	2675	0	12	1107	958
Arrive On Green	0.30	0.00	0.30	0.03	0.03	0.03	0.21	0.52	0.00	0.01	0.31	0.31
Sat Flow, veh/h	3563	0	1566	312	437	937	3456	5274	0	1781	3554	1560
Grp Volume(v), veh/h	509	0	820	27	0	0	517	1020	0	5	616	450
Grp Sat Flow(s),veh/h/ln	1781	0	1566	1686	0	0	1728	1702	0	1781	1777	1560
Q Serve(g_s), s	10.5	0.0	26.8	1.4	0.0	0.0	12.4	10.7	0.0	0.3	13.0	14.2
Cycle Q Clear(g_c), s	10.5	0.0	26.8	1.4	0.0	0.0	12.4	10.7	0.0	0.3	13.0	14.2
Prop In Lane	1.00		1.00	0.19		0.56	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	1061	0	806	46	0	0	741	2675	0	12	1107	958
V/C Ratio(X)	0.48	0.00	1.02	0.59	0.00	0.00	0.70	0.38	0.00	0.43	0.56	0.47
Avail Cap(c_a), veh/h	1061	0	806	112	0	0	837	2675	0	115	1107	958
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.65	0.65	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.9	0.0	21.9	43.3	0.0	0.0	32.7	12.7	0.0	44.5	25.8	9.6
Incr Delay (d2), s/veh	1.6	0.0	36.0	11.3	0.0	0.0	1.4	0.3	0.0	23.1	0.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.0	15.9	0.7	0.0	0.0	5.2	3.9	0.0	0.2	5.4	9.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.4	0.0	62.4	54.6	0.0	0.0	34.1	13.0	0.0	67.7	26.4	10.0
LnGrp LOS	C	A	F	D	A	A	C	B	A	E	C	B
Approach Vol, veh/h		1329			27			1537			1071	
Approach Delay, s/veh		49.0			54.6			20.1			19.7	
Approach LOS		D			D			C			B	

Timer - Assigned Phs	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	30.0	22.9	31.6		5.5	3.8	50.8
Change Period (Y+Rc), s	3.2	3.6	* 3.6		3.0	3.2	3.6
Max Green Setting (Gmax), s	26.8	21.8	* 22		6.0	5.8	38.4
Max Q Clear Time (g_c+I1), s	28.8	14.4	16.2		3.4	2.3	12.7
Green Ext Time (p_c), s	0.0	1.2	3.0		0.0	0.0	8.1

Intersection Summary	
HCM 6th Ctrl Delay	29.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
1: Santa Rosa Avenue & US 101 NB Ramps/Yolanda Ave

02/18/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	161	103	12	91	311	211	321	659	104	315	429	332
Future Volume (veh/h)	161	103	12	91	311	211	321	659	104	315	429	332
Initial Q (Qb), veh	0	0	0	2	2	0	1	1	1	0	1	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	161	103	12	91	311	211	321	659	104	315	429	332
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	240	148	125	274	299	254	402	1704	737	444	1722	858
Arrive On Green	0.07	0.08	0.08	0.15	0.16	0.16	0.12	0.48	0.48	0.12	0.48	0.48
Sat Flow, veh/h	3456	1870	1585	1781	1870	1585	3456	3554	1538	3456	3554	1556
Grp Volume(v), veh/h	161	103	12	91	311	211	321	659	104	315	429	332
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1870	1585	1728	1777	1538	1728	1777	1556
Q Serve(g_s), s	4.1	4.8	0.5	4.1	14.4	8.8	8.1	10.7	3.4	8.0	6.4	10.9
Cycle Q Clear(g_c), s	4.1	4.8	0.5	4.1	14.4	8.8	8.1	10.7	3.4	8.0	6.4	10.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	240	148	125	274	299	254	402	1704	737	444	1722	858
V/C Ratio(X)	0.67	0.70	0.10	0.33	1.04	0.83	0.80	0.39	0.14	0.71	0.25	0.39
Avail Cap(c_a), veh/h	541	341	289	274	299	254	476	1705	738	630	1723	864
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.46	0.46	0.46	1.00	1.00	1.00	0.79	0.79	0.79
Uniform Delay (d), s/veh	40.9	40.4	23.6	34.1	37.8	20.3	38.8	15.0	13.2	37.6	13.6	11.6
Incr Delay (d2), s/veh	3.2	5.8	0.3	0.3	45.9	10.5	8.0	0.7	0.4	1.7	0.3	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.6	24.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	2.4	0.3	2.0	12.2	3.8	3.9	4.3	1.3	3.4	2.5	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.1	46.1	23.9	35.0	107.7	30.8	47.0	15.7	13.6	39.3	13.9	12.6
LnGrp LOS	D	D	C	D	F	C	D	B	B	D	B	B
Approach Vol, veh/h		276			613			1084			1076	
Approach Delay, s/veh		44.0			70.4			24.8			20.9	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.7	10.7	14.0	47.5	10.2	18.3	14.5	47.1
Change Period (Y+Rc), s	3.9	3.6	3.6	3.9	3.9	* 3.9	3.9	* 3.9
Max Green Setting (Gmax), s	12.1	16.4	12.4	34.1	14.1	* 14	16.4	* 30
Max Q Clear Time (g_c+I1), s	6.1	6.8	10.1	12.9	6.1	16.4	10.0	12.7
Green Ext Time (p_c), s	0.1	0.3	0.3	4.1	0.3	0.0	0.6	4.6

Intersection Summary	
HCM 6th Ctrl Delay	34.3
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM Signalized Intersection Capacity Analysis
2: Petaluma Hill Rd & Yolanda Ave

02/18/2020

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	135	163	370	870	430	188
Future Volume (vph)	135	163	370	870	430	188
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.6		3.0	5.8	5.8	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.93		1.00	1.00	0.96	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1687		1770	1863	1774	
Flt Permitted	0.98		0.95	1.00	1.00	
Satd. Flow (perm)	1687		1770	1863	1774	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	135	163	370	870	430	188
RTOR Reduction (vph)	44	0	0	0	15	0
Lane Group Flow (vph)	254	0	370	870	603	0
Confl. Bikes (#/hr)						2
Turn Type	Prot		Prot	NA	NA	
Protected Phases	2		3	8	4	
Permitted Phases						
Actuated Green, G (s)	18.1		22.3	59.5	34.2	
Effective Green, g (s)	18.1		22.3	59.5	34.2	
Actuated g/C Ratio	0.21		0.26	0.68	0.39	
Clearance Time (s)	3.6		3.0	5.8	5.8	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	350		453	1274	697	
v/s Ratio Prot	c0.15		c0.21	0.47	c0.34	
v/s Ratio Perm						
v/c Ratio	0.72		0.82	0.68	0.86	
Uniform Delay, d1	32.1		30.4	8.2	24.3	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	7.3		10.9	1.5	10.9	
Delay (s)	39.4		41.3	9.7	35.2	
Level of Service	D		D	A	D	
Approach Delay (s)	39.4			19.1	35.2	
Approach LOS	D			B	D	

Intersection Summary			
HCM 2000 Control Delay	26.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	87.0	Sum of lost time (s)	12.4
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
3: Santa Rosa Avenue & Hearn Avenue

02/18/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	303	3	760	3	4	4	400	654	1	3	304	319
Future Volume (veh/h)	303	3	760	3	4	4	400	654	1	3	304	319
Initial Q (Qb), veh	0	1	1	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	305	0	760	3	4	4	400	654	1	3	304	319
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1383	0	933	6	8	8	692	2348	4	7	888	1012
Arrive On Green	0.39	0.00	0.39	0.01	0.01	0.01	0.20	0.45	0.45	0.00	0.25	0.25
Sat Flow, veh/h	3563	0	1585	473	630	630	3456	5265	8	1781	3554	1585
Grp Volume(v), veh/h	305	0	760	11	0	0	400	423	232	3	304	319
Grp Sat Flow(s),veh/h/ln	1781	0	1585	1733	0	0	1728	1702	1869	1781	1777	1585
Q Serve(g_s), s	4.9	0.0	15.2	0.5	0.0	0.0	8.9	6.7	6.7	0.1	6.0	7.7
Cycle Q Clear(g_c), s	4.9	0.0	15.2	0.5	0.0	0.0	8.9	6.7	6.7	0.1	6.0	7.7
Prop In Lane	1.00		1.00	0.27		0.36	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	1383	0	933	23	0	0	692	1518	834	7	888	1012
V/C Ratio(X)	0.22	0.00	0.81	0.47	0.00	0.00	0.58	0.28	0.28	0.42	0.34	0.32
Avail Cap(c_a), veh/h	1383	0	933	102	0	0	692	1518	834	105	1187	1145
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.85	0.85	0.85	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	0.0	13.9	41.6	0.0	0.0	30.8	14.9	14.9	42.2	26.1	7.0
Incr Delay (d2), s/veh	0.4	0.0	7.8	14.1	0.0	0.0	1.0	0.4	0.7	34.5	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	4.6	0.3	0.0	0.0	3.7	2.5	2.9	0.1	2.5	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.8	0.0	21.7	55.7	0.0	0.0	31.8	15.3	15.6	76.8	26.4	7.1
LnGrp LOS	B	A	C	E	A	A	C	B	B	E	C	A
Approach Vol, veh/h		1065			11			1055			626	
Approach Delay, s/veh		20.6			55.7			21.6			16.8	
Approach LOS		C			E			C			B	

Timer - Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		36.2	20.2	24.4		4.1	3.5	41.1
Change Period (Y+Rc), s		3.2	3.2	3.2		3.0	3.2	3.2
Max Green Setting (Gmax), s		33.0	6.0	28.4		5.0	5.0	29.4
Max Q Clear Time (g_c+I1), s		17.2	10.9	9.7		2.5	2.1	8.7
Green Ext Time (p_c), s		4.1	0.0	3.0		0.0	0.0	4.2

Intersection Summary			
HCM 6th Ctrl Delay			20.3
HCM 6th LOS			C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
1: Santa Rosa Avenue & US 101 NB Ramps/Yolanda Ave

02/18/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	324	113	40	131	265	260	345	964	188	247	945	326
Future Volume (veh/h)	324	113	40	131	265	260	345	964	188	247	945	326
Initial Q (Qb), veh	0	0	0	2	2	0	1	1	1	0	1	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	324	113	40	131	265	260	345	964	188	247	945	326
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	408	160	135	349	299	254	423	1600	692	390	1527	851
Arrive On Green	0.12	0.09	0.09	0.20	0.16	0.16	0.12	0.45	0.45	0.10	0.43	0.43
Sat Flow, veh/h	3456	1870	1585	1781	1870	1585	3456	3554	1537	3456	3554	1555
Grp Volume(v), veh/h	324	113	40	131	265	260	345	964	188	247	945	326
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1870	1585	1728	1777	1537	1728	1777	1555
Q Serve(g_s), s	8.2	5.3	1.7	5.7	12.5	11.2	8.8	18.4	6.9	6.3	18.6	10.8
Cycle Q Clear(g_c), s	8.2	5.3	1.7	5.7	12.5	11.2	8.8	18.4	6.9	6.3	18.6	10.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	408	160	135	349	299	254	423	1600	692	390	1527	851
V/C Ratio(X)	0.79	0.71	0.30	0.38	0.89	1.03	0.81	0.60	0.27	0.63	0.62	0.38
Avail Cap(c_a), veh/h	541	341	289	349	299	254	476	1604	694	630	1527	855
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.57	0.57	0.57	1.00	1.00	1.00	0.54	0.54	0.54
Uniform Delay (d), s/veh	38.6	40.1	23.2	31.6	37.2	17.7	38.5	18.7	15.6	38.2	20.0	11.8
Incr Delay (d2), s/veh	5.9	5.6	1.2	0.4	16.5	49.2	9.5	1.7	1.0	0.9	1.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.4	2.8	0.0	0.2	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	2.6	0.9	2.7	7.3	6.9	4.3	7.6	2.6	2.6	7.6	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.5	45.7	24.4	32.3	56.5	66.9	48.3	20.4	16.6	39.1	21.0	12.5
LnGrp LOS	D	D	C	C	E	F	D	C	B	D	C	B
Approach Vol, veh/h		477			656			1497			1518	
Approach Delay, s/veh		43.1			55.8			26.3			22.1	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.5	11.3	14.6	42.6	14.5	18.3	12.7	44.5
Change Period (Y+Rc), s	3.9	3.6	3.6	3.9	3.9	* 3.9	3.9	* 3.9
Max Green Setting (Gmax), s	12.1	16.4	12.4	34.1	14.1	* 14	16.4	* 30
Max Q Clear Time (g_c+I1), s	7.7	7.3	10.8	20.6	10.2	14.5	8.3	20.4
Green Ext Time (p_c), s	0.1	0.4	0.2	6.6	0.4	0.0	0.5	5.1

Intersection Summary			
HCM 6th Ctrl Delay			31.4
HCM 6th LOS			C

Notes

User approved pedestrian interval to be less than phase max green.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM Signalized Intersection Capacity Analysis
2: Petaluma Hill Rd & Yolanda Ave

02/18/2020

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	281	114	268	537	654	128
Future Volume (vph)	281	114	268	537	654	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.6		3.0	5.8	5.8	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.96		1.00	1.00	0.98	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1729		1770	1863	1815	
Flt Permitted	0.97		0.95	1.00	1.00	
Satd. Flow (perm)	1729		1770	1863	1815	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	281	114	268	537	654	128
RTOR Reduction (vph)	14	0	0	0	6	0
Lane Group Flow (vph)	381	0	268	537	776	0
Confl. Bikes (#/hr)						2
Turn Type	Prot		Prot	NA	NA	
Protected Phases	2		3	8	4	
Permitted Phases						
Actuated Green, G (s)	23.7		19.0	62.3	40.3	
Effective Green, g (s)	23.7		19.0	62.3	40.3	
Actuated g/C Ratio	0.25		0.20	0.65	0.42	
Clearance Time (s)	3.6		3.0	5.8	5.8	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	429		352	1216	766	
v/s Ratio Prot	c0.22		c0.15	0.29	c0.43	
v/s Ratio Perm						
v/c Ratio	0.89		0.76	0.44	1.01	
Uniform Delay, d1	34.6		36.1	8.1	27.6	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	19.3		9.4	0.3	35.7	
Delay (s)	53.9		45.4	8.3	63.2	
Level of Service	D		D	A	E	
Approach Delay (s)	53.9			20.7	63.2	
Approach LOS	D			C	E	

Intersection Summary			
HCM 2000 Control Delay	44.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	95.4	Sum of lost time (s)	12.4
Intersection Capacity Utilization	91.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
3: Santa Rosa Avenue & Hearn Avenue

02/18/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	504	7	867	5	7	15	576	1057	0	5	654	450
Future Volume (veh/h)	504	7	867	5	7	15	576	1057	0	5	654	450
Initial Q (Qb), veh	0	1	1	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	509	0	867	5	7	15	576	1057	0	5	654	450
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1061	0	825	9	12	26	769	2698	0	12	1110	967
Arrive On Green	0.30	0.00	0.30	0.03	0.03	0.03	0.22	0.53	0.00	0.01	0.31	0.31
Sat Flow, veh/h	3563	0	1585	312	437	937	3456	5274	0	1781	3554	1585
Grp Volume(v), veh/h	509	0	867	27	0	0	576	1057	0	5	654	450
Grp Sat Flow(s),veh/h/ln	1781	0	1585	1686	0	0	1728	1702	0	1781	1777	1585
Q Serve(g_s), s	10.5	0.0	26.8	1.4	0.0	0.0	14.0	11.1	0.0	0.3	14.0	13.9
Cycle Q Clear(g_c), s	10.5	0.0	26.8	1.4	0.0	0.0	14.0	11.1	0.0	0.3	14.0	13.9
Prop In Lane	1.00		1.00	0.19		0.56	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	1061	0	825	46	0	0	769	2698	0	12	1110	967
V/C Ratio(X)	0.48	0.00	1.05	0.59	0.00	0.00	0.75	0.39	0.00	0.43	0.59	0.47
Avail Cap(c_a), veh/h	1061	0	825	112	0	0	837	2698	0	115	1110	967
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.62	0.62	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.9	0.0	21.6	43.3	0.0	0.0	32.6	12.6	0.0	44.5	26.1	9.5
Incr Delay (d2), s/veh	1.6	0.0	45.7	11.3	0.0	0.0	2.2	0.3	0.0	23.1	0.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.0	18.3	0.7	0.0	0.0	6.0	4.0	0.0	0.2	5.9	9.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.4	0.0	71.6	54.6	0.0	0.0	34.8	12.9	0.0	67.7	26.9	9.9
LnGrp LOS	C	A	F	D	A	A	C	B	A	E	C	A
Approach Vol, veh/h		1376			27			1633			1109	
Approach Delay, s/veh		55.3			54.6			20.6			20.2	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	30.0	23.2	31.3		5.5	3.8	50.8
Change Period (Y+Rc), s	3.2	3.2	3.2		3.0	3.2	3.2
Max Green Setting (Gmax), s	26.8	21.8	22.8		6.0	5.8	38.8
Max Q Clear Time (g_c+I1), s	28.8	16.0	16.0		3.4	2.3	13.1
Green Ext Time (p_c), s	0.0	1.2	3.4		0.0	0.0	8.5

Intersection Summary		
HCM 6th Ctrl Delay	32.2	
HCM 6th LOS	C	

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
1: Santa Rosa Avenue & US 101 NB Ramps/Yolanda Ave

02/18/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	161	48	12	91	267	122	321	643	106	265	418	332
Future Volume (veh/h)	161	48	12	91	267	122	321	643	106	265	418	332
Initial Q (Qb), veh	0	0	0	2	2	0	1	1	1	0	1	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	161	48	12	91	267	122	321	643	106	265	418	332
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	240	104	88	316	299	254	402	1756	760	369	1722	863
Arrive On Green	0.07	0.06	0.06	0.18	0.16	0.16	0.12	0.49	0.49	0.10	0.48	0.48
Sat Flow, veh/h	3456	1870	1585	1781	1870	1585	3456	3554	1538	3456	3554	1556
Grp Volume(v), veh/h	161	48	12	91	267	122	321	643	106	265	418	332
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1870	1585	1728	1777	1538	1728	1777	1556
Q Serve(g_s), s	4.1	2.2	0.5	4.0	12.6	4.9	8.1	10.1	3.4	6.7	6.2	10.9
Cycle Q Clear(g_c), s	4.1	2.2	0.5	4.0	12.6	4.9	8.1	10.1	3.4	6.7	6.2	10.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	240	104	88	316	299	254	402	1756	760	369	1722	863
V/C Ratio(X)	0.67	0.46	0.14	0.29	0.89	0.48	0.80	0.37	0.14	0.72	0.24	0.38
Avail Cap(c_a), veh/h	541	341	289	316	299	254	476	1757	761	630	1723	864
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.55	0.55	0.55	1.00	1.00	1.00	0.82	0.82	0.82
Uniform Delay (d), s/veh	40.9	41.2	25.3	32.3	37.2	20.4	38.8	14.1	12.5	38.9	13.6	11.4
Incr Delay (d2), s/veh	3.2	3.2	0.7	0.3	16.9	0.8	8.0	0.6	0.4	2.2	0.3	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.4	3.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	1.1	0.3	1.9	7.4	2.4	3.9	4.0	1.3	2.9	2.5	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.1	44.4	26.0	32.9	57.1	21.2	47.0	14.7	12.9	41.1	13.9	12.5
LnGrp LOS	D	D	C	C	E	C	D	B	B	D	B	B
Approach Vol, veh/h		221			480			1070			1015	
Approach Delay, s/veh		43.2			43.4			24.2			20.5	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.9	8.6	14.0	47.5	10.2	18.3	13.1	48.4
Change Period (Y+Rc), s	3.9	3.6	3.6	3.9	3.9	* 3.9	3.9	* 3.9
Max Green Setting (Gmax), s	12.1	16.4	12.4	34.1	14.1	* 14	16.4	* 30
Max Q Clear Time (g_c+I1), s	6.0	4.2	10.1	12.9	6.1	14.6	8.7	12.1
Green Ext Time (p_c), s	0.1	0.1	0.3	4.0	0.3	0.0	0.5	4.6

Intersection Summary	
HCM 6th Ctrl Delay	27.7
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM Signalized Intersection Capacity Analysis
2: Petaluma Hill Rd & Yolanda Ave

02/18/2020

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	115	156	364	865	412	139
Future Volume (vph)	115	156	364	865	412	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.6		3.0	5.8	5.8	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.92		1.00	1.00	0.97	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1682		1770	1863	1789	
Flt Permitted	0.98		0.95	1.00	1.00	
Satd. Flow (perm)	1682		1770	1863	1789	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	115	156	364	865	412	139
RTOR Reduction (vph)	50	0	0	0	12	0
Lane Group Flow (vph)	221	0	364	865	539	0
Confl. Bikes (#/hr)						2
Turn Type	Prot		Prot	NA	NA	
Protected Phases	2		3	8	4	
Permitted Phases						
Actuated Green, G (s)	16.1		21.5	54.1	29.6	
Effective Green, g (s)	16.1		21.5	54.1	29.6	
Actuated g/C Ratio	0.20		0.27	0.68	0.37	
Clearance Time (s)	3.6		3.0	5.8	5.8	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	340		478	1266	665	
v/s Ratio Prot	c0.13		c0.21	0.46	c0.30	
v/s Ratio Perm						
v/c Ratio	0.65		0.76	0.68	0.81	
Uniform Delay, d1	29.2		26.7	7.6	22.5	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	4.2		7.0	1.5	7.4	
Delay (s)	33.4		33.7	9.2	29.9	
Level of Service	C		C	A	C	
Approach Delay (s)	33.4			16.4	29.9	
Approach LOS	C			B	C	

Intersection Summary			
HCM 2000 Control Delay	22.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	79.6	Sum of lost time (s)	12.4
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
3: Santa Rosa Avenue & Hearn Avenue

02/18/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	303	3	726	3	4	4	333	616	1	3	277	319
Future Volume (veh/h)	303	3	726	3	4	4	333	616	1	3	277	319
Initial Q (Qb), veh	0	1	1	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	305	0	726	3	4	4	333	616	1	3	277	319
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1383	0	935	6	8	8	698	2348	4	7	882	1009
Arrive On Green	0.39	0.00	0.39	0.01	0.01	0.01	0.20	0.45	0.45	0.00	0.25	0.25
Sat Flow, veh/h	3563	0	1585	473	630	630	3456	5264	9	1781	3554	1585
Grp Volume(v), veh/h	305	0	726	11	0	0	333	398	219	3	277	319
Grp Sat Flow(s),veh/h/ln	1781	0	1585	1733	0	0	1728	1702	1869	1781	1777	1585
Q Serve(g_s), s	4.9	0.0	12.3	0.5	0.0	0.0	7.2	6.2	6.2	0.1	5.4	7.8
Cycle Q Clear(g_c), s	4.9	0.0	12.3	0.5	0.0	0.0	7.2	6.2	6.2	0.1	5.4	7.8
Prop In Lane	1.00		1.00	0.27		0.36	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	1383	0	935	23	0	0	698	1518	834	7	882	1009
V/C Ratio(X)	0.22	0.00	0.78	0.47	0.00	0.00	0.48	0.26	0.26	0.42	0.31	0.32
Avail Cap(c_a), veh/h	1383	0	935	102	0	0	698	1518	834	105	1187	1145
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.88	0.88	0.88	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	0.0	13.3	41.6	0.0	0.0	30.0	14.8	14.8	42.2	26.1	7.0
Incr Delay (d2), s/veh	0.4	0.0	6.3	14.1	0.0	0.0	0.4	0.4	0.7	34.5	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	10.7	0.3	0.0	0.0	3.0	2.4	2.7	0.1	2.3	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.8	0.0	19.6	55.7	0.0	0.0	30.4	15.1	15.4	76.8	26.3	7.2
LnGrp LOS	B	A	B	E	A	A	C	B	B	E	C	A
Approach Vol, veh/h		1031			11			950			599	
Approach Delay, s/veh		19.0			55.7			20.6			16.4	
Approach LOS		B			E			C			B	

Timer - Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		36.2	20.4	24.3		4.1	3.5	41.1
Change Period (Y+Rc), s		3.2	3.2	3.2		3.0	3.2	3.2
Max Green Setting (Gmax), s		33.0	6.0	28.4		5.0	5.0	29.4
Max Q Clear Time (g_c+I1), s		14.3	9.2	9.8		2.5	2.1	8.2
Green Ext Time (p_c), s		4.2	0.0	2.8		0.0	0.0	4.0

Intersection Summary	
HCM 6th Ctrl Delay	19.1
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
1: Santa Rosa Avenue & US 101 NB Ramps/Yolanda Ave

02/18/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	324	51	40	139	241	203	345	948	196	209	930	326
Future Volume (veh/h)	324	51	40	139	241	203	345	948	196	209	930	326
Initial Q (Qb), veh	0	0	0	2	2	0	1	1	1	0	1	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	324	51	40	139	241	203	345	948	196	209	930	326
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	408	104	88	386	284	239	423	1571	680	405	1560	869
Arrive On Green	0.12	0.06	0.06	0.22	0.15	0.15	0.12	0.44	0.44	0.04	0.14	0.14
Sat Flow, veh/h	3456	1870	1585	1781	1870	1585	3456	3554	1537	3456	3554	1555
Grp Volume(v), veh/h	324	51	40	139	241	203	345	948	196	209	930	326
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1870	1585	1728	1777	1537	1728	1777	1555
Q Serve(g_s), s	8.2	2.4	1.7	6.0	11.3	8.6	8.8	18.2	7.3	5.3	22.0	13.7
Cycle Q Clear(g_c), s	8.2	2.4	1.7	6.0	11.3	8.6	8.8	18.2	7.3	5.3	22.0	13.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	408	104	88	386	284	239	423	1571	680	405	1560	869
V/C Ratio(X)	0.79	0.49	0.45	0.36	0.85	0.85	0.81	0.60	0.29	0.52	0.60	0.38
Avail Cap(c_a), veh/h	541	341	289	386	299	254	476	1574	681	630	1561	870
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	0.60	0.60	0.60	1.00	1.00	1.00	0.56	0.56	0.56
Uniform Delay (d), s/veh	38.6	41.3	25.4	30.1	37.3	21.5	38.5	19.1	16.1	40.8	31.1	18.1
Incr Delay (d2), s/veh	5.9	3.6	3.6	0.3	12.5	14.3	9.5	1.7	1.1	0.6	0.9	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.3	2.3	0.0	0.2	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	1.2	0.9	2.7	6.4	4.0	4.3	7.6	2.8	2.4	10.7	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.5	44.8	29.0	30.7	52.2	35.8	48.3	20.9	17.2	41.3	32.0	18.8
LnGrp LOS	D	D	C	C	D	D	D	C	B	D	C	B
Approach Vol, veh/h		415			583			1489			1465	
Approach Delay, s/veh		43.1			41.4			26.7			30.4	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.4	8.6	14.6	43.4	14.5	17.5	14.2	43.8
Change Period (Y+Rc), s	3.9	3.6	3.6	3.9	3.9	* 3.9	3.9	* 3.9
Max Green Setting (Gmax), s	12.1	16.4	12.4	34.1	14.1	* 14	16.4	* 30
Max Q Clear Time (g_c+I1), s	8.0	4.4	10.8	24.0	10.2	13.3	7.3	20.2
Green Ext Time (p_c), s	0.1	0.2	0.2	5.4	0.4	0.3	0.4	5.1

Intersection Summary	
HCM 6th Ctrl Delay	32.0
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM Signalized Intersection Capacity Analysis
2: Petaluma Hill Rd & Yolanda Ave

02/18/2020

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	233	107	260	519	644	99
Future Volume (vph)	233	107	260	519	644	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.6		3.0	5.8	5.8	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.96		1.00	1.00	0.98	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1725		1770	1863	1824	
Flt Permitted	0.97		0.95	1.00	1.00	
Satd. Flow (perm)	1725		1770	1863	1824	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	233	107	260	519	644	99
RTOR Reduction (vph)	16	0	0	0	5	0
Lane Group Flow (vph)	324	0	260	519	738	0
Confl. Bikes (#/hr)						2
Turn Type	Prot		Prot	NA	NA	
Protected Phases	2		3	8	4	
Permitted Phases						
Actuated Green, G (s)	21.1		18.4	61.8	40.4	
Effective Green, g (s)	21.1		18.4	61.8	40.4	
Actuated g/C Ratio	0.23		0.20	0.67	0.44	
Clearance Time (s)	3.6		3.0	5.8	5.8	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	394		352	1247	798	
v/s Ratio Prot	c0.19		c0.15	0.28	c0.40	
v/s Ratio Perm						
v/c Ratio	0.82		0.74	0.42	0.92	
Uniform Delay, d1	33.8		34.7	7.0	24.5	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	12.9		7.9	0.2	16.3	
Delay (s)	46.7		42.6	7.2	40.8	
Level of Service	D		D	A	D	
Approach Delay (s)	46.7			19.0	40.8	
Approach LOS	D			B	D	

Intersection Summary			
HCM 2000 Control Delay	32.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	92.3	Sum of lost time (s)	12.4
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
3: Santa Rosa Avenue & Hearn Avenue

02/18/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	504	7	836	5	7	15	525	1035	0	5	632	450
Future Volume (veh/h)	504	7	836	5	7	15	525	1035	0	5	632	450
Initial Q (Qb), veh	0	1	1	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	509	0	836	5	7	15	525	1035	0	5	632	450
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1061	0	814	9	12	26	746	2675	0	12	1102	964
Arrive On Green	0.30	0.00	0.30	0.03	0.03	0.03	0.22	0.52	0.00	0.01	0.31	0.31
Sat Flow, veh/h	3563	0	1585	312	437	937	3456	5274	0	1781	3554	1585
Grp Volume(v), veh/h	509	0	836	27	0	0	525	1035	0	5	632	450
Grp Sat Flow(s),veh/h/ln	1781	0	1585	1686	0	0	1728	1702	0	1781	1777	1585
Q Serve(g_s), s	10.5	0.0	26.8	1.4	0.0	0.0	12.6	10.9	0.0	0.3	13.4	14.0
Cycle Q Clear(g_c), s	10.5	0.0	26.8	1.4	0.0	0.0	12.6	10.9	0.0	0.3	13.4	14.0
Prop In Lane	1.00		1.00	0.19		0.56	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	1061	0	814	46	0	0	746	2675	0	12	1102	964
V/C Ratio(X)	0.48	0.00	1.03	0.59	0.00	0.00	0.70	0.39	0.00	0.43	0.57	0.47
Avail Cap(c_a), veh/h	1061	0	814	112	0	0	837	2675	0	115	1102	964
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.65	0.65	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.9	0.0	21.9	43.3	0.0	0.0	32.6	12.8	0.0	44.5	26.0	9.7
Incr Delay (d2), s/veh	1.6	0.0	38.6	11.3	0.0	0.0	1.5	0.3	0.0	23.1	0.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.0	16.7	0.7	0.0	0.0	5.3	4.0	0.0	0.2	5.6	9.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.4	0.0	64.9	54.6	0.0	0.0	34.2	13.1	0.0	67.7	26.8	10.0
LnGrp LOS	C	A	F	D	A	A	C	B	A	E	C	B
Approach Vol, veh/h		1345			27			1560			1087	
Approach Delay, s/veh		50.7			54.6			20.2			20.0	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	30.0	23.0	31.5	5.5	3.8	50.8
Change Period (Y+Rc), s	3.2	3.6	* 3.6	3.0	3.2	3.6
Max Green Setting (Gmax), s	26.8	21.8	* 22	6.0	5.8	38.4
Max Q Clear Time (g_c+I1), s	28.8	14.6	16.0	3.4	2.3	12.9
Green Ext Time (p_c), s	0.0	1.2	3.2	0.0	0.0	8.2

Intersection Summary	
HCM 6th Ctrl Delay	30.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
1: Santa Rosa Avenue & US 101 NB Ramps/Yolanda Ave

02/18/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	161	105	12	91	312	212	321	659	106	323	429	332
Future Volume (veh/h)	161	105	12	91	312	212	321	659	106	323	429	332
Initial Q (Qb), veh	0	0	0	2	2	0	1	1	1	0	1	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	161	105	12	91	312	212	321	659	106	323	429	332
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	240	150	127	272	299	254	402	1695	733	451	1722	858
Arrive On Green	0.07	0.08	0.08	0.15	0.16	0.16	0.12	0.48	0.48	0.12	0.48	0.48
Sat Flow, veh/h	3456	1870	1585	1781	1870	1585	3456	3554	1538	3456	3554	1556
Grp Volume(v), veh/h	161	105	12	91	312	212	321	659	106	323	429	332
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1870	1585	1728	1777	1538	1728	1777	1556
Q Serve(g_s), s	4.1	4.9	0.5	4.1	14.4	8.8	8.1	10.7	3.5	8.2	6.4	10.9
Cycle Q Clear(g_c), s	4.1	4.9	0.5	4.1	14.4	8.8	8.1	10.7	3.5	8.2	6.4	10.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	240	150	127	272	299	254	402	1695	733	451	1722	858
V/C Ratio(X)	0.67	0.70	0.09	0.33	1.04	0.84	0.80	0.39	0.14	0.72	0.25	0.39
Avail Cap(c_a), veh/h	541	341	289	272	299	254	476	1696	734	630	1723	864
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.46	0.46	0.46	1.00	1.00	1.00	0.78	0.78	0.78
Uniform Delay (d), s/veh	40.9	40.3	23.5	34.2	37.8	20.2	38.8	15.1	13.3	37.6	13.6	11.6
Incr Delay (d2), s/veh	3.2	5.8	0.3	0.3	46.9	10.8	8.0	0.7	0.4	1.8	0.3	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.6	24.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	2.5	0.3	2.0	12.3	3.9	3.9	4.3	1.3	3.5	2.5	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.1	46.1	23.8	35.1	108.7	31.0	47.0	15.8	13.7	39.4	13.9	12.6
LnGrp LOS	D	D	C	D	F	C	D	B	B	D	B	B
Approach Vol, veh/h		278			615			1086			1084	
Approach Delay, s/veh		44.0			71.0			24.8			21.1	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.6	10.8	14.0	47.5	10.2	18.3	14.7	46.9
Change Period (Y+Rc), s	3.9	3.6	3.6	3.9	3.9	* 3.9	3.9	* 3.9
Max Green Setting (Gmax), s	12.1	16.4	12.4	34.1	14.1	* 14	16.4	* 30
Max Q Clear Time (g_c+I1), s	6.1	6.9	10.1	12.9	6.1	16.4	10.2	12.7
Green Ext Time (p_c), s	0.1	0.3	0.3	4.1	0.3	0.0	0.6	4.6

Intersection Summary	
HCM 6th Ctrl Delay	34.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM Signalized Intersection Capacity Analysis
2: Petaluma Hill Rd & Yolanda Ave

02/18/2020

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	135	163	370	870	430	189
Future Volume (vph)	135	163	370	870	430	189
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.6		3.0	5.8	5.8	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.93		1.00	1.00	0.96	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1687		1770	1863	1774	
Flt Permitted	0.98		0.95	1.00	1.00	
Satd. Flow (perm)	1687		1770	1863	1774	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	135	163	370	870	430	189
RTOR Reduction (vph)	44	0	0	0	15	0
Lane Group Flow (vph)	254	0	370	870	604	0
Confl. Bikes (#/hr)						2
Turn Type	Prot		Prot	NA	NA	
Protected Phases	2		3	8	4	
Permitted Phases						
Actuated Green, G (s)	18.1		22.3	59.6	34.3	
Effective Green, g (s)	18.1		22.3	59.6	34.3	
Actuated g/C Ratio	0.21		0.26	0.68	0.39	
Clearance Time (s)	3.6		3.0	5.8	5.8	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	350		453	1274	698	
v/s Ratio Prot	c0.15		c0.21	0.47	c0.34	
v/s Ratio Perm						
v/c Ratio	0.72		0.82	0.68	0.87	
Uniform Delay, d1	32.2		30.5	8.1	24.3	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	7.3		10.9	1.5	10.9	
Delay (s)	39.4		41.4	9.7	35.2	
Level of Service	D		D	A	D	
Approach Delay (s)	39.4			19.1	35.2	
Approach LOS	D			B	D	

Intersection Summary			
HCM 2000 Control Delay	26.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	87.1	Sum of lost time (s)	12.4
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
3: Santa Rosa Avenue & Hearn Avenue

02/18/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	303	3	764	3	4	4	400	655	1	3	308	319
Future Volume (veh/h)	303	3	764	3	4	4	400	655	1	3	308	319
Initial Q (Qb), veh	0	1	1	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	305	0	764	3	4	4	400	655	1	3	308	319
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1383	0	932	6	8	8	691	2348	4	7	889	1012
Arrive On Green	0.39	0.00	0.39	0.01	0.01	0.01	0.20	0.45	0.45	0.00	0.25	0.25
Sat Flow, veh/h	3563	0	1585	473	630	630	3456	5265	8	1781	3554	1585
Grp Volume(v), veh/h	305	0	764	11	0	0	400	423	233	3	308	319
Grp Sat Flow(s),veh/h/ln	1781	0	1585	1733	0	0	1728	1702	1869	1781	1777	1585
Q Serve(g_s), s	4.9	0.0	15.6	0.5	0.0	0.0	8.9	6.7	6.7	0.1	6.0	7.7
Cycle Q Clear(g_c), s	4.9	0.0	15.6	0.5	0.0	0.0	8.9	6.7	6.7	0.1	6.0	7.7
Prop In Lane	1.00		1.00	0.27		0.36	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	1383	0	932	23	0	0	691	1518	834	7	889	1012
V/C Ratio(X)	0.22	0.00	0.82	0.47	0.00	0.00	0.58	0.28	0.28	0.42	0.35	0.32
Avail Cap(c_a), veh/h	1383	0	932	102	0	0	691	1518	834	105	1187	1145
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.85	0.85	0.85	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	0.0	14.0	41.6	0.0	0.0	30.8	14.9	14.9	42.2	26.2	7.0
Incr Delay (d2), s/veh	0.4	0.0	8.0	14.1	0.0	0.0	1.0	0.4	0.7	34.5	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	4.8	0.3	0.0	0.0	3.7	2.5	2.9	0.1	2.5	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.8	0.0	22.0	55.7	0.0	0.0	31.8	15.3	15.6	76.8	26.4	7.1
LnGrp LOS	B	A	C	E	A	A	C	B	B	E	C	A
Approach Vol, veh/h		1069			11			1056			630	
Approach Delay, s/veh		20.8			55.7			21.6			16.9	
Approach LOS		C			E			C			B	

Timer - Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		36.2	20.2	24.5		4.1	3.5	41.1
Change Period (Y+Rc), s		3.2	3.2	3.2		3.0	3.2	3.2
Max Green Setting (Gmax), s		33.0	6.0	28.4		5.0	5.0	29.4
Max Q Clear Time (g_c+I1), s		17.6	10.9	9.7		2.5	2.1	8.7
Green Ext Time (p_c), s		4.1	0.0	3.0		0.0	0.0	4.2

Intersection Summary			
HCM 6th Ctrl Delay			20.4
HCM 6th LOS			C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
1: Santa Rosa Avenue & US 101 NB Ramps/Yolanda Ave

02/18/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	324	121	40	139	281	283	345	964	196	279	945	326
Future Volume (veh/h)	324	121	40	139	281	283	345	964	196	279	945	326
Initial Q (Qb), veh	0	0	0	2	2	0	1	1	1	0	1	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	324	121	40	139	281	283	345	964	196	279	945	326
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	408	168	142	342	299	254	423	1567	677	424	1527	850
Arrive On Green	0.12	0.09	0.09	0.19	0.16	0.16	0.12	0.44	0.44	0.11	0.43	0.43
Sat Flow, veh/h	3456	1870	1585	1781	1870	1585	3456	3554	1537	3456	3554	1555
Grp Volume(v), veh/h	324	121	40	139	281	283	345	964	196	279	945	326
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1870	1585	1728	1777	1537	1728	1777	1555
Q Serve(g_s), s	8.2	5.7	1.7	6.2	13.4	11.1	8.8	18.7	7.3	7.1	18.6	10.8
Cycle Q Clear(g_c), s	8.2	5.7	1.7	6.2	13.4	11.1	8.8	18.7	7.3	7.1	18.6	10.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	408	168	142	342	299	254	423	1567	677	424	1527	850
V/C Ratio(X)	0.79	0.72	0.28	0.41	0.94	1.12	0.81	0.62	0.29	0.66	0.62	0.38
Avail Cap(c_a), veh/h	541	341	289	342	299	254	476	1570	679	630	1527	855
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.57	0.57	0.57	1.00	1.00	1.00	0.51	0.51	0.51
Uniform Delay (d), s/veh	38.6	39.9	22.9	32.1	37.6	17.7	38.5	19.4	16.2	37.7	20.0	11.8
Incr Delay (d2), s/veh	5.9	5.7	1.1	0.4	25.0	78.1	9.5	1.8	1.1	0.9	1.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.4	5.3	0.0	0.2	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	2.8	0.9	2.8	8.6	9.0	4.3	7.8	2.8	2.9	7.6	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.5	45.6	24.0	32.9	67.8	95.8	48.3	21.2	17.3	38.6	21.0	12.5
LnGrp LOS	D	D	C	C	E	F	D	C	B	D	C	B
Approach Vol, veh/h		485			703			1505			1550	
Approach Delay, s/veh		43.1			72.2			26.9			22.4	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.2	11.7	14.6	42.6	14.5	18.3	13.5	43.7
Change Period (Y+Rc), s	3.9	3.6	3.6	3.9	3.9	* 3.9	3.9	* 3.9
Max Green Setting (Gmax), s	12.1	16.4	12.4	34.1	14.1	* 14	16.4	* 30
Max Q Clear Time (g_c+I1), s	8.2	7.7	10.8	20.6	10.2	15.4	9.1	20.7
Green Ext Time (p_c), s	0.1	0.4	0.2	6.6	0.4	0.0	0.6	5.0

Intersection Summary			
HCM 6th Ctrl Delay			34.6
HCM 6th LOS			C

Notes

User approved pedestrian interval to be less than phase max green.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM Signalized Intersection Capacity Analysis
2: Petaluma Hill Rd & Yolanda Ave

02/18/2020

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	286	114	268	537	654	133
Future Volume (vph)	286	114	268	537	654	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.6		3.0	5.8	5.8	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.96		1.00	1.00	0.98	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1729		1770	1863	1814	
Flt Permitted	0.97		0.95	1.00	1.00	
Satd. Flow (perm)	1729		1770	1863	1814	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	286	114	268	537	654	133
RTOR Reduction (vph)	14	0	0	0	7	0
Lane Group Flow (vph)	386	0	268	537	780	0
Confl. Bikes (#/hr)						2
Turn Type	Prot		Prot	NA	NA	
Protected Phases	2		3	8	4	
Permitted Phases						
Actuated Green, G (s)	23.9		19.1	62.3	40.2	
Effective Green, g (s)	23.9		19.1	62.3	40.2	
Actuated g/C Ratio	0.25		0.20	0.65	0.42	
Clearance Time (s)	3.6		3.0	5.8	5.8	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	432		353	1214	762	
v/s Ratio Prot	c0.22		c0.15	0.29	c0.43	
v/s Ratio Perm						
v/c Ratio	0.89		0.76	0.44	1.02	
Uniform Delay, d1	34.6		36.1	8.1	27.7	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	20.2		9.1	0.3	38.7	
Delay (s)	54.8		45.1	8.4	66.4	
Level of Service	D		D	A	E	
Approach Delay (s)	54.8			20.6	66.4	
Approach LOS	D			C	E	

Intersection Summary			
HCM 2000 Control Delay	45.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	95.6	Sum of lost time (s)	12.4
Intersection Capacity Utilization	91.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
3: Santa Rosa Avenue & Hearn Avenue

02/18/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	504	7	883	5	7	15	584	1072	0	5	670	450
Future Volume (veh/h)	504	7	883	5	7	15	584	1072	0	5	670	450
Initial Q (Qb), veh	0	1	1	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	509	0	883	5	7	15	584	1072	0	5	670	450
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1061	0	820	9	12	26	759	2698	0	12	1121	972
Arrive On Green	0.30	0.00	0.30	0.03	0.03	0.03	0.22	0.53	0.00	0.01	0.32	0.32
Sat Flow, veh/h	3563	0	1585	312	437	937	3456	5274	0	1781	3554	1585
Grp Volume(v), veh/h	509	0	883	27	0	0	584	1072	0	5	670	450
Grp Sat Flow(s),veh/h/ln	1781	0	1585	1686	0	0	1728	1702	0	1781	1777	1585
Q Serve(g_s), s	10.5	0.0	26.8	1.4	0.0	0.0	14.3	11.3	0.0	0.3	14.3	13.8
Cycle Q Clear(g_c), s	10.5	0.0	26.8	1.4	0.0	0.0	14.3	11.3	0.0	0.3	14.3	13.8
Prop In Lane	1.00		1.00	0.19		0.56	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	1061	0	820	46	0	0	759	2698	0	12	1121	972
V/C Ratio(X)	0.48	0.00	1.08	0.59	0.00	0.00	0.77	0.40	0.00	0.43	0.60	0.46
Avail Cap(c_a), veh/h	1061	0	820	112	0	0	837	2698	0	115	1121	972
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.61	0.61	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.9	0.0	21.7	43.3	0.0	0.0	33.0	12.7	0.0	44.5	26.0	9.4
Incr Delay (d2), s/veh	1.6	0.0	54.2	11.3	0.0	0.0	2.5	0.3	0.0	23.1	0.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.0	20.2	0.7	0.0	0.0	6.1	4.1	0.0	0.2	6.0	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.4	0.0	80.4	54.6	0.0	0.0	35.5	12.9	0.0	67.7	26.9	9.7
LnGrp LOS	C	A	F	D	A	A	D	B	A	E	C	A
Approach Vol, veh/h		1392			27			1656			1125	
Approach Delay, s/veh		61.0			54.6			20.9			20.2	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	30.0	23.0	31.6		5.5	3.8	50.8
Change Period (Y+Rc), s	3.2	3.2	3.2		3.0	3.2	3.2
Max Green Setting (Gmax), s	26.8	21.8	22.8		6.0	5.8	38.8
Max Q Clear Time (g_c+I1), s	28.8	16.3	16.3		3.4	2.3	13.3
Green Ext Time (p_c), s	0.0	1.2	3.3		0.0	0.0	8.6

Intersection Summary	
HCM 6th Ctrl Delay	34.2
HCM 6th LOS	C

Notes
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Appendix C

Collision Rate Calculations

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Intersection Collision Rate Calculations

Traffic Impact Study for the Yolanda Avenue Industrial Project

Intersection # 1: Yolanda Avenue - US 101 North Ramps & Santa Rosa Avenue
Date of Count: Thursday, June 21, 2018

Number of Collisions: 31
Number of Injuries: 17
Number of Fatalities: 0
ADT: 38600
Start Date: December 1, 2013
End Date: November 30, 2018
Number of Years: 5

Intersection Type: Four-Legged
Control Type: Signals
Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions x 1 Million}}{\text{ADT x 365 Days per Year x Number of Years}}$$

$$\text{collision rate} = \frac{31 \times 1{,}000{,}000}{38{,}600 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.44 c/mve**	**0.0%**	**54.8%**
Statewide Average*	**0.27 c/mve**	**0.4%**	**41.9%**

ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2013 Collision Data on California State Highways, Caltrans

Intersection # 2: Yolanda Avenue & Petaluma Hill Road
Date of Count: Wednesday, June 12, 2019

Number of Collisions: 10
Number of Injuries: 6
Number of Fatalities: 0
ADT: 18500
Start Date: December 1, 2013
End Date: November 30, 2018
Number of Years: 5

Intersection Type: Tee
Control Type: Signals
Area: Suburban

$$\text{collision rate} = \frac{\text{Number of Collisions x 1 Million}}{\text{ADT x 365 Days per Year x Number of Years}}$$

$$\text{collision rate} = \frac{10 \times 1{,}000{,}000}{18{,}500 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.30 c/mve**	**0.0%**	**60.0%**
Statewide Average*	**0.27 c/mve**	**0.6%**	**37.3%**

ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2013 Collision Data on California State Highways, Caltrans

Intersection Collision Rate Calculaions

Traffic Impact Study for the Yolanda Avenue Industrial Project

Intersection # 3: Hearn Avenue & Santa Rosa Avenue

Date of Count: Thursday, June 21, 2018

Number of Collisions: 19
Number of Injuries: 13
Number of Fatalities: 0
ADT: 39700
Start Date: December 1, 2013
End Date: November 30, 2018
Number of Years: 5

Intersection Type: Four-Legged
Control Type: Signals
Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions x 1 Million}}{\text{ADT x 365 Days per Year x Number of Years}}$$

$$\text{collision rate} = \frac{19 \times 1{,}000{,}000}{39{,}700 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.26 c/mve**	**0.0%**	**68.4%**
Statewide Average*	**0.27 c/mve**	**0.4%**	**41.9%**

ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2013 Collision Data on California State Highways, Caltrans

Intersection # 4: &

Date of Count: Saturday, January 0, 1900

Number of Collisions: 0
Number of Injuries: 0
Number of Fatalities: 0
ADT: 0
Start Date: January 0, 1900
End Date: January 0, 1900
Number of Years: 0

Intersection Type: 0
Control Type: 0
Area: 0

$$\text{collision rate} = \frac{\text{Number of Collisions x 1 Million}}{\text{ADT x 365 Days per Year x Number of Years}}$$

$$\text{collision rate} = \frac{0 \times 1{,}000{,}000}{0 \times 365 \times 0}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.00 c/mve**	**0.0%**	**0.0%**
Statewide Average*	**0.30 c/mve**	**0.7%**	**40.3%**

ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2013 Collision Data on California State Highways, Caltrans

APPENDIX G

Environmental Noise and Vibration Assessment

324-350 YOLANDA AVENUE
GENERAL PLAN AMMENDMENT & USE PERMIT

ENVIRONMENTAL NOISE AND VIBRATION ASSESSMENT

Santa Rosa, California

September 17, 2019

Prepared for:

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Project: 19-110

INTRODUCTION

The proposed project will involve development on seven parcels along Yolanda Avenue in Santa Rosa and includes a General Plan Amendment and Rezoning of six parcels along Yolanda Avenue, and a Major Conditional Use Permit and Minor Design review for a proposed multi-use building containing cannabis cultivation, manufacturing, distribution and vacant/untenanted space on two parcels.

The General Plan Amendment and Rezoning reviewed for this study would amend the City of Santa Rosa General Plan to modify the current General Plan designations for six parcels 044-070-006 (Parcel A), 044-072-007 (Parcel B), 044-072-008 (Parcel C), 044-081-024 (Parcel D), 044-081-061(Parcel E), and 044-390-029 (Parcel F) as shown in Figure 1. The project proposes to modify the General Plan designations of these parcels to Light Industrial (IL) designations and zoning to facilitate the proposed development, which will include;

- Parcel A: A new light industrial access drive.
- Parcels B and C: A 8,442 ft^2 multi-use building with cannabis cultivation, manufacturing, distribution and vacant/untenanted space.
- Parcel D: Improvements to two existing buildings totaling 32,000 ft^2 to create a multi-unit industrial alteration building,
- Parcel E: A portion of a proposed 17,982 ft^2 warehouse industrial building extending from the currently designated and zoned Light Industrial parcel immediately north[1] which will be setback approximately 110 feet from the centerline of Yolanda Avenue and,
- Parcel F: An existing approximately 30,000 ft^2 industrial building, with no alterations is to remain.

	APN	ADDRESS	EXISTING ZONING	PROPOSED ZONING
A	044-072-006	324 YOLANDA AVENUE	CG	IL
B	044-072-007	330 YOLANDA AVENUE	CG	IL
C	044-072-008	350 YOLANDA AVENUE	CG	IL
D	044-081-024	328 YOLANDA AVENUE	CG	IL
E	044-390-061		R-3-15	IL
F	044-081-029	324 YOLANDA AVENUE	CG	IL

Figure 1: General Plan Amendment & Use Map

The Major Conditional Use Permit and Minor Design review submittals evaluated for this study include a new 8,442 ft^2 multi-use building setback approximately 105 feet from the centerline of Yolanda Avenue with three separate uses and premises; a cannabis dispensary (4,744 ft^2), a cannabis microbusiness (1,419 ft^2), and vacant/untenanted space (2,279 ft^2). Figure 2 shows the location of this proposed building and other project improvements overlaid on an aerial photo of the site and vicinity. The full project description is attached to this report as Appendix A.

This report evaluates the potential significance of noise impacts that could result from the General Plan Amendment, Rezoning and Project Conditional Use Permit, including the noise and land use compatibility of proposed uses, as well as the potential for temporary or permanent noise level increases at nearby sensitive receptors. The report is divided into three sections: 1) the Setting Section provides a brief description of the fundamentals of environmental noise, summarizes applicable regulatory criteria, and discusses the results of the ambient noise

[1] This parcel is identified as APN 044-072-009 as identified in Figure 1.

monitoring survey completed to document existing noise conditions; 2) the General Plan Consistency Section discusses noise and land use compatibility utilizing policies in the City's General Plan; and, 3) the Impacts and Mitigation Measures Section describes the significance criteria used to evaluate project impacts, provides a discussion of each project impact, and presents mitigation measures, where necessary, to provide a compatible project in relation to adjacent noise sources and land uses.

Figure 2: Proposed Project Improvements in relation to the Site Vicinity

SETTING

FUNDAMENTALS OF ENVIRONMENTAL NOISE

Noise may be defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound could be caused by its *pitch* or its *loudness*. *Pitch*

is the height or depth of a tone or sound, depending on the relative rapidity (frequency) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. *Loudness* is intensity of sound waves combined with the reception characteristics of the ear. Intensity may be compared with the height of an ocean wave in that it is a measure of the amplitude of the sound wave.

In addition to the concepts of pitch and loudness, there are several noise measurement scales which are used to describe noise in a particular location. A *decibel (dB)* is a unit of measurement which indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a ten-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc. There is a relationship between the subjective noisiness or loudness of a sound and its intensity. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities. Technical terms are defined in Table 1.

TABLE 1 Definition of Acoustical Terms Used in this Report

Term	Definition
Decibel, dB	A unit describing, the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20 micro Pascals.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micro Pascals,where 1 Pascal is the pressure resulting from a force of 1 Newton exerted over an area of 1 square meter. Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency sound similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, L_{eq}	The average A-weighted noise level during the measurement period.
L_{max}, L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
L_{01}, L_{10}, L_{50}, L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day/Night Noise Level, L_{dn} or DNL	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10pm and 7am.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, timing, and tonal or informational content as well as the prevailing ambient noise level.

Source: Handbook of Acoustical Measurements and Noise Control, Harris, 1998.

There are several methods of characterizing sound. The most common in California is the *A-weighted sound level (dBA).* This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Representative outdoor and indoor noise levels in units of dBA

are shown in Table 2. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This *energy-equivalent sound/noise descriptor* is called L_{eq}. The most common averaging period is hourly, but L_{eq} can describe any series of noise events of arbitrary duration.

TABLE 2 Typical Noise Levels in the Environment

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110 dBA	Rock band
Jet fly-over at 1,000 feet		
	100 dBA	
Gas lawn mower at 3 feet		
	90 dBA	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	80 dBA	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower, 100 feet	70 dBA	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	60 dBA	
		Large business office
Quiet urban daytime	50 dBA	Dishwasher in next room
Quiet urban nighttime	40 dBA	Theater, large conference room
Quiet suburban nighttime		
	30 dBA	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	20 dBA	
		Broadcast/recording studio
	10 dBA	
	0 dBA	

Source: Technical Noise Supplement (TeNS), California Department of Transportation, September 2013.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends upon the distance the receptor is

from the noise source. Close to the noise source, the models are accurate to within about plus or minus 1 to 2 dBA.

Since the sensitivity to noise increases during the evening and at night -- because excessive noise interferes with the ability to sleep -- 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The *Community Noise Equivalent Level* (*CNEL*) is a measure of the cumulative noise exposure in a community, with a 5 dB penalty added to evening (7:00 pm - 10:00 pm) and a 10 dB addition to nocturnal (10:00 pm - 7:00 am) noise levels. The *Day/Night Average Sound Level* (*DNL* or L_{dn}) is essentially the same as CNEL, with the exception that the evening time period is dropped and all occurrences during this three-hour period are grouped into the daytime period.

Effects of Noise

The thresholds for speech interference indoors are about 45 dBA if the noise is steady and above 55 dBA if the noise is fluctuating. Outdoors the thresholds are about 15 dBA higher. Steady noises of sufficient intensity (above 35 dBA) and fluctuating noise levels above about 45 dBA have been shown to affect sleep. Interior residential standards for multi-family dwellings are set by the State of California at 45 dBA L_{dn}. Typically, the highest steady traffic noise level during the daytime is about equal to the L_{dn} and nighttime levels are 10 dB lower. The standard is designed for sleep and speech protection and most jurisdictions apply the same criterion for all residential uses. Typical structural attenuation is 12 to 17 dB with open windows. With standard construction and closed windows in good condition, the noise attenuation factor is around 20 dB for an older structure and 25 dB for a newer dwelling. Sleep and speech interference is therefore of concern when exterior noise levels are about 57 to 62 dBA L_{dn} with open windows and 65 to 70 dBA L_{dn} if the windows are closed. Levels of 55 to 60 dBA are common along collector streets and secondary arterials, while 65 to 70 dBA is a typical value for a primary/major arterial. Levels of 75 to 80 dBA are normal noise levels at the first row of development outside a freeway right-of-way.

FUNDAMENTALS OF GROUNDBORNE VIBRATION

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One method is the Peak Particle Velocity (PPV). The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. In this report, a PPV descriptor with units of mm/sec or in/sec is used to evaluate construction generated vibration for building damage and human complaints. Table 3 displays the reactions of people and the effects on buildings that continuous or frequent intermittent vibration levels produce. The guidelines in Table 3 represent syntheses of vibration criteria for human response and potential damage to buildings resulting from construction vibration.

Construction activities can cause vibration that varies in intensity depending on several factors. The use of pile driving and vibratory compaction equipment typically generates the highest construction related groundborne vibration levels. Because of the impulsive nature of such activities, the use of the PPV descriptor has been routinely used to measure and assess groundborne vibration and almost exclusively to assess the potential of vibration to cause damage and the degree of annoyance for humans.

The two primary concerns with construction-induced vibration, the potential to damage a structure and the potential to interfere with the enjoyment of life, are evaluated against different vibration limits. Human perception to vibration varies with the individual and is a function of

physical setting and the type of vibration. Persons exposed to elevated ambient vibration levels, such as people in an urban environment, may tolerate a higher vibration level.

Structural damage can be classified as cosmetic only, such as paint flaking or minimal extension of cracks in building surfaces; minor, including limited surface cracking; or major, that may threaten the structural integrity of the building. Safe vibration limits that can be applied to assess the potential for damaging a structure vary by researcher. The damage criteria presented in Table 3 include several categories for ancient, fragile, and historic structures, the types of structures most at risk to damage. Most buildings are included within the categories ranging from "Historic and some old buildings" to "Modern industrial/commercial buildings". Construction-induced vibration that can be detrimental to the building is very rare and has only been observed in instances where the structure is at a high state of disrepair and the construction activity occurs immediately adjacent to the structure.

The annoyance levels shown in Table 3 should be interpreted with care since vibration may be found to be annoying at lower levels than those shown, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage.

TABLE 3 Reaction of People and Damage to Buildings from Continuous or Frequent Intermittent Vibration Levels

Velocity Level, PPV (in/sec)	Human Reaction	Effect on Buildings
0.01	Barely perceptible	No effect
0.04	Distinctly perceptible	Vibration unlikely to cause damage of any type to any structure
0.08	Distinctly perceptible to strongly perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
0.1	Strongly perceptible	Threshold at which there is a risk of damage to fragile buildings with no risk of damage to most buildings
0.25	Strongly perceptible to severe	Threshold at which there is a risk of damage to historic and some old buildings.
0.3	Strongly perceptible to severe	Threshold at which there is a risk of damage to older residential structures
0.5	Severe - Vibrations considered unpleasant	Threshold at which there is a risk of damage to new residential and modern commercial/industrial structures

Source: Transportation and Construction Vibration Guidance Manual, California Department of Transportation, September 2013.

REGULATORY BACKGROUND – NOISE

The State of California and the City of Santa Rosa have established regulatory criteria that are applicable in this assessment. The State CEQA Guidelines, Appendix G, are used to assess the potential significance of impacts pursuant to local General Plan policies, Municipal Code standards, or the applicable standards of other agencies. A summary of the applicable regulatory criteria is provided below.

2018 State CEQA Guidelines. The CEQA contains guidelines to evaluate the significance of effects of environmental noise attributable to a proposed project. Under CEQA, noise impacts would be considered significant if the project would 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, if the project would expose people residing or working in the project area to excessive noise levels.

Checklist items (a) and (b) are applicable to the proposed project. The project would not expose people residing or working in the project area to excessive aircraft noise levels; therefore, item (c) is not carried further in this analysis.

CEQA does not define what noise level increase would be considered substantial. Typically, project-generated noise level increases of 3 dBA L_{dn} or greater would be considered significant where exterior noise levels would exceed the compatible noise level standard (60 dBA L_{dn} for residential land uses and 70 dBA L_{dn} for industrial land uses). Where noise levels would remain at or below the compatible noise level standard with the project, noise level increases of 5 dBA L_{dn} or greater would be considered significant.

2016 California Building Code, Title 24, Part 2. The current version of the California Building Code (CBC) requires interior noise levels within residences attributable to exterior environmental noise sources to be limited to a level not exceeding 45 dBA L_{dn}/CNEL in any habitable room.

2016 California Green Building Standards Code (Cal Green Code). The State of California established exterior sound transmission control standards for new non-residential buildings as set forth in the 2016 California Green Building Standards Code (Section 5.507.4.1 and 5.507.4.2). Section 5.507 states that either the prescriptive (Section 5.507.4.1) or the performance method (Section 5.507.4.2) shall be used to determine environmental control at indoor areas. The prescriptive method is very conservative and not practical in most cases; however, the performance method can be quantitatively verified using exterior-to-interior calculations. For the purposes of this report, the performance method is utilized to determine consistency with the Cal Green Code. The sections that pertain to this project are as follows:

> **5.507.4.1 Exterior noise transmission, prescriptive method.** Wall and roof-ceiling assemblies exposed to the noise source making up the building envelope shall meet a composite STC rating of at least 50 or a composite OITC rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 when the building falls within the 65 dBA L_{dn} noise contour of a freeway or expressway, railroad, industrial source or fixed-guideway noise source, as determined by the local general plan noise element.

5.507.4.2 Performance method. For buildings located, as defined by Section 5.507.4.1, wall and roof-ceiling assemblies exposed to the noise source making up the building envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level ($L_{eq\ (1\text{-}hr)}$) of 50 dBA in occupied areas during any hour of operation.

The performance method, which establishes the acceptable interior noise level, is the method typically used when applying these standards.

City of Santa Rosa General Plan. The Noise and Safety Element of the City of Santa Rosa's General Plan identifies policies that are intended to "maintain an acceptable community noise level to protect the health and comfort of people living, working and/or visiting in Santa Rosa, while maintaining a visually appealing community." Multi-family residential uses normally acceptable in areas with a noise environment of L_{dn} of 65 dBA or less, General Commercial uses are normally acceptable in areas with a noise environment of L_{dn} of 70 dBA or less, and Light Industrial uses are normally acceptable in areas with a noise environment of L_{dn} of 75 dBA or less. (see Figure 12-1).

The following policies are applicable to the proposed project:

NS-B Maintain an acceptable community noise level to protect the health and comfort of people living, working and/or visiting in Santa Rosa, while maintaining a visually appealing community.

NS-B-3 Prevent new stationary and transportation noise sources from creating a nuisance in existing developed areas. Use a comprehensive program of noise prevention through planning and mitigation and consider noise impacts as a crucial factor in project approval.

NS-B-4 Require new projects in the following categories to submit an acoustical study, prepared by a qualified acoustical consultant:

- All new projects that could generate noise whose impacts on other existing uses would be greater than those normally acceptable.

NS-B-5 Pursue measures to reduce noise impacts primarily through site planning. Engineering solutions for noise mitigation, such as sound walls, are the least desirable alternatives.

NS-B-6 Do not permit existing uses to generate new noises exceeding normally acceptable levels unless:

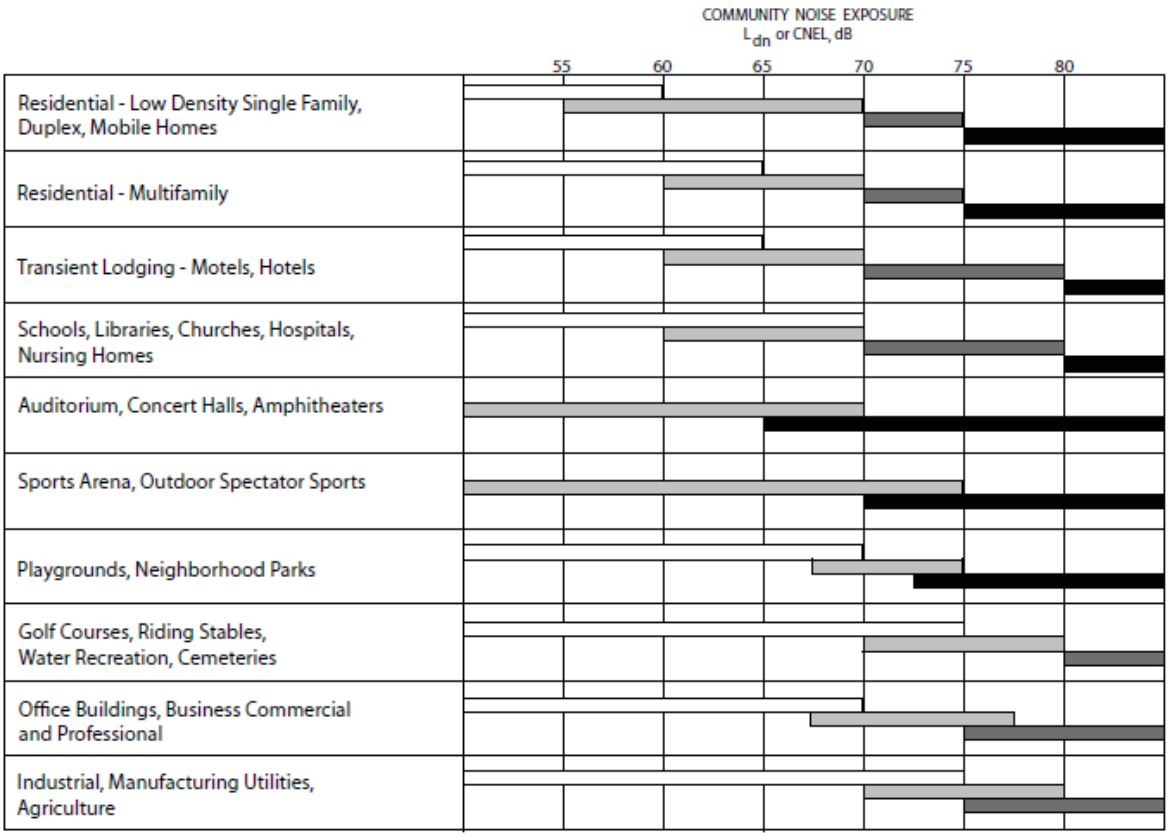
- Those noises are mitigated to acceptable levels; or
- The activities are specifically exempted by the City Council on the basis of community health, safety, and welfare.

NS-B-10 Work with private enterprises to reduce or eliminate nuisance noise from industrial and commercial sources that impact nearby residential areas. If progress is not made within a reasonable time, the City shall issue abatement orders or take other legal measures.

NS-B-14 Discourage new projects that have potential to create ambient noise levels more than 5 dBA L_{dn} above existing background, within 250 feet of sensitive receptors

Figure 12-1

Land Use Compatibility Standards



LEGEND:

NORMALLY ACCEPTABLE
Specified land use is satisfactory, based upon the assumption that any building involved is of normal conventional construction, without any special noise insulation requirements.

CONDITIONALLY ACCEPTABLE
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

NORMALLY UNACCEPTABLE
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

CLEARLY UNACCEPTABLE
New construction or development should generally not be undertaken.

Source: Environmental Science Associates, 2001

City of Santa Rosa Municipal Code.
The City of Santa Rosa has adopted a quantitative noise ordinance in Chapter 17-16 of the Municipal Code. Section 17-16.120 regulates noise from machinery and equipment:

"It is unlawful for any person to operate any machinery, equipment, pump, fan, air conditioning apparatus, or similar mechanical device in any manner so as to create any noise which would cause the noise level at the property line of any property to exceed the ambient base noise level by more than five decibels."

The ambient base noise levels for residential, office, commercial, and industrial areas are established in Section 17-16.030. The applicable ambient noise level criteria are shown in Table 4;

TABLE 4: City of Santa Rosa Municipal Code Ambient Base Noise Levels

Land Use Zone	**Daytime Level** (7am to 7pm)	**Evening Level** (7pm to 10pm)	**Nighttime Level** (10pm to 7am)
Single-Family Residential (R1 and R2)	55 dBA	50 dBA	45 dBA
Multi-Family Residential	55 dBA	55 dBA	50 dBA
Office and Commercial	60 dBA	60 dBA	55 dBA
Intensive Commercial	65 dBA	65 dBA	55 dBA
Industrial	70 dBA	70 dBA	70 dBA

Source: City of Santa Rosa, City of Santa Rosa Municipal Code 17-16.030

The Noise Ordinance defines ambient noise as follows:
"Ambient noise is the all-encompassing noise associated with a given environment usually a composite of sounds from many sources near and far. For the purpose of this chapter, ambient noise level is the level obtained when the noise level is averaged over a period of 15 minutes without inclusion of noise from isolated identifiable sources at the location and time of day near that at which a comparison is to be made."

The noise descriptor, L_{eq}, is used in this report for the purposes of determining noise with respect to these limits.

EXISTING NOISE ENVIRONMENT
The project site is located to the southeast of intersection of Yolanda Avenue and Santa Rosa Avenue and is surrounded by General Commercial zoned land to the northwest and south, and by a multifamily residential use (Harvest Park Apartments) and a Light Industrial zoned parcel to the east. Apparently non-conforming single-family residential uses are situated on the Yolanda Avenue frontage west of the parcel A and industrially zoned parcels to the east. A noise monitoring survey which included one long-term and two short-term measurements as shown in Figure 2, was conducted between June 20th and 24th, 2019 to document existing ambient noise conditions at the proposed site and adjacent existing residential uses. All noise measurements were conducted with Larson Davis Laboratories (LDL) Type I Model 820 Sound Level Meters fitted with a ½-inch pre-polarized condenser microphone and windscreen. The meters were calibrated with a Larson Davis Model CA250 precision acoustic calibrator prior to and following the measurement survey.

The long-term measurement was conducted between 3 p.m. on Thursday, June 20th and 2 p.m. on Monday May 24th, 2019 in a tree at a height of 10 feet above grade 5 feet inside the property line shared between the Parcel E and the Harvest Park Apartment complex. The primary noise source in this area was resident and parking lot noise at the Harvest Park Apartment complex and occasional noise from adjacent commercial uses. Distant traffic noise from Yolanda and Santa Rosa Avenues contributed to the background noise environment. The hourly trend in noise levels measured, including the energy equivalent noise level (L_{eq}), and the noise levels exceeded

01, 10, 50 and 90 percent of the time (indicated as L_1, L_{10}, L_{50} and L_{90}), for this measurement is shown in Chart 1 following. The L_{eq} noise level is typically considered the average noise level, while the L_1 is considered the intrusive level, the L_{50} is considered the median noise level and the L_{90} is considered the background noise level.

A review of Chart 1 indicates that daytime, evening and nighttime average (L_{eq}) noise levels ranged from 47 to 61 dBA, 46 to 54 dBA, and 38 to 51 dBA, respectively, with respective peak hour and average daytime L_{eq} of 61 dBA and 52 dBA, an average evening level of 51 dBA, and an average nighttime level of 43 dBA. The average Day-Night noise Level (L_{dn}) for individual 24-hour periods over the entire 95-hour measurement period ranged from 53 to 56 dBA, with an average L_{dn} of 54 dBA.

The Short-term measurements (ST-1 and ST-2 in Figure 2) were made along Yolanda Avenue at setbacks of 30 and 60 feet from the centerline of Yolanda Avenue (ST-1and ST-2 in Figure 2) at a height of 5 feet above grade to document Yolanda Avenue traffic noise exposure at the proposed site and adjacent existing residential uses. The results of these short-term measurements are shown in Table 5, below.

TABLE 5: Summary of Short-Term Noise Measurement Data

ID	Location (Start Time)	Measured Noise Levels, dBA				Projected Noise Levels, dBA		Primary noise source
		L_{10}	L_{50}	L_{90}	L_{eq}	L_{dn}	Pk. Hr. L_{eq}	
ST-1	30 feet from the centerline of Yolanda Avenue centerline (6/24/19, 1:50 p.m. to 2:00 p.m.)	75	68	61	72	73	78	Traffic on Yolanda Avenue
ST-2	60 feet from the centerline of Yolanda Avenue (6/24/19, 1:40 p.m. to 1:50 p.m.)	70	64	55	68	69	75	Traffic on Yolanda Avenue

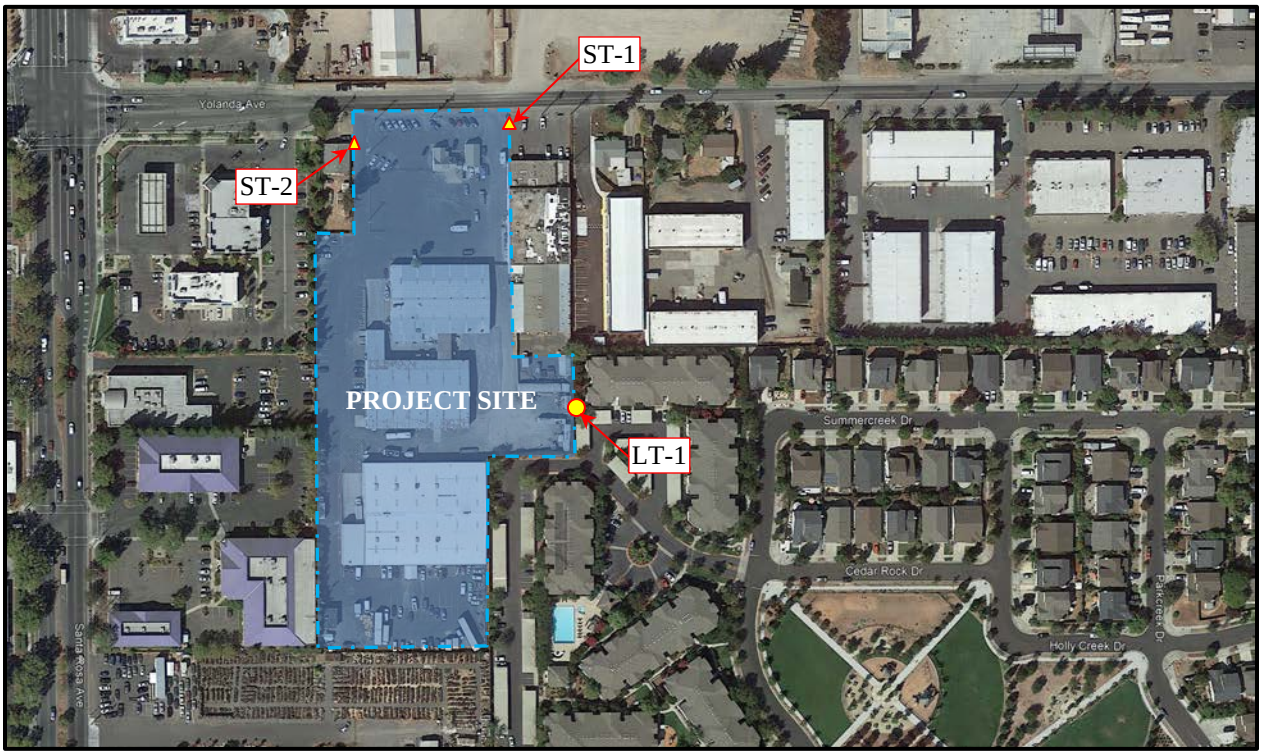
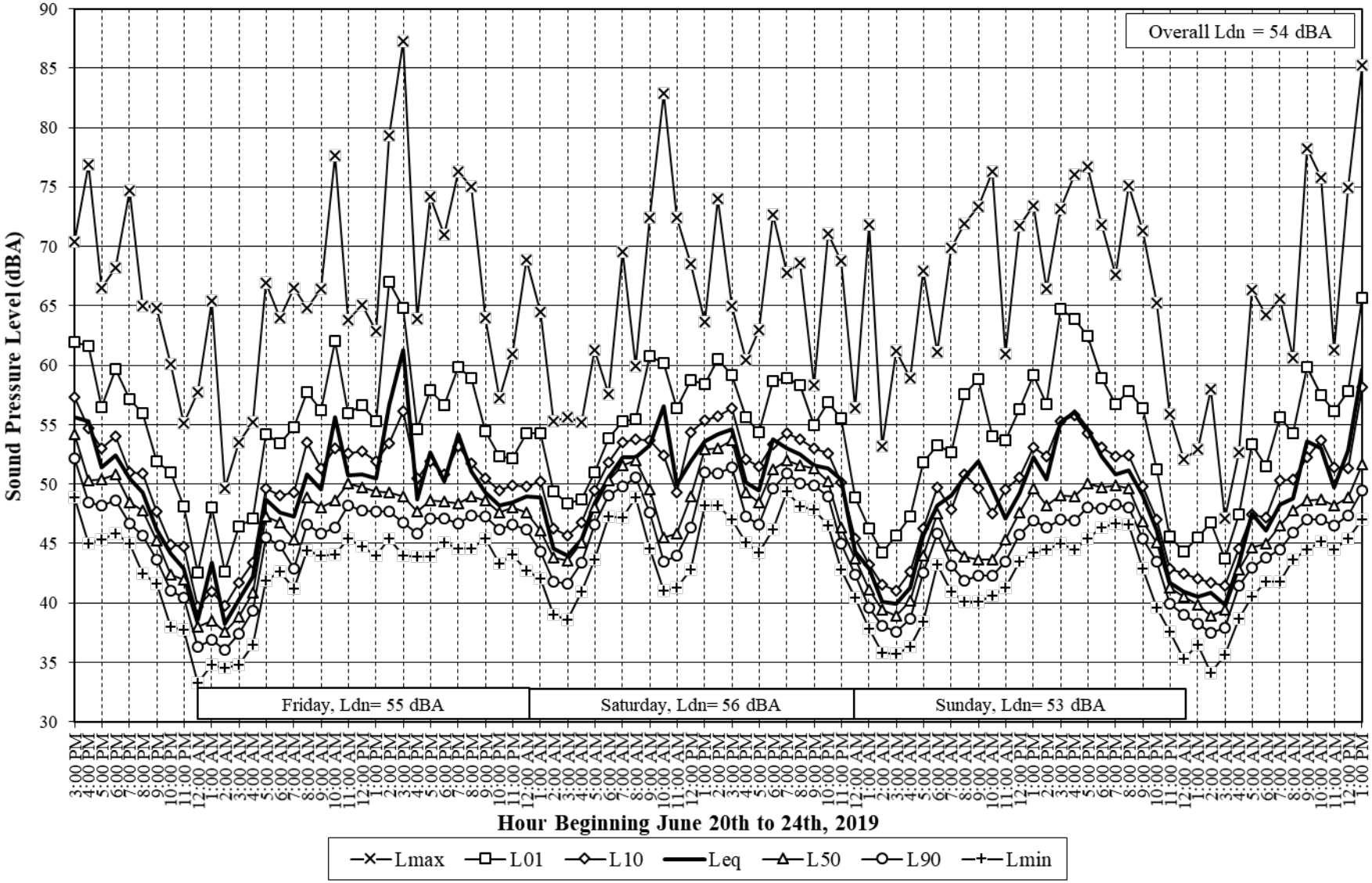


Figure 2: Site Area, Vicinity, and Measurement Locations

Chart 1: Measured Noise Levels at LT-1



GENERAL PLAN CONSISTENCY ANALYSIS

The impacts of site constraints such as exposure of the proposed project to excessive levels of noise and vibration are not considered under CEQA. This section addresses Noise and Land Use Compatibility for consistency with the policies set forth in the City's General Plan.

Noise and Land Use Compatibility

The Noise and Safety Element of City of Santa Rosa's General Plan sets forth policies with the goal of minimizing the impact of noise on people through noise reduction and suppression techniques, and through appropriate land use policies in the City of Santa Rosa. The applicable General Plan policies were presented in detail in the Regulatory Background section and are summarized below for the proposed project:

- The City's acceptable exterior noise level objective is 60 dBA L_{dn} or less for single-family residential uses,
- The City's acceptable exterior noise level objective is 65 dBA L_{dn} or less for multi-family residential uses,
- The City's acceptable exterior noise level objective is 75 dBA L_{dn} for the proposed Light Industrial uses.
- The Cal Green Code standards specify an interior noise environment attributable to exterior sources not to exceed an hourly equivalent noise level ($L_{eq\ (1\text{-}hr)}$) of 50 dBA in occupied areas of non-residential uses during any hour of operation.

Future Exterior Noise Environment:

The primary sources at the project site will continue to be vehicular traffic on Yolanda Avenue and more distant Santa Rosa Avenue. Though no traffic study was reviewed for this analysis, considering the effect of general growth throughout the City and surrounding region, an increase of 1-2% in traffic volume per year on this roadway has been assumed to establish future traffic volumes. Considering this incremental increase, the future noise environment on the project site is expected to increase by approximately 1 decibel over existing noise levels. Considering this increase and the proposed setbacks of new Dispensary/untenanted space and warehouse industrial buildings, these new uses are expected to be exposed to an L_{dn} of 67 dBA and a peak hour L_{eq} of 73 dBA due to traffic on Yolanda Avenue. Future exterior noise levels at the project site would, therefore, be expected to meet Sonoma County's acceptable exterior noise level objective for light industrial uses of 75 dBA L_{dn}.

Under these future conditions (without the project) the multifamily residential uses to the southeast would be exposed to an L_{dn} of 55 dBA and would clearly meet Sonoma County's acceptable exterior noise level objective. However, under these future conditions (without the project) the adjacent (non-conforming) single family residential uses along Yolanda Avenue would be exposed to an L_{dn} of 69 dBA and would be considered "Conditionally Acceptable" for such a use.

Future Interior Noise Environment:

Based on the 105-foot setback of the Cannabis Dispensary/untenanted space building from Yolanda Avenue shown in the current project drawings, the exterior noise level exposure of the closest building façade to Yolanda Avenue is expected to be exposed to an L_{dn} of 67 dBA and a peak hour L_{eq} of 73 dBA. Based on a review of conceptual building plans and elevations and considering typical California construction techniques, this commercial building facade is

expected to provide a minimum of 25 dBA of exterior to interior noise reduction. Considering this we expect that the interior noise levels within the proposed Cannabis Dispensary/ untenanted space building on parcels B and C and the proposed warehouse industrial building on parcel E (and the lot north of it) to meet the CAL Green Code required interior hourly equivalent noise level ($L_{eq\text{-}1Hr}$) limit of 50 dBA during any hour of operation.

NOISE IMPACTS AND MITIGATION MEASURES

This section describes the significance criteria used to evaluate project impacts under CEQA, provides a discussion of each project impact, and presents mitigation measures, where necessary, to provide a compatible project in relation to adjacent noise sources and land uses.

Significance Criteria

The following criteria were used to evaluate the significance of environmental noise resulting from the project:

1. **Temporary or Permanent Noise Increases in Excess of Established Standards:** A significant impact would be identified in the following cases:
   a. Operational Noise in Excess of Standards. A significant noise impact would be identified if the project operations would generate noise levels that would exceed applicable noise standards presented in the Santa Rosa General Plan or Municipal Code.
   b. Permanent Noise Increase. A significant permanent noise increase would occur if project traffic resulted in an increase of 3 dBA L_{dn} or greater at noise-sensitive land uses where existing or projected noise levels would equal or exceed the noise level considered satisfactory for the affected land use (60 dBA L_{dn} for single-family residential areas) and/or an increase of 5 dBA L_{dn} or greater at noise-sensitive land uses where noise levels would continue to be below those considered satisfactory for the affected land use.
   c. Temporary Noise Increase. A significant temporary noise impact would be identified if construction-related noise would temporarily increase ambient noise levels at sensitive receptors. Hourly average noise levels exceeding 60 dBA L_{eq} at the property lines shared with residential land uses, and the ambient by at least 5 dBA L_{eq}, for a period of more than one year would constitute a significant temporary noise increase at adjacent residential land uses. Hourly average noise levels exceeding 70 dBA L_{eq} at the property lines shared with residential land uses, and the ambient by at least 5 dBA L_{eq}, for a period of more than one year would constitute a significant temporary noise increase at adjacent commercial land uses.
2. **Generation of Excessive Groundborne Vibration:** A significant impact would be identified if the construction of the project would expose persons to excessive vibration levels. Groundborne vibration levels exceeding 0.3 in/sec PPV would have the potential to result in cosmetic damage to buildings.

Impact 1: **Temporary or Permanent Noise Increases in Excess of Established Standards.** The project would not result in a substantial permanent traffic noise level increase at existing noise-sensitive land uses in the project vicinity. However, on-site operational noise could exceed City limits and existing noise-sensitive land uses would be exposed to construction noise levels in excess of the temporary noise increase significance thresholds for a period of more than one year. **This is a potentially significant impact.**

a) Permanent Noise from On-Site Operational Noise

Noise generating on-site operational components of the project would include mechanical equipment, potential outside operation and maintenance activities, and parking lot activities. The City of Santa Rosa Municipal Code Section 17-16.030 defines an ambient base noise levels of 55 dBA L_{eq} from 7:00 a.m. to 7:00 p.m., 50 dBA L_{eq} from 7:00 p.m. to 10:00 p.m., and 45 dBA L_{eq} from 10:00 p.m. to 7:00 a.m. for single-family residential areas and 55 dBA L_{eq} from 7:00 a.m. to 7:00 p.m., 55 dBA L_{eq} from 7:00 p.m. to 10:00 p.m., and 50 dBA L_{eq} from 10:00 p.m. to 7:00 a.m. for single-family residential areas. Mechanical equipment noise is limited to not exceed the ambient base noise level by more than 5 dBA. Because ambient noise levels at the single-family home along Yolanda Avenue adjacent to the project site are expected to be higher than nighttime ambient base level of 45 dBA, this analysis assesses all operational components of the project against the most conservative nighttime residential threshold of 55 dBA L_{eq} (5 dBA above the multifamily ambient base noise level of 50 dBA).

Mechanical Equipment

The proposed project buildings are expected to include mechanical equipment such as heating, ventilation, and air conditioning systems (HVAC). Give the state of the current proposal detailed information on the location and specific equipment to be used are not available. However, based on experience with similar uses, it is expected that the HVAC units may generate noise levels of up to 50 to 60 dBA at 50 feet from the equipment. Shielding from equipment enclosures and surrounding structures may provide also provide up to 10 to 15 dBA of equipment noise reduction.

Considering the parcel sizes, the existing single-family residences to the west of the proposed Cannabis Dispensary/untenanted space building may be as close as 50 feet from the building, and the warehouse industrial building extended onto Parcel E may be as close as 35 feet from multi-family residential structures in the Harvest Park Apartment complex.

Assuming a worst-case scenario with unshielded HVAC equipment placed outdoors at ground level adjacent to the proposed buildings, mechanical equipment noise associated with the cannabis dispensary and café could reach noise levels as high as 50 to 60 dBA L_{eq} at single family residences west, and mechanical equipment noise associated with the warehouse industrial building extended onto Parcel E could reach noise levels as high as 53 to 63 dBA L_{eq} at multi-family residences in the Harvest Park Apartment complex. This is a **potentially significant impact**.

Inclusion of **Mitigation Measure 1** would reduce this impact to less-than-significant level.

Parking Lot

Surface parking lots currently exist, but increased parking lot activities are expected at the result from the proposed site improvements. Access to the parking lots of the Cannabis Dispensary/ untenanted space building, the new warehouse industrial building, and existing industrial buildings beyond would be provided from Yolanda Avenue. Noise sources associated with the use of the parking lot would include vehicular circulation, louder engines, car alarms, squealing tires, door slams, and human voices. The typical sound of a passing car at 15 mph would be about 50 to 60 dBA L_{max} at a distance of 50 feet. The noise of an engine start is similar. Door slams typically produce noise levels lower than engine starts. The hourly

average noise level resulting from all these noise-generating activities in a small parking lot is expected to reach 40 dBA L_{eq} at a distance of 50 feet from the parking area.

The nearest residential land uses appear to the proposed parking areas shown in the project plans will be as close as 50 feet from the nearest parking space of the lots. Considering this distance, these residences are expected to be exposed to hourly average noise levels of 40 dBA L_{eq} or less. Parking lot activity noise woul, therefore, not exceed even the more restrictive, nighttime residential, threshold of 55 dBA L_{eq} at the adjacent residences.
This is a less-than-significant impact.

b) Permanent Noise Increases from Project Traffic

Typically, a significant permanent traffic noise increase would occur if the project would increase noise levels at a noise sensitive receptor by 3 dBA L_{dn} or greater where ambient noise levels exceed the "normally acceptable" noise level standard. Where ambient noise levels are at or below the "normally acceptable" noise level standard, noise level increases of 5 dBA L_{dn} or greater would be considered significant. According to the County's General Plan, the "normally acceptable" outdoor noise level standard for noise-sensitive land uses would be 60 dBA L_{dn}.

A traffic report was not reviewed for this analysis, however to cause a 3-dBA increase in noise along Yolanda or Santa Rosa Avenue, the project would have to generate enough traffic to double the current roadway volumes. Given the anticipated size of the project and the current amount of traffic on Yolanda and Santa Rosa Avenues this is not considered possible.
This is a less-than-significant impact.

c) Temporary Noise Increases from Project Construction

Neither the City of Santa Rosa nor the State of California specify quantitative thresholds for the impact of temporary increases in noise due to construction. The threshold for speech interference indoors is 45 dBA (see Setting Section, Effects of Noise). Assuming a 15-dB exterior-to-interior reduction for standard residential construction with windows open and a 25-dB exterior-to-interior reduction for standard commercial construction, assuming windows closed, this would correlate to an exterior threshold of 60 dBA L_{eq} at residential land uses and 70 dBA L_{eq} at commercial land uses. Therefore, the project would be considered to generate a significant temporary construction noise impact if project construction activities exceeded 60 dBA L_{eq} at nearby residences or exceeded 70 dBA L_{eq} at nearby commercial land uses and exceeded the ambient noise environment by 5 dBA L_{eq} or more for a period longer than one year.

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

No time frame for project construction is available, however project construction may occur over a period of more than one year and is anticipated include demolition of existing structures and pavement, site preparation, grading and excavation, trenching, building

erection, and paving. The hauling of excavated materials and construction materials would generate truck trips on local roadways as well. Pile driving is not anticipated in any phase of construction of the project.

Construction activities would be carried out in stages. During each stage of construction, there would be a different mix of equipment operating, and noise levels would vary by stage and vary within stages, based on the amount of equipment in operation and the location at which the equipment is operating. Typical construction noise levels at a distance of 50 feet are shown in Tables 6 and 7. Table 6 shows the average noise level ranges, by construction phase and Table 7 shows the maximum noise level ranges for different construction equipment. Most demolition and construction noise falls within the range of 80 to 90 dBA at a distance of 50 feet from the source. Construction-generated noise levels drop off at a rate of about 6 dBA per doubling of the distance between the source and receptor. Shielding by buildings or terrain can provide an additional 5 to 10 dBA noise reduction at distant receptors.

TABLE 6 Typical Ranges of Construction Noise Levels at 50 Feet, L_{eq} (dBA)

	Domestic Housing		Office Building, Hotel, Hospital, School, Public Works		Industrial Parking Garage, Religious Amusement & Store, Service Station		Public Works Roads & Highways, Sewers, and Trenches	
	I	II	I	II	I	II	I	II
Ground Clearing	83	83	84	84	84	83	84	84
Excavation	88	75	89	79	89	71	88	78
Foundations	81	81	78	78	77	77	88	88
Erection	81	65	87	75	84	72	79	78
Finishing	88	72	89	75	89	74	84	84

I - All pertinent equipment present at site.
II - Minimum required equipment present at site.

Source: U.S.E.P.A., Legal Compilation on Noise, Vol. 1, p. 2-104, 1973.

TABLE 7 Construction Equipment 50-foot Noise Emission Limits

Equipment Category	L_{max} Level (dBA)1,2	Impact/Continuous
Arc Welder	73	Continuous
Auger Drill Rig	85	Continuous
Backhoe	80	Continuous
Bar Bender	80	Continuous
Boring Jack Power Unit	80	Continuous
Chain Saw	85	Continuous
Compressor[3]	70	Continuous
Compressor (other)	80	Continuous
Concrete Mixer	85	Continuous
Concrete Pump	82	Continuous
Concrete Saw	90	Continuous
Concrete Vibrator	80	Continuous
Crane	85	Continuous
Dozer	85	Continuous
Excavator	85	Continuous
Front End Loader	80	Continuous
Generator	82	Continuous
Generator (25 KVA or less)	70	Continuous
Gradall	85	Continuous

Equipment Category	L_{max} Level (dBA)1,2	Impact/Continuous
Grader	85	Continuous
Grinder Saw	85	Continuous
Horizontal Boring Hydro Jack	80	Continuous
Hydra Break Ram	90	Impact
Impact Pile Driver	105	Impact
Insitu Soil Sampling Rig	84	Continuous
Jackhammer	85	Impact
Mounted Impact Hammer (hoe ram)	90	Impact
Paver	85	Continuous
Pneumatic Tools	85	Continuous
Pumps	77	Continuous
Rock Drill	85	Continuous
Scraper	85	Continuous
Slurry Trenching Machine	82	Continuous
Soil Mix Drill Rig	80	Continuous
Street Sweeper	80	Continuous
Tractor	84	Continuous
Truck (dump, delivery)	84	Continuous
Vacuum Excavator Truck (vac-truck)	85	Continuous
Vibratory Compactor	80	Continuous
Vibratory Pile Driver	95	Continuous
All other equipment with engines larger than 5 HP	85	Continuous

Notes:

1 Measured at 50 feet from the construction equipment, with a "slow" (1 sec.) time constant.

2 Noise limits apply to total noise emitted from equipment and associated components operating at full power while engaged in its intended operation.

3 Portable Air Compressor rated at 75 cfm or greater and that operates at greater than 50 psi.

Source: Mitigation of Nighttime Construction Noise, Vibrations and Other Nuisances, National Cooperative Highway Research Program, 1999.

Project construction activities could take place as close as 40 feet from existing residential uses. When construction activities are occurring at this closest range they are expected range from 80 to 92 dBA L_{max} and hourly average noise levels are calculated to range from 76 to 87 dBA L_{eq}. Noise levels would be lower as construction moves away from shared property lines or into shielded areas. However, construction noise could exceed 60 dBA L_{eq} at residences and 70 dBA L_{eq} at commercial areas and the ambient noise environment by 5 dBA L_{eq}, for a period greater than one year. **This is a potentially significant temporary impact.**

Implementation of **Mitigation Measure 1** would reduce this impact to less-than-significant level.

Mitigation Measure 1: The following mitigation measures would reduce this impact to a less-than-significant level.

a) Permanent Noise from On-Site Operational Noise

Prior to the issuance of building permits, project mechanical equipment shall be selected and designed to reduce impacts on surrounding uses to meet the City's noise ordinance requirements. A qualified acoustical consultant shall be retained by the project applicant to review mechanical noise as the equipment systems are selected in order to determine specific noise reduction measures necessary to reduce noise to comply with the City's noise limits at the shared property lines. Noise reduction measures could include, but are not limited to,

placement of noisy equipment in areas which are acoustically shielded from the adjacent residential uses, selection of equipment that emit low noise levels, and/or installation of noise barriers such as enclosures and parapet walls to block the line of sight between the noise source and the nearest receptors.

b) *Permanent Noise Increases from Project Traffic*
None needed.

c) *Temporary Noise Increases from Project Construction*
Implementation of the following measures would reduce construction noise levels emanating from the site, limit construction hours, and minimize disruption and annoyance.

- Construction activities shall be limited to allowable construction hours (typically 7:00 am to 7:00 pm on weekdays). No construction activities are permitted on Sundays and holidays.
- Limit use of construction equipment which can generate noise levels of 90 dBA or more at 50 feet, such as Concrete Saws, hoe rams, or others, to a distance of 50 feet or greater from residences, where feasible. Construct temporary noise barriers to screen stationary noise-generating equipment, such as the concrete saws, when located near adjoining sensitive land uses. Temporary noise barriers could reduce construction noise levels by 5 dBA or more.
- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Unnecessary idling of internal combustion engines should be strictly prohibited.
- Locate stationary noise-generating equipment such as air compressors or portable power generators as far as possible from sensitive receptors.
- Utilize "quiet" air compressors and other stationary noise sources where technology exists.
- Control noise from construction workers' radios to a point where they are not audible at existing residences bordering the project site.
- Notify all adjacent business, residences, and other noise-sensitive land uses of the construction schedule, in writing, and provide a written schedule of "noisy" construction activities to the adjacent land uses and nearby residences.
- Designate a "disturbance coordinator" who would be responsible for responding to any complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint (e.g., bad muffler, etc.) and will require that reasonable measures be implemented to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include in it the notice sent to neighbors regarding the construction schedule.

Impact 2: **Generation of Excessive Groundborne Vibration due to Construction.** Construction-related vibration levels would not exceed 0.3 in/sec PPV at the nearest structures. **This is a less-than-significant impact.**

City of Santa Rosa's General Plan does not specify a construction vibration limit. Based on the thresholds provided by Caltrans (see Table 3), a construction vibration limit of 0.3 in/sec PPV would minimize damage at buildings of normal conventional construction. A significant impact would occur if buildings adjacent to the proposed construction site were exposed to vibration levels in excess of 0.3 in/sec PPV.

The construction of the project may generate perceptible vibration when heavy equipment or impact tools (e.g. jackhammers, hoe rams) are used. Construction activities would include site demolition work, preparation work, excavation of below-grade levels, foundation work, and new building framing and finishing.

Table 8 presents typical vibration levels that could be expected from construction equipment at a distance of 25 feet. Construction activities, such as use of saws, excavators, scrapers and other high-power or vibratory tools, and rolling stock equipment (tracked vehicles, compactors, etc.) may generate substantial vibration in the immediate vicinity. Vibration levels would vary depending on soil conditions, construction methods, and equipment used.

TABLE 8 Vibration Source Levels for Construction Equipment

Equipment		PPV at 25 ft. (in/sec)
Clam shovel drop		0.202
Hydromill (slurry wall)	in soil	0.008
	in rock	0.017
Vibratory Roller		0.210
Hoe Ram		0.089
Large bulldozer		0.089
Caisson drilling		0.089
Loaded trucks		0.076
Jackhammer		0.035
Small bulldozer		0.003

Source: Transit Noise and Vibration Impact Assessment, United States Department of Transportation, Office of Planning and Environment, Federal Transit Administration, September 2018.

The nearest existing structures are residences located about 30 feet from anticipated project construction areas. Pile driving is not anticipated for this project. At a distance of 30 feet vibration levels from construction are anticipated to be less than 0.20 in/sec PPV. Vibration levels may be perceptible to occupants but would be below the 0.3 in/sec PPV vibration limit. Construction vibration would not be anticipated to cause architectural or structural damage to the nearest buildings and would not be considered excessive. As construction moves away from the shared property lines, vibration levels would be even lower. This is a **less-than-significant** impact.

Mitigation Measure 2: None required.

BC Engineering Group
Civil Engineering & Land Planning

Project Description

This Project Description details the proposed development involving seven Assessor's parcels along Yolanda Avenue in Santa Rosa. Assessor's parcels associated with the project are as follows:

044-072-006
044-072-007
044-072-008
044-072-009
044-081-024
044-081-029
044-390-061

The project will include a new 17,982 square foot industrial building, a new 8,442 square foot building with three separate uses and premises; a cannabis dispensary (4,744 SF), a cannabis microbusiness (1,419 SF), and a vacant/untenanted space (2,279 SF). The proposed development also includes 61 new parking stalls, including 7 ADA parking stalls, proposed planting of 50 trees, and improvements to two existing buildings totaling 32,000 square feet to create a multi-unit industrial alteration building. An existing approximately 30,000 square foot industrial building is to remain on parcel 044-081-029.

Utilities to support the proposed development will include, but are not limited to, City of Santa Rosa water and sewer, and PG&E gas and electric. To reduce storm water pollution, protect water quality, and promote groundwater recharge, the proposed development will adhere to the City of Santa Rosa's low impact development requirements and utilize the City of Santa Rosa's storm drain system where necessary.

The project will require multiple applications to the City of Santa Rosa, including General Plan Amendment and Rezoning, Major Conditional Use Permit, and Minor Design Review for the new 8,442 square foot building.

General Plan Amendment and Rezoning

The purpose of the General Plan amendment under GPAM18-007 is to modify the current General Plan designations for six of the project Assessor's parcels. The General Plan amendment is intended to support the proposed development of the six Assessor's parcels, as demonstrated on the attached Site Plan developed by Henderson Architect, Inc. The Assessor's parcel numbers for the six Assessor's parcels included in the General Plan amendment are 044-070-006, 044-072-007, 044-072-008, 044-081-024, 044-081-029, and 044-390-061. In addition to the General Plan Amendment, a Rezoning application has been submitted under REZ19-003 to rezone the six Assessor's parcels to conform to the proposed General Plan designations.

The proposed 17,982 square foot industrial building is part of the overall proposed development; however, only a portion of the building is located on one of the six Assessor's parcels proposed for General Plan amendment, that parcel being 044-390-061. The remainder of the proposed building is located on 044-072-009, which already has the same zoning and General Plan designations as those designations proposed for the six Assessor's parcels associated with the General Plan amendment and Rezoning applications.

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Following is a summary of each of the parcels included in the General Plan amendment (GPAM18-007) and Rezoning (REZ19-003), including existing and proposed designations and uses:

044-072-006 – 324 Yolanda Avenue
Parcel Area: 0.17 Acres
Current GP Designation: Undesignated
Proposed GP Designation: Light Industrial
Current Zoning: CG
Proposed Zoning: IL
Current Use: Light Industrial
Proposed Use: Light Industrial - Access Drive

044-072-007 – 330 Yolanda Avenue
Parcel Area: 0.34 Acres
Current GP Designation: Retail and Business Services
Proposed GP Designation: Light Industrial
Current Zoning: CG
Proposed Zoning: IL
Current Use: Light Industrial
Proposed Use: Light Industrial - Cannabis Dispensary, Cannabis Microbusiness, and Vacant/Untenanted Space

044-072-008 – 350/358 Yolanda Avenue
Parcel Area: 0.33 Acres
Current GP Designation: Retail and Business Services
Proposed GP Designation: Light Industrial
Current Zoning: CG
Proposed Zoning: IL
Current Use: Light Industrial
Proposed Use: Light Industrial - Cannabis Dispensary, Cannabis Microbusiness, and Vacant/Untenanted Space

044-081-024 – 328 Yolanda Avenue
Parcel Area: 1.92 Acres
Current GP Designation: Retail and Business Services
Proposed GP Designation: Light Industrial
Current Zoning: CG
Proposed Zoning: IL
Current Use: Light Industrial
Proposed Use: Light Industrial - Industrial Alteration Building (multi-unit)

044-081-029 – 324 Yolanda Avenue
Parcel Area: 1.68 Acres
Current GP Designation: Retail and Business Services
Proposed GP Designation: Light Industrial
Current Zoning: CG
Proposed Zoning: IL
Current Use: Light Industrial

Proposed Use: Light Industrial – Existing Building

044-390-061 – No Address Assigned
Parcel Area: 0.45 Acres
Current GP Designation: Med-High Residential
Proposed GP Designation: Light Industrial
Current Zoning: R-3-15
Proposed Zoning: IL
Current Use: Light Industrial
Proposed Use: Light Industrial – Portion of Proposed 17,982 SF Industrial Building

Major Conditional Use Permit

The proposed 8,442 square foot building with three separate uses and premises; a cannabis dispensary (4,744 SF), a cannabis microbusiness (1,419 SF), and a vacant/untenanted space (2,279 SF), will require submittal of a Major Conditional Use Permit. The submittal is to permit the uses associated with the single building which proposes hours of operation of 10am to 6pm, 7 days a week.

Use Permit Project Summary

A purpose-built, immersive retail destination, the Friends & Farmers facility offers a rare opportunity to instill, from inception, a commitment to health, wellness and sustainable development with a sophisticated and welcoming atmosphere, where patients and consumers can learn about the truly remarkable attributes of this therapeutic plant – within a thoughtfully designed, naturally engaging, and inspiring environment.

Offering exceptionally pure, locally grown and high quality cannabis products, Friends & Farmers will provide an experiential retail destination that serves as a home for the new cannabis culture, and a focal point for the renewal of Santa Rosa's Yolanda Avenue district.

Modeled after the great wineries of the region, and in alignment with the agrarian roots of the community, Friends & Farmers will be a place to engage with, learn about and purchase the highest quality, sun grown and craft cannabis products from our NorCal region. The applicant is committed to this facility serving as a flagship location in support of the heritage and legacy of cannabis in Northern California, innovative green building design, and the health of our community.

The facility will be inclusive of a beautifully designed retail storefront (cannabis dispensary permit), type 6 non-volatile manufacturing area (cannabis manufacturing permit), a small, glass greenhouse that will serve as a demonstration garden for educational purposes (cannabis craft cultivation and small nursery permit), a private member's consumption lounger for guided tasting experiences and private health consultations (not including smoking or vaping), and a non-cannabis licensed lifestyle storefront for showcasing other locally produced market-style, lifestyle goods for health and wellness.

Built from the ground up, the store will be designed to educate, engage and inspire a deeper understanding of cannabis, and its wide-reaching therapeutic potential. Taking cues from the applicant's extensive work in the wine industry, and three-years of hands-on experience running their own virtual cannabis dispensary, they know how to provide

exceptional customer service with informed and personalized health consultations suited to each individual's needs and desires.

A beautiful, comfortable and inviting retail environment, the store will offer a thoughtfully curated product selection – defined by absolute purity, standardized potency and full-spectrum therapeutic effect. Our product curation will continue to include best-of-class products supporting Northern California's heritage of the local craft farmer, and biodynamic, sun grown and regenerative farming practices.

Cultivation and Nursery
The applicant proposes a cultivation canopy of roughly 476 square feet. A glass greenhouse will serve as an educational showpiece, offering the chance for visitors to see the plant in its various stages of plant growth and to learn about the differences between cultivars, terpene development and growing techniques. Customers will be able to look in through the glass to see the plants and other herbs that they will have growing for demonstration purposes. Some plants will be harvested and dried for packaging and sale on site with demonstrations on harvesting, curing and trimming. The project will grow plants to full-term, as well as have the ability to cut and plant clones, and sell them to customers in hand-made pots etc.

Manufacturing
Onsite manufacturing, including nonvolatile, CO2 extraction will be conducted onsite. Activities will include extraction, processing, sorting, packaging and grading. This use is permitted in the IL-Light Industrial zones, but is included in the Use Permit project description in order to provide a complete perspective on operations and to be clear that since the parcel is in the midst of rezoning, it is allowed in the IL zones.

Distribution
Onsite distribution of cultivated and manufactured cannabis and cannabis products will be conducted onsite. Activities include interacting with lab facilities to ensure quality control and lab testing, collection of taxes, and logistics. This use is permitted by right in the IL-Light Industrial zones, but is included in the Use Permit project description in order to provide a complete perspective on operations since the parcel is in the midst of rezoning from CG to IL.

Retail
The applicant proposes to operate a cannabis retail dispensary which will utilize 4,744 SF of the proposed building. Visitors to the cannabis retail dispensary will check in at the reception area and have their identification and age verified. Visitors will be accompanied by a designated security person and either go directly to the retail floor or be offered a private seated consultation. A walk up service counter and pick up counter for online or phone orders will be available. There is a separate area from the main retail floor that's designed as a private consultation area to host customers and patients who have more complicated health needs, who may be remiss to share their most personal details in a larger public space. This area will be large enough to also be used as a conference room, meeting room or lounge area, to accommodate larger groups, celebrities, and members looking for a private location to meet - overlooking the greenhouse. Since this will be a private area, customers, patients and guests, will have the chance to try products allowable by the on site consumption regulations including CBD, tinctures, sublingual, topicals and edibles (excluding vape or smoking options).

A separate vacant/untenanted space is contained within the proposed building. At this time, it is undetermined what will occupy the vacant/untenanted space.

Environmental Sustainability

Multiple environmental sustainability commitments have been made as a part of the project, including, EV charging stations, bike stands, upgraded pedestrian access, solar panels, LED lights, drought tolerant landscaping, low flow toilets, water wise appliances, non-toxic cleaning agents, and employee carpool planning.

Minor Design Review

The proposed 8,442 square foot building requires a Minor Design Review submittal to the City of Santa Rosa. Below is the Design Concept Narrative developed by Henderson Architect:

Design Concept Narrative
The Yolanda avenue dispensary project will be a newly constructed retail building at the location of the former auto sales business located at 358 Yolanda Avenue. The site is currently in the approval process for a General Plan amendment and Zoning change to convert the site from CG zoning to IL zoning. The anticipated hearing date is in October.

The building is being built by the property owner as a shell retail building with the intent of leasing the building to cannabis micro-business that will include a Dispensary, Distribution, a small Demonstration Manufacturing and Grow area within the building. A portion of the building will be leased to a separate tenant yet to be identified. The space is currently identified as vacant on the floor plan.

This project incorporates the City requirements for the road enlargement and new frontage improvements along Yolanda Avenue. In a separate design review package, we will be submitting a new industrial building located to the East of this retail building project. The new industrial building and this retail building will be the new Yolanda "frontage façade" for the entire industrial parcel comprised of multiple buildings. The design of this retail building and the industrial building have been coordinated so that there is uniformity of the architecture on the site when viewed from Yolanda Avenue.

Site: Natural and Built Environment
The site is currently comprised of a small commercial building that appears to be a converted residence. The existing structure is very residential in form and scale and is entirely surrounded by asphalt with chain link fencing to separate this parcel from the adjacent parcels under the same ownership. The new retail building will be set back away from Yolanda in order to allow for the frontage improvements that will accommodate a new center turn lane, bike lane, generous landscape buffer and sidewalk. Interior to the frontage improvements is parking adjacent to the building landscape buffer and walkways for access around the retail building. There is a central landscape peninsula at the center entrance to the retail building that will have polished basalt stone benches, decomposed granite walkways, and landscaping. This central outdoor area will provide a nice gathering area in front of the retail buildings central entrance.

Architecture

The building design is based on a modification of the form of a traditional horse barn that can be seen throughout the rural area of Sonoma County. The tall roofed central section will serve as an open-air courtyard and reception area for people using the retail functions within the two "wings" of the horse barn form. This central section is open to the exterior with a large opening that can be closed off by the large sliding barn doors. On the front façade above the sliding barn doors are large square glazed windows that reference a hay loft barn door you would see on traditional horse barns. The same windows can be found on the upper area of the rear side of the large central volume. There are also clerestory windows along both sides of the taller central form.

Each side of the central tall form is a separate retail lease space. It is intended that West lease space will be the location of the future dispensary and the East space will be leased to a yet to be determined tenant. See the attached color floor plan diagram that illustrates the locations of the proposed building uses.

For the potential dispensary tenant there will be a greenhouse built at the rear of the central tall open-air space. This will be the location of the nursery/grow portion of the microbusiness. The manufacturing space will be located with the Dispensary wing of the retail space. The Distribution office is carved out of the vacant space intended for a future tenant. It is separate but within the wing to be leased to the a future tenant.

The building materials are proposed to be a grey patinaed cedar board and batten siding with black accents at the roof brackets, window frames, and door hardware. The barn doors will be "weathered" white paint color. The roof will be a light grey metal roof.

Landscaping

The site access and landscaping for both the retail building and the adjacent new industrial building will be developed at the same time and will be landscaped with the same palette to provide continuity to the site and to assist in working towards a comprehensive campus feel.

The landscape frontage around the sidewalk will be planted with Chinese Pistache along the street and some intermittent Redbuds interior to the site from the sidewalk. There will be shrubs and ground cover among these trees along the frontage.

Interior to the site and more adjacent to the building will be larger Chinese Elm trees, Chinese Pistache, Western Redbud and Sweet Bay trees. A few accent trees near the outdoor seating area in front of the building entrance include Gravenstein Apple and Olease Europea located to reinforce the "farm to table" concept that will be reinforced in the concept of the Dispensary interior. Among these trees will be a variety of shrubs and ground cover to provide visual interest to the site.

On the Yolanda side of the building wings there will be a wood trellis built in front of each wing that will be used to grow vines and foliage to soften the façade of the building.

Placemaking/Livability:

This project proposes a major upgrade to this site. Currently it is very uninviting and almost dangerous as it is a field of asphalt connected to Yolanda way with a maze of chain link fences.

The new frontage with bike lane, sidewalk and landscaping will be an immense improvement and provide a needed buffer between the roadway and the pedestrian sidewalk providing for a safer and more pleasant neighborhood experience when traveling along the sidewalk. Sidewalk connections are provided at two locations along the frontage of the retail and industrial building to provide pedestrian access into the site.

The fruit bearing accent trees near the entrance area available to anyone who chooses to pick a piece of fruit to take with them.

Street and parking trees with provide shade for the sidewalk and the parking lot to help in reducing with the heat island effect of the current site.

Sustainability

The buildings will be very energy efficient and will exceed title 24 requirements for HVAC, lighting, and building shell requirements. Thermally broken storefront and fixed window frames are utilized. The exterior cedar siding is a natural renewable material that is pest resistant. The metal roof will be a cool roof and will require almost no future maintenance. The materials that will be used within the building will exceed the requirements for VOC content and off-gassing.

Please refer to the Design Review submittal drawings, renderings, and material board for more information.

APPENDIX H

Cannabis Security Measures

Application for Minor Use Permit
Cannabis Retail, Manufacturing, Distribution, Cultivation and Nursery
Sunstone Advisors, Inc.
350 Yolanda Avenue

Proposed Use: Adult-Use Cannabis Retail, Manufacturing, Distribution, Cultivation and Nursery
Owner: Allan Henderson
Applicant: Sunstone Advisors, Inc.
Address: 350 Yolanda Avenue ("Property")
APN: 044-072-007 and 044-072-008 (to be merged)
Building Size: 8,441 sq. ft.
Lot Size (merged): 36,227 sq. ft.
Zoning: CG - General Commercial (rezone to IL- Light Industrial)
General Plan: Light Manufacturing & Industrial

INTRODUCTION

Applicant proposes to occupy the entire square footage of the 8,441 square foot building that will be constructed at 350 Yolanda Avenue (the "Building"), Sonoma County APNS 044-072-007 and 044-072-008 and obtain a Minor Use Permit for the operation of a non-volatile commercial cannabis facility (the "Project"). Please note that the APN's listed above are recognized by the City of Santa Rosa as being "350 Yolanda Avenue", but the physical address is marked as "358 Yolanda Avenue".

MINOR USE PERMIT AND INDEMNIFICATION AGREEMENT

The application for the Minor Use Permit and the Indemnification Agreement are attached.

ADDITIONAL DOCUMENTS

Included are the following:

- Disclosure Form
- Vicinity Map
- Neighborhood Context Map
- Proposed Site Plan
- Floor Plans.
- Storm Water Determination Worksheet
- Environmental Assessment
- Design Review

ZONING AND SETBACK ISSUES

Zoning
The Property is currently zoned CG - General Commercial, with rezoning to IL- Light Industrial), with Light Manufacturing & Industrial General Plan designation, one of the designated zoning districts where cannabis manufacturing uses are allowed.

The parcel is located on a heavily developed industrial and commercial street. The area around the Parcel is industrial and commercial in nature.

"Abutting" a Residential Zoning District or Use
Because the property abuts a residential use, a Minor Use Permit is required for non-volatile cannabis manufacturing (Type 6), however, this application includes the request for distribution and cultivation as well as an amended retail description which requires a Minor Use Permit.

BUILDING CHANGES

Exterior Modifications

As previously filed with the City of Santa Rosa under the General Plan Amendment, this project involves the demolition of the existing building and construction of a new, approximately 8,441 square foot building.

Interior Modifications
The floor plans submitted with the permit application describe the internal modifications to the Building, including the layout and square footages for the various planned uses. Approximately 889 square feet of the existing footprint will be dedicated to cannabis manufacturing, 476 square feet will be dedicated to cannabis cultivation, 3,965 square feet will be dedicated to a cannabis retail and 2,279 square feet will be dedicated to traditional retail. The remaining square footage will be a reception area.
Please see Henderson plans.

PARKING
The Building has a total of 24 parking spaces located along its western side. Santa Rosa City Code §20-36.040 (as amended) requires one (1) parking space per 350 square feet for manufacturing activities. Thus, at least twelve spaces would be required for the manufacturing activity. The City of Santa Rosa also requires one (1) space per 1,000 sf. for cultivation activities and one (1) space per 1,000 sf. for distribution activities and one (1) space for each 250 sf. for retail for a total of 32 spaces required, of which, 24 are provided with 30 additional spaces provided in an overflow lot designated on the site plans. There are a total of two (2) ADA approved parking spaces required and provided and two (2) bicycle spaces are required and provided, thus, Applicant meets the City's parking standards.

COMPLIANCE WITH CITY OF SANTA ROSA CHAPTER 20-46

20-46.040 Cannabis Businesses
Land Use: Cannabis – Manufacturing, Distribution, Cultivation and Retail

Where allowed: Division 2 (Zoning Districts and Allowable Uses) dictates that manufacturing, distribution, cultivation and retail uses are permitted in the IL- Light Industry zones. This property is in the process of rezoning from CG to IL.

20-46.050 General Operating Requirements

Dual Licensing: As a new operator, Sunstone Advisors, Inc. will seek and obtain both permitting by the City of Santa Rosa and licensure from the California Department of Public Health Manufactured Cannabis Safety Branch, as well as the CDFA and BCC as required prior to commencing commercial cannabis activities.

Description of Extraction Processes: Performing extractions is probably one of the most well-known physical hazard in the cannabis industry. With the processes that are commonly used there is a large explosion and fire hazard when extracting oils from the cannabis plant. In response to this known hazard, fire departments like Santa Rosa have developed extraction guidelines for commercial/licensed facilities that clarify common code requirements. Local municipalities fire codes will be adhered to. High heat and pressure may be combined to make products like rosin. High-pressure machinery poses a hazard both from the pressing and high-pressure build-up to extract oils and from explosion hazards and burns. CO2 is commonly used for extractions and is covered under its own section in this document.

Minors: As an adult use cannabis business, Sunstone Advisors, Inc. will only allow on the premises persons who are 21 years of age and older and who possess a valid government-issued photo identification card.

Inventory and Tracking: Applicant shall operate at all times in a manner to prevent diversion of cannabis and shall comply with the State of California track and trace program.

Building and Fire Codes: Applicant will obtain a building permit to conform with the appropriate occupancy classification; will obtain all annual operating fire permits with inspections prior to operation; will comply with all Health and Safety Code and California Fire Code requirements, including obtaining CUPA permits and filing CERS submissions; and will provide the Fire Department with a lock box for gates and doors.

SECURITY

The Building will employ security measures as required by Section 20-46.050(G) and Title 17, Division 1, Chapter 13, Subchapter 3, of the California Code of Regulations, as amended from time to time, including:

- twenty-four hour security cameras covering all areas where cannabis is handled;
- a professionally monitored robbery alarm system;
- card- or fob- based system to control and log access through all doors, integrated with the cameras and security system
- secure storage for all cannabis products and waste;
- procedures for secure and safe transportation of cannabis products and currency as required under state law;
- commercial-grade door and window locks; and
- emergency access measures in compliance with California Fire Code and Santa Rosa Fire Department standards.

A complete security plan was submitted in connection with the retail application. We request that the security plan be kept confidential and not released to the public for safety considerations.

All staff will be trained in safety measures to ensure the proper handling and mitigation of any potential hazard. All personnel will strictly adhere to safety protocols. These include, but are not limited to, the following:

- Precautionary safety measures
- Adherence to State and Local laws as well as industry standards
- Machinery training and supervision (machinery is only to be operated in the presence of lead engineer)
- Personnel safety training and accident avoidance/mitigation training
- Protective equipment (e.g. eyewear, gloves, masks) where appropriate
- Training in the safe handling of chemical materials and volatile compounds
- Scheduled safety checks by lead engineer
- Frequent cleaning schedule
- Evacuation plan and notification system
- Third party engineer safety checks as required by law
- Monitoring systems (smoke, CO2, and gas detectors/sensors)
- Sprinkler system
- Secure premises with dual entry method required (e.g. two separate keys)
- Fire extinguishers present and maintained
- Monitored security system (e.g. video surveillance, alarm)

Additionally, compliance with Santa Rosa Ordinances, California law, and all future ordinances, laws, and regulations is to be maintained at all times. The Sunstone team shall

be responsible for the upkeep of knowledge of accepted industry standards and practices, as well as machinery safety enhancements or upgrades on an ongoing basis.

ODOR CONTROL. A complete odor control and mitigation plan is included. Applicant will comply with the odor control plan and will employ an air treatment system that ensure off-site odors of cannabis will not result to the maximum extent practicable.

LIGHTING. Interior and Exterior lighting shall be provided for security purposes and shall comply with City regulations regarding location, intensity, and impacts to the neighborhood. Interior systems will be fully shielded, including adequate coverings on windows to confine light and glare to the interior of the structure.

NOISE. The use of any air conditioning and ventilation equipment shall comply with Chapter 17-16 (Noise).

HOURS OF OPERATION. The facility will operate according to Santa Rosa regulations. Manufacturing will only take place during normal business hours.

PRODUCT SECURITY. Inventory controls and loss documentation procedures will be implemented. A web-based inventory control system will be accessible upon demand to assist the City of Santa Rosa with its requirement to implement a track and trace program. All cannabis products produced, manufactured, or distributed through the facility will be inventoried into the system including the employee identification number, date/time, quantity, strain and batch number. This system will keep track of all cannabis onsite until the product is either purchased or disposed of. All employees will be trained to report loss or theft immediately to the company and the City of Santa Rosa.

EMPLOYEE SECURITY/HIRING/TRAINING. The applicant will implement standard operating procedures which have proven successful in other locations. Vendors will be used to train employees on product safety and best management practices. Hiring practices will focus on the Santa Rosa and Sonoma County employee pool Employees and managers will receive extensive training on safe industry practices, best management practices, City of Santa Rosa regulations and the requirements of the permits called for under this Use Permit, California regulations and the requirements of any State license subsequently obtain, and Federal Guidelines regarding diversion and protection of minors. Employees will be paid a living wage in order to support the City of Santa Rosa's efforts to create a sustainable jobs base, and contribute to creation of head of household jobs.

All security protocols and elements will comply with SRCC §20-46.50 (G).

CULTIVATION AND NURSERY

The applicant proposes a cultivation canopy of roughly 476 square feet.

A glass greenhouse will serve as an educational showpiece, offering the chance for visitors to see the plant in its various stages of plant growth and to learn about the differences between cultivars, terpene development and growing techniques. Customers will be able to look in through the glass to see the plants and other herbs that we will have growing for demonstration purposes. Some plants will be harvested and dried for packaging and sale on site with demonstrations on harvesting, curing and trimming. The project will grow plants to full-term, as well as have the ability to cut and plant clones, and sell them to customers in hand-made pots etc.

Cultivation activities will comply with SRCC §§20-46.050 and .060 regulations.

MANUFACTURING

Onsite manufacturing, including nonvolatile, CO2 extraction will be conducted onsite. Activities will include extraction, processing, sorting, packaging and grading. This use is permitted in the IL-Light Industrial zones, but is included in this description in order to provide a complete perspective on operations and to be clear that since the parcel is in the midst of rezoning, it is allowed in the IL zones.

Manufacturing activities will comply with SRCC §§20-416.050 and §20-46.070 regulations.

DISTRIBUTION

Onsite distribution of cultivated and manufactured cannabis and cannabis products will be conducted onsite. Activities include interacting with lab facilities to ensure quality control and lab testing, collection of taxes, and logistics. This use is permitted by right in the IL-Light Industrial zones, but is included in this project description in order to provide a complete perspective on operations since the parcel is in the midst of rezoning from CG to IL.

Distribution activities will comply with SRCC §§20-46.050.

RETAIL

This project was previously recommended for approval by the cannabis subcommittee on November 14, 2018. Please see that application for detailed information regarding operations and impacts.

CEQA

In compliance with CEQA Guidelines Section 15378, the project includes a General Plan Amendment, Rezoning, Major Conditional Use Permit and Minor Design Review, all of which has been attached hereto.

The General Plan Amendment and request for rezoning was submitted to the City of Santa Rosa and is awaiting the City's approval.

The Design Review documents are attached.