APPENDIX A

NOTICE OF PREPARATION AND SCOPING COMMENTS

Appendix A1:
Original Notice of Preparation (February 2019)

CITY HALL
600 ELM STREET
SAN CARLOS, CA 94070-3085

PLANNING DIVISION
TELEPHONE (650) 802-4263
FAX (650) 595-6763
WEB: http://www.cityofsancarlos.org

Notice of Preparation Environmental Impact Report City of San Carlos

Date: **February 11, 2019**

To: State Clearinghouse
Governor's Office of Planning and Research
San Mateo County Clerk
Responsible and Trustee Agencies
Interested Individuals and Organizations

From: Lisa Costa Sanders
Principal Planner
City of San Carlos
600 Elm Street
San Carlos, CA 94070-3085
Email:
lcostasanders@cityofsancarlos.org

Subject: **Notice of Preparation (NOP) of the Draft Environmental Impact Report (EIR) for the Black Mountain Townhome Development**

Lead Agency: City of San Carlos
Project Title: Black Mountain Townhome Development EIR Project
Project Location: City of San Carlos

Call for Comments:
The City is requesting written comments from responsible agencies and the public regarding the scope and content of the environmental document regarding the Black Mountain Townhome Development Project. Comments should focus on discussing possible impacts on the physical environment, ways in which potential adverse effects might be minimized, and alternatives to the project in recognition of the EIR's intent to provide helpful and accurate information about aforementioned factors.

Preparing an Environmental Impact Report:
Notice is hereby given that the City of San Carlos (City) will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the Black Mountain Townhome Development Project (proposed project) pursuant to the California Environmental Quality Act (CEQA) Guidelines (14 California Code of Regulations Section 15060(d)); thus, an Initial Study will not be prepared and the City will begin work directly on the EIR.

Comment Submittal:
Comments on the NOP are due no later than the close of the 30-day NOP review period at **5:00 p.m. on April 1, 2019**. Please send your written comments to Lisa Costa Sanders, Principal Planner, at the address shown above or email to lcostasanders@cityofsancarlos.org with "Black Mountain Townhome Development EIR" as the subject. Public agencies providing comments are asked to include a contact person for the agency.

The City is requesting comments and guidance on the scope and content of the EIR from interested public agencies, organizations, and individuals. With respect to the views of Responsible and Trustee Agencies as to significant environmental issues, the City needs to know the reasonable alternatives and mitigation measures that are germane to each agency's statutory responsibilities in connection with the project.

Public Meeting:
The City is conducting an EIR Scoping Meeting on **March 4, 2019 at 7:00 p.m** at the following location:
City Hall Council Chambers
600 Elm Street, San Carlos, CA 94070
Comments related to the scope and focus of the environmental analysis can be submitted at the meeting.

Project Location:
The project site is located just west of the intersection of Castor Road and Alameda de las Pulgas in the City of San Carlos, about 0.75 miles west of State Route 82. The 11.4-acre site is composed of four parcels at 800, 804, 806, and 808 Alameda de las Pulgas and is adjacent to the existing Beverly Terrace residential neighborhood. The site is generally bordered by low-density single family residences and open space. It is zoned RS-6: Single Family on the City of San Carlos zoning map, which allows up to six residential units per net acre. The project site is within the city's Hillside (H) Overlay District.

Project Background Information
The project site is the former location of the Black Mountain Spring Water Company. It contains remnants of the bottling facility, including a tunnel used to harvest the natural spring at the eastern boundary of the site. The site is one of three hillside properties west of Alameda de las Pulgas and between Madera Avenue and Melendy Drive that the City sought to preserve through 2015's Measure V. Following failure of Measure V, the land was purchased by project applicant Dragonfly.

Project Description
The proposed project would involve site preparation and construction of a residential community consisting of 68 attached townhome units, each with a two-car garage. Existing homes on three parcels would be demolished and the four parcels combined into a single parcel. The project would include reconfigured and new rights-of-way, new landscaping, public walking trails and recreational components and erosion control elements. The completed townhomes would have a gross floor area of 212,117 square feet and would be organized into 14 clusters situated around an east-west running right-of-way based generally on existing private Castor Road. Areas between townhome clusters and outside of the

proposed right-of-way would be landscaped with new plantings and trees, partially to replace the removal of existing trees.

The project would also include a shared facility called the Community Hub, located at the east entrance. The 1,674 sf facility would include a community space, kitchenette, bike storage room, general storage area and 1,328 sf outdoor terrace.

Finally, 2.4 acres of the project site would be dedicated as a Natural State Area. These lands would remain undisturbed by site preparation, construction or landscaping.

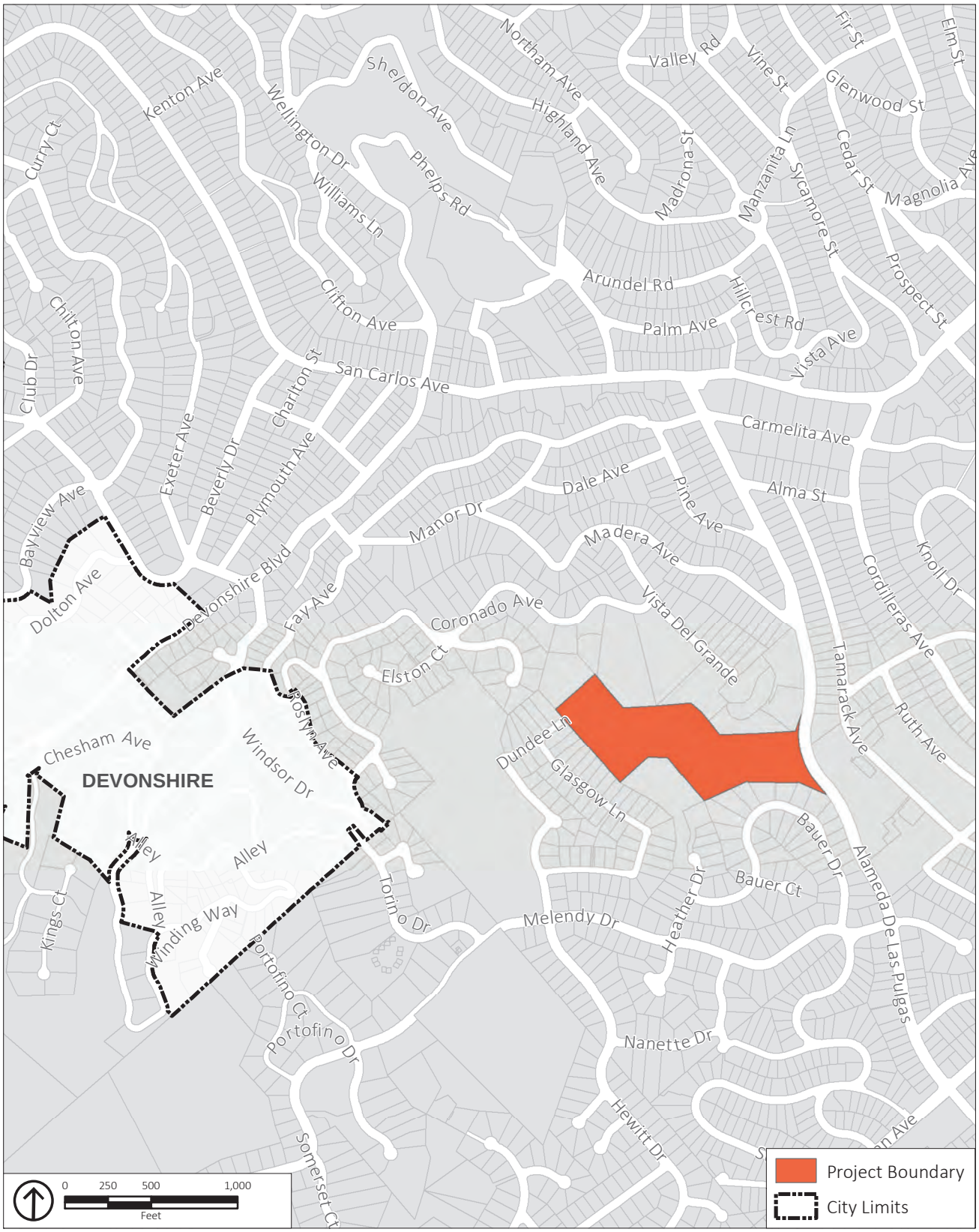
Potential Environmental Effects:
An EIR will be necessary to analyze potential environmental impacts associated with the project. The proposed project could potentially affect the following environmental factors and each will be addressed in the EIR: aesthetics, air quality, biological resources, cultural and tribal cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, pubic services, parks and recreations, transportation, utilities and service systems, and wildfire. Cumulative impacts will consider impacts of relevant projects in and around the project area combined with those of the project and an evaluation of project alternatives that could reduce or avoid significant potential impacts will be included in the EIR.

Environmental Effects Not Likely to Require Further Analysis:

The proposed project is not anticipated to result in significant environmental effects on the following CEQA topic areas: Agricultural Resources and Mineral Resources.

Attachments:
Figure 1: Local Vicinity Map

Figure 2: Proposed Site Plan



Source: San Mateo County, 2016; PlaceWorks, 2018.

Local Vicinity

SITE PLAN

N

0 50 100 200

Appendix A2:
Reissued Notice of Preparation (January 2021)

CITY HALL
600 ELM STREET
SAN CARLOS, CA 94070-3085

PLANNING DIVISION
TELEPHONE (650) 802-4263
FAX (650) 595-6763
WEB: http://www.cityofsancarlos.org

Notice of Preparation Environmental Impact Report City of San Carlos

Date: **January 8, 2021**

To: State Clearinghouse
Governor's Office of Planning and Research
San Mateo County Clerk
Responsible and Trustee Agencies
Interested Individuals and Organizations

From: Lisa Costa Sanders
Principal Planner
City of San Carlos
600 Elm Street
San Carlos, CA 94070-3085
Email:
lcostasanders@cityofsancarlos.org

Subject: **Second Notice of Preparation (NOP) of the Draft Environmental Impact Report (EIR) for the 808 Alameda de las Pulgas Townhome Development**

Lead Agency: City of San Carlos
Project Title: 808 Alameda de las Pulgas Townhome Development EIR Project
Project Location: City of San Carlos

Background

In February 2019, the City of San Carlos issued a NOP for the Alameda de las Pulgas Townhome Development EIR (formerly titled *Black Mountain Townhome Development EIR*). Subsequently, during September of 2020, the applicant submitted a revised project, described below, and the City determined that a second NOP reflecting the new project should be circulated to allow responsible agencies, and the public to comment on the revised project.

Call for Comments:

The City is requesting written comments from responsible agencies and the public regarding the scope and content of the environmental document regarding the 808 Alameda de las Pulgas Townhome Development Project. Comments should focus on discussing possible impacts from construction and operation of the project on the physical environment, ways in which potential adverse effects might be minimized, and alternatives to the project in recognition of the EIR's intent to provide helpful and accurate information about aforementioned factors.

Preparing an Environmental Impact Report:
Notice is hereby given that the City of San Carlos (City) will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the 808 Alameda de las Pulgas Townhome Development Project (proposed project) pursuant to the California Environmental Quality Act (CEQA) Guidelines (14 California Code of Regulations Section 15060(d)); thus, an Initial Study will not be prepared and the City will begin work directly on the EIR.

Comment Submittal:
Comments on the NOP are due no later than the close of the 30-day NOP review period at **5:00 p.m. on February 8, 2021**. Please send your written comments to Lisa Costa Sanders, Principal Planner, at the address shown above or email to lcostasanders@cityofsancarlos.org with "808 Alameda de las Pulgas Townhome Development EIR" as the subject. Public agencies providing comments are asked to include a contact person for the agency.

The City is requesting comments and guidance on the scope and content of the EIR from interested public agencies, organizations, and individuals. With respect to the views of Responsible and Trustee Agencies as to significant environmental issues, the City needs to know the reasonable alternatives and mitigation measures that are germane to each agency's statutory responsibilities in connection with the project.

Project Location:
The project site is located just west of the intersection of Castor Road and Alameda de las Pulgas in the City of San Carlos, about 0.75 miles west of State Route 82. The 11.4-acre site is composed of four parcels at 800, 804, 806, and 808 Alameda de las Pulgas and is adjacent to the existing Beverly Terrace residential neighborhood. The site is generally bordered by low-density single family residences and open space. It is zoned RS-6: Single Family on the City of San Carlos zoning map, which allows up to six residential units per net acre. The project site is within the city's Hillside (H) Overlay District.

Project Background Information
The project site is the former location of the Black Mountain Spring Water Company. It contains remnants of the bottling facility, including a tunnel used to harvest the natural spring at the eastern boundary of the site. The site is one of three hillside properties west of Alameda de las Pulgas and between Madera Avenue and Melendy Drive that the City sought to preserve through 2015's Measure V. Following failure of Measure V, the land was purchased by project applicant Veev.

Project Description
The proposed project would involve site preparation, and construction of a residential community. The proposed project applies the State Density bonus provision to the base project of 68 units with a proposal for a total of 87 units, 10 of which will be deed restricted as affordable. The proposed 87 attached townhome units would consist of four distinct three- and four-bedroom unit types of between approximately 1,522 to 2,943 gross sf, each with a two-car garage for a total of 174 covered parking spaces. Additionally, there are 34 on-street townhouse guest parking spaces. Existing homes on three parcels would be demolished and the four parcels combined into a single parcel. The project would

include reconfigured and new rights-of-way, new landscaping, walking trails and recreational components and erosion control elements. The completed townhomes would have a combined gross floor area of 226,981 square feet and would be organized into 14 clusters situated around an east-west running right-of-way based generally on existing private Castor Road. Areas between townhome clusters and outside of the proposed right-of-way would be landscaped with mostly new plantings and trees, partially to replace the removal of many existing trees. There is an emergency vehicle access (EVA) road at the northwest corner of the project connecting to Coronado Avenue via a private easement.

The project would also include a shared facility called the Community Hub, located at the east entrance. The facility would include a 920 square foot building containing two accessible bathrooms, a kitchen, community room and homeowners' association (HOA) office/storage area and would include a new public plaza of 1,212 square feet. The Community Hub area would also include 18 short-term public bike parking spaces, a bus shelter (southbound), bus stop (northbound), crosswalk, and flashing beacon.

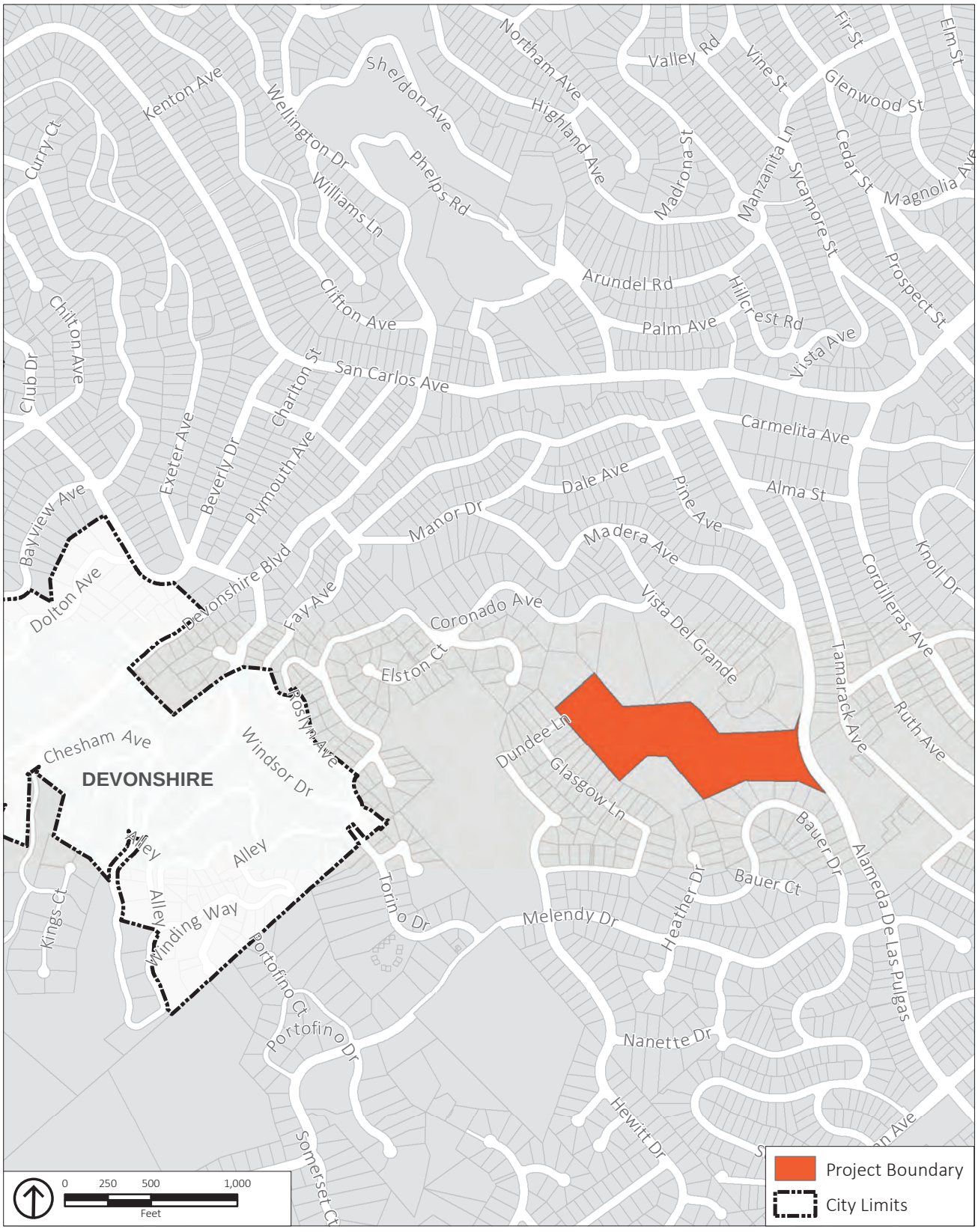
Finally, 2.4 acres of the project site would remain in dedicated open space and would remain undisturbed during site preparation, construction and landscaping activities.

Potential Environmental Effects:
An EIR will be prepared to analyze potential environmental impacts associated with the project. The proposed project could potentially affect the following environmental factors and each will be addressed in the EIR: aesthetics, air quality, biological resources, cultural and tribal cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, pubic services, parks and recreations, transportation, utilities and service systems, and wildfire. Cumulative impacts will consider impacts of relevant projects in and around the project area, including the adjacent Vista Grande project combined with those of the project and an evaluation of project alternatives that could reduce or avoid significant potential impacts will be included in the EIR.

Environmental Effects Not Likely to Require Further Analysis:
The proposed project is not anticipated to result in significant environmental effects on the following CEQA topic areas: Agricultural Resources and Mineral Resources because the proposed site is not located in an area with agricultural practices nor is it located in an area with known mineral resources.

Attachments:
Figure 1: Local Vicinity Map

Figure 2: Proposed Site Plan



Source: San Mateo County, 2016; PlaceWorks, 2021.

Figure 1
Local Vicinity Map

Source: Lowney Arch, 2020.

Figure 2
Proposed Site Plan

APPENDIX A3:
SCOPING COMMENTS

From: Lisa Costa Sanders
To: Tricia Stevens; Sean Anayah
Subject: FW: 808 Alameda de las pulgas town home development
Date: Monday, February 8, 2021 6:30:31 PM

From: James Mcgraw <mcgrawz@pacbell.net>
Sent: Wednesday, January 27, 2021 2:37 PM
To: Lisa Costa Sanders <LCostaSanders@cityofsancarlos.org>
Subject: 808 Alameda de las pulgas town home development

[**NOTICE:** This message originated outside of City of San Carlos -- **DO NOT CLICK** on **links** or open **attachments** unless you are sure the content is safe.]

Hi,
I would like to comment on the proposed development on the Black Mountain Water property.

The developer has totally ignored the concerns of the residents in the area. There was great concern about the traffic impact of dumping possibly up to 100 or more additional cars on Alameda, and in response to these concerns the developer had gone from a 65 unit development to a 87 unit development. Also the reconfiguration of the existing road would seem to provide access to adjacent property for future development, under the guise of emergency access. This could become the main access to that property as the access from Coronado is poor at best for a regular vehicle and very difficult for emergency vehicles. The developer claims that will not happen, but now that the plans to develop the adjacent property has been leaked, funneling an additional 100 vehicles via the Coronado route doesn't seem like a smart plan either. Those two developments will turn Alameda into a parking lot at certain times of the day. To suggest a traffic study is required to determine if an additional 100 or more vehicles will disrupt traffic flow is a waste of money. And what about the other development planned on the parcel behind this property? Assuming that developer will use the same scam of providing "affordable" housing and shoe horn in another 80 or 90 residences, is the city of San Carlos really going to allow greed to completely destroy our city??

Also, one need only research the old Black Mountain Water public access file to see all of the noise complaints over the years while the water facility was operating. I studied that file decades ago and it was a substantial file. That canyon is a natural ampha theater and the city will be fielding noise complaints the entire time the construction continues, and long after the development is occupied.

In examining the original proposal and the new proposal, it is clear the developer has tried to utilize every usable inch of the property in what appears as a attempt to make the first proposal look more palatable. The original proposal was for 14 clusters. Even though the recent mailer from the city indicates 14 clusters, it is very clear there are more buildings on the new plan. If one were to use a magnifying glass and look at the notes carefully on the site plan there are actually 21 clusters on the newest proposal.

Every time we hear from this developer, the prospects for our neighborhood get worse. The 2.4 acres of "open space" is land the developer cant build on so to imply it is a gift is disingenuous at best.
For anyone to suggest there will be no additional stress on our existing sewer system and storm drain system by paving the canyon and adding up to 200 additional households to the sewer system is simply dishonest. Despite what the developer is saying, they are essentially paving that canyon.

I fear the city is going to follow one bad idea with another bad idea. I would hope you and others in planning try to consider the concerns of the existing residents who will have to deal with this long after the decision makers are gone. The developers comments about "helping us deal with our housing shortage" as his response to what's in it for us residents is weak at best and dishonest on the face of it. We have no housing shortage, look around at all the development going on in our city. When San Carlos High School was demolished for development, the original scope of that project was greatly reduced and the developer was required to establish the park and ball fields for the residents. This developer not only is providing nothing to the community but seems determined to totally destroy the character of the canyon.

As if that's not bad enough, in about five years we can expect to get a letter from the city of San Carlos stating that the storm drain system will need enlarging because of the additional load placed on it from the development (paving over) of the remaining parcels adjacent to the BLK MT property and dumping all that surface water into the existing storm drain system. There will be a lot of hand wringing as we are told no one anticipated the degree of impact the multiple high density developments would have on the existing infrastructure. That will be followed by the sad story about the sewage back ups that have damaged property in the flat lands caused by the additional high density developments on formally basically agricultural lands feeding into the existing sewer system. We will be told we will fund these necessary augmentations to the sewer system to avoid addition litigation surrounding liability over sewer overflow damages.

I wonder why cities like Brisbane seem to have some control over their development yet San Carlos seems to feel we need to address the housing concerns of the entire bay area by building MDU's on every single available piece of land with seemingly no regard for the impact all this development will have on existing infrastructure and residents. Greed.

This property would have been a wonderful asset for the city. I was extremely disappointed the city choose to shoot for the moon on purchasing the property rather than just buying the land and developing it later….like our very wise founders did securing land for parks and schools.

Thank You,
Jim McGraw
865 Bauer Dr.
San Carlos CA

Sent from Mail for Windows 10

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To help prevent the spread of COVID-19, City Hall is closed and all nonessential meetings and services have been suspended. For the most up to date information, please visit www.cityofsancarlos.org/coronavirus

February 2, 2021

Lisa Costa Sanders
Principal Planner
City of San Carlos
San Carlos, CA 94070

Re: 808 Alameda de las Pulgas

Ms. Sanders and the rest of the Planning Commission:

After attending the Zoom meeting held by Veev on January 19th, I want to submit my concerns about the development now called 808 Alameda de las Pulgas.

I was very disappointed by the revised plans presented at the meeting as well as the tenor of the comments made by the developer and the city. It is clear that the initial comments made by residents almost a year ago were not only completely ignored but the new plan has doubled down on the issues of greatest concern in the last meeting.

I was under the impression that the purpose of these meetings was to gather and INCORPORATE legitimate concerns of San Carlos citizens in the design and development process. Instead, none of the concerns raised a year ago seem to have been addressed or even considered. For a development of this proposed size, (only one of two on the former Black Mountain property and adjacent land) greater consideration of the impact on the whole San Carlos community must be addressed. During the meeting when one community member raised concerns about increased traffic, she was told by the VEEV representative that San Carlos residents needed to change their behavior and stop driving their kids to school, that Veev was doing all it could by adding a bus shelter.

I am listing my concerns/comments about issues to be included in the EIR below.

1. Inclusion of both developments in the EIR
Both the 808 Alameda de las Pulgas and the Vista del Grande impacts need to be evaluated together. Even though they are being built sequentially, the ultimate impact to the community is from the combination of the two developments. Evaluating only the 808 Alameda project will significantly understate the impacts on the community and the hillside.

2. Hillside Stability/loss of trees
First, I am very concerned about the hillside stability and its suitability for 87 townhomes for this project (likely only half of the total number proposed when both developments are included). The plan calls for the removal of hundreds of trees, at least half of which are heritage trees. These trees have been in place for decades and have served to prevent landslides and erosion. Heritage trees should not be cut down. Additionally, the amount of

earth moving and grading required to build that number of homes on a very steep piece of property is considerable. That too increases the risk of landslides and erosion.
The existence of an active spring also needs to be taken into account. After many years of below average rain, the spring is likely running at a much lower level than historic averages. Additionally, there is already a huge amount of runoff from this property onto Alameda and developing the property will increase the run-off increasing the risk of flooding for the properties east of Alameda.
As part of the EIR, tree removal, grading and an evaluation of hillside stability including the natural spring on the property by a geologist needs to be done. Current run-off and drainage systems also needs to be measured and incorporated into the EIR.
Hillside stability is a huge concern as I walk around the hills of San Carlos and see small landslides all over on land that is less steep than the property at 808 Alameda.

3. Density and Unit count:
In the last year, Veev has increased the number of proposed units to 87, up from 68 units, by taking advantage of a density bonus. However, it doesn't seem to have excluded the acreage like streets and public easements which are not supposed to be included in the calculation. The city needs to review the numbers.
The density has also led to minimal setbacks from adjacent properties, impacting the enjoyment/use of the neighbors and increasing the impacts of noise. Setbacks need to be reviewed.

4. Traffic
The EIR needs to evaluate traffic not just on Alameda but the impact of the addition of 200+ cars on Brittan, San Carlos Avenue, Melendy and the surrounding neighborhood streets. The commute traffic is already horrible getting to the freeways and adding a significant number of cars will make it worse. Telling people to send their elementary school kids to school on the bus as the Veev representative did is not the solution to this problem. Again, this problem will be even worse when both developments are included.

5. Noise/light/air quality
Adding 87 additional units with roof decks will create a significant increase in noise. The property is in a canyon and the noise echoes. Just one neighbor across the canyon blasting his stereo is an annoyance to a hundred homes without any housing on the property. 87 townhomes will make it worse. The roof top decks should qualify as an extra story, making the townhomes too tall under existing design restrictions.
The addition of 87 HVAC systems on roofs will also significantly increase noise.

Noise must be measured in a realistic way, as people in the broader area will experience it.

Additionally, the construction noise from 8-5 6 days a week is significant along with the dust raised from grading and building and sawing down trees. These hazards need to be included in the EIR. Based on comments by the developer, this construction could go on for 6+ years, making this a real environmental concern.

Additional streetlights and house lights will add to the light pollution and create glare for the surrounding homes.

6. Fire Safety
The proposed fire lane easement onto Coronado is insufficient. Coronado is extremely narrow, steep and curvy, frequently with cars parked on one or both sides of the street. As an emergency egress for the development(s) it is likely to back up and be blocked quickly. Should there be a significant fire, it could easily turn into an enormous tragedy.

7. Wildlife and plants
There is a considerable amount of local wildlife living on the property today, including deer, coyotes, and many varieties of birdlife. The proposed development will wipe out all the wildlife and any unique plant life in the area. An evaluation of species located on the land should be included as part of the EIR

Finally, I would ask that this project go before the City Council for approvals. I understand that the City Council can request this as an appropriate action for one of San Carlos last large undeveloped properties. Both developments (808 Alameda and Vista Grande) must be evaluated together to understand the full impact of the proposals.

Thank you for your consideration.

Sincerely,

Anne Tang
173 Glasgow Lane
San Carlos
annecarswell@yahoo.com

From: Lisa Costa Sanders
To: Tricia Stevens; Sean Anayah
Subject: Fwd: 808 Alameda de las Pulgas Townhome Development Feedback
Date: Tuesday, February 2, 2021 8:52:05 PM

From: "Cynthia Kenyon" <cynthiakenyon@ymail.com>
Subject: 808 Alameda de las Pulgas Townhome Development Feedback
Date: 02 February 2021 20:50
To: "Lisa Costa Sanders" <LCostaSanders@cityofsancarlos.org>

[**NOTICE:** This message originated outside of City of San Carlos -- **DO NOT CLICK** on **links** or open **attachments** unless you are sure the content is safe.]

Hi Lisa-

I have reviewed the 808 Alameda de las Pulgas Townhouse Development Plan. I live right down the street and my concerns are as follows:

-More entrances/exits needed for safety of residents who will live there

-Needs a sports field and playground and associated parking to support additional residents this development will add (like housing development that added Highlands park back in the 80s). San Carlos already doesn't have enough sports fields to support current needs

- Too dense- looks like the ugly development at the top of Crestview but worse because buildings are taller. Need more open space between buildings

Thank you in advance for considering my feedback :)

Cynthia Kenyon

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To help prevent the spread of COVID-19, City Hall is closed and all nonessential meetings and services have been suspended. For the most up to date information, please visit www.cityofsancarlos.org/coronavirus

Lisa Costa Sanders
Town Planner
City of San Carlos
600 Elm Street
San Carlos, CA. 94070
lcostasanders@cityofsancarlos.org

February 2, 2021

Re: Development of 808 Alameda de las Pulgas

I am resubmitting my original letter, dated 3/29/2019, with additional new concerns, regarding the development at 808 Alameda de las Pulgas, as it is clear that our concerns, expressed at the public meetings, have not been addressed. In fact, the situation has devolved as the housing density has increased from 68 subunits to 87.

1. Noise/light/ visual disturbance

As previously indicated, most days it is surprisingly noisy from St. Charles School which is located below the Veev property. Noise travels up through the valley very well. It is hard to imagine the noise from 87 additional units with roof decks, no less from a total of ~160 families moving into this space when considering the Vista del Grande property next door. Just one neighbor across the canyon blasting his stereo is an annoyance to many homes with only three houses currently on the property. 160 townhomes will exacerbate the situation making the noise pollution both worse and more frequent. The roof top decks will exacerbate this issue especially when considering the proximity to our property (15 feet from the property line). **Removal of the rooftop patios would be the single most helpful issue, as this will both lower the height of the units, reducing the visual disturbance, as well as reduce the noise concerns.**

The additional streetlights and house lights will add to the light pollution and create glare for the surrounding homes. Furthermore, the height of the buildings would appear to block the view for many of the neighbors on Glasgow Lane. The placement of a 30 foot tall water tower, which would clearly be visible at Dundee Lane would be an absolute eye sore to the surrounding community. This cluster of units in the northwest corner near Dundee Lane has the least buffer zone relative to other area of the development. **Deletion of the two, 4 and 5 unit complexes (labelled units 3 and 4) and nestling the units further downhill would alleviate some of these concerns. This would also expand the park region across the back of the property.**

2. Inclusion of all new developments in San Carlos in the EIR

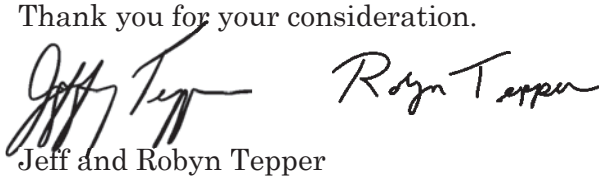
Growth in San Carlos has accelerated at a pace we have never experienced in our 27 years here. It is hard to imagine what the impact of the massive developments along El Camino and other high-density construction in San Carlos will do to the character of our city. It is clear that both the 808 Alameda de las Pulgas and the Vista del Grande projects need to be evaluated together in concert with all of the other development completing construction in the city. I appreciate that the full impact of this under construction, high density housing

is currently unknown. However, **the EIR review should include the impact on traffic, schools, noise, sewage, water run-off, fire and other utilities.**

3. Density Concerns

The condominium project proposed is simply too many units for this property. In addition to being out of place and an eyesore (pre-fab; boxy architecture) to the existing residents, the higher density will be a problem with higher environmental impacts as well and a loss of quality of life for the surrounding neighborhoods. I also find it very curious as to why the city would allow a conditional use permit for townhomes in this area zoned for single family homes. This will undoubtably lead to high traffic and congestion especially on Alameda in the mornings and evening as well as general congestion in the downtown area. **Single family homes would fit better with the character of the neighborhood and could be spaced more evenly across the property.** This would also help with the preservation of the many heritage trees slated for removal on this property.

Thank you for your consideration.



Jeff and Robyn Tepper
197 Glasgow Lane, San Carlos

From: Lisa Costa Sanders
To: Tricia Stevens; Sean Anayah
Subject: FW: 808 Alameda de las Pulgas Townhome Development EIR
Date: Monday, February 8, 2021 6:27:38 PM

-----Original Message-----
From: Jennifer Robb <jenn_schumann@hotmail.com>
Sent: Tuesday, February 2, 2021 10:26 AM
To: Lisa Costa Sanders <LCostaSanders@cityofsancarlos.org>
Subject: 808 Alameda de las Pulgas Townhome Development EIR

[NOTICE: This message originated outside of City of San Carlos -- DO NOT CLICK on links or open attachments unless you are sure the content is safe.]

We would like to voice our concerns regarding the proposed development.

1. Inclusion of both Black Mountain and Vista del Grande developments in the EIR

Both the 806 [Now 808 Alameda] Alameda de las Pulgas and the Vista del Grande developments need to be evaluated together. The ultimate impact to the community is from the combination of the two developments. Evaluating only the 806 [808] Alameda project will significantly underestimate the impacts on the community.

2. Traffic and parking

The EIR needs to evaluate traffic not just on Alameda but the impact of the addition of 200+ cars on Brittan, San Carlos Avenue, Melendy and the surrounding neighborhood streets. The commute traffic is already horrible getting to the freeways and adding a significant number of cars will make it worse.

3. Hillside stability

The plan calls for the removal of over 260 trees, at least half of which are heritage trees. These trees have been in place for decades and have served to prevent landslides and erosion. Also, the amount of earth moving and grading required to build that number of homes on a very steep piece of property is considerable. That too increases the risk of landslides and erosion. As part of the EIR, tree removal, grading and an evaluation of hillside stability by a geologist needs to be done.

4. Noise and light pollution

Adding so many townhomes with roof decks will create a significant increase in noise. The property is in a canyon and the noise echoes. Just one neighbor across the canyon blasting his stereo is an annoyance to a hundred homes. We expect it will much worse with so many units in the small canyon. Additionally, the construction noise will be significant along with the dust raised from grading and building and sawing down trees. These hazards need to be included in the EIR. Additional streetlights and house lights will add to the light pollution and create glare for the surrounding homes.
OUR HOUSE SITS ACROSS FROM VISTA DEL GRANDE PROPERTY, WE HAVE LARGE WINDOWS FACING VISTA DEL GRANDE AND BLACK MOUNTAIN PROPERTY. EXTRA LIGHT FROM THESE DEVELOPMENTS WILL LIGHT UP OUR WHOLE HOUSE. THE NOISE DEFINITELY ECHOES AS YOU CAN HEAR A DOG BARKING FROM ACROSS THE CANYON TO MUSIC AND GAMES COMING FROM HIGHLANDS PARK.

5. At least two entrances on Alameda de las Pulgas

There are safety and congestion concerns about the proposed single road entrance. A second entrance on the

Alameda de las Pulgas within the property boundaries should be considered.
OUR DRIVEWAY IS DIRECTLY ACROSS FROM THE CORONADO ENTRANCE. WE HAVE ALMOST BEEN HIT NUMEROUS TIMES COMING IN AND PUT OF OUR DRIVEWAY. ADDED CONGESTION FROM THIS, ON OUR ALREADY SMALL STREET WILL BE AN ACCIDENT WAITING TO HAPPEN.

6. Saving Wildlife and Heritage Trees

The removal of around 130 Heritage Trees should not be permitted. Not only does this affect our air quality but it is also unprecedented. There are also many deer on Vista del Grande and in Devonshire Canyon. The developments will drive out the deer and other wild life.
THERE IS A MOUNTAIN LION AND A PACK OF COYOTES THAT LIVE ON THIS PROPERTY. THEY WILL HAVE NO WHERE TO GO EXCEPT OUR BACKYARDS

7. Water drainage

The impact of additional water drainage must be properly assessed. The storm drains are currently insufficient and numerous properties on Carmelita have flooded garages during the rainy season. Additional water drainage from the construction, and from the final development will negatively affect the community by causing additional flooding and property damage downhill.

8. Fire hazards and public services

The high density of the new townhome development coupled with the narrow streets in Devonshire Canyon and increased traffic in the neighborhoods presents an increased danger for fires and risk of emergency vehicles not being able to properly access the area. The fire safety precautions like emergency egress, fuel breaks, and other safety issues need to be addressed.
IF THERE IS AN EMERGENCY OR FIRE NO ONE WOULD BE ABLE TO GET OUT IN TIME. OUR STREETS ARE VERY NARROW (YOU HAVE TO PULL OVER TO LET SOMEONE PASS). OUR RETAINING WALL HAS BEEN HIT NUMEROUS TIMES BY CONSTRUCTION AND DELIVERY VEHICLES TRYING TO PASS PARKED CARS.

9. Construction vehicles

The current plan is unclear for where the construction vehicles will be parked during the project. Many of the streets in the neighborhood are narrow, especially on Vista del Grande, Coronado and Madera Ave. These streets cannot accommodate large construction vehicles.

10. Water shed impact

Impacts to the Water Shed, former creek, and existing spring should be addressed.

11. Excessive 4 story heights

The 3 plus-story height of the units is too tall, and does not appear to be in compliance with recently approved rules. Putting roof decks make them effectively 4 stories. The exterior living level may be very close to the surrounding homes. The stair structure to these roofs rise to the 4th level.
ANYTHING HIGHER THAN 1 STORY ON THE VISTA DEL GRANDE PROPERTY WILL BE LOOKING STRAIGHT OVER OUR FENCE INTO OUR HOME THAT HAS LARGE BAY WINDOWS ON THAT SIDE. THIS WILL BE A TOTAL INVASION OF PRIVACY!!!

12. Affordable housing

There is a lack of affordable housing within the development. The developer should provide affordable homes on site, and should not be allowed to pay the city some fees for a future project that may never happen. [Note that the new project proposes 10 of the units be affordable]

13. Impact on Parks

San Carlos Parks, like Highlands, Arguello and Burton Parks, are already too small for the number of residents that use them. Adding over 140 new houses will exacerbate the problem.
PRE COVID WE ALREADY AVOIDED HIGHLANDS PARK ON THE WEEKENDS AS IT WAS TOO CROWDED

14. Developer experience

The financial ability of the developer and track record of the developer for a project of this size and scope are concerning. Due diligence, openness, and oversight is needed. [Note that the new developer is Veev, which is just a renamed Dragonfly]

We ask the City Staff, Planning Commission and Council to consider the cumulative impact of both the 808 Alameda de las Pulgas and Vista del Grande developments and take into consideration the concerns raised above. We also request that this project go before the City Council in an open forum for approvals.

Thank you for taking the time to read our concerns, Jenn and Walter Robb
36 Vista Del Grande

Sent from my iPad

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From:	Lisa Costa Sanders
To:	Tricia Stevens; Sean Anayah
Subject:	FW: 808 Alameda de las Pulgas Townhome Development EIR
Date:	Wednesday, February 3, 2021 3:49:50 PM

From: Aaron Bernstein <aaronbernstein@yahoo.com>
Sent: Wednesday, February 3, 2021 2:55 PM
To: Lisa Costa Sanders <LCostaSanders@cityofsancarlos.org>
Cc: Don Bradley <DBradley@cityofsancarlos.org>; Jim Iacoponi <JIacoponi@cityofsancarlos.org>; David Roof <DRoof@cityofsancarlos.org>; Kristen Clements <KClements@cityofsancarlos.org>; Ellen Garvey <EGarvey@cityofsancarlos.org>
Subject: 808 Alameda de las Pulgas Townhome Development EIR

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My name is Aaron Bernstein and I own a house on Heather Drive in San Carlos that is adjacent to the proposed 808 Alameda development. I joined a recent call outlining the developer's plan for this area and I am extremely disturbed by their proposal. If I knew that this proposal had the potential to be accepted by the City of San Carlos when we moved here in 2010, I NEVER would have chosen to buy this house. In addition, I have been actively encouraging friends and co-workers to move to San Carlos for the past decade, and based on this and other recent decisions by the City, I no longer feel as comfortable doing so. I am deeply disappointed that the city would permit decisions like this to get to this stage and to potentially be made.

There are other major concerns that I have, but the most significant are the following:

Traffic and parking

The EIR needs to evaluate traffic not just on Alameda but the impact of the addition of 200+ cars on Brittan, San Carlos Avenue, Melendy and the surrounding neighborhood streets. The commute traffic -- including getting our kids to and from school - is already horrible and adding a significant number of cars will make it much worse.

Hillside stability

The plan calls for the removal of over 260 trees, at least half of which are heritage trees. These trees have been in place for decades and have served to prevent landslides and erosion. Also, the amount of earth moving and grading required to build that number of homes on a very steep piece of property is considerable. That too increases the risk of landslides and erosion. As part of the EIR, tree removal, grading and an evaluation of hillside stability by a geologist needs to be done.

Noise and light pollution

Adding so many townhomes **with roof decks** will create a significant increase in noise. The property is in a canyon and the noise echoes. Just one neighbor across the canyon blasting his stereo is an annoyance to a hundred homes. We expect it will be much worse with so many units in the small canyon. Additionally, the construction noise will be significant along with the dust raised from grading and building and sawing down trees. These hazards need to be included in the EIR. Additional streetlights and house lights will add to the light pollution and create glare for the surrounding homes.

Saving Wildlife and Heritage Trees

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The high density of the new townhome development coupled with the narrow streets in Devonshire Canyon and increased traffic in the neighborhoods presents an increased danger for fires and risk of emergency vehicles not being able to properly access the area. The fire safety precautions like emergency egress, fuel breaks, and other safety issues need to be addressed.

Construction vehicles

The current plan is unclear for where the construction vehicles will be parked during the project. Many of the streets in the neighborhood are narrow, especially on Vista del Grande, Coronado and Madera Ave. These streets cannot accommodate large construction vehicles.

Excessive 4 story heights

The 3 plus-story height of the units is too tall, and does not appear to be in compliance with recently approved rules. Putting roof decks make them effectively 4 stories. The exterior living level is proposed to be very close to the surrounding homes. The stair structure to these roofs rise to the 4th level.

Impact on Parks

San Carlos Parks, like Highlands, Arguello and Burton Parks, are already too small for the number of residents that use them. Adding nearly 200 new houses will exacerbate the problem.

Developer experience

The financial ability of the developer and track record of the developer for a project of this size and scope are concerning. Due diligence, openness, and oversight is needed.

Regards,

Aaron Bernstein

San Carlos homeowner and resident

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Lisa Costa Sanders
Town Planner
City of San Carlos
San Carlos, CA. 94070
lcostasanders@cityofsancarlos.org

February 3, 2021

RE: Black Mountain Water Property

Ms. Sanders,

I joined the recent "Community Meeting" led by Sean Gibson of Veev, and I was very disappointed.

First, why would the City of San Carlos only send notices of the meeting out to properties within 300 feet of the property? I realize this is the base minimum requirement, but most cities will increase the dimension for larger projects that impact the larger community. This 300 feet barely makes it to our neighbors just across the street on Glasgow. The Black Mountain property and neighboring property are two of the largest developments to happen in San Carlos in decades. I would request that the City Manager consider a 1,000-foot dimension for notices of the draft EIR, final EIR and future correspondence.

Second, it is clear that Veev is not interested in working with the Community. The very first question by the concerned neighbors asked this directly. None of the previous neighbor comments and concerns have been addressed or incorporated by Veev. At many points Sean Gibson evens laughs off comments, as he has done in other project meetings (Cherry street project meeting at the library). It is very unprofessional and upsetting. The San Carlos Community Outreach Process is broken. Is this just a check-the-box? Veev's unbelievably poor performance at the Cherry Street project gives all of our neighbors' concern, and it should give City Staff and Council similar concerns.

I offer the following comments in addition to my letter from March 2019.

Density & Unit Count:
Per the City's zoning ordinance, allowable density is calculated by net land area. This means the number of dwelling units per acre of land should "exclude the street rights-of-way, public easements, public open space, land under water, and certified wetlands and floodplains." The property in question is 11.427 gross acres. The engineer should net out these areas including all the roads as they need a public emergency access easement and other areas like the sidewalks, public open space, and others. In my estimation, this area excluded exceeds one acre. This will reduce the allowable base density from the current number of 68 units.

Density Bonus:
State Density Bonus law requires developers to round up the number of all affordable units. In the current submittal by Veev, 15% Low affordable units on the 68-unit base

equals 10.2 units. This is required to be rounded up to 11. These overall numbers should change due to the netting out mentioned above, but the City should check the math.

Affordable Housing:

According to the City's Affordable Housing Ordinance, the bedroom count of the below rate units should be the same in proportion to the market rate homes. The below market rate homes should also be dispersed throughout the development. The current plan by Veev provided mostly 2-bedroom BMR units, congregated at the front of the site. This does not comply with the ordinance and should be revised.

Conditional Use Permit Required:

The R-6 zoning allows townhome style homes; however, it requires a Conditional Use Permit. According to the City's ordinance:

18.30.010 Purpose.

The use permit review and approval process is intended to apply to uses that are generally consistent with the purposes of the zoning district where they are proposed but require special consideration to ensure that they can be designed, located, and operated in a manner that will not interfere with the use and enjoyment of surrounding properties. (Ord. 1464 § 3 (Exh. C (part)), 2013: Ord. 1438 § 4 (Exh. A (part)), 2011)

18.30.060 Required findings.

The decision-maker must make all of the following findings in order to approve or conditionally approve a use permit application. The inability to make one or more of the findings is grounds for denial of an application.

A. The proposed use is allowed within the applicable zoning district and complies with all other applicable provisions of this title and all other titles of the municipal code;

B. The proposed use is consistent with the General Plan and any applicable specific plan;

C. The proposed use will not be adverse to the public health, safety, or general welfare of the community, nor detrimental to surrounding properties or improvements;

D. The proposed use complies with any design or development standards applicable to the zoning district or the use in question unless waived or modified pursuant to the provisions of this title;

E. The design, location, size, and operating characteristics of the proposed activity are compatible with the existing and reasonably foreseeable future land uses in the vicinity; and

F. The site is physically suitable for the type, density, and intensity of use being proposed, including access, utilities, and the absence of physical constraints.

A. ROOF DECKS AND NOISE:

As the City has heard, the neighbors are extremely upset at the inclusion of roof decks on top of these townhomes. In addition to the increased building height and 4-stories (yes, the California Building Code considers these roof decks as a story), these roof decks will be a nuisance to the neighbors. The concern includes noise, lights, and smell. The roof decks on this project will most definitely interfere with the use and enjoyment of the surrounding properties.

Noise: The noise issues in this area are well documented. The City should study noise in general from this project, not only the number of homes and people that could possibly be living there, but the development process itself. Please recall all the complaints from the Cherry street project and they are not even located in a small valley where the noise travels up. Please study the noise from people on the 87 roof decks as well as HVAC equipment for these homes. The roof decks should be removed from the plan to comply with the CUP. The heat pumps should be required to be placed at grade (and not on the roofs) as a Condition of Approval.

Relative size: Roof decks have become very popular in Multi-family housing. As a note, Multi-family housing of similar type construction and height is not allowed in R-6 zoning. The current proposal by Veev of approximately 300sf roof decks per unit would equal 26,100sf for the 87 units. This area is larger than a half-acre park and an area large enough to install 5-1/2 full size basketball courts. As a relative example, the new Encore apartment project in downtown Redwood City includes 90 apartments. For a community of similar unit count, it includes a roof deck of 1,500 sf. The roof decks proposed by Veev are 17 times larger than this apartment community! It does not take an Acoustic Engineer to understand the impact from the roof decks, but please do the study and consult with the City Manager and City Attorney. Talk to the City Council.

Density Bonus & Value: Veev should not use the argument of value as a required aspect of the development under the Density Bonus law. It can be easily documented that the cost of the roof decks is very close to the added value. And the units proposed already have other multiple exterior decks that diminish the value of the roof deck.

B. SETBACKS:

The proposed setbacks of 9 to 15 feet are far too close to the neighboring properties and would impact the enjoyment of the neighbors. More studies should be done at each setback of the proposed new buildings to the neighbors. Additional room (larger setbacks) and new screening with new trees could help.

C. TREES & GREEN:

The proposed development removes far too many trees, including heritage trees. The latest proposal, adding 19 homes, basically removes four of the best open space/park areas; removing even more trees and greenery. The removal of so many trees in one area will most definitely impact the enjoyment of the neighbors and community at large. Veev's

answer to many questions is that this is a preliminary landscape plan. Far more studies should be done on the serious impacts to the neighborhood and the environment.

Relative Impact: I asked that the City answer a very direct question: How many tree removal permits have been issued in the City of San Carlos in the last 10 years? My guess is with this one proposed development, Veev will remove more trees, than years or even decades of trees within our town. What a shame. A responsible developer would do better. Will this not impact the enjoyment of the surrounding properties?

D. ARCHITECTURE:

The proposed development has extremely poor architecture. The developer changed architects and the quality has gone down even further than from the start. There is no context to the surroundings; the boxes have no detail or interest; the colors are poor; and the general size and height are far from being in context with the neighborhood (Four story boxes in a single-family neighborhood of one- and two-story homes). The CUP should require a higher scrutiny.

E. CONCLUSION:

The proposal by Veev does not meet the Purpose of a Conditional Use Permit, and it does not meet the Findings of at least 2 of the 6 elements. The requirement of a Conditional Use Permit is a higher standard than what would be required if the developer proposed single family homes in this single-family neighborhood. As such, City Staff including the City Manager and City Attorney should be certain that the proposal would not negatively impact the use and enjoyment of the surrounding neighborhood. And they should determine if the developer should adjust their proposal before recommending it move forward to the Planning Commission. The higher CUP standard means the developer cannot hide behind the State Density Bonus or by-right entitlement.

EIR – Alternative Study:

As part of the EIR process, the City should study an alternative that includes single family detached homes.

Other Comments:

Biology: The City should study impacts to the biology on the property – plants and animals. We have many animals that make their home on that land, in particular, a pack of coyotes.

Cultural – Historical: The City should study the structures on the property for any protected structures or elements including the spring.

Cultural – Archeology: The City should perform a detailed archeological study on the property. There is a good chance Native Americans lived on the property, near the spring.

Geology & Drainage: The City should study the impacts of grading the site and loss of trees as it relates to the surrounding properties including drainage downhill from the site.

Loss of Community Use: With the new design, they essentially depleted most of the community use, green space, and trails. Per Sean Gibson (Veev), it is considered private property with the only community benefit, and use, being a very small room with a bathroom. This is an extreme departure from their original proposal.

We ask the City Staff, Planning Commission and even the Council seriously study this proposal and consider the cumulative impact of the adjacent 12-acres by another developer when looking at the area. A direct request of the surrounding neighborhoods is that this project goes before the City Council for approvals. We understand that the City Council can request this as an appropriate action for one of San Carlos last large undeveloped properties. A more responsible proposal and development of single family detached homes would likely be received much better from the existing San Carlos Residents. Keep the San Carlos Hills single family and put density where it belongs, near transit.

Thank you for your consideration.

Sincerely,

Amy Hathaway

From:	Lisa Costa Sanders
To:	Tricia Stevens; Sean Anayah
Subject:	FW: Town Home Development DEIR 808 Alameda De Las Pulgas San Carlos, and sister project on Vista Del Grande
Date:	Monday, February 8, 2021 6:12:53 PM

From: Gail Pettit <smpgsp172@comcast.net>
Sent: Wednesday, February 3, 2021 10:17 PM
To: Lisa Costa Sanders <LCostaSanders@cityofsancarlos.org>
Cc: Chris Pettit <cpettit650@gmail.com>
Subject: Town Home Development DEIR 808 Alameda De Las Pulgas San Carlos, and sister project on Vista Del Grande

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This is Gail Pettit I live at 27 Beverly Drive San Carlos.

We need to include a Wildlife Impact Investigation in the EIR.

My concern is, we have a large contingent of Wildlife that occupy that space. These include Mountain Lion, a protected species, being added to the Endangered Species List, along with Bobcats who are also protected.

Coyotes, Foxes along with Deer, Owls, Hawks, rattlesnake, etc, all call that land home.

Wildlife follow the food, so Mountain Lion follow Deer that graze there. They all use that space to live out their lives in some privacy because they are near homes that draw Deer and other wildlife. They are already pushed now due to the fires and this 15 acres and adjoining property where coyotes and deer are regularly seen will be pushed even closer to homes and family pets. They are even visible in the streets now by night. They have always been here, but not visible because they had plenty of territory to live out their lives in privacy. Now it is common place to see them on security footage or In person walking at dusk and through late dawn. This will only become more commonplace and unsettling as construction continues putting the community and wildlife at risk of stressed encounters.

Wildlife can not be relocated successfully. When placed in another territory, the occupying Wildlife kill them as competitors. So, they must Survive, here. As in Redwood City by Sequoia Hospital, a Mountain Lion was disrupted from her home territory during construction that forced her across the street into a residential backyard.....Fish and Game responded and the female Puma was shot and killed for having a defensive posture with her back up against the fence, as any cat would do. Along with two Cubs in Half Moon Bay 16 and 20 lbs, were shot and killed when their mother left them under a deck by the pool for safety to go hunt. Another Mountain Lion disturbed from its territory in Menlo Park ended up in an open garage, was also shot and killed. All these events caused community outrage, because of

human error. As a result Senator Jerry Hill was contacted about the communities concerns, introduced SB132 that became law, protecting Mountain Lions. Another law Protects Bobcats also.
Mountain Lion rear their young, teaching them, amongst other things, to avoid humans, survival skills and hunting deer for 3 years, before they are sent off on their own to find a new territory.

Mountain Lion patrol a large area on their rounds but bed down by day in the same space. This is a collision course in the making. There will only be three acres left for joint use??

I have contacted Zara Mc Donald who heads the Bay Area Puma Project, BAPP.org, the Lead Research Scientist, who is very familiar with Destruction of Habitat and the conflicts that leads to. I have asked her for her input. They have sightings maps that track Mountain Lion Sightings as they are reported. Zara McDonald can be reached at info@BAPP.Org

It is imperative protected species and others that call that space home, including a pack of coyotes, foxes and birds of prey who need the many trees be represented by a Wildlife Impact Statement.

Coyotes, Mountain Lion, and Bobcats, all daytime hunters, have adjusted their time to hunt with a few exceptions to between dusk and late dawn to Avoid Humans. This will push them to be much more visible, and create Habitat And Human Stress.

Coyotes and foxes take 10-20 rodents per night each, so they provide necessary rodent control. Mountain Lion keep the deer population in check, and have done an efficient job of taking weak and ill deer. Birds of prey need all those trees for shelter and to rear young and also are responsible for rodent control. They are all necessary and Indispensable to maintain Natures balance in the canyon and environs.

I look forward to a Wildlife Impact Study as part of the DEIR.

Thank You for your time,

Gail Pettit
SMPGSP172@Comcast.net
650 773-0602

Sent from my iPhone

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From: Lisa Costa Sanders
To: Tricia Stevens; Sean Anayah
Subject: FW: Black Mountain Water Property - Veev Project
Date: Wednesday, February 3, 2021 3:53:02 PM

From: Ron Ludlow <rgludlow@gmail.com>
Sent: Wednesday, February 3, 2021 11:27 AM
To: Lisa Costa Sanders <LCostaSanders@cityofsancarlos.org>
Subject: Black Mountain Water Property - Veev Project

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Dear Ms. Sanders,

You should have received the letter below from my neighbor, Amy Hathaway. I want to let you know that I am also concerned about the Veev project and agree with Amy's concerns.

Regards,

Ron Ludlow
185 Glasgow Ln
San Carlos, CA 94070-3670
Cell: 650-703-7006

Lisa Costa Sanders
Town Planner
City of San Carlos
San Carlos, CA. 94070
lcostasanders@cityofsancarlos.org

January 25, 2021

RE: Black Mountain Water Property

Ms. Sanders,

I joined the recent "Community Meeting" led by Sean Gibson of Veev, and I was very disappointed.

First, why would the City of San Carlos only send notices of the meeting out to properties within 300 feet of the property? I realize this is the base minimum requirement, but most cities will increase the dimension for larger projects that impact the larger community. This 300 feet barely makes it to our neighbors just across the street on Glasgow. The Black Mountain property and neighboring property are two of the largest developments to happen in San Carlos in decades. I would request that the City Manager consider a 1,000-foot dimension for notices of the draft EIR, final EIR and future correspondence.

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I offer the following comments in addition to my letter from March 2019.

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Density Bonus:

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B. The proposed use is consistent with the General Plan and any applicable specific plan;

C. The proposed use will not be adverse to the public health, safety, or general welfare of the community, nor detrimental to surrounding properties or improvements;

D. The proposed use complies with any design or development standards applicable to the zoning district or the use in question unless waived or modified pursuant to the provisions of this title;

E. The design, location, size, and operating characteristics of the proposed activity are compatible with the existing and reasonably foreseeable future land uses in the vicinity; and

F. The site is physically suitable for the type, density, and intensity of use being proposed, including access, utilities, and the absence of physical constraints.

A. ROOF DECKS

As the City has heard, the neighbors are extremely upset at the inclusion of roof decks on top of these townhomes. In addition to the increased building height and 4-stories (yes, the California Building Code considers these roof decks as a story), these roof decks will be a nuisance to the neighbors. The concern includes noise, lights, and smell. The roof decks on this project will most definitely interfere with the use and enjoyment of the surrounding properties.

Noise: The noise issues in this area are well documented. The City should study noise from people on the 87 roof decks as well as HVAC equipment for these homes. The roof decks should be removed from the plan to comply with the CUP. The heat pumps should be required to be placed at grade (and not on the roofs) as a Condition of Approval.

Relative size: Roof decks have become very popular in Multi-family housing. As a note, Multi-family housing of similar type construction and height is not allowed in R-6 zoning. The current proposal by Veev of approximately 300sf roof decks per unit would equal 26,100sf for the 87 units. This area is larger than a half-acre park and an area large enough to install 5-1/2 full size basketball courts. As a relative example, the new Encore apartment project in downtown Redwood City includes 90 apartments. For a community of similar unit count, it includes a roof deck of 1,500 sf. The roof decks proposed by Veev are 17 times larger than this apartment community! It does not take an Acoustic Engineer to understand the impact from the roof decks, but please do the study and consult with the City Manager and City Attorney. Talk to the City Council.

Density Bonus & Value: Veev should not use the argument of value as a required aspect of the development under the Density Bonus law. It can be easily documented that the cost of the roof decks is very close to the added value. And the units proposed already have other multiple exterior decks that diminish the value of the roof deck.

B. SETBACKS:

The proposed setbacks of 9 to 15 feet are far too close to the neighboring properties and would impact the enjoyment of the neighbors. More studies should be done at each setback of the proposed new buildings to the neighbors. Additional room (larger setbacks) and new screening with new trees could help.

C. TREES & GREEN:

The proposed development removes far too many trees, including heritage trees. The latest proposal, adding 19 homes, basically removes four of the best open space/park areas; removing even more trees and greenery. The removal of so many trees in one area will most definitely impact the enjoyment of the neighbors. Veev's answer to many

questions is that this is a preliminary landscape plan. Far more studies should be done on the serious impacts to the neighborhood and the environment.

Relative Impact: I asked that the City answer a very direct question: How many tree removal permits have been issued in the City of San Carlos in the last 10 years? My guess is with this one proposed development, Veev will remove more trees than years or even decades of trees within our town. What a shame. A responsible developer would do better. Will this not impact the enjoyment of the surrounding properties?

D. ARCHITECTURE:

The proposed development has extremely poor architecture. The developer changed architects and the quality has gone down even further than from the start. There is no context to the surroundings; the boxes have no detail or interest; the colors are poor; and the general size and height are far from being in context with the neighborhood (Four story boxes in a single-family neighborhood of one- and two-story homes). The CUP should require a higher scrutiny.

E. CONCLUSION:

The proposal by Veev does not meet the Purpose of a Conditional Use Permit, and it does not meet the Findings of at least 2 of the 6 elements. The requirement of a Conditional Use Permit is a higher standard than what would be required if the developer proposed single family homes in this single-family neighborhood. As such, City Staff including the City Manager and City Attorney should be certain that the proposal would not negatively impact the use and enjoyment of the surrounding neighborhood. And they should determine if the developer should adjust their proposal before recommending it move forward to the Planning Commission. The higher CUP standard means the developer cannot hide behind the State Density Bonus or by-right entitlement.

EIR – Alternative Study:

As part of the EIR process, the City should study an alternative that includes single family detached homes.

Other Comments:

Biology: The City should study impacts to the biology on the property – plants and animals.

Cultural – Historical: The City should study the structures on the property for any

protected structures or elements including the spring.

Cultural – Archeology: The City should perform a detailed archeological study on the property. There is a good chance Native Americans lived on the property, near the spring.

Geology & Drainage: The City should study the impacts of grading the site and loss of trees as it relates to the surrounding properties including drainage downhill from the site.

We ask the City Staff, Planning Commission and even the Council seriously study this proposal and consider the cumulative impact of the adjacent 12-acres by another developer when looking at the area. A direct request of the surrounding neighborhoods is that this project goes before the City Council for approvals. We understand that the City Council can request this as an appropriate action for one of San Carlos last large undeveloped properties. A more responsible proposal and development of single family detached homes would likely be received much better from the existing San Carlos Residents. Keep the San Carlos Hills single family and put density where it belongs, near transit.

Thank you for your consideration.

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San Carlos Green

Inspiring a more sustainable San Carlos

February 3, 2021

Lisa Costa Sanders
Principal Planner
City of San Carlos
lcostasanders@cityofsancarlos.org

RE: 808 Alameda de las Pulgas Townhome Development EIR

Greetings Planning Department and Planning Commission,

Thank you for the opportunity to comment on the scope and content of the Environmental Impact Report for the project at 808 Alameda de las Pulgas (formerly 806 Alameda de las Pulgas, formerly Black Mountain).

Cumulative Impacts and Context

In order to evaluate cumulative impacts and provide greater context, it would be helpful to be able to review the current plans for the Vista del Grande project, immediately north of the subject project. The 60-home Vista del Grande plans circulated in 2019 vary significantly from the plans posted on the Wanmei Properties web site. Also, it would be helpful to know whether the undeveloped lot south of the 808 Alameda project, accessible from Heather Drive, is being development at this time, and if so, what the plans are for that project.

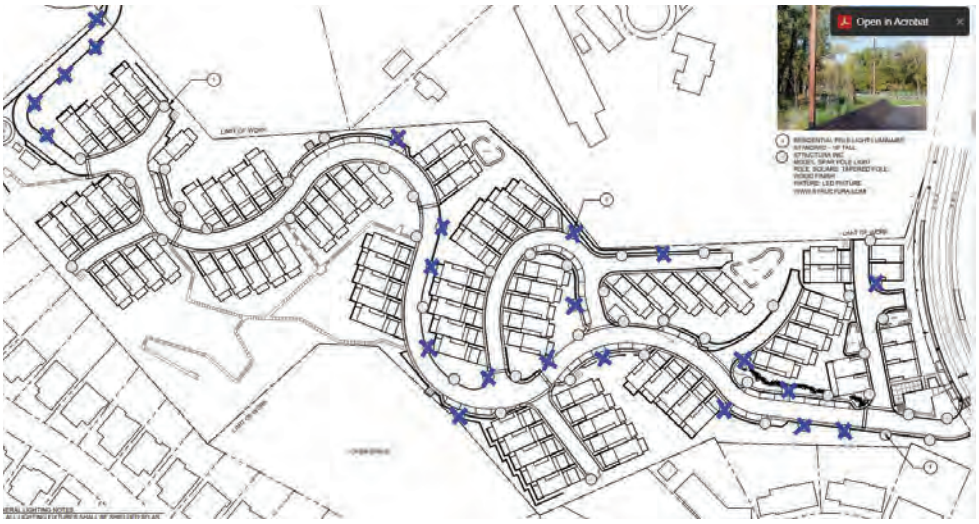
Aesthetics

We appreciate the stormwater management and urban-heat-island-effect reduction benefits of the proposed Green Roof areas. It would be useful to know whether maintenance of the green roof areas will be performed by the HOA. Expecting occupants to access fenced-off green roof areas to perform maintenance is unreasonable, but the HOA representatives might not have ready access to the rooftop areas. Confirming the HOA will take responsibility for continued maintenance of the green roof areas will help assure they do not become a weeded-over eyesore or a wildfire hazard.

Aesthetics and Light Pollution

The San Carlos General Plan Action LU-1.5 directs that “New lighting should illuminate properties appropriately and help keep them safe and secure, but shall not cause glare or spillover into surrounding properties or negatively affect the night sky.” General Plan Policy EM-1.4 directs, “Protect and preserve the circadian cycle (the cycle of night and day) by limiting sources of light during nighttime hours.”

Project landscaping plan page L1.1 notes that all lighting fixtures shall be shielded so as not to produce obtrusive glare onto the public right-of-way or adjoining properties. While meeting safety concerns, all opportunities should be taken to reduce glare and over-lighting, by assuring lighting is only as bright as is needed, full cut-off, warmer color, and not illuminating beyond the property line. Where possible, reduce the number of street lights, especially those adjacent to neighboring lots. Walking path lighting, if any, should be motion-controlled so as to not illuminate when it is not useful. Exterior lighting on buildings should meet International Dark Sky standards. The International Dark Sky Association has extensive guidance on how to meet these goals.



As the emergency vehicle access road is only intended to be used by vehicles in case of emergency, the proposed light poles should be removed from this area or, less preferably, reduce their size to pedestrian-scale lighting, as discussed in the City's Bicycle and Pedestrian Master Plan.

Aesthetics and Biological Resources

The San Carlos General Plan Policy LU-10.2 calls for the City to "Require development in hillside areas to be designed into the natural features of the hillside including topography, trees, vegetation, landforms and drainage channels." Policy LU-10.5 directs to "Minimize grading and removal of earth material in hillside areas to the greatest extent possible." The City's Hillside Overlay ordinance says, "Existing trees and native vegetation shall be retained to the extent possible to stabilize hillsides, reduce erosion and to preserve the natural scenic beauty of the area." (18.12.040)

This project appears to be cutting down almost all trees except in two corner areas and extensively regrading the topography. (L1.2B-C, C4.1, C9.2-C9.3) We look forward to receiving additional information about how this project complies with General Plan Policies LU-10.2 and 10.5 and the Hillside Overlay ordinance.

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The San Carlos General Plan Policy EM-3.1 directs the City to "Maintain and expand the urban canopy with special emphasis on protection of heritage trees." The City's Tree Ordinance (SCMC 18.18.070), only allows for removal of a Heritage Tree if it "substantially detracts from the value of the property" in such a way that removal "is necessary to … utilize the property in a manner which is of greater public value than any environmental degradation caused by the action, or allow reasonable economic or other enjoyment of the property".

The project is planning to remove 149 Heritage Trees, 5 Significant Trees, and 109 other trees. (L1.2B). That's removal of 68% of the site's Heritage Trees. The tree survey referenced in the architectural plans (C2.1) has not been posted for public review.

Pursuant to the City's Tree Ordinance, do all 149 of the heritage trees slated for removal "substantially detract[] from the value of the property" in such a way that removal of each of the 149 heritage trees "is necessary to … utilize the property in a manner which is of greater public value than any environmental degradation caused by the action, or allow reasonable economic or other enjoyment of the property"? Has any attempt been made to preserve and design around the most iconic of the heritage trees on the property? Appropriate mitigation would be to identify the healthiest and best specimens of heritage trees on the arborist survey and modify the design and grading to preserve these iconic trees. And post the arborist's survey for public review.

The developers only plan to plant 138 new trees. (L1.2D) Additional replacement trees, especially Heritage Tree varieties, should be included in the design. By definition, the 149 Heritage Trees slated for the ax are buckeye, madrone, coast live oak, valley oak, blue oak, interior live oak, redwood, or California bay laurel. The planting plan (L3.0) indicates 34 new coast live oak (*quercus agrifolia*), but the rest of the new trees are not species on the Heritage Tree list. A mitigation would be to substitute more Heritage Tree varieties for the intended non-heritage varieties in the planting plan and increase tree replacement numbers.

It would be helpful in the review process if the project artwork were consistent with the landscaping plans, not adding artistic landscaping and trees in locations that they are not intended to be installed. Plan set artwork shows landscaping and trees between driveways, but the landscaping plans show no landscaping areas or trees between units within a cluster. The project will have uninterrupted spans of concrete at the front of each townhouse cluster, from one end to the other. It would be preferable to reflect this in the plan set artwork instead of fabricating trees there is no intent to plant in landscaping areas there is no intent to build. Alternatively, modify the landscaping plans to include these additional trees and planting areas.

Biological Resources

Our western hills are well-known as habitat areas for mountain lions, coyotes, deer, and smaller animals including protected dusky-footed woodrats and Santa Cruz kangaroo rats. We look forward to an analysis of the impacts of the proposed development on wildlife and available mitigation measures.

We would also appreciate more information about intended site fencing. It appears there are existing fences along the property line adjacent to Glasgow Lane homes and the home at 13 Coronado, but that most of the rest of the site is currently unfenced and serves as a wildlife corridor. We would appreciate assurances that existing wildlife corridors will not be fenced off, or that any fencing will be of a type that delineates boundaries without blocking wildlife access, such as split rail fencing.

Climate Change

With the increasing impacts of climate change, more frequent and severe heat waves are expected. The City's 2009 Climate Action Plan calls for increased albedo (reflectivity) of urban surfaces including roads, driveways, sidewalks, and roofs in order to minimize the urban heat island effect. We look forward to learning about how this project will be minimizing the urban heat island effect through material choices. The green roof areas are innovative and will certainly help with this issue. Provide Solar Reflective Index numbers for the HPA canopy, railing, and siding. To mitigate the impacts on the urban heat island effect, the project could utilize Cool Roof materials, high-albedo patio materials, and high-albedo paving.

Greenhouse Gas Emissions

Transportation is the largest source of greenhouse gas emissions in California, due in large part to passenger vehicles. The San Carlos Climate Action Plan element 10.3 says "Encourage

developers to dedicate parking lot spaces to electric vehicle recharging stations". Indicate all garage parking spaces to have two EV-ready outlets or fully-installed chargers, fully-installed EV chargers for some visitor parking spaces, and all visitor parking spaces to be EV-capable.

The City's recently-adopted (first reading) Reach Code requires projects of this type to be all-electric. We assume the fireplaces indicated in the plan set are electric.

Energy

Electricity generation accounts for a large proportion of the State's greenhouse gas emissions. The California Energy Code requires solar photovoltaic systems be installed on each new low-rise residential structure. The San Carlos Reach Code, as adopted on first reading, requires nonresidential structures like the Community Hub to have solar photovoltaic systems as well. The architectural plans do not indicate areas for solar PV on the roof plans or elsewhere. Where will the solar PV be for each unit? Is there enough space on the stair enclosure roof for the required amount of solar? Will solar panels also be on the installed shade structure for each unit, or on other sections of the roof? Will solar PV be maximized on the Community Hub to offset development lighting energy use as well as Hub and water feature energy uses?

When connected to a renewable energy source, such as photovoltaic solar panels, batteries can take in the clean energy produced when the skies are clear and sunny, store it, and then send it back to the electricity grid at night, on cloudy days, or whenever needed. Batteries can potentially reduce electricity bills for customers who use them to send power back to the grid when demand is at its peak and energy prices are at their highest, and they can serve as back-up power in the case of electrical outage. Will these units be built battery-ready?

Hydrology and Water

The Notice of Preparation mentions the site's historic use of a natural spring. News coverage from 2015 indicates there is still an active spring on the site. To those of us not trained in interpreting Civil plans, C1.1 does not clearly show what becomes of the water in the spring – is there now underground drainage leading to the stormwater system, or is there an above-ground stream? C4.1 appears to show the area of the spring being substantially regraded, and L1.1 shows a light pole on top of the spring. Are plans in place to protect existing surface water drainage systems and their value to the ecosystem? We look forward to the EIR providing information about current hydrology and an analysis of how the existing spring and any stream or tributary areas will be protected.

Page C5.2 note 3 states, "All onsite stormwater and runoff collected from the offsite tributary to bypass treatment and be piped to Alameda de Las Pulgas." We look forward to an analysis of the impact of this site no longer providing stormwater dissipation for adjacent uphill areas.

Parks and Recreation

According to news coverage in 2018, the project was intending to build a publicly-accessible park. The current plans show the patio area at the Community Hub but do not indicate any playground or other play area. Will active use areas such as a playground be added to the plan?

Population and Housing/Circulation

Figure 2 of the Notice and A0.1 indicate that units 1-7 & 13-14 are wheelchair-accessible units. These units are on the street adjacent to the Community Hub. But there is no continuous sidewalk along the block between that street and Alameda, nor is there a ramp from that street down to the Hub plaza. To get from the bus stop to the accessible units, occupants would need to cross the street twice because no sidewalk is provided. We look forward to seeing an explanation of how this is "best practices" for disability access.

Nine of the units are indicated as Accessible, but the bedrooms of these units are all on a different level than the entry, there are stairs but no elevator, and the bathrooms do not appear to be wheelchair-accessible designs. The B floorplans have an elevator, but do not appear to have accessible bathrooms. We look forward to learning more about why the D units are considered Accessible units, and why there are no units that have both an accessible bedroom and bathroom.

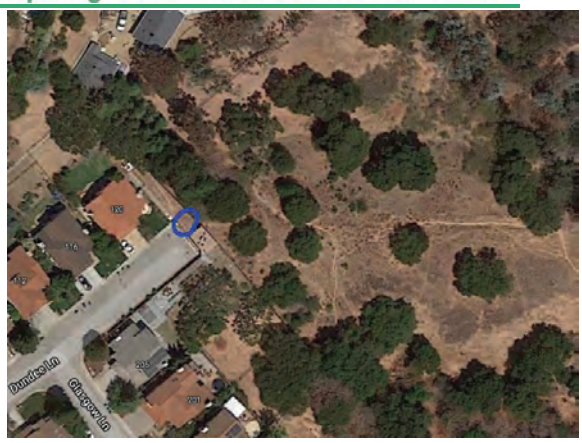
A summary of the City's Below Market Rate (BMR) Housing Program indicates at least 15% of units need to be BMR, including 5% Low-Income units (L Units). Plan page A0.1 indicates only 10 of the units (11.5%) are to be BMR, and provides no indication of L Units. We look forward to plan revisions to achieve full compliance with the City's BMR program.

Transportation and Circulation

San Carlos General Plan Policy LU-1.12 directs the City to "Promote the development of publicly accessible urban trails throughout the city to provide access to the natural environment and facilitate nonmotorized transportation options." The City's Climate Action Plan, element 5, says "Create travel routes that ensure that destinations may be reached conveniently by public transit, bicycling and walking". Element 5.2 directs: "Make it a condition for approval that new large-scale developments address transit, biking, and walking access to the location."

The March 4, 2019 Planning presentation regarding this project mentions "connections to existing off-site trails". The City's General Plan identifies as a "Potential Trail Connection" a trail across this property, connecting Alameda to Dundee Lane (GP p. 166, fig. 7-4). It is further described on the City's adopted list of "Potential San Carlos Trail Connections" attached to the City's Parks, Open Space, Buildings, and other Recreational Facilities Master Plan 2009-2029:

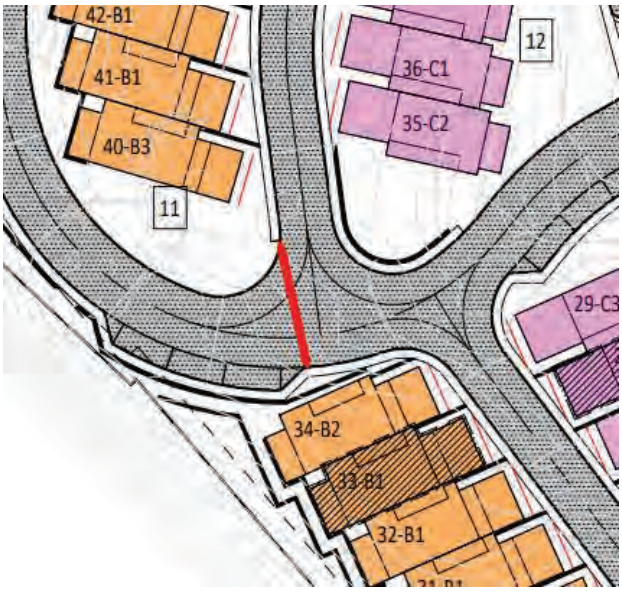
> Alameda to Dundee and Highland Park Across Black Mountain Property to Bell/Lupine Ave. This is on the Midpeninsula Regional Open Space District plan as a conceptual access into District lands. Some of this area is currently in open space easements or could be with future development. An existing trail damaged in 1983 could be rebuilt and improved. Would be easternmost access point into system.



According to news coverage in 2018, the project was intending to connect trails to Dundee Lane. But the current plans show the trail stopping short of the property line and not connecting to Dundee Lane. A through pathway would connect the new 808 Alameda residents to Highlands Park, with its many field and sports amenities, as well as enhance pedestrian accessibility from the Highlands Park neighborhood to Alameda de las Pulgas. Developer acquisition of an easement over a portion of one of the two properties at the end of Dundee Lane, in order to connect the 808 Alameda trails with Dundee Lane, would substantially increase pedestrian connectivity between the neighborhoods.

The same news coverage indicated the project would have publicly-accessible trails connecting to Heather Drive, but the plans show no indication of this either. Information about the accessibility over this lot would be useful to include in a future presentation.

We assume that pedestrians will have access to the Emergency Vehicle road (ingress/egress easement over Lands of Malamy & VDG View Estate) to Coronado. We look forward to this pedestrian accessibility to and from Coronado.



The Pedestrian Access Plan on C6.1 indicates a continuous sidewalk on the south side of the main roadway, but intermittent sidewalks in other areas. The loop with units 35-39 does not connect to continuous sidewalks on either side of the loop road. The intersection between units 40 and 34 looks particularly problematic for pedestrians, as they would be required to walk in the lane of auto travel for a long distance to cross the rounded intersection. (The City recently spent a substantial amount of money reconfiguring the intersection of Alameda de las Pulgas and San Carlos Avenue to shorten a long pedestrian cross distance.) If a pedestrian is crossing the road from the end of the sidewalk at unit 40 to the nearest continuous sidewalk along the side of unit 34, what is the distance the pedestrian would need to cover to walk in the lane of traffic to reach that sidewalk? This issue could be mitigated by extending the sidewalks for better connectivity, shortening the cross distance by reducing the curvature of the intersection, or adding a pedestrian island in the center of the intersection.

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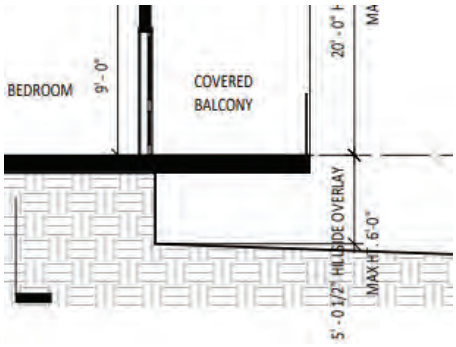
San Carlos General Plan Policy LU-3.10 calls for the City to "Encourage the creation of safe, walkable environments that include elements such as wide, smooth sidewalks, good lighting, safe crosswalks, clear signage, curb bulb-outs, curb cuts, street furniture and trees and traffic-calming measures which allow people of all ages and abilities to exercise and safely access public transportation, community centers and schools and goods and services." The City's Bicycle and Pedestrian Master Plan says, "Sidewalk and trail furnishings like benches, shade structures, restrooms, water fountains, and trash receptacles contribute to a cleaner, more comfortable, and more pedestrian-oriented public realm." We look forward to additional information about how these goals will be met on this project. For example, benches could be installed along the sidewalk and trail areas. The occasional garbage can would also be appreciated by project residents who walk dogs.

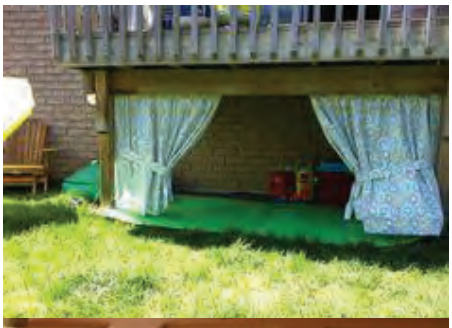
Figure 2 of the Notice of Preparation indicates the on-site roadway at the north-east corner, between units 5 and 14, extends to the property line. Previously-circulated plans for the adjacent Vista Grande project indicate no construction on the east end of the Vista Grande site. Have plans for the Vista Grande site been modified to include a connection to this proposed road and potential other construction on the east end of the site?

We look forward to the EIR's analysis of the cumulative impact of 808 Alameda and proposed Vista Grande projects on local roads, especially Alameda de la Pulgas, San Carlos Avenue, Brittan, and Crestview.

Wildfire

Wildfire prevention guidance promoted in San Carlos encourages us to keep an area within five feet of our homes free of plants and other combustible material and to not plant below decks. The 5' fire buffer does not appear on the landscaping plans – instead, building perimeters are indicated as general planting areas. (L3.0). A3.2 and A4.2 indicate some bottom-floor balcony areas are cantilevered 4-6 feet over the soil level, which would enable plants to grow directly under the overhanging deck. We look forward an analysis of how this project complies with wildfire safety guidance. Mitigation measures could include installing degraded granite or river rocks under the cantilevered balcony areas and surrounding each building in a 5' fire buffer of degraded granite or river rocks.





Or maybe, with the absence of a playground, the under-cantilevered-deck area is where the developers intend the children to play. If that is the case, might as well install fort amenities like synthetic turf, under-balcony monkey bars on the balconies more than 5' above ground level, and balcony-mounted cleats for attaching a rope ladder to climb from the unit down to the unit's fort.

We look forward to receiving additional information about this project in the future. Thank you.

Sincerely,

Suzanne Henderson Emerson
San Carlos Green

cc: Ellen Garvey (Chair) egarvey@cityofsancarlos.org
Kristen Clements kclements@cityofsancarlos.org
David Roof droof@cityofsancarlos.org
Jim Iacoponi jiacoponi@cityofsancarlos.org
Don Bradley dbradley@cityofsancarlos.org

Lisa Costa Sanders

Town Planner City of San Carlos San Carlos, CA. 94070

lcostasanders@cityofsancarlos.org

February 3, 2021

RE: Black Mountain Water Property

Ms. Sanders,

We have resided in San Carlos for over 20 years. We moved here from San Mateo, because we liked the smaller town atmosphere, wooded hills & close-knit friendly community. It has changed dramatically & sadly not for the best. In our opinion it is no longer the "City of Good Living" but instead the city of high rises, traffic congestion & out of control dense housing. The City Planners have succeeded in the "Manhattanization" of lower San Carlos so please stop expanding into the San Carlos Hills, which have traditionally been set aside for single family residences. The San Carlos Hills are beautiful with teaming wildlife, hiking trails & open space. Keep the San Carlos Hills single family and put density where it belongs, near transit. A more responsible proposal and development of single family detached homes would likely be received much better by existing San Carlos Residents, who will be directly impacted by this extremely dense "Black Mountain Townhome Development."

Thank you for your consideration.

Sincerely,

William & Barbara Mecham

From:	Lisa Costa Sanders
To:	Tricia Stevens; Sean Anayah
Subject:	FW: 808 Alameda de las Pulgas EIR public comment submission
Date:	Monday, February 8, 2021 6:09:21 PM

From: Christopher Rimer <crimer@gmail.com>
Sent: Thursday, February 4, 2021 9:22 PM
To: Lisa Costa Sanders <LCostaSanders@cityofsancarlos.org>
Subject: 808 Alameda de las Pulgas EIR public comment submission

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To Lisa & the City planners,

Thank you for providing the opportunity to comment on the 808 ADLP EIR preparation submission.

I am writing to express ongoing concern with the Black Mountain project. With the EIR submission period coming to a close, I note issues that lead me to object to the project.

I have three primary concerns:
1) the proposed development adds density that is in direct conflict with the development surrounding it, and placing density away from the core of San Carlos. Per the City's own statement:

> *"The site is generally bordered by low-density single family residences and open space. It is zoned RS-6: Single Family on the City of San Carlos zoning map, which allows up to six residential units per net acre. The project site is within the city's Hillside (H) Overlay District."*

Unlike townhomes and dense housing that was built in at the top of Brittan along Crestview when that area was developed, this area was never intended to have dense housing, and those homes will have denigrated view lines and little to look at other than...other dense housing.

2) the transportation options in and out of that area will be by car -- this will most certainly warrant another stoplight given the density, at increased cost to developer and City.

We have learned a great deal since the hilltop projects were approved in the 60s/70s, and recognize the importance of bringing dense housing close to central transportation options as we have in the downtown area.

3) While the proposal states "2.4 acres would remain dedicated open space" that is a bit disingenuous, as that is not one piece of land, but rather, a few parcels that add up to 2.4 acres. That makes a big difference in terms of the "livable space" of this area. And, there is no real "park" -- the hillside open space is not particularly accessible -- there are no substantial flat open areas in this plan for residents to leverage.

~~

As a City homeowner since 2002, I am very supportive of the need to grow our housing stock as well as provide good, affordable housing options when development is done well. Wheeler Plaza is a perfect example of putting dense living space near downtown & transportation where vehicles may not be required by residents;

However, I voted for the bond for the City to purchase this land. **I was, and remain, willing to take a tax bond added to my property to preserve this open space** for the sake of the City as an asset that can be used now, or in the future, as park or as other sources of community use emerge.

I would urge the City to strongly consider the option of revisiting the purchase option, even with the challenge of having to go back to voters to fund it. Once this space is lost, it is lost for good.

Thank you for taking this viewpoint, and I wish you well in considering the many & varied viewpoints of San Carlos residents. We have much to celebrate in San Carlos, and the preservation of this space for a broader community use would be worthy of celebration, indeed.

Sincerely,

Chris Rimer

--
Chris Rimer
crimer@alumni.haas.org / crimer@gmail.com

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From:	Lisa Costa Sanders
To:	Tricia Stevens; Sean Anayah
Subject:	FW: 808 Alameda de la PulgasTownhouse Development EIR
Date:	Thursday, February 4, 2021 1:23:00 PM

From: Calsolberg <calsolberg@aol.com>
Sent: Thursday, February 4, 2021 11:28 AM
To: Lisa Costa Sanders <LCostaSanders@cityofsancarlos.org>
Cc: Don Bradley <DBradley@cityofsancarlos.org>; Jim Iacoponi <JIacoponi@cityofsancarlos.org>; David Roof <DRoof@cityofsancarlos.org>; Kristen Clements <KClements@cityofsancarlos.org>; Ellen Garvey <EGarvey@cityofsancarlos.org>
Subject: 808 Alameda de la PulgasTownhouse Development EIR

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1. The street shown should not be a private street and should be connected to the rest of the community. If not, the Vista del Grande development will be land locked except for a narrow winding basically a one lane road. Madera and Vista del Grande cannot handle the construction and residential traffic from 65 homes. Readers should drive these roads on Friday when the garbage trucks are there to see what it would be like with the increased traffic,

2. Veev stated that their traffic survey shows that only a crosswalk would be required on the Alameda connecting to their street If this survey was done after March, 2020, it would have counted 1/4 to 1/3 of the traffic before the pandemic shut down . When schools reopen and traffic is back to normal the results will be much different.

Regards,

Gerald Solberg
145 Vista del Grande
San Carlos Ca

Member of the San Carlos Traffic Commission for 9 years

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Lisa Costa Sanders
Town Planner
City of San Carlos
San Carlos, CA. 94070
lcostasanders@cityofsancarlos.org

February 4, 2021

RE: 808 Alameda de las Pulgas Townhome Development EIR

Dear Ms. Sanders,

I live at 924 Heather Drive in San Carlos. I participated in the community Zoom meeting led by Sean Gibson of Veev the evening of January 19, 2021. I was disappointed and now concerned about the scope, density, and environmental impact the development portends for our community. In my opinion, as a long-term homeowner in this community, the planned construction will adversely impact the quality of our lives and our neighborhood, and will be detrimental to the physical environment, the indigenous vegetation, and the wildlife of the area.

Impact on the Families in Home Encircling the Property

The area encircling the 808 Alameda del las Pulgas project is home to single family residences and open space. Most residents have lived in San Carlos for decades and many are the original owners of their homes. Residents of this community moved here for the ambiance, as well as the local schools, and to enable our children to walk or bike to school along quiet streets and sidewalks. The community is highly desired because residents can jog, bike, and walk in the neighborhood and along the Alameda throughout the day and especially on weekends. Evenings are quiet and lights are low, leaving skies clear and dark enough at night to see the stars.

Over the past 5 years, San Carlos has been identified as an "up and coming" community with rising home values. This is because of the balance that has developed between the scores of attractive single-family homes and the open space that provides a comfortable level of population density. While we appreciate the profit motive of the Veev developers as well as the need for additional housing in San Carlos, the effort to "stuff" an additional 87 homes (which is only half the full Black Mountain project) into THIS particular open canyon is ill conceived; it will destroy the open-space balance of the neighborhood and dramatically change the population density. Recognizing that the developers own the land and thereby hold rights to its development, it is unjust that their current plan in this particular location, if it proceeds, will adversely impact the lives and home value of hundreds of current local residents. There are alternatives, compromises, that will respect the local community and enable the developers to generate profits.

Impact: The EIR must study the adverse impact this project would have on local residents' historical and current use of the area, along the Alameda and neighboring streets. The EIR must study the impact on residents' quality of life. The EIR must evaluate whether this development violates the San Carlos City ordinance which requires a "Conditional Use Permit" for R-6 districts. The permit is intended to ensure that "<u>the proposed use will not be adverse to the public health, safety, or general welfare of the community, nor detrimental to surrounding properties or improvements</u>" (Ord. 1464 § 3 (Exh. C (part)), 2013: Ord. 1438 § 4 (Exh. A (part)), 2011)

Population Density

The Veev development plans 87 units and several common shared facilities. This is a population density that is approximately 4 times the density of surrounding streets. Eight-seven units each with 3-4 bedrooms and occupied by approximately 3-5 people would increase the population living within one steep canyon by 300-400 people. The sharp increase in density-- as compared to nearby Melendy (from Bauer to Heather) where there are a total 28 homes lining the road, must be studied. Furthermore, this amplified density will bring corresponding problems:

Traffic – Traffic will increase significantly along the Alameda, Brittan, Lupin Way, San Carlos Avenue, Carmelita and Alma. Cars entering and exiting Castor Road will slow down traffic on Alameda creating a back-up, at an already dangerous curve in the road. The point at which Castor meets Alameda is at a blind spot for cars going down the hill towards San Carlos Avenue. Cars tend to speed on this strip of road and are not prepared to stop for traffic, for someone making a left turn into Castor, or for anyone crossing at the proposed cross walk.

Noise - The predictable increase in noise from traffic and the concentration of 300-400 persons living in a steep canyon must be studied and quantified by the EIR. Sound travels easily from the low-lying areas of San Carlos up along the hills bordering the west side of the city. Residents already can hear any sound made in the canyon, and on streets below (east) of the Alameda (ie, garbage trucks backing up). Recently there was a rooster loose in the canyon and the Nextdoor app used by residents was full of questions about the location of the bird -- because everyone was suffering the 5 am "cock-a-doodle do".

There is no limit to the types of noise that will barrel up the canyon with this development: cars starting, outdoor gatherings, lawn mowers, air conditioners, etc. The noise may be unintentional, but will carry into our homes just the same.

Aesthetics - The architecture of the proposed development is tasteless. In no way does the design complement the surrounding neighborhoods or even downtown San Carlos. They resemble children's Legos stacked one atop the other, crowded onto a very narrow windy street. The development will be an eyesore viewed from any vantage point, whether it is from Alameda or our backyards.

Native Wildlife - In order to build on this steep hilly canyon, the builders will need to remove existing foliage and destroy the habitat of native wildlife including deer, possum, skunk, racoons, and coyotes.

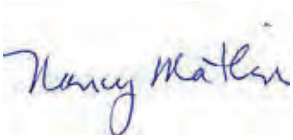
Air quality - Air quality is a function of traffic and land use. The development will increase traffic at least 4-5 times its current level. Instead of wooded canyon and hillsides, 300-400 people will be lighting their BBQs and indoor fireplaces and using their cars.

Geology and Soils - The Black Mountain water company was situated at 808 Alameda because of the fresh spring water that flows through the land. Water also flows throughout the surrounding hillsides. The EIR must study the geology, topography, soil and stability of the surrounding hills and canyons. As evidence I would direct the geologists to walk up Bauer Avenue and see the broken asphalt caused by water seeping up from underground. The EIR must consider the impact that construction, removal of native ancient trees and subsequent runoff from the development has on the stability of the hillside. Consider the harmful residues that will flow out from the canyon down through the city to Baer Island wetland (nature area) and the Bay.

The EIR must take all of these issues: quality of life, population density, traffic, noise, aesthetics, native wildlife, air quality and geologic stability into account. Moreover, the damage will surely be multiplied when the adjacent Vista Grande project is developed! Few details about the Vista Grande development have been shared, but the impact on the environment will be equally as devastating.

Thank you for your consideration.

Sincerely,



Nancy Matlin
924 Heather Drive, San Carlos

CC:
San Carlos Planning Commission

- Don Bradley dbradley@cityofsancarlos.org
- Jim Iacoponi jiacoponi@cityofsancarlos.org
- David Roof droof@cityofsancarlos.org
- Kristen Clements kclements@cityofsancarlos.org
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San Carlos City Council

- Laura Parmer-Lohan lparmerlohan@cityofsancarlos.org
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- Ron Collins rcollins@cityofsancarlos.org
- John Dugan jdugan@cityofsancarlos.org
- Adam Rak arak@cityofsancarlos.org

From: Lisa Costa Sanders
To: Tricia Stevens; Sean Anayah
Subject: FW: 808 Alameda de las Pulgas Townhome Development EIR
Date: Monday, February 8, 2021 6:11:38 PM

From: Virginia Thomson <ginger@felidaefund.org>
Sent: Thursday, February 4, 2021 1:40 PM
To: Lisa Costa Sanders <LCostaSanders@cityofsancarlos.org>
Cc: Zara McDonald <zaramcdonald@felidaefund.org>; Don Bradley <DBradley@cityofsancarlos.org>; Jim Iacoponi <JIacoponi@cityofsancarlos.org>; David Roof <DRoof@cityofsancarlos.org>; Kristen Clements <KClements@cityofsancarlos.org>; Ellen Garvey <EGarvey@cityofsancarlos.org>
Subject: 808 Alameda de las Pulgas Townhome Development EIR

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Dear Commisioners

We are writing to express concern regarding the habitat needs of the *Puma concolor* (aka Mountain Lion, Puma) in the vicinity of the Black Mountain Development in San Carlos, specifically the Townhome Development DEIR 808 Alameda De Las Pulgas San Carlos, and sister project on Vista Del Grande.

Habitat for wildlife has been consistently encroached upon by residential and commercial development in the San Francisco Bay Area. The impact has been to create an array of unconnected fragments of open space conducive to healthy wildlife/biodiversity persistence. Because these fragments are often not connected to one another wildlife must brave residential streets and properties to disperse for mating, leading to increased human wildlife conflicts. The challenge for wildlife also leads to a decrease in genetic diversity within a fragment, particularly of larger species like pumas and bobcats. And while both are adaptive species, genetic diversity is made challenging when habitat fragments are reduced in size, separated more broadly and interrupted by human developments.

Felidae (Bay Area Puma Project) is conducting research on wildlife habitat fragments in the San Francisco Bay Area in order to inform cities, developers and planners about how best to consider development. While we have not completed this research we can make a general statement that wildlife habitat in the SF Bay Area is under considerable threat and our failure to recognize this threat will lead to species extirpations not only for wild cats (Puma, bobcat) but also for many other at risk terrestrial species that contribute significantly to the area's biodiversity and hence its ecosystem health. Our research to date offers various findings to support this, and Phase 1 of our larger puma fragmentation project will be complete in 2022, and will provide measurable, concrete recommendations for wildlife-friendly development.

We urge you to await the results of this research, and to partner with us to expedite its results, ahead of making any decisions regarding the Black Mountain Development and the need for far more open space in the area than is currently contemplated.

Sincerely,
Zara McDonald & Virginia Thomson
Felidae Conservation Fund /Bay Area Puma Project

Community Conservation * Fund Development * Tech for Good
Virginia Thomson & Associates
415.990.3311
www.felidaefund.org

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From: Lisa Costa Sanders
To: Tricia Stevens; Sean Anayah
Subject: FW: 808 ALAMEDA DE LAS PULGAS TOWNHOME DEVELOPMENT EIR
Date: Monday, February 8, 2021 6:08:04 PM

From: ZINOVY FICHTENHOLZ <zolik@comcast.net>
Sent: Thursday, February 4, 2021 11:49 PM
To: Lisa Costa Sanders <LCostaSanders@cityofsancarlos.org>
Subject: 808 ALAMEDA DE LAS PULGAS TOWNHOME DEVELOPMENT EIR

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Ms. Sanders -

Below are my comments (concerns) about this proposed project:

1. The rooftop patios have to be disallowed. There is no way outdoor noise levels can be kept below 55 dB (for outdoors) if just a couple of these rooftops are crowded with people. The EIR has to do a very thorough analysis of the noise emanating from the rooftop patios. Please, note that this analysis, or lack of it, will be challenged in court by the community.

2. Heritage tree removal shall not be allowed in wholesale levels. It is my understanding that the current city ordinance DOES NOT ALLOW any heritage tree removal, unless the tree is dead, dying, or threatening an EXISTING dwelling occupied by people.
VEEV/DRAGONFLY knew what they were buying. They can not possibly assume that the city will simply allow removal of 250+ healthy heritage trees to clear the area for new construction. Our concern is not only the air quality maintained by the trees, but also the hill's stability we all depend on.
This aspect of the EIR will be also challenged in court - whether it is covered or not.

3. Traffic. It is my understanding that there will be 2 developments - VEEV and VISTA DEL GRANDE. The EIR has to take into consideration the traffic impact from BOTH developments. as both of them will discharge their vehicles into Alameda De Las Pulgas. Each of these developments will have ~ 90 units, which would translate into at least ~ 180* 2= 360 cars. Ability of our intersections to handle these additional cars without creating major gridlocks will be challenged as well.

Thank you for your consideration.

Please, acknowledge receipt of these comments.

Zinovy Fichtenholz
165 Glasgow Lane, San Carlos, CA 94070
Cell: 650-208-5743

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From:	Lisa Costa Sanders
To:	Tricia Stevens; Sean Anayah
Subject:	FW: 808 Alameda de las Pulgas Townhouse Development EIR--Public Comment and Questions
Date:	Monday, February 8, 2021 6:01:41 PM

From: Gary Baldocchi <gdb357@aol.com>
Sent: Friday, February 5, 2021 5:36 PM
To: Lisa Costa Sanders <LCostaSanders@cityofsancarlos.org>; sgibson@veev.com; tstevens@migcom.com
Cc: jenpeters@sbcglobal.net; seanpeters@mobile.me; tanya_omalley@yahoo.com
Subject: Fwd: 808 Alameda de las Pulgas Townhouse Development EIR--Public Comment and Questions

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2/5/21

Hi Lisa, Sean and Tricia,

Sean, thank you so much for your reply to my earlier email. Lisa, we hope to receive your response to our January 23rd email next week if possible. We have several follow-up questions and comments to add before the public comment period closes on February 8th.

Introduction

We are concerned that this project **may not be eligible** for bonus density exemption and formally request that the city re-evaluate the determination. The following questions are based on eligibility provisions set forth in Government Code section 65913.4 (Bonus Density Housing--formerly Senate Bill 35) and provisions in the San Carlos Municipal Code, current through Ordinance 1567, passed November 9, 2020.

The relevant sections of of the Gov. Code are summarized in Redwood City's SB 35 Eligibility Checklist. https://www.redwoodcity.org/home/showdocument?id=15112 We did not find a similar checklist for San Carlos. Please let me know if we overlooked it. It reads in part, ***SB 35 creates a streamlined and ministerial approval process for certain housing projects. If the answers to all of the statements below are "yes," then your project is eligible for the approval process under Government Code section 65913.4 (see process notes on page 2). If any of these responses are "no," then the project is not eligible. This checklist provides an overview of SB 35's requirements.***

Is it possible that the project is **not eligible** for bonus density exemption because

of the following provisions stated below?

(1) Section 8: The project is outside each of the following areas (sub. (a)(6)-a(7):
-Earthquake fault zones
-High or very high fire hazard severity zones

We believe that the project is **within an active earthquake fault zone and high or very high fire hazard severity zone** based on our reading of the San Carlos Municipal code. (San Carlos Municipal Code section 15.04.170--Findings.) The code recognizes the extraordinary risks of construction in these areas and described them in detail in the *Potential Geologic and Seismic Hazards Map.*

It reads, in part: *Based upon these geologic findings, the City Council hereby adopts and designates the Harlan Tait Associates "Potential Geologic and Seismic Hazards Map, City of San Carlos, California" dated February 22, 1996, and Hazard Zone A and Hazard Zone B handouts, as minimum criteria to determine when a geotechnical investigation report (soils report) is required for development within the City.*

B. Climatic. The local climate is characterized by markedly delineated rainy and dry seasons, which tend to maximize the expansive characteristics of soil.

C. Topography. San Carlos topography includes mountain and foothill areas. The ground elevation rises over nine hundred feet in less than one mile in much of the City resulting in large areas of unstable, steep slopes. ***Upgraded structural provisions are required to construct housing on these unpredictable, unstable steep slopes.*** *Upgraded automatic sprinkler provisions are required due to approximately one-quarter of residential properties located in very high fire hazard severity zone*. (SCMC, section 15.04.170.)

We reviewed the online plans for the development and did not read any sections that designated any of the excavation, building or construction activities as *upgraded structural provisions*. It would be very helpful if the developer would provide a complete list of upgraded structural provisions being undertaken in order to ensure public safety.

In a nutshell, it is our perception that the proposed density is inherently unsafe

because the steep slopes are unpredictable, unstable, and located on a site that makes it uniquely susceptible to erosion, slope collapse, sink holes or subsistence because of the documented existence of underground and above ground springs, other areas of potential ground water accumulation, remnants of an underground water catchment "tunnel" and possible additional unknown underground industrial remnants from the former Black Mountain Springs Water Company.

Two California trial courts have interpreted state housing development laws--SB35 and the Housing Accountability Act-in ways that limit their applicability to cities. https://www.reubenlaw.com/trial-court-challenges-to-state-housing-laws/ We formally request that the city of San Carlos consider those cases and find that this development is not eligible for approval pursuant to SB 35.

To the extent that the city plans to approve the newly proposed increase in density from 68 attached townhomes to 87, we respectfully request that the city consider the following questions and concerns in order to mitigate the significant environmental impacts and hazards to public health and safety.

(1) Please clarify the amount of post-development impervious surfaces

Sean, in the email reply below, you indicated that there will be **116,600** sq ft of impervious surface after completion of construction. However, I reviewed BFK's civil engineering plans online and noted that is half of what is reported. (See the *Project Scope Notes, page C0.0*.) It reads that post-development, the impervious area will be **248,834** sq ft. However, I did see the 116,600 figure you cited in BFK's *Stormwater Control Plan* in the *Onsite Tributary Area Chart*. Will you please confirm the correct square footage of total impervious surfaces post-development?

In addition, I noted that there is a conflict in the online materials regarding how much of the parcel will remain undisturbed during site preparation and landscaping activities. The current Notice of Preparation of EIR Report reads: *Finally, 2.4 acres of the project site would remain in dedicated open space and would remain undisturbed during site preparation, construction and landscaping actives.* (Page 3) However, the *Project Notes* in the *Civil Plan* read:

Property area: 497,956 sq ft (11.4 acres)
Pre-development impervious surfaces: 52,113
Post development impervious surfaces: 248,834
Total disturbed surface: 438, 522 (10.07 acres)

That appears to be 1.33 acres of undisturbed space, not 2.4 acres. But, what's

more important is the development **adds** an additional 196,721 sq ft of impervious surface and that does not include solar panels.

Will please you confirm how many additional square feet of impervious surface will exist on the site after adding solar panels? To the extent possible and appropriate, we request that construction follows the higher guidelines (i.e. upgraded structural provisions) recommended by civil engineering and geotechnical experts, such as those listed in the article: *Low Impact Development: The contributing drainage area of roof top to each disconnected discharge is 500 sq feet or less, soil should not be designated as hydrologic soil group "D" or equivalent and overland flow path should have a slope of 5% or less and contributing flow path over impervious surface should be no more than 75 feet.* https://lidcertification.org/certification/reduce-impervious-areas Although that article dealt with water runoff that could negatively affect a lake and not a creek, the environmental issues are very similar. Namely, *to protect water quality by reducing stormwater runoff and pollutants from impervious surfaces, preserve ecosystem services of watershed by maintaining natural landscape, protect water habitat by buffering thermal impact from runoff and preserve undisturbed natural resources by locating development and redevelopment where existing infrastructure exists.*

What is the hydrologic soil group (HSG) on the site as defined by the Natural Resource Conservation Service? Is it soils type D? This HSG is mostly clay and has the highest runoff potential. Since some areas in San Carlos may fall into this category, the drainage infrastructure on and around the site is especially important because experts describe this soil type as having *very low infiltration rates when thoroughly wetted and consist chiefly of clay soils with a high swelling potential, soils with a permanent high water table, soils with a clay pan or clay layer at or near the surface and shallow soils over nearly impervious materials.* https://engineering.purdue.edu/mapserve/LTHIA7/documentation/hsg.html

However, even if the site soils are one of the other types frequently found in San Carlos, such as those described in the San Carlos Municipal Code, section 15.04.170, the potential storm water runoff is a significant environmental issue that warrants the highest levels of civil and geotechnical engineering to protect people, property and infrastructure. That code section reads in part:

Findings:

A. Geologic. The City of San Carlos is located near a very active seismic area, seismic zone E (previously known as seismic zone 4). The entire City is two to seven kilometers from the San Andreas Fault, a major active fault in California.

There are five major soils types in the City from the bay to the hillsides. There is existing fill overlying unconsolidated Holocene Bay mud deposits. There are unconsolidated Holocene fine- to coarse-grained alluvial fan and basin deposits with a water table equal to or less than ten feet. There are unconsolidated Holocene fine- to coarse-grained alluvial fan deposits with a water table equal to or greater than ten feet. There are weak consolidated Pleistocene fine- to coarse-grained alluvial fan and basin deposits. There are colluvial and landslide deposits locally overlying sandstone and bedrock units.

There are high flooding hazards in two of the five soils types and moderate flooding hazards in two of the five. There is high ground settlement potential in the area along the bay. There is high potential for seismically induced ground failure in the same area and moderate potential in the adjacent area.

There is a high potential for seismically induced ground shaking in all areas in the City. There is a high potential for liquefaction in the area adjacent to the bay and moderate potential in the adjacent area. There is moderate potential for erosion and slope instability/landslides in approximately fifty percent of the City. Expansive soils or bedrock varies in significance in over two-thirds of the entire City.

(2) Please clarify the definition of "green roofs" and describe the plans for their long-term maintenance

We respectfully request that the roof decks be more accurately described in the official online plans. Although they have green features, many people do not think of rain capture planter type boxes as true green roofs as defined by environmental experts. https://www.nps.gov/tps/sustainability/new-technology/green-roofs/define.htm The usable deck portion of the roofs cover significantly more square feet than the rain capture planters, so it seems misleading to describe the units as having green roofs. Also, will you please describe the role and responsibilities of the new property owners in maintaining the planters to keep them functional? How effective will the planters be if the owners fail to maintain them and allow the plants to die? How will that affect water run-off and rain water accumulation on the roof decks? How will the city monitor and enforce the ongoing maintenance? It is foreseeable that some owners, for example, Airbnb renters or absentee owners will allow the planting beds to fall into disrepair. If the plants die and the dirt hardens, will that increase the risk of downslope flooding and roof top collapse or water damage? What are the public's remedies when this happens? How will green roof maintenance responsibilities be enforced and by whom? It would be great if you could specifically address these issues in the public online plans.

(3) Please clarify San Carlos regulations for roof decks

The roof decks in this development are significantly larger than any other residential roof decks proposed for new construction in the entire bay area (between 595-735 sq ft). They have more square footage than many one and two bedroom condos and apartments. They include even more total square footage for private open space if you add the square footage of the green roof features and additional smaller decks and balconies on each unit. I do not believe that the 2020 San Carlos Municipal Code specifically addresses roof decks. If it does, will you please refer me to the appropriate section?

The San Francisco Planning Department considered a new roof deck policy in 2018 after there was significant neighborhood opposition to expansive roof top decks because of the attendant environmental hazards. https://www.reubenlaw.com/san-francisco-proposes-new-roof-deck-policy/ The purpose of the policy revisions they considered was to *mitigate potential impacts of adjacent residents resulting from the addition of roof decks, including, but not limited to, the qualify of life from noise, diminishment of privacy, and reduction of light to adjacent properties.* In addition, the article reads: *The impacts referenced by Staff can result*

from the intensification of use of a building's area not historically an active space, i.e., space not previously used, including additions of amenities such as outdoor kitchenettes or grills, hot tubs, televisions, and even putting greens. The SF planning commission considered taking the following action: *(1) limit the size to no greater than one-third of the roof area; (2) 5-foot setback or guardrails except for rear building walls (also recommends 5-foot setback from shared side lot lines and from the edges of light wells); internalized staircase or roof hatch only for single-family dwellings or one minimally sized stair penthouses for multi-unit buildings.* In addition, they considered whether roof decks were appropriate at all for decks at the front of buildings.

According to the Reuben Law article cited above, the SF planning commission: *expressed apprehension to impose restrictions on roof decks, e.g., no kitchenette, grills, or hot tubs--given that deck appliances and furniture are arguably outside the scope of the Planning Commission and such restrictions would be difficult to enforce. The Planning Commission, however, indicated physical restrictions, e.g. size and setback requirements would be prudent planning.* The Planning Commission acknowledged that restrictions on roof decks in larger projects *could lead to developmental hurdles with respect to the provision of open space to a project's future residents or privately owned public open space required in the Downtown Plan Area.* No action was taken at that meeting and I was unable to find articles that addressed whether San Francisco Planning subsequently enacted roof top restrictions.

In this proposed development, thousands of square feet of roof decks constructed so closely together pose critical public health and safety issues that should be addressed and mitigated. As indicated, in this 87 unit development, the square footage of roof decks, according to the information provided in the email below, is between 595-735 sq ft per unit. In the interest of transparency, will you please include the total roof deck square footage per unit in the online plans, including the additional 328-523 sq ft per unit "green roofs" and the additional square footage of decks and balconies so that the public has accurate information? The square footage for the roof decks combined with the green roof structures range between 923-1,258 square feet per unit and that does not include the additional square footage for the two additional balconies. That is far higher than the city's requirement for a minimum of 300 sq ft of open space per unit.

Creating new housing is an important goal for San Carlos and the bay area. However, housing should not be constructed with optional luxury features, such as expansive roof decks that allow amenities which will negatively impact the environment and create unnecessary and foreseeable public safety and health risks. Neighbors should not be put in the position of having to constantly report HOA roof deck safety violations (i.e. fire pits, open flames, etc.) or file noise complaints because a development failed to mitigate and minimize the impacts. It is foreseeable that the decks will be popular locations for parties, weddings, and other social and holiday gatherings that could include hundreds of people. Therefore, we respectfully request that roof decks be limited to no more than 300 square feet per unit, excluding the green roof features. At the very minimum, we request that the developer limit on the number of people allowed on each roof deck to no more than 10 people at any given time. Finally, we request that the developer consider using the remaining roof deck square footage for solar panels.

(a) Fire and public safety risks

The foreseeable risks associated with these exposed and primarily uncovered roof decks are: (1) fires from grills, kitchenettes, tvs, hot tubs, fireplaces, fire features, etc; (2) propane tank explosion from direct sunlight during hot summer days; (3) physical injuries or property damage from deck furniture, bikes, toys, etc. if they are blown from decks during heavy winds or storms; (4) water damage to the buildings due to malfunctions or improper maintenance of hot tubs or lap pools, plant irrigation, etc; (5) polluted storm water runoff from decks related to the deck amenities. We request that home owners be required to maintain appropriate fire extinguishers or water based fire suppression systems on the roof decks.

If there are no specific roof deck regulations, what is the city considering in light of this development and other new commercial and residential construction in the city? How will the city enforce HOA rules that may seek to limit the use of some of the more dangerous items on uncovered roof decks, such as propane tanks, grills, fireplaces, hot tubs etc.? Those items could cause widespread fires, not only to the new units, but also to the surrounding properties and the heavily wooded site. We respectfully request that Veev disclose proposed HOA regulations and safety protocols for the roof decks in the online plans.

(b) Noise and light pollution

Neighbors also expressed concerns about the likelihood of a significant increase in noise from people, pets, appliances, tvs, sound systems, etc. on the rooftop decks. As indicated by many during the community zoom meeting, the acoustics of the bowl shaped topography magnifies and amplifies sound. What noise dampening measures (upgraded structural provisions) are being considered? Will the decks have acoustic floor tiles to help absorb the noise? Will there be noise suppressing "fences" or visual sound dampening barriers between the units? For example, will there be acoustic solutions as described in this article: http://www.roofingmagazine.com/structural-acoustical-roof-decks-reduce-noise-provide-r-values-up-to-44-2/amp/ We saw that the online plans show artificial grass turf as the roof deck covering. However, that may not be effective in significantly reducing sound. We respectfully request that Veev install structural acoustic products that will minimize and dampen noise to the highest extent possible.

What are the city's current regulations that could apply to roof top decks related to the issues described above? The San Carlos Municipal Code, *Subdivisions* (Section 17.08.230), reads, in part: (b) *Window and balcony placement. Offset windows to avoid direct sight lines into and from neighboring properties. Position balconies and other private open space so they minimize views into neighboring properties*. (See page 23 of 68.) The roof decks are private open spaces. But, given their massive size and condensed placement on the tiered slopes, how will the developer effectively comply with these regulations?

(4) Please clarify what steps are being taken to prevent downslope flooding and the long-term formation of sink holes, subsistence or slope collapse on or near the site

In the online *Notice of Preparation of the EIR*, under *Project Background Information*, it reads: *The project site is the former location of the Black Mountain Spring Water Company. It contains the remnants of the bottling facility, including a tunnel used to harvest the natural spring at the eastern boundary of the site.* What will happen to the underground tunnel? Will

it be filled with concrete, demolished or left as is? Are there any other underground remnants of the bottling facility or underground springs or water sources that could make the property subject to slope collapse, erosion or sink hole formation? https://www.conserve-energy-future.com/causes-effects-and-types-of-sinkholes.php

I reviewed the online stormwater and landscaping plans. Although the winding street has several storm drain inlets for street water runoff, there are significantly fewer than in a similar stretch of Alameda de las Pulgas. Since the development's private street, like Alameda, is on a very steep grade, it seems logical that more storm drains would help protect downslope properties in the development from flooding and water damage. In addition, although there are water detention features, there seem to be proportionally less of them than on similar, smaller, new residential construction on sloped lots in the City. However, I read in the *Storm Drain Notes* that *Drains not intended to be the final number and placement is dependent on other factors* per the contractor. We respectfully request that Veev use a general contractor and subcontractors who have significant experience building large scale developments on steep slopes in San Mateo County.

I also read in BFK's Stormwater Control plan that: *(4) The site is not subject to hydromodification sizing requirements.* (See page C5.2.) What steps has the city undertaken to ensure that the proposed density of 87 three-story stacked units on the steep slope is safe? Why is the site exempt from the sizing requirement in light of the extensive underground water sources on site and the huge increase in the square footage of impervious surfaces? The San Mateo County Water Pollution Prevention Program requires a C.3 and C.6 Developmental Review Checklist and permits for Stormwater Controls for Development Projects. The 11-page application requires complex storm water run off calculations based on, among other things, the difference between the square footage of pre-development and post-development impervious surfaces. As mentioned earlier, the development adds an additional 196,721 sq ft of impervious surface and that does not include solar panels.

It is not clear from the online plans what steps (upgraded structural provisions) will be undertaken to ensure that the site is safe for excavation and construction. Although civil engineers designed the plans with expert advise from geotechnical experts, I did not see any description of what is planned for the underground springs and old underground industrial infrastructure. In the community meeting, neighbors asked how the water from the underground springs will be re-routed, discharged or used on the site. We understood the explanation to be that the spring would be "back filled with concrete" and that the spring would be used as an overground "water feature."

Although a soils report was completed for the development, it is not publicly available. We respectfully request that the city post the Geotechnical Report by Cornerstone Earth Group Geotechnical Engineers, dated July 11, 2018 and referenced by

BFK on page C4.1 of the civil plans.

Finally, are the developers' and city's civil engineering experts confident that the new units have sufficiently deep foundational support to resist sliding and movement? The foundations appear quite shallow in the drawings, built on infill soil and do not appear to be anchored to bedrock.

Even the most experienced civil engineers and experts cannot always accurately predict how long high density construction will survive on steep, unstable slopes or on bay area landfill. The most graphic example is the sinking Millennium Tower in San Francisco. A 2018 inspection revealed the tower descended at least 18 inches into the bay fill at Mission and Fremont street and the proposed fix costs over $100 million dollars. The fix consumed years of planning, permits and numerous lawsuits. https://www.sfgate.com/news/editorspicks/article/SF-s-sinking-Millenium-Tower-to-finally-get-fixed-15439863.php

In this case, the townhomes may pose a more serious risk of personal injury in the event of sliding or a slope collapse because it could occur quickly and would not give occupants time to evacuate, especially in the event of an earthquake.

Thank you very much for considering these questions and concerns. We greatly appreciate your time and professionalism.

Sincerely,

Debbie Baldocchi

-----Original Message-----
From: Sean Gibson <sgibson@veev.com>
To: gdb357@aol.com
Cc: Tricia Stevens <tstevens@migcom.com>; Lisa Costa Sanders <LCostaSanders@cityofsancarlos.org>
Sent: Mon, Jan 25, 2021 2:33 pm
Subject: Re: San Carlo Creek flooding—2016 article and follow up questions

Debbie,

Thank you for joining the community meetings last week and for these follow up questions.

Responses below to your questions based on the latest design. Additional information is available at: https://www.cityofsancarlos.org/Home/Components/FlexPlanningZoningProjects/PlanningZoningProjects/59805/407

Impervious surfaces equal 116,600 sqft (245,500 of pervious).

Roof decks range between 595-735 sqft.

Green roofs are between 328-523 sqft.

HVAC and solar PV design is still in process.

On the public stormwater system design specifics, we defer you to the San Carlos Dept of Public Works. Note that they will be reviewing our project's stormwater system design in detail to ensure that it meets all the requirements.

Regards,

Sean Gibson
Head of Communications and Partnerships

777 Mariners Island Blvd., Suite 150, San Mateo, CA 94404
p (650) 292-0752 •**m** (415) 999-7874

On Sat, Jan 23, 2021 at 7:44 PM 'Gary Baldocchi' via 808 Alameda De Las Pulgas <808alameda@veev.com> wrote:

> Hi all,
>
> I have a few follow up questions about the project. I have included a link to a 2016 article about flooding in San Carlos. Hope the upcoming rains this week won't cause flooding. We are getting fiber rolls and sandbags ready just in case.
>
> What is the diameter of the storm drain running from 808 Alameda to Pulgas creek? Does it connect to other storm drains on Alma or Carmelita? Are there water catchment "bubble ups" along the storm drain to slow the flow?
>
> What is the total square footage of impermeable surfaces in the development, including water tower, parking, streets, sidewalks, roof tops, decks, etc?
>
> Finally, what is the range of square footage for each roof top deck? (Is it between 1,000 to 1,500 square feet per unit?) What is the square footage of the solar panels? Will the solar panels be tilted at an angle?
>
> What is the square footage per unit dedicated to the green roof feature? It appears be to be about 2 feet wide.
>
> Will each unit have its own HVAC unit? Will they be mounted on the roofs or on the ground? I think you said that hasn't yet been decided.
>
> Thank you for clarifying. Greatly appreciate the info.
>
> Debbie Baldocchi
>
> Sent from my iPhone
>
> https://www.smdailyjournal.com/news/local/san-carlos-tackles-flooding/article_33b22dc1-c2a7-5408-818e-85f3206c9f5b.html#tncms-source=login
>
> Shared via the Google app
>
> Sent from my iPhone

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808 Alameda
Proposed Development
Comments Regarding Draft Environmental Impact Report

Submitted by John McDowell
February 5, 2021

Ms. Lisa Costa Sanders
Principal Planner
City of San Carlos
Community Development Department
City Hall, 600 Elm St.
San Carlos CA 94070

Dear Ms. Costa Sanders,

As the Draft Environmental Impact Report for the proposed 808 Alameda project is developed, I believe that is should cover the negative impacts and proposed mitigations of these impacts as outlined below.

1. **Comprehensive and cumulative review**
The EIR should consider not only the impacts of the proposed project, located on approximately half of what is locally known as "Black Mountain," but the combined impacts of all projects proposed for the site, including the proposed Vista del Grande/San Carlos View Estates project (https://envisualitygroup.wixsite.com/wanmei-properties/properties?fbclid=IwAR1x5RUPZpvbRn0d_UnxMXrynADnJoD0NiMW7MIlsJQ8WjS6z8H00j5uWFw). The individual projects may themselves not cause large negative impacts to our community, but the joint impacts of these projects could.

2. **Wildfire**
Climate change is bringing a greater chance of wildfire to the city of San Carlos. Already the wildfire season in California has lengthened, with the rainy season now starting a month later than it did decades ago (https://kfgo.com/2021/02/04/california-rains-starting-later-extending-fire-season-study/). The 808 Alameda project sits just a few blocks outside the Local Responsibility Area of a Very High Fire Hazard Severity Zone (https://gis.data.ca.gov/datasets/789d5286736248f69c4515c04f58f414). Buildings in the 808 Alameda project area will thus be subject to a greater chance of destructive wildfire and the design of the project should reflect such danger.

3. **Light pollution**
The proposed development should reduce glare and over-lighting, by assuring lighting is only as bright as is needed, full cut-off, warmer color, and not illuminating beyond the

property line. Where possible, reduce the number of streetlights, especially those next to neighboring lots. Walking path lighting, should be motion-controlled to not illuminate when it is not useful. Exterior lighting on buildings should meet International Dark Sky standards.

4. Wildlife

Black Mountain is home to a vast array of wildlife, including the mountain lion, a "specially protected mammal' under California law. On April 16, 2020 the California Fish and Game Commission voted 5-0 to advance Southern California and Central Coast mountain lions to candidacy under the state's Endangered Species Act. The vote follows a February 2020 finding by the California Department of Fish and Wildlife (CDFW) that increased protections may be called for. That vote triggered a year-long review by CDFW to determine if these populations should be formally protected under the Act. The Act's protections apply during the candidacy period.

While the mountain lions that follow their deer food source in and around Black Mountain may not be covered by the Act's provisions, the EIR should include a review of how the proposed development will diminish habitat for not only mountain lions but other wildlife and how the developer should mitigate such habitat destruction, possibly by funding habitat restoration in other areas of the state.

5. Transportation, circulation, and greenhouse gasses.

The building of 140 single family units across the entire Black Mountain site (808 Alameda and Vista del Grande) will drive an increase in automobile trips, greenhouse gas emissions, and traffic across the city. Strict plans should be put in place to limit such destructive impacts, including for instance a hard limit on the number of parking spaces allowed in the development (possibly only one per every three units) and a fund for payment of mass transit alternatives for residents of the development (a yearly SamTrans and Caltrain pass for each resident).

6. Geology

The site is honeycombed with natural springs and manufactured underground tunnels, a legacy of the Black Mountain Spring Water Company. Any proposed development must consider the inherent instability of the underlying soil as well as associated runoff issues driven by grading and covering over of the natural spring and creek flows through the area.

From:	Lisa Costa Sanders
To:	Tricia Stevens; Sean Anayah
Subject:	FW: 808 Alameda de las Pulgas Townhome Development EIR
Date:	Monday, February 8, 2021 6:07:08 PM

From: Velvet Snow <velvetdavid@gmail.com>
Sent: Friday, February 5, 2021 8:49 AM
To: Lisa Costa Sanders <LCostaSanders@cityofsancarlos.org>
Cc: Don Bradley <DBradley@cityofsancarlos.org>; Jim Iacoponi <JIacoponi@cityofsancarlos.org>; David Roof <DRoof@cityofsancarlos.org>; Kristen Clements <KClements@cityofsancarlos.org>; Ellen Garvey <EGarvey@cityofsancarlos.org>
Subject: 808 Alameda de las Pulgas Townhome Development EIR

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Hello San Carlos Planning Department and Planning Commission,

The new developments in the Black Mountain area and the Vista del Grande area are going to be an adjustment for our neighborhood. Good leadership will make these changes comfortable with very little inconvenience.

My big ask is that you please consider how to make these developments fit into San Carlos and not make San Carlos change to fit one new development.

With that said my first area of concern is the traffic. I fear the construction traffic first. Are San Carlos roads and traffic patterns ready to accommodate extra staff driving in as well as delivery of materials on very large vehicles? Please consider this and plan this out so that our neighborhoods are not negatively impacted. Especially for the Vista del Grande build. Vista del Grande and the roads leading up to it are narrow, full of overgrown vegetation and debris, crowded with parked cars, and very windy. They aren't the safest streets on a normal day so adding a big job requiring lots of added vehicles is a huge threat. Parking on the perimeter of this project scares me a lot. Where are all of the staff going to park so that our streets aren't any more unsafe than they already are?

Once construction is finished and we have new neighbors living in the developments please consider the amount of traffic that will be coming and going on the Alameda. Where will these people be driving and at what hours? If thought is put into this ahead of time and careful planning the outcome will be so much better.

I am really confused about the low income housing part. The 15% doesn't seem to add up and who exactly can afford these new homes? How are they going to serve their purpose? Can you please show the math to those of us who are not educated in this area?

I would like to see what the plan is for how the disrupted wildlife is going to live and where they will go once they are unhomed. What will happen to the coyotes, mountain lions, rats,

raccoons, snakes, deer, skunks, owls and every other critter living there? Where are they going to go? What is the city going to do to make sure existing neighborhoods are safe from these animals while keeping the animals safe?

Water runoff, drainage, sewage and hill stability are always huge concerns in this area. Can we please see a very detailed plan of how the city will make necessary adjustments during the build to ensure there is no negative outcome? Many of us know what can go wrong and we want that prevented.

Vista del Grande and Coronado surround these proposed new developments and these streets have very little street lighting and are very quiet. The new developments have lots of proposed lighting and the potential for a lot of noise. What has the city planned to again make this new community fit into San Carlos?

To date I have not heard enough from the city to understand this new development will be responsibly planned and built with good outcomes for all. A project of this scope takes more than just a developer, architects and builders. We are expanding our neighborhoods and making dramatic changes to the way your community is currently living.

I look forward to all of your analysis, planning and expertise.
Best,
Velvet Snow
Resident on Vista del Grande in San Carlos

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From:	Lisa Costa Sanders
To:	Tricia Stevens; Sean Anayah
Subject:	FW: 808 Alameda de las Pulgas Townhome Development EIR
Date:	Monday, February 8, 2021 5:54:14 PM

From: Albert Lin <alin2k@yahoo.com>
Sent: Monday, February 8, 2021 1:08 PM
To: Lisa Costa Sanders <LCostaSanders@cityofsancarlos.org>
Subject: 808 Alameda de las Pulgas Townhome Development EIR

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Dear San Carlos Planning staff and commissioners,

I am a resident at 4 Vista Del Grande next to the intersection of Madera.
Most of the neighbors know that there will be two real estate developments under review by the city soon. As residents of the hillside community, we really want to express our paramount requirement and necessity that there should be road interconnection between the existing community and two development projects**,** also the new road access to Alameda las Pulgas through these two developments for the existing neighbors.
We all can image how terrible the traffic will be for the construction of the new houses on Vista Del Grande if the labor and material delivery trucks need to use the existing winding road of Madera.
If the new roads are not interconnected with the existing neighborhood**,** how would fire engines be efficiently deployed to put out fires during wild fires and how would ambulances, garbage trucks and many other essential service be provided during hazardous situations**?** Interconnected road network is also important for the future daily commuting by the new and existing residences.
We heard from planning staffs that the density of the new development will meet the zoning ordinance and we will cope with the new environment. But, Interconnected road in this hillside community is absolutely essential for our future life.
So, we strongly emphasize that the city NOT OVERLOOK this paramount and important requirement for our hillside community. **Thanks for the review!**

__Albert Y. Lin at 4 Vista Del Grande

Sent from my iPhone

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From:	Lisa Costa Sanders
To:	Tricia Stevens; Sean Anayah
Subject:	FW: 808 Alameda de las Pulgas Townhome Development EIR
Date:	Monday, February 8, 2021 5:55:19 PM

From: Alecia Blazei <aleciablazei@sbcglobal.net>
Sent: Monday, February 8, 2021 12:37 PM
To: Lisa Costa Sanders <LCostaSanders@cityofsancarlos.org>
Cc: Jim Iacoponi <JIacoponi@cityofsancarlos.org>; Ellen Garvey <EGarvey@cityofsancarlos.org>; Don Bradley <DBradley@cityofsancarlos.org>; Kristen Clements <KClements@cityofsancarlos.org>; David Roof <DRoof@cityofsancarlos.org>
Subject: 808 Alameda de las Pulgas Townhome Development EIR

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Hello,
I am respectfully submitting my comments regarding this project. Please, please, please reconsider approving this project. I am concerned about the following issues:
Noise:
I can't even imagine how loud and unsettling this is going to be for months and possibly years going forward. The noise for ongoing construction is going to disrupt our neighborhood significantly.

Wildlife impact:
This land is home to deer, coyotes, skunks, squirrels, wood and tree rats, raccoons, mountain lion, opossums and hundreds of birds. Where are these animals going to go? This really is upsetting.

Traffic:
It is already difficult to enter and exit this area. How are the roads going to handle the extra hundreds of vehicles this project will require as well as the vehicles of the new residents? Both Madera Avenue, Vista Del Grande and Alameda de las Pulgas are already overcrowded.

Wildfire Evacuation:
How are we all going to safely evacuate in the event of wildfire?

Tree Removal:
It is my understanding that this project is requesting to remove 149 heritage trees, 5 significant trees and 109 other trees. Wow! This alone boggles my mind. This will have an immense impact on this area.

Sewer:
What is the plan for water and sewer? How does this not affect the current residents?

Aesthetics:

Adding this many dwellings is going to be very impactful to our views and natural beauty of the area.

Thank you for taking the time to read my comments. I am very concerned about the impact this project will have on the citizens and wildlife currently living in this area.

Respecfully Submitted,

Alecia Blazei
137 Vista Del Grande
San Carlos, CA

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From: Lisa Costa Sanders
To: Tricia Stevens; Sean Anayah
Subject: FW: 808 Alameda de las Pulgas Townhome Development EIR
Date: Monday, February 8, 2021 5:53:07 PM

From: Andi Vachss <andivachss@yahoo.com>
Sent: Monday, February 8, 2021 2:07 PM
To: Lisa Costa Sanders <LCostaSanders@cityofsancarlos.org>
Subject: 808 Alameda de las Pulgas Townhome Development EIR

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I am submitting the comments below regarding the negative impact of the Black Mountain development project on public safety, particularly on the ability to evacuate the surrounding neighborhoods in the event of a wildfire.

The subject property is located in or directly abutting the portion of San Carlos that has been designated by CalFire as Wildland Urban Interface, meaning that there is an elevated risk of wildfires. Much of San Carlos west of Alameda de las Pulgas has been so designated, affecting over a significant portion of the city's residents. What had been an elevated risk during traditional fire season more recently has been characterized by local fire officials as a high risk year round. Although "wildfires" is listed in the city's Notice as one of the environmental issues of concern in developing the property, the Notice omits any mention of the Wildland Urban Interface designation in the area and fails to address at all the potential fire risks and evacuation within the subject property and surrounding communities.

Currently, evacuating the Devonshire Canyon, Beverly Terrace, Melendy, Brittan and Crestview areas of San Carlos in a wildfire would be challenging at best. They are comprised mostly of narrow winding streets that feed onto the main evacuation arteries. Devonshire Canyon in particular is almost entirely comprised of streets that realistically only one lane of cars can navigate at a time. To illustrate but one example of the risk, in 2019 an Amazon delivery vehicle overturned on one of them, stranding residents in their homes for hours. It is horrifying to contemplate what would happen in a fire, even without an overturned vehicle and even without a whole new neighborhood crammed into the area.

Alameda de las Pulgas is one of the principal streets to which evacuating residents currently would be directed (via through streets such as Melendy and Brittan) during a fire. It is only a two-lane street. Your map shows the main egress from the subject property is directly onto the Alameda, adding potentially an additional 208 cars (174 covered plus 34 street parking spaces) to what would already be a traffic nightmare, which would significantly hinder an evacuation and put countless residents at increased risk.

No movement should be made on this project without a clear evacuation strategy from fire and other public safety officials that does not put existing residents at materially increased risk. The proposal as currently described and mapped does not do that.

Andi Vachss
3305 Melendy Drive

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From:	Lisa Costa Sanders
To:	Tricia Stevens; Sean Anayah
Subject:	FW: 808 Alameda de las Pulgas Townhouse Development EIR--Public Comment and Questions
Date:	Monday, February 8, 2021 5:33:12 PM

From: Gary Baldocchi <gdb357@aol.com>
Sent: Monday, February 8, 2021 4:58 PM
To: Lisa Costa Sanders <LCostaSanders@cityofsancarlos.org>; sgibson@veev.com; tstevens@migcom.com
Cc: Ellen Garvey <EGarvey@cityofsancarlos.org>; Kristen Clements <KClements@cityofsancarlos.org>; David Roof <DRoof@cityofsancarlos.org>; Jim Iacoponi <JIacoponi@cityofsancarlos.org>; Don Bradley <DBradley@cityofsancarlos.org>
Subject: 808 Alameda de las Pulgas Townhouse Development EIR--Public Comment and Questions

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2/8/21

Hi Lisa,

Sorry for all the questions! I am sure that you and the Planning Department are carefully studying these issues. I am trying to understand them as a layperson because our property sits on the banks of Pulgas creek and we may be directly affected by a possible increase in storm water runoff into storm drains or the creek.

In my earlier email, I forgot to ask if the city has considered whether this site constitutes an "historic structure" similar to the underground shell mound described in the Berkeley case referenced here. https://www.reubenlaw.com/trial-court-challenges-to-state-housing-laws/ The underground and above ground springs on this site provided an important source of drinking water for many years and are still active.

I reviewed my notes from the March 4, 2019 Planning Committee Meeting about this project and noted that Shannon Bergman mentioned that the former owners stopped operating the business because of concerns about the risk of earthquakes many years ago. Is that true? If so, wouldn't it be even more high risk to build residential units on the site? We would appreciate any information about prior earthquake damage to the site or any prior soils or other geological reports which revealed critical information that caused the business to cease operations.

Finally, we read an interesting 2020 article about the history of the property in an article in the publication *Climate Online Redwood City*, titled: ***From Water to Wine (and lots of buildings)***. https://climaterwc.com/2020/01/02/from-water-to-wine-and-lots-of-buildings/ It was shocking to learn that the Black Mountain Springs Water company

sold for $100 million in 2001 to the Nestle Company, yet it does not appear that they ever opened or operated a water harvesting business on the San Carlos site.

If the Planning Department decides to approve the proposed development, we respectfully request that the natural springs be preserved to the greatest extent possible.

Thank you very much for the opportunity to ask questions! We greatly appreciate the important work you do for the community and the environment.

Sincerely,

Debbie Baldocchi

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From:	Lisa Costa Sanders
To:	Tricia Stevens; Sean Anayah
Subject:	FW: Comments re: DEIR of proposed Black Mountain development
Date:	Monday, February 8, 2021 5:56:17 PM

From: Doris Davis <doris@dordavis.com>
Sent: Monday, February 8, 2021 12:34 PM
To: Lisa Costa Sanders <LCostaSanders@cityofsancarlos.org>
Cc: Don Bradley <DBradley@cityofsancarlos.org>; Jiacopponi@cityofsancarlos.org; David Roof <DRoof@cityofsancarlos.org>; Kristen Clements <KClements@cityofsancarlos.org>; Ellen Garvey <EGarvey@cityofsancarlos.org>
Subject: Comments re: DEIR of proposed Black Mountain development

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Lisa:
I am a resident of San Carlos. The border of my property meets up with the border of the proposed development. My address is 889 Bauer Drive.
I have attended all of the meetings whereby residents could voice their opinions about the proposed development. I have not been the only neighbor who has brought up how noise carries throughout the canyon.

In the community presentation of Nov 14, 2018, the plan included 68 townhome units. We, the community that surrounds the canyon, brought up how noise carries through the canyon. During the meeting of Mar 4, 2019, we, the community that surrounds the canyon, brought up how noise carries through the canyon. Now the plan includes 87 townhomes with rooftops to allow people to congregate. We voiced our opinion and the project grew by nearly 20 units. Our voices were not heard.

In the early summer of 2020, someone who currently lives in the canyon owned a rooster. The rooster crowed all hours of the night and often during the day. It echoed through the canyon disturbing the sleep of many of us on the other side of canyon. It was not until I got the San Mateo County Sheriff's Dept involved that it stopped mid October. We had all had enough. When St Charles school is in session, we hear announcements made by teachers calling students to the office. We hear the students recite the Pledge of Allegiance. I hear people as they converse and walk along the Alameda. Last summer, someone had a mariachi band playing and it resonated through the canyon. My neighbor to my right thought I was having a loud party and I thought the neighbor to my left was having a loud party. To all of us on Bauer Drive, it sounded like it was next door but it was across the canyon. It was also heard by residents who live on Glasgow. My point is sound resonates through the canyon.

The removal of trees (that buffer sound) will only make sounds resonate more. We are likely to hear all rooftop conversations. When people congregate, they're likely to have music. They will have no idea how the sound will disturb all of us.

We have brought the potential of noise disturbance up repeatedly but our voices are not being heard. During the VEEV Meeting of Jan 19, the response was ‘but the rooftops are part of the appeal.’ I was taken aback by this comment because it was so inconsiderate of those of us who have lived here (peacefully until the rooster disturbed our peace for about 4 months) for as long as 25 years. One needs to LIVE here to know what we are talking about. VEEV has no concept of the point we are trying to make. They are looking at it as ‘land’ but it’s a CANYON.

Alternative: less number of units and no rooftops
Preferred alternative: single family homes if anything

Add to that, there will be streetlights and house lights and this will create glare. It will feel like I’m living in the heart of a city. That’s not what appealed to me when I purchased my property in 1996.

The proposed structure is not compatible with the character of the neighborhood. The 1st proposal looked like boxes with windows. The 2nd proposal looks like boxes with windows.

The traffic will also increase substantially on Alameda de Las Pulgas.

Hopefully, the impact of noise will be considered in the Environmental Impact Report. Hopefully our voices will finally be heard.

Doris Davis
889 Bauer Drive

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From: Lisa Costa Sanders
To: Tricia Stevens; Sean Anayah
Subject: FW: 808 Alameda project
Date: Monday, February 8, 2021 5:27:55 PM

-----Original Message-----
From: Jennifer Heinemann <jenniferjlh402@hotmail.com>
Sent: Monday, February 8, 2021 5:25 PM
To: Lisa Costa Sanders <LCostaSanders@cityofsancarlos.org>
Subject: 808 Alameda project

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Hello,

I am writing with some comments and concerns about this project.

1. It is out of scale with the surrounding neighborhoods, which comprise low density, single family homes.
2. The project will result in the removal of many mature trees.
3. Our home is adjacent to this project, and I am quite concerned about noise and light pollution. This project fundamentally changes the nature of the area, which at present is very quiet all day and night and is also completely dark at night. Such a crowded development will be noisy. Will lighting be regulated? I suggest “dark sky” regulations restricting lighting.
4. The rooftop decks will look messy when observed from the surrounding homes which look down onto these roofs. How will the contents of the roofs be regulated, so they don’t become an eyesore? Normal, uniform-looking roofs would be a better aesthetic choice.
5. The project has added more units than originally planned. It’s too dense - with large buildings in an area with single family homes.
6. Isn’t this the same developer who has dragged its feet over many years to complete other projects in San Carlos? How can we ensure the project will be completed in a timely manner? How will the city guarantee this? The grading and construction will be highly visible and noisy to the surrounding neighbors. Let’s make sure it doesn’t last forever...
7. We need to consider the adjacent “Vista del Grande” project at the same time. This will also remove many mature trees and add many new, dense housing units. Let’s look at the impact of these projects TOGETHER.
8. Wildlife calls this canyon home. We’ve seen red fox, coyotes, quail, deer… This project will displace these animals. Has this been considered?

Thank you for considering these points as you assess the revision of this project.

Jennifer Heinemann

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https://us2.proofpointessentials.com/index01.php?mod_id &mod_option=gitem&mail_id 12833926-wP3YRd6CBDvS&r_address=ostasanders%40cityofsancarlos.org&report=

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From: Lisa Costa Sanders
To: Tricia Stevens; Sean Anayah
Subject: FW: 808 Alameda de las Pulgas Townhome Development EIR
Date: Monday, February 8, 2021 5:35:31 PM

From: Joe Ghazal <joe@ghazalfamily.com>
Sent: Monday, February 8, 2021 4:55 PM
To: Lisa Costa Sanders <LCostaSanders@cityofsancarlos.org>; Don Bradley <DBradley@cityofsancarlos.org>; Ellen Garvey <EGarvey@cityofsancarlos.org>; Jim Iacoponi <JIacoponi@cityofsancarlos.org>; David Roof <DRoof@cityofsancarlos.org>; Kristen Clements <KClements@cityofsancarlos.org>
Subject: 808 Alameda de las Pulgas Townhome Development EIR

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To the Planning Department and Planning Commission,

I would like to start by saying that I am completely opposed to the proposed development at 808 Alameda. The scope of the project is way more than should ever be allowed in the location it is proposed for.

I object to many aspects of this development including:

- Density (way more than should be allowed considering RS-6 zoning is intended for single family housing and requiring conditional use permits for such proposed townhomes)
- The proposed rooftop decks (as it pertains to the noise it will create disturbing the surrounding homes as well as that they violate the 3 floor maximum rule)
- The removal of 263 trees (including 149 Heritage trees)

As far as the EIR, I want to be sure you take the following into consideration:

- Noise - specifically related to the rooftops, traffic, AC units, heating units, and length of expected construction
- Architecture - in no way do these fit in to the surrounding neighborhood
- Trees - the effect on the neighborhood and wildlife

Thank you,

Joe Ghazal

201 Glasgow Lane
San Carlos, CA

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February 8, 2021

Lisa Costa Sanders
Principal Planner
City of San Carlos
lcostasanders@cityofsancarlos.org

cc: Ellen Garvey (Chair), Don Bradley, Jim Iacoponi, David Roof, Kristen Clements

Thank you for the opportunity to comment on the Environmental Impact Report for the proposed development at 808 Alameda de las Pulgas. We have been residents of San Carlos on Vista del Grande for nearly 20 years. And we've outlined some areas of concern, below -- and in general, feel strongly that the local environment is not well-suited to the scope and size of the proposed development. We'd also like to state that we are neither naïve nor anti-development -- we've expected that at some point this open space might be developed (particularly after the failure of park Measure V). We'd simply like to see growth that is better designed to integrate into the existing community, enhance property values for the surrounding area, and takes into account the existing environment, topography, infrastructure and overall neighborhood. We'd like to take a moment to address various areas of the EIR and provide some commentary.

Agricultural History
This property is the site of a former geranium / hydrangea nursery and the former location of Black Mountain Spring Water. Therefore, there is high likelihood that the area contains pesticides, herbicides, fertilizer, piping, lead, water plant leftovers, etc. We request a "Phase 2 Survey" to analyze what's currently in the ground and strongly encourage a thorough evaluation of the area.

Biological
This area is a home to many different species of *animals*:
- Wood rats
- Owls
- Coyotes
- Salamanders
- Reptiles
- Mountain Lions
- Endangered species

Please consider in your report the impact of the development upon these species.
Trees:
It has come to our attention that the development plans to cut down many trees, many of which are Heritage trees and may or may not have a

significant influence on the value of the properties. Please refer to the City's Tree Ordinance to ensure that the Heritage trees and others are appropriately replaced and the landscaping of the grounds compliant to San Carlos' rules.

Geology & Soil
Aside from the potential poisoning from the above-mentioned pesticides and residual agricultural effects, we request that the EIR take soil management into strong consideration. The development involves regrading the topology and changing elevations – what is the impact on the upper hills and potential for slides? The widening of Madera Avenue in the early 1970s created significant sliding, impacting what is now our property. We suspect the 808 development would encounter similar slide issues to their own project and to all properties uphill from it.

Furthermore, what is the plan for overall water management as a result of such a significantly large development?

Hydrology & Water Quality
There is an existing spring on the property. What's happening to the spring and where does that water go? How is water managed that runs from the property towards St. Charles church/school and Cordilleras? How will the water run-off affect Cordilleras Creek and its water levels?

Land Use & Planning
We question the placement of higher density housing in this community and on this topology. Compared to, for example, the relatively newer homes in Devonshire Canyon in Hyde Count (Kings, Queens Court, etc.), this proposal is entirely different. Per the renderings, 808 Alameda looks more like a community college than a residential neighborhood suited to the San Carlos hills. Does this proposal serve the expressed intention of the city's zoning – enhancing values vs. decreasing them – and does it meet all the requirements of the zoning? It appears that high density housing is being crammed into a small valley in a hillside community.

It is not well-situated to connect to mass transit (far from SamTrans, CalTrain) and therefore may not serve the mission to connect residents to commuter areas, as is seen downtown.

Noise / Vibrations
We have three main concerns around noise:

- Rooftop decks = the primary outdoor recreation space. This would be new for the area, there are no precedents, and therefore it is unproven and untested. What is the "echo factor?"
- Construction noise - how long will construction last? Do we have a sense of the history of this developer and the duration of their projects?

- Duration of construction noise - it appears to be planned as phased construction which implies that the construction may have a long tail and last longer than anticipated, depending on rounds of funding / ability to sell.

Public Services and Recreation
We are under the impression that common areas for public services have been both required by the city and requested by the community. Yet there appear to be virtually none aside from a common room and kitchenette. Are there plans for a playground, trails, open space or any access for the public to the space? Regarding recreation, is the common room is the sole recreation area for 87 units? And the outdoor space for hundreds of residents is only on the units' rooves?

Schools
It is likely that these students would attend Heather School on Melendy; however, this could force re-districting, depending on prospective enrollment. The access to Heather, Arundel, Tierra Linda Middle, or Carlmont High School is not easily served by any form of transportation other than private car (see below). We request that the city and developer meet with the San Carlos School and Sequoia Union High School Districts to solidify plans and discuss the impact on K-12, and maintain ongoing communications.

Transportation / Traffic
What are the plans for access to Alameda de las Pulgas? Will there be a crosswalk, stop sign, or traffic light? Is there a provision for a left turn lane to Alameda? At the base of the development, what will be the traffic impact on Alameda, which already routinely backs up from San Carlos Ave. to Brittan?

This area is not meaningfully served by public transit to and from local public schools; this has been proven by Safe Routes to School efforts in recent years to serve the Tierra Linda Middle School population through increased bus routes. The route connecting the Middle School to Brittan, Melendy (past Heather School), Highlands Park, and Alameda (SamTrans #61/295) was already so oversubscribed as to have become unsafe – overfilled buses and students spilling off the sidewalks at the bus stops.

Elementary school students are unlikely to use public transportation or commute in any way other than by private car. The idea that elementary students will bike to any school is delusional – when proposed at a recent community meeting, it is clear that the developers lack basic familiarity with this community, its traffic patterns and its population. Heather School is straight uphill; Arundel School requires crossing multiple major intersections.

The neighborhood streets in the vicinity of this development, and surrounding the proposed development of the Vista del Grande property, are already congested, over-subscribed and essentially, functionally, one-lane roads – due to parked cars, delivery vehicles and individual home projects/service vehicles. These roads were carved decades ago, and were not designed for the SUV-sized vehicles, delivery trucks, or the amount of daily traffic they are handling. This has been true even during the pandemic. With few houses on the proposed property currently – how will 87 additional units affect this immediate area? It is already barely safe to drive or bike these narrow streets, and we consider it often dangerous to walk.

Utilities & Services Systems
None exist in this area. Will this development require water towers, which are aesthetically obtrusive, or water from other sources? How will this area be connected with services -- water, sewer, power, internet/comms? From where to where?

Wildfire
There is an increased inherent risk in growing a small area practically zero people to 300-400 people. There also is fire risk associated with construction. We're interested in what extra precautions will be provided, and the layout/plans for fire access roads. The woodland areas uphill from the development will continue to be at risk.

Thank you very much for your time. Please feel free to contact us for additional thoughts behind our concerns.

John & Heather Mannion
133 Vista del Grande
San Carlos, CA 94070

John Mannion – jjmannion@mac.com -- 650-740-8489
Heather Mannion – hwmannion@mac.com -- 650-740-8490

Lauren Zorfas
7 Madera Avenue
San Carlos, CA 94070
lzorfas@zorfaslaw.com 415.608.6019

Lisa Costa Sanders
Principal Planner
City of San Carlos
600 Elm Street
San Carlos, CA 94070
Via e-mail: lcostasanders@cityofsancarlos.org

February 8, 2021

Re: 808 Alameda de las Pulgas Townhome Development EIR

Dear Ms. Costa Sanders:

I am writing this letter to express my very serious concerns about the approval of the development plans for the property known as the "Black Mountain Property" or as it is now being called, "808 Alameda de las Pulgas Townhome Development EIR" located on Alameda de las Pulgas between Melendy Drive and Madera Ave.

I understand that the city will be reviewing the Draft Environmental Impact Report and ask that you consider my comments contained herein as you review that report as well as further development efforts for this project. I will concede that I have not reviewed that report, but I will offer that its technical jargon would likely exceed my laypersons understandings of such reports. I can, however, comment, on what I see as extremely negative impacts on our environment, not to mention our community, here in San Carlos.

I can personally attest to the wide array of fantastic wildlife that regular visit my property through my backyard which is adjacent to and I believe abuts the Black Mountain property. I see deer, raccoons, snakes, possum, mountain lions, bobcats, foxes, coyotes, a wide variety of hawks, owls and even salamanders on my property. While some may claim these are either a nuisance or even dangerous, it is their land that we live on and we can, and should, live harmoniously with them. It is indeed one of the reasons I purchased my home. When I first saw my steep, wooded backyard that was surrounded by even more open space, I knew this was the place for me. I felt that I had purchased property in a city that values its open spaces and all of the bounties of nature that come with open space. I knew there would be an abundance of wildlife which is one of the many things that makes the suburb of San Carlos so unique. We are so fortunate to live in an area that has both a thriving downtown and fantastic open spaces that keep nature alive in our community.

Based on what I have read, this development proposes to cut down 263 trees, 149 of those being heritage trees. In fact on theoir website they indicate that, "approximately 2/3 of the existing trees will be removed." (See https://www.808alameda.com/community) I am not a wildlife expert, but I don't think one needs to be to understand that trees are vital to our wildlife, especially our birds. I also understand that the developer plans to have "animal runs" throughout the property, but that cannot, and does not, account for the negative impact of the bulldozing and clearing of this land, the increase in exhaust and other forms of air pollution that will be added by the addition of what I understand will be over 120 new residences (this would include both properties that are sought to be developed in this one area). Animals may indeed be able to "run" through this property, but as they currently reside, graze and raise their young there, that will no longer be possible.

Also, the plans call for 174 private parking spaces and 40 guest spaces. That represents 214 more cars in our community. I cannot cite the exact amount of air pollution that will add, but it cannot be discounted. Nor can the idea of 214 more cars on our already crowded and highly trafficked streets.

I also have concerns about the impact this will have on our community's environment. While our traffic problem (and indeed there is a problem) here in San Carlos has been somewhat abated due to COVID and adults working from home and children "schooling" from home, this will end. When our children return to school, which are already overcrowded, where will these new children in our community go to school? And, how will they get to school? My son, now 18 years old, is long past his elementary school days, but even 10 years ago when he was attending Heather elementary school, we had to employ a crossing guard on Melendy due to the heavy traffic. Later, when he went to Tierra Linda, we would simply walk to school because the roads were too congested and dangerous. While we enjoyed our walks to school together (on sunny days), crossing streets was always harrowing given the volume of cars on the road rushing to get their children to school on time. How can these proposed new homes not endanger our community?

I recognize that my complaints, much like so many of my neighbors who also oppose this project, are met with the standard critical reply, "Well, Measure V did not pass, so the community gave their imprimatur for this." We did not. Measure V asked the community to allow the City purchase a property that had not yet even been listed. There was no accounting for the amount of the money the city was asking the community to approve and certainly the purchase price would have been at or close to the $86 Million the measure requested as the seller would know the amount of money set aside. Further, the measure, in its language was overly broad and vague as to how exactly the land would have been used. So, yes, as it was written, the city did not pass Measure V, but this is not representative of the community's commitment to preserve our open spaces, rather it shows that our community expects responsibility from our local representatives. What we are asking for now with regard to this development.

I have seen Dragonfly's initial proposal and viewed Veev's website regarding the development this property. I am very concerned with the management of this property thus far and the inconsistencies between what I read from the city regarding expectations and the current status as listed on Veev's website. For instance, the city indicates in its January 8, 2021 Notice that there are to be a total of 87 units, 10 of which will be deed restricted as affordable. (See Notice page 2). However, on Veev's website they indicate in their FAQ page, " Will this development include affordable housing? We are currently exploring options for a separate mixed-income project at a transit-oriented location to fulfill the affordable housing requirements of San Carlos." Also, along the lines of accountability, is the current maintenance of the property. My property has access to a trial that allows for a close view of the subject property. The last time I was back there, there were piles and piles and dried wood, plants and the like, all highly flammable, just left bundled and out in the open causing an extreme fire hazard.

There is no denying that this development will have a negative impact on our community. I recognize that housing is critical in our area. Sufficient housing, at an affordable cost, is absolutely necessary to sustain our communities. Especially when one considers that arguably those most valued to our community, our teachers, certainly could not afford to live here, but I ask the city to consider the substantial new development we have added along El Camino and in the surrounding downtown area, much of which must be earmarked as affordable, in making its decision to allow further development that will no doubt tear an irreparable hole in the community for our residents, the wildlife and the open spaces. WE should seek to continue to earn our "City of Good Living" name not destroy it.

I appreciate your consideration of my comments.

Very truly yours,

/s/

Lauren Zorfas

From:	Lisa Costa Sanders
To:	Tricia Stevens; Sean Anayah
Subject:	FW: 808 Alameda de las Pulgas Townhome Development EIR
Date:	Monday, February 8, 2021 5:50:18 PM

From: Mike McDonell <mike@mcdonellweb.com>
Sent: Monday, February 8, 2021 2:18 PM
To: Lisa Costa Sanders <LCostaSanders@cityofsancarlos.org>
Cc: Don Bradley <DBradley@cityofsancarlos.org>; jiacopon@cityofsancarlos.org; David Roof <DRoof@cityofsancarlos.org>; Ellen Garvey <EGarvey@cityofsancarlos.org>; Melissa McDonell <melissa@mcdonellweb.com>
Subject: 808 Alameda de las Pulgas Townhome Development EIR

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February 8, 2021

FROM: Michael and Melissa McDonell, Homeowners
877 Bauer Dr., San Carlos

SUBJECT: DEIR Comments

We have reviewed comments to date in Rethink Black Mountain and offer the following concurrence and additional comments:

1.
2. Inclusion
3. of both Black Mountain and Vista Del Grande in the EIR.
4.

In the recent Zoom call with the developer, the focus was on Black Mountain with only peripheral reference to the other development. Yet, these adjacent projects will certainly impact current communities regarding noise, traffic, egress and tree removal. They should not be separated.

2.
3. Traffic,
4. Parking and Entrances.

5.

Fully concur that the addition of 200+ cars onto our already high traffic neighborhoods will significantly affect our commuting way of life. With only one egress to Alameda in the plan, I wouldn't want to be in the queue entering and departing the development during rush hours. Alameda is a single lane street and the congestion caused by development residents promises some real traffic jams and unhappy citizens. The only planned second egress I believe has been designated an emergency exit and offers no help to this dead-end, single road plan.

3.

4. Hillside

5. Stability,Saving Wildlife and Heritage Trees.

6.

The planned removal of 260 trees will change the attractiveness and livability of neighboring communities in an unacceptable way. The 130 heritage oak trees are barriers to erosion and, along with grassland and shrubs, have provided the rich habitat for the deer, hawks, coyotes, foxes, raccoons, quail and other birds that make this canyon a unique and treasured green area for all of proximate San Carlos residents. Two Golden Eagles and mated owls have been sighted often in the canyon. Can't imagine they will be attracted by the rooftops decks.

One old, large oak (36") is on the edge of the offset from my home. If that tree is removed or damaged during construction, we'll have a great view into several floors of town houses 2-30" away. There are several other old oaks all along perimeter areas of our neighborhoods that are also critical to preserving reasonable view blocks. In some cases, particularly on the back side of our property, these homes will be placed within 20' of our house. On a recent call with the developer, we asked if there was a plan for any type of perimeter fencing and were told that it wasn't included in the concept. If a fence is not an option, then at least some sort of hedging or green barrier should be considered.

4.

5. Noise

6. and Light Pollution -- Excessive Story Heights.

7.

It is hard to conceive that this development will not result in unacceptable levels of noise and light. Having lived right on the canyon for 15 years, it behaves like a megaphone when folks in the three homes there now are talking (even in normal

voices), playing, starting cars. So, these three homes will be replaced with 87 tightly spaced town houses, and we are to assume no significant noise and light increase, from all these additional families, especially from the open decks?

In conclusion, we recognize that no development in this beautiful canyon that is essentially in our backyard is not a realistic option, given the shortage of housing in San Carlos. However, given the significant negative impact that this development is clearly going to have on the existing neighborhoods, there just should be an alternative to build at a lower density than what is currently being proposed. It's hard to believe the developer's claim that anything under the proposed 87 units would not be profitable on this site given its prime location.

We appreciate the opportunity to have our concerns heard and addressed.

Mike & Melissa McDonell

Mike McDonell
650-714-4735

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From:	Lisa Costa Sanders
To:	Tricia Stevens; Sean Anayah
Subject:	FW: 808 Alameda de las Pulgas Townhome Development EIR
Date:	Monday, February 8, 2021 5:57:30 PM

From: Nahid Varjavand <nahid.varjavand@gmail.com>
Sent: Monday, February 8, 2021 12:33 PM
To: Lisa Costa Sanders <LCostaSanders@cityofsancarlos.org>
Cc: Don Bradley <DBradley@cityofsancarlos.org>; Jim Iacoponi <JIacoponi@cityofsancarlos.org>; David Roof <DRoof@cityofsancarlos.org>; Kristen Clements <KClements@cityofsancarlos.org>; Ellen Garvey <EGarvey@cityofsancarlos.org>
Subject: Re: 808 Alameda de las Pulgas Townhome Development EIR

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Hello Dear City Officials,

I am resending this letter as it was accidentally sent prematurely. I have been a resident of San Carlos since 1978, and I am voicing strong opposition to the Black Mountain development project. In the late 70s San Carlos made a terrible blunder selling off our High School, and this type of development of such a special wild place is also a serious error. The proposed destruction of 130 heritage trees is totally unacceptable, and this must be remedied by redrawing of proposed build areas. Already human biomass (as well as their pets and farm animals) accounts for more than 95% of life on earth. We are facing total ecological collapse and must speak for the trees and wildlife who depend on them (like the great horned owls I see there). Furthermore, the preservation of our precious spring and by extension, water-table must be kept apart from the residential area and protected. Building 3 stories (a fourth including the roof) is grossly overreaching and unsustainable for affordability or ecology). It was heartbreaking that we voted down the measure to protect this area. PLEASE, be a voice of reason in this insane plan and help neighbors of Black Mountain to be proud of this once humble, post war town that has become bloated unnecessarily.

Thank you, Nahid Varjavand

On Mon, Feb 8, 2021 at 12:28 PM Nahid Varjavand <nahid.varjavand@gmail.com> wrote:

> Hello Dear City Officials,
>
> I have been a resident of San Carlos since 1978, and I am voicing strong opposition to the Black Mountain development project. In the late 70s San Carlos made a terrible blunder selling off our High School, and this type of development of such a special wild place is also a serious error. The proposed destruction of 130 heritage trees is totally unacceptable, and this must be remedied by redrawing of proposed build areas. Already human biomass (as well as their pets and farm animals) accounts for more than 95% of life on earth. We are facing total ecological collapse and must speak for the trees and wildlife who depend on

> them (like the great horned owls I see there). Furthermore, the preservation of our precious spring and by extension, water-table must be kept apart from the residential area and protected. Building 3 stories (It was heartbreaking that we voted down the measure to protect this area. PLEASE, be a voice of reason in this insane plan.

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From:	Lisa Costa Sanders
To:	Tricia Stevens; Sean Anayah
Subject:	FW: 808 Alameda de las Pulgas Townhome Development EIR
Date:	Monday, February 8, 2021 5:32:06 PM

From: Tanya OMalley <tanya_omalley@yahoo.com>
Sent: Monday, February 8, 2021 4:59 PM
To: Lisa Costa Sanders <LCostaSanders@cityofsancarlos.org>
Cc: Ellen Garvey <EGarvey@cityofsancarlos.org>; Don Bradley <DBradley@cityofsancarlos.org>; Jim Iacoponi <JIacoponi@cityofsancarlos.org>; David Roof <DRoof@cityofsancarlos.org>; Kristen Clements <KClements@cityofsancarlos.org>
Subject: 808 Alameda de las Pulgas Townhome Development EIR

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Hello,

I have been a resident of San Carlos for 21 years.

I have lived along the property line of Black Mountain for 15 years.

With such a unique piece of property, it is extremely important that the scope of the EIR cover every issue that development of this property raises.

There are the obvious issues of traffic, noise, and impact on the wildlife population.

When I walk, bike, or drive through San Carlos and my neighborhood, I am struck by how peaceful and tranquil it is. That is one of many things that makes living in our town so desirable. It is quiet with friendly neighbors. The plan to put in 87 plus homes packed next to each other with roof top decks is quite contrary to the atmosphere of our town and what makes it special. I understand the want to give the new residents some outdoor space, but I do not understand the need to put it on the roof. There is plenty of space to put several homes with yards. Roof top decks in a canyon that echoes will not only effect those in the new vicinity of the Black Mountain property, but the entire town. This noise will absolutely travel throughout San Carlos.

While Veev has indicated the development will be a private property with an HOA, that HOA can dissolve at any time. We know the Highlands neighborhood was once run by an HOA. That HOA has since dissolved and no longer exists. The problem I foresee is that these houses are not desirable for the typical San Carlos resident. They will be desirable for investors who want to rent the houses on AirBnb with rooftop decks in a prime peninsula location. Our entire quiet little town will be effected by people coming in and out of those homes, who are not members of our community and who will use the property without regard for our town. Just one loud party by AirBnb renters could disrupt our peaceful town. Veev should not be allowed to put rooftop decks on these houses. They should have to limit outdoor space to decks - which is quite common for townhomes in our area. Or adjust their numbers so that there are few homes with yards.

Additionally, what really concerns me is this plan to fill the water spring that currently exists

on the property, and build homes over it. Having dealt with percolating water in a home I previously owned in San Carlos, I know that you do not get to decide how that percolating water is going to be dealt with. Nature decides where that percolating water will go. And while you may want to rid the property of it, it is not easy, and sometimes impossible. Veev representatives assure us that experts will advise on how to properly build over the spring, and how they will reroute the water in a water structure. This sounds great, but the one thing that comes to mind is the Millennium Tower in San Francisco. I'm sure the developers of the Millennium Tower paid many experts to make sure that tower was structurally sound. And yet, it still sunk. And it will cost $100 million to repair. Veev is inexperienced not only in a project the size of 808 Alameda de Las Pulgas, but also in the land they are dealing with. To think that "filling" a spring where there are numerous aqueducts below the surface is a simple solution for them to add more buildings, is reckless. That spring is going to find a place for it's water to go, and Veev is not going to be able to control that. The water percolation could end up compromising the stability of the entire hillside.

While these are not my only concerns regarding the development, they are my primary concerns and should be fully addressed by the EIR. Please feel free to contact me with any questions.

Tanya & Dennis O'Malley
120 Dundee Lane
San Carlos

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From:	Lisa Costa Sanders
To:	Tricia Stevens; Sean Anayah
Subject:	FW: 808 Alameda de las Pulgas Townhome Development EIR
Date:	Monday, February 8, 2021 5:58:52 PM

From: Bill Reeves <billreeves.sc@gmail.com>
Sent: Monday, February 8, 2021 12:18 PM
To: Lisa Costa Sanders <LCostaSanders@cityofsancarlos.org>
Subject: 808 Alameda de las Pulgas Townhome Development EIR

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Hello Ms. Costa Sanders,

This is regarding the townhome development project at 808 Alameda de las Pulgas. The request for comments on the scope of the EIR for this project came out a month ago with a deadline of today.

I am a homeowner on Glasgow Lane - our property adjoins the proposed development.

The issues that we want to make sure are covered in the EIR for this project are the following:

1. Noise. Construction of 87 townhomes on a subset of the currently-open space, and the 87 families occupying those units after they are built, will be noisier than the status quo. I am hoping that it is possible to study similar construction in canyons as to how the neighbors were affected by noise - an example is Carlmont Drive in Belmont, where a number of townhouses were built at the bottom of the canyon, and if noise from those units affected the property owners on Hastings Drive who overlook the canyon where those units were built.

2. Trees. The original project documents from last year (two years ago?) showed which trees would be removed - I have not seen a similar document for the updated project. The project web site says that two-thirds of the original trees will be removed. That's a lot of trees. We want to make sure the EIR studies the impact from removing that many trees, specifically regarding the stability of the hillside and the impact on wildlife.

2a. Wildlife - related to the above, we regularly see coyotes, raccoons and raptors (hawks and owls) in the space that will be developed. The only mention of wildlife in the updated project documents is that no endangered species have been identified - will the project relocate any affected animals, or will they have to find their way to a new home or merge into the already-built-up area around the project site?

3. The Vista del Grande project is separate, but it adjoins the 808 Alameda de las Pulgas project, and both projects will impact one another and the surrounding community. Is there a way to look at the combined effects of the two projects together? I understand that the Vista del Grande project is not as advanced as the 808 Alameda de las Pulgas project, and it may not

be fair to the 808 Alameda de las Pulgas developers to delay their project until the Vista del Grande project can be studied, but the impacts of both projects together may be multiplied above and beyond the impacts of just the 808 Alameda de las Pulgas project. The two projects together will add 150 or more homes to an area that currently has zero.

Thank you,

William Reeves
189 Glasgow Lane
San Carlos, CA

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To help prevent the spread of COVID-19, City Hall is closed and all nonessential meetings and services have been suspended. For the most up to date information, please visit www.cityofsancarlos.org/coronavirus

DAVID CRABBE ARCHITECT
ARCHITECTURE • PLANNING • INTERIOR DESIGN

289 CRESTVIEW DRIVE, SAN CARLOS, CA. 94070 - TEL: (650) 631-8614

February 12, 2021

Suzanne Emerson
San Carlos Green

Suzanne:

I support the comments included in the February 3 San Carlos Green letter to the city concerning the proposed 808 Alameda de las Pulgas development.

The most unfortunate aspect of this planned development is its location far away from frequent public transit (although they do propose a new bus stop on Alameda). The bus stop might help transport the kids to school if bus service is frequent enough during school commute times, but it is unlikely to be used by residents commuting to and from work. They will drive unless they can work from home. It will be interesting to see the developer's Transportation Demand Management Plan (TDM) to see how they propose to mitigate the anticipated traffic flow.

David Crabbe

APPENDIX B

PROPOSED PROJECT PLANS

808 ALAMEDA DE LAS PULGAS

SAN CARLOS, CA

APN : 049-360-060
050-220-020
050-220-160
050-220-170

PLANNING APPLICATION

JANUARY 28, 2022

808 ALAMEDA DE LAS PULGAS

808 ALAMEDA DE LAS PULGAS, SAN CARLOS, CA, 94070

Work In Progress

PROJECT LOCATION

DRAWING LIST

ARCHITECTURAL
- A COVER SHEET
- A0.0 PROJECT INFORMATION
- A0.1 SITE PLAN
- A0.2 SITE PLAN - PARKING AND FIRE ACCESS
- A0.4 SITE SECTIONS
- A1.0 TYPE A1 FLOOR PLANS
- A1.1 TYPE A2 FLOOR PLANS
- A1.2 TYPE A3 FLOOR PLANS
- A1.3 TYPE B1 FLOOR PLANS
- A1.4 TYPE B2 FLOOR PLANS
- A1.5 TYPE B3 FLOOR PLANS
- A1.6 TYPE C1 FLOOR PLANS
- A1.7 TYPE C2 FLOOR PLANS
- A1.8 TYPE C3 FLOOR PLANS
- A2.0 TYPE A ELEVATIONS
- A2.1 TYPE A ELEVATIONS
- A2.2 TYPE B ELEVATIONS
- A2.3 TYPE B ELEVATIONS
- A2.4 TYPE C ELEVATIONS
- A2.5 TYPE C ELEVATIONS
- A3.0 TYPE A BUILDING SECTIONS
- A3.1 TYPE B BUILDING SECTIONS
- A3.2 TYPE C BUILDING SECTIONS
- 23

CIVIL
- C0.0 TITLE SHEET
- C0.1 NOTES
- C1.1 EXISTING PARCELS & TOPOGRAPHIC SURVEY
- C2.1 EXISTING TREE PLAN
- C2.2 TREE REMOVAL PLAN
- C3.0 EXISTING PARCELS & EASEMENTS
- C3.1 VESTING TENTATIVE MAP
- C3.2 VESTING TENTATIVE MAP
- C4.0 SITE PLAN
- C4.1 GRADING PLAN
- C4.2 GRADING PLAN
- C4.3 ROAD PROFILE
- C5.1 UTILITY PLAN
- C5.2 UTILITY PLAN
- C5.3 STORMWATER CONTROL PLAN
- C6.1 FIRE AND PEDESTRIAN ACCESS
- C6.2 FIRE TRUCK PROFILE
- C7.1 EROSION CONTROL PLAN
- C7.2 EROSION CONTROL DETAILS
- C7.3 EROSION CONTROL DETAILS
- C8.1 DETAIL SHEET
- C8.2 DETAIL SHEET
- C9.1 NATURAL STATE PLAN
- 23

LANDSCAPE
- L0.0 LANDSCAPE NOTES
- L0.1 LANDSCAPE LEGENDS
- L0.2 LANDSCAPE LEGENDS
- L1.0 OVERALL LANDSCAPE SITE PLAN
- L1.1 LANDSCAPE LIGHTING PLAN
- L1.2A EXISTING TREE PLAN
- L1.2B TREE REMOVAL PLAN
- L1.2C TREE PRESERVATION PLAN
- L1.2D TREE PROPOSAL PLAN
- L2.0 ENLARGEMENT PLAN
- L2.1 ENLARGEMENT PLAN
- L2.2 ENLARGEMENT PLAN
- L2.3 ENLARGEMENT PLAN
- L3.0 RETAINING WALL SECTIONS
- L3.1 RETAINING WALL SECTIONS
- L3.2 RETAINING WALL SECTIONS
- L3.3 RETAINING WALL SECTIONS
- L4.0 OVERALL LANDSCAPE PLANTING PLAN
- L6.0 SITE MATERIAL IMAGERY
- L6.1 PLANT LEGEND AND IMAGERY
- L6.2 PLANT LEGEND AND IMAGERY
- 21

SHEET TOTAL: 67

PROJECT DESCRIPTION

The Project combines the existing four parcels into a single parcel of 11.427 acres, which allows up to 68 units under R-6 zoning. The Project utilizes the State Density Bonus Law for an additional 27.5% density bonus for a total of 87 units, as required based on the base Project's inclusion of 15% of units (10) affordable to low-income households (defined as earning 80% of the area median income). The completed townhouses will be available for separate ownership as condominiums, through a Common Interest Subdivision, with a single Homeowners Association responsible for the maintenance of the Project's private shared features.

The existing buildings will be demolished and site improvements made to allow for construction of 87 new townhouses of three distinct unit types in clusters throughout the site. All dwelling units are accessed from privately maintained roads and alleys for vehicular and bike access, as well as sidewalks and trails for pedestrian access. A portion of the trail system and the road and related infrastructure is expected to be publicly dedicated.

The townhouses offer three- and four-bedroom options of between approximately 2,525-2,950 square feet of floor area per unit. Each townhouse includes a two-car garage for a total of 174 covered parking spaces, as well as a roof deck and balconies. At least 26 private long-term bike parking spaces will be provided in garages. Additionally, there are 32 on-site, on-street townhouse guest parking spaces.

The entrance to the Project includes the addition of a bus shelter with pullout (southbound), 18 short-term public bike parking spaces, bus stop (northbound), crosswalks both north-south bound across the entrance road, as well as east-west across Alameda de las Pulgas to include a rapid rectangular flashing beacon (or similar improvement), as well as an accessible parking space for access to the public trailhead and sidewalk improvements along the project frontage on Alameda de las Pulgas.

OCCUPANCY AND BUILDING SUMMARY

	TOWNHOMES	TRASH ENCLOSURE
OCCUPANCY GROUPS:	R2	U
TYPE OF CONSTRUCTION:	IIA	IIA
SPRINKLERS:	NFPA 13	NFPA 13
STORIES:	3	1
AREA OF WORK:	226,327SF/ 87 Units	420 SF
ZONING:	RS-6 (HILLSIDE OVERLAY)	
SETBACK:	15'-0" FRONT & REAR, 5'-0" SIDE SETBACK + 4'-0" @ 2ND LEVEL	
LOT AREA:	497,756SF (11.427 Acres)	
FAR:	ALLOWED: 497,756SF = FAR: 1.00 PROPOSED: 226,327 SF = FAR: 0.45	

APN: 049-360-060 174,554 SF (4.01 ACRES)
APN: 050-220-020 26,640 SF (0.61 ACRES)
APN: 050-220-160 41,456 SF (0.95 ACRES)
APN: 050-220-170 255,106 SF (5.86 ACRES)

APPLICABLE CODES

2019 CALIFORNIA BUILDING CODE
2019 CALIFORNIA GREEN BUILDING CODE
2019 CALIFORNIA MECHANICAL CODE
2019 CALIFORNIA ELECTRICAL CODE
2019 CALIFORNIA PLUMBING CODE
2019 CALIFORNIA BUILDING ENERGY EFFICIENCY CODE
2019 CALIFORNIA FIRE CODE
2019 CALIFORNIA BUILDING ENERGY CODE
SAN CARLOS BUILDING CODE
SAN CARLOS FIRE CODE

STATE DENSITY BONUS BENEFIT

-CONCESSION FOR TDM PLAN

	Unit Quantity	Beds	Baths	Building Areas: Saleable	Garage / Misc.	Decking	Buildable	Floor Area Per Unit
TOWNHOUSE TYPE A1								
Level 1			2	816		188		
Level 2		3	2	981		188		
Level 3			0.5	884	453	188		
Roof Level				149		735		
TYPE A1 TOTAL	12	4	4.5	2830	453	1299	1283	2830
TYPE A1 TOTAL								
TOWNHOUSE TYPE A2								
Level 1			2	816		238		
Level 2		2	2	981		238		
Level 3			0.5	884	453	188		
Roof Level				149		735		
TYPE A2 TOTAL	4		4	2830	453	1399	1283	2830
TOWNHOUSE TYPE A3								
Level 1			2	816		262		
Level 2		2	2	981		262		
Level 3			0.5	884	453	262		
Roof Level				149		735		
TYPE A3 TOTAL	4		4.5	2830	453	1521	1283	2830
TOWNHOUSE TYPE B1								
Level 1				306	541			
Level 2		1	1	1031		428		
Level 3		2	3	1031		280		
Roof Level				159		595		
TYPE B1 TOTAL	28	3	4	2527	541	1303	3068	2527
TOWNHOUSE TYPE B2								
Level 1				306	541			
Level 2		1	1	1031		428		
Level 3		2	3	1031		339		
Roof Level				159		595		
TYPE B2 TOTAL	8	3	4	2527	541	1362	3068	2527
TOWNHOUSE TYPE B3								
Level 1				306	541			
Level 2		1	1	1031		481		
Level 3		2	3	1031		947		
Roof Level				159		595		
TYPE B3 TOTAL	8	3	4	2527	541	1418	3068	2527
TOWNHOUSE TYPE C1								
Level 1		1	2	815		188		
Level 2			0.5	943	499	188		
Level 3		2	2	1059		372		
Roof Level				126		628		
TYPE C1 TOTAL	13	3	4.5	2943	499	1376	3442	2943
TOWNHOUSE TYPE C2								
Level 1		1	2	815		245		
Level 2			0.5	943	499	188		
Level 3		2	2	1002		629		
Roof Level				126		628		
TYPE C2 TOTAL	5	3	4.5	2886	499	1690	3385	2886
TOWNHOUSE TYPE C3								
Level 1		1	2	815		245		
Level 2			0.5	943	499	243		
Level 3		2	2	1059		827		
Roof Level				126		628		
TYPE C3 TOTAL	5	3	4.5	2943	499	1943	3442	2943
Trash Enclosure						420		
Project Totals	87	281	368.5	229182	44343	139665	299554	243182

Saleable is gross habitable residential area measured from the centerline of party walls to the exterior finish of exterior walls.
Garage/ Misc. is the net usable area of garages, mechanical, and unconditioned storage.
Decking is gross area of decks, balconies, and terraces.
Buildable is gross total building area.
Floor area measured per SCMC 18.03.080.
Accessible units included per CBC 1102A3.1. Refer to Site Plan A0.1 for locations.

UNIT MATRIX

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LICENSED ARCHITECT JOYCE TSAI C-30982 EXP. 8/30/21 STATE OF CALIFORNIA
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3	1/28/22	COMMENT RESPONSE 2

DRAWN BY: Author
PROJECT NUMBER: 19-098
SHEET ISSUE DATE: 02/08/21
SHEET TITLE:

PROJECT INFORMATION

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AREA ANALYSIS

TYPE IIA CONSTRUCTION
OCCUPANCY: R-2
HEIGHT: 35'-0"
STORIES: 3
SPRINKLERS: NFPA 13

Allowable Area
At = 72,000 Table 506.2
Ns = 24,000 Table 506.2
If = 0
Sa = 2 Section 506.2.3

Aa = [72,000 + (24,000 x 0)] x 2
Aa = 144,000 sf

PER STORY:
Sa = 1 Section 506.2.3
Area per floor: 72,000 sf

BUILDING GROUP A
Type A: 4 units
Type B: 17 units
Type C: 2 units

Actual Area
Level 1: 3,444 sf + 5,202 sf + 1,630 sf = 10,276 sf
Level 2: 3,924 sf + 17,527 sf + 1,886 sf = 23,337 sf
Level 3: 3,536 sf + 17,527 sf + 2,118 sf = 23,181 sf
Total: 56,794 sf

BUILDING GROUP B
Type A: 8 units
Type B: 15 units
Type C: 5 units

Actual Area
Level 1: 6,888 sf + 4,590 sf + 4,075 sf = 15,553 sf
Level 2: 7,848 sf + 15,465 sf + 4,715 sf = 28,028 sf
Level 3: 4,420 sf + 15,465 sf + 5,295 sf = 25,180 sf
Total: 68,761 sf

BUILDING GROUP C
Type A: 0 units
Type B: 12 units
Type C: 10 units

Actual Area
Level 1: 3,672 sf + 8,150 sf = 11,822 sf
Level 2: 12,372 sf + 9,430 sf = 28,802 sf
Level 3: 12,372 sf + 10,590 sf = 22,962 sf
Total: 63,586 sf

BUILDING GROUP D
Type A: 8 units
Type B: 0 units
Type C: 6 units

Actual Area
Level 1: 6,888 sf + 4,890 sf = 11,778 sf
Level 2: 7,848 sf + 5,658 sf = 13,506 sf
Level 3: 4,420 sf + 6,354 sf = 10,774 sf
Total: 63,586 sf

	Unit A	Unit B	Unit C
	Actual Area	Actual Area	Actual Area
	Level 1: 861	Level 1: 306	Level 1: 815
	Level 2: 981	Level 2: 1031	Level 2: 943
	Level 3: 884	Level 3: 1031	Level 3: 1059

CLUSTER #	5, 11, 15	4, 10, 13	2, 9, 14	6, 12	1, 8, 17	3, 7, 16
	GT914 Merino	GT910 Egg White	G317 Steel Concrete	S005 Gray	S230 Tusk	S002 Almond

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PROJECT NORTH
TRUE NORTH

DRAWN BY: Author
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SITE PLAN

SHEET NUMBER

A0.1

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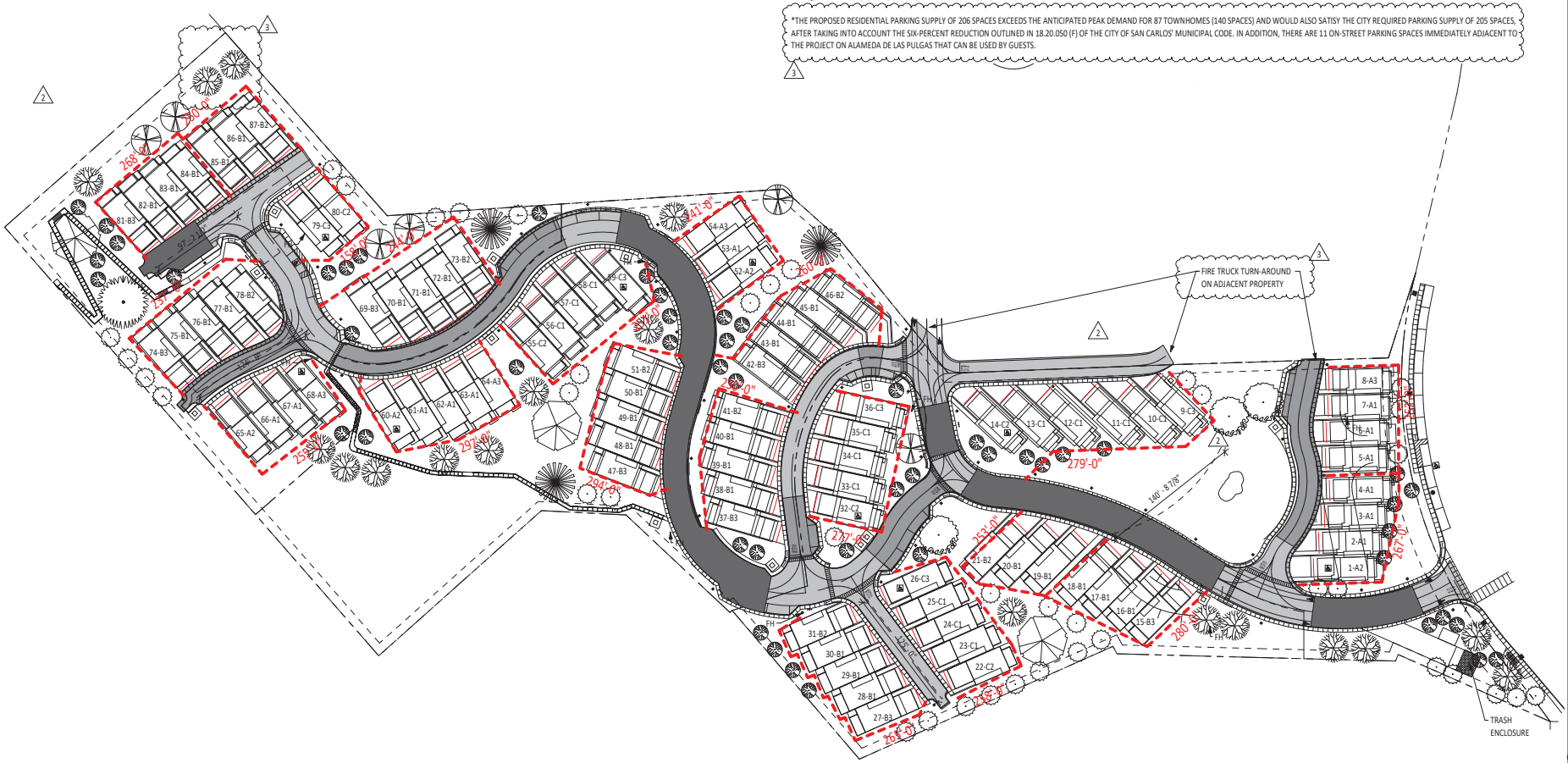
LEGEND

- FIRE APPARATUS ACCESS
- < 10% ROAD GRADE
- 10-12% ROAD GRADE
- 12-13% ROAD GRADE

Unit Type	# Of Bedrooms	Resident Parking Req'd Per Unit	Guest Parking Req'd Per Unit	# Of Units	Resident Parking Req'd	Guest Parking Req'd	Total Parking Req'd *	Resident Parking provided	Guest Parking provided	Total Parking provided
A1	4	2	0.5	12	12	3	15	24	Street	24
A2	4	2	0.5	4	6	1.5	7.5	8	Street	8
A3	4	2	0.5	4	6	1.5	7.5	8	Street	8
B1	3	2	0.5	28	48	12	60	56	Street	56
B2	3	2	0.5	8	18	4.5	22.5	16	Street	16
B3	3	2	0.5	8	18	4.5	22.5	16	Street	16
C1	3	2	0.5	13	32	8	40	26	Street	26
C2	3	2	0.5	5	10	2.5	12.5	10	Street	10
C3	3	2	0.5	5	10	2.5	12.5	10	Street	10
Total Count				**87**	174	43.5	217.5	**174**	41 +2 ACCESSIBLE = **43**	**217**
					(87 COVERED)		(87 COVERED)	**(ALL COVERED)**		**(174 COVERED)**

* REQUIRED PARKING IS REDUCED FROM THESE NUMBERS AS A RESULT OF TDM

*THE PROPOSED RESIDENTIAL PARKING SUPPLY OF 206 SPACES EXCEEDS THE ANTICIPATED PEAK DEMAND FOR 87 TOWNHOMES (140 SPACES) AND WOULD ALSO SATISY THE CITY REQUIRED PARKING SUPPLY OF 205 SPACES, AFTER TAKING INTO ACCOUNT THE SIX-PERCENT REDUCTION OUTLINED IN 18.20.050 (F) OF THE CITY OF SAN CARLOS' MUNICIPAL CODE. IN ADDITION, THERE ARE 11 ON-STREET PARKING SPACES IMMEDIATELY ADJACENT TO THE PROJECT ON ALAMEDA DE LAS PULGAS THAT CAN BE USED BY GUESTS.



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PROJECT NORTH | TRUE NORTH

DRAWN BY: Author
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SHEET TITLE:

SITE PLAN - PARKING AND FIRE ACCESS

SHEET NUMBER

A0.2

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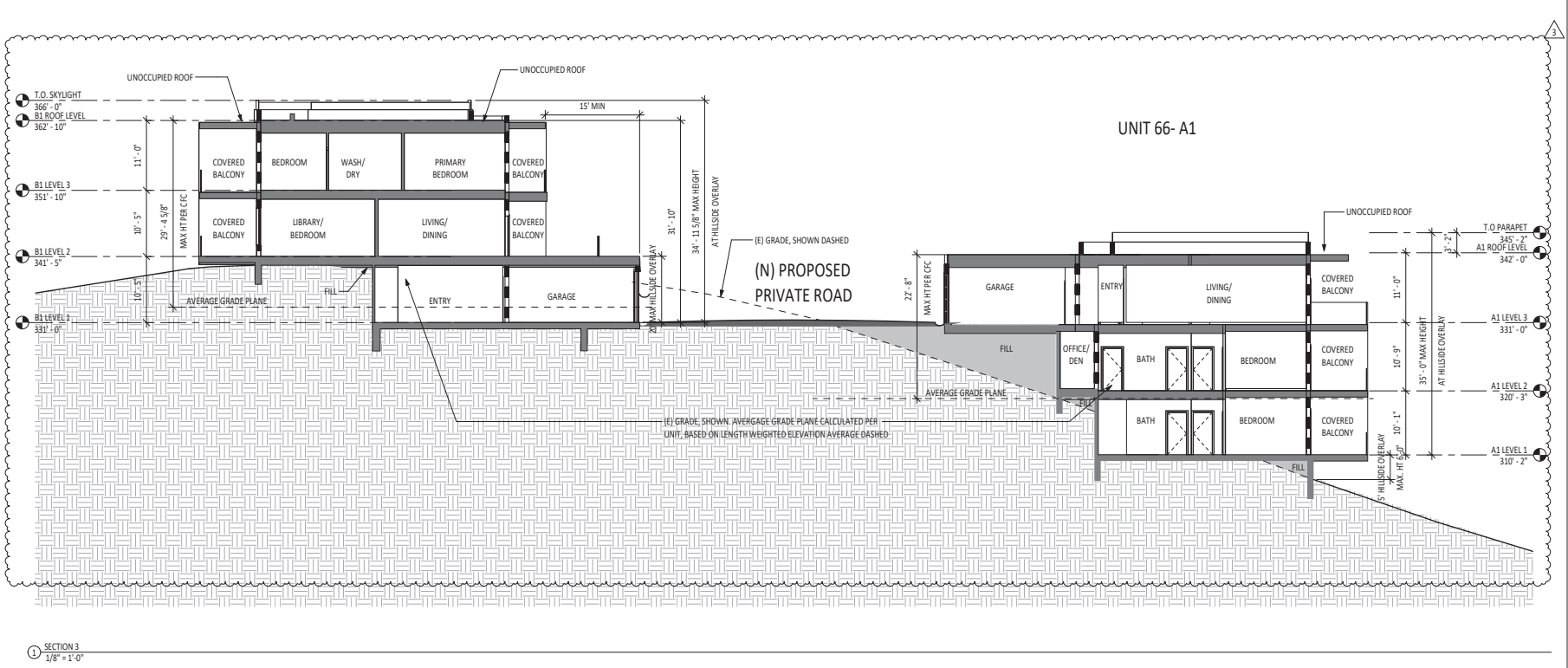

1 SECTION 3
1/8" = 1'-0"

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2	03/05/21	COMMENT RESPONSE
3	1/28/22	COMMENT RESPONSE 2

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SHEET TITLE:

SITE SECTIONS

SHEET NUMBER

A0.4 2

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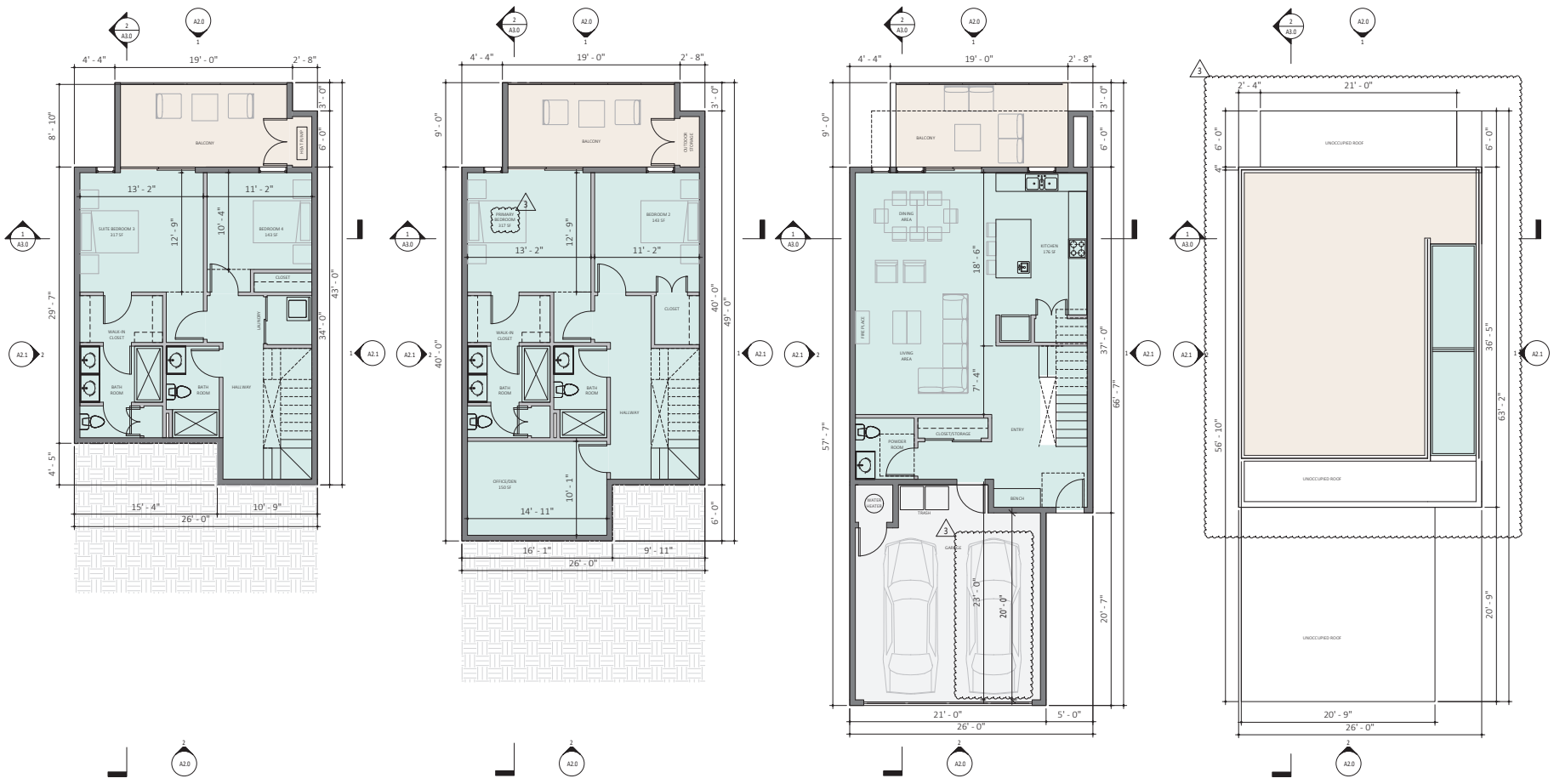


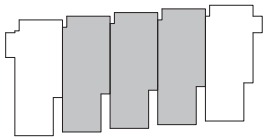
1 TYPE A1 - GROUND FLOOR PLAN

2 TYPE A1 - SECOND LEVEL PLAN

3 TYPE A1 - THIRD LEVEL PLAN

4 TYPE A1 - ROOF PLAN

	Unit Quantity	Beds	Baths	Building Areas					
				Saleable	Garage/ Misc	Decking	Buildable	Floor Area Per Unit	Landscaping
TOWNHOUSE TYPE A1									
Level 1		2	2	816		188			
Level 2		2	2	981		188			
Level 3			0.5	884	453	188			
Roof Level				149		735			
TYPE A1 TOTAL	6	4	4.5	2830	453	1299	3283	2830	



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#	DATE	ISSUES & REVISIONS
1	09/15/20	PLANNING RESUBMITTAL
2	03/05/21	COMMENT RESPONSE
3	01/28/22	COMMENT RESPONSE 2

DRAWN BY: Author
PROJECT NUMBER: 00-000
SHEET ISSUE DATE: 02/08/21
SHEET TITLE:

TYPE A1 FLOOR PLANS

SHEET NUMBER

A1.0

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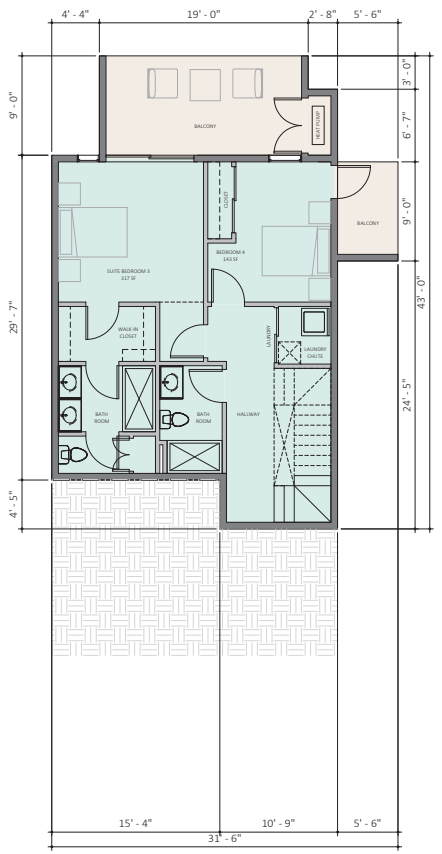
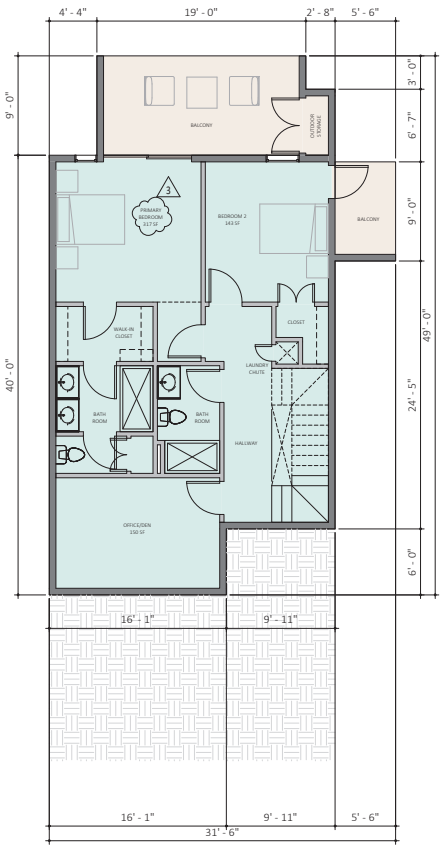
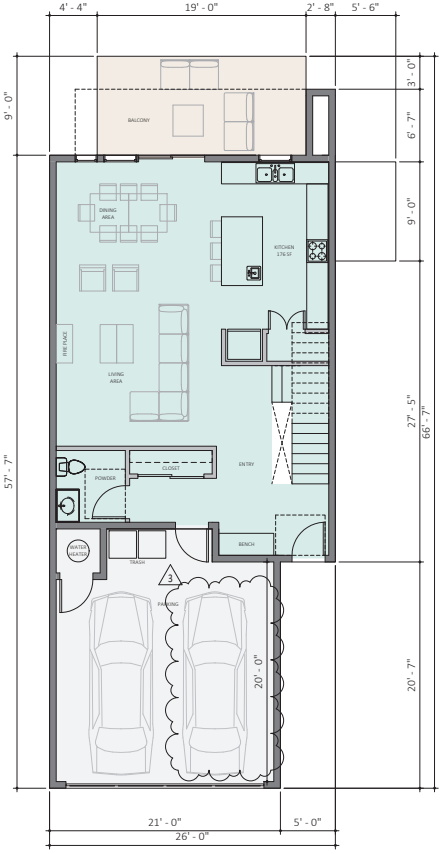


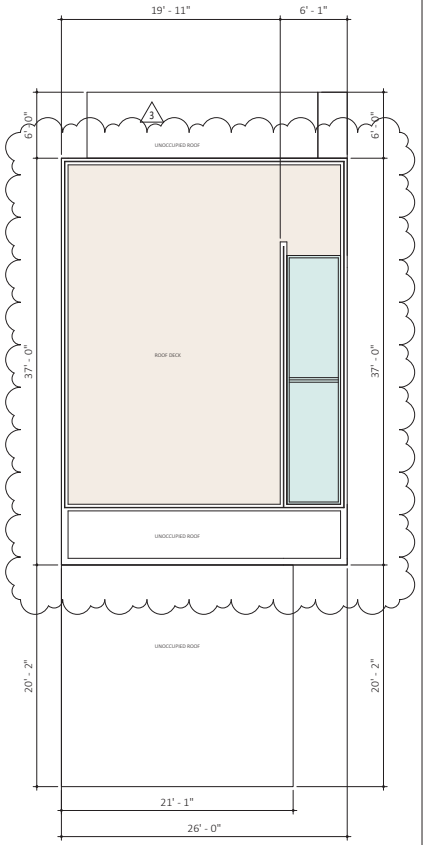
1 TYPE A2 - GROUND FLOOR PLAN
3/16" = 1'-0"



2 TYPE A2 - SECOND LEVEL PLAN
3/16" = 1'-0"

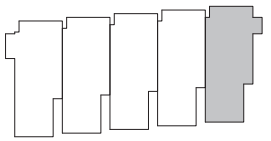


3 TYPE A2 - THIRD LEVEL PLAN
3/16" = 1'-0"



4 ROOF PLAN
3/16" = 1'-0"

	Unit Quantity	Beds	Baths	Building Areas					
				Saleable	Garage/ Misc	Decking	Buildable	Floor Area Per Unit	Landscaping
TOWNHOUSE TYPE A2									
Level 1		2	2	816		238			
Level 2		2	2	981		238			
Level 3			0.5	884	453	188			
Roof Level				149		735			
TYPE A2 TOTAL	3	4	4.5	2830	453	1399	3283	2830	



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1	09/15/20	PLANNING RESUBMITTAL
2	03/15/21	COMMENT RESPONSE
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DRAWN BY: Author
PROJECT NUMBER: 00-000
SHEET ISSUE DATE: 02/08/21
SHEET TITLE:

TYPE A2 FLOOR PLANS

SHEET NUMBER

A1.1

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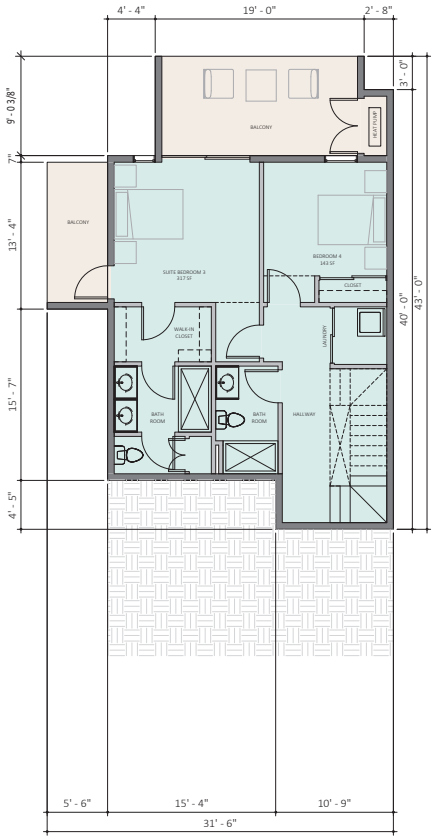
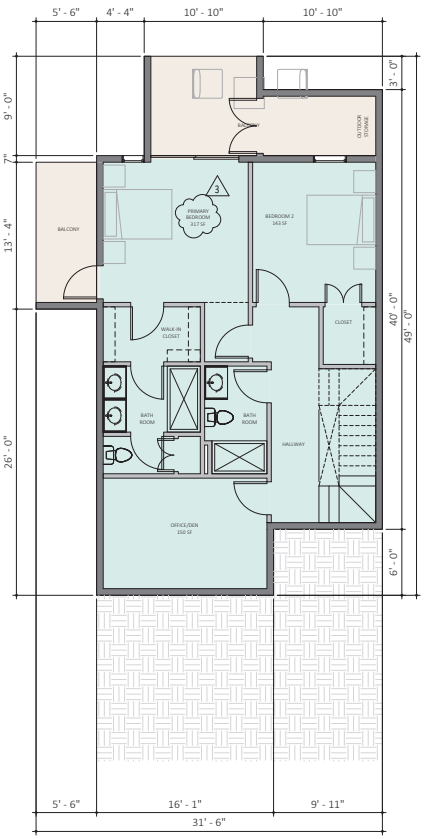
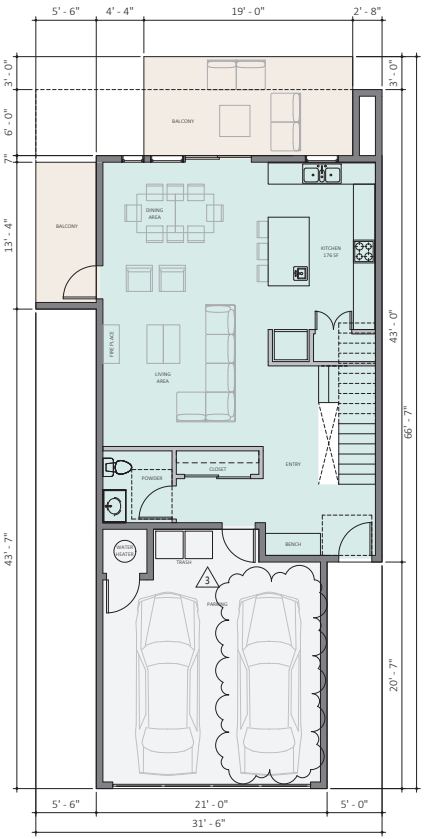


1 TYPE A3 - GROUND FLOOR PLAN
3/16" = 1'-0"



2 TYPE A3 - SECOND LEVEL PLAN
3/16" = 1'-0"



3 TYPE A3 - THIRD LEVEL PLAN
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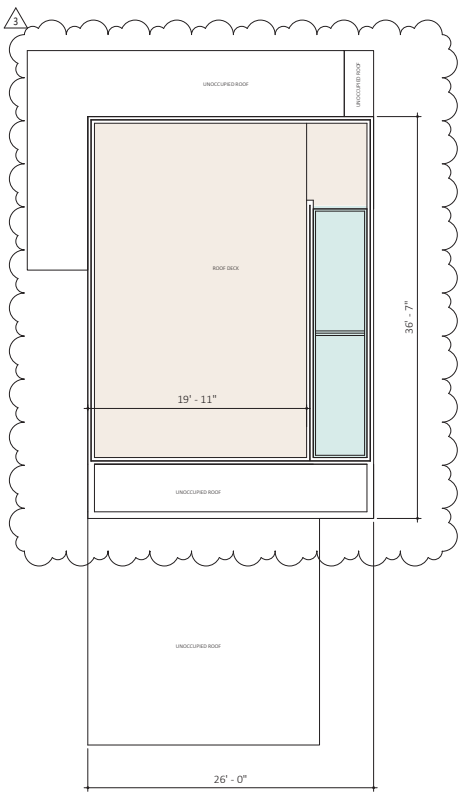
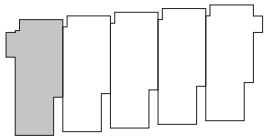


4 TYPE A3 - ROOF PLAN
3/16" = 1'-0"

	Unit Quantity	Beds	Baths	Building Areas					Landscaping
				Saleable	Garage/ Misc	Decking	Buildable	Floor Area Per Unit	
TOWNHOUSE TYPE A3									
Level 1		2	2	816		262			
Level 2		2	2	981		262			
Level 3			0.5	884	453	262			
Roof Level				149		735			
TYPE A3 TOTAL	3	4	4.5	2830	453	1521	3283	2830	



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DRAWN BY: Author
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SHEET ISSUE DATE: 02/08/21
SHEET TITLE:

TYPE A3 FLOOR PLANS

SHEET NUMBER

A1.2

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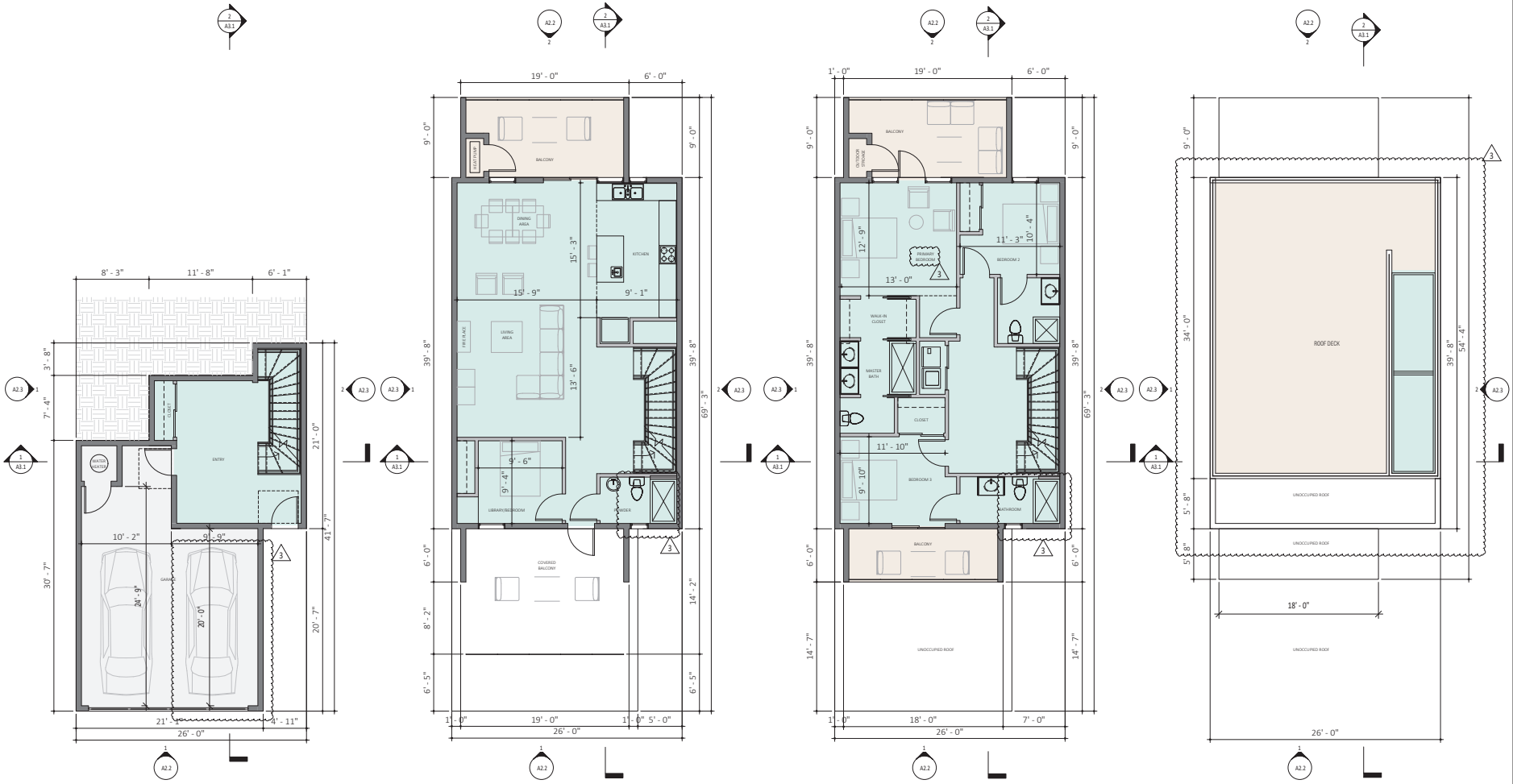


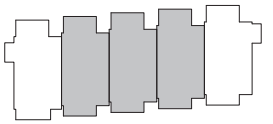
1 GROUND FLOOR PLAN
3/16" = 1'-0"

2 SECOND LEVEL PLAN
3/16" = 1'-0"

3 THIRD LEVEL PLAN
3/16" = 1'-0"

4 ROOF PLAN
3/16" = 1'-0"

	Unit Quantity	Beds	Baths	Building Areas					
				Saleable	Garage/ Misc	Decking	Buildable	Floor Area Per Unit	Landscaping
TOWNHOUSE TYPE B1									
Level 1				306	541				
Level 2		1	1	1031		428			
Level 3		2	3	1031		280			
Roof Level				159		595			
TYPE B1 TOTAL	24	3	4	2527	541	1303	3068	2527	



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#	DATE	ISSUES & REVISIONS
1	09/15/20	PLANNING RESUBMITTAL
2	03/05/21	COMMENT RESPONSE
3	01/28/22	COMMENT RESPONSE 2

DRAWN BY: Author
PROJECT NUMBER: 00-000
SHEET ISSUE DATE: 09/22/17
SHEET TITLE:

TYPE B1 FLOOR PLANS

SHEET NUMBER

A1.3

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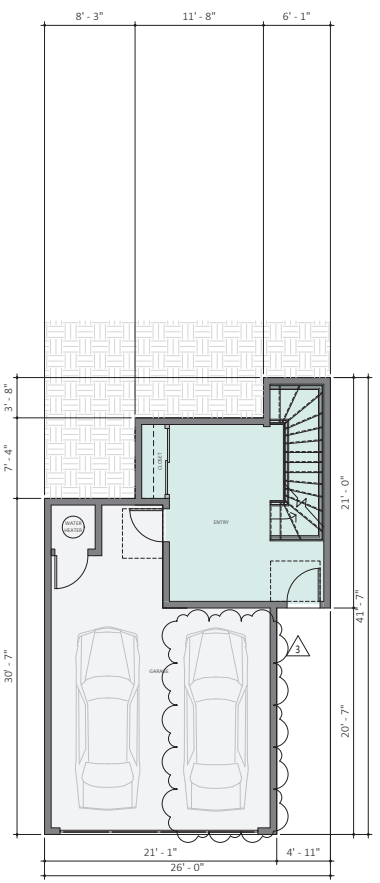
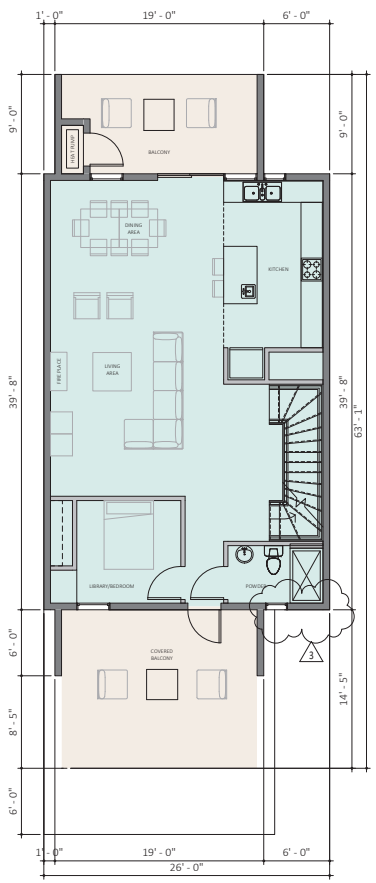
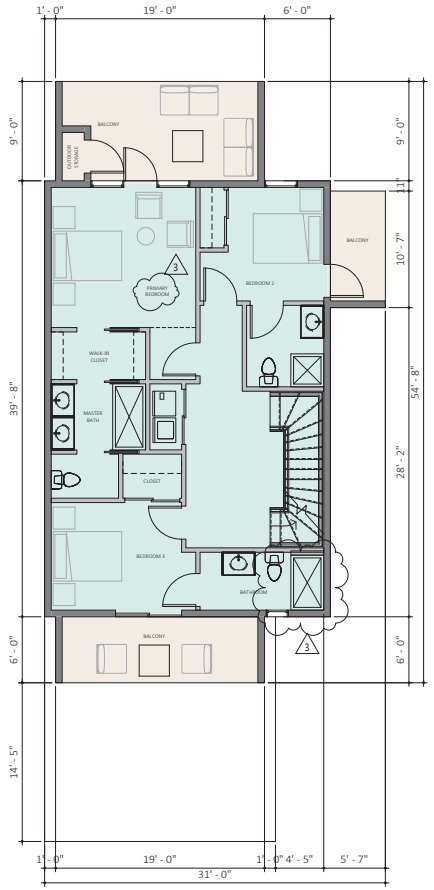


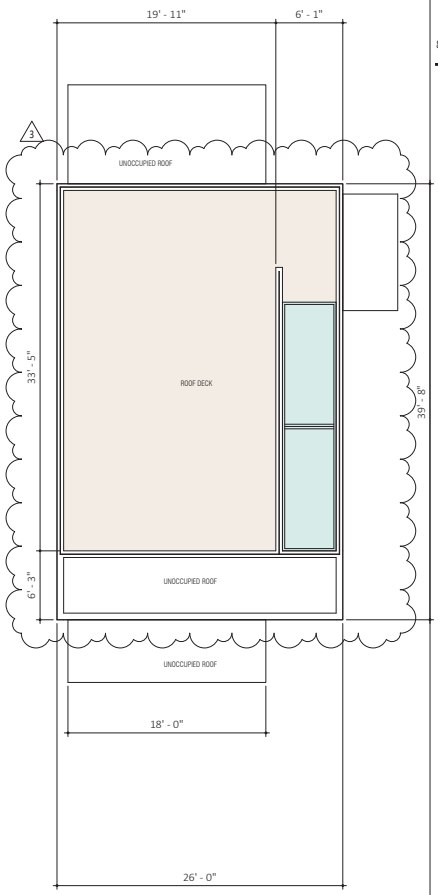
1 GROUND FLOOR PLAN
3/16" = 1'-0"



2 SECOND LEVEL PLAN
3/16" = 1'-0"

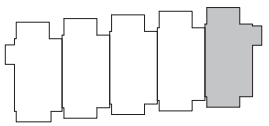


3 THIRD LEVEL PLAN
3/16" = 1'-0"



4 ROOF PLAN
3/16" = 1'-0"

	Unit Quantity	Beds	Baths	Building Areas					
				Saleable	Garage/ Misc.	Decking	Buildable	Floor Area Per Unit	Landscaping
TOWNHOUSE TYPE B2									
Level 1				306	541				
Level 2		1	1	1031		428			
Level 3		2	3	1031		339			
Roof Level				159		595			
TYPE B2 TOTAL	9	3	4	2527	541	1362	3068	2527	



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#	DATE	ISSUES & REVISIONS
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2	03/05/21	COMMENT RESPONSE
3	01/28/22	COMMENT RESPONSE

DRAWN BY: Author
PROJECT NUMBER: 00-000
SHEET ISSUE DATE: 02/08/21
SHEET TITLE:

TYPE B2 FLOOR PLANS

SHEET NUMBER

A1.4

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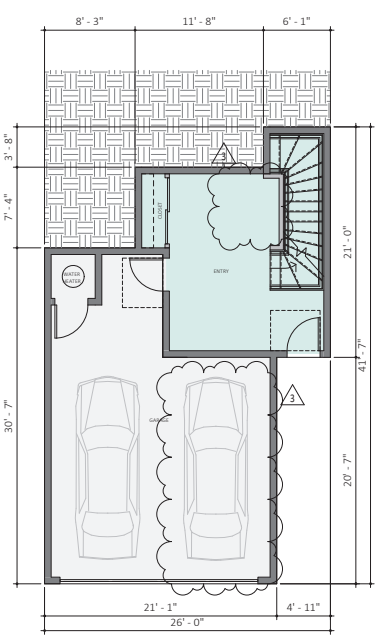
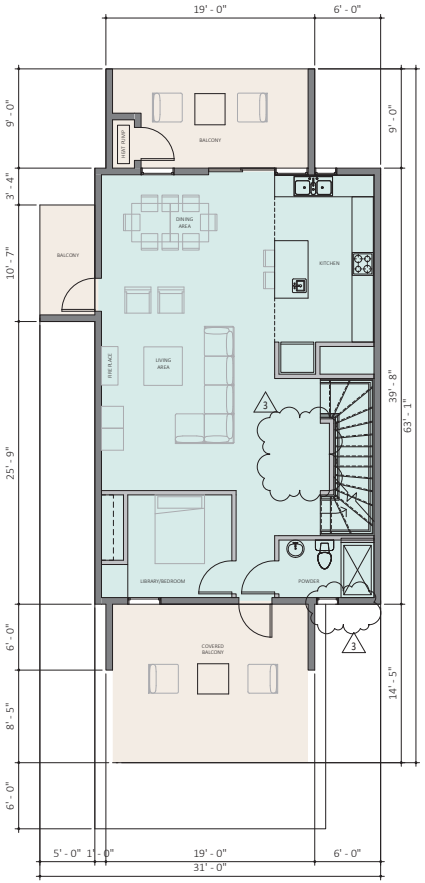
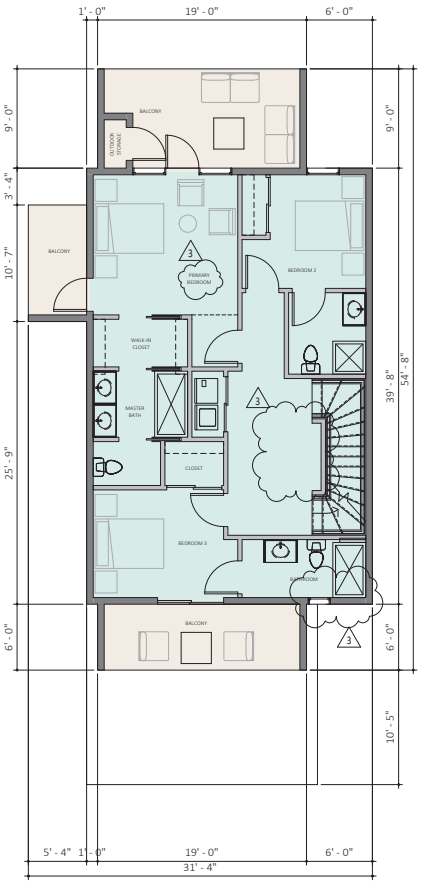


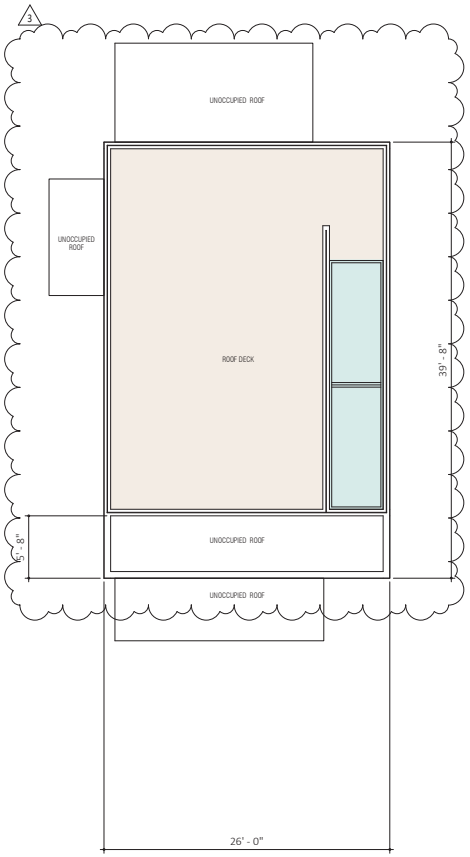
1 GROUND FLOOR PLAN
3/16" = 1'-0"



2 SECOND LEVEL PLAN
3/16" = 1'-0"

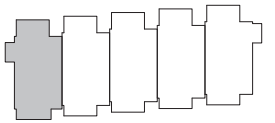


3 THIRD LEVEL PLAN
3/16" = 1'-0"



4 ROOF PLAN
3/16" = 1'-0"

	Unit Quantity	Beds	Baths	Building Areas					
				Saleable	Garage/ Misc	Decking	Buildable	Floor Area Per Unit	Landscaping
TOWNHOUSE TYPE B3									
Level 1				306	541				
Level 2		1	1	1031		481			
Level 3		2	3	1031		342			
Roof Level				159		595			
TYPE B3 TOTAL	9	3	4	2527	541	1418	3068	2527	



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1	09/15/20	SCHEMATIC DESIGN
2	03/15/21	COMMENT RESPONSE
3	01/28/22	COMMENT RESPONSE 2

DRAWN BY: Author
PROJECT NUMBER: 00-000
SHEET ISSUE DATE: 02/08/21
SHEET TITLE:

TYPE B3 FLOOR PLANS

SHEET NUMBER

A1.5

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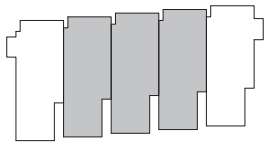
1 GROUND FLOOR PLAN
3/16" = 1'-0"

2 SECOND LEVEL PLAN
3/16" = 1'-0"

3 THIRD LEVEL PLAN
3/16" = 1'-0"

4 ROOF PLAN
3/16" = 1'-0"

	Unit Quantity	Beds	Baths	Building Areas					
				Saleable	Garage/ Misc	Decking	Buildable	Floor Area Per Unit	Landscaping
TOWNHOUSE TYPE C1									
Level 1		1	2	815		188			
Level 2			0.5	943	499	188			
Level 3		2	2	1059		372			
Roof Level				126		628			
TYPE C1 TOTAL	16	3	4.5	2943	499	1376	3442	2943	



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1	09/15/20	PLANNING RESUBMITTAL
2	03/05/21	COMMENT RESPONSE
3	01/28/22	COMMENT RESPONSE 2

DRAWN BY: Author
PROJECT NUMBER: 19-098
SHEET ISSUE DATE: 09/22/17
SHEET TITLE:

TYPE C1 FLOOR PLANS

SHEET NUMBER

A1.6

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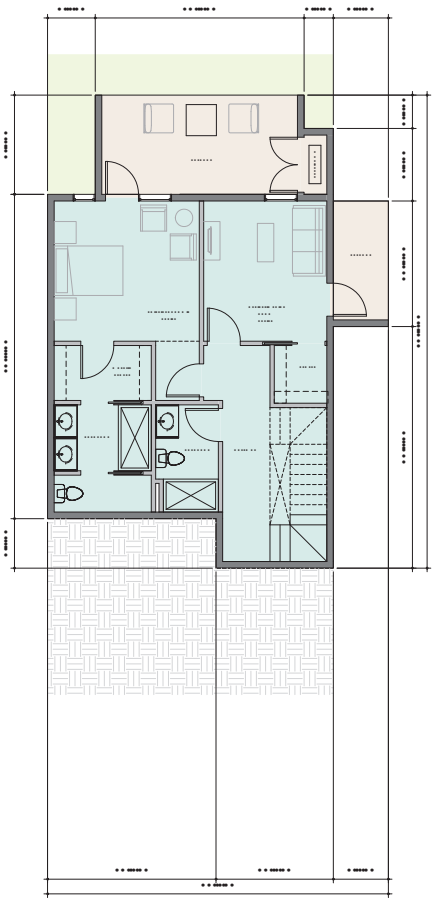
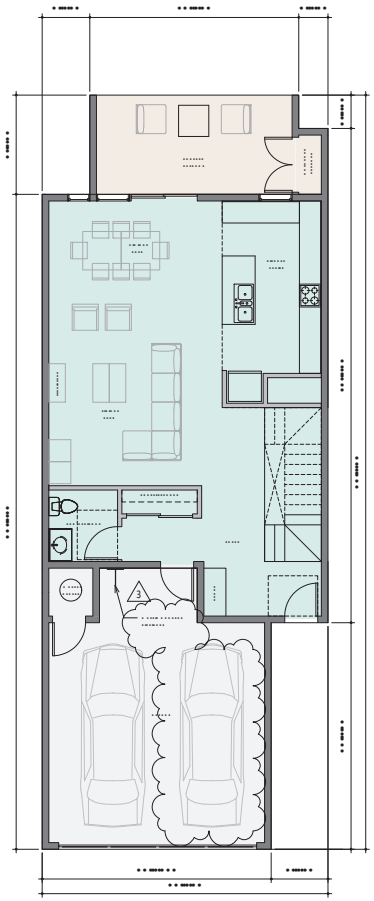
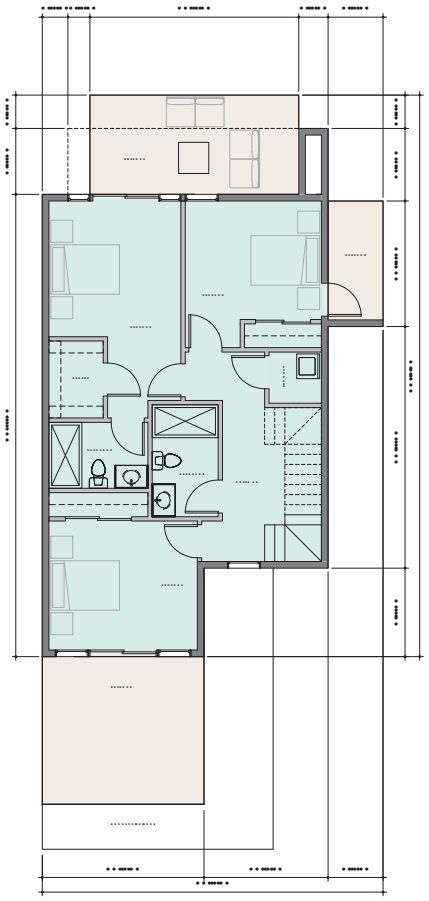


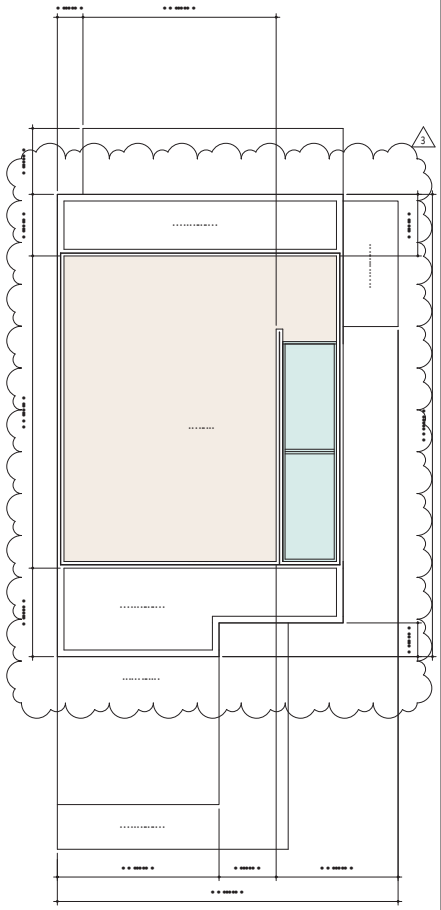
1 GROUND FLOOR PLAN
3/16" = 1'-0"



2 SECOND LEVEL PLAN
3/16" = 1'-0"

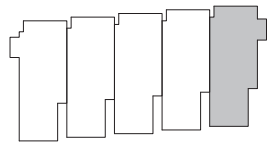


3 THIRD LEVEL PLAN
3/16" = 1'-0"



4 ROOF PLAN
3/16" = 1'-0"

	Unit Quantity	Beds	Baths	Building Areas					
				Saleable	Garage/ Misc	Decking	Buildable	Floor Area Per Unit	Landscaping
TOWNHOUSE TYPE C2									
Level 1		1	2	815		245			
Level 2			0.5	943	499	188			
Level 3		2	2	1002		429			
Roof Level				126		628			
TYPE C2 TOTAL	5	3	4.5	2886	499	1490	3385	2886	



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TYPE C2 FLOOR PLANS

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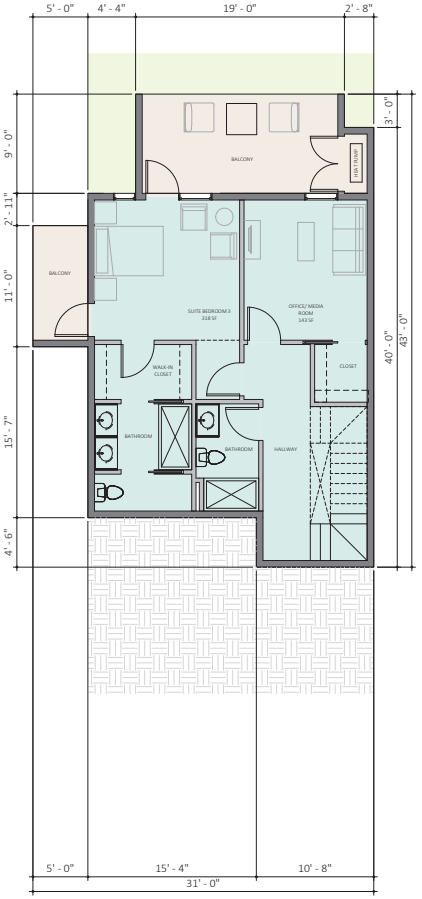
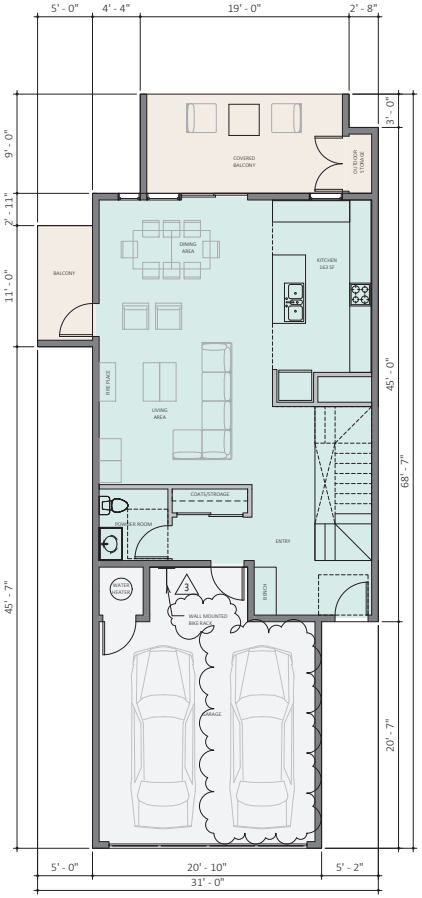
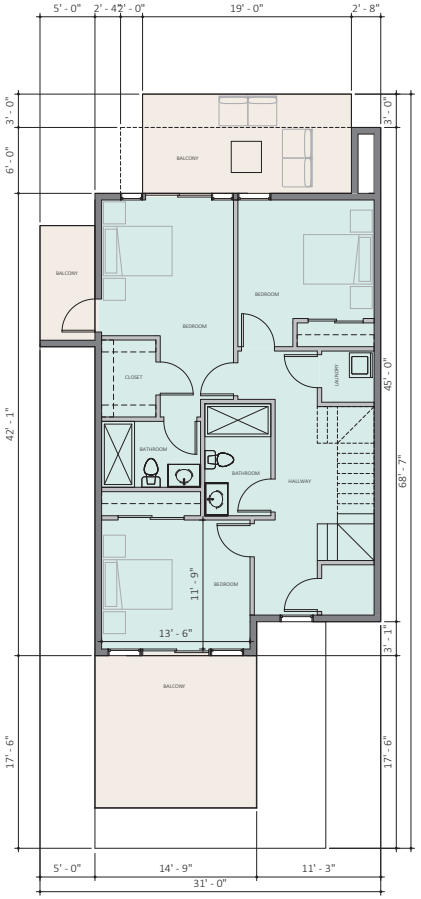


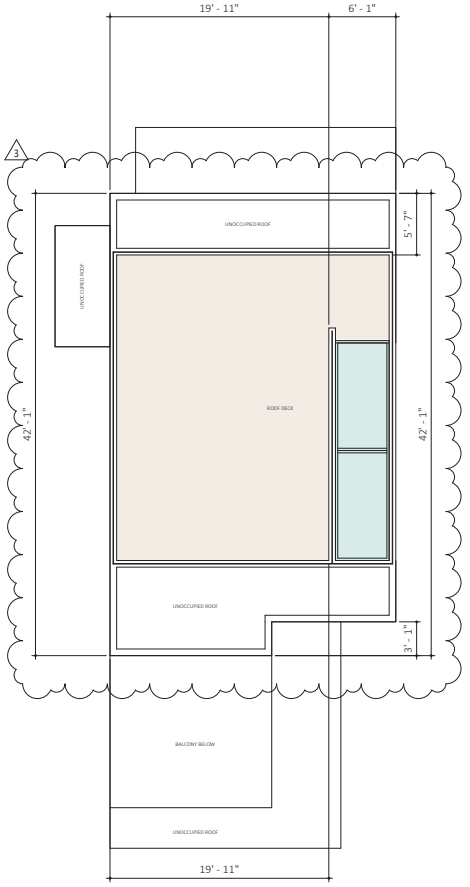
1 GROUND FLOOR PLAN
3/16" = 1'-0"



2 SECOND LEVEL PLAN
3/16" = 1'-0"

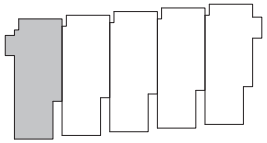


3 THIRD LEVEL PLAN
3/16" = 1'-0"



4 ROOF PLAN
3/16" = 1'-0"

	Unit Quantity	Beds	Baths	Building Areas					Landscaping
				Saleable	Garage/ Misc	Decking	Buildable	Floor Area Per Unit	
TOWNHOUSE TYPE C3									
Level 1		1	2	815		245			
Level 2			0.5	943	499	243			
Level 3		2	2	1059		427			
Roof Level				126		628			
TYPE C3 TOTAL	5	3	4.5	2943	499	1543	3442	2943	



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TYPE C3 FLOOR PLANS

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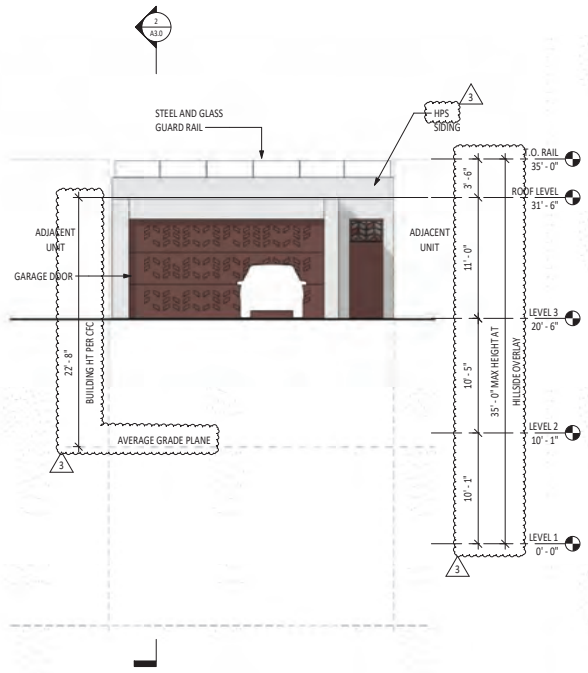
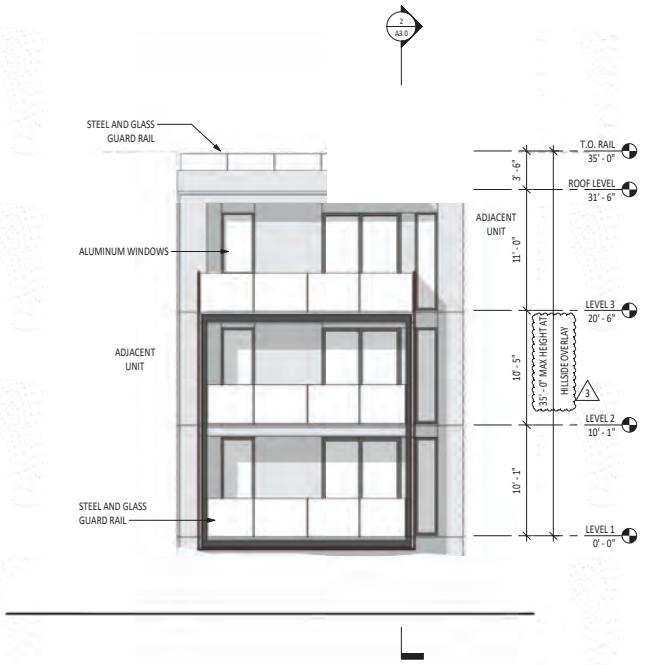


2 TYPE A1 - NORTH ELEVATION
3/16" = 1'-0"



1 TYPE A1 - SOUTH ELEVATION
3/16" = 1'-0"

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TYPE A ELEVATIONS

SHEET NUMBER

A2.0

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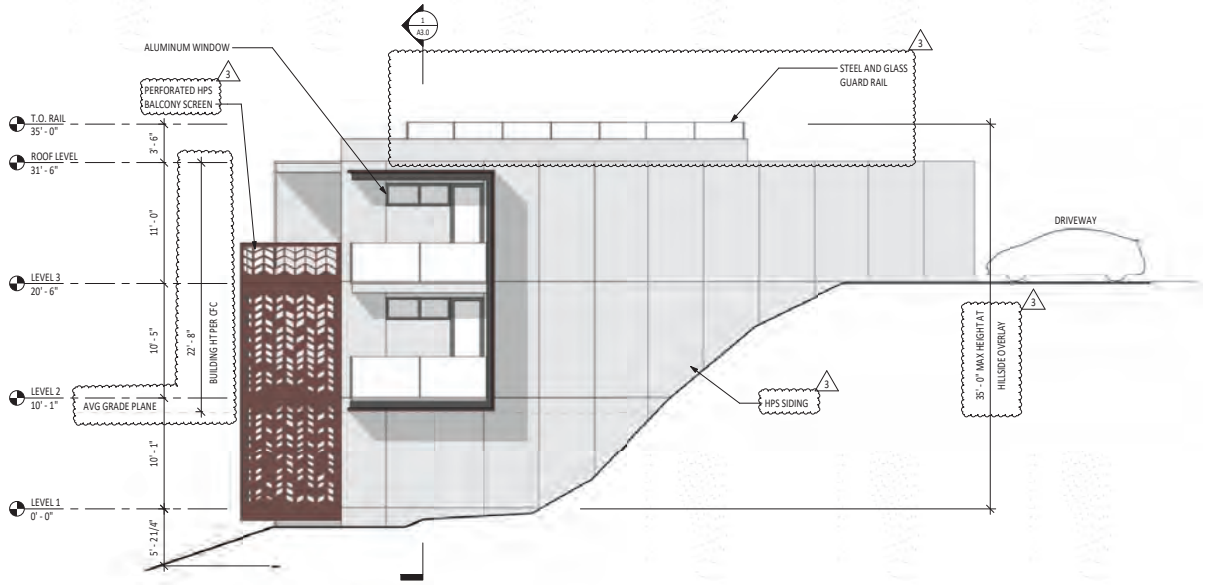
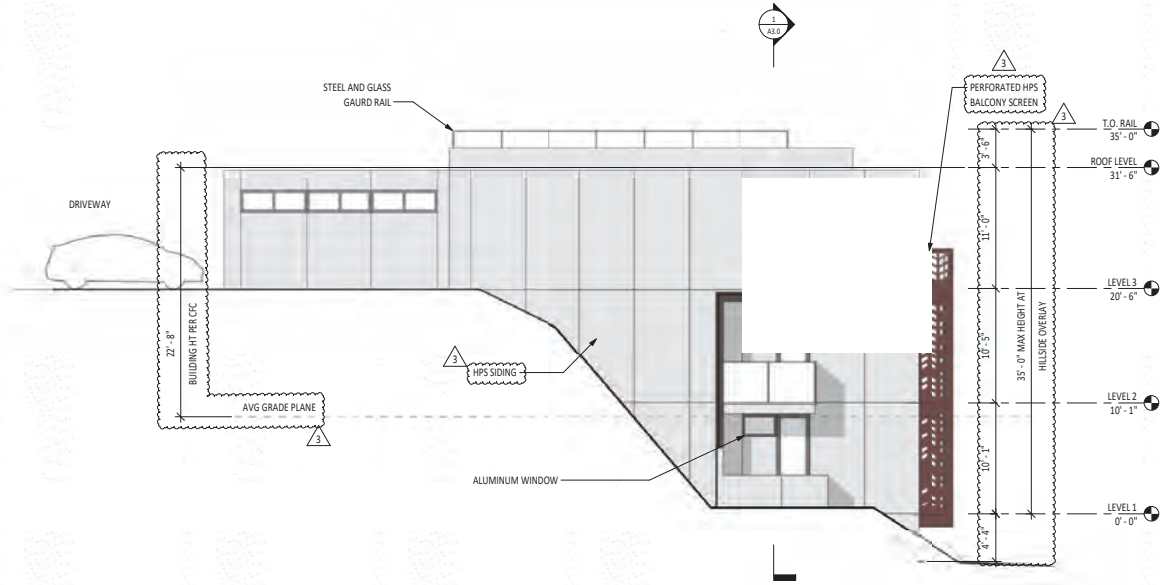


2 TYPE A3 - EAST ELEVATION
3/16" = 1'-0"



1 TYPE A2 - WEST ELEVATION
3/16" = 1'-0"

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TYPE A ELEVATIONS

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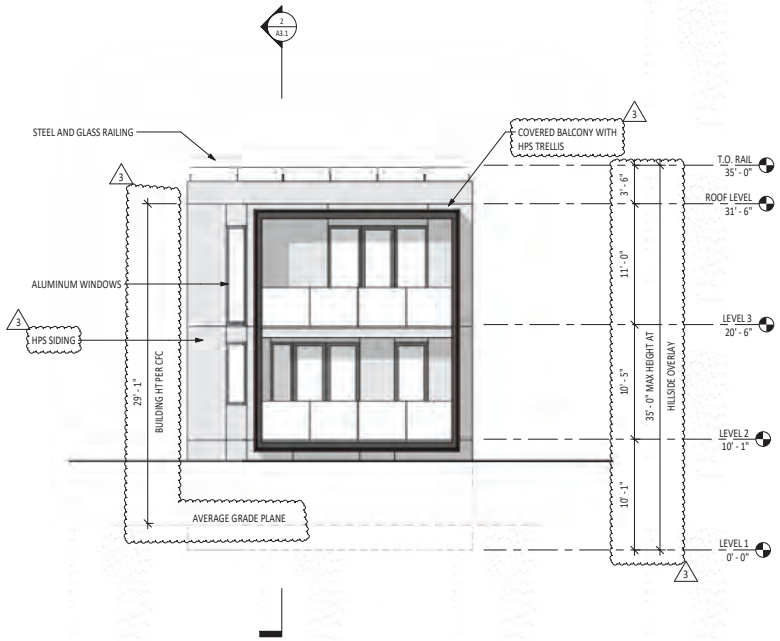
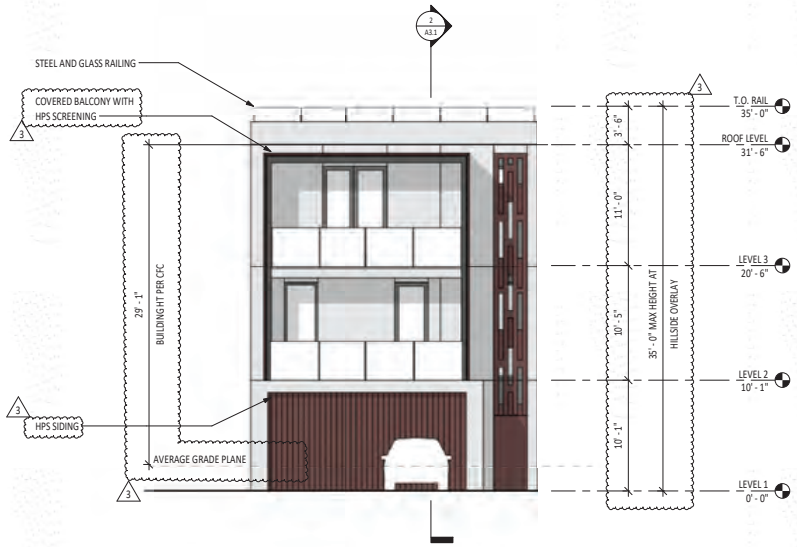


2 EXTERIOR ELEVATION WEST
3/16" = 1'-0"



1 EXTERIOR ELEVATION EAST
3/16" = 1'-0"

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A2.2

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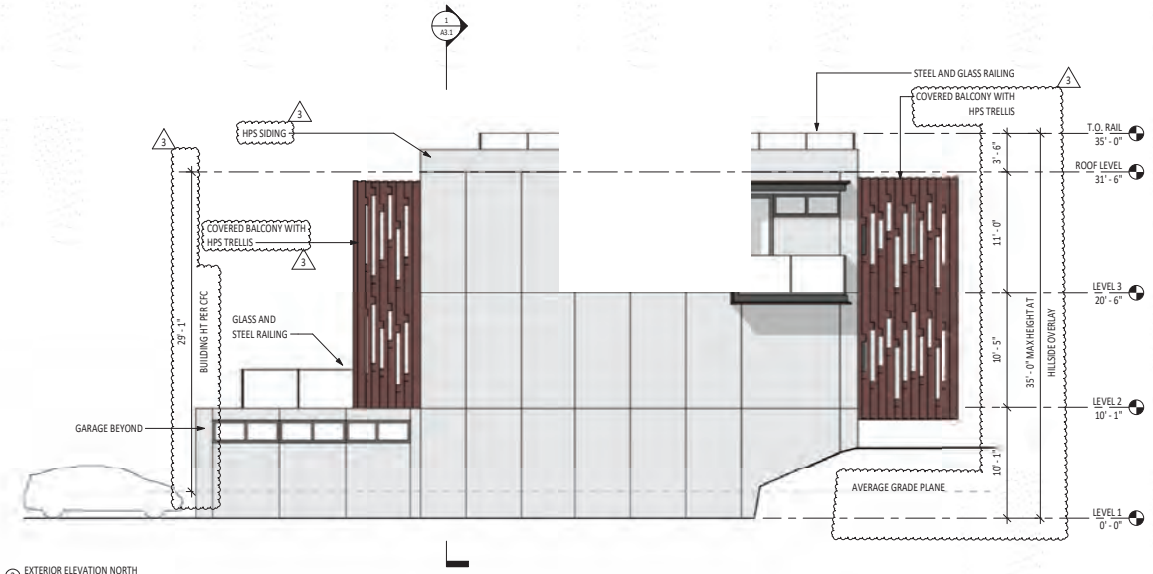
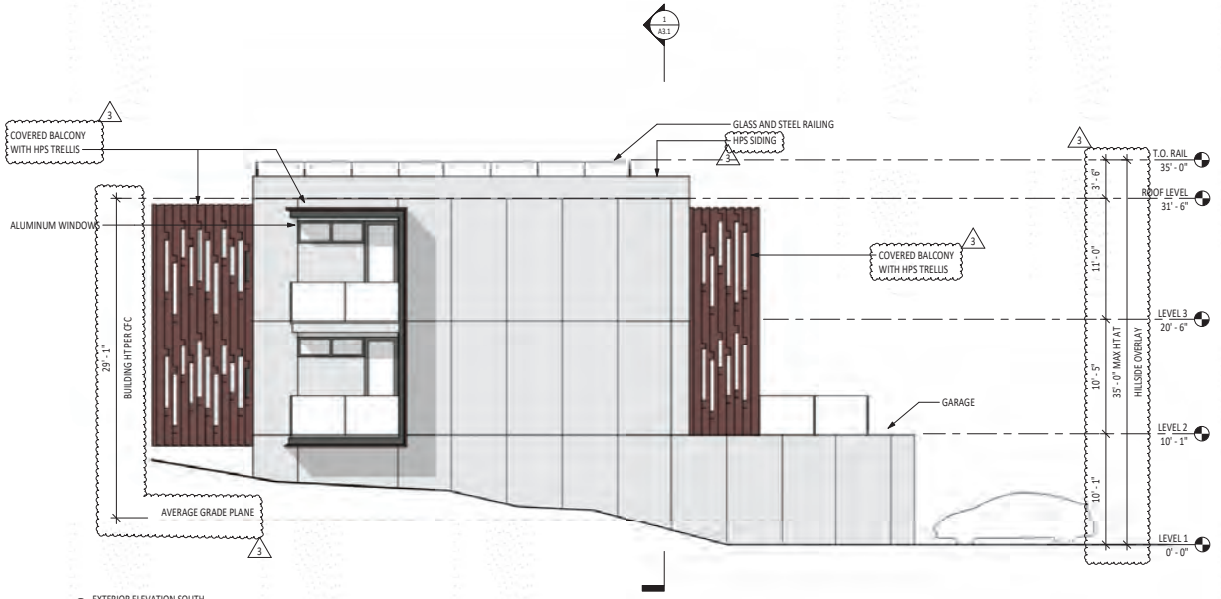


2 EXTERIOR ELEVATION NORTH
3/16" = 1'-0"



1 EXTERIOR ELEVATION SOUTH
3/16" = 1'-0"

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TYPE B ELEVATIONS

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A2.3

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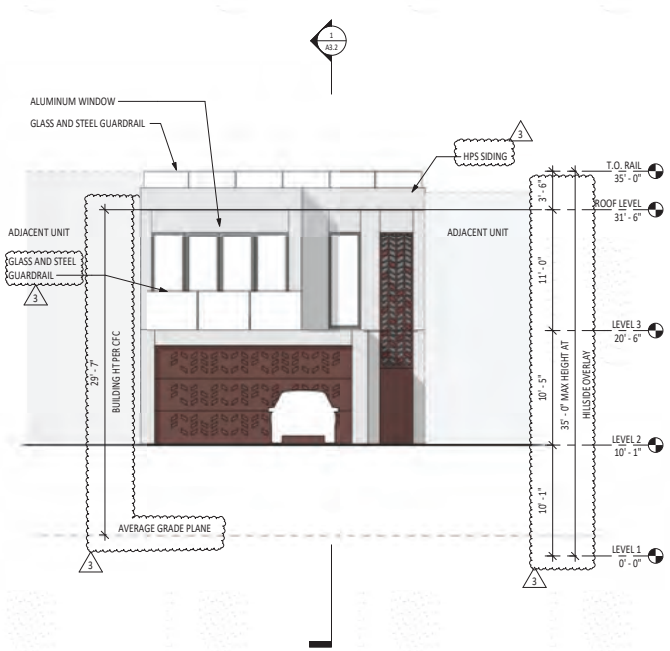
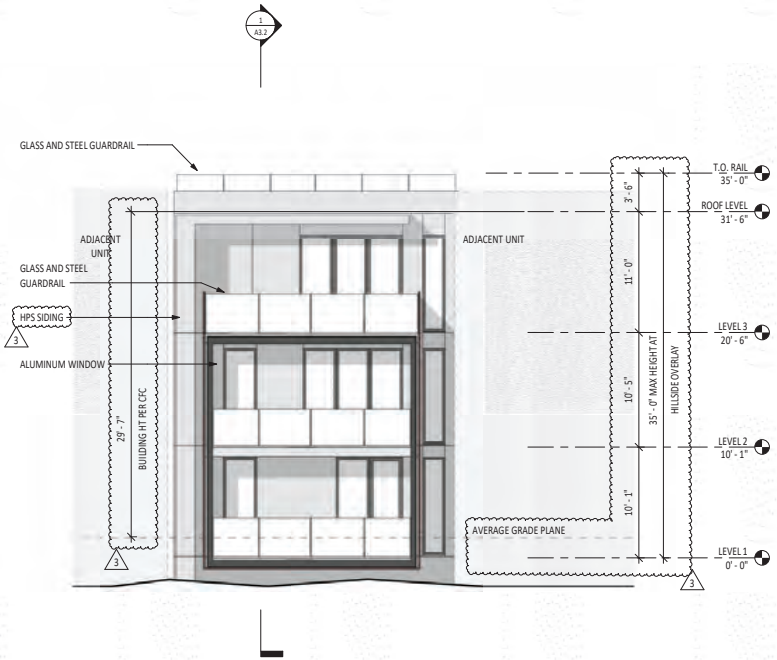


2 TYPE C - NORTH ELEVATION
3/16" = 1'-0"



1 TYPE C - SOUTH ELEVATION
3/16" = 1'-0"

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TYPE C ELEVATIONS

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A2.4

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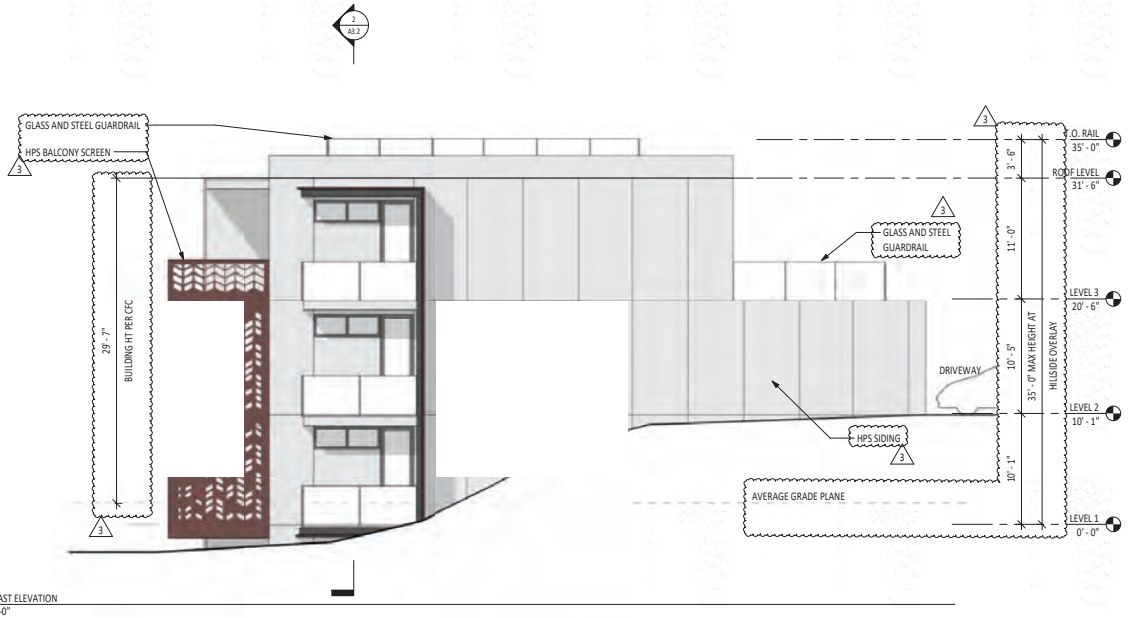
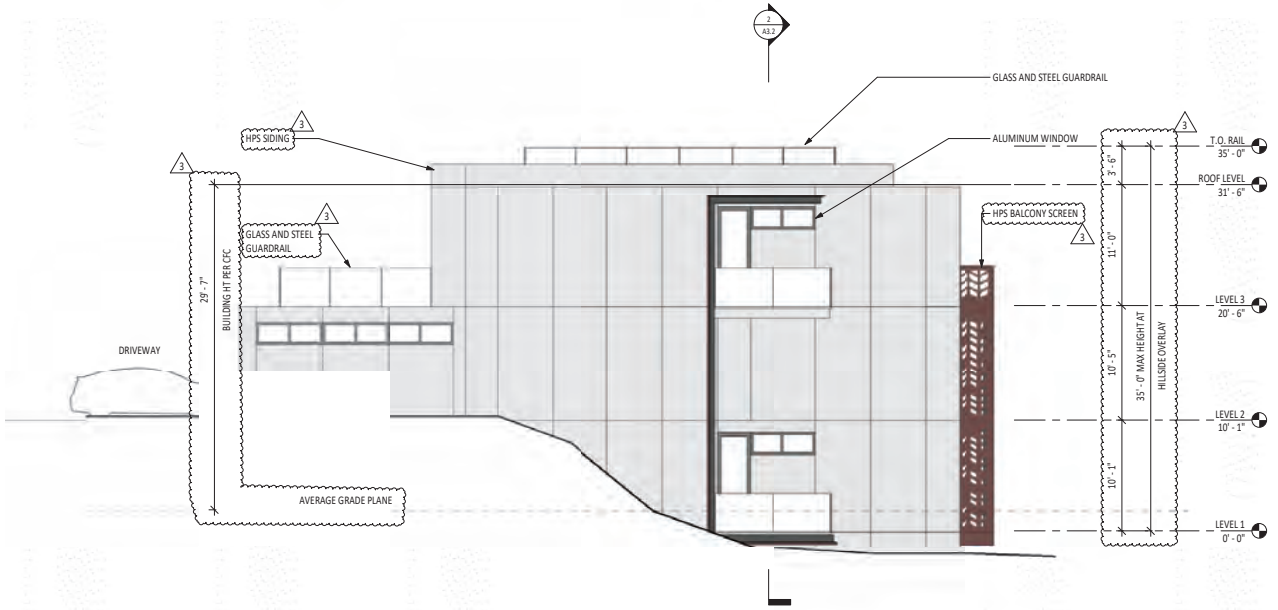


4 TYPE C - EAST ELEVATION
3/16" = 1'-0"



3 TYPE C - WEST ELEVATION
3/16" = 1'-0"

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TYPE C ELEVATIONS

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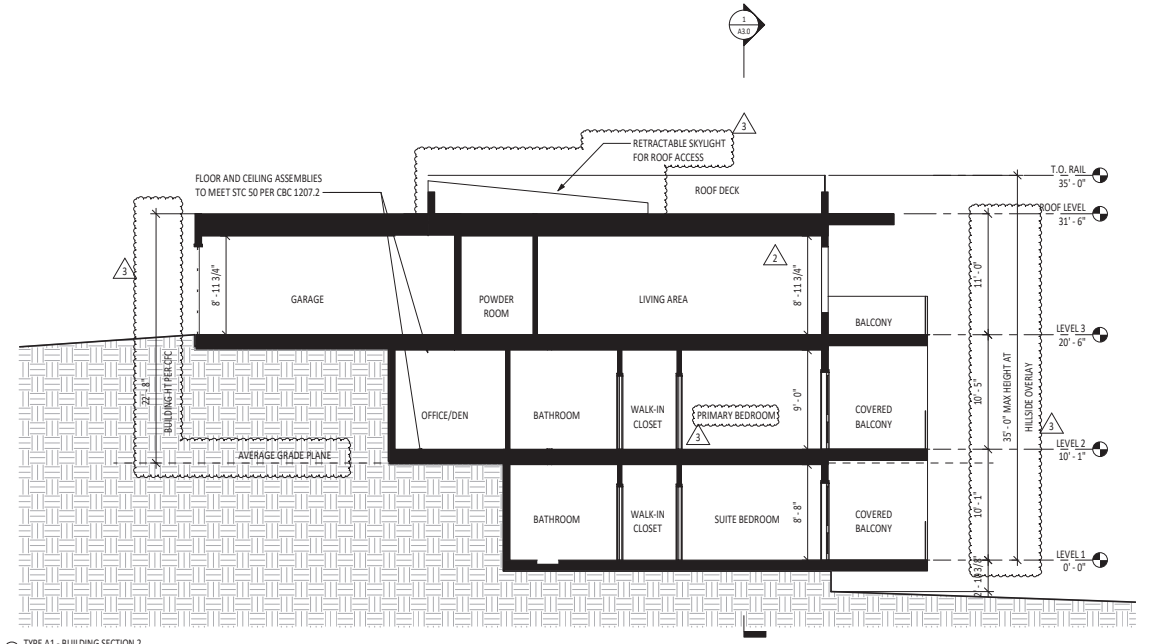
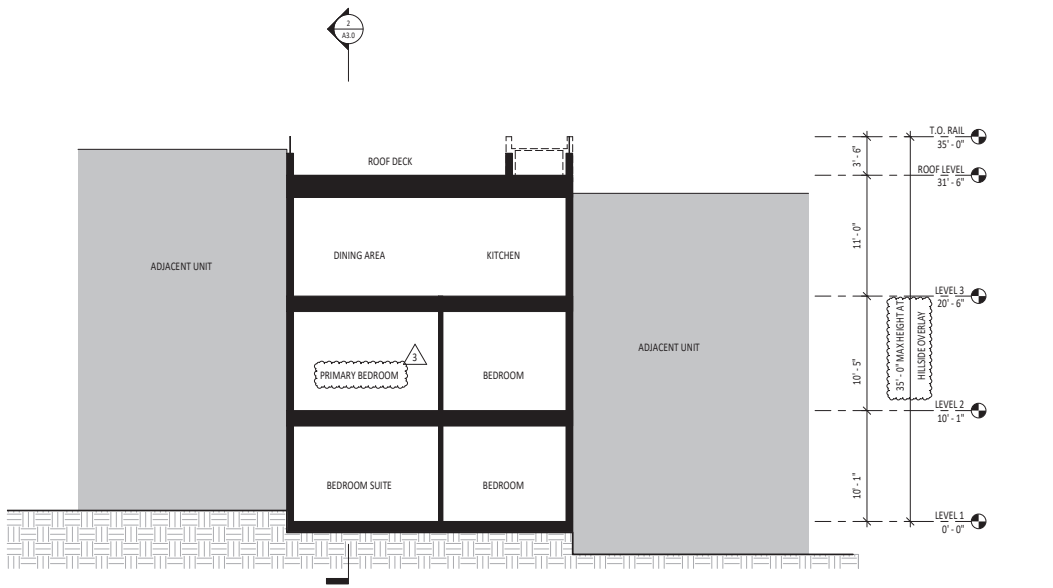


2 TYPE A1 - BUILDING SECTION 2
3/16" = 1'-0"



1 TYPE 1A - BUILDING SECTION 1
3/16" = 1'-0"

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TYPE A BUILDING SECTIONS

SHEET NUMBER

A3.0

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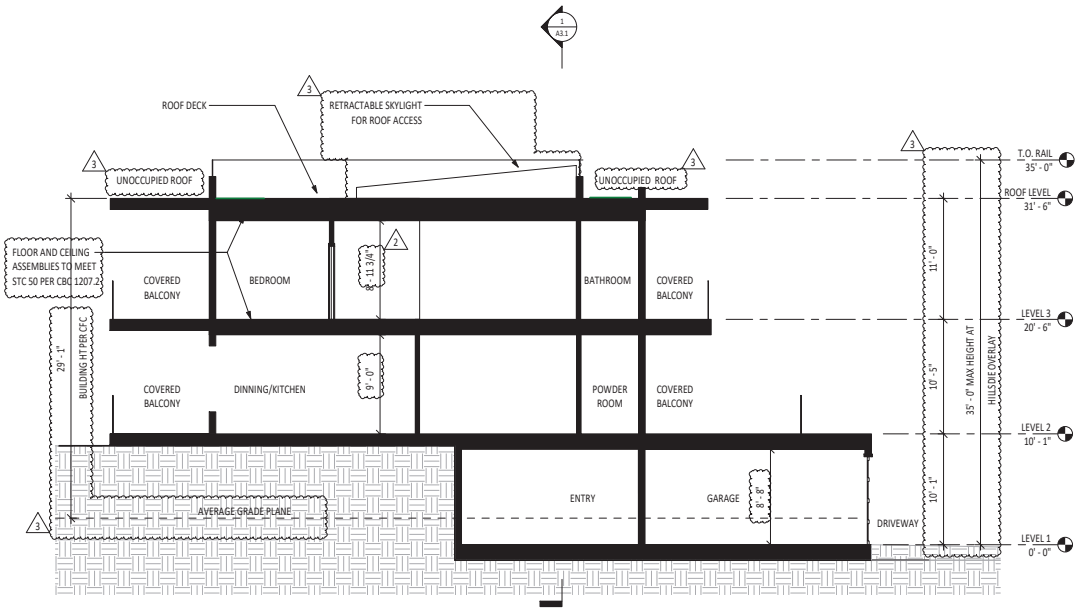

2 TYPE B - BUILDING SECTION 2
3/16" = 1'-0"

1 TYPE B - BUILDING SECTION 1
3/16" = 1'-0"

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TYPE B BUILDING SECTIONS

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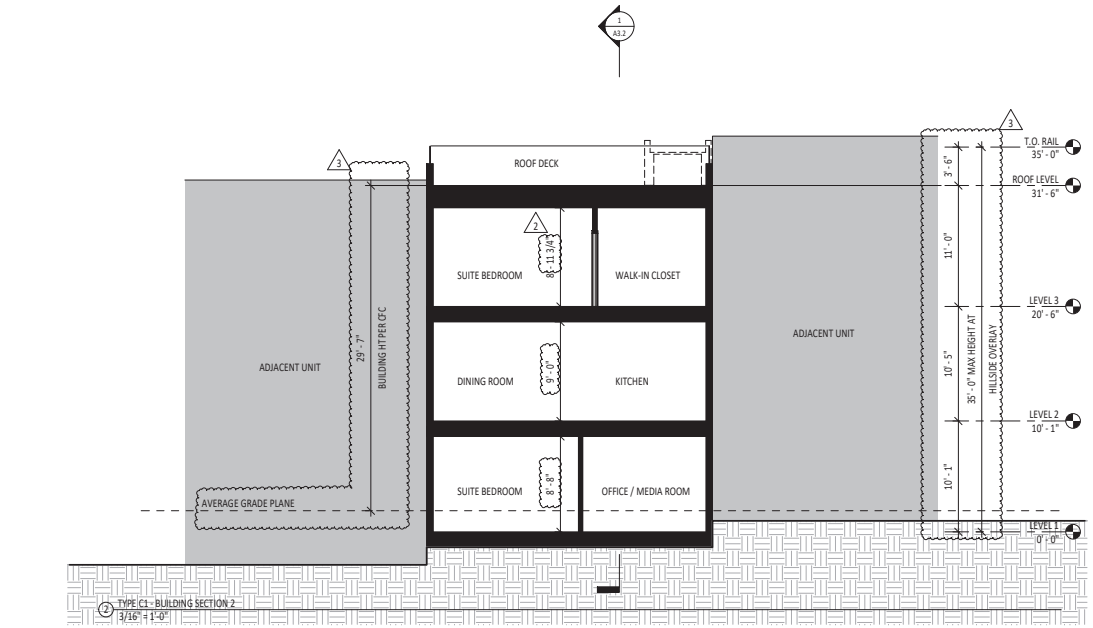
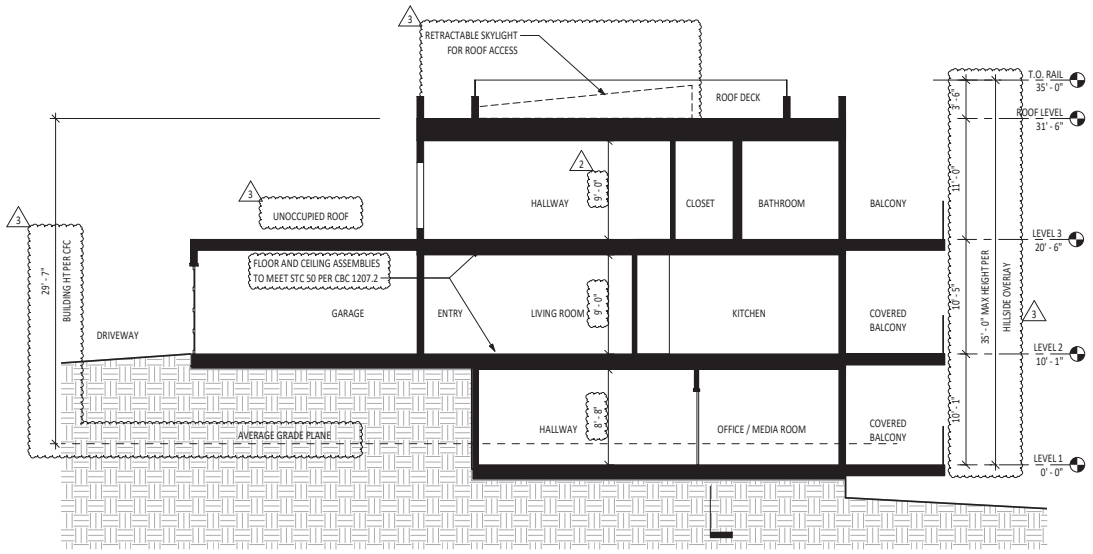


2 TYPE C1 - BUILDING SECTION 2
3/16" = 1'-0"



1 TYPE C1 - BUILDING SECTION 1
3/16" = 1'-0"

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VEEV

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777 MARINERS ISLAND BLVD., STE 150
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360 17th Street, Suite 200
Oakland, CA 94612
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San Francisco, CA 94102
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Redwood City, CA 94065
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#	DATE	ISSUES & REVISIONS
1	09/15/20	PLANNING RESUBMITTAL
2	03/05/21	COMMENT RESPONSE
3	01/28/22	COMMENT RESPONSE 2

DRAWN BY: Author
PROJECT NUMBER: 19-098
SHEET ISSUE DATE: 02/08/21
SHEET TITLE:

TYPE C BUILDING SECTIONS

SHEET NUMBER

A3.2

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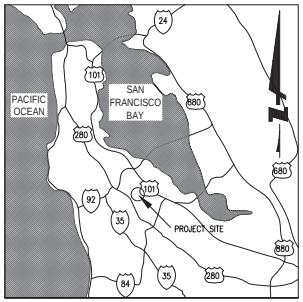
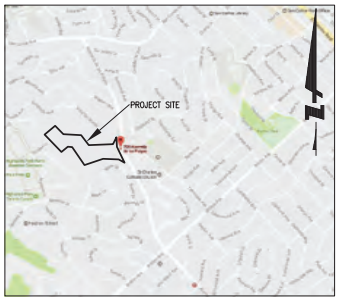


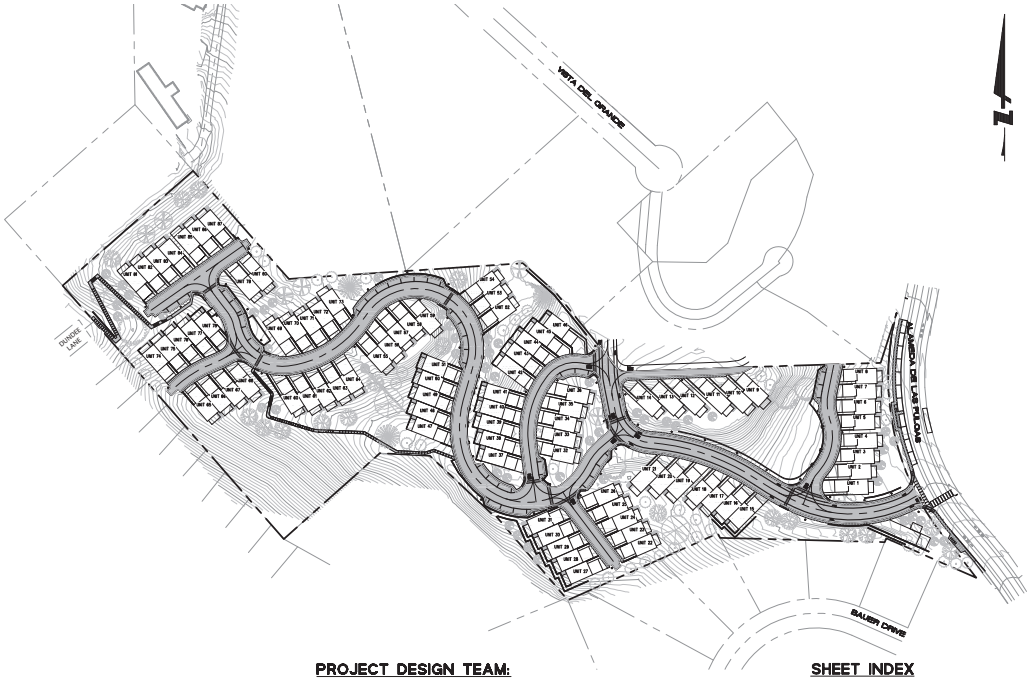
VICINITY MAP
N.T.S.



LOCATION MAP
N.T.S.

ABBREVIATIONS:

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
AD	AREA DRAIN
ARV	AIR RELEASE VALVE
ATD	ATRIUM DRAIN
BFPD	BACK FLOW PREVENTION DEVICE
BOV	BLOW OFF VALVE
BS	BOTTOM STEP ELEVATION
BSTD	BRICKSLOT TRENCH DRAIN
BW	BOTTOM OF WALL ELEVATION
CB	CATCH BASIN
CL	CENTER LINE
CS	CRAWL SPACE ELEVATION
CIP	CAST IRON PIPE
CONC	CONCRETE
DD	DECK DRAIN
DDCV	DOUBLE DETECTOR CHECK VALVE
DIP	DUCTILE IRON PIPE
DS	ROOF DOWN SPOUT
DW	DOMESTIC WATER LINE
DWL	DRYWELL CATCH BASIN
DWY	DRIVEWAY
(E)	EXISTING
EG	EXISTING GRADE
ELEC	ELECTRICAL
EM	ELECTRICAL METER
EP	EDGE OF PAVEMENT
EW	EARTHWORK QUANTITY
FC	FACE OF CURB ELEVATION
FDC	FIRE DEPARTMENT CONNECTION
FF	FINISHED FLOOR ELEVATION
FG	FINISHED GROUND ELEVATION
FL	FLOW LINE ELEVATION
FM	FORCE MAIN LINE
FS	FINISHED SURFACE ELEVATION
FP	FINISHED PAVEMENT ELEVATION
FW	FIRE WATER LINE
GB	GRADE BREAK
GM	GAS METER
GR	GRATE ELEVATION
GV	GATE VALVE
HP	HIGH POINT
INV	INVERT ELEVATION
JT	JOINT TRENCH
JP	JOINT POLE
LAD	LAWN AREA DRAIN
LD	LANDSCAPE DRAIN
LF	LINEAR FEET
LP	LOW POINT
(N)	NEW
PIV	POST INDICATOR VALVE
PKG	PARKING
POC	POINT OF CONNECTION
RET	RETAINING WALL
RIM	RIM ELEVATION
RRFB	RECTANGULAR RAPID-FLASHING BEACON
S	SLOPE
SAP	SEE ARCHITECTURAL PLANS
SAR	SEE ARBORIST REPORT
SBD	STORM SUB DRAIN
SBDCO	STORM SUB DRAIN CLEANOUT
SD	STORM DRAIN
SDCO	STORM DRAIN CLEANOUT
SGR	SEE GEOTECHNICAL REPORT
SICB	SIDE INLET CATCH BASIN
SLP	SEE LANDSCAPE PLANS
SPP	SEE PLUMBING PLANS
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEANOUT
SSP	SEE STRUCTURAL PLANS
TC	TOP OF CURB ELEVATION
TS	TOP STEP ELEVATION
TW	TOP OF WALL ELEVATION
TYP.	TYPICAL
USD	UNDERSLAB DRAIN
VD	PIPE VERTICAL DROP
W	DOMESTIC WATER LINE
WM	WATER METER



LEGEND:

EXISTING	PROPOSED	
		BOUNDARY
		GRADING LIMIT
		FLOWLINE
		JOINT TRENCH
	6"FW	FIRE SERVICE
DW	2"W	DOMESTIC WATER SERVICE
SS	6" SS	SANITARY SEWER
SD	12" SD	SOLID STORM DRAIN
		VALVE
		STREET LIGHT
		FIRE HYDRANT
		BENCHMARK
		MANHOLE
		CATCH BASIN
		STREET CATCH BASIN
	2 / C5.1	DETAIL NUMBER / SHEET LOCATION
		TREE TO BE REMOVED
		TRANSFORMER

PROJECT DESIGN TEAM:

DEVELOPER:	VEEV 777 MARINERS ISLAND BLVD, SUITE 150 SAN MATEO, CA 94404 (650)-292-0752
ARCHITECT:	LOWNEY ARCHITECTURE 360 17TH STREET, SUITE 200 OAKLAND, CA 94612 (510) 836-5400
LANDSCAPE ARCHITECT:	CREO LANDSCAPE ARCHITECTURE 466 GEARY STREET, SUITE 300 SAN FRANCISCO, CA 94102 (415) 686-2506
SURVEYOR & CIVIL ENGINEER:	BKF ENGINEERS 255 SHORELINE DR, SUITE 200 REDWOOD CITY, CA 94065 (650) 482-6300
GEOTECHNICAL ENGINEER:	CORNERSTONE EARTH GROUP 1270 SPRINGBROOK ROAD, SUITE 101 WALNUT CREEK, CA 94597 (925) 988-9500 [REPORT DATED JULY 11, 2016]
ARBORIST	KURT FOUTS 826 MONTEREY AVENUE CAPITOLA, CA 95010 (831)-359-3607

SHEET INDEX

SHEET NO.	DESCRIPTION
C0.0	TITLE SHEET
C0.1	NOTES
C1.1	EXISTING PARCELS & TOPOGRAPHIC SURVEY
C2.1	EXISTING TREE PLAN
C2.2	TREE REMOVAL PLAN
C3.0	EXISTING PARCELS & EASEMENTS
C3.1	VESTING TENTATIVE MAP
C4.0	SITE PLAN
C4.1	GRADING PLAN
C4.2	GRADING PLAN
C4.3	ROAD PROFILE
C5.1	UTILITY PLAN
C5.2	UTILITY PLAN
C5.3	STORMWATER CONTROL PLAN
C6.1	FIRE AND PEDESTRIAN ACCESS PLAN
C6.2	FIRE TRUCK PROFILE
C7.1	EROSION CONTROL PLAN
C7.2	EROSION CONTROL DETAILS
C7.3	EROSION CONTROL DETAILS
C8.1	DETAIL SHEET
C8.2	DETAIL SHEET
C9.1	NATURAL STATE PLAN

PROJECT SCOPE NOTES:

PROPERTY OWNER:	VEEV (650) 292-0752
CURRENT ADDRESS:	777 MARINERS ISLAND BLVD, SUITE 150 SAN MATEO, CA 94404
PROPERTY AREA:	497,756 SQ FT (11.427 AC)
APN:049-360-060	174,554 SQ FT (4.01 AC)
APN:050-220-020	26,640 SQ FT (0.61 AC)
APN:050-220-160	41,456 SQ FT (0.95 AC)
APN:050-220-170	255,106 SQ FT (5.86 AC)
PRE-DEVELOPMENT IMPERVIOUS AREAS:	52,113 SQ FT
POST-DEVELOPMENT IMPERVIOUS AREAS:	274,613 SQ FT
TOTAL DISTURBED AREA (LIMIT OF WORK):	438,522 SQ FT (10.07 AC)

0 100 200
GRAPHIC SCALE

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REVIEW ONLY. NOT FOR CONSTRUCTION

No.	Revisions	Date
1	PLANNING RESUBMITTAL	09/15/2020
2	COMMENT RESPONSE	03/05/2021
3	COMMENT RESPONSE	01/28/2022

Date: 12/05/2018
Scale: AS SHOWN
Design: DJP
Drawn: DLG
Approved: DJL
Job No: 20160150

Drawing Number:
C0.0
OF

DRAWING NAME: \\Bkf-sf\data\2016\160150_BlackMountain_San_Carlos\ENG\pmsheets.dwg
PLOT DATE: 01-27-22
PLOTTED BY: gold

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CAUTION:

1. CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT FOR LOCATION OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION– PHONE (800) 642–2444. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES PRIOR TO BEGINNING ANY WORK ON THIS SITE.

GENERAL SITE NOTES:

1. CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING ON THIS WORK AND CONSIDER THE EXISTING CONDITIONS AND SITE CONSTRAINTS IN THE BID. CONTRACTOR SHALL BE IN THE POSSESSION OF AND FAMILIAR WITH ALL APPLICABLE GOVERNING AGENCIES STANDARD DETAILS AND SPECIFICATIONS PRIOR TO SUBMITTING OF A BID.
2. ALL WORK ON–SITE AND IN THE PUBLIC RIGHT–OF–WAY SHALL CONFORM TO ALL APPLICABLE GOVERNING AGENCIES STANDARD DETAILS & SPECIFICATIONS.
3. PRIOR TO BEGINNING WORK, AND AFTER INITIAL HORIZONTAL CONTROL STAKING, CONTRACTOR SHALL FIELD CHECK ALL ELEVATIONS MARKED WITH (E) AND REPORT ANY DISCREPANCIES GREATER THAN 0.05' TO PROJECT MANAGER.
4. DAMAGE TO ANY EXISTING SITE IMPROVEMENTS, UTILITIES AND/OR SERVICES TO REMAIN SHALL BE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL REPAIR AND/OR REPLACE IN KIND.
5. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT INCLUDING SAFETY OF ALL PERSONS AND PROPERTY THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND THAT THE CONTRACTOR SHALL DEFEND INDEMNIFY AND HOLD THE CLIENT, THE CONSULTING ENGINEER AND THE CITY HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE CLIENT OR THE CONSULTING ENGINEER.
6. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT BY CORNERSTONE EARTH GROUP GEOTECHNICAL ENGINEERS, DATED JULY 11, 2016.

DEMOLITION NOTES :

1. CONTRACTOR IS TO COMPLY WITH ALL GENERAL AND STATE REQUIREMENTS INVOLVING THE REMOVAL AND DISPOSAL OF HAZARDOUS MATERIAL(S).
2. CONTRACTOR'S BID IS TO INCLUDE ALL VISIBLE SURFACE AND ALL SUBSURFACE FEATURES IDENTIFIED TO BE REMOVED OR ABANDONED IN THESE DOCUMENTS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR A SITE INSPECTION TO FULLY ACKNOWLEDGE THE EXTENT OF THE DEMOLITION WORK.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY AND ALL PERMITS NECESSARY FOR ENCROACHMENT, GRADING, DEMOLITION, AND DISPOSAL OF SAID MATERIALS AS REQUIRED BY PRIVATE, LOCAL AND STATE JURISDICTIONS. THE CONTRACTOR SHALL PAY ALL FEES ASSOCIATED WITH THE DEMOLITION WORK.
5. BACKFILL ALL DEPRESSIONS AND TRENCHES FROM DEMOLITION TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.
6. REMOVAL OF LANDSCAPING SHALL INCLUDE ROOTS AND ORGANIC MATERIALS TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.
7. PRIOR TO BEGINNING DEMOLITION WORK ACTIVITIES, CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES OUTLINED IN THE EROSION CONTROL PLAN & DETAILS.
8. THE CONTRACTOR SHALL MAINTAIN ALL SAFETY DEVICES, AND SHALL BE RESPONSIBLE FOR CONFORMANCE TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS LAWS AND REGULATIONS.
9. THE CONTRACTOR SHALL PROTECT FROM DAMAGE ALL EXISTING IMPROVEMENTS FACILITIES AND STRUCTURES WHICH ARE TO REMAIN. ANY ITEMS DAMAGED BY THE CONTRACTOR OR HIS AGENTS OR ANY ITEMS REMOVED FOR HIS USE SHALL BE REPLACED IN EQUAL OR BETTER CONDITION AS APPROVED BY THE ARCHITECT OR OWNER'S REPRESENTATIVE.
10. COORDINATE WITH ELECTRICAL, MECHANICAL, LANDSCAPING AND ARCHITECTURAL DRAWINGS FOR UTILITY SHUT–DOWN/DISCONNECT LOCATIONS. CONTRACTOR IS TO SHUT OFF ALL UTILITIES AS NECESSARY PRIOR TO DEMOLITION. CONTRACTOR IS TO COORDINATE SERVICE INTERRUPTIONS WITH THE CLIENT. DO NOT INTERRUPT SERVICES TO ADJACENT OFF–SITE OWNERS. ALSO SEE ARCHITECTURAL PLANS FOR ADDITIONAL DEMOLITION SCOPE OF WORK.
11. THIS PLAN IS NOT INTENDED TO BE A COMPLETE CATALOGUE OF ALL EXISTING STRUCTURES AND UTILITIES. THIS PLAN INTENDS TO DISCLOSE GENERAL INFORMATION KNOWN BY THE ENGINEER AND TO SHOW THE LIMITS OF THE AREA WHERE WORK WILL BE PERFORMED. THIS PLAN SHOWS THE EXISTING FEATURES TAKEN FROM A FIELD SURVEY, FIELD INVESTIGATIONS AND AVAILABLE INFORMATION. THIS PLAN MAY OR MAY NOT ACCURATELY REFLECT THE TYPE OR EXTENT OF THE ITEMS TO BE ENCOUNTERED AS THEY ACTUALLY EXIST. WHERE EXISTING FEATURES ARE NOT SHOWN, IT IS NOT IMPLIED THAT THEY ARE NOT TO BE DEMOLISHED OR REMOVED. THE CONTRACTOR SHALL PERFORM A THOROUGH FIELD INVESTIGATION AND REVIEW OF THE SITE WITHIN THE LIMIT OF WORK SHOWN IN THIS PLAN SET TO DETERMINE THE TYPE, QUANTITY AND EXTENT OF ANY AND ALL ITEMS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DETERMINING THE EXTENT OF EXISTING STRUCTURES AND UTILITIES AND QUANTITY OF WORK INVOLVED IN REMOVING THESE ITEMS FROM THE SITE.

STORM DRAIN MAINTENANCE NOTES:

PLEASE NOTE THAT REGULAR MAINTENANCE ON GRADING AND DRAINAGE STRUCTURES IS REQUIRED TO ENSURE FUNCTIONALITY THROUGHOUT THE LIFE OF THE PROPERTY. MAINTENANCE SHOULD INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:

1. THE CLEARING OF DEBRIS FROM THE STORM DRAIN CATCH BASINS, STORM DRAIN LINES AND OVERFLOW STRUCTURES.
2. ROOF GUTTERS AND DOWNSPOUTS SHOULD BE CLEARED BEFORE THE BEGINNING OF EACH RAINY SEASON AND AS NEEDED THROUGHOUT THE WINTER MONTHS.
3. FOUNDATION SUBDRAINS SHOULD BE INSPECTED VIA CLEANOUTS ONCE EVERY 5 YEARS AND SNAKED AS NEEDED TO CLEAR DEBRIS.
4. SURFACE GRADING MAY ALSO REQUIRE CONTINUED REFINEMENT, INCLUDING THE CLEARING AND RE–FINISHING OF VEGETATED SWALES AND SLOPES TO MINIMIZE PONDING, MAINTAIN POSITIVE DRAINAGE AWAY FROM IMPROVEMENTS AND PROTECT AGAINST EROSION.
5. GRADED SLOPES SHOULD BE MONITORED AND RE–VEGETATED AS NEEDED.
6. FINALLY, DRAINAGE SWALES AND CONCRETE VALLEY GUTTERS UPHILL OF THE SITE WALLS SHOULD BE CONTINUOUSLY MONITORED AND CLEARED OF LEAVES AND DIRT DEBRIS.

TREE/PLANT PROTECTION NOTES:

1. PRIOR TO BEGINNING CONSTRUCTION ON SITE, CONTRACTOR SHALL IDENTIFY AND PROTECT EXISTING TREES AND PLANTS DESIGNATED AS TO REMAIN.
2. PROTECT EXISTING TREES TO REMAIN FROM SPILLED CHEMICALS, FUEL OIL, MOTOR OIL, GASOLINE AND ALL OTHER CHEMICALLY INJURIOUS MATERIAL; AS WELL AS FROM PUDDLING OR CONTINUOUSLY RUNNING WATER. SHOULD A SPILL OCCUR, STOP WORK IN THAT AREA AND CONTACT THE CITY'S ENGINEER/INSPECTOR IMMEDIATELY. CONTRACTOR SHALL BE RESPONSIBLE TO MITIGATE DAMAGE FROM SPILLED MATERIAL AS WELL AS MATERIAL CLEAN UP.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ONGOING MAINTENANCE OF ALL TREES DESIGNATED TO REMAIN AND FOR MAINTENANCE OF RELOCATED TREES STOCKPILED DURING CONSTRUCTION. CONTRACTOR WILL BE REQUIRED TO REPLACE TREES THAT DIE DUE TO LACK OF MAINTENANCE.
4. ADDITIONAL TREE PROTECTION NOTES FROM ARBORIST REPORT BY KURT FOUTS ARBORIST CONSULTANT, DATED JULY 9, 2018 ARE BELOW:

4.1. BEFORE THE START OF SITE WORK, EQUIPMENT OR MATERIALS MOVE IN, CLEARING, EXCAVATION, CONSTRUCTION, OR OTHER WORK ON THE SITE, EVERY TREE TO BE RETAINED SHALL BE SECURELY FENCED OFF AS DELINEATED IN APPROVED PLANS. SUCH FENCES SHALL REMAIN CONTINUOUSLY IN PLACE FOR THE DURATION OF THE WORK UNDERTAKEN IN CONNECTION WITH THE DEVELOPMENT.

4.2. IF THE PROPOSED DEVELOPMENT, INCLUDING ANY SITE WORK, WILL ENCROACH UPON THE TREE PROTECTION ZONE, SPECIAL MEASURES SHALL BE UTILIZED, AS APPROVED BY THE PROJECT ARBORIST, TO ALLOW ROOTS TO OBTAIN NECESSARY OXYGEN, WATER, AND NUTRIENTS.

4.3. UNDERGROUND TRENCHING SHALL AVOID THE MAJOR SUPPORT AND ABSORBING TREE ROOTS OF PROTECTED TREES. IF AVOIDANCE IS IMPRACTICAL, HAND EXCAVATION UNDERTAKEN UNDER THE SUPERVISION OF THE PROJECT ARBORIST MAY BE REQUIRED. TRENCHES SHALL BE CONSOLIDATED TO SERVICE AS MANY UNITS AS POSSIBLE. BORING/TUNNELING UNDER ROOTS SHOULD BE CONSIDERED AS AN ALTERNATIVE TO TRENCHING.

4.4. CONCRETE OR ASPHALT PAVING SHALL NOT BE PLACED OVER THE ROOT ZONES OF PROTECTED TREES, UNLESS OTHERWISE PERMITTED BY THE PROJECT ARBORIST.

4.5. ARTIFICIAL IRRIGATION SHALL NOT OCCUR WITHIN THE ROOT ZONE OF NATIVE OAKS, UNLESS DEEMED APPROPRIATE ON A TEMPORARY BASIS BY THE PROJECT ARBORIST TO IMPROVE TREE VIGOR OR MITIGATE ROOT LOSS.

4.6. COMPACTION OF THE SOIL WITHIN THE TREE PROTECTION ZONE SHALL BE AVOIDED.

4.7. ANY EXCAVATION, CUTTING, OR FILLING OF THE EXISTING GROUND SURFACE WITHIN THE TREE PROTECTION ZONE SHALL BE MINIMIZED AND SUBJECT TO SUCH CONDITIONS AS THE PROJECT ARBORIST MAY IMPOSE. RETAINING WALLS SHALL LIKEWISE BE DESIGNED, SITED, AND CONSTRUCTED SO AS TO MINIMIZE THEIR IMPACT ON PROTECTED TREES.

4.8. BURNING OR USE OF EQUIPMENT WITH AN OPEN FLAME NEAR OR WITHIN THE TREE PROTECTION ZONE SHALL BE AVOIDED. ALL BRUSH, EARTH, AND OTHER DEBRIS SHALL BE REMOVED IN A MANNER THAT PREVENTS INJURY TO THE TREE.

4.9. OIL, GAS, CHEMICALS, PAINTS, CEMENT, STUCCO OR OTHER SUBSTANCES THAT MAY BE HARMFUL TO TREES SHALL NOT BE STORED OR DUMPED WITHIN THE TREE PROTECTION ZONE OF ANY PROTECTED TREE, OR AT ANY OTHER LOCATION ON THE SITE FROM WHICH SUCH SUBSTANCES MIGHT ENTER THE TREE PROTECTION ZONE OF A PROTECTED TREE.

4.10. CONSTRUCTION MATERIALS SHALL NOT BE STORED WITHIN THE TREE PROTECTION ZONE OF A PROTECTED TREE.

HORIZONTAL CONTROL NOTES:

1. ALL DIMENSIONS ON THE PLANS ARE IN FEET OR DECIMALS THEREOF UNLESS SPECIFICALLY CALLED OUT AS FEET AND INCHES.

PAVEMENT SECTION:

1. SEE STRUCTURAL DRAWINGS FOR BUILDING SLAB SECTIONS AND PAD PREPARATIONS.
2. SEE GEOTECHNICAL REPORT FOR ALL FLATWORK AND VEHICULAR PAVEMENT SECTIONS AND BASE REQUIREMENTS.
3. THE FINAL OR SURFACE LAYER OF ASPHALT CONCRETE SHALL NOT BE PLACED UNTIL ALL ON–SITE IMPROVEMENTS HAVE BEEN COMPLETED, INCLUDING ALL GRADING, AND ALL UNACCEPTABLE CONCRETE WORK HAS BEEN REMOVED AND REPLACED, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER AND/OR DEVELOPER'S CIVIL ENGINEER.
4. ALL PAVING SHALL BE IN CONFORMANCE WITH SECTION 26 "AGGREGATE BASE" AND SECTION 39 "ASPHALT CONCRETE" PER LATEST EDITION OF CALTRANS STANDARD SPECIFICATIONS.

SITE MAINTENANCE:

1. REMOVE ALL DIRT, GRAVEL, RUBBISH, REFUSE, AND GREEN WASTE FROM STREET PAVEMENT AND STORM DRAINS ADJOINING THE SITE. LIMIT CONSTRUCTION ACCESS ROUTES ONTO THE SITE AND PLACE GRAVEL PADS AT THESE LOCATIONS. DO NOT DRIVE VEHICLES AND EQUIPMENT OFF THE PAVED OR GRAVELED AREAS DURING WET WEATHER.
2. SWEEP OR VACUUM THE STREET PAVEMENT AND SIDEWALKS ADJOINING THE PROJECT SITE AND THE ON–SITE PAVED AREAS ON A DAILY BASIS. SCRAPE CAKED–ON MUD AND DIRT FROM THESE AREAS BEFORE SWEEPING. CORNERS AND HARD TO REACH AREAS SHALL BE SWEPT MANUALLY.
3. CREATE A CONTAINED AND COVERED AREA ON THE SITE FOR THE STORAGE OF BAGS, CEMENT, PAINTS, OILS, FERTILIZERS, PESTICIDES, OR OTHER MATERIALS USED ON THE SITE THAT HAVE THE POTENTIAL OF BEING DISCHARGED INTO THE STORM DRAIN SYSTEM THROUGH EITHER BEING WIND–BLOWN OR IN THE EVENT OF A MATERIAL SPILL.
4. NEVER CLEAN MACHINERY, EQUIPMENT OR TOOLS INTO A STREET, GUTTER OR STORM DRAIN.
5. ENSURE THAT CEMENT TRUCKS, PAINTERS, OR STUCCO/PLASTER FINISHING CONTRACTORS DO NOT DISCHARGE WASH WATER FROM EQUIPMENT, TOOLS OR RINSE CONTAINERS INTO GUTTERS OR DRAINS.
6. UPON PROJECT COMPLETION THE CLIENT SHALL BE SOLELY RESPONSIBLE TO ROUTINELY INSPECT AND MAINTAIN ALL ON–SITE STORM DRAIN FACILITIES. STORM DRAIN SYSTEM SHALL BE CLEANED AND/OR FLUSHED ON A BIANNUAL BASIS OR AS FOUND NECESSARY.

DUST CONTROL:

1. WATER TRUCKS SHALL BE PRESENT AND IN USE AT THE CONSTRUCTION SITE. ALL PORTIONS OF THE SITE SUBJECT TO BLOWING DUST SHALL BE WATERED AS OFTEN AS DEEMED NECESSARY BY THE CLIENT/INSPECTOR IN ORDER TO INSURE PROPER CONTROL OF BLOWING DUST FOR THE DURATION OF THE PROJECT.
2. ALL PUBLIC STREETS AND MEDIANS SOILED OR LITTERED DUE TO THIS CONSTRUCTION ACTIVITY SHALL BE CLEANED AND SWEPT ON A DAILY BASIS DURING THE WORK WEEK, OR AS OFTEN AS DEEMED NECESSARY BY THE CLIENT/INSPECTOR, OR TO THE SATISFACTION OF THE CITY'S DEPARTMENT OF PUBLIC WORKS.
3. ALL TRUCKS HAULING SOIL, SAND, AND OTHER LOOSE MATERIALS SHALL BE COVERED WITH TARPAULINS OR OTHER EFFECTIVE COVERS.
4. WHEEL WASHERS SHALL BE INSTALLED AND USED TO CLEAN ALL TRUCKS AND EQUIPMENT LEAVING THE CONSTRUCTION SITE. IF WHEEL WASHERS CANNOT BE INSTALLED, TIRES OR TRACKS OF ALL TRUCKS AND EQUIPMENT SHALL BE WASHED OFF BEFORE LEAVING THE CONSTRUCTION SITE.
5. THE CONTRACTOR SHALL DEMONSTRATE DUST SUPPRESSION MEASURES, SUCH AS REGULAR WATERING, WHICH SHALL BE IMPLEMENTED TO REDUCE EMISSIONS DURING CONSTRUCTION AND GRADING IN A MANNER MEETING THE APPROVAL OF THE CONSTRUCTION MANAGER. THIS SHALL ASSIST IN REDUCING SHORT–TERM IMPACTS FROM PARTICLES WHICH COULD RESULT IN NUISANCES THAT ARE PROHIBITED BY RULE 403 (FUGITIVE DUST).
6. GRADING OR ANY OTHER OPERATIONS THAT CREATES DUST SHALL BE STOPPED IMMEDIATELY IF DUST AFFECTS ADJACENT PROPERTIES. THE CONTRACTOR SHALL PROVIDE SUFFICIENT DUST CONTROL FOR THE ENTIRE PROJECT SITE IN ACCORDANCE WITH THE PROJECT SWPPP AT ALL TIMES. THE SITE SHALL BE SPRINKLERED AS NECESSARY TO PREVENT DUST NUISANCE. IN THE EVENT THAT THE CONTRACTOR NEGLECTS TO USE ADEQUATE MEASURES TO CONTROL DUST, THE CLIENT RESERVES THE RIGHT TO TAKE WHATEVER MEASURES ARE NECESSARY TO CONTROL DUST AND CHARGE THE COST TO THE CONTRACTOR.
7. THE CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL MEASURES AND FOR OBTAINING ALL REQUIRED PERMITS AND APPROVALS.

NPDES REQUIREMENTS:

1. ALL CONSTRUCTION ON OFF–SITE OR ON–SITE IMPROVEMENTS SHALL ADHERE TO NPDES (NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM) BEST MANAGEMENT PRACTICES TO PREVENT DELETERIOUS MATERIALS OR POLLUTANTS FROM ENTERING THE CITY OR COUNTY STORM DRAIN SYSTEMS.
2. ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES, OR WIND.
3. STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.
4. FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
5. EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC RIGHT–OF–WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
6. TRASH AND CONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION AND DISPERSAL BY WIND.
7. SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC RIGHT–OF–WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
8. ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.
9. CLEAN UP ALL SPILLS USING DRY METHODS.
10. SWEEP ALL GUTTERS AT THE END OF EACH WORKING DAY. GUTTERS SHALL BE KEPT CLEAN AFTER LEAVING CONSTRUCTION SITE.
11. CALL 911 IN CASE OF A HAZARDOUS SPILL.
12. BMP'S AS OUTLINED IN, BUT NOT LIMITED TO, CALIFORNIA STORM WATER QUALITY TASK FORCE, SACRAMENTO, CALIFORNIA, JANUARY 2003, OR THE LATEST REVISED EDITION, MAY APPLY DURING THE CONSTRUCTION OF THIS PROJECT (ADDITIONAL MEASURES MAY BE REQUIRED IF DEEMED APPROPRIATE BY CITY INSPECTORS).
13. UPON SATISFACTORY COMPLETION OF THE WORK, THE ENTIRE WORK SITE SHALL BE CLEANED BY THE CONTRACTOR AND LEFT WITH A SMOOTH AND NEATLY GRADED SURFACE FREE OF CONSTRUCTION WASTE, RUBBISH, AND DEBRIS OF ANY NATURE.

FIRE PROTECTION NOTES:

1. CONTRACTOR SHALL INSTALL THE DESIGN BUILD FIRE SERVICE LINE, BACKFLOW PREVENTOR, SPRINKLERS AND EQUIPMENT IN ACCORDANCE WITH THE FIRE PROTECTION CONSULTANT'S PLANS, SPECIFICATIONS, LATEST EDITION OF THE UNIFORM/CALIFORNIA FIRE CODE AND CITY/TOWN STANDARDS.
2. THE UNDERGROUND FIRE PROTECTION SYSTEM INSTALLER SHALL PREPARE SHOP DRAWINGS SHOWING ALL INFORMATION REQUIRED BY THE LOCAL FIRE MARSHAL, INCLUDING ANGLES, THRUST BLOCKS, VALVES, FIRE HYDRANTS, PIV's, FDC's, BACKFLOW ASSEMBLIES, FLEXIBLE CONNECTIONS, VAULTS, ETC.
3. SHOP DRAWINGS SHALL BE SUBMITTED TO THE LOCAL FIRE MARSHAL, THE RATING AGENCY AND THE PROJECT MANAGER, ALLOWING TIME FOR REVIEW AND ACCEPTANCE, PRIOR TO START OF WORK.
4. THE UNDERGROUND FIRE PROTECTION SYSTEM INSTALLER SHALL OBTAIN ALL APPROVALS AND PERMITS PRIOR TO ORDERING MATERIALS, FABRICATING SYSTEMS OR ANY INSTALLATION.
5. GENERAL CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS AND EQUIPMENT LOCATIONS. RISER LOCATIONS ARE SHOWN ON ARCHITECTURAL AND PLUMBING DRAWINGS AND ARE TO BE COORDINATED WITH ACTUAL FIELD CONDITIONS.

SITE FENCE NOTES:

1. CONTRACTOR SHALL PROVIDE A CONSTRUCTION FENCE AROUND THE ENTIRE AREA OF DEMOLITION AND CONSTRUCTION, INCLUDING ALL STAGING, STORAGE, CONSTRUCTION OFFICE AND LAYDOWN AREAS.
2. CONSTRUCTION FENCE SHALL BE A MINIMUM OF A 6' HIGH GALVANIZED CHAIN LINK WITH GREEN WINDSCREEN FABRIC ON THE OUTSIDE OF THE FENCE.
3. CONSTRUCTION FENCE ADDRESSED IN THESE NOTES IS ONLY FOR VISUAL CONFORMANCE OF THIS CONSTRUCTION SITE TO THE CITY STANDARDS. CONTRACTOR MAY BE REQUIRED TO PROVIDE ADDITIONAL FENCING, BARRICADES OR OTHER SAFETY DEVICES TO KEEP THE SITE SECURE AND SAFE.

GENERAL UTILITY SYSTEM NOTES:

1. ALL TRENCHES SHALL BE BACK FILLED PER THE SPECIFICATIONS WITH APPROPRIATE TESTS BY THE GEOTECHNICAL ENGINEER TO VERIFY COMPACTION VALUES.
2. CLEAN OUTS, CATCH BASINS AND AREA DRAINS ARE TO BE ACCURATELY LOCATED BY THEIR RELATIONSHIP TO THE BUILDING, FLATWORK, ROOF DRAINS, AND/OR CURB LAYOUT, NOT BY THE LENGTH OF PIPE SPECIFIED IN THE DRAWINGS (WHICH IS APPROXIMATE).
3. CONTRACTOR SHALL STAKE LOCATION OF ABOVE GROUND UTILITY EQUIPMENT (BACKFLOW PREVENTOR, SATELLITE DISH, TRANSFORMER, GAS METER, ETC.) AND MEET WITH CLIENT TO REVIEW LOCATION PRIOR TO INSTALLATION. PLANNING DEPARTMENT MUST SPECIFICALLY AGREE WITH LOCATION PRIOR TO PROCEEDING WITH THE INSTALLATION.
4. CONTRACTOR SHALL PREPARE AN ACCURATE COMPOSITE UTILITY PLAN THAT TAKES INTO ACCOUNT THE ACTUAL LOCATION OF EXISTING UTILITIES AS DETERMINED DURING THE DEMOLITION WORK, THE UTILITIES SHOWN ON THE CIVIL DRAWINGS, AND THE SITE POWER, CONDUITS AND LIGHTING SHOWN ON THE ELECTRICAL PLANS. THE FIRE SPRINKLER SYSTEM SHALL BE INCLUDED AS DESIGNED BY THE DESIGN/BUILD UNDERGROUND FIRE SPRINKLER CONTRACTOR.
5. CATHODIC PROTECTION MAY BE REQUIRED ON ALL METALLIC FITTINGS AND ASSEMBLIES THAT ARE IN CONTACT WITH THE SOIL, IF RECOMMENDED BY THE GEOTECHNICAL REPORT. CONTRACTOR IS RESPONSIBLE TO FULLY ENGINEER AND INSTALL THIS SYSTEM AND COORDINATE ANODE AND TEST STATION LOCATIONS WITH OWNER'S PROJECT MANAGER.
6. COMPLETE SYSTEMS: ALL UTILITY SYSTEMS ARE DELINEATED IN A SCHEMATIC MANNER ON THESE PLANS. CONTRACTOR IS TO PROVIDE ALL FITTINGS, ACCESSORIES AND WORK NECESSARY TO COMPLETE THE UTILITY SYSTEM SO THAT IT IS FULLY FUNCTIONING FOR THE PURPOSE INTENDED.
7. UNDERGROUND UTILITIES OR STRUCTURES ARE SHOWN IN THEIR APPROXIMATE LOCATIONS AND EXTENT BASED UPON RECORD INFORMATION. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. THE CLIENT, BY ACCEPTING THESE PLANS OR PROCEEDING WITH IMPROVEMENTS PURSUANT THERETO, AGREES TO ASSUME LIABILITY AND TO HOLD UNDERSIGNED HARMLESS FOR ANY DAMAGES RESULTING FROM THE EXISTENCE OF UNDERGROUND UTILITIES OR STRUCTURES NOT REPORTED TO THE UNDERSIGNED; NOT INDICATED ON THE PUBLIC RECORDS EXAMINED, LOCATED AT VARIANCE WITH THOSE REPORTED OR SHOWN ON RECORDS EXAMINED.
8. CONTRACTOR SHALL VERIFY ALL EXISTING INVERT ELEVATIONS FOR STORM DRAIN AND SANITARY SEWER CONSTRUCTION PRIOR TO COMMENCEMENT OF ANY WORK. ALL WORK FOR STORM AND SANITARY SEWER INSTALLATION SHALL BEGIN AT THE DOWNSTREAM CONNECTION POINT. THIS WILL ALLOW FOR ANY NECESSARY ADJUSTMENTS TO BE MADE PRIOR TO THE INSTALLATION OF THE ENTIRE LINE. IF THE CONTRACTOR FAILS TO BEGIN AT THE DOWNSTREAM CONNECTION POINT AND WORKS UP STREAM, HE SHALL PROCEED AT HIS OWN RISK AND BE RESPONSIBLE FOR ANY ADJUSTMENTS NECESSARY. CONTRACTOR SHALL VERIFY LOCATION OF SANITARY SEWER LATERAL WITH OWNER PRIOR TO CONSTRUCTION.
9. EXISTING UTILITY CROSSINGS OF NEW PIPELINE ARE SHOWN ACCORDING TO THE BEST AVAILABLE INFORMATION. GAS, WATER AND SEWER SERVICE LATERALS ARE SHOWN ACCORDING TO THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL VERIFY THE TYPE, SIZE, LOCATION AND DEPTH OF ALL THE UTILITY CROSSING (BOTH MAINS AND LATERALS) ARE CORRECT AS SHOWN. NO GUARANTEE IS MADE THAT ALL EXISTING UTILITIES (BOTH MAINS AND LATERALS) ARE SHOWN. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN EXCAVATING AND SHALL PROTECT ALL EXISTING UTILITIES (BOTH MAINS AND LATERALS) FROM DAMAGE DUE TO HIS OPERATION.
10. VERTICAL SEPARATION REQUIREMENTS:

    A MINIMUM OF SIX (6) INCHES VERTICAL CLEARANCE SHALL BE PROVIDED BETWEEN CROSSING UTILITY PIPES, EXCEPT THAT THE MINIMUM VERTICAL CLEARANCE BETWEEN WATER AND SANITARY SEWER PIPELINES SHALL BE 12 INCHES AND ALL NEW WATER PIPES SHALL BE TYPICALLY INSTALLED TO CROSS ABOVE/OVER EXISTING SANITARY SEWER PIPELINES.

    WHERE NEW WATER PIPELINES ARE REQUIRED TO CROSS UNDER EXISTING AND/OR NEW SANITARY SEWER PIPELINES, THE MINIMUM VERTICAL SEPARATION SHALL BE 12 INCHES. WATER LINE PIPE ENDS SHALL BE INSTALLED NO CLOSER THAN 10' MINIMUM HORIZONTAL DISTANCE FROM CENTERLINE OF UTILITY CROSSINGS, WHERE FEASIBLE.
11. HORIZONTAL SEPARATION REQUIREMENTS:

    A MINIMUM HORIZONTAL SEPARATION BETWEEN NEW PIPELINES AND ANY EXISTING UTILITIES SHALL BE 5' FEET, EXCEPT THAT THE MINIMUM HORIZONTAL SEPARATION FOR WATER AND SANITARY SEWER PIPELINES SHALL BE 10' MINIMUM, UNLESS OTHERWISE NOTED.

    A MINIMUM HORIZONTAL SEPARATION BETWEEN NEW PIPELINES AND JOINT TRENCH SHALL BE 5 FEET.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING APPROPRIATE UTILITIES AND REQUESTING VERIFICATION OF SERVICE POINTS, FIELD VERIFICATION OF LOCATION, SIZE, DEPTH, ETC. FOR ALL THEIR FACILITIES AND TO COORDINATE WORK SCHEDULES.
13. ANY EXISTING UNDERGROUND UTILITY LINES TO BE ABANDONED, SHOULD BE REMOVED FROM WITHIN THE PROPOSED BUILDING ENVELOPE AND THEIR ENDS CAPPED OUTSIDE OF THE BUILDING ENVELOPE.

EROSION AND SEDIMENTATION CONTROL NOTES:

1. CONTRACTOR SHALL ASSUME THE CONCEPTS ON THE EROSION CONTROL PLAN, IF PROVIDED, ARE SCHEMATIC MINIMUM REQUIREMENTS, THE FULL EXTENT OF WHICH ARE TO BE DETERMINED BY THE CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR THE EXACT DESIGN AND EXTENT OF THE EROSION CONTROL SYSTEM SO THAT IT WORKS WITH THE CONTRACTOR'S INTENDED USE AND MANAGEMENT OF THE CONSTRUCTION SITE.
2. ALL EROSION CONTROL FACILITIES SHALL BE INSPECTED BY THE CONTRACTOR AND REPAIRED, AS REQUIRED, AT THE CONCLUSION OF EACH WORKING DAY. THE CONTRACTOR SHALL INSPECT THE EROSION CONTROL FACILITIES AND MAKE NECESSARY REPAIRS PRIOR TO ANTICIPATED STORMS AND AT REASONABLE INTERVALS DURING STORMS OF EXTENDED DURATION. REPAIRS TO DAMAGED FACILITIES SHALL BE MADE IMMEDIATELY UPON DISCOVERY.
3. AS SOON AS PRACTICAL FOLLOWING EACH STORM, THE CONTRACTOR SHALL REMOVE ANY ACCUMULATION OF SILT OR DEBRIS FROM THE EROSION CONTROL SEDIMENT BASINS AND SHALL CLEAR THE OUTLET PIPES OF ANY BLOCKAGE.
4. STOCKPILED MATERIAL SHALL BE COVERED WITH VISQUEEN OR A TARPAULIN UNTIL THE MATERIAL IS REMOVED FROM THE SITE. ANY REMAINING BARE SOIL THAT EXISTS AFTER THE STOCKPILE HAS BEEN REMOVED SHALL BE COVERED UNTIL A NATURAL GROUND COVER IS ESTABLISHED OR IT MAY BE SEEDED OR PLANTED TO PROVIDE GROUND COVER.
5. PRIOR TO THE COMMENCEMENT OF ANY CLEARING, GRADING, OR EXCAVATION, THE CONTRACTOR SHALL VERIFY THAT THE CLIENT HAS SUBMITTED TO THE STATE WATER RESOURCES CONTROL BOARD A NOTICE OF INTENT (NOI) FOR COVERAGE UNDER THE STATE CONSTRUCTION STORM WATER GENERAL PERMIT, IF REQUIRED BY THE STATE. THE CONTRACTOR SHALL MAINTAIN A COPY OF THE NOI ON THE CONSTRUCTION SITE.
6. NECESSARY MATERIALS SHALL BE AVAILABLE ON SITE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.
7. PROTECT ADJACENT PROPERTIES AND UNDISTURBED AREAS FROM CONSTRUCTION IMPACTS USING VEGETATIVE BUFFER STRIPS, SEDIMENT BARRIERS OR FILTERS, DIKES, MULCHING OR OTHER MEASURES AS APPROPRIATE.
8. CONTRACTOR SHALL MAINTAIN ADJACENT STREETS IN A NEAT, CLEAN, DUST FREE AND SANITARY CONDITION AT ALL TIMES AND TO THE SATISFACTION OF THE CITY INSPECTOR. THE ADJACENT STREET SHALL BE KEPT CLEAN OF DEBRIS, WITH DUST AND OTHER NUISANCE BEING CONTROLLED AT ALL TIMES. DEVELOPER SHALL BE RESPONSIBLE FOR ANY CLEAN UP ON ADJACENT STREETS AFFECTED BY THEIR CONSTRUCTION, METHOD OF STREET CLEANING SHALL BE BY DRY SWEEPING OF ALL PAVED AREAS. NO STOCKPILING OF BUILDING MATERIALS WITHIN THE CITY'S RIGHT–OF–WAY IS PERMITTED.
9. ALL EROSION CONTROL MATERIALS SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR UNLESS OTHERWISE NOTED.
10. PROTECT DOWN SLOPE DRAINAGE COURSES, STREAMS AND STORM DRAINS WITH ROCK FILLED SAND BAGS, TEMPORARY DRAINAGE SWALES, SILT FENCES, EARTH BERMS, STORM DRAIN INLET FILTERS AND/OR STRAW BALES USED ONLY IN CONJUNCTION WITH PROPERLY INSTALLED SILT FENCES.

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SAN CARLOS SAN MATEO COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER DALE J. LEDI... C 78436 CIVIL STATE OF CALIFORNIA
REVIEW ONLY NOT FOR CONSTRUCTION

No.	Revisions	Date
1	PLANNING RESUBMITTAL	09/15/2020

Date: 12/05/2018
Scale: NO SCALE
Design: DJP
Drawn: DLG
Approved: DJL
Job No: 20160150

Drawing Number: CO.1
OF

DRAWING NAME: \\Bkf-rc\data\2016\160150_Black_Mountain_San_Carlos\ENG\bmsheets.dwg
PLOT DATE: 01-27-22 PLOTTED BY: gald

LEGEND:

- GAS METER
- AREA DRAIN
- DRAIN INLET
- SANITARY SEWER MANHOLE
- JOINT POLE
- FOUND MONUMENT AS NOTED
- WATER VALVE
- FIRE HYDRANT
- ANCHOR GUY
- ELECTRIC BOX
- SD — STORM DRAIN LINE
- SS — SANITARY SEWER LINE
- E — OVER HEAD ELECTRICAL LINE
- TREE TRUNK

STORM DRAIN DATA:

① 246.43 GRATE
244.71 15" RCP IN WEST
245.73 6" PVC IN NORTH
244.71 8" RCP OUT EAST

② 246.73 GRATE
245.811 6" PVC OUT EAST

③ 214.08 GRATE
FULL OF LEAVES AND DEBRIS
COULD NOT MEASURE

④ 209.80 GRATE
205.18 IN WEST
204.48 OUT EAST

⑤ 196.14 GRATE
191.94 14" IN WEST
192.26 14" IN NORTHWEST
191.94 14" OUT EAST

⑥ 191.30 GRATE
187.76 15" RCP IN WEST
182.76 FLOOR
NO OUT NOTED

⑦ FILED WITH DEBRIS

SANITARY SEWER DATA:

① 231.78 RIM
229.0 4" PVC IN WEST
229.0 6" PVC IN NORTHWEST
229.0 6" RCP OUT EAST

② 210.1 RIM
205.3 6" PVC IN WEST
205.1 6" PVC OUT EAST

③ 192.8 RIM
182.3 6" PVC IN NORTHWEST
182.4 6" PVC IN SOUTHWEST
182.5 6" PVC IN SOUTHEAST
181.9 6" PVC OUT NORTHEAST

④ 183.26 RIM
175.7 BOTTOM
PIPE NOT VISIBLE

⑤ 177.5 RIM
171.2 6" PVC IN WEST
177.6 14" OUT EAST

⑥ 169.8 RIM
165.3 6" PVC IN SOUTHWEST
165.6 6" PVC IN NORTHWEST
165.1 4" PVC OUT EAST
SIZES VERIFIED

⑦ 173.2 RIM
UNABLE TO REMOVE MANHOLE
COVER DUE TO DEBRIS AND
MATERIAL ON TOP OF MANHOLE

DRAWING NAME: \\Bkf-rc\data\2016\160150_Black_Mountain_San_Carlos\ENG\bmsheets.dwg
PLOT DATE: 01-27-22 PLOTTED BY: gold

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EXISTING PARCELS & TOPOGRAPHIC SURVEY
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REGISTERED PROFESSIONAL ENGINEER — DALE J. LEDU — C 78436 — CIVIL — STATE OF CALIFORNIA

No.	Revisions	Date
1	PLANNING RESUBMITTAL	09/15/2020

Date: 12/05/2018
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Design: DJP
Drawn: DLG
Approved: DJL
Job No: 20160150

Drawing Number:
C1.1
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EXISTING TREE PLAN
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No.	Revisions	Date
1	PLANNING RESUBMITTAL	09/15/2020

Date: 12/05/2018
Scale: 1" = 50'
Design: DJP
Drawn: DLG
Approved: DJL
Job No: 20160150

Drawing Number:
C2.1
OF

DRAWING NAME: \\Bkf-rc\data\2016\160150_Black_Mountain_San_Carlos\ENG\umsheets.dwg
PLOT DATE: 01-27-22
PLOTTED BY: gold

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LEGEND:

- HERITAGE TREE
- SIGNIFICANT TREE
- PUBLIC TREE
- NOT PROTECTED TREE
- HERITAGE TREE TO BE REMOVED
- SIGNIFICANT TREE TO BE REMOVED
- NOT PROTECTED TREE TO BE REMOVED
- GRADING LIMIT

TOTAL TREE COUNT

CLASSIFICATION	PRE-DEVELOPMENT	REMOVAL	POST-DEVELOPMENT	NEW TREES PLANTED	TOTAL PROPOSED TREES
HERITAGE TREE	219	150	69		236
SIGNIFICANT TREE	11	9	2		
PUBLIC TREE	3	2	1		
NOT PROTECTED TREE	151	111	40		
TOTAL TREES	384	272	112	124	

*TREE NUMBERS SHOWN CORRESPOND TO THE PROJECT ARBORIST REPORT BY KURT FOUTS ARBORIST CONSULTANT, DATED JULY 2016 AND REVISED/UPDATED SEPTEMBER 11, 2020.

**TREE NUMBERS 125 AND 127 TO BE PRUNED PER THE ARBORIST REPORT TO ENHANCE DEFENSIBLE SPACE AROUND THE PROPOSED BUILDINGS.

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TREE REMOVAL PLAN
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SAN CARLOS — SAN MATEO COUNTY — CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — KYLE J. TEN EYCK — CIVIL — STATE OF CALIFORNIA

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No.	Revisions	Date
1	PLANNING RESUBMITTAL	09/15/2020
2	COMMENT RESPONSE	03/05/2021
3	COMMENT RESPONSE	01/28/2022

Date: 12/05/2018
Scale: 1" = 50'
Design: DJP
Drawn: DLC
Approved: DJL
Job No: 20160150

Drawing Number:
C2.2
OF

DRAWING NAME: \\Bkf-rc\data\2016\160150_Block_Mountain_San_Carlos\ENG\umsheets.dwg
PLOT DATE: 01-27-22
PLOTTED BY: gold

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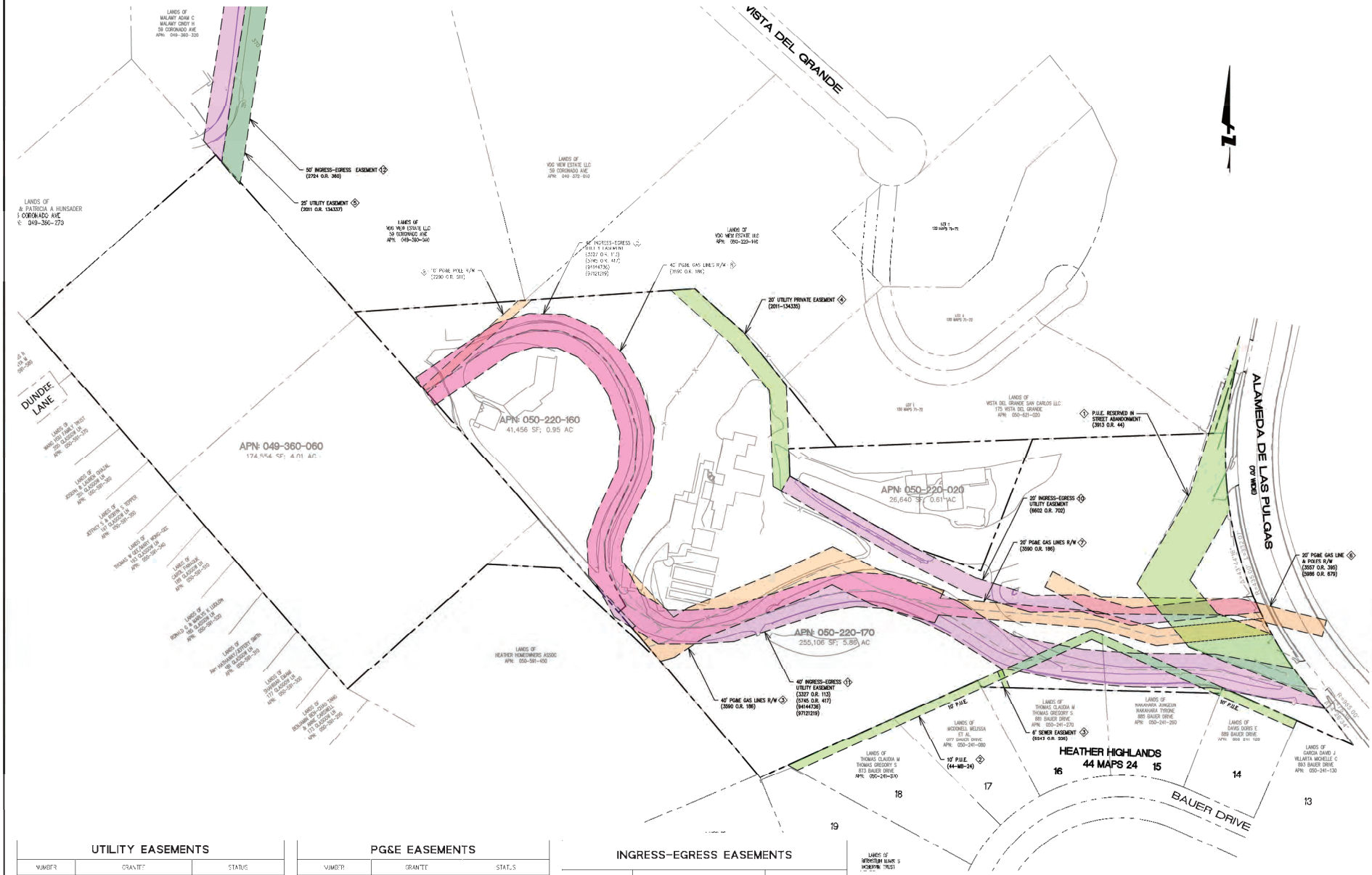

UTILITY EASEMENTS

NUMBER	GRANTEE	STATUS
1	CITY OF SAN CARLOS	VACATED
2	CITY OF SAN CARLOS	TO BE VACATED
3	OWNER OF PARCEL 16; APN: 050-241-270	TO BE VACATED
4	VIC & LIL ROLLERI LLC; APN: 050-220-140	TO BE VACATED
5	BLACK MOUNTAIN HOLDINGS, LLC APN: 050-220-160	TO REMAIN

PG&E EASEMENTS

NUMBER	GRANTEE	STATUS
6	PG&E	TO BE VACATED
7	PG&E	TO BE VACATED
8	PG&E	TO BE VACATED
9	PG&E	TO BE VACATED

INGRESS-EGRESS EASEMENTS

NUMBER	GRANTEE	STATUS
10	BLACK MOUNTAIN HOLDINGS, LLC APN: 050-220-160	TO BE VACATED
11	CALIFORNIA WATER SERVICE COMPANY	TO BE VACATED
12	BLACK MOUNTAIN HOLDINGS, LLC APN: 050-220-160	TO REMAIN

EXISTING PARCELS & EASEMENTS
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No.	Revisions	Date
1	P. AND M. RES. SUBMITTAL	08/15/2020
2	COMMENT RESPONSE	01/28/2022

Date: 12/08/2018
Scale: 1" = 50'
Design: D.P.
Drawn: D.L.G.
Approved: D.M.
Job No: 20181350

Drawing Number:
C3.0
OF

DRAW NG NAME: \\Bkf-fs\Projects\2018\181350_Black_Mountain_San_Carlos\ENG\vmsheets.dwg
PLOT DATE: 01_27_22
PLOTTED BY: gaic

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EASEMENT NOTES:

1. PRIVATE STREET EASEMENT (PRSE) FOR INGRESS/EGRESS, UNDERGROUND UTILITIES, EMERGENCY VEHICLE ACCESS, PEDESTRIAN ACCESS, GUEST PARKING AND LOADING ZONES.
2. COMMON OPEN SPACE EASEMENT (COSE) FOR NON-DEVELOPABLE OPEN SPACE (RETAINING WALLS, ASSOCIATED DRAINAGE, PRIVATE UTILITIES, AND LANDSCAPING). COMMON OPEN SPACE INCLUDES ALL AREAS NOT OTHERWISE DESIGNATED BY PROPOSED UNITS OR OTHER USES.
3. PUBLIC UTILITY EASEMENT (PUE) FOR ALL UNDERGROUND PUBLIC UTILITIES, ASSOCIATED STRUCTURES AND MAINTENANCE ACCESS, SEE UTILITY PLAN FOR UTILITY LOCATIONS.
4. PUBLIC RIGHT-OF-WAY (PROW) FOR PUBLIC ACCESS, INCLUDING PEDESTRIAN AND VEHICLE ACCESS, UNDERGROUND UTILITIES AND EVAE.
5. PUBLIC ACCESS EASEMENT (PAE) FOR PUBLIC USE OF TRAILS AND WALKWAYS WHERE INDICATED.
6. FOR PARCELS DESIGNATED FOR CONDOMINIUM PURPOSES, ALL AREA OUTSIDE THE FOOTPRINT OF BUILDINGS WILL BE FOR RESIDENT INGRESS/EGRESS

PROPOSED PARCEL 1 - 497,756 SF
FOR CONDOMINIUM PURPOSES
INCLUDING (87) UNITS, PARKING,
PRIVATE ROAD, PUBLIC ROW,
PRIVATE OPEN SPACE, AND
COMMON AREA

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No.	Revisions	Date
1	PLANNING RESUBMITTAL	09/15/2020
2	COMMENT RESPONSE	03/25/2021
3	COMMENT RESPONSE	07/28/2022

Date: 12/05/2018
Scale: 1" = 30'
Design: CJB
Drawn: DJC
Approved: DJL
Job No. 20160150

Drawing Number
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OF

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PLOT DATE: 01-27-22 PLOTTED BY: gaic

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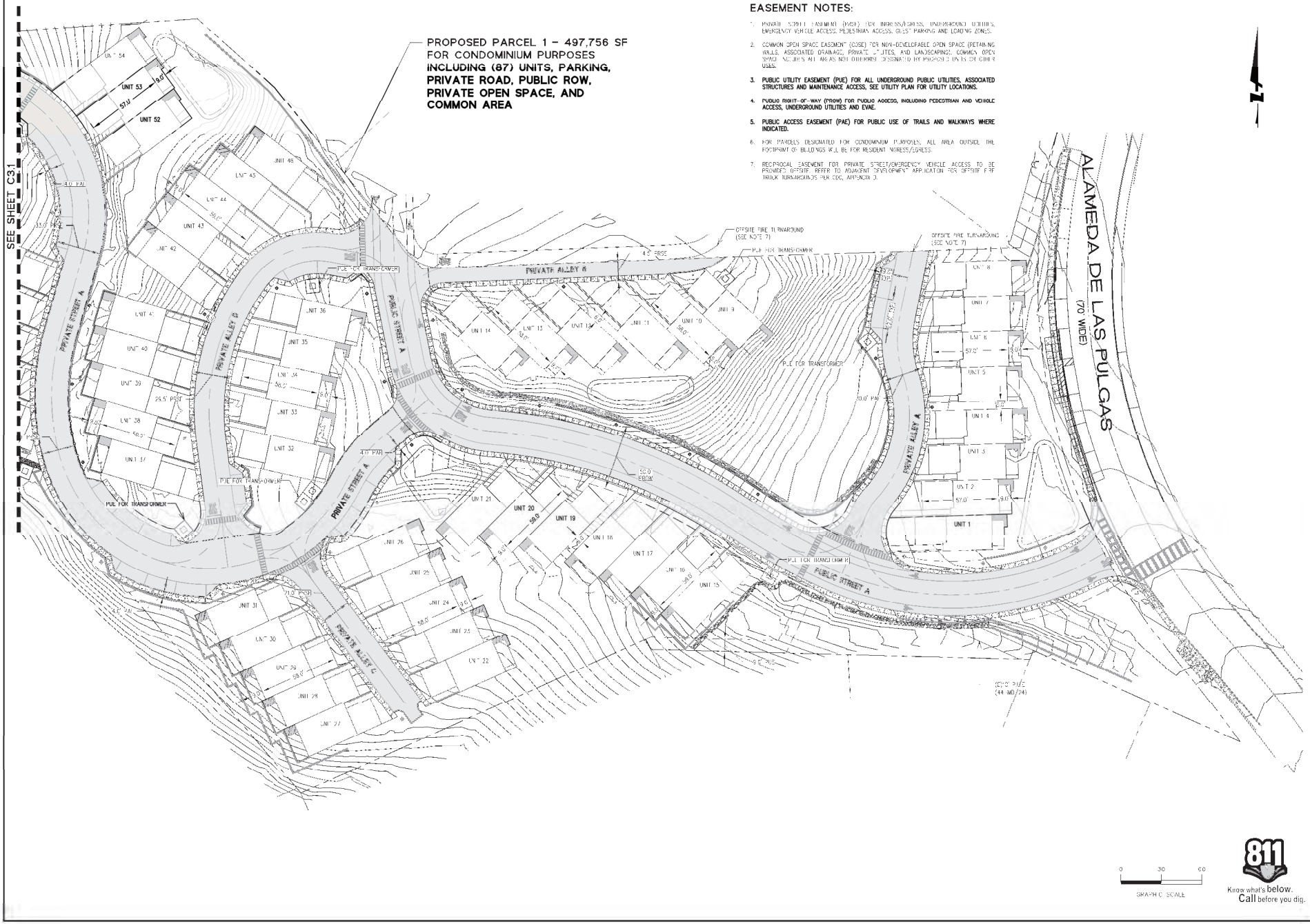

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5. **PUBLIC ACCESS EASEMENT (PAE) FOR PUBLIC USE OF TRAILS AND WALKWAYS WHERE INDICATED.**
6. FOR PARCELS DESIGNATED FOR CONDOMINIUM PURPOSES, ALL AREA OUTSIDE THE FOOTPRINT OF BUILDINGS WILL BE FOR RESIDENT INGRESS/EGRESS.
7. RECIPROCAL EASEMENT FOR PRIVATE STREET/EMERGENCY VEHICLE ACCESS TO BE PROVIDED OFFSITE. REFER TO ADJACENT DEVELOPMENT APPLICATION FOR OFFSITE FIRE TRUCK TURNAROUNDS PER CDC, APPENDIX D.

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VESTING TENTATIVE MAP
808 ALAMEDA DE LAS PULGAS
ALAMEDA DE LAS PULGAS

SAN CARLOS SAN MATEO COUNTY CALIFORNIA

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No.	Revisions	Date
1	PLANNING RESUBMITTAL	09/15/2020
2	COMMENT RESPONSE	03/25/2021
3	COMMENT RESPONSE	07/28/2022

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Design: CJP
Drawn: CJC
Approved: DJL
Job No. 20160150

Drawing Number
C3.2
OF

DRAW NO. NAME: \\Bkf.rc\data\2016\160150_Block_Mountain San Carlos\FNC\tmsheets.dwg
PLOT DATE: 01-27-22 PLOTTED BY: gaic

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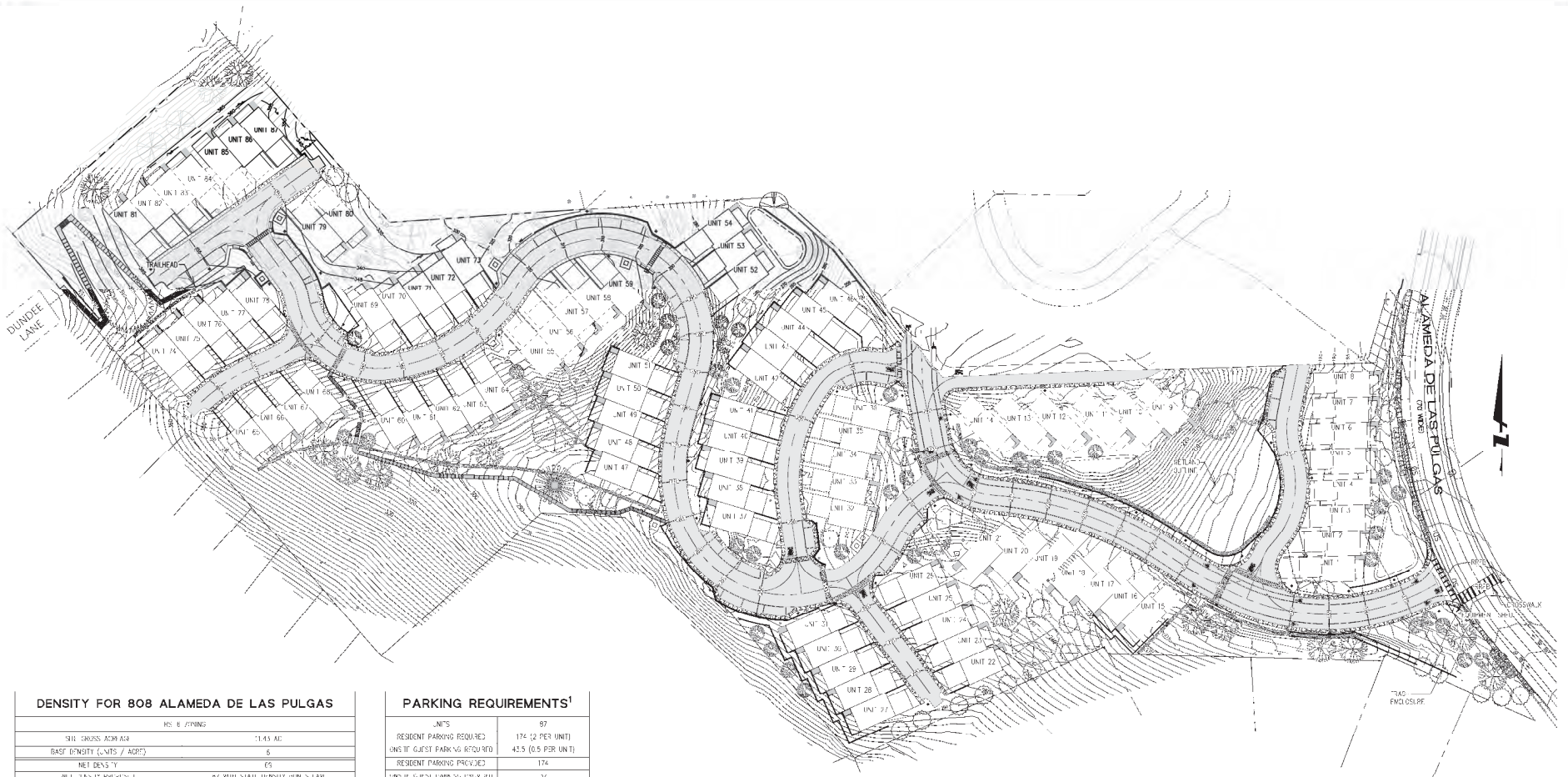


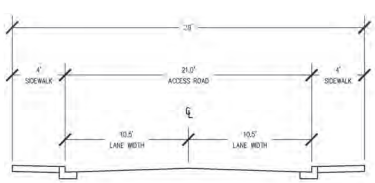
DENSITY FOR 808 ALAMEDA DE LAS PULGAS

RS 6 ZONING	
SITE GROSS ACHMAN	11.43 AC
BASE DENSITY (UNITS / ACRE)	6
NET DENSITY	69
NET DENSITY PROPOSED	87 WITH STATE DENSITY BONUS LAW

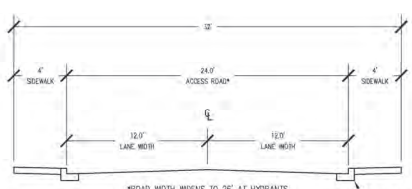
PARKING REQUIREMENTS[1]

UNITS	87
RESIDENT PARKING REQUIRED	174 (2 PER UNIT)
ONSITE GUEST PARKING REQUIRED	43.5 (0.5 PER UNIT)
RESIDENT PARKING PROVIDED	174
ONSITE GUEST PARKING PROVIDED	32
OFFSITE GUEST PARKING PROVIDED	11

[1] PARKING REQUIREMENTS FROM SAN CARLOS MUNICIPAL CODE TABLE 18.20.040-A(1).

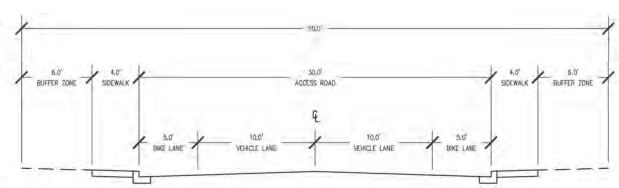


PRIVATE ALLEY ROAD SECTION



*ROAD WIDTH WIDENS TO 26' AT HYDRANTS.

PRIVATE ACCESS ROAD SECTION



PUBLIC STREET SECTION

0 50 100
GRAPHIC SCALE

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SITE PLAN
808 ALAMEDA DE LAS PULGAS
ALAMEDA DE LAS PULGAS
SAN MATEO COUNTY
SAN CARLOS CALIFORNIA

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GRADING NOTES:

1. ALL PAVED AREAS ARE TO SLOPE A MINIMUM OF 1% AND MAXIMUM OF 8% ACCESSIBLE STALLS AND LOADING ZONES ARE TO SLOPE AT A MAXIMUM OF 2% IN ALL DIRECTIONS. ACCESSIBLE PATHWAYS ARE TO SLOPE AT A MAXIMUM OF 5% IN THE DIRECTION OF TRAVEL AND 1% ACROSS DRIVEWAYS TO THE DIRECTION OF TRAVEL. SHALL BE AT A MAXIMUM OF 2% ANY AREAS ON THE SITE NOT CONFORMING TO **THESE BASIC RULES DUE TO EXISTING CONDITIONS OR DISCREPANCIES IN THE DOCUMENTS ARE TO BE REPORTED TO THE PROJECT MANAGER PRIOR TO PROCEEDING WITH PLACEMENT OF ROCK BASE, FORMWORK FOR CURBS AND/OR FLATWORK.**
2. **CONTRACTOR SHALL DETERMINE EARTHWORK QUANTITIES BASED ON THE TOPOGRAPHIC SURVEY, THE GEOTECHNICAL INVESTIGATION AND THE PROPOSED SURFACE THICKNESS AND BASE THE BID ACCORDINGLY. IT IS THE CONTRACTORS RESPONSIBILITY TO CONFIRM IF A SEPARATE DEMOLITION CONTRACT HAS BEEN ISSUED TO TAKE THE** SITE FROM THE WAY IT IS AT THE TIME OF THE BID TO THE CONDITIONS DESCRIBED IN THESE DOCUMENTS. ANY DIFFERENCES BETWEEN THE STATE IN WHICH THE SITE IS DELIVERED TO THE CONTRACTOR AND THESE DOCUMENTS SHOULD BE NOTED TO THE ENGINEER/ARCHITECT
3. ALL FILL SHALL BE COMPACTED PER THE GEOTECHNICAL REPORT AND THE CONTRACTOR SHALL COORDINATE AND COMPLY WITH THE CLIENT'S TESTING AGENCY TO TAKE THE APPROPRIATE TESTS TO VERIFY COMPACTION VALUES.
4. IMPORT SOILS SHOULD MEET THE REQUIREMENTS OF THE SOILS REPORT AND SPECIFICATIONS.
5. COORDINATE THE PLACEMENT OF ALL SLEEVES FOR LANDSCAPE IRRIGATION (WATER AND CONTROL WIRING) AND SITE LIGHTING PRIOR TO THE PLACEMENT OF ANY ASPHALT, BASE ROCK OR CONCRETE SURFACING. SEE LANDSCAPING AND SITE ELECTRICAL DRAWINGS.
6. DO NOT ADJUST GRADES ON THIS PLAN WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER/ARCHITECT
7. SITE STRIPPINGS THAT CONTAIN ONLY ORGANIC MATERIAL (NO DEBRIS TRASH, BROKEN CONC OR ROCKS GREATER THAN 1" IN DIAMETER) MAY BE USED IN LANDSCAPE AREAS, EXCEPT FOR AREAS DESIGNED AS IMPORT TOP SOIL BY THE LANDSCAPE DRAWINGS. EXCESS STRIPPINGS SHALL BE REMOVED FROM SITE.
8. TOP OF CONCRETE CURBS ARE 0.50' ABOVE TOP OF PAVING ELEVATIONS, UNLESS NOTED OTHERWISE.
9. ROUGH GRADING TO BE WITHIN 0.1' AND FINISH GRADES ARE TO BE WITHIN 0.05'. HOWEVER CONTRACTOR SHALL NOT CONSTRUCT ANY IMPROVEMENTS THAT WILL CAUSE WATER TO POND OR NOT MEET REQUIREMENTS IN GRADING NOTE #1.
10. THE CONTRACTOR SHALL EXERCISE EXTREME CARE TO CONFORM TO THE LINES, GRADES, SECTIONS, AND DIMENSIONS AS SET FORTH ON THESE PLANS. ALL GRADED AREAS SHALL CONFORM TO THE VERTICAL DIMENSIONS SHOWN WITH A TOLERANCE OF ONE-TENTH (0.1) FEET. WHERE GRADED AREAS DO NOT CONFORM TO THESE TOLERANCES, **THE CONTRACTORS SHALL BE REQUIRED TO DO CORRECTIVE GRADING, AT NO EXTRA COST TO THE CLIENT.**
11. **IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM THE GROUND ELEVATIONS AND OVERALL TOPOGRAPHY OF THE SITE PRIOR TO THE START OF CONSTRUCTION AS TO THE ACCURACY BETWEEN THE WORK SET FORTH ON THESE PLANS AND THE WORK IN THE FIELD. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND CIVIL ENGINEER IN WRITING PRIOR TO START OF CONSTRUCTION WHICH MAY REQUIRE** CHANGES IN DESIGN AND/OR AFFECT THE EARTHWORK QUANTITIES.
12. TRENCHES SHALL NOT BE LEFT OPEN OVERNIGHT IN EXISTING PUBLIC STREET AREAS. CONTRACTOR SHALL BACKFILL TRENCHES, OR PLACE STEEL PLATING WITH ADEQUATE CUTBACK TO PREVENT SHIFTING OF STEEL PLATE AND/OR HOT MIX ASPHALT REQUIRED TO PROTECT OPEN TRENCHES AT THE END OF THE WORKING DAY.

EARTHWORK QUANTITIES

GROSS QUANTITIES

CUT	48,900 CUBIC YARDS
FILL	13,700 CUBIC YARDS
TOTAL	62,600 CUBIC YARDS
HAVE AND	35,200 CUBIC YARDS OF EXPORT

FOR BY UNITS BR OFFHAUL = 405 CUBIC YARDS/UNIT

EARTHWORK QUANTITIES SHOWN ARE FOR PLANNING PURPOSES ONLY. CONTRACTOR SHALL PERFORM THEIR OWN EARTHWORK QUANTITY CALCULATION AND USE THEIR CALCULATION FOR BIDDING AND COST ESTIMATING PURPOSES.

UNIT TYPES ELEVATION

UNIT TYPE	ENTRY LEVEL	REAR PAD/DECK ELEV.	REAR SLOPE
A	3RD LEVEL (0')	20'	23' TO 26' MAX
B	1ST LEVEL (0')	0' OR +10'	0' OR +10'
C	2ND LEVEL (0')	-9.5'	-10'

PAVEMENT NOTES:

1. PAVEMENT SECTION TO BE APPROVED BY GEOTECHNICAL ENGINEER
2. COLOR AND FINISH OF CONCRETE TO BE SPECIFIED BY LANDSCAPE ARCHITECT
3. SEE LANDSCAPE PLANS FOR ALL WALKWAY FINISHES AND MATERIALS

OVER-EXCAVATION NOTES:

SEE GEOTECHNICAL REPORT BY CORNERSTONE EARTH GROUP GEOTECHNICAL ENGINEERS, DATED JULY 11, 2018 FOR EXACT RECOMMENDATION FOR GRADING OPERATIONS AND OVER-EXCAVATION ON-SITE.

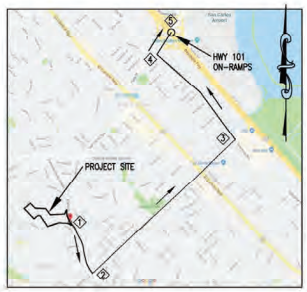
PAVEMENT LEGEND/HATCHING:

SIDEWALK — SEE LANDSCAPE PLANS FOR DETAILS.

PRIVATE ROAD — 2.5" AC PAVING OVER 11" OF CALTRANS CLASS 2 BASE ROCK PER TRAFFIC INDEX OF 5.0.

WALL TABLE

WALL SECTION	TW	BW	HEIGHT	WALL SECTION	TW	BW	HEIGHT
1	180.0	179.0	6.0	21	258.0	252.0	6.0
2	190.0	185.0	5.0	22	260.0	259.0	2.0
3	191.0	185.0	6.0	23	265.0	259.0	6.0
4	175.0	170.0	6.0	24	287.5	285.0	2.5
5	168.0	167.5	1.5	25	275.0	269.0	6.0
6	168.0	167.0	1.0	26	265.0	262.5	2.5
7	201.0	196.0	5.0	27	280.0	274.0	6.0
8	195.0	194.0	1.0	28	274.0	268.0	6.0
9	193.0	187.0	6.0	29	268.0	262.0	6.0
10	195.0	193.0	3.0	30	262.0	256.0	6.0
11	216.0	210.0	6.0	31	271.0	265.0	6.0
12	225.0	221.0	4.0	32	262.0	256.0	6.0
13	220.0	214.0	6.0	33	256.0	250.0	6.0
14	224.0	218.0	6.0	34	265.0	262.5	2.5
15	235.0	230.0	5.0	35	285.0	279.0	6.0
16	248.0	246.0	2.0	36	291.5	285.5	6.0
17	251.0	250.0	1.0	37	298.0	292.0	6.0
18	348.0	342.0	6.0	38	303.0	300.0	3.0
19	365.0	359.0	6.0	39	310.0	305.0	5.0
20	402.0	396.0	6.0	40	321.0	315.0	6.0



HAUL ROUTE:

CONTRACTOR SHALL UTILIZE THE FOLLOWING HAUL ROUTE FOR IMPORTING/EXPORTING SPOILS AND OTHER CONSTRUCTION MATERIALS:

1. TRAVEL SOUTH ON ALAMEDA DE LAS PULGAS.
2. LEFT ONTO BRITTAN AVENUE TOWARD EL CAMINO REAL/INDUSTRIAL ROAD.
3. LEFT ONTO INDUSTRIAL ROAD TOWARD HOLLY ROAD.
4. RIGHT ONTO HOLLY ROAD TOWARDS HWY 101.
5. NORTH OR SOUTH ON HIGHWAY 101.

NOTE:
12 CUBIC YARDS TRUCKS TO BE USED FOR 2,933 TRIPS OVER A 6 MONTH PERIOD TO OFFHAUL GROSS EARTHWORK CUT VOLUME.

0 30 60
GRAPHIC SCALE

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CALIFORNIA

GRADING PLAN
808 ALAMEDA DE LAS PULGAS
ALAMEDA DE LAS PULGAS
SAN MATEO COUNTY
SAN CARLOS

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PLOTTED BY: gold

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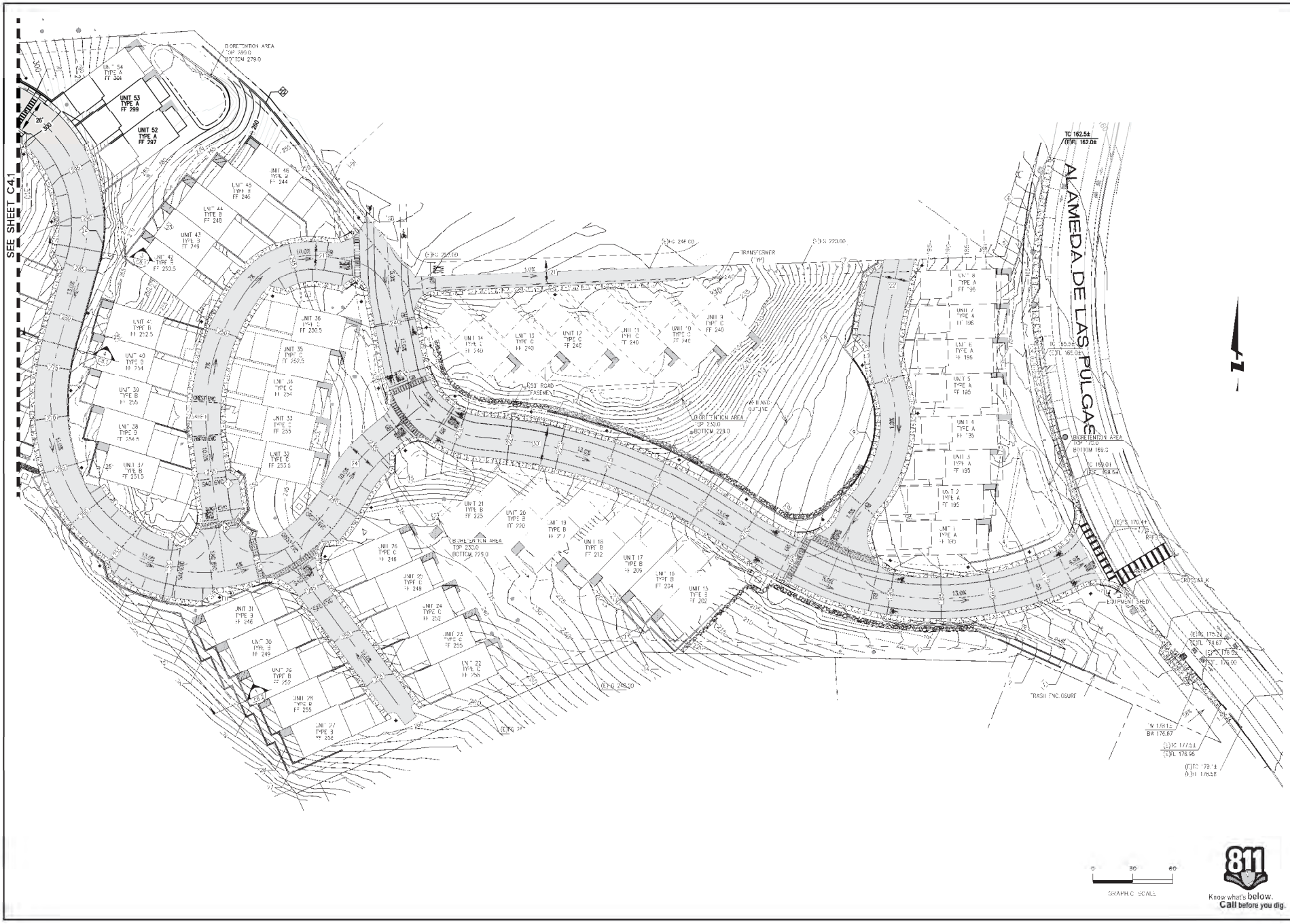

GRADING PLAN
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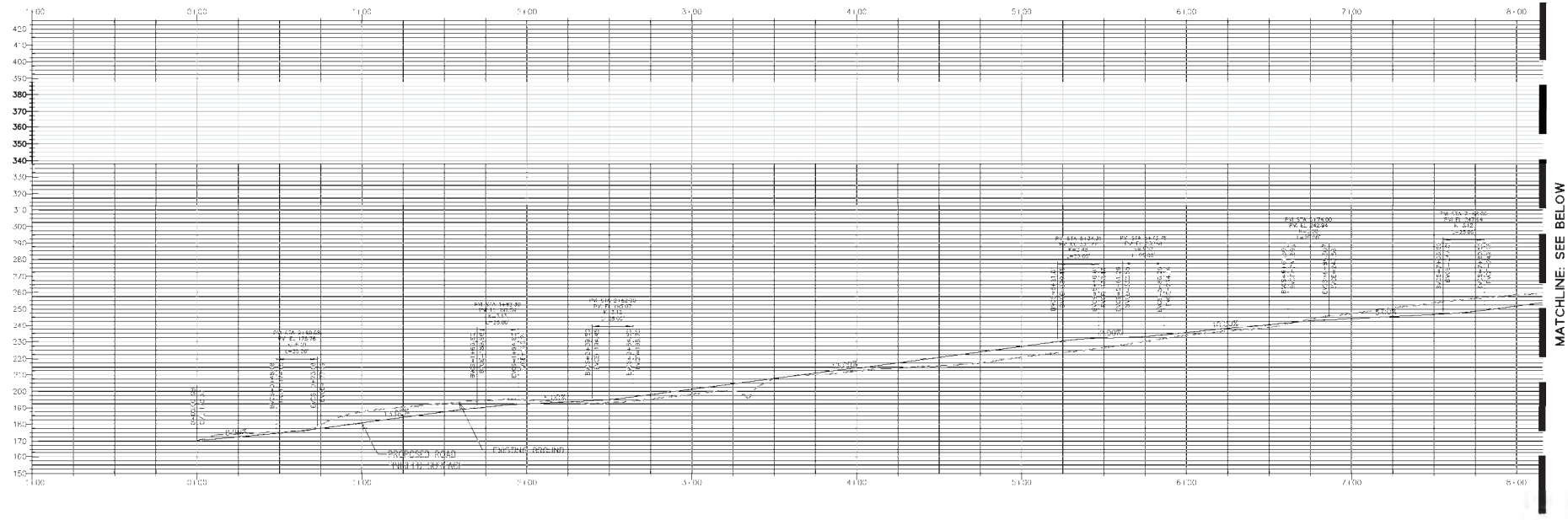

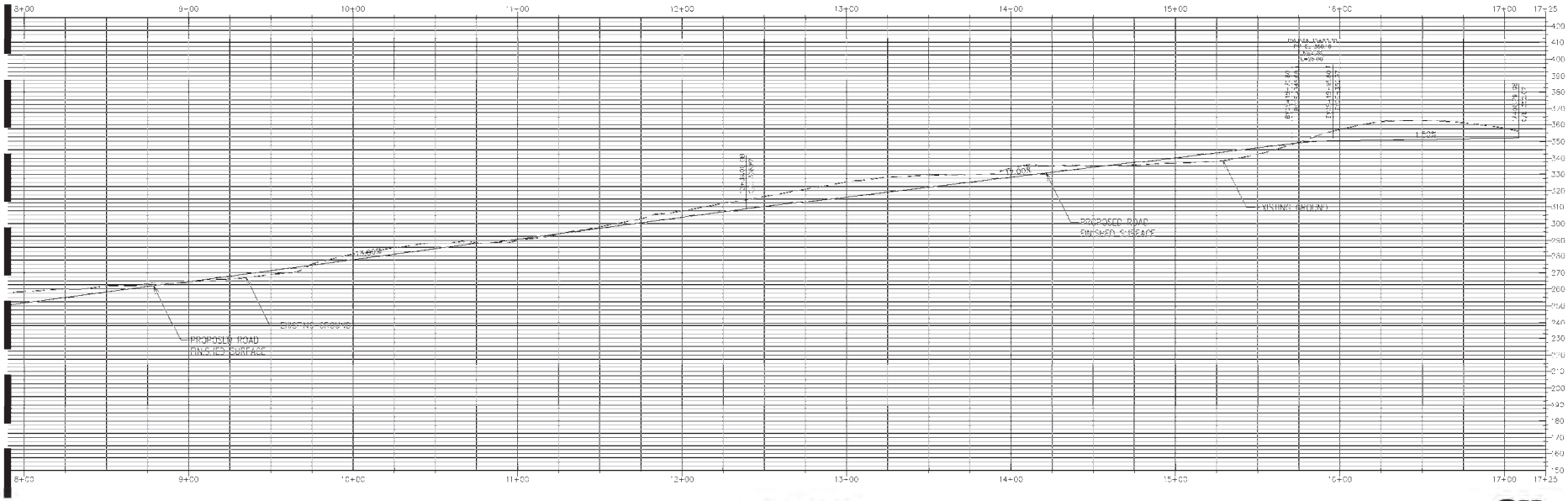

ROAD PROFILE

SCALE: 1" = 30' HORIZ.
1" = 30' VERT.

0 30 60
GRAPHIC SCALE

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ROAD PROFILE
808 ALAMEDA DE LAS PULGAS
ALAMEDA DE LAS PULGAS

SAN CARLOS SAN MATEO COUNTY CALIFORNIA

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SANITARY SEWER NOTES:

1. ALL SEWER WORK SHALL BE IN CONFORMANCE WITH THE CITY OR APPROPRIATE SANITARY SEWER DISTRICT.
2. PRIVATE SANITARY SEWER SERVICE LINE 4-INCH THROUGH 8-INCH SHALL BE POLYVINYL CHLORIDE (PVC) SDR 26 GREEN SEWER PIPE AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION D 3034-73 WITH GUIDED JOINTS. ALL DIRECTION CHANGES SHALL BE MADE WITH WYE CONNECTIONS, 22.5° ELBOWS or 45° **ELBOWS, 90° ELBOWS AND TEE'S ARE PROHIBITED. PUBLIC SANITARY SEWER LINES AND MAINS SHALL BE PER CITY STANDARDS.**
3. **ALL LATERALS SHALL HAVE A CLEANOUT AT FACE OF BUILDING AND AS SHOWN ON PLANS PER THE CITY STANDARD OR APPROPRIATE SANITARY SEWER DISTRICT.**
4. **IF (E) SEWER LATERAL IS TO BE USED, CONTRACTOR SHALL PERFORM PRESSURE TEST ON (E) SEWER LATERAL, AND SHALL PERFORM ANY NEEDED REPAIRS. EXTEND (N) OR (E) SEWER LINE AS SHOWN ON THE PLANS SLOPED AT 2% MINIMUM. INSTALL** CLEANOUT AT FACE OF BUILDING AND AT PROPERTY LINE.

WATER MAIN EXTENSION NOTES:

1. WATER MAIN TO SERVE UPPER SITE (34 UNITS) TO TIE INTO CALWATER PRESSURE ZONE 585 AT CORONADO AVENUE. REFER TO WATER SUPPLY MEMORANDUM FOR FULL EXTENT OF WORK AND DESIGN ALTERNATIVES.

STORM DRAIN NOTES:

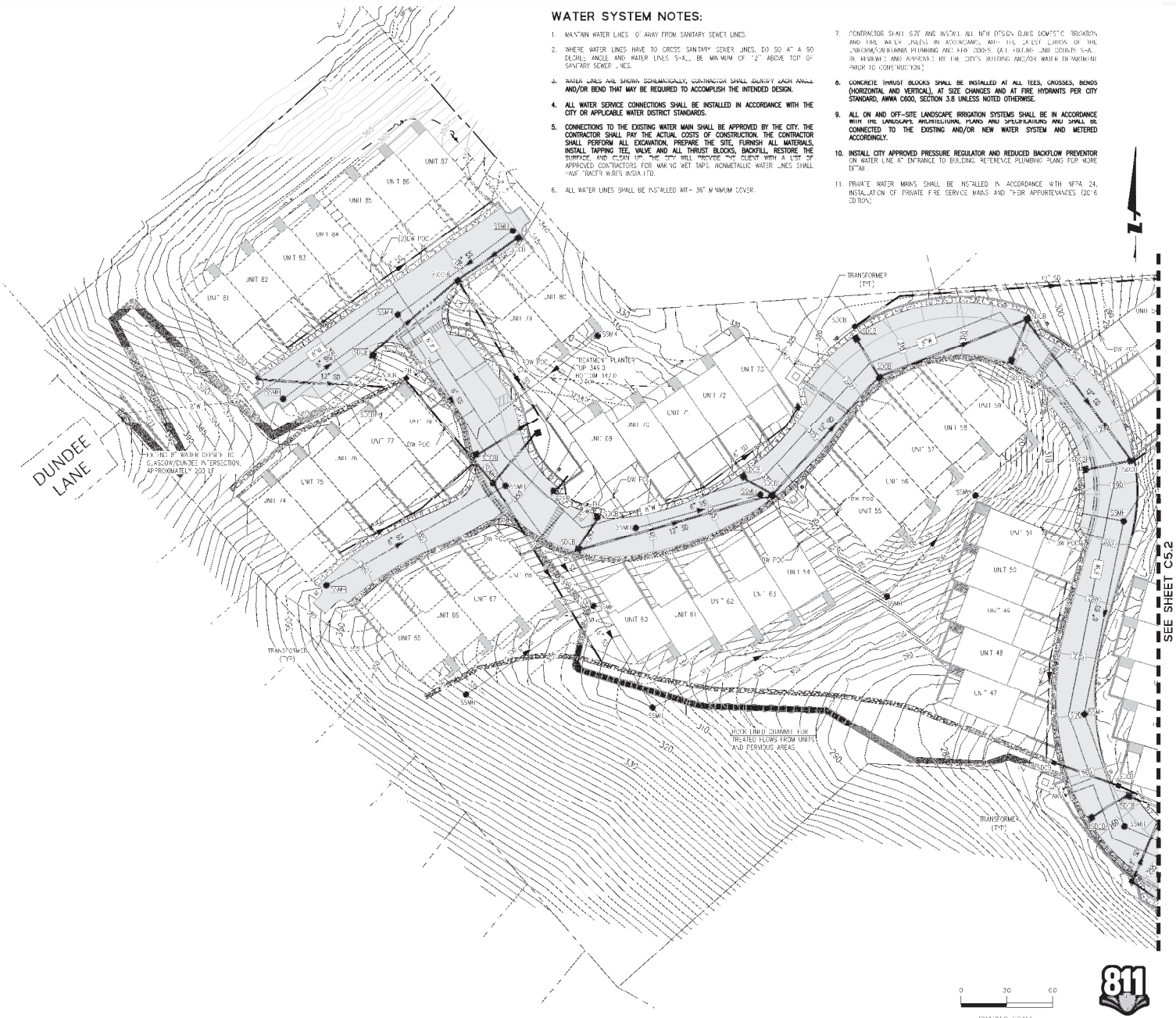
1. PRIVATE STORM DRAIN LINE 4-INCH THROUGH 12-INCH WITH A MINIMUM OF TWO (2) FEET OF COVER IN NON TRAFFIC AREAS SHALL BE POLYVINYL CHLORIDE (PVC) SDR 35 WHITE PIPE AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION D 3034-73 WITH GUIDED JOINTS. ALL DIRECTION CHANGES SHALL BE MADE WITH WYE CONNECTIONS, 22.5° ELBOWS, 45° ELBOWS OR LONG SWEEP ELBOWS, 90° ELBOWS AND TEE'S ARE PROHIBITED.
2. PRIVATE STORM DRAIN LINE 6 INCH THROUGH 12 INCH WITH LESS THAN THREE (3) FEET OF COVER IN VEHICULAR TRAFFIC AREAS SHALL BE POLYVINYL CHLORIDE (PVC) C900, RATED FOR 150 PSI CLASS PIPE. PROVIDE AND INSTALL "STORM DRAIN" MARKER TAPE FOR THE ENTIRE LENGTH OF PIPE TRENCH IN ACCORDANCE WITH CITY STANDARDS. ALL DIRECTION CHANGES SHALL BE MADE WITH WYE CONNECTIONS, OR USE ELBOWS OR LONG SWEEP ELBOWS. 90° ELBOWS AND TEES ARE PROHIBITED.
3. ALL AREA DRAINS AND CATCH BASINS GRATES WITHIN PEDESTRIAN ACCESSIBLE AREAS SHALL MEET ADA REQUIREMENTS.
4. ALL TRENCHES SHALL BE BACK FILLED PER THE SPECIFICATIONS WITH APPROPRIATE TESTS BY THE GEOTECHNICAL ENGINEER TO VERIFY COMPACTION VALUES.
5. FOR GRAVITY FLOW SYSTEMS CONTRACTOR SHALL VERIFY (POTHOLE IF NECESSARY) SIZE, MATERIAL, LOCATION AND DEPTH OF ALL SYSTEMS THAT ARE TO BE CONNECTED TO OR CROSSED PRIOR TO THE TRENCHING OR INSTALLATION OF ANY GRAVITY FLOW SYSTEM.
6. DRAINS SHOWN ON CIVIL PLANS ARE NOT INTENDED TO BE IN FINAL NUMBER AND LOCATION OF ALL DRAINS. PLACEMENT AND NUMBER OF LANDSCAPING DRAINS ARE HIGHLY DEPENDENT ON GROUND COVER TYPE AND PLANT MATERIAL. CONTRACTOR SHALL ADD ADDITIONAL AREA DRAINS AS NEEDED AND AS DIRECTED BY THE LANDSCAPE ARCHITECT OR CIVIL ENGINEER.

UTILITY LEGEND:

- PRIVATE STORM DRAIN AND APPURTENANCES
- PRIVATE WATER AND APPURTENANCES, SEE NOTE 1
- PRIVATE SANITARY SEWER AND APPURTENANCES
- PUBLIC SANITARY SEWER AND APPURTENANCES
- JOINT TRENCH FOR PUBLIC UTILITIES

WATER SYSTEM NOTES:

1. MAINTAIN WATER LINES 10' AWAY FROM SANITARY SEWER LINES.
2. WHERE WATER LINES HAVE TO CROSS SANITARY SEWER LINES, DO SO AT A 90 DEGREE ANGLE AND WATER LINES SHALL BE MINIMUM OF 12" ABOVE TOP OF SANITARY SEWER LINES.
3. **WATER LINES ARE SHOWN SCHEMATICALLY. CONTRACTOR SHALL IDENTIFY EACH ANGLE AND/OR BEND THAT MAY BE REQUIRED TO ACCOMPLISH THE INTENDED DESIGN.**
4. **ALL WATER SERVICE CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OR APPLICABLE WATER DISTRICT STANDARDS.**
5. **CONNECTIONS TO THE EXISTING WATER MAIN SHALL BE APPROVED BY THE CITY. THE CONTRACTOR SHALL PAY THE ACTUAL COSTS OF CONSTRUCTION. THE CONTRACTOR SHALL PERFORM ALL EXCAVATION, PREPARE THE SITE, FURNISH ALL MATERIALS, INSTALL TAPPING TEE, VALVE AND ALL THRUST BLOCKS, BACKFILL, RESTORE THE SURFACE AND CLEAN UP. THE CITY WILL PROVIDE THE CLIENT WITH A LIST OF APPROVED CONTRACTORS FOR MAKING WET TAPS. NONMETALLIC WATER LINES SHALL HAVE TRACER WIRES INSTALLED.**
6. ALL WATER LINES SHALL BE INSTALLED WITH 36" MINIMUM COVER.
7. CONTRACTOR SHALL SIZE AND INSTALL ALL NEW DESIGN BUILD DOMESTIC IRRIGATION AND FIRE WATER LINE(S) IN ACCORDANCE WITH THE LATEST EDITION OF THE UNIFORM CALIFORNIA PLUMBING AND FIRE CODES. (ALL FIXTURE UNIT COUNTS SHALL BE MINIMUM AND APPROVED BY THE CITY'S BUILDING AND/OR WATER DEPARTMENT PRIOR TO CONSTRUCTION.)
8. **CONCRETE THRUST BLOCKS SHALL BE INSTALLED AT ALL TEES, CROSSES, BENDS (HORIZONTAL AND VERTICAL), AT SIZE CHANGES AND AT FIRE HYDRANTS PER CITY STANDARD, AWWA C600, SECTION 3.8 UNLESS NOTED OTHERWISE.**
9. **ALL ON AND OFF-SITE LANDSCAPE IRRIGATION SYSTEMS SHALL BE IN ACCORDANCE WITH THE LANDSCAPE ARCHITECTURAL PLANS AND SPECIFICATIONS AND SHALL BE CONNECTED TO THE EXISTING AND/OR NEW WATER SYSTEM AND METERED ACCORDINGLY.**
10. **INSTALL CITY APPROVED PRESSURE REGULATOR AND REDUCED BACKFLOW PREVENTOR** ON WATER LINE AT ENTRANCE TO BUILDING. REFERENCE PLUMBING PLANS FOR MORE DETAIL.
11. PRIVATE WATER MAINS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 24, INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES (2016 EDITION).



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CALIFORNIA

UTILITY PLAN

808 ALAMEDA DE LAS PULGAS

ALAMEDA DE LAS PULGAS

SAN MATEO COUNTY

SAN CARLOS

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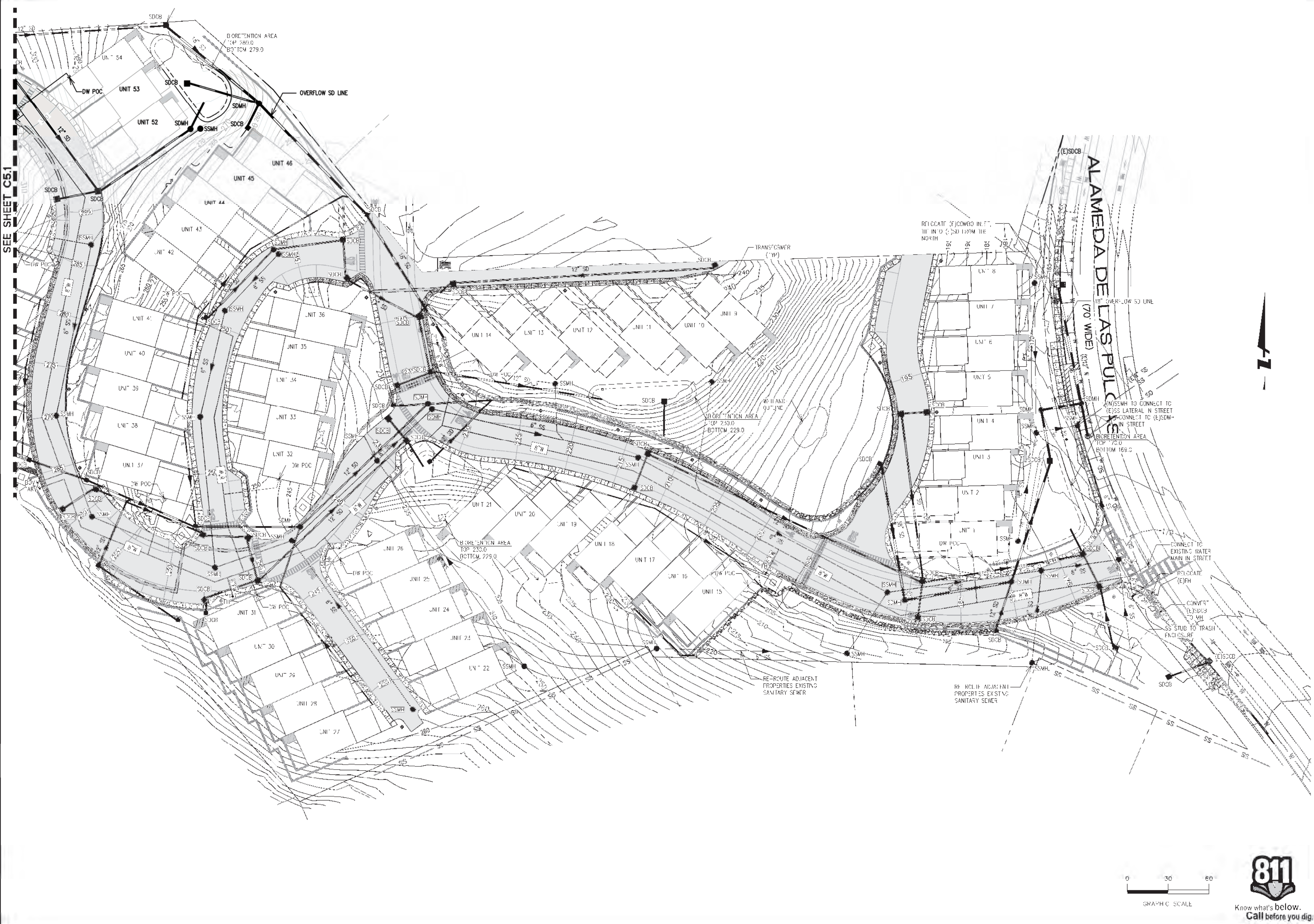

UTILITY PLAN
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SAN CARLOS
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ONSITE TRIBUTARY AREA

DRAINAGE MANAGEMENT AREA (DMA)	IMPERVIOUS AREA	PERVIOUS AREA	EFFECTIVE IMPERVIOUS AREA	REQUIRED TREATMENT AREA	PROVIDED TREATMENT AREA
DMA 1	18,250	3,444	18,594	744	755
DMA 2	34,097	2,114	34,308	1,372	1,412
DMA 3	35,731	13,542	37,085	1,483	1,486
DMA 4	25,034	4,122	25,446	1,018	1,040
DMA 5	41,098	4,503	41,548	1,662	1,688
DMA 6	0	195,418	SELF-TREATING, SEE TABLE BELOW FOR BREAKDOWN OF SUB AREAS		
UNIT CLUSTERS	120,403	0	SEE NOTE 5		
TOTAL	274,613	223,143	156,982	6,279	6,381

1. BIOTREATMENT AREAS ARE SIZED TO TREAT 4% OF EFFECTIVE IMPERVIOUS AREA IN DMA'S 1–5.
2. EFFECTIVE IMPERVIOUS AREA IS EQUAL TO THE TOTAL IMPERMOUS AREA PLUS 0.1 TIMES THE TOTAL PERVIOUS AREA PER THE SAN MATEO COUNTY C.3 MANUAL.

ONSITE TRIBUTARY SELF-TREATING AREAS

DRAINAGE MANAGEMENT AREA (DMA)	PERVIOUS AREA	DISCHARGE POINT TO TREATED RUNOFF PIPE
DMA 6A	29,396	CATCH BASIN WEST OF CLUSTER 3
DMA 6B	11,829	CATCH BASIN NORTH OF CLUSTER 5
DMA 6C	67,903	CATCH BASIN SOUTH OF CLUSTER 8
DMA 6D	4,564	CATCH BASIN NORTH OF CLUSTER 9
DMA 6E	9,038	CATCH BASIN NORTH OF CLUSTER 10
DMA 6F	3,454	CATCH BASIN SOUTH OF CLUSTER 11
DMA 6G	5,428	CATCH BASIN EAST OF CLUSTER 12
DMA 6H	29,473	CATCH BASIN EAST OF CLUSTER 15
DMA 6I	27,802	CATCH BASINS WEST OF CLUSTER 17
DMA 6J	5,472	CATCH BASINS SOUTH OF CLUSTER 15
TOTAL	191,794	–

1. DMA'S 6A-6J ARE SELF-TREATING AREAS CONSISTING OF NON-PAVED NATURAL SPACES AND LANDSCAPED AREAS AS PER THE C.3 TECHNICAL GUIDANCE. SELF-TREATING AREAS SHALL ROUTE RUNOFF DIRECTLY TO THE STORM DRAIN SYSTEM, BYPASSING BIO-RETENTION. SEE ABOVE TABLE FOR DISCHARGE POINT OF EACH TRIBUTARY.

NOTES:
1. CHANNEL SHALL BE LINED WITH A PERMANENT EROSION CONTROL FABRIC SUCH AS MIRAFI 140N OR EQUIVALENT.
2. THE CONTRACTOR SHALL HANDLE, STORE, PLACE AND INSTALL/ANCHOR THE PERMANENT EROSION CONTROL FABRIC IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND INSTALLATION SPECIFICATIONS AND DETAILS.
3. THE CONTRACTOR AND/OR OWNER SHALL INSPECT, MAINTAIN AND REPAIR ROCK LINED CHANNEL LINING, SIDES, AND EROSION CONTROL FABRIC IN ACCORDANCE WITH THE EROSION CONTROL PLAN NOTES AND RECOMMENDATIONS.

1 – ROCK LINED CHANNEL

GRAPHIC SCALE 0 50 100

Know what's below. Call before you dig.

STORMWATER CONTROL PLAN
808 ALAMEDA DE LAS PULGAS
ALAMEDA DE LAS PULGAS
SAN MATEO COUNTY CALIFORNIA
SAN CARLOS

REVIEW ONLY NOT FOR CONSTRUCTION

No.	Revisions	Date
1	PLANNING RESUBMITTAL	06/15/2020
2	1ST COMPLETENESS RESPONSE	03/05/2021
3	2ND COMPLETENESS RESPONSE	07/29/2022

Date: 12/01/2018
Scale: 1" = 50'
Design: D.P.
Drawn: D.L.
Approved: D.M.
Job No: 20161350

Drawing Number C5.3 OF

DRAW NG NAME: \\bkf.com\data\2016\161350_Black_Mountain_San_Carlos\ENG\sheets.dwg
PLOT DATE: 07/29/22 11:01:10 BY: gold

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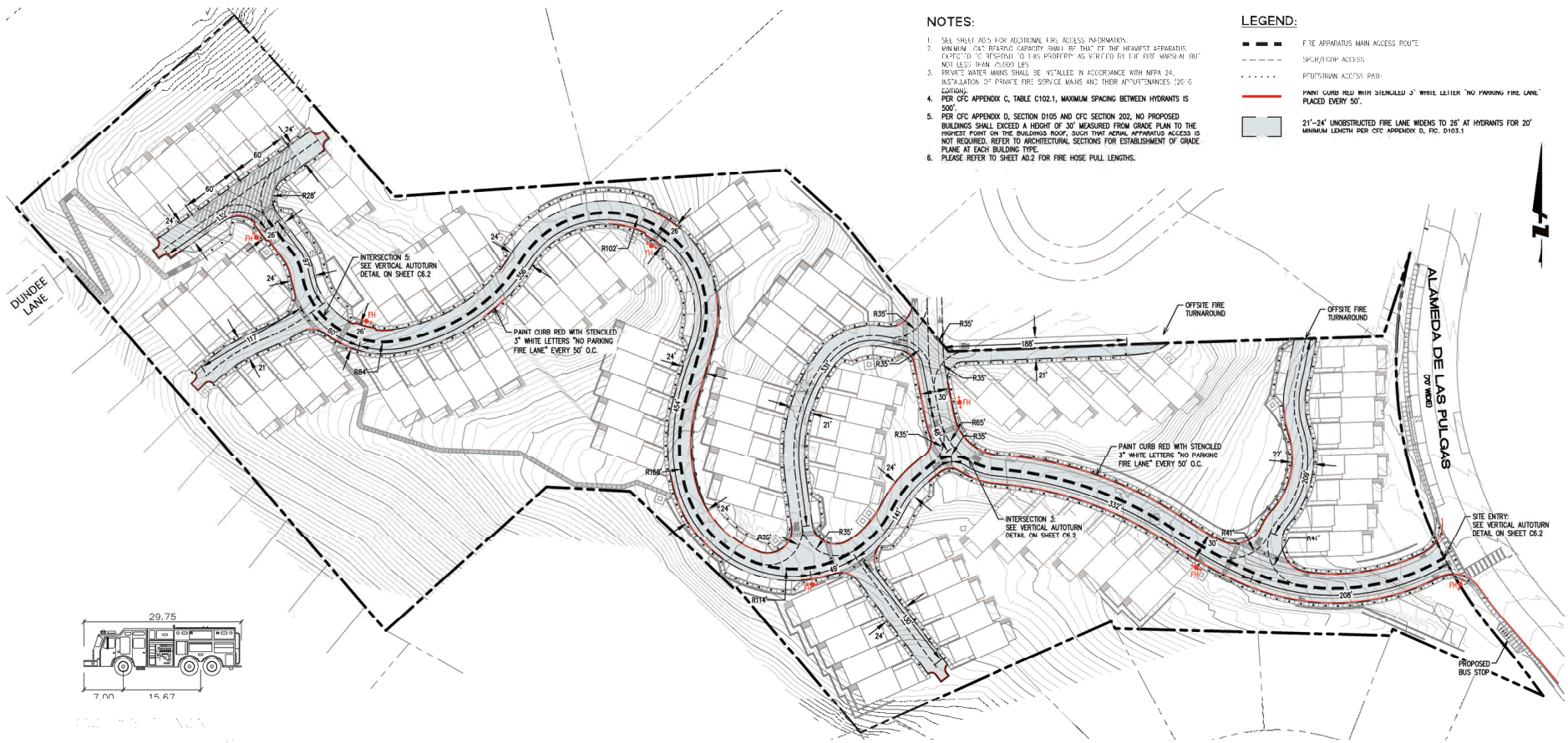
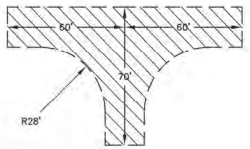
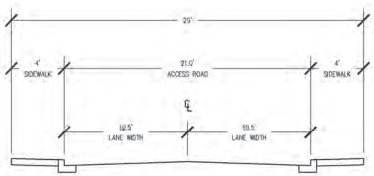


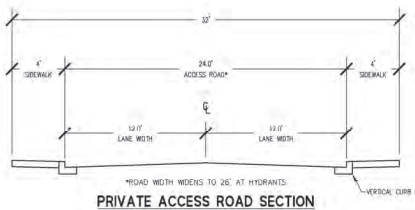
FIRE TRUCK TURNAROUND:



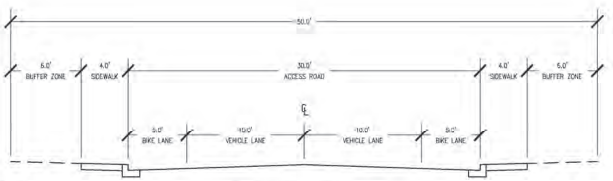
FIRE TRUCK TURNAROUND PER CA FIRE CODE APPENDIX D. ALL CURBS ALONG FIRE TRUCK TURNAROUNDS SHALL BE RED PAINTED AND MARKED WITH WHITE CURB LETTERING "NO PARKING. FIRE LANE" AT NO LESS THAN 25-FT INTERVALS.



PRIVATE ALLEY ROAD SECTION
SCALE 1" = 5'



PRIVATE ACCESS ROAD SECTION
SCALE 1" = 5'



PUBLIC STREET SECTION
SCALE 1" = 5'

FIRE AND PEDESTRIAN ACCESS PLAN
808 ALAMEDA DE LAS PULGAS
ALAMEDA DE LAS PULGAS
SAN MATEO COUNTY
CALIFORNIA
SAN CARLOS

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No.	Revisions	Date
1	PLANNING RESUBMITTAL	06/15/2020
2	COMMENT RESPONSE	03/05/2021
3	COMMENT RESPONSE	01/26/2022

Date: 12/06/2018
Scale: AS SHOWN
Design: DJP
Drawn: DLG
Approved: DJL
Job No: 20160150

Drawing Number:
C6.1
OF

DRAW NG NAME: \\bkf-rc\data\2016\160150_Black_Mountain_San_Carlos\ENG\basesheets.dwg
PLOT DATE: 01-27-22
PLOTTED BY: gold

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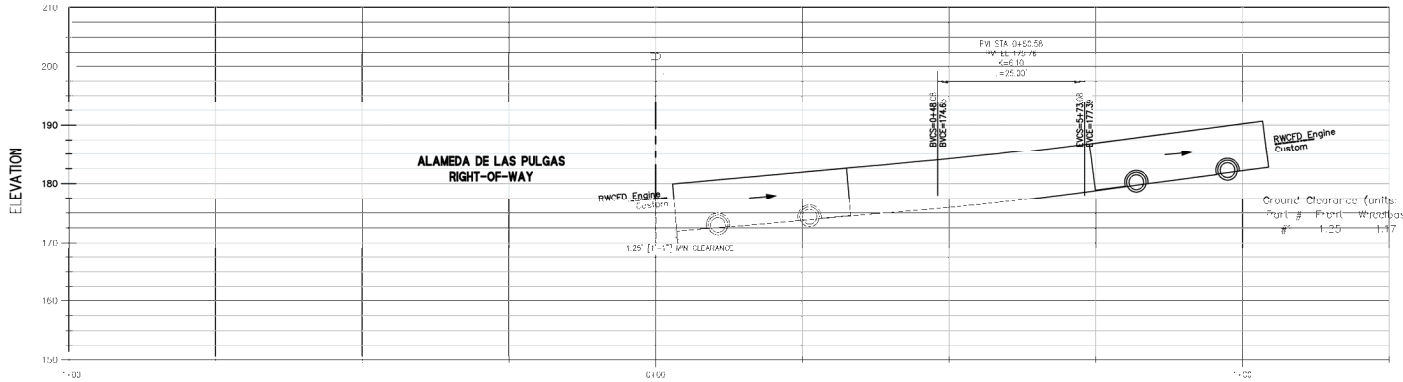
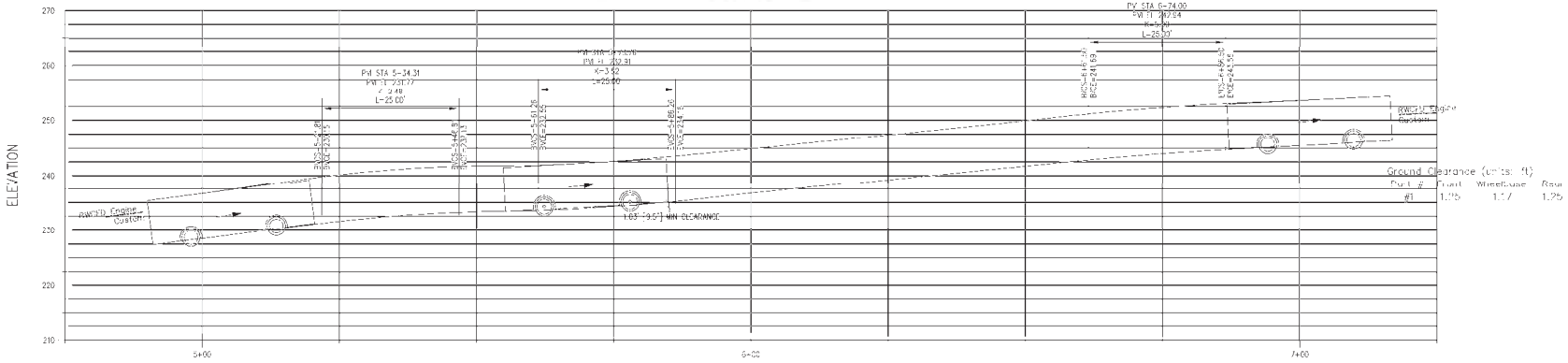


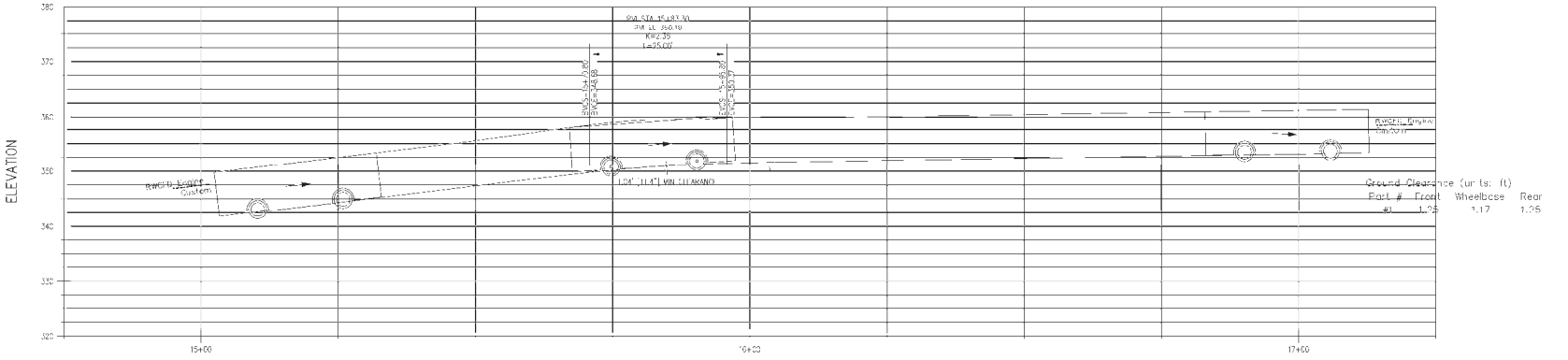
FIRE TRUCK PROFILE: ENTRY INTERSECTION

SCALE: 1" = 10' HORIZ.
1" = 10' VERT.



FIRE TRUCK PROFILE: 3RD INTERSECTION

SCALE: 1" = 10' HORIZ.
1" = 10' VERT.



FIRE TRUCK PROFILE: 5TH INTERSECTION

SCALE: 1" = 10' HORIZ.
1" = 10' VERT.

Know what's below. Call before you dig.

FIRE TRUCK PROFILE
808 ALAMEDA DE LAS PULGAS
ALAMEDA DE LAS PULGAS
SAN MATEO COUNTY, CALIFORNIA

SAN CARLOS

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No.	Revisions	Date
1	PLANNING RESUBMITTAL	08/15/2018
2	COMMENT RESPONSE	12/06/2018

Date: 12/06/2018
Scale: 1" = 10'
Design: CJB
Drawn: CJC
Approved: EJL
Job No: 20160150

Drawing Number
C6.2
OF

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PLOT DATE: 01-27-22 11:01:10 BY: gaile

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PLOT DATE: 01-27-22 PLOTTED BY: galc

Date:	12/05/2018
Scale:	1" = 50'
Design:	DJP
Drawn:	DLG
Approved:	DJL
Job No:	20160150

No.	Revisions	Date
1	PLANNING RESUBMITTAL	09/15/2020
2	COMMENT RESPONSE	01/28/2022

Drawing Number: C7.1 OF

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EROSION CONTROL PLAN
808 ALAMEDA DE LAS PULGAS
ALAMEDA DE LAS PULGAS

SAN CARLOS SAN MATEO COUNTY CALIFORNIA

BKF

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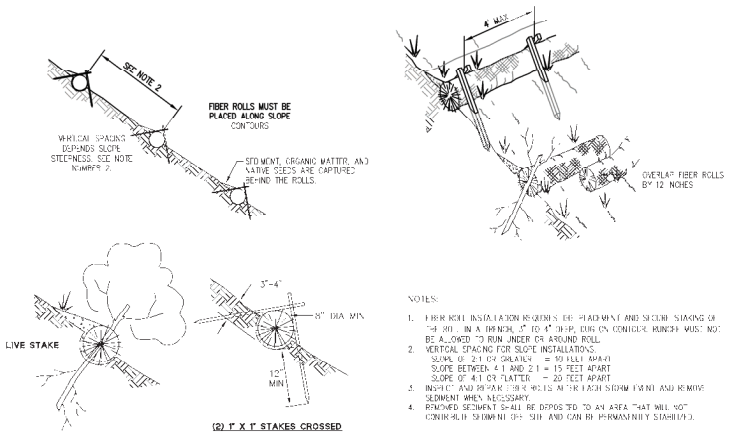
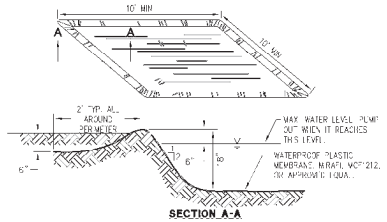


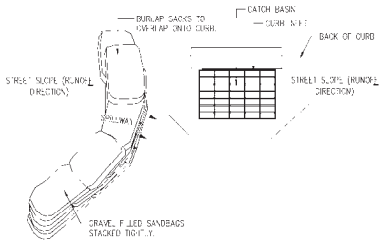
NOTES:

1. FIBER ROLL INSTALLATION SHOULD BE PLACED ON CONTOUR AND SECURE STAKING OF THE ROLL IN A TRENCH, 2" TO 4" DEEP, DUG ON CONTOUR. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.
2. VERTICAL SPACING FOR SLOPE INSTALLATIONS:
   SLOPE OF 2:1 OR GREATER = 10 FEET APART
   SLOPE BETWEEN 4:1 AND 2:1 = 15 FEET APART
   SLOPE OF 4:1 OR FLATTER = 20 FEET APART
3. INSPECT AND REPAIR FIBER ROLLS AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
4. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF SITE AND CAN BE PERMANENTLY STABILIZED.

5 — **FIBER ROLL**
NTS



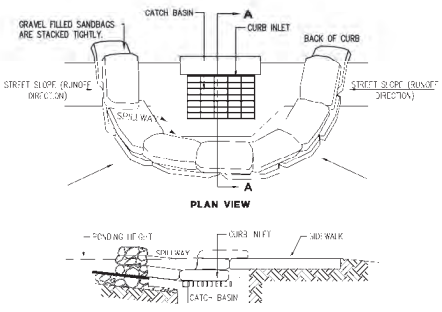
2 — **VEHICLE/EQUIPMENT WASHOUT PIT**
NTS



NOTES:

1. PLACE CURB TYPE SEDIMENT BARRIERS ON GENTLY SLOPING STREETS, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
2. SANDBAGS OF EITHER BURLAP OR WOVEN GEOTEXTILE FABRIC, ARE FILLED WITH GRAVEL, LAYERED AND PACKED TIGHTLY.
3. LEAVE ONE SANDBAG GAP IN THE TOP ROW TO PROVIDE A SPILLWAY OVERFLOW. TOP OF SPILLWAY SHALL BE LOWER THAN TOP OF CURB.
4. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT, SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

CURB INLET SEDIMENT BARRIER - CONTINUOUS GRADE

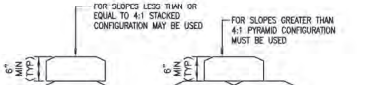


CURB INLET SEDIMENT BARRIER - SUMP

NOTES:

1. PLACE CURB TYPE SEDIMENT BARRIERS ON GENTLY SLOPING STREETS, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
2. SANDBAGS OF EITHER BURLAP OR WOVEN GEOTEXTILE FABRIC, ARE FILLED WITH GRAVEL, LAYERED AND PACKED TIGHTLY.
3. LEAVE ONE SANDBAG GAP IN THE TOP ROW TO PROVIDE A SPILLWAY OVERFLOW.
4. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT, SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

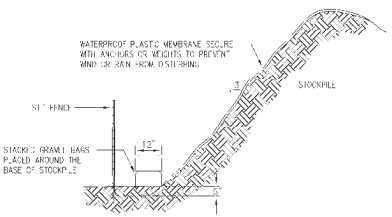
1 — **INLET PROTECTION**
NTS



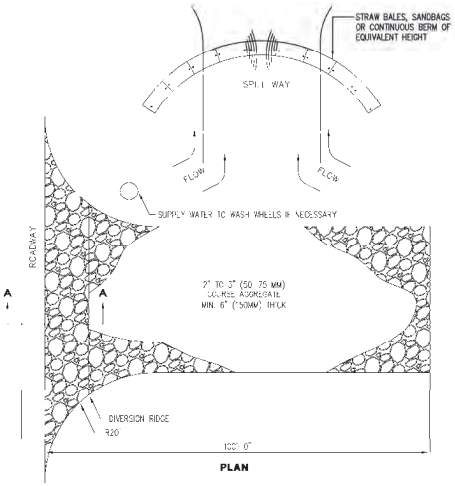
NOTES:

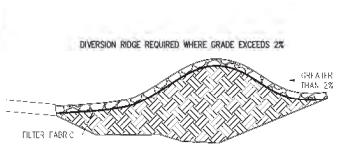
1. INSTALL AT LOCATIONS AS SHOWN ON EROSION CONTROL PLAN, AND IN ADDITION, PROTECT ALL EXISTING AND PROPOSED STORM DRAIN STRUCTURES WITH GRAVEL BAGS.

3 — **GRAVEL BAG BERM**
NTS



4 — **STOCKPILE COVERING**
NTS





NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT OF WAYS. THIS MAY REQUIRED TOP DRESSING, REPAIR, AND / OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC R-O-T OF WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ONTO AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

6 — **STABILIZED CONSTRUCTION ENTRANCE**
NTS

BKF
1 INE DRIVE
CITY, CA 94065
(00)
(00)

EROSION CONTROL DETAILS
808 ALAMEDA DE LAS PULGAS
ALAMEDA DE LAS PULGAS

SAN MATEO COUNTY
CALIFORNIA
SAN CARLOS

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No.	Revisions	Date
1	PLANNING RESUBMITTAL	08/15/2018

Date: 12/05/2018
Scale: AS SHOWN
Design: DJP
Drawn: DLG
Approved: DJL
Job No: 20160150

Drawing Number:
C7.2
OF

DRAW NG NAME: \\Bkf-rs\data\2016\160150_Block Mountain - San Carlos\Drawings\Sheets.dwg
PLOT DATE: 01-27-22
PLOTTED BY: gaile

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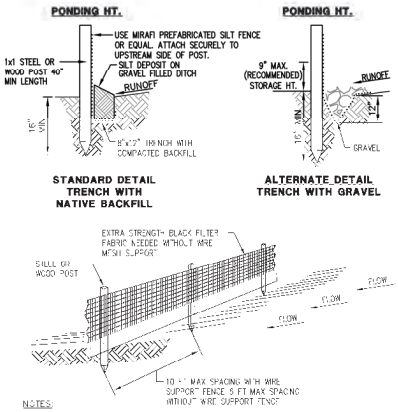
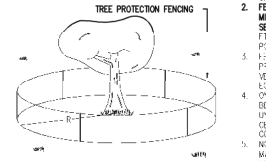


NOTES:

1. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
2. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT ON SITE INCLUDING PERMANENTLY STABILIZED.
3. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

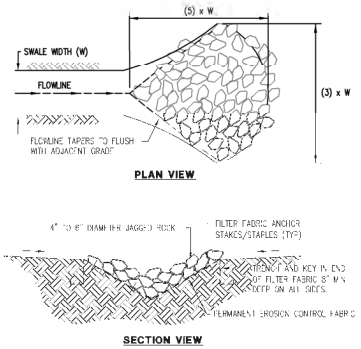
3 — **SILT FENCE**
NTS



NOTES:

1. **TREE PROTECTION FENCING (TPF) SHALL BE SET A RADIAL DISTANCE (R) AT THE BASE OF THE TREE, OR EXTENDING TO THE LIMITS OF THE TREE DRIPLINE, WHICHEVER IS GREATER.**
2. **FENCING SHALL CONSIST OF 6 FT MIN. HEIGHT CHAIN LINK FENCE SET ON STEEL POSTS DRIVEN 2 FT INTO GROUND, SPACE FENCE POSTS 10 FT M'N. O.C.**
3. FENCING MUST BE INSTALLED PRIOR TO ARRIVAL OF MATERIALS, VEHICLES, OR CONSTRUCTION EQUIPMENT.
4. ONCE INSTALLED, TPF MUST NOT BE MOVED, EVEN TEMPORARILY, UNLESS APPROVED BY A CERTIFIED ARBORIST, OR WHEN CONSTRUCTION IS COMPLETE.
5. NO STOCKPILING OF CONSTRUCTION MATERIALS OR SOIL IS ALLOWED WITHIN TPF.
6. NO GRADING, TRENCHING OR SURFACE SCRAPING IS ALLOWED INSIDE THE TPF OF PROTECTED TREES UNLESS APPROVED BY A CERTIFIED ARBORIST.
7. TRENCHING FOR UNDERGROUND UTILITIES WITHIN THE TPF MUST BE APPROVED BY A CERTIFIED ARBORIST AND BE COMPLETED BY HAND. NO ROOTS ENCOUNTERED SHALL BE CUT WITHOUT APPROVAL OF A CERTIFIED ARBORIST.
8. COVER ALL BARE SOILS WITHIN THE TPF. THIS MATERIAL MUST BE 4 TO 6 INCHES IN DEPTH AFTER SPREADING, WHICH MUST BE DONE BY HAND. COARSE WOOD CHIPS ARE PREFERRED.

2 — **TREE PROTECTION FENCING**
NTS



NOTES:

1. ROCK CUTOFF SHALL BE LINED WITH A PERMANENT EROSION CONTROL FABRIC SUCH AS VMAX 350 REINFORCING MAT (BY NORTH AMERICAN GREEN).
2. THE CONTRACTOR SHALL ANCHOR, STORE, PLACE AND INSTALL (ANCHOR THE PERMANENT EROSION CONTROL FABRIC) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND INSTALLATION SPECIFICATIONS AND DETAILS.
3. PLANTING MAY BE DONE DIRECTLY WITHIN SWALE, OUTFALL OR IMMEDIATELY DOWNSTREAM OF OUTFALL.

1 — **STABILIZED SWALE OUTFALL**
NTS

BKF
255 SHORELINE DRIVE
SUITE 200
REDWOOD CITY, CA 94065
(650) 482-6300
www.bkf.com

EROSION CONTROL DETAILS
808 ALAMEDA DE LAS PULGAS
ALAMEDA DE LAS PULGAS

SAN MATEO COUNTY
CALIFORNIA
SAN CARLOS

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No.	Revisions:	Date
1.	PLANNING RESUBMITTAL	06/15/2020

Date: 12/05/2018
Scale: AS SHOWN
Design: DJP
Drawn: DLG
Approved: DJL
Job No: 20160150

Drawing Number:
C7.3
OF

DRAW NG NAME: \\Bkf-rp\data\2016\160150_Black_Mountain_San_Carlos\ENG\cmsheets.dwg
PLOT DATE: 01-27-22
PLOTTED BY: gold

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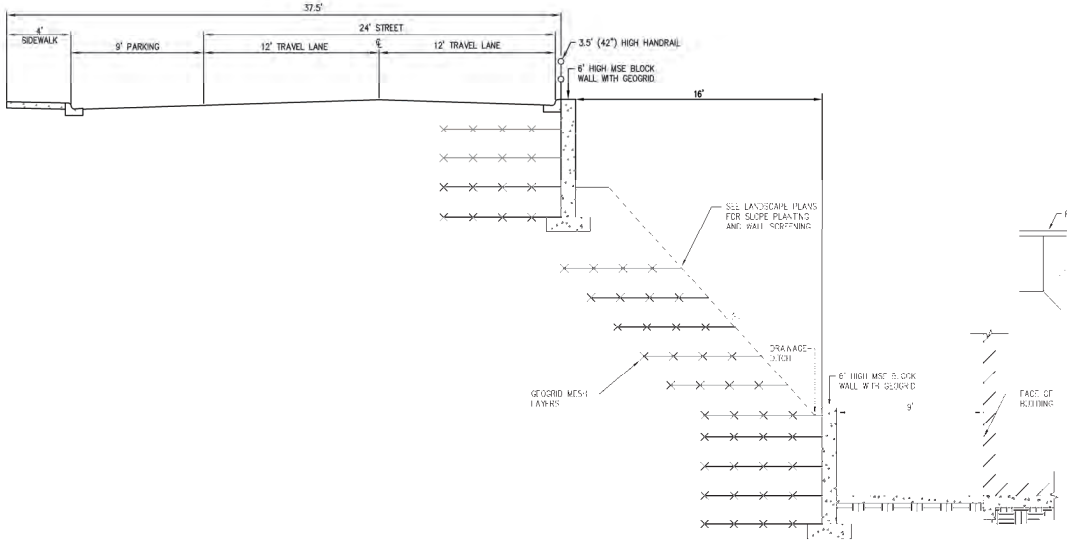
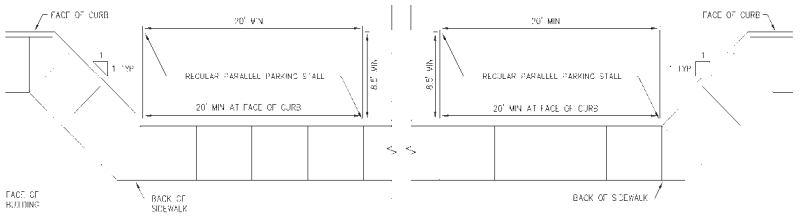
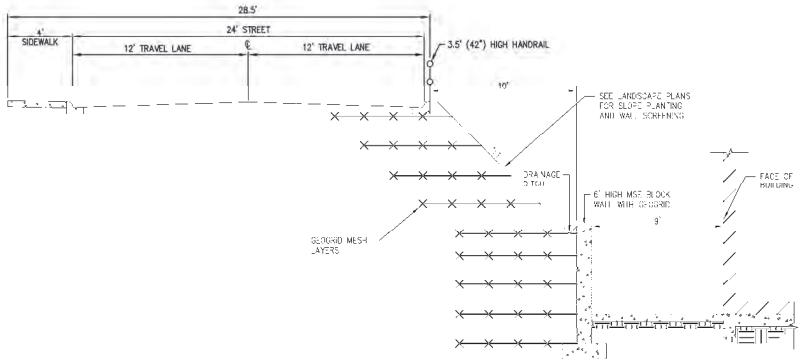


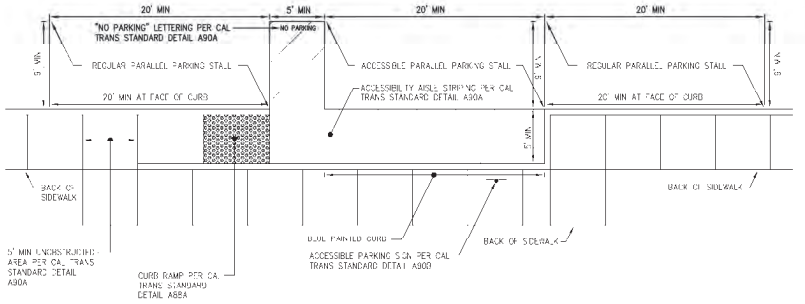
3 ENGINEERED GEOTECHNICAL SLOPE CROSS SECTION (SEE SHEET C4.2 FOR LOCATION)
NTS



1 PARALLEL PARKING STALLS
NTS



4 ENGINEERED GEOTECHNICAL SLOPE CROSS SECTION (SEE SHEET C4.2 FOR LOCATION)
NTS



2 PARALLEL PARKING STALLS WITH ADA STALL
NTS

BKF
255 SHORELINE DRIVE
SUITE 200
REDWOOD CITY, CA 94065
(650) 482-6300
www.bkf.com

DETAIL SHEET
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ALAMEDA DE LAS PULGAS

SAN CARLOS SAN MATEO COUNTY CALIFORNIA

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No.	Revisions	Date
1	PLANNING RESUBMITTAL	09/15/2020
2	COMMENT RESPONSE	03/25/2021
3	COMMENT RESPONSE	07/28/2022

Date: 12/05/2018
Scale: AS SHOWN
Design: DJP
Drawn: DLG
Approved: DJL
Job No: 20160150

Drawing Number:
C8.1
OF

DRAW NG NAME: \\Bkf-fs\data\2016\160150_Block_Mountain San Carlos\FNC\msheets.dwg
PLOT DATE: 01-27-22 PLOTTED BY: gaic

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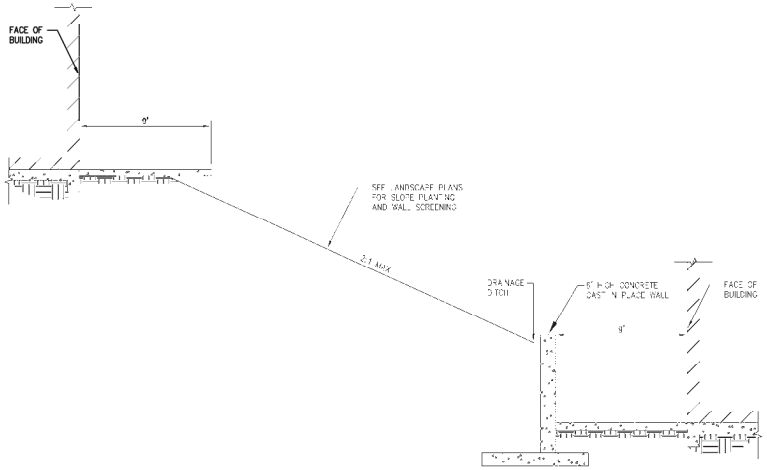
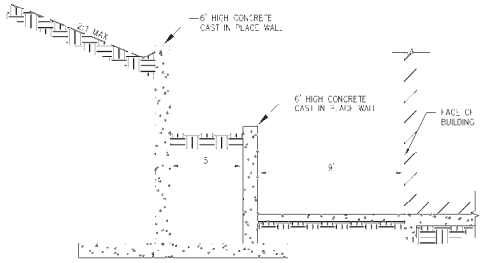
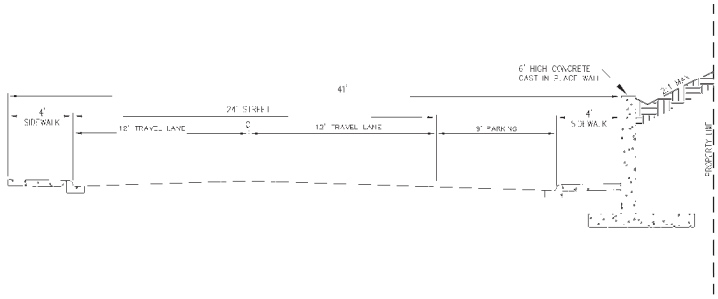


3 CROSS SECTION (SEE SHEET C4.1 FOR LOCATION)
NTS



1 CROSS SECTION (SEE SHEET C4.2 FOR LOCATION)
NTS



2 CROSS SECTION (SEE SHEET C4.1 FOR LOCATION)
NTS

BKF
INE DRIVE
CITY, CA 94065
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DETAIL SHEET
808 ALAMEDA DE LAS PULGAS
ALAMEDA DE LAS PULGAS
SAN MATEO COUNTY
SAN CARLOS CALIFORNIA

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No.	Revisions	Date
2	COMMENT RESPONSE	11/05/2021
3	COMMENT RESPONSE	11/26/2022

Date: 12/05/2018
Scale: AS SHOWN
Design: DJP
Drawn: DLG
Approved: DJL
Job No: 20160150

Drawing Number:
C8.2
OF

DRAW NG NAME: \\Bkf-rp\data\2016\16015_Black_Mountain San Carlos\ENG\msheets.dwg
PLOT DATE: 01-27-22 PLOTTED BY: galc

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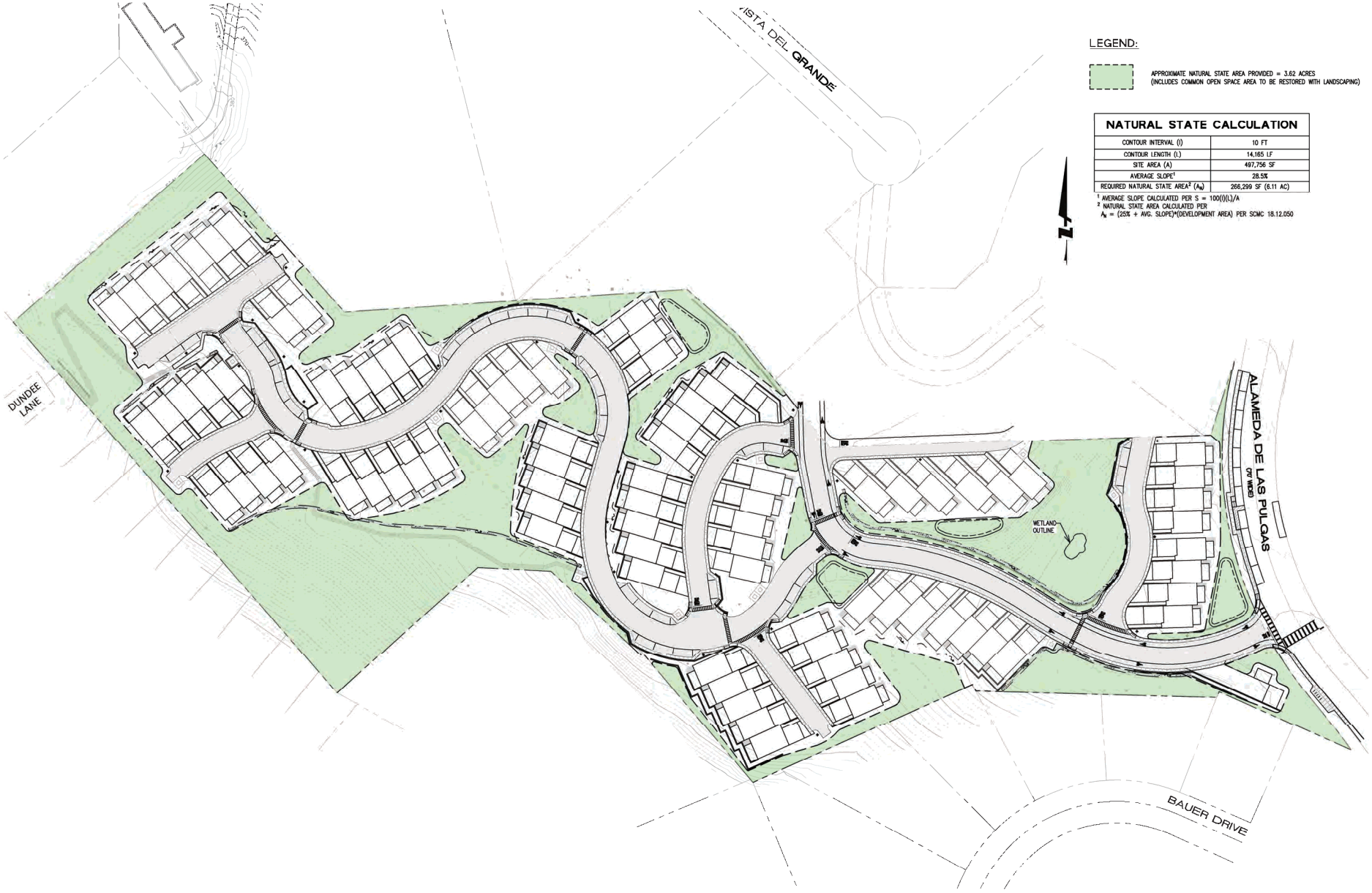

LEGEND:

APPROXIMATE NATURAL STATE AREA PROVIDED = 3.62 ACRES
(INCLUDES COMMON OPEN SPACE AREA TO BE RESTORED WITH LANDSCAPING)

NATURAL STATE CALCULATION	
CONTOUR INTERVAL (I)	10 FT
CONTOUR LENGTH (L)	14,165 LF
SITE AREA (A)	497,756 SF
AVERAGE SLOPE[1]	28.5%
REQUIRED NATURAL STATE AREA[2] (A_N)	266,299 SF (6.11 AC)

[1] AVERAGE SLOPE CALCULATED PER S = 100(I)(L)/A
[2] NATURAL STATE AREA CALCULATED PER
A_N = (25% + AVG. SLOPE)*(DEVELOPMENT AREA) PER SCMC 18.12.050

NATURAL STATE PLAN
808 ALAMEDA DE LAS PULGAS
ALAMEDA DE LAS PULGAS

SAN CARLOS SAN MATEO COUNTY CALIFORNIA

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No.	Revisions	Date
1	PLANNING RESUBMITTAL	09/15/2020
2	COMMENT RESPONSE	03/05/2021
3	COMMENT RESPONSE	01/28/2022

Date: 12/05/2018
Scale: 1" = 50'
Design: DJB
Drawn: DJC
Approved: DJL
Job No: 20160150

Drawing Number:
C9.1
OF

DRAW NG NAME: \\BKF.rc\data\2016\160150_Black_Mountain_San_Carlos\ENG\tmsheets.dwg
PLOT DATE: 01-27-22 PLOTTED BY: gold

PROJECT ABBREVIATIONS

AB	AGGREGATE BASE
AD	AREA DRAIN
ARCH	ARCHITECT
BC	BACK OF CURB
BF	BOTTOM OF FENCE
BIO	BIORETENTION PLANTING
BLDG	BUILDING
BOR	BACK OF RAMP
BOS	BOTTOM OF SLOPE
BR	BIKE RACK
BS	BOTTOM OF STEP (STAIR)
BSW	BACK OF SIDEWALK
BW	BOTTOM OF WALL
CAL	CALIPER
CB	CATCH BASIN OR CEMENT BASE
CH	CHANNEL OR CHILLER
CHD	CONCRETE HEADER
CIP	CAST-IN-PLACE
CJ	CONTROL JOINT
CL	CENTER LINE
CLR	CLEARANCE
CO	CLEAN OUT
COJ	CONSTRUCTION JOINT
CONC	CONCRETE
CONT	CONTINUOUS
D/B	DESIGN/BUILD
DI	DRAIN INLET
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
EA	EACH
EF	EACH FACE
EJ	EXPANSION JOINT
EJS	EXPANSION JOINT W/ SEALANT
EL	ELEVATION
ENGR	ENGINEER
EP	EDGE OF PAVEMENT
EQ	EQUAL
EW	EACH WAY
(E)	EXISTING
FDC	FIRE DEPARTMENT CONNECTION
FFE	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FOW	FACE OF WALL
FS	FINISHED SURFACE
GC	GENERAL CONTRACTOR
GB	GRADE BREAK
GJ	GROUT JOINT
HDR	HEADER
HP	HIGH POINT
HV	HOSE VALVE
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
INV	INVERTED
LOW	LIMIT OF WORK
LPT	LOW POINT
LSJ	LONGITUDINAL SHRINKAGE JOINT
MAX	MAXIMUM
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MM	MILLIMETERS
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OCEW	ON CENTER EACH WAY
OD	OUTSIDE DIAMTER
OPP	OPPOSITE
PA	PLANTING AREA
PED	PEDESTAL
PERF	PERFORATED
POC	POINT OF CONNECTION
R	RADIUS
RB	ROOT BARRIER
RGB	ROUNDED FRADE BREAK
RIM	RIM ELEVATION
ROW	RIGHT OF WAY
SAD	SEE ARCHITECTURAL DRAWINGS
SB	SPLASH BLOCK
SBSD	SEE BUILDING STRUCTURAL DRAWINGS
SCD	SEE CIVIL DRAWINGS
SD	STORM DRAIN
SED	SEE ELECTRICAL DRAWINGS
SG	SUBGRADE
SF	SQUARE FEET
SHP	SWALE FLOWLINE HIGH POINT
SIM	SIMILAR
SJ	SCORE JOINT
SLD	SEE LIGHTING DRAWINGS
SPECS	SPECIFICATIONS
SSD	SEE STRUCTURAL DRAWINGS
SWPPP	STORMWATER POLLUTION PREVENTION PLAN
TBD	TO BE DETERMINED
TOC	TOP OF CURB
TOR	TOP OF RAMP
TPTL	TREE PLANTING TRENCH LIMIT
TOF	TOP OF FENCE
TOFG	TOP OF FOOTING
TOFN	TOP OF FOUNDATION
T&B	TOP AND BOTTOM
TOP	TOP OF POST
TOS	TOP OF SLOPE
TS	TOP OF STEP (STAIR)
TSS	TOP OF STRUCTURAL SLAB
TW	TOP OF WALL
TWL	TREE WELL
TYP	TYPICAL
VEH	VEHICULAR
WPM	WATER PROOF MEMBRANE
WWF	WELDED WIRE FABRIC

LANDSCAPE DESIGN CRITERIA

1. FINISH GRADING, SHALL HAVE POSITIVE SURFACE DRAINAGE ACROSS PLANTED AREAS AND AWAY FROM BUILDING FOUNDATIONS. REFER TO CIVIL GRADING PLAN FOR ALL EXISTING AND PROPOSED GRADE INFORMATION.

2. STORMWATER MANAGEMENT TO COMPLY WITH SPECIAL PROJECT CATEGORY 'B' C3 REQUIREMENTS AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP). BIO RETENTION AND/OR INFILTRATION PLANTERS WILL BE USED TO TREAT STORM WATER. REFER TO CIVIL DOCUMENTS.

3. LANDSCAPE FEATURES EMPLOYED TO MINIMIZE RUNOFF AND PROMOTE SURFACE FILTRATION INCLUDE:
   A) INSTALLING PLANTS WITH LOW WATER REQUIREMENTS.
   B) INSTALLING PLANTS APPROPRIATE FOR THE LOCATION AND MICRO-CLIMATE.
   C) UTILIZING BIO RETENTION AND/OR INFILTRATION PLANTERS TO CAPTURE RUNOFF BEFORE IT EXITS THE SITE.
   D) INSTALLING COBBLE SPLASH PADS WHERE RUNOFF IS DISCHARGED INTO SWALES OR INFILTRATION PLANTERS TO AVOID EROSION.

4. ON SITE LANDSCAPE LIGHTING TO BE PROVIDED BY POLES AND BOLLARDS. EXTERIOR LIGHTING AND ILLUMINATION WILL COMPLY WITH THE REQUIREMENTS OF 18.12.070 AND SHALL BE PROVIDED FOR A SECURE NIGHTTIME PEDESTRIAN ENVIRONMENT BY REINFORCING ENTRANCES, PUBLIC SIDEWALKS AND OPEN AREAS WITH A SAFE LEVEL OF ILLUMINATION. SEE LIGHTING PLAN

5. PLANTING IS DESIGNED TO PROVIDE MAXIMUM SAFETY FOR RESIDENTS AND USERS. PLANTING WILL BE PROVIDED ALONG WALLS, FENCES, AND AT BUILDING FOUNDATIONS AND WILL BE MAINTAINED AT AN APPROPRIATE HEIGHT FOR CLEAR VISIBILITY.

6. OUTDOOR LIGHTING SHALL NOT EXCEED 16' IN HEIGHT AS REQUIRED FOR RESIDENTIAL DISTRICTS.

7. ALL PLANTING AREAS SHALL RECEIVE SOIL IMPROVEMENTS AS REQUIRED FOR HORTICULTURAL PLANTING AND A 3" LAYER OF BARK MULCH. SOIL AMENDMENTS WILL BE ADDED BASED ON SOIL LAB RECOMMENDATIONS TO ALL PLANTING AREAS DISTURBED BY CONSTRUCTION.

12. FIRE RESISTANT, DROUGHT TOLERANT SPECIES SHALL BE USED PER THE SAN MATEO COUNTY FIRE SAFE PLANT LIST. PROPOSED TREES SHALL BE LOCATED TO ENHANCE DEFENSIBLE SPACE AROUND THE PROPOSED BUILDINGS. EXISTING TREES TO REMAIN SHALL BE PRUNED PER THE ARBORIST REPORT TO ENHANCE DEFENSIBLE SPACE AROUND THE PROPOSED BUILDINGS.

13. PLANTING ALONG HILLSIDES SHALL BE SELECTED FOR SLOPE STABILIZATION

14. ALL PLANTING GROUPS ARE DESIGNED FOR WATER USE AND ARRANGED BY WATER HYDROZONES BASED ON WATER NEEDS.

15. *WATER USE RATING IS BASED ON WATER USE CLASSIFICATION OF LANDSCAPE SPECIES (WUCOLS), UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION. VL=VERY LOW, L=LOW, M=MEDIUM, H=HIGH

16. SCREENING IS DESIGNED TO MINIMIZE VIEWS TO EXTERIOR MECHANICAL AND ELECTRICAL EQUIPMENT, OUTDOOR STORAGE, TRASH ENCLOSURES AND NEIGHBORS PROPERTIES USING HEDGE OR TREE PLANTING, EARTH BERMS AND FENCES.

17. RETAINING WALLS OVER FOUR FEET IN HEIGHT AND PARKING AREAS SHALL BE SCREENED FROM DOWNSLOPE VIEW,

IRRIGATION DESIGN CRITERIA

1. IRRIGATION DESIGN TO COMPLY WITH ABA 1881 REQUIREMENTS, FOLLOW THE STATEWIDE MODEL ORDINANCE DESIGN GUIDELINES AND CITY REQUIREMENTS WITH USE OF WATER EFFICIENT LANDSCAPING AND LOW WATER-WISE PLANTS. ALL PLANTED AREAS SHOWN WILL BE IRRIGATED BY AN AUTOMATIC IRRIGATION SYSTEM.

2. THE IRRIGATED SYSTEMS WILL BE A PERMANENT BELOW GROUND AUTOMATED SYSTEMS ADEQUATE FOR THE ESTABLISHMENT AND MAINTENANCE OF ALL PLANT MATERIAL.

3. ALL TREE, SHRUB AND GROUNDCOVER AREAS WILL BE IRRIGATED BY A PERMANENT, AUTOMATIC, UNDERGROUND DRIP OR LOW FLOW IRRIGATION SYSTEM. TREE, SHRUB, AND GROUND COVER AREAS SHALL BE ON SEPARATE VALVES.

4. ALL IRRIGATION SYSTEMS SHALL BE DESIGNED, MAINTAINED AND MANAGED TO MEET OR EXCEED MINIMUM EFFICIENCY.

5. ALL IRRIGATION EQUIPMENT SHALL BE SCREENED APPROPRIATELY FROM VIEW IN PUBLIC AREAS.

6. THE FINAL IRRIGATION PLAN SHALL ACCURATELY AND CLEARLY IDENTIFY:
   A) LOCATION AND SIZE OF WATER METERS FOR THE LANDSCAPE.
   B) LOCATION, TYPE AND SIZE OF ALL COMPONENTS OF THE IRRIGATION SYSTEM, INCLUDING AUTOMATIC CONTROLLERS, MAIN AND LATERAL LINES, VALVES, SPRINKLER HEADS, RAIN SWITCHES, QUICK COUPLERS, AND BACKFLOW PREVENTION DEVICES.
   C) STATIC WATER PRESSURE AT THE POINT OF CONNECTION TO THE PUBLIC WATER SUPPLY.
   D) FLOW RATE (GALLONS PER MINUTE), AND REMOTE CONTROL VALVE SIZE.

7. QUICK COUPLERS WILL BE LOCATED AT EVERY 80 TO 100 FEET ALONG THE IRRIGATION MAIN LINE.

8. IRRIGATION SYSTEM AND FINAL DESIGN SHALL BE PROVIDED AT A LATER DATE.

9. IRRIGATION SYSTEM FEATURES EMPLOYED TO ACHIEVE WATER CONSERVATION GOALS INCLUDE:
   A) SMART IRRIGATION CONTROLLERS CAPABLE OF RESPONDING TO ON-SITE WEATHER CONDITIONS.
   B) CONTROLLERS WITH MULTIPLE PROGRAMS.
   C) WATERING SCHEDULES EMPLOYING SHORT CYCLES.
   D) RAIN SHUT-OFF DEVICES TO PREVENT IRRIGATION AFTER SIGNIFICANT PRECIPITATION.
   E) DRIP AND/OR BUBBLER IRRIGATION FOR SHRUBS AND TREES IN PLANTER AREAS WHICH HAVE A SHRUB DENSITY THAT WILL CAUSE EXCESSIVE SPRAY INTERFERENCE OF AN OVERHEAD SYSTEM.
   F) USE OF FLOW REDUCERS TO MITIGATE SPRAY OF BROKEN HEADS NEXT TO SIDEWALK, STREETS, AND DRIVEWAYS.

CAL GREEN NOTES

1. THIS LANDSCAPE PROJECT AREA COMPLIES WITH CAL GREEN SECTION 5.304 OUTDOOR WATER USE

2. THIS LANDSCAPE PROJECT AREA COMPLIES WITH CAL GREEN SECTION A5.304.4 POTABLE WATER REDUCTION

3. THIS LANDSCAPE PROJECT AREA COMPLIES WITH THE MODEL WATER EFFICIENT LANDSCAPE ORDINANCE

SHEET INDEX

SHEET #	SHEET TITLE
L0.0	LANDSCAPE NOTES
L0.1	LANDSCAPE LEGENDS
L0.2	LANDSCAPE LEGENDS
L1.0	OVERALL LANDSCAPE SITE PLAN
L1.1	LANDSCAPE LIGHTING PLAN
L1.2A	EXISTING TREE PLAN
L1.2B	TREE REMOVAL PLAN
L1.2C	TREE PRESERVATION PLAN
L1.2D	TREE PROPOSAL PLAN
L2.0	ENLARGEMENT PLAN
L2.1	ENLARGEMENT PLAN
L2.2	ENLARGEMENT PLAN
L2.3	ENLARGEMENT PLAN
L3.0	RETAINING WALL SECTION PLAN
L3.1	SITE SECTION
L3.2	SITE SECTIONS
L3.3	SITE SECTION
L4.0	OVERALL LANDSCAPE PLANTING
L6.0	SITE MATERIAL IMAGERY
L6.1	PLANT LEGEND AND IMAGERY
L6.2	PLANT LEGEND AND IMAGERY

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2	03/05/21	COMMENT RESPONSE	
3	01/28/22	PLANNING RESUBMITTAL	

DRAWN BY: JS/SM
PROJECT NUMBER: 19-098
SHEET ISSUE DATE: 09/15/20
SHEET TITLE:

LANDSCAPE NOTES

SHEET NUMBER

L0.0

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GENERAL LANDSCAPE PROJECT LEGEND

KEY	DESCRIPTION	DETAIL
L.O.W.	LIMIT OF WORK	
PL	PROPERTY LINE	
	MATCH LINE	
	EXISTING TREE TO REMAIN	
	EXISTING TREE REMOVAL	
	(E) POLE LIGHT LUMINAIRE	
	RESIDENTIAL POLE LIGHT LUMINAIRE, SED.	
	BOLLARD LIGHT LUMINAIRE, SED.	
XX / XX	DETAIL CALLOUT	
XX / XX	ELEVATION INDICATOR	
XX / XX	SECTION / ELEVATION DETAIL	
	TREE, REFER TO PLANTING PLAN	

LANDSCAPE MATERIAL LEGEND: 1" = 20'-0" SCALE

KEY	DESCRIPTION	DETAIL# / SHEET #
	CONCRETE SIDEWALK PAVING	1/L6.0
	EXPANSION JOINT W/ SEALANT (EJS)	NA
	TRUNCATED DOMES	7/L6.0
	UNIT PAVERS AT CROSSWALKS	6/L6.0
	METAL DECK STAIRS WITH HANDRAIL	2/L6.0
	WOOD TIMBER STEPS WITH STABILIZED DG INFILL	8/L6.0
	BIORETENTION AREA (BIO)	18-21 /L6.1
	GUARDRAILS AND RAILING	3/L6.0
	WETLAND	1-6/L6.2
	RAISED STORMWATER PLANTERS, (ON GRADE).	NA

SITE FURNISHING LEGEND

KEY	DESCRIPTION	DETAIL# / SHEET#
	BIKE RACKS	17/L6.0
	BUS SHELTER	21/L6.0

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LANDSCAPE LEGENDS

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PLANTING LEGEND	
KEY	DESCRIPTION
●	TREE PLANTING HOLE
00 | XXX XXX / X GAL	PLANT CALLOUT
GAL	GALLON SIZED PLANT
BOX	BOXED SIZE TREE
O.C.	ON CENTER SPACING
TYP.	TYPICAL

PLANTING HOLE SCHEDULE

TREES	WIDTH	DEPTH
36" BOX	6'-0" SQUARE	AS DETAILED
SHRUBS		
1 GALLON	1'-6" ROUND	AS DETAILED
5 GALLON	2'-0" ROUND	AS DETAILED
15 GALLON	4'-0" ROUND	AS DETAILED

TREE PLANTING SCHEDULE (WITH PERMANENT, BELOW GRADE EFFICIENT IRRIGATION SYSTEM)

KEY	BOTANICAL NAME	SIZE	HEIGHT	SPREAD	SAN MATEO FIRE SAFE LIST	WATER USE
ACE MAC	ACER MACROPHYLLUM	36" BOX	65'-0"	65'-0"	Y	M
AES CAL	AESCULUS CALIFORNICA	36" BOX	20'-0" TO 30'-0"	15'-0" TO 30'-0"	Y	VL
ARB MEN	ARBUTUS MENZIESII	36" BOX	15'-0" TO 60'-0"	15'-0" TO 50'-0"	Y	L
CER OCC	CERCIS OCCIDENTALIS	36" BOX	10'-0" TO 25'-0"	10'-0" TO 15'-0"	Y (AS SHRUB)	VL
LYO FLO	LYONOTHAMNUS FLORIBUNDUS SSP ASPLENIIFOLIUS	36" BOX	20'-0" TO 30'-0"	15'-0" TO 20'-0"	Y	L
PLA RAC	PLATANUS RACEMOSA	24" BOX	30'-0" TO 80'-0"	20'-0" TO 50'-0"	Y	M
QUE AGR	QUERCUS AGRIFOLIA	36" BOX	20'-0" TO 70'-0"	20'-0" TO 70'-0"	Y	VL
QUE KEL	QUERCUS KELLOGGII	36" BOX	30'-0" TO 50'-0"	15'-0" TO 30'-0"	Y	L

TERRASEED (WITH TEMPORARY, ABOVE GRADE, IRRIGATION SYSTEM FOR THE ESTABLISHED PERIOD 1 YEAR)		
	PACIFIC COAST SEED - NATIVE ORNAMENTAL FINE FESCUE MIX	SEED
	PACIFIC COAST SEED - STREAMBANK BIOSWALE MIX	SEED
	PACIFIC COAST SEED - UNION CITY HABITAT SEED MIX WITH FLOWERS	SEED

NOTE: TERRASEEDING™ IS A PATENTED PROCESS WHERE SEED IS INJECTED INTO COMPOSTED GROWING MEDIUM AS IT'S INSTALLED INTO PLACE WITH AN EXPRESS BLOWER TRUCK. THE SEED IS PLANTED RATHER THAN TOPICALLY APPLIED, AS IN HYDROSEED. THE SEEDER ON THE TRUCK IS CALIBRATED AND METERED TO ENSURE THE CORRECT SEED RATE. THIS APPLICATION IS PROPOSED FOR THIS SITE DUE TO ROCKY SOILS AND TO PROMOTE SUFFICENT GROWTH FOR THE GRASS SEEDLINGS TO ESTABLISH. THIS WILL REQUIRE A TEMPORARY IRRIGATION SYSTEM UNTIL THE SEED MIXTURE HAS ESTABLISHED (ONE YEAR +/-).

EXISTING PLANT AREA TO REMAIN

GENERAL

SHRUB AND GRASSES (WITH PERMANENT, BELOW GRADE, EFFICIENT, IRRIGATION SYSTEM)

SYMBOL	KEY	BOTANICAL NAME	SIZE	HEIGHT	SPREAD	SAN MATEO FIRE SAFE LIST	WATER USE
	BAC PIL	BACCHARIS PILULARIS 'PIGEON POINT'	5 GAL	1'-0" TO 2'-0"	8'-0" TO 10'-0"	Y	L
	CEA FOL	CEANOTHUS FOLIOSUS	5 GAL	2'-0" TO 3'-0"	4'-0" TO 6'-0"	Y	VL
	EPI CAN	EPILOBIUM CANUM	5 GAL	1'-0"	2'-0" TO 3'-0"	Y	L
	MON VIL	MONARDELLA VILLOSA	5 GAL	1'-0" TO 2'-0"	8'-0" TO 10'-0"	Y	VL
	PEN HET	PENSTEMON HETEROPHYLLUS	5 GAL	1'-2"	1'-2"	Y	L
	RAN CAL	RANUNCULUS CALIFORNICUS	5 GAL	2'-0"	2'-0"	Y	VL
	RHA CAL	RHAMNUS CALIFORNICA 'MOUND SAN BRUNO'	5 GAL	1'-0" TO 2'-0"	8'-0" TO 10'-0"	Y	L
	SAL SON	SALVIA SONOMENSIS MRS. BEARD	5 GAL	1'-0" TO 2'-0"	8'-0" TO 10'-0"	Y	L
	SAL SPA	SALVIA SPATHACEA	5 GAL	1'-0" TO 2'-0"	2'-0" TO 3'-0"	Y	L
		BACKYARDS					
	FES CAL	FESTUCA CALIFORNICA	5 GAL	2'-0"	2'-0"	Y	L
	IRI DOU	IRIS DOUGLASIANA	1 GAL	3'-0"	3'-0"	Y	L
	MUH RIG	MUHLENBERGIA RIGENS	5 GAL	4'-0" TO 5'-0"	4'-0" TO 6'-0"	Y	L
	POL MUN	POLYSTICHUM MUNITUM	5 GAL	2'-0" TO 3'-0"	2'-0" TO 4'-0"	Y	M
		SCREENING / EDGE					
	ARC SPP	ARCTOSTAPHYLOS SPP.	5 GAL	6'-0" TO 20'-0"	10'-0"	Y	L
	HET ARB	HETEROMELES ARBUTIFOLIA	5 GAL	6'-0" TO 30'-0"	10'-0" TO 15'-0"	Y	L

BIORETENTION (WITH PERMANENT, BELOW GRADE, EFFICIENT, IRRIGATION SYSTEM)

	ACH MIL	ACHILLEA MILLEFOLIUM	5 GAL	2'-0" TO 3'-0"	2'-0" TO 3'-0"	Y	L
	CAR TUM	CAREX TUMULICOLA	1 GAL	1'-0"	1'-0" TO 2'-0"	Y	L
	CAP CAL	CARPENTERIA CALIFORNICA	5 GAL	6'-0" TO 8'-0"	3'-0" TO 5'-0"	Y	M
	PHI LEW	PHILADELPHUS LEWISII	1 GAL	6'-0"	3'-0"	Y	M

WETLAND PLANTING (WITH PERMANENT, BELOW GRADE, EFFICIENT, IRRIGATION SYSTEM)

	ACH MIL	ACHILLEA MILLEFOLIUM	10 GAL	2'-0" TO 3'-0"	1'-0" TO 2'-0"	Y	L
	CAR BAR	CAREX BARBARAE	15 GAL	1'-0" TO 3'-0"	1'-0" TO 2'-0"	Y	L
	JUN EFF	JUNCUS EFFUSUS	15 GAL	2'-0" TO 4'-0"	2'-0" TO 4'-0"	Y	L
	JUN PAT	JUNCUS PATENS	15 GAL	2'-0" TO 4'-0"	2'-0" TO 4'-0"	Y	L
	SIS CAL	SISYRINCHIUM CALIFORNICUM	15 GAL	6" TO 2'-0"	6" TO 2'-0"	Y	L
	TYP DOM	TYPHA DOMINGENSIS	15 GAL	4'-0" TO 12'-0"	VARIES	Y	L

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REGISTERED LANDSCAPE ARCHITECT
SCOTT C. MURPHY
C 4980
08/31/23
01/28/22
STATE OF CALIFORNIA

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LANDSCAPE LEGENDS

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FOR ADDITIONAL INFORMATION, NOTES, LEGEND AND SCHEDULES, REFER TO SHEETS L0.0, L0.1, L0.2,

SCALE: 1"=50'-0"

0' 20' 50' 100'

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Phone: 650.482.6300

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#	DATE	ISSUES & REVISIONS	BY
1	09/15/20	PLANNING RESUBMITTAL	
2	03/05/21	COMMENT RESPONSE	
3	01/28/22	PLANNING RESUBMITTAL	

DRAWN BY: JS/SM
PROJECT NUMBER: 19-098
SHEET ISSUE DATE: 09/15/20
SHEET TITLE:

OVERALL LANDSCAPE SITE PLAN

SHEET NUMBER

L1.0

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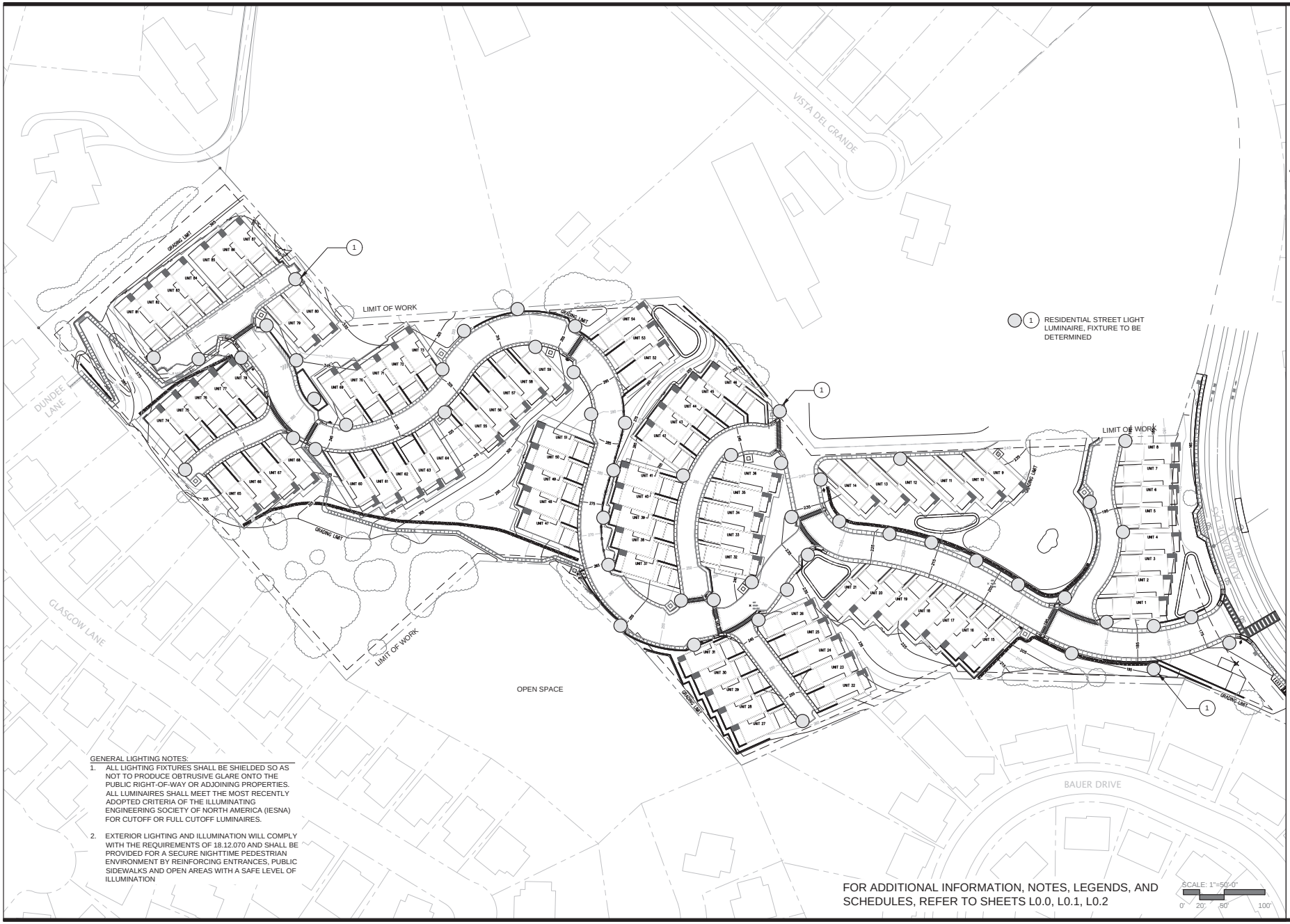

GENERAL LIGHTING NOTES:

1. ALL LIGHTING FIXTURES SHALL BE SHIELDED SO AS NOT TO PRODUCE OBTRUSIVE GLARE ONTO THE PUBLIC RIGHT-OF-WAY OR ADJOINING PROPERTIES. ALL LUMINAIRES SHALL MEET THE MOST RECENTLY ADOPTED CRITERIA OF THE ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA) FOR CUTOFF OR FULL CUTOFF LUMINAIRES.

2. EXTERIOR LIGHTING AND ILLUMINATION WILL COMPLY WITH THE REQUIREMENTS OF 18.12.070 AND SHALL BE PROVIDED FOR A SECURE NIGHTTIME PEDESTRIAN ENVIRONMENT BY REINFORCING ENTRANCES, PUBLIC SIDEWALKS AND OPEN AREAS WITH A SAFE LEVEL OF ILLUMINATION

FOR ADDITIONAL INFORMATION, NOTES, LEGENDS, AND SCHEDULES, REFER TO SHEETS L0.0, L0.1, L0.2

SCALE: 1"=50'-0"
0' 20' 50' 100'

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REGISTERED LANDSCAPE ARCHITECT
SCOTT C. MEURER
C 4980
08/31/23
01/28/22
STATE OF CALIFORNIA

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3	01/28/22	PLANNING RESUBMITTAL	

DRAWN BY: JS/SM
PROJECT NUMBER: 19-098
SHEET ISSUE DATE: 09/15/20
SHEET TITLE:

LANDSCAPE LIGHTING PLAN

SHEET NUMBER

L1.1

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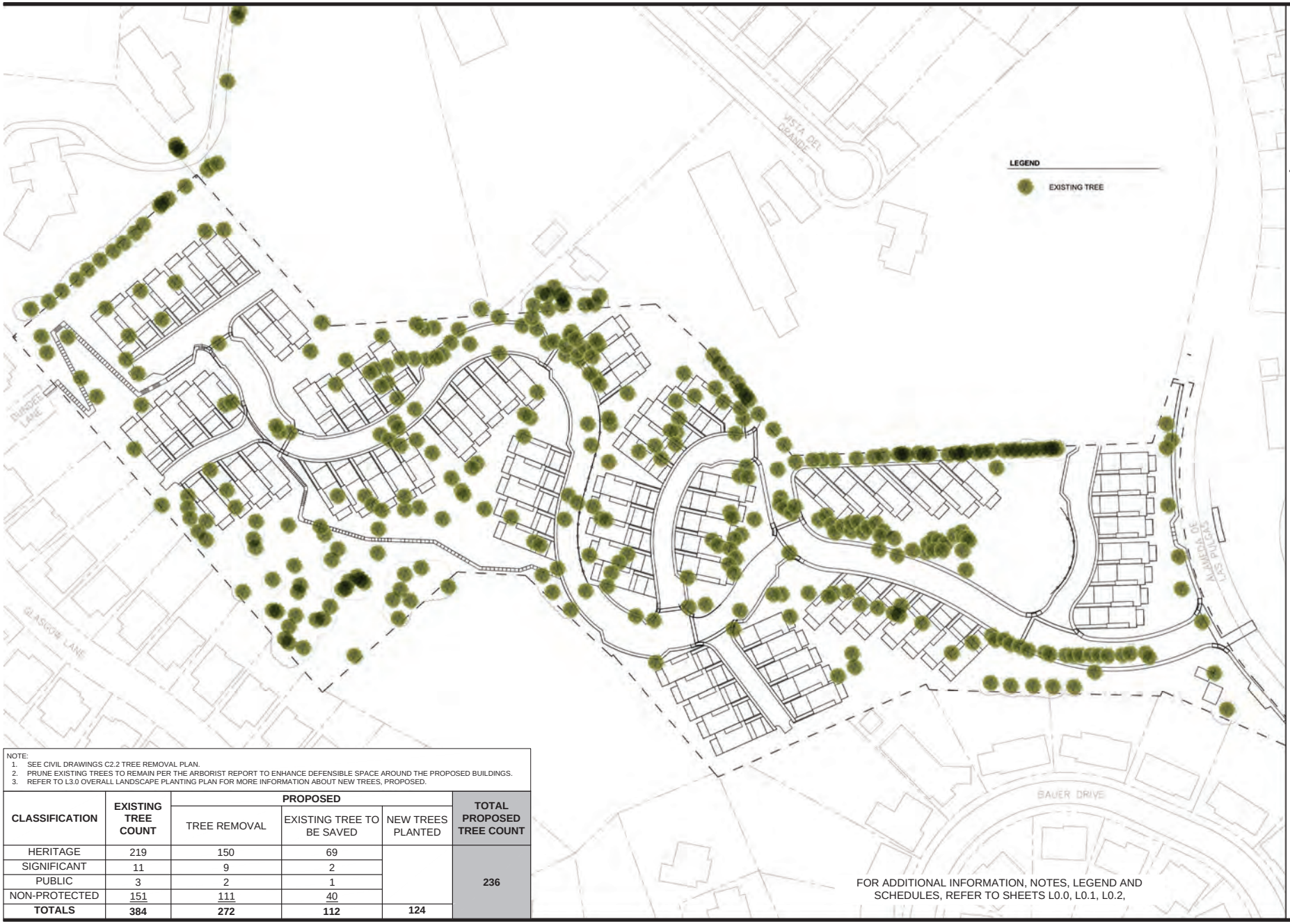

NOTE:
1. SEE CIVIL DRAWINGS C2.2 TREE REMOVAL PLAN.
2. PRUNE EXISTING TREES TO REMAIN PER THE ARBORIST REPORT TO ENHANCE DEFENSIBLE SPACE AROUND THE PROPOSED BUILDINGS.
3. REFER TO L3.0 OVERALL LANDSCAPE PLANTING PLAN FOR MORE INFORMATION ABOUT NEW TREES, PROPOSED.

CLASSIFICATION	EXISTING TREE COUNT	PROPOSED			TOTAL PROPOSED TREE COUNT
		TREE REMOVAL	EXISTING TREE TO BE SAVED	NEW TREES PLANTED	
HERITAGE	219	150	69		
SIGNIFICANT	11	9	2		
PUBLIC	3	2	1		236
NON-PROTECTED	151	111	40		
TOTALS	**384**	**272**	**112**	**124**	

FOR ADDITIONAL INFORMATION, NOTES, LEGEND AND SCHEDULES, REFER TO SHEETS L0.0, L0.1, L0.2,

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0' 20' 50' 100'

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REGISTERED LANDSCAPE ARCHITECT
SCOTT C. MEADOWS
C 4980
08/31/23
01/28/22
STATE OF CALIFORNIA

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3	01/28/22	PLANNING RESUBMITTAL	

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PROJECT NUMBER: 19-098
SHEET ISSUE DATE: 09/15/20
SHEET TITLE:

EXISTING TREE PLAN

SHEET NUMBER

L1.2A

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NOTE:
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3. REFER TO L3.0 OVERALL LANDSCAPE PLANTING PLAN FOR MORE INFORMATION ABOUT NEW TREES, PROPOSED.

CLASSIFICATION	EXISTING TREE COUNT	PROPOSED			TOTAL PROPOSED TREE COUNT
		TREE REMOVAL	EXISTING TREE TO BE SAVED	NEW TREES PLANTED	
HERITAGE	219	150	69		
SIGNIFICANT	11	9	2		
PUBLIC	3	2	1		236
NON-PROTECTED	151	111	40		
TOTALS	**384**	**272**	**112**	**124**	

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PROJECT NUMBER: 19-098
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SHEET TITLE:

TREE REMOVAL PLAN

SHEET NUMBER

L1.2B

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3. REFER TO L3.0 OVERALL LANDSCAPE PLANTING PLAN FOR MORE INFORMATION ABOUT NEW TREES, PROPOSED.

CLASSIFICATION	EXISTING TREE COUNT	PROPOSED			TOTAL PROPOSED TREE COUNT
		TREE REMOVAL	EXISTING TREE TO BE SAVED	NEW TREES PLANTED	
HERITAGE	219	150	69		
SIGNIFICANT	11	9	2		
PUBLIC	3	2	1		236
NON-PROTECTED	151	111	40		
TOTALS	**384**	**272**	**112**	**124**	

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SCALE: 1"=50'-0"
0' 20' 50' 100'

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REGISTERED LANDSCAPE ARCHITECT
SCOTT C. MEURETT
C 4980
08/31/23
01/28/22
STATE OF CALIFORNIA

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DRAWN BY: JS/SM
PROJECT NUMBER: 19-098
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TREE PRESERVATION PLAN

SHEET NUMBER

L1.2C

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CLASSIFICATION	EXISTING TREE COUNT	PROPOSED			TOTAL PROPOSED TREE COUNT
		TREE REMOVAL	EXISTING TREE TO BE SAVED	NEW TREES PLANTED	
HERITAGE	219	150	69		
SIGNIFICANT	11	9	2		
PUBLIC	3	2	1		236
NON-PROTECTED	151	111	40		
TOTALS	**384**	**272**	**112**	**124**	

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TREE PROPOSAL PLAN

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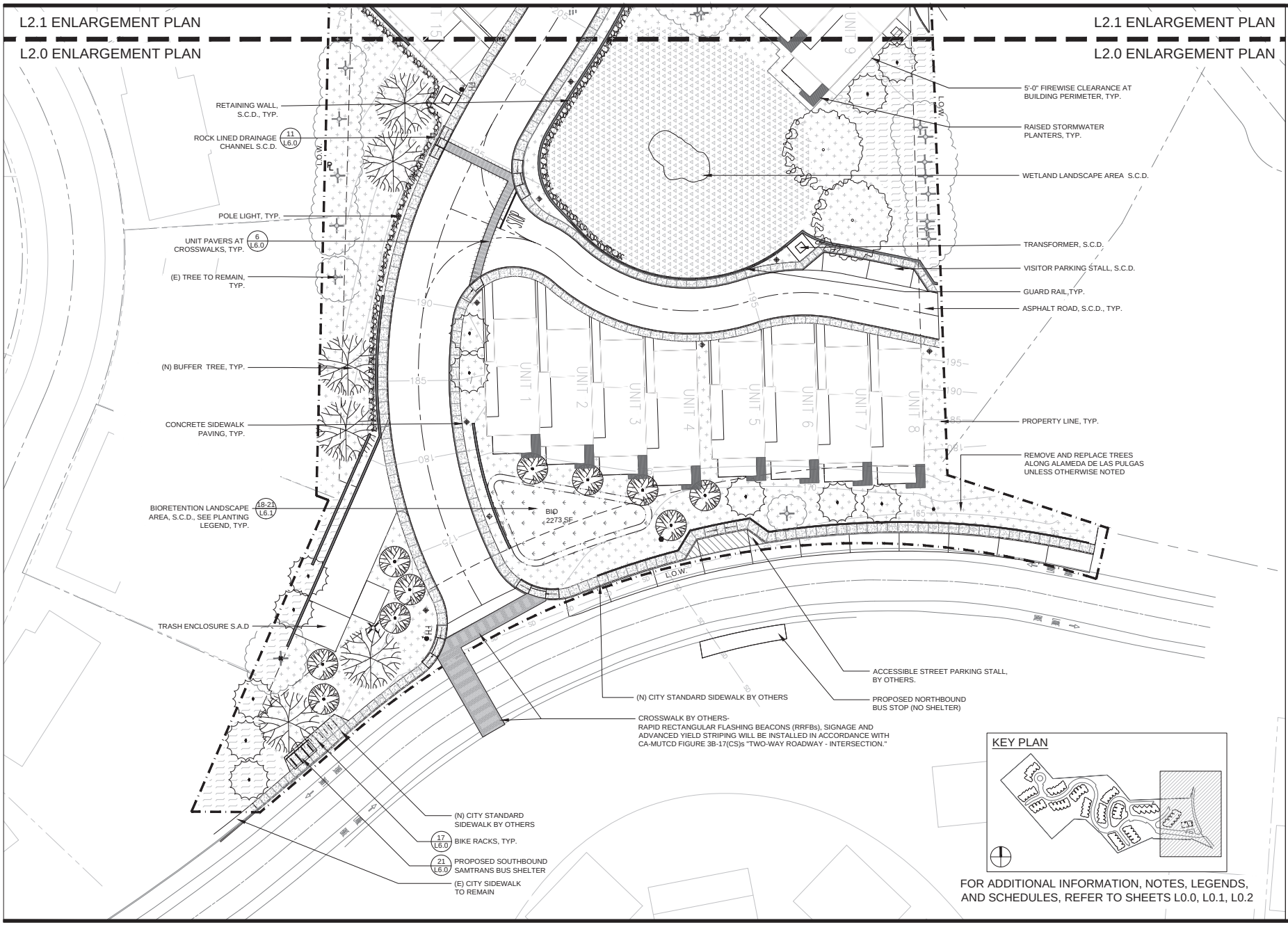
L2.1 ENLARGEMENT PLAN

L2.0 ENLARGEMENT PLAN

L2.1 ENLARGEMENT PLAN

L2.0 ENLARGEMENT PLAN



KEY PLAN

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0' 10' 20' 40'

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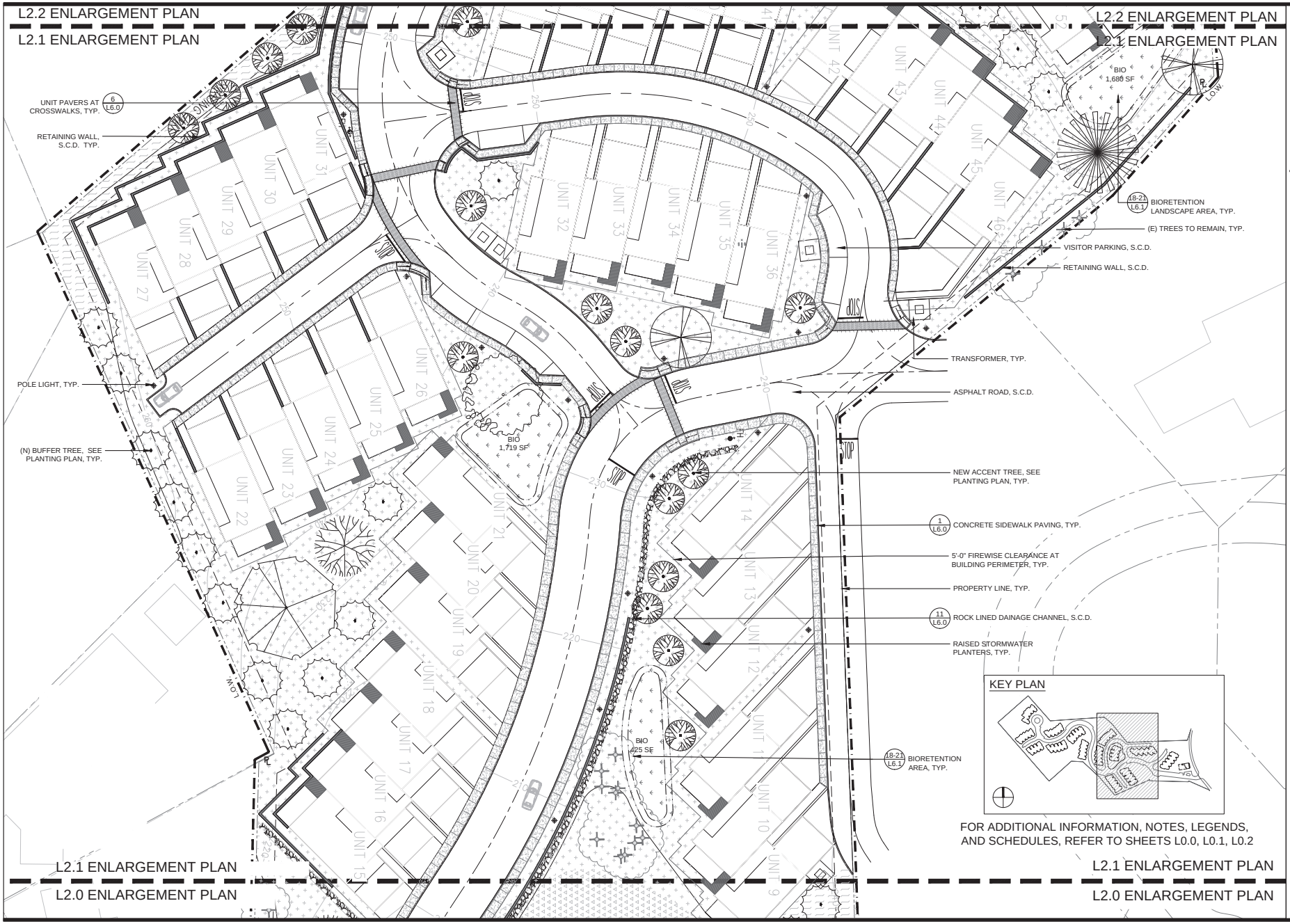

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SCALE: 1"=20'-0"
0' 10' 20' 40'

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REGISTERED LANDSCAPE ARCHITECT
SCOTT C. MEDBERY
C 4980
08/31/23
01/28/22
STATE OF CALIFORNIA

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ENLARGEMENT PLAN

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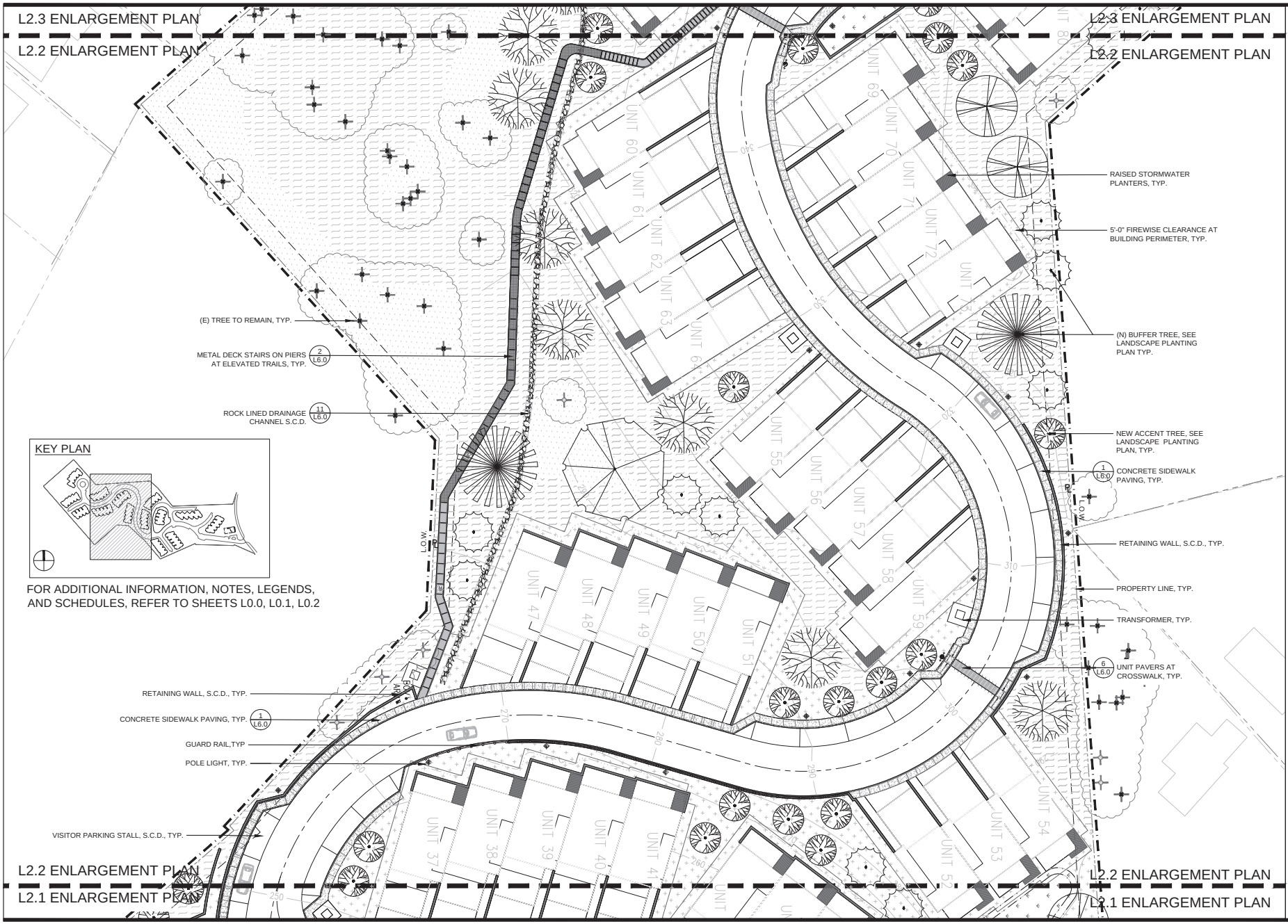

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SCALE: 1"=20'-0"
0' 10' 20' 40'

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REGISTERED LANDSCAPE ARCHITECT
SCOTT C. MULHOLLAND
C 4980
08/31/23
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ENLARGEMENT PLAN

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L2.2

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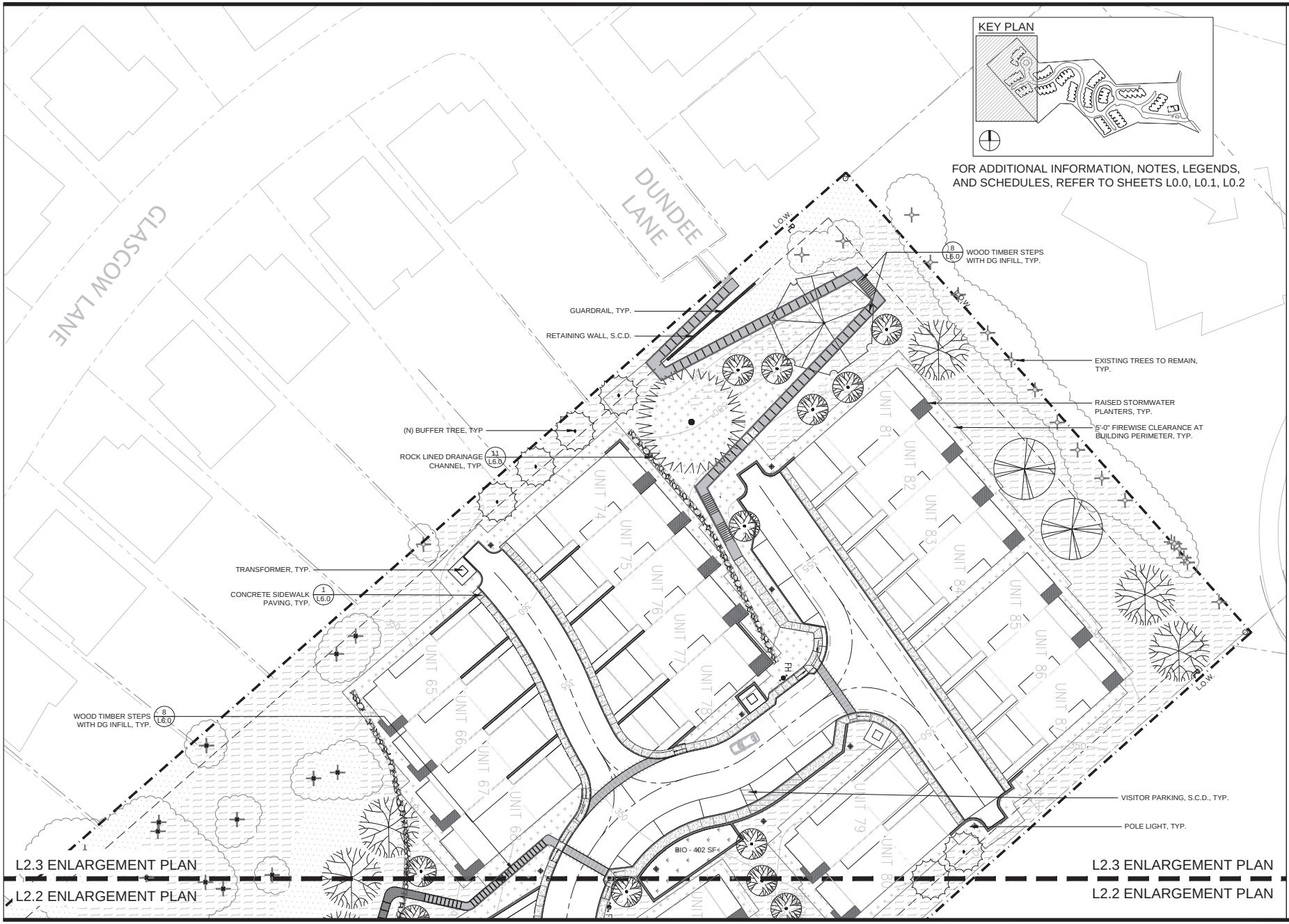

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SCALE: 1"=50'-0"
0' 20' 50' 100'

STAMP

REGISTERED LANDSCAPE ARCHITECT
SCOTT C. MULHOLLAND
C 4980
Signature 08/31/23
Renewal Date 01/28/22
Date
STATE OF CALIFORNIA

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DRAWN BY: JS/SM
PROJECT NUMBER: 19-098
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RETAINING WALL SECTIONS

SHEET NUMBER
L3.0

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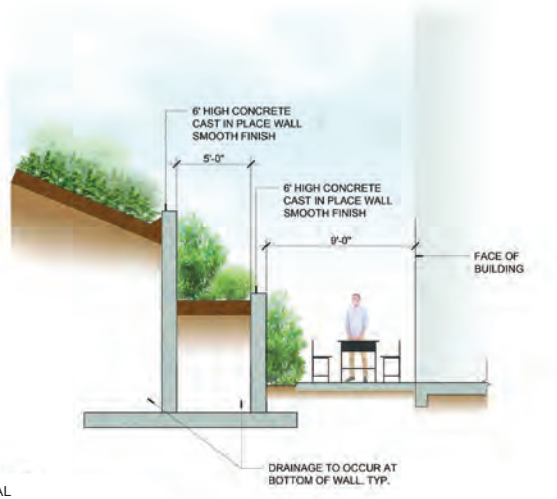
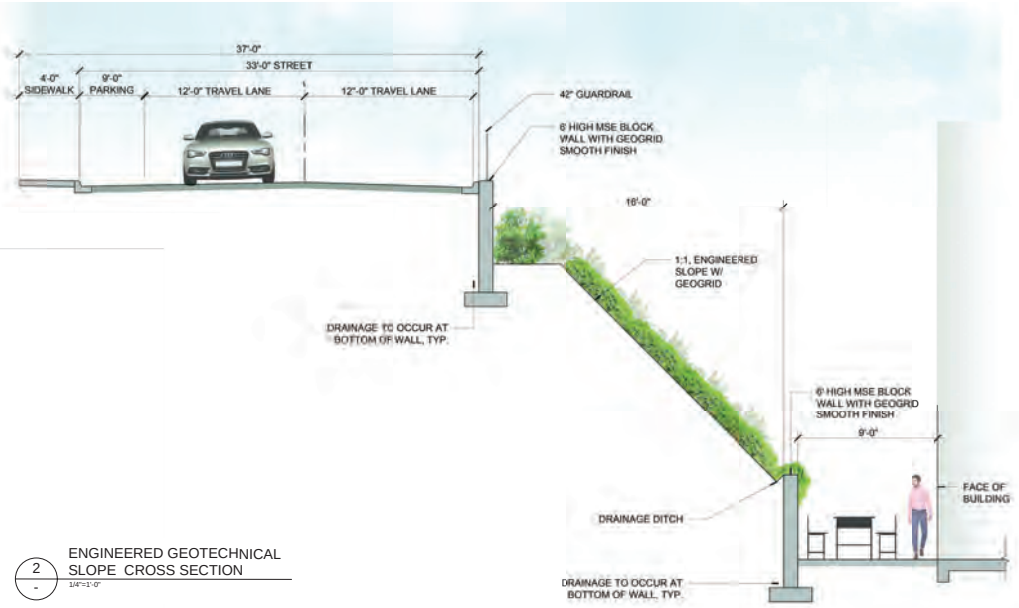


1 - ENGINEERED GEOTECHNICAL SLOPE CROSS SECTION
1/4"=1'-0"



2 - ENGINEERED GEOTECHNICAL SLOPE CROSS SECTION
1/4"=1'-0"

NOTE: SEE SHEET L3.0 FOR SECTION CUT LOCATIONS

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SCALE: 1"=50'-0"
0' 20' 50' 100'

STAMP

REGISTERED LANDSCAPE ARCHITECT
SCOTT C. MEDBERY
C 4980
08/31/23
01/28/22
STATE OF CALIFORNIA

#	DATE	ISSUES & REVISIONS	BY
1	09/15/20	PLANNING RESUBMITTAL	
2	03/05/21	COMMENT RESPONSE	
3	01/28/22	PLANNING RESUBMITTAL	

DRAWN BY: JS/SM
PROJECT NUMBER: 19-098
SHEET ISSUE DATE: 09/15/20
SHEET TITLE:

RETAINING WALL SECTIONS

SHEET NUMBER

L3.1

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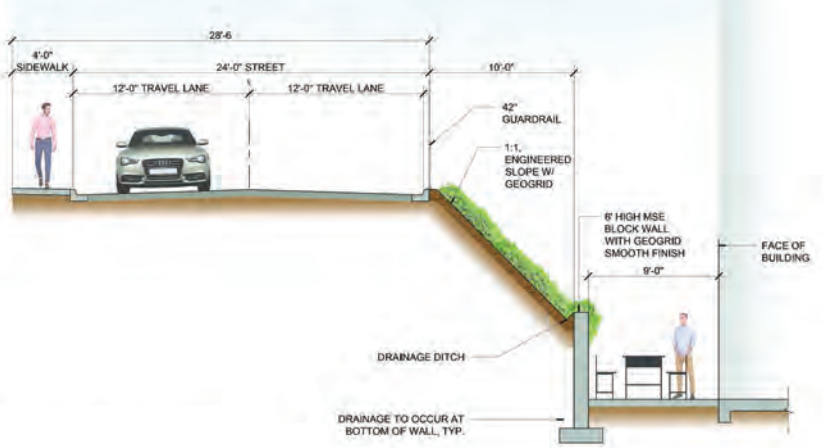

3 ENGINEERED GEOTECHNICAL SLOPE CROSS SECTION
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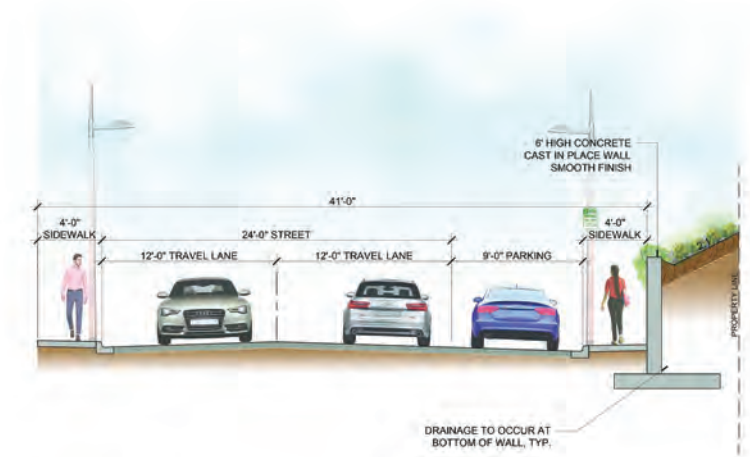
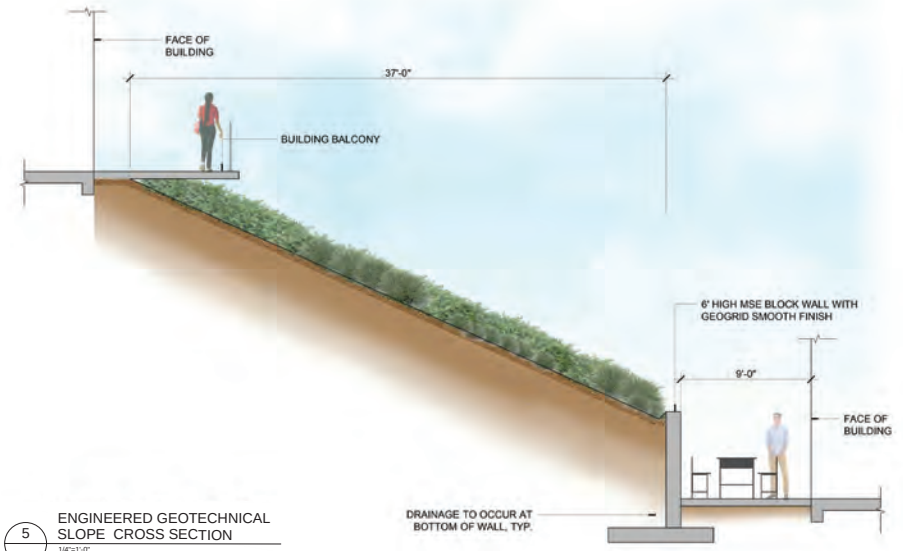


4 — ENGINEERED GEOTECHNICAL SLOPE CROSS SECTION
1/4"=1'-0"



5 — ENGINEERED GEOTECHNICAL SLOPE CROSS SECTION
1/4"=1'-0"

NOTE: SEE SHEET L3.0 FOR SECTION CUT LOCATIONS

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SHEET NUMBER

L3.3

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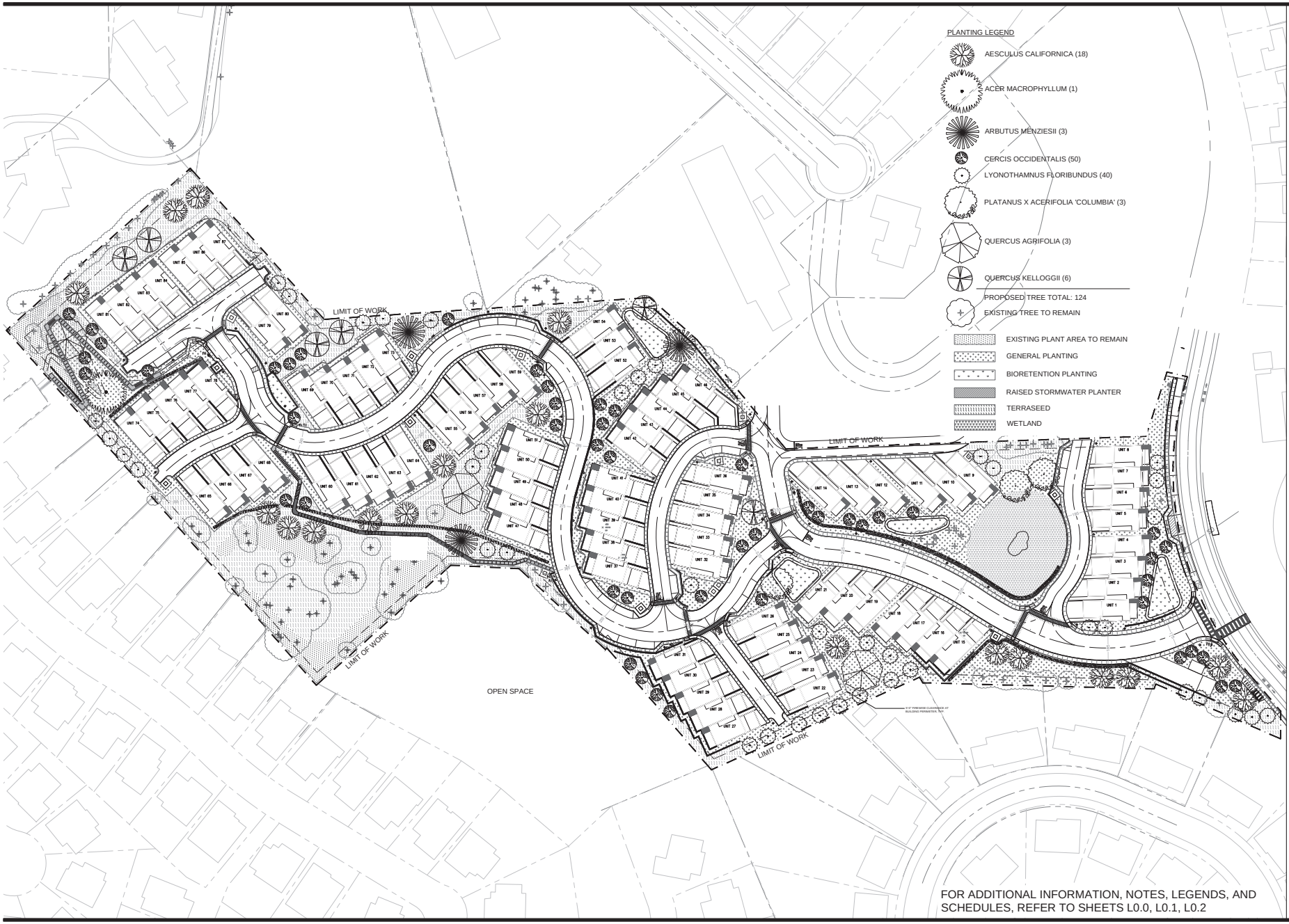
NOTE: SEE SHEET L3.0 FOR SECTION CUT LOCATIONS



FOR ADDITIONAL INFORMATION, NOTES, LEGENDS, AND SCHEDULES, REFER TO SHEETS L0.0, L0.1, L0.2

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OVERALL LANDSCAPE PLANTING PLAN

SHEET NUMBER

L4.0

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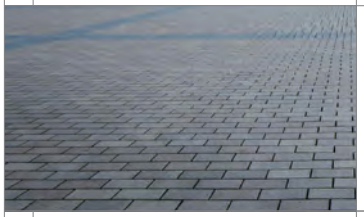
1 CONCRETE SIDEWALK PAVING

2 METAL DECK STAIRS WITH HANDRAILS

3 GUARDRAILS AND RAILINGS

4

5



6 UNIT PAVERS AT CROSSWALKS

7

8 WOOD TIMBER STEPS WITH DG INFILL

9

10

11 ROCK LINED DRAINAGE CHANNEL

12

13

14

15

16 BOARD FORM CONCRETE RETAINING WALL

17 BIKE RACKS

18

19

20

21 BUS SHELTER (PRECEDENT)

22

23

24

25

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SITE MATERIAL IMAGERY

SHEET NUMBER

L6.0

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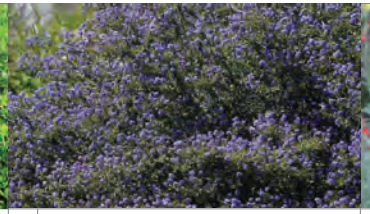
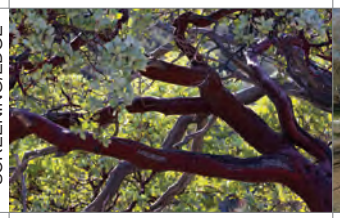
				SHRUBS & GRASSES					
1	NOT USED	2	NOT USED	3	BACCHARIS PILULARIS 'PIGEON POINT'	4	CEANOTHUS FOLIOSUS	5	EPIBOLIUM CANUM
6	MONARDELLA VILLOSA	7	PENSTEMON HETEROPHYLLUS	8	RANUNCULUS CALIFORNICUS	9	RHAMNUS CALIFORNICA 'MOUND SAN BRUNO"	10	SALVIA SONOMENSIS 'MRS. BEARD'
		BACKYARDS							
11	SALVIA SPATHACEA	12	FESTUCA CALIFORNICA	13	IRIS DOUGLASIANA	14	MUHLENBERGIA RIGENS	15	POLYSTICHUM MUNITUM
SCREENING/EDGE 									
16	ARCTOSTAPHYLOS SPP.	17	HETEROMELES ARBUTIFOLIA						
BIORETENTION									
18	ACHILLEA MILLEFOLIUM	19	CAREX TUMULICOLA	20	CARPENTERIA CALIFORNICA	21	PHILADELPHUS LEWISII		

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PLANT LEGEND AND IMAGERY

SHEET NUMBER

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WETLAND

1 ACHILLEA MILLEFOLIUM

2 CAREX BARBARAE

3 JUNCUS EFFUSUS

4 JUNCUS PATENS

5 SISYRINCHIUM CALIFORNICUM

6 TYPHA DOMINGENSIS

TREES

7 ACER MACROPHYLLUM

8 AESCULUS CALIFORNICA

9 ARBUTUS MENZIESII

10 CERCIS OCCIDENTALIS

11 LYONOTHAMNUS FLORIBUNDUS SSP ASPLENIIFOLIUS

12 PLATANUS RACEMOSA

13 QUERCUS AGRIFOLIA

14 QUERCUS KELLOGGII

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APPENDIX C

AIR QUALITY AND GREENHOUSE GAS MODELING

Assumptions Worksheet

CalEEMod Inputs - 808 Alameda de Las Pulgas Townhome Development, Construction

COSC-07.0

Name:	808 Alameda de Las Pulgas Townhome Development
Project Number:	COSC-07
Project Location:	West of the intersection of Castor Road and Alameda De Las Pulgas
County:	San Mateo
Climate Zone:	5
Land Use Setting:	Urban
Operational Year:	2026
Utility Company:	Peninsula Clean Energy CCA
Air Basin:	San Francisco Bay Area Air Basin (SFBAAB)
Air District:	Bay Area Air Quality Management District (BAAQMD)

Proiect Site Acreage	11.95
Disturbed Site Acreage	11.95

Demolition*	**Tons**
Existing House 1	70
Existing House 2	113
Existing House 3	68
Buidling Demo Total	**251**
Asphalt Demo	1,140
Total Demolition	**1,391**

*Demolition volumes provided by the Applicant

New Construction	**Total SQFT[1]**	**Acres**	**Building Footprint**	**Number of Dwelling Units**	**Stories/Levels**
Townhouse Type A1	54,984	0.44	18,984	12	3
Townhouse Type A2	18,728	0.15	6,524	4	3
Townhouse Type A3	19,216	0.15	6,620	4	3
Townhouse Type B1	122,388	1.05	45,780	28	3
Townhouse Type B2	35,440	0.31	13,504	8	3
Townhouse Type B3	35,888	0.31	13,528	8	3
Townhouse Type C1	62,634	0.49	21,242	13	3
Townhouse Type C2	24,375	0.19	8,455	5	3
Townhouse Type C3	24,925	0.19	8,445	5	3
Trash Enclosure	420	0.01	420	NA	
Total Residential	**398,998**	**3.29**	**143,502**	**87**	
Parking Lot	6,336	0.15	NA	32 Stalls	
Total Other Asphalt Surfaces	75,053	1.72	NA	NA	
Total Hardscape	72,821	1.67	NA	NA	
Total Landscape	223,143	5.12	NA	NA	
Total Other Non-Asphalt Surfaces	**295,964**	**6.79**			

Notes:

[1] Square footage includes the garages for each townhouse.

CalEEMod Land Use Inputs

Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	Land Use Square Feet
Residential	Condo/townhouse high rise	87	Dwelling Units	3.29	398,998
Parking	Parking Lot	6.3	1000 sqft	0.15	6,336
Parking	Other Asphalt Surfaces	75.1	1000 sqft	1.72	75,053
Parking	Other Non-asphalt Surfaces	296.0	1000 sqft	6.79	295,964
				11.96	**776351**

Demolition

Component	Amount to be Demolished (Tons)	Haul Truck Capacity (tons)[1]	Haul Distance (miles)[2]	Total Trip Ends	Total Days	Trip Ends/ day
Building	251	7	13	72	15	5
Asphalt	1,140	7	13	326	10	33
Total	1,391			398		

Notes:

[1] Haul truck capacity provided by Applicant.

[2] Haul distance to Ox Mountain Landfill in Half Moon Bay provided by Applicant.

Soil Haul[1]

Construction Activities	Haul Truck Capacity (CY)[1]	Volume (CY)[2]	Haul Distance (miles)[2]	Total Trip Ends	Total Days	Trip Ends/Day
Site Preperation	12	3,000	13	500	10	50
Rough Grading	12	30,200	13	5,034	98	52
Fine Grading	12	2,000	13	334	43	8
		35,200		**5,868**		

Notes:

[1] Haul truck capacity provided by Applicant.

[2] Haul volumes provided by the Applicant.

[2] Haul distance to Ox Mountain Landfill in Half Moon Bay provided by Applicant.

Architectural Coating[1]

	Percent Painted[1]
Interior:	0%
Exterior:	0%
Parking Lot	100%
Trash Enclosure (Interior)	0%
Trash Enclosure (Exterior)	20%

Notes:

1 Veev panelized building system does not use paint on exteriors/interiors.

BAAQMD Rule 1113

	VOC Content (grams/liter)
Interior	100
Exterior	150
Trash Enclosure Exterior	250

Residential Structures	Land Use Square Feet	CalEEMod Factor[2]	Total Paintable Surface Area	Paintable Interior Area[1]	Paintable Exterior Area[1]
Residential Housing	398,578	2.7	1,076,161	0	0
Trash Enclosure	420	2.0	840	0	42
				0	**42**
Parking[3]					
Parking Lot	6,336	6%	380	-	380
					380

Notes:

1 CalEEMod methodology calculates the paintable interior and exterior areas by multiplying the total paintable surface area by 75 and 25 percent, respectively.

2 The program assumes the total surface for painting equals 2.7 times the floor square footage for residential and 2.0 times that for nonresidential square footage defined by the user.

3 Architectural coatings for the parking lot is based on CalEEMod methodology applied to a surface parking lot (i.e., striping), in which 6% of surface area is painted.

Peninsula Clean Energy CCA Carbon Intensity Factors

	lbs/MwH
CO_2:[1]	0
CH_4:[1]	0
N_2O:[1]	0

Notes:

[1] Peninsula Clean Energy Authority, 2020 Power Content Label.https://www.peninsulacleanenergy.com/wp-content/uploads/2021/09/2020-Power-Content-Label-pdf.pdf

BAAQMD Construction BMPs

Replace Ground Cover	PM10:	5	% Reduction
Replace Ground Cover	PM2.5:	5	% Reduction
Water Exposed Area	Frequency:	2	per day
	PM10:	55	% Reduction
	PM25:	55	% Reduction
Unpaved Roads	Vehicle Speed:	15	mph
	Clean Paved Road	9	% PM Reduction

CalEEMod Inputs - 808 Alameda de Las Pulgas Townhome, Net Operations

Name:	808 Alameda de Las Pulgas Townhome Development
Project Number:	COSC-07
Project Location:	West of the intersection of Castor Road and Alameda De Las Pulgas
County:	San Mateo
Climate Zone:	5
Land Use Setting:	Urban
Operational Year:	2026
Utility Company:	Peninsula Clean Energy CCA
Air Basin:	San Francisco Bay Area Air Basin (SFBAAB)
Air District:	Bay Area Air Quality Management District (BAAQMD)

Proiect Site Acreage	11.96
Disturbed Site Acreage	11.96

CalEEMod Land Use Inputs

Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	Land Use Square Feet
Residential	Condo/townhouse high rise	87	Dwelling Units	3.29	398,998
Parking	Parking Lot	6.3	1000 sqft	0.15	6,336
Parking	Other Asphalt Surfaces	75.1	1000 sqft	1.72	75,053
Parking	Other Non-asphalt Surfaces	296.0	1000 sqft	6.79	295,964
				11.96	

Net Trips

Land Use Type	Average Daily Trips	CalEEMod Trip Rate	Saturday Trips[1]	CalEEMod Trip Rate	Sunday Trips[1]	CalEEMod Trip Rate
Condo/Townhouse high rise	638	**7.33**	638	**7.33**	638	**7.33**

Notes:

[1] Assumes that Saturday and Sunday trips are the same as weekday trips.

	TAZ VMT	Project VMT
Population	3,460	220
Weekday VMT[1]	61,934	3,940
VMT per Service Population (SP)[1]	17.9	17.9

[1] *includes TDM reduction measures (15.5%)*

Notes:

[1] The proposed 87 affordable and market-rate units would host 220 number of residents on the proposed development, based on an average of a 2.53-person household size within the City of San Carlos.

Source: CHS Consulting Group. 2022, January 22 (Updated). 806 Alameda de las Pulgas Transportation Impact Analysis Final Report.

Trips	Average Trip Length (mi/trip)	Annual Vehicle Miles Traveled[1]
Condo/Townhouse high rise	**6.18**	**1,434,149**

Notes:

[1] Annual VMT is calculated based on weekday VMT x 364 days per year.

	Trip Type Percentages		
	Primary	**Diverted**	**Passby**
Condo/Townhouse high rise	86%	11%	3%
Adjusted Trip Type Percentages	**100%**	**0%**	**0%**

Fireplaces

**would be all electric*

Water Use[1,2]

Land Use	Net Increase in gallons/day	Net Increase in gallons/year
Indoor[3]	11,458	4,182,170
Outdoor[4]	3,009	1,098,285
Total:	**14,467**	**5,280,455**

Source PlaceWorks. 2022. 808 Alameda de las Pulgas Townhome Development Project Draft EIR: Section 4.17, Utilities and Service Systems.

Notes:

[1] Assumes 100% aerobic treatment.

[2] Wastewater is treated by the Silicon Valley Clean Water (SVCW) treatment plant, which currently collects and treats wastewater for San Mateo and Santa Clara counties.

[3] Calculations for indoor water use was based on 120 gallons per day per unit.

[4] Outdoor water use for the proposed project based on DWR Water Budget spreadsheet for new and rehabilitated residential landscapes assuming 203,113 square feet of new landscaping.

Solid Waste to Landfills

Land Use	Net Total Solid Waste (lbs/person/day)	Net Total Solid Waste (lbs/day)[1]	Net Total Solid Waste (tons/yr)
Condo/Townhouse	2.71	596.20	109

Source PlaceWorks. 2022. 808 Alameda de las Pulgas Townhome Development Project Draft EIR: Section 4.17, Utilities and Service Systems.

Notes:

[1] The proposed 87 affordable and market-rate units would host 220 number of residents on the proposed development, based on an average of a 2.53-person household size within the City of San Carlos.

Architectural Coating see Construction Assumptions

Fuel Switching - 100% Electricity - Changes to CalEEMod defaults

Modeling is conservative because it is based on the Electricity and Natural Gas Energy Intensity default information from CalEEMod, which complies with 2019 Building Energy Efficiency Standards.

Table A-9 shows average energy use rates per dwelling unit or area for major natural gas commercial and residential end uses. Any full or partial reduction in natural gas end uses or appliance types can be estimated by multiplying the percentage of natural gas reduction by the percent of total natural gas consumption for a given gas appliance. That reduction percentage can then be subtracted from an existing total gas consumption rate (e.g. CalEEMod default energy use intensities). The additional electricity use can be estimated by multiplying the electric energy use rate by the number of dwelling units or commercial square footage and adding this to the CalEEMod® default total electricity consumption rate. For example, a single family residence that complies with BMP 1 would remove all natural gas use from the CalEEMod® default ("Title 24" and "Non-Title 24" natural gas categories) and add 4,650 kWh to the electricity total. In contrast, a residence that keeps natural gas cooking would use Table A-9 to show that it should keep 9% of the CalEEMod® default natural gas use and should add (4,650 minus 310 equals 4,340) 4,340 kWh to the electricity total.

Source Sacramento Metropolitan Air Quality Management District (SCAQMD). 2020, June 1. Greenhouse Gas Thresholds for Sacramento County. Table A-9, Increases in Electricity Use to Replace Natural Gas Greenhouse Gas CEQA Thresholds Update Sacramento County, California.

Commercial Energy Use Categories

	Percent of Annual Energy - Gas[1]	Energy Use Index (KwH/ksf/yr)
Water Heaters	31%	341
Space Heaters	44%	1037
Cooking (Oven + Cooktop)	18%	666
Total	93%	2044

Notes

1 This demonstrates that the majority of natural gas use in commercial buildings (93%) is accounted for by these three appliance groups. Due to differences in efficiency between electric and natural gas appliances, the relative amount of energy used for each appliance group may vary if applied to electricity consumption.

Residential Energy Use Categories				
	Percent of Annual Energy - Gas			
	Single Family	Townhomes	Low-Rise Apartments (2-4 Unit buildings)	Mid-Rise Apartments (5+ Units buildings)
Water Heaters	47%	68%	65%	75%
Space Heaters	44%	21%	24%	13%
Cooking (Oven + Cooktop)	9%	11%	11%	12%
Total	100%	100%	100%	100%
	Energy Use Index (KwH/DU/yr)			
	Single Family	Townhomes	Low-Rise Apartments (2-4 Unit buildings)	Mid-Rise Apartments (5+ Units buildings)
Water Heaters	3,169	2,190	1,301	1,543
Conventional Heat	1,171	501	552	570
Cooking (Oven + Cooktop)	310	234	218	165
Water Heater (Electric Backup)	*1,877*	*2,075*		
Heat Pump	*994*	*320*	*324*	*522*
Total (Water Heater, Conventional Heat, Cooking)[1]	4,650	2,925	2,071	2,278

Notes

1 For residential projects that comply with BMP 1, the electricity use rates should be increased by this total per DU. For projects that do not comply with BMP 1 and instead commit to one or two of the appliance groups to be electric, the electricity use can be increased by just the rate shown for the relevant appliance groups and the natural gas use can be reduced by the percent of natural gas from the appliance groups shown above. Heat pumps are more efficient than conventional electric heating, so projects that plan to use heat pumps can use the heat pump values instead of the conventional heat values.

2 Space heating and water heating are included in the Title 24 electricity and Title 24 natural gas energy usage categories of CalEEMod, while cooking and appliances are included in the non-title 24 electricity and natural gas energy usage categories.

Additional Electricity Demand from Fuel Switching

Townhomes	Kwh/DU/Yr	T24E	NT24E	Additional Kwh/yr
87.0	2,925	2,691	234	254,475

CalEEMod Defaults

EnergyUseLandUseSubType	T24E	NT24E	LightingElect	T24NG	NT24NG
	Kwh/DU			kBTU/DU	
Condo/Townhouse High Rise	91	3,054	1001.1	5828.01	2615
Parking Lot	0	0	0.35	0	0

Changes to the Defaults

EnergyUseLandUseSubType	T24E	NT24E	LightingElect	T24NG	NT24NG
	Kwh/DU			kBTU/DU	
Condo/Townhouse High Rise	2,782	3,288	1001.1	0	0
Parking Lot			0.35		

Peninsula Clean Energy CCA Carbon Intensity Factors

	lbs/MwH
CO_2:[1]	0
CH_4:[1]	0
N_2O:[1]	0

Notes:

[1] Peninsula Clean Energy Authority, 2020 Power Content Label.https://www.peninsulacleanenergy.com/wp-content/uploads/2021/09/2020-Power-Content-Label-pdf.pdf

Construction Activities and Schedule Assumptions: 808 Alameda de Las Pulgas Townhome Development EIR

Combined Schedule

		Construction Schedule		
Construction Activities[1]	**Phase Type**	**Start Date**	**End Date**	**CalEEMod Duration (Workday)**
Site Preparation and Demolition P1	Site Preparation	6/1/2023	7/15/2023	32
Building Demolition Debris Haul	Demolition	6/10/2023	6/30/2023	15
Asphalt Demolition Debris Haul	Demolition	7/1/2023	7/15/2023	10
Site Preparation Soil Haul	Site Preparation	7/15/2023	7/30/2023	10
Rough Grading P1	Grading	7/1/2023	11/15/2023	98
Rough Grading Soil Haul	Grading	7/1/2023	11/15/2023	98
Fine Grading P1	Grading	11/1/2023	12/31/2023	43
Fine Grading Soil Haul	Grading	11/1/2023	12/31/2023	43
Utility Trenching P1	Trenching	10/16/2023	2/6/2024	82
Paving P1	Paving	2/9/2024	6/26/2024	99
Building Construction P1 + P2	Building Construction	4/1/2024	9/5/2025	375
Architectural Coating P1	Architectural Coating	9/13/2025	10/19/2025	25
Finishing/Landscaping P2	Finishing/Landscaping	10/20/2025	2/5/2026	79
	Construction Days			
	Year 2023	6/1/2023	12/31/2023	152
	Year 2024	1/1/2024	12/31/2024	262
	Year 2025	1/1/2025	12/31/2025	261
	Year 2026	1/1/2026	2/5/2026	26
	Total			**701**

Notes:

1 Combined P1 + P2 building construction, architectural coating and finishing/landscaping for most conservative emissions.

Overlapping Construction Schedule

Construction Activities	Start Date	End Date	CalEEMod Duration (Workday)
Site Preparation and Demolition	6/1/2023	6/9/2023	7
Site Preparation, Demolition, and Building Demo Debris Haul	6/10/2023	6/30/2023	15
Site Preparation, Demolition, Asphalt Demo Debris Haul, Rough Grading, and Rough Grading Soil Haul	7/1/2023	7/14/2023	10
Site Preparation, Asphalt Demo Debris Haul, Rough Grading, Rough Grading Soil Haul and Site Prep Soil Haul	7/15/2023	7/15/2023	0
Rough Grading, Rough Grading Soil Haul and Site Prep Soil Haul	7/16/2023	7/30/2023	10
Rough Grading, Rough Grading Soil Haul	7/31/2023	10/15/2023	55
Rough Grading, Rough Grading Soil Haul, and Utility Trenching	10/16/2023	10/31/2023	12
Rough Grading, Rough Grading Soil Haul, Utility Trenching, Fine Grading, and Fine Grading Soil Haul	11/1/2023	11/15/2023	11
Utility Trenching, Fine Grading, and Fine Grading Soil Haul	11/16/2023	12/31/2023	32
Utility Trenching	1/1/2024	2/6/2024	27
Paving	2/9/2024	3/31/2024	36
Paving and Building Construction	4/1/2024	6/26/2024	63
Building Construction	6/27/2024	8/31/2025	307
Building Construction, and Architectural Coating	9/1/2025	9/5/2025	5
Architectural Coating	9/13/2025	10/19/2025	25
Finishing/Landscaping	10/20/2025	2/5/2026	79

Construction Trips Worksheet

Phase Name	Worker Trip Ends Per Day	Vendor Trip Ends Per Day	Haul Truck Trip Ends Per Day	Total Haul Truck Trip Ends	Start Date	End Date	Workdays
Site Preparation and Demolition P1	2	11	0	0	6/1/2023	7/15/2023	32
Building Demolition Debris Haul	0	0	5	72	6/10/2023	6/30/2023	15
Asphalt Demolition Debris Haul	0	0	33	326	7/1/2023	7/15/2023	10
Site Preparation Soil Haul	0	0	50	500	7/15/2023	7/30/2023	10
Rough Grading P1	2	16	0	0	7/1/2023	11/15/2023	98
Rough Grading Soil Haul	0	0	52	5,034	7/1/2023	11/15/2023	98
Fine Grading P1	2	14	0	0	11/1/2023	12/31/2023	43
Fine Grading Soil Haul	0	0	8	334	11/1/2023	12/31/2023	43
Utility Trenching P1	2	4	0	0	10/16/2023	2/6/2024	82
Paving P1	2	10	0	0	2/9/2024	6/26/2024	99
Building Construction P1 + P2	60	30	0	0	4/1/2024	9/5/2025	375
Architectural Coating P1	4	4	0	0	9/13/2025	10/19/2025	25
Finishing/Landscaping P2	8	8	0	0	10/20/2025	2/5/2026	79

Construction Activity (Overlapping)	Worker Trip Ends Per Day	Vendor Trip Ends Per Day	Haul Truck Trip Ends Per Day	Total Trip Ends Per Day	Start Date	End Date	Workdays
Site Preparation and Demolition	2	11	0	13	6/1/2023	6/9/2023	7
Site Preparation, Demolition, and Building Demo Debris Haul	2	11	5	18	6/10/2023	6/30/2023	15
Site Preparation, Demolition, Asphalt Demo Debris Haul, Rough Grading, and Rough Grading Soil Haul	4	27	85	116	7/1/2023	7/14/2023	10
Site Preparation, Asphalt Demo Debris Haul, Rough Grading, Rough Grading Soil Haul and Site Prep Soil Haul	4	27	135	166	7/15/2023	7/15/2023	0
Rough Grading, Rough Grading Soil Haul and Site Prep Soil Haul	2	16	102	120	7/16/2023	7/30/2023	10
Rough Grading, Rough Grading Soil Haul	2	16	52	70	7/31/2023	10/15/2023	55
Rough Grading, Rough Grading Soil Haul, and Utility Trenching	4	20	52	76	10/16/2023	10/31/2023	12
Rough Grading, Rough Grading Soil Haul, Utility Trenching, Fine Grading, and Fine Grading Soil Haul	6	34	60	100	11/1/2023	11/15/2023	11
Utility Trenching, Fine Grading, and Fine Grading Soil Haul	4	18	8	30	11/16/2023	12/31/2023	32
Utility Trenching	2	4	0	6	1/1/2024	2/6/2024	27
Paving	2	10	0	12	2/9/2024	3/31/2024	36
Paving and Building Construction	62	40	0	102	4/1/2024	6/26/2024	63
Building Construction	60	30	0	90	6/27/2024	8/31/2025	307
Building Construction, and Architectural Coating	64	34	0	98	9/1/2025	9/5/2025	5
Architectural Coating	4	4	0	8	9/13/2025	10/19/2025	25
Finishing/Landscaping	8	8	0	16	10/20/2025	2/5/2026	79
Maximum Daily Trips	**64**	**40**	**135**	**166**			

CalEEMod Construction Off-Road Equipment Inputs

**Based on equipment mix provided by the Applicant.*

General Construction Hours: btwn 7:00 AM to 4:00 PM (with 1 hr break), Mon-Fri

Construction Equipment Details								
Equipment	CalEEMod Equipment	# of Equipment	hr/day	Days Equipment Onsite	Average Hours per day	hp	load factor	total trips/Day
Site Preparation and Demolition								
Track Mounted Excavator	Excavators	4	8	30	8	158	0.38	
Loaders/Backhoe	Tractor/loader/Backhoe	6	8	30	8	97	0.37	
Track Mounted Dozer	Rubber Tired Dozers	2	8	30	8	247	0.4	
Industrial saw	Concrete/Industrial Saws	1	4	30	4	81	0.73	
Worker Trips								2
Vendor Trips								11
Hauling Trips (TOTAL TRIPS)								
Water Trucks (Added to Vendor Trips)								
Building Demolition Haul								
No additional equipment required for Building Demolition Haul								
Hauling Trips (TOTAL TRIPS)								72
Asphalt Demolition Haul								
No additional equipment required for Asphalt Demolition Haul								
Hauling Trips (TOTAL TRIPS)								326
Site Preparation Soil Haul								
No additional equipment required for Site Preparation Haul								
Hauling Trips (TOTAL TRIPS)								500
Rough Grading								
Track Mounted Dozer	Rubber Tired Dozers	4	8	98	8	247	0.4	
Track Mounted Excavator	Excavators	4	8	98	8	158	0.38	
Graders	Graders	2	8	98	8	187	0.41	
Sheep Foot Compactor CP56B	Rollers	2	8	98	8	157	0.43	
Worker Trips								2
Vendor Trips								16
Hauling Trips (TOTAL TRIPS)								
Water Trucks (Added to Vendor Trips)								
Rough Grading Soil Haul								
No additional equipment required for Rough Grading Soil Haul								
Hauling Trips (TOTAL TRIPS)								5,034
Fine Grading								
Track Mounted Dozer	Rubber Tired Dozers	4	8	43	8	247	0.4	
Track Mounted Excavator	Excavators	4	8	43	8	158	0.38	
Graders	Graders	2	8	43	8	187	0.41	
Sheep Foot Compactor CP56B	Rollers	2	8	43	8	157	0.38	
Worker Trips								2
Vendor Trips								14
Hauling Trips (TOTAL TRIPS)								
Water Trucks (Added to Vendor Trips)								
Fine Grading Soil Haul								
No additional equipment required for Fine Grading Soil Haul								
Hauling Trips (TOTAL TRIPS)								334
Water Trucks (Added to Vendor Trips)								
Utility Trenching								
Tractor/loader/Backhoe	Tractor/loader/Backhoe	4	8	30	3	97	0.37	
Excavators	Excavators	2	8	30	3	97	0.38	
Worker Trips								2
Vendor Trips								4
Hauling Trips (TOTAL TRIPS)								0
Water Trucks (Added to Vendor Trips)								0
Building Construction								
Cranes	Cranes	2	1	300	1	231	0.29	
Fork Lifts	Fork Lifts	3	8	300	6	89	0.2	
Tractor/loader/Backhoe	Tractor/loader/Backhoe	6	8	300	6	97	0.37	
Generator Sets	Generator Sets	2	8	300	6	84	0.74	
Welders	Welders	2	1	300	1	46	0.45	
Drill piers[1]	Bore/Drill rigs	1	8	68	1	221	0.5	
Worker Trips								60
Vendor Trips								30
Hauling Trips (TOTAL TRIPS)								0
Water Trucks (Added to Vendor Trips)								0

Architectural Coating								
No additional equipment required for Architectural Coating								
Worker Trips								4
Vendor Trips								4
Hauling Trips (TOTAL TRIPS)								0
Water Trucks (Added to Vendor Trips)								0
Paving								
Cement and Mortar Mixers	Cement and Mortar Mixers	2	8	90	7	9	0.56	
Pavers	Pavers	2	8	90	7	130	0.42	
Paving Equipment	Paving Equipment	2	8	90	7	132	0.36	
Rollers	Rollers	2	8	90	7	80	0.38	
Tractor/Loader	Tractor/loader/Backhoe	4	8	90	7	97	0.37	
Worker Trips								2
Vendor Trips								10
Hauling Trips (TOTAL TRIPS)								0
Water Trucks (Added to Vendor Trips)								0
Finishing/Landscaping								
Backhoe/Loader	Tractor/loader/Backhoe	4	8	60	6	97	0.37	
Worker Trips								8
Vendor Trips								8
Hauling Trips (TOTAL TRIPS)								0
Water Trucks (Added to Vendor Trips)								0

Notes:

[1] Assume bore/drill rigs based on residential projects of similar size.

Changes to the CalEEMod Defaults - Fleet Mix 2026

Weekday Trips 638

Default	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH	
FleetMix (Model Default)	0.457911	0.074699	0.239011	0.149017	0.025897	0.006576	0.010546	0.001994	0.001422	0.000553	0.029236	0.000429	0.00271	100%
Trips	292	48	152	95	17	4	7	1	1	0	19	0	2	638
Percent	80%			15%	5%									100%
without buses/MH	0.457911	0.074699	0.239011	0.149017	0.025897	0.006576	0.010546	0.001994	0	0	0.029236	0.000429	0.002710	100%
Percent	80%			15%	5%									100%
Adjusted without buses/MH	0.457911	0.074699	0.239011	0.149017	0.026959	0.006846	0.010979	0.002076	0.000000	0.000000	0.030435	0.000447	0.002821	
Percent adjusted	80%			15%	5%									100%
Assumed Mix	97.0%			2.00%	1.00%									100%
adjusted with Assumed	**0.553794**	**0.090340**	**0.289058**	**0.020000**	**0.005378**	**0.001366**	**0.002190**	**0.000414**	**0.000000**	**0.000000**	**0.036808**	**0.000089**	**0.000563**	**100%**
Percent Check:	97%			2%	1%									
Trips	353	58	184	13	3	1	1	0	0	0	23	0	0	638
	619			*13*	*6*									

Fleet mix for the project is modified to reflect a higher proportion of passenger vehicles that the regional VMT. Assumes a mix of approximately 97% passenger vehicles, 2% medium duty trucks, and 1% heavy duty trucks and buses.

Emissions Worksheet

Construction Emissions - DPM
Input to Risk Tables

tons/year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Total Unmitigated	0.78	7.88	8.53	0.02	1.11	0.33	1.44	0.51	0.30	0.81

UNMITIGATED (Onsite)

tons/year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Total Onsite	0.74	7.31	8.14	0.01	0.92	0.32	1.24	0.46	0.30	0.76
Total Offsite	0.04	0.58	0.39	0.00	0.19	0.00	0.19	0.05	0.00	0.06
check	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

FOR CONSTRUCTION RISK ASSESSMENT - Unmitigated Run

tons/year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
2023 Onsite	0.38	3.91	3.15	0.01	0.92	0.17	1.09	0.46	0.16	0.61
2023 Offsite	0.01	0.26	0.07	0.00	0.07	0.00	0.07	0.02	0.00	0.02
2024 Onsite	0.22	2.10	3.01	0.00	0.00	0.10	0.10	0.00	0.09	0.09
2024 Offsite	0.02	0.17	0.17	0.00	0.07	0.00	0.07	0.02	0.00	0.02
2025 Onsite	0.13	1.25	1.88	0.00	0.00	0.05	0.05	0.00	0.05	0.05
2025 Offsite	0.01	0.14	0.15	0.00	0.06	0.00	0.06	0.02	0.00	0.02
2026 Onsite	0.01	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2026 Offsite	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

FOR CONSTRUCTION REGIONAL EMISSIONS - Unmitigated Run

tons/year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Total 2023	0.39	4.17	3.23	0.01	0.98	0.17	1.16	0.48	0.16	0.64
Total 2024	0.24	2.27	3.18	0.01	0.07	0.10	0.16	0.02	0.09	0.11
Total 2025	0.15	1.39	2.03	0.00	0.06	0.05	0.11	0.02	0.05	0.07
Total 2026	0.01	0.06	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Construction Total	0.78	7.88	8.53	0.02	1.11	0.33	1.44	0.51	0.30	0.81
Check	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.2 Site Preparation and Demolition - 2023

Unmitigated Construction On-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Fugitive Dust						0.09	0.00	0.09	0.05	0.00	0.05
Offroad		0.05	0.50	0.55	0.00		0.02	0.02		0.02	0.02
Total		0.05	0.50	0.55	0.00	0.09	0.02	0.11	0.05	0.02	0.07

Unmitigated Construction Off-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.3 Building Demolition Debris Haul - 2023

Unmitigated Construction On-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Fugitive Dust						0.00	0.00	0.00	0.00	0.00	0.00
Off-Road		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
Total		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Unmitigated Construction Off-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.4 Asphalt Demolition Debris Haul - 2023

Unmitigated Construction On-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Fugitive Dust						0.01	0.00	0.01	0.00	0.00	0.00
Off-Road		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
Total		0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00

Unmitigated Construction Off-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Hauling		0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.5 Rough Grading - 2023

Unmitigated Construction On-Site

		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr										
Fugitive Dust						0.57	0.00	0.57	0.28	0.00	0.28
Off-Road		0.22	2.31	1.71	0.00		0.10	0.10		0.09	0.09
Total		0.22	2.31	1.71	0.00	0.57	0.10	0.67	0.28	0.09	0.38

Unmitigated Construction Off-Site

		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr										
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.04	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00

3.6 Rough Grading Soil Haul - 2023

Unmitigated Construction On-Site

		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr										
Fugitive Dust						0.00	0.00	0.00	0.00	0.00	0.00
Off-Road		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
Total		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Unmitigated Construction Off-Site

		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr										
Hauling		0.00	0.16	0.04	0.00	0.04	0.00	0.05	0.01	0.00	0.01
Vendor		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.16	0.04	0.00	0.04	0.00	0.05	0.01	0.00	0.01

3.7 Site Preparation Soil Haul - 2023

Unmitigated Construction On-Site

		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr										
Fugitive Dust						0.00	0.00	0.00	0.00	0.00	0.00
Off-Road		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Unmitigated Construction Off-Site

		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr										
Hauling		0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.8 Utility Trenching - 2023

Unmitigated Construction On-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Off-Road		0.01	0.10	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.01	0.10	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Unmitigated Construction Off-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.9 Fine Grading - 2023

Unmitigated Construction On-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Fugitive Dust						0.25	0.00	0.25	0.12	0.00	0.12
Off-Road		0.10	1.01	0.75	0.00		0.04	0.04	0.00	0.04	0.04
Total		0.10	1.01	0.75	0.00	0.25	0.04	0.29	0.12	0.04	0.17

Unmitigated Construction Off-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.10 Fine Grading Soil Haul - 2023

Unmitigated Construction On-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Fugitive Dust						0.00	0.00	0.00	0.00	0.00	0.00
Off-Road		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Unmitigated Construction Off-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Hauling		0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.8 Utility Trenching - 2024

Unmitigated Construction On-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Off-Road		0.00	0.04	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.04	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Unmitigated Construction Off-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.11 Paving - 2024

Unmitigated Construction On-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Off Road		0.07	0.70	1.05	0.00	0.00	0.03	0.03	0.00	0.03	0.03
Paving		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.08	0.70	1.05	0.00	0.00	0.03	0.03	0.00	0.03	0.03

Unmitigated Construction Off-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.12 Building Construction (P1+P2) - 2024

Unmitigated Construction On-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Off-Road		0.14	1.36	1.89	0.00	0.00	0.06	0.06	0.00	0.06	0.06
Total		0.14	1.36	1.89	0.00	0.00	0.06	0.06	0.00	0.06	0.06

Unmitigated Construction Off-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.14	0.05	0.00	0.02	0.00	0.02	0.01	0.00	0.01
Worker		0.01	0.01	0.11	0.00	0.04	0.00	0.04	0.01	0.00	0.01
Total		0.02	0.15	0.16	0.00	0.06	0.00	0.06	0.02	0.00	0.02

3.12 Building Construction (P1+P2) - 2025

Unmitigated Construction On-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Off-Road		0.12	1.14	1.71	0.00	0.00	0.05	0.05	0.00	0.05	0.05
Total		0.12	1.14	1.71	0.00	0.00	0.05	0.05	0.00	0.05	0.05

Unmitigated Construction Off-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.12	0.04	0.00	0.02	0.00	0.02	0.00	0.00	0.01
Worker		0.01	0.01	0.09	0.00	0.04	0.00	0.04	0.01	0.00	0.01
Total		0.01	0.13	0.14	0.00	0.06	0.00	0.06	0.02	0.00	0.02

3.13 Architectural Coating - 2025

Unmitigated Construction On-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Architectural Coating		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Unmitigated Construction Off-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.14 Finishing/Landscaping - 2025

Unmitigated Construction On-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Off-Road		0.01	0.11	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.01	0.11	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Unmitigated Construction Off-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.14 Finishing/Landscaping - 2026

Unmitigated Construction On-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Off-Road		0.01	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.01	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Unmitigated Construction Off-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Criteria Air Pollutant Emissions Summary - Construction Unmitigated

Annual emissions divided by total construction duration to obtain average daily emissions. Average construction emissions accounts for the duration of each construction phase and the time each piece of construction equipment is onsite.

Total Construction Days	2023	2024	2025	2026	Calendar Days
701	152	262	261	26	981

Unmigated Run - with Best Control Measures for Fugitive Dust

average lbs/day	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Total 2023	5	55	42	0.11	12.95	2.27	15	6.27	2.09	8
Total 2024	2	17	24	0.04	0.50	0.75	1	0.14	0.71	1
Total 2025	1	11	16	0.03	0.45	0.41	1	0.12	0.38	1
Total 2026	0	4	7	0.01	0.11	0.16	0	0.03	0.15	0
Average	2	22	24	0.05	3.17	0.93	4	1.46	0.86	2
BAAQMD Threshold	54	54	NA	NA	BMP	82	54	BMP	54	NA
Exceeds Threshold	No	No	NA	NA	NA	No	No	NA	No	NA

Average Daily Emissions and Emission Rates

Onsite Construction PM10 Exhaust Emissions[1]

Year	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/hr)	Emission Rate (g/s)
2023	2.25	2.82E-01	3.55E-02
2024	0.75	9.33E-02	1.18E-02
2025	0.40	4.99E-02	6.29E-03
2026	0.16	2.03E-02	2.56E-03

Onsite Construction PM2.5 Exhaust Emissions[2]

Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/hr)	Emission Rate (g/s)
2.08	2.59E-01	3.27E-02
0.70	8.73E-02	1.10E-02
0.38	4.69E-02	5.91E-03
0.15	1.87E-02	2.35E-03

Offsite Construction PM10 Exhaust Emissions[1]

Year	Average Daily Emissions (lbs/day)	Hauling Emissions w/in 1,000ft (lbs/day)[3]	Emission Rate (lbs/hr)	Emission Rate (g/s)
2023	1.55E-02	3.62E-04	4.52E-05	5.70E-06
2024	8.09E-03	1.89E-04	2.36E-05	2.97E-06
2025	6.90E-03	1.61E-04	2.01E-05	2.53E-06
2026	2.31E-03	5.38E-05	6.72E-06	8.47E-07

Offsite Construction PM2.5 Exhaust Emissions[2]

Average Daily Emissions (lbs/day)	Hauling Emissions w/in 1,000ft (lbs/day)[3]	Emission Rate (lbs/hr)	Emission Rate (g/s)
1.47E-02	3.44E-04	4.29E-05	5.41E-06
7.79E-03	1.82E-04	2.27E-05	2.86E-06
6.59E-03	1.54E-04	1.92E-05	2.42E-06
1.54E-03	3.59E-05	4.48E-06	5.65E-07

Note: Emissions evenly distributed over 68 modeled volume sources.

Hauling Length (miles)	20	miles
Haul Length within 1,000 ft of Site (mile)[3]	0.47	miles
Hours per work day (7:00 AM to 4:00 PM, 1-hour of breaks)[4]	8	hours

Year	Workdays	Risk Scalar[5]
2023	152	0.58
2024	262	1.00
2025	261	1.00
2026	26	0.10

[1] DPM emissions taken as PM_{10} exhaust emissions from CalEEMod average daily emissions.

[2] $PM_{2.5}$ emissions taken as $PM_{2.5}$ exhaust emissions from CalEEMod average daily emissions.

[3] Emissions from CalEEMod offsite average daily emissions, which is based on proportioned haul truck trip distances, are adjusted to evaluate emissions from the 0.47-mile route within 1,000 of the project site.

[4] Work hours applied in By Hour/Day (HRDOW) variable emissions module in air dispersion model (see App B - Air Dispersion Model Output).

[5] Risk scalars determined for each year of construction to adjust receptor exposures to the exposure durations for each construction year (see App C - Risk Calculations).

Mitigated Construction Emissions - DPM
Input to Risk Tables

tons/year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Total Mitigated	0.31	6.05	10.09	0.02	1.11	0.03	1.14	0.51	0.03	0.54

MITIGATED (Onsite)

tons/year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Total Onsite	0.27	5.47	9.70	0.01	0.92	0.03	0.94	0.46	0.03	0.48
Total Offsite	0.04	0.58	0.39	0.00	0.19	0.00	0.19	0.05	0.00	0.06
check	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

FOR CONSTRUCTION RISK ASSESSMENT - Mitigated Run

tons/year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
2023 Onsite	0.10	2.29	4.22	0.01	0.92	0.01	0.93	0.46	0.01	0.47
2023 Offsite	0.01	0.26	0.07	0.00	0.07	0.00	0.07	0.02	0.00	0.02
2024 Onsite	0.10	1.94	3.33	0.00	0.00	0.01	0.01	0.00	0.01	0.01
2024 Offsite	0.02	0.17	0.17	0.00	0.07	0.00	0.07	0.02	0.00	0.02
2025 Onsite	0.07	1.19	2.06	0.00	0.00	0.01	0.01	0.00	0.01	0.01
2025 Offsite	0.01	0.14	0.15	0.00	0.06	0.00	0.06	0.02	0.00	0.02
2026 Onsite	0.00	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2026 Offsite	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

FOR CONSTRUCTION REGIONAL EMISSIONS - Mitigated Run

tons/year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Total 2023	0.11	2.55	4.30	0.01	0.98	0.01	1.00	0.48	0.01	0.49
Total 2024	0.12	2.11	3.50	0.01	0.07	0.01	0.08	0.02	0.01	0.03
Total 2025	0.08	1.33	2.21	0.00	0.06	0.01	0.06	0.02	0.01	0.02
Total 2026	0.00	0.06	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Construction Total	0.31	6.05	10.09	0.02	1.11	0.03	1.14	0.51	0.03	0.54
Check	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.2 Site Preparation and Demolition - 2023

Unmitigated Construction On-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Fugitive Dust						0.09	0.00	0.09	0.05	0.00	0.05
Offroad		0.02	0.37	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.02	0.37	0.65	0.00	0.09	0.00	0.09	0.05	0.00	0.05

Unmitigated Construction Off-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.3 Building Demolition Debris Haul - 2023

Unmitigated Construction On-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Fugitive Dust						0.00	0.00	0.00	0.00	0.00	0.00
Off-Road		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Unmitigated Construction Off-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.4 Asphalt Demolition Debris Haul - 2023

Unmitigated Construction On-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Fugitive Dust						0.01	0.00	0.01	0.00	0.00	0.00
Off-Road		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00

Unmitigated Construction Off-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Hauling		0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.5 Rough Grading - 2023

Unmitigated Construction On-Site

		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr										
Fugitive Dust						0.57	0.00	0.57	0.28	0.00	0.28
Off-Road		0.06	1.28	2.38	0.00	0.00	0.01	0.01	0.00	0.01	0.01
Total		0.06	1.28	2.38	0.00	0.57	0.01	0.58	0.28	0.01	0.29

Unmitigated Construction Off-Site

		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr										
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.04	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00

3.6 Rough Grading Soil Haul - 2023

Unmitigated Construction On-Site

		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr										
Fugitive Dust						0.00	0.00	0.00	0.00	0.00	0.00
Off-Road		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Unmitigated Construction Off-Site

		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr										
Hauling		0.00	0.16	0.04	0.00	0.04	0.00	0.05	0.01	0.00	0.01
Vendor		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.16	0.04	0.00	0.04	0.00	0.05	0.01	0.00	0.01

3.7 Site Preparation Soil Haul - 2023

Unmitigated Construction On-Site

		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr										
Fugitive Dust						0.00	0.00	0.00	0.00	0.00	0.00
Off-Road		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
Total		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Unmitigated Construction Off-Site

		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr										
Hauling		0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.8 Utility Trenching - 2023

Unmitigated Construction On-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Off-Road		0.00	0.08	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.08	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Unmitigated Construction Off-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.9 Fine Grading - 2023

Unmitigated Construction On-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Fugitive Dust						0.25	0.00	0.25	0.12	0.00	0.12
Off-Road		0.02	0.56	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.02	0.56	1.05	0.00	0.25	0.00	0.25	0.12	0.00	0.13

Unmitigated Construction Off-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.10 Fine Grading Soil Haul - 2023

Unmitigated Construction On-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Fugitive Dust						0.00	0.00	0.00	0.00	0.00	0.00
Off-Road		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Unmitigated Construction Off-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Hauling		0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.8 Utility Trenching - 2024

Unmitigated Construction On-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Off-Road		0.00	0.04	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.04	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Unmitigated Construction Off-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.11 Paving - 2024

Unmitigated Construction On-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Off Road		0.03	0.70	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.03	0.70	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Unmitigated Construction Off-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.12 Building Construction (P1+P2) - 2024

Unmitigated Construction On-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Off-Road		0.07	1.20	2.07	0.00	0.00	0.01	0.01	0.00	0.01	0.01
Total		0.07	1.20	2.07	0.00	0.00	0.01	0.01	0.00	0.01	0.01

Unmitigated Construction Off-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.14	0.05	0.00	0.02	0.00	0.02	0.01	0.00	0.01
Worker		0.01	0.01	0.11	0.00	0.04	0.00	0.04	0.01	0.00	0.01
Total		0.02	0.15	0.16	0.00	0.06	0.00	0.06	0.02	0.00	0.02

3.12 Building Construction (P1+P2) - 2025

Unmitigated Construction On-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Off-Road		0.06	1.08	1.87	0.00	0.00	0.01	0.01	0.00	0.01	0.01
Total		0.06	1.08	1.87	0.00	0.00	0.01	0.01	0.00	0.01	0.01

Unmitigated Construction Off-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.12	0.04	0.00	0.02	0.00	0.02	0.00	0.00	0.01
Worker		0.01	0.01	0.09	0.00	0.04	0.00	0.04	0.01	0.00	0.01
Total		0.01	0.13	0.14	0.00	0.06	0.00	0.06	0.02	0.00	0.02

3.13 Architectural Coating - 2025

Unmitigated Construction On-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Architectural Coating		0.00				0.00	0.00	0.00	0.00	0.00	0.00
Off-Road		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Unmitigated Construction Off-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.14 Finishing/Landscaping - 2025

Unmitigated Construction On-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Off-Road		0.01	0.11	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.01	0.11	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Unmitigated Construction Off-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.14 Finishing/Landscaping - 2026

Unmitigated Construction On-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Off-Road		0.00	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Unmitigated Construction Off-Site

Category	tons/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Hauling		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Criteria Air Pollutant Emissions Summary - Construction Mitigated

Annual emissions divided by total construction duration to obtain average daily emissions. Average construction emissions accounts for the duration of each construction phase and the time each piece of construction equipment is onsite.

Total Construction Days	2023	2024	2025	2026	Calendar Days
701	152	262	261	26	981

Migated Run - with Best Control Measures for Fugitive Dust and Tier 4 Interim Emission Standards for Equipment > 50 HP

average lbs/day	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Total 2023	1	34	57	0.11	12.95	0.16	13	6.27	0.16	6
Total 2024	1	16	27	0.04	0.50	0.08	1	0.14	0.08	0
Total 2025	1	10	17	0.03	0.45	0.05	0	0.12	0.05	0
Total 2026	0	4	7	0.01	0.11	0.02	0	0.03	0.02	0
Average	1	17	29	0.05	3.17	0.08	3	1.46	0.08	2
BAAQMD Threshold	54	54	NA	NA	BMP	82	54	BMP	54	NA
Exceeds Threshold	No	No	NA	NA	NA	No	No	NA	No	NA

Average Daily Emissions and Emission Rates

Onsite Construction PM10 Exhaust Emissions[1]

Year	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/hr)	Emission Rate (g/s)
2023	0.14	1.79E-02	2.26E-03
2024	0.07	9.15E-03	1.15E-03
2025	0.04	5.17E-03	6.52E-04
2026	0.02	1.92E-03	2.42E-04

Onsite Construction PM2.5 Exhaust Emissions[2]

Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/hr)	Emission Rate (g/s)
0.14	1.79E-02	2.26E-03
0.07	9.15E-03	1.15E-03
0.04	5.17E-03	6.52E-04
0.02	1.92E-03	2.42E-04

Offsite Construction PM10 Exhaust Emissions[1]

Year	Average Daily Emissions (lbs/day)	Hauling Emissions w/in 1,000ft (lbs/day)[3]	Emission Rate (lbs/hr)	Emission Rate (g/s)
2023	1.55E-02	3.62E-04	4.52E-05	5.70E-06
2024	8.09E-03	1.89E-04	2.36E-05	2.97E-06
2025	6.90E-03	1.61E-04	2.01E-05	2.53E-06
2026	2.31E-03	5.38E-05	6.72E-06	8.47E-07

Offsite Construction PM2.5 Exhaust Emissions[2]

Average Daily Emissions (lbs/day)	Hauling Emissions w/in 1,000ft (lbs/day)[3]	Emission Rate (lbs/hr)	Emission Rate (g/s)
1.47E-02	3.44E-04	4.29E-05	5.41E-06
7.79E-03	1.82E-04	2.27E-05	2.86E-06
6.59E-03	1.54E-04	1.92E-05	2.42E-06
1.54E-03	3.59E-05	4.48E-06	5.65E-07

Note: Emissions evenly distributed over 68 modeled volume sources.

Hauling Length (miles)	20	miles
Haul Length within 1,000 ft of Site (mile)[3]	0.47	miles
Hours per work day (7:00 AM to 4:00 PM, 1-hour of breaks)[4]	8	hours

Year	Workdays	Risk Scalar[5]
2023	152	0.58
2024	262	1.00
2025	261	1.00
2026	26	0.10

[1] DPM emissions taken as PM_{10} exhaust emissions from CalEEMod average daily emissions.

[2] $PM_{2.5}$ emissions taken as $PM_{2.5}$ exhaust emissions from CalEEMod average daily emissions.

[3] Emissions from CalEEMod offsite average daily emissions, which is based on proportioned haul truck trip distances, are adjusted to evaluate emissions from the 0.47-mile route within 1,000 of the project site.

[4] Work hours applied in By Hour/Day (HRDOW) variable emissions module in air dispersion model (see App B - Air Dispersion Model Output).

[5] Risk scalars determined for each year of construction to adjust receptor exposures to the exposure durations for each construction year (see App C - Risk Calculations).

Phase Name	Start Date	End Date	CalEEMod Days	Total Days
Site Preparation and Demolition P1	6/1/2023	7/15/2023	32	**44**
Building Demolition Debris Haul	6/10/2023	6/30/2023	15	**20**
Asphalt Demolition Debris Haul	7/1/2023	7/15/2023	10	**14**
Site Preparation Soil Haul	7/15/2023	7/30/2023	10	**15**
Rough Grading P1	7/1/2023	11/15/2023	98	**137**
Rough Grading Soil Haul	7/1/2023	11/15/2023	98	**137**
Fine Grading P1	11/1/2023	12/31/2023	43	**60**
Fine Grading Soil Haul	11/1/2023	12/31/2023	43	**60**
Utility Trenching P1	10/16/2023	2/6/2024	82	**113**
Paving P1	2/9/2024	6/26/2024	99	**138**
Building Construction P1 + P2	4/1/2024	9/5/2025	375	**522**
Architectural Coating P1	9/13/2025	10/19/2025	25	**36**
Finishing/Landscaping P2	10/20/2025	2/5/2026	79	**108**

	Number of Construction Days Per Year		
2023	6/1/2023	12/31/2023	152
2024	1/1/2024	12/31/2024	262
2025	1/1/2025	12/31/2025	261
2026	1/1/2026	2/5/2026	26
		CONSTRUCTION DAYS	701

Total Construction Days Per Year		
1/1/2023	12/31/2023	260
1/1/2024	12/31/2024	262
1/1/2025	12/31/2025	261
1/1/2026	12/31/2026	261
	TOTAL DAYS	1044

Criteria Air Pollutant Emissions Summary - Net Operations, 2026

Proposed Condo/Townhouse high rises

Mitigated Operational

		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr										
Area		1.60	0.01	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile		0.26	0.16	2.40	0.00	0.52	0.00	0.52	0.14	0.00	0.14
Waste		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		1.86	0.17	3.04	0.00	0.52	0.01	0.59	0.14	0.01	0.14
BAAQMD Threshold (T/YR)		10	10	NA	NA	NA	NA	15	NA	NA	10
Exceeds thresholds		No	No					No			No

Criteria Air Pollutant Emissions Summary - Net Operations, 2026

Annual emissions divided by 365 days/year to obtain average daily emissions.

Proposed Project

lbs/day	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Area	9	0	4	0	0	0	0	0	0	0
Energy	0	0	0	0	0	0	0	0	0	0
Mobile	1	1	13	0	3	0	3	1	0	1
Waste	0	0	0	0	0	0	0	0	0	0
Water	0	0	0	0	0	0	0	0	0	0
Total	**10**	**1**	**17**	**0**	**3**	**0**	**3**	**1**	**0**	**1**
BAAQMD Threshold (Daily)	54	54					82			54
Exceeds Threshold	No	No					No			No

GHG Emissions Inventory

*CalEEMod, Version 2020.4

Construction

	$MTCO_2e$ Total Project*
2023	764
2024	522
2025	354
2026	14
Total Construction	**1,654**
30-Yr Amortized Construction Emissions[1]	**55**

Notes:

[1] Total construction emissions are amortized over 30 years per BAAQMD methodology; International Energy Agency, 2008. Energy Efficiency Requirements in Building Codes, Energy Efficiency Policies for New Buildings. https://www.iea.org/publications/freepublications/publication/Building_Codes.pdf, accessed November 21, 2019.

Net Operation

Proposed Project

	Proposed Project (2026) Net $MTCO_2e$	Percent of Emissions
Area	1	0.2%
Energy[1]	0	0.0%
Mobile	378	86.6%
Solid Waste	55	12.5%
Water	3	0.6%
Total	**437**	100%

Notes:

[1] Project site is under Peninsula Clean Energy CCA with carbon intensity factors of 0.

CalEEMod Construction Model

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

808 Alameda de Las Pulgas Townhome Development Project

San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	75.10	1000sqft	1.72	75,053.00	0
Other Non-Asphalt Surfaces	296.00	1000sqft	6.79	295,964.00	0
Parking Lot	6.30	1000sqft	0.15	6,336.00	0
Condo/Townhouse High Rise	87.00	Dwelling Unit	3.29	398,998.00	249

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2026
Utility Company	Peninsula Clean Energy				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on Applicant info., see assumptions file

Construction Phase - Based on applicant info., see assumptions file

Off-road Equipment - Based on applicant info., see assumptions file

Off-road Equipment - Based on applicant info., see assumptions file

Off-road Equipment - No additional hauling equipment required for this phase

Off-road Equipment - Based on applicant info., added bore/drill rigs for building foundation based on project of similar size, see assumptions file

Date: 2/18/2022 11:26 AM

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-road Equipment - No additional hauling equipment required for this phase

Off-road Equipment - Based on applicant info., see assumptions file

Off-road Equipment - No additional hauling equipment required for this phase

Off-road Equipment - Based on applicant info., see assumptions file

Off-road Equipment - Based on applicant info., see assumptions file

Off-road Equipment - Based on applicant info., see assumptions file

Off-road Equipment - No additional hauling equipment required for this phase

Off-road Equipment - Based on applicant info., see assumptions file

Off-road Equipment - No additional hauling equipment required for this phase

Off-road Equipment - Based on applicant info., see assumptions file

Trips and VMT - Based on applicant info., see assumptions file

Demolition -

Grading -

Architectural Coating - Based on applicant info., see assumptions file

Construction Off-road Equipment Mitigation - BAAQMD Construction BMPs

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	22,641.00	380.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	269,324.00	42.00
tblArchitecturalCoating	ConstArea_Residential_Interior	807,971.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	250.00
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	32.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	30.00	98.00
tblConstructionPhase	NumDays	30.00	98.00

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstructionPhase	NumDays	30.00	43.00
tblConstructionPhase	NumDays	30.00	43.00
tblConstructionPhase	NumDays	20.00	99.00
tblConstructionPhase	NumDays	300.00	375.00
tblConstructionPhase	NumDays	20.00	25.00
tblGrading	MaterialExported	0.00	30,200.00
tblGrading	MaterialExported	0.00	3,000.00
tblGrading	MaterialExported	0.00	2,000.00
tblLandUse	LandUseSquareFeet	75,100.00	75,053.00
tblLandUse	LandUseSquareFeet	296,000.00	295,964.00
tblLandUse	LandUseSquareFeet	6,300.00	6,336.00
tblLandUse	LandUseSquareFeet	87,000.00	398,998.00
tblLandUse	LotAcreage	6.80	6.79
tblLandUse	LotAcreage	0.14	0.15
tblLandUse	LotAcreage	1.36	3.29
tblOffRoadEquipment	HorsePower	158.00	97.00
tblOffRoadEquipment	HorsePower	80.00	157.00
tblOffRoadEquipment	HorsePower	80.00	157.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	7.00	1.00

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblTripsAndVMT	HaulingTripNumber	25.00	72.00
tblTripsAndVMT	HaulingTripNumber	113.00	326.00
tblTripsAndVMT	HaulingTripNumber	3,775.00	5,034.00
tblTripsAndVMT	HaulingTripNumber	375.00	500.00
tblTripsAndVMT	HaulingTripNumber	250.00	334.00
tblTripsAndVMT	HaulingVehicleClass	HHDT	MHDT
tblTripsAndVMT	HaulingVehicleClass	HHDT	MHDT
tblTripsAndVMT	HaulingVehicleClass	HHDT	MHDT
tblTripsAndVMT	HaulingVehicleClass	HHDT	MHDT
tblTripsAndVMT	HaulingVehicleClass	HHDT	MHDT
tblTripsAndVMT	VendorTripNumber	0.00	11.00
tblTripsAndVMT	VendorTripNumber	0.00	16.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	14.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	71.00	30.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	WorkerTripNumber	33.00	2.00
tblTripsAndVMT	WorkerTripNumber	30.00	2.00

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblTripsAndVMT	WorkerTripNumber	15.00	2.00
tblTripsAndVMT	WorkerTripNumber	30.00	2.00
tblTripsAndVMT	WorkerTripNumber	30.00	2.00
tblTripsAndVMT	WorkerTripNumber	221.00	60.00
tblTripsAndVMT	WorkerTripNumber	44.00	4.00
tblTripsAndVMT	WorkerTripNumber	10.00	8.00

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					
2023	0.3905	4.1710	3.2277	8.4100e-003	2.2190	0.1725	2.3915	1.0889	0.1588	1.2477	0.0000	753.1100	753.1100	0.1904	0.0214	764.2509
2024	0.2389	2.2678	3.1790	5.7900e-003	0.0704	0.0988	0.1692	0.0193	0.0924	0.1117	0.0000	515.7449	515.7449	0.1121	0.0116	522.0105
2025	0.1460	1.3872	2.0294	3.9000e-003	0.0632	0.0530	0.1162	0.0173	0.0499	0.0671	0.0000	349.2384	349.2384	0.0658	9.5900e-003	353.7386
2026	5.4500e-003	0.0569	0.0904	1.5000e-004	1.5000e-003	2.1400e-003	3.6400e-003	4.1000e-004	1.9700e-003	2.3800e-003	0.0000	13.3258	13.3258	3.6100e-003	3.2000e-004	13.5118
Maximum	**0.3905**	**4.1710**	**3.2277**	**8.4100e-003**	**2.2190**	**0.1725**	**2.3915**	**1.0889**	**0.1588**	**1.2477**	**0.0000**	**753.1100**	**753.1100**	**0.1904**	**0.0214**	**764.2509**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2023	0.3905	4.1710	3.2277	8.4100e-003	0.9844	0.1725	1.1569	0.4765	0.1588	0.6353	0.0000	753.1093	753.1093	0.1904	0.0214	764.2502
2024	0.2389	2.2678	3.1790	5.7900e-003	0.0653	0.0988	0.1641	0.0180	0.0924	0.1104	0.0000	515.7444	515.7444	0.1121	0.0116	522.0100
2025	0.1460	1.3872	2.0294	3.9000e-003	0.0586	0.0530	0.1116	0.0161	0.0499	0.0660	0.0000	349.2381	349.2381	0.0658	9.5900e-003	353.7383
2026	5.4500e-003	0.0569	0.0904	1.5000e-004	1.3900e-003	2.1400e-003	3.5300e-003	3.9000e-004	1.9700e-003	2.3600e-003	0.0000	13.3257	13.3257	3.6100e-003	3.2000e-004	13.5118
Maximum	**0.3905**	**4.1710**	**3.2277**	**8.4100e-003**	**0.9844**	**0.1725**	**1.1569**	**0.4765**	**0.1588**	**0.6353**	**0.0000**	**753.1093**	**753.1093**	**0.1904**	**0.0214**	**764.2502**

	ROG	NOx	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	52.86	0.00	46.43	54.62	0.00	43.03	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	6-10-2023	9-9-2023	1.9649	1.9649
2	9-10-2023	12-9-2023	2.2341	2.2341
3	12-10-2023	3-9-2024	0.6732	0.6732
4	3-10-2024	6-9-2024	0.9473	0.9473
5	6-10-2024	9-9-2024	0.6497	0.6497
6	9-10-2024	12-9-2024	0.5488	0.5488
7	12-10-2024	3-9-2025	0.5164	0.5164
8	3-10-2025	6-9-2025	0.5165	0.5165
9	6-10-2025	9-9-2025	0.4933	0.4933

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

10	**9-10-2025**	**12-9-2025**	0.0917	0.0917
11	**12-10-2025**	**3-9-2026**	0.0996	0.0996
		Highest	2.2341	2.2341

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation and Demolition	Site Preparation	6/1/2023	7/15/2023	5	32	a
2	Building Demolition Debris Haul	Demolition	6/10/2023	6/30/2023	5	15	b
3	Asphalt Demolition Debris Haul	Demolition	7/1/2023	7/15/2023	5	10	c
4	Rough Grading	Grading	7/1/2023	11/15/2023	5	98	d
5	Rough Grading Soil Haul	Grading	7/1/2023	11/15/2023	5	98	e
6	Site Preparation Soil Haul	Site Preparation	7/15/2023	7/30/2023	5	10	f
7	Utility Trenching	Trenching	10/16/2023	2/6/2024	5	82	g
8	Fine Grading	Grading	11/1/2023	12/31/2023	5	43	h
9	Fine Grading Soil Haul	Grading	11/1/2023	12/31/2023	5	43	i
10	Paving	Paving	2/9/2024	6/26/2024	5	99	j
11	Building Construction (P1+P2)	Building Construction	4/1/2024	9/5/2025	5	375	k
12	Architectural Coating	Architectural Coating	9/13/2025	10/17/2025	5	25	l
13	Finishing/Landscaping	Trenching	10/20/2025	2/5/2026	5	79	m

Acres of Grading (Site Preparation Phase): 32

Acres of Grading (Grading Phase): 294

Acres of Paving: 8.66

Residential Indoor: 0; Residential Outdoor: 42; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 380 (Architectural Coating

OffRoad Equipment

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation and Demolition	Concrete/Industrial Saws	1	4.00	81	0.73
Site Preparation and Demolition	Excavators	4	8.00	158	0.38
Site Preparation and Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation and Demolition	Tractors/Loaders/Backhoes	6	8.00	97	0.37
Rough Grading	Excavators	4	8.00	158	0.38
Rough Grading	Graders	2	8.00	187	0.41
Rough Grading	Rollers	2	8.00	157	0.38
Rough Grading	Rubber Tired Dozers	4	8.00	247	0.40
Utility Trenching	Excavators	2	3.00	97	0.38
Utility Trenching	Tractors/Loaders/Backhoes	4	3.00	97	0.37
Fine Grading	Excavators	4	8.00	158	0.38
Fine Grading	Graders	2	8.00	187	0.41
Fine Grading	Rollers	2	8.00	157	0.38
Fine Grading	Rubber Tired Dozers	4	8.00	247	0.40
Paving	Cement and Mortar Mixers	2	7.00	9	0.56
Paving	Pavers	2	7.00	130	0.42
Paving	Paving Equipment	2	7.00	132	0.36
Paving	Rollers	2	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	4	7.00	97	0.37
Building Construction (P1+P2)	Bore/Drill Rigs	1	1.00	221	0.50
Building Construction (P1+P2)	Cranes	2	1.00	231	0.29
Building Construction (P1+P2)	Forklifts	3	6.00	89	0.20
Building Construction (P1+P2)	Generator Sets	2	6.00	84	0.74
Building Construction (P1+P2)	Tractors/Loaders/Backhoes	6	6.00	97	0.37
Building Construction (P1+P2)	Welders	2	1.00	46	0.45
Finishing/Landscaping	Tractors/Loaders/Backhoes	4	6.00	97	0.37

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation and Demolition	13	2.00	11.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Demolition Debris Haul	0	0.00	0.00	72.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	MHDT
Asphalt Demolition Debris Haul	0	0.00	0.00	326.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	MHDT
Rough Grading	12	2.00	16.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grading Soil Haul	0	0.00	0.00	5,034.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	MHDT
Site Preparation Soil Haul	0	0.00	0.00	500.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	MHDT
Utility Trenching	6	2.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	12	2.00	14.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading Soil Haul	0	0.00	0.00	334.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	MHDT
Paving	12	2.00	10.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction (P1+P2)	16	60.00	30.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	4.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Finishing/Landscaping	4	8.00	8.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation and Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2097	0.0000	0.2097	0.1078	0.0000	0.1078	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0512	0.4953	0.5514	9.5000e-004		0.0234	0.0234		0.0216	0.0216	0.0000	83.6093	83.6093	0.0259	0.0000	84.2558
Total	**0.0512**	**0.4953**	**0.5514**	**9.5000e-004**	**0.2097**	**0.0234**	**0.2331**	**0.1078**	**0.0216**	**0.1294**	**0.0000**	**83.6093**	**83.6093**	**0.0259**	**0.0000**	**84.2558**

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	1.9000e-004	8.2900e-003	2.9700e-003	4.0000e-005	1.1500e-003	4.0000e-005	1.1900e-003	3.3000e-004	4.0000e-005	3.7000e-004	0.0000	3.7393	3.7393	2.3000e-004	5.5000e-004	3.9093
Worker	7.0000e-005	5.0000e-005	6.2000e-004	0.0000	2.5000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.1872	0.1872	0.0000	0.0000	0.1888
Total	**2.6000e-004**	**8.3400e-003**	**3.5900e-003**	**4.0000e-005**	**1.4000e-003**	**4.0000e-005**	**1.4400e-003**	**4.0000e-004**	**4.0000e-005**	**4.4000e-004**	**0.0000**	**3.9265**	**3.9265**	**2.3000e-004**	**5.5000e-004**	**4.0980**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0896	0.0000	0.0896	0.0461	0.0000	0.0461	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0512	0.4953	0.5514	9.5000e-004		0.0234	0.0234		0.0216	0.0216	0.0000	83.6092	83.6092	0.0259	0.0000	84.2557
Total	**0.0512**	**0.4953**	**0.5514**	**9.5000e-004**	**0.0896**	**0.0234**	**0.1131**	**0.0461**	**0.0216**	**0.0677**	**0.0000**	**83.6092**	**83.6092**	**0.0259**	**0.0000**	**84.2557**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	1.9000e-004	8.2900e-003	2.9700e-003	4.0000e-005	1.0800e-003	4.0000e-005	1.1200e-003	3.1000e-004	4.0000e-005	3.6000e-004	0.0000	3.7393	3.7393	2.3000e-004	5.5000e-004	3.9093
Worker	7.0000e-005	5.0000e-005	6.2000e-004	0.0000	2.3000e-004	0.0000	2.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1872	0.1872	0.0000	0.0000	0.1888
Total	**2.6000e-004**	**8.3400e-003**	**3.5900e-003**	**4.0000e-005**	**1.3100e-003**	**4.0000e-005**	**1.3500e-003**	**3.7000e-004**	**4.0000e-005**	**4.2000e-004**	**0.0000**	**3.9265**	**3.9265**	**2.3000e-004**	**5.5000e-004**	**4.0980**

3.3 Building Demolition Debris Haul - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.6900e-003	0.0000	2.6900e-003	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.6900e-003**	**0.0000**	**2.6900e-003**	**4.1000e-004**	**0.0000**	**4.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	6.0000e-005	2.2200e-003	5.2000e-004	2.0000e-005	6.8000e-004	1.0000e-005	6.9000e-004	2.1000e-004	1.0000e-005	2.1000e-004	0.0000	1.5750	1.5750	0.0000	2.0000e-004	1.6336
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.0000e-005**	**2.2200e-003**	**5.2000e-004**	**2.0000e-005**	**6.8000e-004**	**1.0000e-005**	**6.9000e-004**	**2.1000e-004**	**1.0000e-005**	**2.1000e-004**	**0.0000**	**1.5750**	**1.5750**	**0.0000**	**2.0000e-004**	**1.6336**

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					1.1500e-003	0.0000	1.1500e-003	1.7000e-004	0.0000	1.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.1500e-003**	**0.0000**	**1.1500e-003**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	6.0000e-005	2.2200e-003	5.2000e-004	2.0000e-005	6.4000e-004	1.0000e-005	6.5000e-004	2.0000e-004	1.0000e-005	2.0000e-004	0.0000	1.5750	1.5750	0.0000	2.0000e-004	1.6336
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.0000e-005**	**2.2200e-003**	**5.2000e-004**	**2.0000e-005**	**6.4000e-004**	**1.0000e-005**	**6.5000e-004**	**2.0000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**1.5750**	**1.5750**	**0.0000**	**2.0000e-004**	**1.6336**

3.4 Asphalt Demolition Debris Haul - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0122	0.0000	0.0122	1.8500e-003	0.0000	1.8500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0122**	**0.0000**	**0.0122**	**1.8500e-003**	**0.0000**	**1.8500e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.8000e-004	0.0100	2.3600e-003	8.0000e-005	3.0800e-003	4.0000e-005	3.1200e-003	9.3000e-004	4.0000e-005	9.7000e-004	0.0000	7.1313	7.1313	2.0000e-005	8.9000e-004	7.3967
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.8000e-004**	**0.0100**	**2.3600e-003**	**8.0000e-005**	**3.0800e-003**	**4.0000e-005**	**3.1200e-003**	**9.3000e-004**	**4.0000e-005**	**9.7000e-004**	**0.0000**	**7.1313**	**7.1313**	**2.0000e-005**	**8.9000e-004**	**7.3967**

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					5.2100e-003	0.0000	5.2100e-003	7.9000e-004	0.0000	7.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**5.2100e-003**	**0.0000**	**5.2100e-003**	**7.9000e-004**	**0.0000**	**7.9000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.8000e-004	0.0100	2.3600e-003	8.0000e-005	2.9000e-003	4.0000e-005	2.9400e-003	8.8000e-004	4.0000e-005	9.3000e-004	0.0000	7.1313	7.1313	2.0000e-005	8.9000e-004	7.3967
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.8000e-004**	**0.0100**	**2.3600e-003**	**8.0000e-005**	**2.9000e-003**	**4.0000e-005**	**2.9400e-003**	**8.8000e-004**	**4.0000e-005**	**9.3000e-004**	**0.0000**	**7.1313**	**7.1313**	**2.0000e-005**	**8.9000e-004**	**7.3967**

3.5 Rough Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.3362	0.0000	1.3362	0.6656	0.0000	0.6656	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2242	2.3094	1.7133	3.8400e-003		0.0995	0.0995		0.0916	0.0916	0.0000	337.0931	337.0931	0.1090	0.0000	339.8187
Total	**0.2242**	**2.3094**	**1.7133**	**3.8400e-003**	**1.3362**	**0.0995**	**1.4357**	**0.6656**	**0.0916**	**0.7572**	**0.0000**	**337.0931**	**337.0931**	**0.1090**	**0.0000**	**339.8187**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	8.3000e-004	0.0369	0.0132	1.6000e-004	5.1200e-003	1.9000e-004	5.3100e-003	1.4800e-003	1.8000e-004	1.6600e-003	0.0000	16.6567	16.6567	1.0200e-003	2.4600e-003	17.4140
Worker	2.1000e-004	1.4000e-004	1.9000e-003	1.0000e-005	7.7000e-004	0.0000	7.8000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.5734	0.5734	1.0000e-005	1.0000e-005	0.5781
Total	**1.0400e-003**	**0.0371**	**0.0151**	**1.7000e-004**	**5.8900e-003**	**1.9000e-004**	**6.0900e-003**	**1.6900e-003**	**1.8000e-004**	**1.8700e-003**	**0.0000**	**17.2301**	**17.2301**	**1.0300e-003**	**2.4700e-003**	**17.9921**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5712	0.0000	0.5712	0.2846	0.0000	0.2846	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2242	2.3094	1.7133	3.8400e-003		0.0995	0.0995		0.0916	0.0916	0.0000	337.0927	337.0927	0.1090	0.0000	339.8183
Total	**0.2242**	**2.3094**	**1.7133**	**3.8400e-003**	**0.5712**	**0.0995**	**0.6708**	**0.2846**	**0.0916**	**0.3761**	**0.0000**	**337.0927**	**337.0927**	**0.1090**	**0.0000**	**339.8183**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	8.3000e-004	0.0369	0.0132	1.6000e-004	4.7900e-003	1.9000e-004	4.9800e-003	1.4000e-003	1.8000e-004	1.5800e-003	0.0000	16.6567	16.6567	1.0200e-003	2.4600e-003	17.4140
Worker	2.1000e-004	1.4000e-004	1.9000e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5734	0.5734	1.0000e-005	1.0000e-005	0.5781
Total	**1.0400e-003**	**0.0371**	**0.0151**	**1.7000e-004**	**5.5000e-003**	**1.9000e-004**	**5.7000e-003**	**1.5900e-003**	**1.8000e-004**	**1.7700e-003**	**0.0000**	**17.2301**	**17.2301**	**1.0300e-003**	**2.4700e-003**	**17.9921**

3.6 Rough Grading Soil Haul - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.7100e-003	0.0000	1.7100e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.7100e-003**	**0.0000**	**1.7100e-003**	**2.6000e-004**	**0.0000**	**2.6000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	4.4000e-003	0.1550	0.0365	1.1600e-003	0.0476	6.8000e-004	0.0482	0.0143	6.5000e-004	0.0150	0.0000	110.1195	110.1195	2.6000e-004	0.0137	114.2171
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.4000e-003**	**0.1550**	**0.0365**	**1.1600e-003**	**0.0476**	**6.8000e-004**	**0.0482**	**0.0143**	**6.5000e-004**	**0.0150**	**0.0000**	**110.1195**	**110.1195**	**2.6000e-004**	**0.0137**	**114.2171**

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					7.3000e-004	0.0000	7.3000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.3000e-004**	**0.0000**	**7.3000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive 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	4.4000e-003	0.1550	0.0365	1.1600e-003	0.0447	6.8000e-004	0.0454	0.0136	6.5000e-004	0.0143	0.0000	110.1195	110.1195	2.6000e-004	0.0137	114.2171
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.4000e-003**	**0.1550**	**0.0365**	**1.1600e-003**	**0.0447**	**6.8000e-004**	**0.0454**	**0.0136**	**6.5000e-004**	**0.0143**	**0.0000**	**110.1195**	**110.1195**	**2.6000e-004**	**0.0137**	**114.2171**

3.7 Site Preparation Soil Haul - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.7000e-004	0.0000	1.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive 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	4.4000e-004	0.0154	3.6200e-003	1.2000e-004	4.7200e-003	7.0000e-005	4.7900e-003	1.4200e-003	6.0000e-005	1.4900e-003	0.0000	10.9376	10.9376	3.0000e-005	1.3600e-003	11.3446
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.4000e-004**	**0.0154**	**3.6200e-003**	**1.2000e-004**	**4.7200e-003**	**7.0000e-005**	**4.7900e-003**	**1.4200e-003**	**6.0000e-005**	**1.4900e-003**	**0.0000**	**10.9376**	**10.9376**	**3.0000e-005**	**1.3600e-003**	**11.3446**

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					7.0000e-005	0.0000	7.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	4.4000e-004	0.0154	3.6200e-003	1.2000e-004	4.4400e-003	7.0000e-005	4.5100e-003	1.3500e-003	6.0000e-005	1.4200e-003	0.0000	10.9376	10.9376	3.0000e-005	1.3600e-003	11.3446
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.4000e-004**	**0.0154**	**3.6200e-003**	**1.2000e-004**	**4.4400e-003**	**7.0000e-005**	**4.5100e-003**	**1.3500e-003**	**6.0000e-005**	**1.4200e-003**	**0.0000**	**10.9376**	**10.9376**	**3.0000e-005**	**1.3600e-003**	**11.3446**

3.8 Utility Trenching - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.3300e-003	0.0953	0.1384	1.9000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	16.9678	16.9678	5.4900e-003	0.0000	17.1050
Total	**9.3300e-003**	**0.0953**	**0.1384**	**1.9000e-004**		**4.6900e-003**	**4.6900e-003**		**4.3100e-003**	**4.3100e-003**	**0.0000**	**16.9678**	**16.9678**	**5.4900e-003**	**0.0000**	**17.1050**

Unmitigated Construction Off-Site

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive 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	1.2000e-004	5.1800e-003	1.8600e-003	2.0000e-005	7.2000e-004	3.0000e-005	7.4000e-004	2.1000e-004	3.0000e-005	2.3000e-004	0.0000	2.3370	2.3370	1.4000e-004	3.4000e-004	2.4433
Worker	1.2000e-004	8.0000e-005	1.0700e-003	0.0000	4.3000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3218	0.3218	1.0000e-005	1.0000e-005	0.3244
Total	**2.4000e-004**	**5.2600e-003**	**2.9300e-003**	**2.0000e-005**	**1.1500e-003**	**3.0000e-005**	**1.1800e-003**	**3.3000e-004**	**3.0000e-005**	**3.5000e-004**	**0.0000**	**2.6588**	**2.6588**	**1.5000e-004**	**3.5000e-004**	**2.7677**

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	9.3300e-003	0.0953	0.1384	1.9000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	16.9678	16.9678	5.4900e-003	0.0000	17.1050
Total	**9.3300e-003**	**0.0953**	**0.1384**	**1.9000e-004**		**4.6900e-003**	**4.6900e-003**		**4.3100e-003**	**4.3100e-003**	**0.0000**	**16.9678**	**16.9678**	**5.4900e-003**	**0.0000**	**17.1050**

Mitigated Construction Off-Site

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive 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	1.2000e-004	5.1800e-003	1.8600e-003	2.0000e-005	6.7000e-004	3.0000e-005	7.0000e-004	2.0000e-004	3.0000e-005	2.2000e-004	0.0000	2.3370	2.3370	1.4000e-004	3.4000e-004	2.4433
Worker	1.2000e-004	8.0000e-005	1.0700e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3218	0.3218	1.0000e-005	1.0000e-005	0.3244
Total	**2.4000e-004**	**5.2600e-003**	**2.9300e-003**	**2.0000e-005**	**1.0700e-003**	**3.0000e-005**	**1.1000e-003**	**3.1000e-004**	**3.0000e-005**	**3.3000e-004**	**0.0000**	**2.6588**	**2.6588**	**1.5000e-004**	**3.5000e-004**	**2.7677**

3.8 Utility Trenching - 2024

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	4.3400e-003	0.0441	0.0680	9.0000e-005		2.0200e-003	2.0200e-003		1.8600e-003	1.8600e-003	0.0000	8.3345	8.3345	2.7000e-003	0.0000	8.4019
Total	**4.3400e-003**	**0.0441**	**0.0680**	**9.0000e-005**		**2.0200e-003**	**2.0200e-003**		**1.8600e-003**	**1.8600e-003**	**0.0000**	**8.3345**	**8.3345**	**2.7000e-003**	**0.0000**	**8.4019**

Unmitigated Construction Off-Site

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive 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	6.0000e-005	2.5200e-003	9.1000e-004	1.0000e-005	3.5000e-004	1.0000e-005	3.7000e-004	1.0000e-004	1.0000e-005	1.1000e-004	0.0000	1.1269	1.1269	7.0000e-005	1.7000e-004	1.1783
Worker	6.0000e-005	3.0000e-005	4.9000e-004	0.0000	2.1000e-004	0.0000	2.1000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1528	0.1528	0.0000	0.0000	0.1540
Total	**1.2000e-004**	**2.5500e-003**	**1.4000e-003**	**1.0000e-005**	**5.6000e-004**	**1.0000e-005**	**5.8000e-004**	**1.6000e-004**	**1.0000e-005**	**1.7000e-004**	**0.0000**	**1.2797**	**1.2797**	**7.0000e-005**	**1.7000e-004**	**1.3323**

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	4.3400e-003	0.0441	0.0680	9.0000e-005		2.0200e-003	2.0200e-003		1.8600e-003	1.8600e-003	0.0000	8.3345	8.3345	2.7000e-003	0.0000	8.4019
Total	**4.3400e-003**	**0.0441**	**0.0680**	**9.0000e-005**		**2.0200e-003**	**2.0200e-003**		**1.8600e-003**	**1.8600e-003**	**0.0000**	**8.3345**	**8.3345**	**2.7000e-003**	**0.0000**	**8.4019**

Mitigated Construction Off-Site

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive 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	6.0000e-005	2.5200e-003	9.1000e-004	1.0000e-005	3.3000e-004	1.0000e-005	3.4000e-004	1.0000e-004	1.0000e-005	1.1000e-004	0.0000	1.1269	1.1269	7.0000e-005	1.7000e-004	1.1783
Worker	6.0000e-005	3.0000e-005	4.9000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1528	0.1528	0.0000	0.0000	0.1540
Total	**1.2000e-004**	**2.5500e-003**	**1.4000e-003**	**1.0000e-005**	**5.3000e-004**	**1.0000e-005**	**5.4000e-004**	**1.5000e-004**	**1.0000e-005**	**1.6000e-004**	**0.0000**	**1.2797**	**1.2797**	**7.0000e-005**	**1.7000e-004**	**1.3323**

3.9 Fine Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5863	0.0000	0.5863	0.2921	0.0000	0.2921	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0984	1.0133	0.7517	1.6800e-003		0.0437	0.0437		0.0402	0.0402	0.0000	147.9082	147.9082	0.0478	0.0000	149.1041
Total	**0.0984**	**1.0133**	**0.7517**	**1.6800e-003**	**0.5863**	**0.0437**	**0.6300**	**0.2921**	**0.0402**	**0.3322**	**0.0000**	**147.9082**	**147.9082**	**0.0478**	**0.0000**	**149.1041**

Unmitigated Construction Off-Site

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive 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	3.2000e-004	0.0142	5.0800e-003	6.0000e-005	1.9600e-003	7.0000e-005	2.0400e-003	5.7000e-004	7.0000e-005	6.4000e-004	0.0000	6.3950	6.3950	3.9000e-004	9.4000e-004	6.6857
Worker	9.0000e-005	6.0000e-005	8.3000e-004	0.0000	3.4000e-004	0.0000	3.4000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2516	0.2516	1.0000e-005	1.0000e-005	0.2536
Total	**4.1000e-004**	**0.0142**	**5.9100e-003**	**6.0000e-005**	**2.3000e-003**	**7.0000e-005**	**2.3800e-003**	**6.6000e-004**	**7.0000e-005**	**7.3000e-004**	**0.0000**	**6.6466**	**6.6466**	**4.0000e-004**	**9.5000e-004**	**6.9394**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2506	0.0000	0.2506	0.1249	0.0000	0.1249	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0984	1.0133	0.7517	1.6800e-003		0.0437	0.0437		0.0402	0.0402	0.0000	147.9080	147.9080	0.0478	0.0000	149.1039
Total	**0.0984**	**1.0133**	**0.7517**	**1.6800e-003**	**0.2506**	**0.0437**	**0.2943**	**0.1249**	**0.0402**	**0.1650**	**0.0000**	**147.9080**	**147.9080**	**0.0478**	**0.0000**	**149.1039**

Mitigated Construction Off-Site

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive 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	3.2000e-004	0.0142	5.0800e-003	6.0000e-005	1.8400e-003	7.0000e-005	1.9100e-003	5.4000e-004	7.0000e-005	6.1000e-004	0.0000	6.3950	6.3950	3.9000e-004	9.4000e-004	6.6857
Worker	9.0000e-005	6.0000e-005	8.3000e-004	0.0000	3.1000e-004	0.0000	3.1000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2516	0.2516	1.0000e-005	1.0000e-005	0.2536
Total	**4.1000e-004**	**0.0142**	**5.9100e-003**	**6.0000e-005**	**2.1500e-003**	**7.0000e-005**	**2.2200e-003**	**6.2000e-004**	**7.0000e-005**	**7.0000e-004**	**0.0000**	**6.6466**	**6.6466**	**4.0000e-004**	**9.5000e-004**	**6.9394**

3.10 Fine Grading Soil Haul - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1000e-004	0.0000	1.1000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.9000e-004	0.0103	2.4200e-003	8.0000e-005	3.1600e-003	5.0000e-005	3.2000e-003	9.5000e-004	4.0000e-005	9.9000e-004	0.0000	7.3063	7.3063	2.0000e-005	9.1000e-004	7.5782
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.9000e-004**	**0.0103**	**2.4200e-003**	**8.0000e-005**	**3.1600e-003**	**5.0000e-005**	**3.2000e-003**	**9.5000e-004**	**4.0000e-005**	**9.9000e-004**	**0.0000**	**7.3063**	**7.3063**	**2.0000e-005**	**9.1000e-004**	**7.5782**

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					5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.9000e-004	0.0103	2.4200e-003	8.0000e-005	2.9700e-003	5.0000e-005	3.0100e-003	9.1000e-004	4.0000e-005	9.5000e-004	0.0000	7.3063	7.3063	2.0000e-005	9.1000e-004	7.5782
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.9000e-004**	**0.0103**	**2.4200e-003**	**8.0000e-005**	**2.9700e-003**	**5.0000e-005**	**3.0100e-003**	**9.1000e-004**	**4.0000e-005**	**9.5000e-004**	**0.0000**	**7.3063**	**7.3063**	**2.0000e-005**	**9.1000e-004**	**7.5782**

3.11 Paving - 2024

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	0.0728	0.6953	1.0475	1.5900e-003		0.0331	0.0331		0.0305	0.0305	0.0000	138.1383	138.1383	0.0438	0.0000	139.2335
Paving	2.4500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0753**	**0.6953**	**1.0475**	**1.5900e-003**		**0.0331**	**0.0331**		**0.0305**	**0.0305**	**0.0000**	**138.1383**	**138.1383**	**0.0438**	**0.0000**	**139.2335**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.1000e-004	0.0231	8.3300e-003	1.0000e-004	3.2300e-003	1.2000e-004	3.3500e-003	9.3000e-004	1.2000e-004	1.0500e-003	0.0000	10.3299	10.3299	6.6000e-004	1.5200e-003	10.8009
Worker	2.0000e-004	1.2000e-004	1.8000e-003	1.0000e-005	7.8000e-004	0.0000	7.8000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.5604	0.5604	1.0000e-005	1.0000e-005	0.5648
Total	**7.1000e-004**	**0.0232**	**0.0101**	**1.1000e-004**	**4.0100e-003**	**1.2000e-004**	**4.1300e-003**	**1.1400e-003**	**1.2000e-004**	**1.2600e-003**	**0.0000**	**10.8903**	**10.8903**	**6.7000e-004**	**1.5300e-003**	**11.3657**

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	0.0728	0.6953	1.0475	1.5900e-003		0.0331	0.0331		0.0305	0.0305	0.0000	138.1382	138.1382	0.0438	0.0000	139.2333
Paving	2.4500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0753**	**0.6953**	**1.0475**	**1.5900e-003**		**0.0331**	**0.0331**		**0.0305**	**0.0305**	**0.0000**	**138.1382**	**138.1382**	**0.0438**	**0.0000**	**139.2333**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.1000e-004	0.0231	8.3300e-003	1.0000e-004	3.0300e-003	1.2000e-004	3.1500e-003	8.8000e-004	1.2000e-004	1.0000e-003	0.0000	10.3299	10.3299	6.6000e-004	1.5200e-003	10.8009
Worker	2.0000e-004	1.2000e-004	1.8000e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5604	0.5604	1.0000e-005	1.0000e-005	0.5648
Total	**7.1000e-004**	**0.0232**	**0.0101**	**1.1000e-004**	**3.7500e-003**	**1.2000e-004**	**3.8700e-003**	**1.0700e-003**	**1.2000e-004**	**1.2000e-003**	**0.0000**	**10.8903**	**10.8903**	**6.7000e-004**	**1.5300e-003**	**11.3657**

3.12 Building Construction (P1+P2) - 2024

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	0.1434	1.3574	1.8945	3.0100e-003		0.0627	0.0627		0.0591	0.0591	0.0000	261.9801	261.9801	0.0601	0.0000	263.4820
Total	**0.1434**	**1.3574**	**1.8945**	**3.0100e-003**		**0.0627**	**0.0627**		**0.0591**	**0.0591**	**0.0000**	**261.9801**	**261.9801**	**0.0601**	**0.0000**	**263.4820**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	3.0400e-003	0.1378	0.0497	6.1000e-004	0.0193	7.2000e-004	0.0200	5.5800e-003	6.9000e-004	6.2700e-003	0.0000	61.6665	61.6665	3.9500e-003	9.1000e-003	64.4781
Worker	0.0121	7.4600e-003	0.1077	3.6000e-004	0.0465	2.1000e-004	0.0467	0.0124	2.0000e-004	0.0126	0.0000	33.4554	33.4554	8.0000e-004	8.1000e-004	33.7171
Total	**0.0151**	**0.1452**	**0.1574**	**9.7000e-004**	**0.0658**	**9.3000e-004**	**0.0668**	**0.0180**	**8.9000e-004**	**0.0189**	**0.0000**	**95.1219**	**95.1219**	**4.7500e-003**	**9.9100e-003**	**98.1952**

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	0.1434	1.3574	1.8945	3.0100e-003		0.0627	0.0627		0.0591	0.0591	0.0000	261.9798	261.9798	0.0601	0.0000	263.4816
Total	**0.1434**	**1.3574**	**1.8945**	**3.0100e-003**		**0.0627**	**0.0627**		**0.0591**	**0.0591**	**0.0000**	**261.9798**	**261.9798**	**0.0601**	**0.0000**	**263.4816**

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	3.0400e-003	0.1378	0.0497	6.1000e-004	0.0181	7.2000e-004	0.0188	5.2800e-003	6.9000e-004	5.9700e-003	0.0000	61.6665	61.6665	3.9500e-003	9.1000e-003	64.4781
Worker	0.0121	7.4600e-003	0.1077	3.6000e-004	0.0429	2.1000e-004	0.0431	0.0115	2.0000e-004	0.0117	0.0000	33.4554	33.4554	8.0000e-004	8.1000e-004	33.7171
Total	**0.0151**	**0.1452**	**0.1574**	**9.7000e-004**	**0.0610**	**9.3000e-004**	**0.0619**	**0.0168**	**8.9000e-004**	**0.0177**	**0.0000**	**95.1219**	**95.1219**	**4.7500e-003**	**9.9100e-003**	**98.1952**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.12 Building Construction (P1+P2) - 2025

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	0.1201	1.1395	1.7066	2.7200e-003		0.0478	0.0478		0.0450	0.0450	0.0000	236.8173	236.8173	0.0540	0.0000	238.1677
Total	**0.1201**	**1.1395**	**1.7066**	**2.7200e-003**		**0.0478**	**0.0478**		**0.0450**	**0.0450**	**0.0000**	**236.8173**	**236.8173**	**0.0540**	**0.0000**	**238.1677**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.6700e-003	0.1230	0.0449	5.4000e-004	0.0174	6.5000e-004	0.0181	5.0400e-003	6.2000e-004	5.6600e-003	0.0000	54.6243	54.6243	3.6400e-003	8.0700e-003	57.1204
Worker	0.0104	6.1000e-003	0.0917	3.2000e-004	0.0420	1.8000e-004	0.0422	0.0112	1.7000e-004	0.0114	0.0000	29.2185	29.2185	6.6000e-004	6.9000e-004	29.4402
Total	**0.0131**	**0.1291**	**0.1366**	**8.6000e-004**	**0.0595**	**8.3000e-004**	**0.0603**	**0.0162**	**7.9000e-004**	**0.0170**	**0.0000**	**83.8428**	**83.8428**	**4.3000e-003**	**8.7600e-003**	**86.5606**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.1201	1.1395	1.7066	2.7200e-003		0.0478	0.0478		0.0450	0.0450	0.0000	236.8170	236.8170	0.0540	0.0000	238.1675
Total	**0.1201**	**1.1395**	**1.7066**	**2.7200e-003**		**0.0478**	**0.0478**		**0.0450**	**0.0450**	**0.0000**	**236.8170**	**236.8170**	**0.0540**	**0.0000**	**238.1675**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.6700e-003	0.1230	0.0449	5.4000e-004	0.0163	6.5000e-004	0.0170	4.7700e-003	6.2000e-004	5.3900e-003	0.0000	54.6243	54.6243	3.6400e-003	8.0700e-003	57.1204
Worker	0.0104	6.1000e-003	0.0917	3.2000e-004	0.0388	1.8000e-004	0.0390	0.0104	1.7000e-004	0.0106	0.0000	29.2185	29.2185	6.6000e-004	6.9000e-004	29.4402
Total	**0.0131**	**0.1291**	**0.1366**	**8.6000e-004**	**0.0551**	**8.3000e-004**	**0.0559**	**0.0152**	**7.9000e-004**	**0.0159**	**0.0000**	**83.8428**	**83.8428**	**4.3000e-003**	**8.7600e-003**	**86.5606**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.13 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.5600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.5600e-003**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0000e-005	2.3000e-003	8.4000e-004	1.0000e-005	3.3000e-004	1.0000e-005	3.4000e-004	9.0000e-005	1.0000e-005	1.1000e-004	0.0000	1.0229	1.0229	7.0000e-005	1.5000e-004	1.0697
Worker	1.0000e-004	6.0000e-005	8.6000e-004	0.0000	3.9000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.2736	0.2736	1.0000e-005	1.0000e-005	0.2757
Total	**1.5000e-004**	**2.3600e-003**	**1.7000e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.4000e-004**	**1.9000e-004**	**1.0000e-005**	**2.2000e-004**	**0.0000**	**1.2965**	**1.2965**	**8.0000e-005**	**1.6000e-004**	**1.3453**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.5600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.5600e-003**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0000e-005	2.3000e-003	8.4000e-004	1.0000e-005	3.1000e-004	1.0000e-005	3.2000e-004	9.0000e-005	1.0000e-005	1.0000e-004	0.0000	1.0229	1.0229	7.0000e-005	1.5000e-004	1.0697
Worker	1.0000e-004	6.0000e-005	8.6000e-004	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2736	0.2736	1.0000e-005	1.0000e-005	0.2757
Total	**1.5000e-004**	**2.3600e-003**	**1.7000e-003**	**1.0000e-005**	**6.7000e-004**	**1.0000e-005**	**6.8000e-004**	**1.9000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**1.2965**	**1.2965**	**8.0000e-005**	**1.6000e-004**	**1.3453**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.14 Finishing/Landscaping - 2025

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	0.0105	0.1061	0.1773	2.5000e-004		4.3000e-003	4.3000e-003		3.9600e-003	3.9600e-003	0.0000	21.7846	21.7846	7.0500e-003	0.0000	21.9608
Total	**0.0105**	**0.1061**	**0.1773**	**2.5000e-004**		**4.3000e-003**	**4.3000e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**21.7846**	**21.7846**	**7.0500e-003**	**0.0000**	**21.9608**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1000e-004	9.7700e-003	3.5700e-003	4.0000e-005	1.3800e-003	5.0000e-005	1.4400e-003	4.0000e-004	5.0000e-005	4.5000e-004	0.0000	4.3372	4.3372	2.9000e-004	6.4000e-004	4.5354
Worker	4.1000e-004	2.4000e-004	3.6400e-003	1.0000e-005	1.6700e-003	1.0000e-005	1.6800e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.1600	1.1600	3.0000e-005	3.0000e-005	1.1688
Total	**6.2000e-004**	**0.0100**	**7.2100e-003**	**5.0000e-005**	**3.0500e-003**	**6.0000e-005**	**3.1200e-003**	**8.4000e-004**	**6.0000e-005**	**9.0000e-004**	**0.0000**	**5.4972**	**5.4972**	**3.2000e-004**	**6.7000e-004**	**5.7042**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0105	0.1061	0.1773	2.5000e-004		4.3000e-003	4.3000e-003		3.9600e-003	3.9600e-003	0.0000	21.7846	21.7846	7.0500e-003	0.0000	21.9607
Total	**0.0105**	**0.1061**	**0.1773**	**2.5000e-004**		**4.3000e-003**	**4.3000e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**21.7846**	**21.7846**	**7.0500e-003**	**0.0000**	**21.9607**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1000e-004	9.7700e-003	3.5700e-003	4.0000e-005	1.3000e-003	5.0000e-005	1.3500e-003	3.8000e-004	5.0000e-005	4.3000e-004	0.0000	4.3372	4.3372	2.9000e-004	6.4000e-004	4.5354
Worker	4.1000e-004	2.4000e-004	3.6400e-003	1.0000e-005	1.5400e-003	1.0000e-005	1.5500e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.1600	1.1600	3.0000e-005	3.0000e-005	1.1688
Total	**6.2000e-004**	**0.0100**	**7.2100e-003**	**5.0000e-005**	**2.8400e-003**	**6.0000e-005**	**2.9000e-003**	**7.9000e-004**	**6.0000e-005**	**8.5000e-004**	**0.0000**	**5.4972**	**5.4972**	**3.2000e-004**	**6.7000e-004**	**5.7042**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.14 Finishing/Landscaping - 2026

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	5.1500e-003	0.0521	0.0870	1.2000e-004		2.1100e-003	2.1100e-003		1.9400e-003	1.9400e-003	0.0000	10.6868	10.6868	3.4600e-003	0.0000	10.7732
Total	**5.1500e-003**	**0.0521**	**0.0870**	**1.2000e-004**		**2.1100e-003**	**2.1100e-003**		**1.9400e-003**	**1.9400e-003**	**0.0000**	**10.6868**	**10.6868**	**3.4600e-003**	**0.0000**	**10.7732**

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	1.0000e-004	4.7300e-003	1.7600e-003	2.0000e-005	6.8000e-004	3.0000e-005	7.0000e-004	2.0000e-004	2.0000e-005	2.2000e-004	0.0000	2.0863	2.0863	1.5000e-004	3.1000e-004	2.1819
Worker	1.9000e-004	1.1000e-004	1.7000e-003	1.0000e-005	8.2000e-004	0.0000	8.2000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.5526	0.5526	1.0000e-005	1.0000e-005	0.5567
Total	**2.9000e-004**	**4.8400e-003**	**3.4600e-003**	**3.0000e-005**	**1.5000e-003**	**3.0000e-005**	**1.5200e-003**	**4.2000e-004**	**2.0000e-005**	**4.4000e-004**	**0.0000**	**2.6390**	**2.6390**	**1.6000e-004**	**3.2000e-004**	**2.7386**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	5.1500e-003	0.0521	0.0870	1.2000e-004		2.1100e-003	2.1100e-003		1.9400e-003	1.9400e-003	0.0000	10.6868	10.6868	3.4600e-003	0.0000	10.7732
Total	**5.1500e-003**	**0.0521**	**0.0870**	**1.2000e-004**		**2.1100e-003**	**2.1100e-003**		**1.9400e-003**	**1.9400e-003**	**0.0000**	**10.6868**	**10.6868**	**3.4600e-003**	**0.0000**	**10.7732**

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	1.0000e-004	4.7300e-003	1.7600e-003	2.0000e-005	6.4000e-004	3.0000e-005	6.6000e-004	1.9000e-004	2.0000e-005	2.1000e-004	0.0000	2.0863	2.0863	1.5000e-004	3.1000e-004	2.1819
Worker	1.9000e-004	1.1000e-004	1.7000e-003	1.0000e-005	7.6000e-004	0.0000	7.6000e-004	2.0000e-004	0.0000	2.1000e-004	0.0000	0.5526	0.5526	1.0000e-005	1.0000e-005	0.5567
Total	**2.9000e-004**	**4.8400e-003**	**3.4600e-003**	**3.0000e-005**	**1.4000e-003**	**3.0000e-005**	**1.4200e-003**	**3.9000e-004**	**2.0000e-005**	**4.2000e-004**	**0.0000**	**2.6390**	**2.6390**	**1.6000e-004**	**3.2000e-004**	**2.7386**

CalEEMod Mitigated Construction Model

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

808 Alameda de Las Pulgas Townhome Development Project

San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	75.10	1000sqft	1.72	75,053.00	0
Other Non-Asphalt Surfaces	296.00	1000sqft	6.79	295,964.00	0
Parking Lot	6.30	1000sqft	0.15	6,336.00	0
Condo/Townhouse High Rise	87.00	Dwelling Unit	3.29	398,998.00	249

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2026
Utility Company	Peninsula Clean Energy				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on Applicant info., see assumptions file

Construction Phase - Based on applicant info., see assumptions file

Off-road Equipment - Based on applicant info., see assumptions file

Off-road Equipment - Based on applicant info., see assumptions file

Off-road Equipment - No additional hauling equipment required for this phase

Off-road Equipment - Based on applicant info., added bore/drill rigs for building foundation based on project of similar size, see assumptions file

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-road Equipment - No additional hauling equipment required for this phase

Off-road Equipment - Based on applicant info., see assumptions file

Off-road Equipment - No additional hauling equipment required for this phase

Off-road Equipment - Based on applicant info., see assumptions file

Off-road Equipment - Based on applicant info., see assumptions file

Off-road Equipment - Based on applicant info., see assumptions file

Off-road Equipment - No additional hauling equipment required for this phase

Off-road Equipment - Based on applicant info., see assumptions file

Off-road Equipment - No additional hauling equipment required for this phase

Off-road Equipment - Based on applicant info., see assumptions file

Trips and VMT - Based on applicant info., see assumptions file

Demolition -

Grading -

Architectural Coating - Based on applicant info., see assumptions file

Construction Off-road Equipment Mitigation - BAAQMD Construction BMPs, Tier 4 Interim equipment for all equipment above 50 HP

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	22,641.00	380.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	269,324.00	42.00
tblArchitecturalCoating	ConstArea_Residential_Interior	807,971.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	250.00
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	14.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	24.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	10.00	32.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	30.00	98.00
tblConstructionPhase	NumDays	30.00	98.00
tblConstructionPhase	NumDays	30.00	43.00
tblConstructionPhase	NumDays	30.00	43.00
tblConstructionPhase	NumDays	20.00	99.00

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstructionPhase	NumDays	300.00	375.00
tblConstructionPhase	NumDays	20.00	25.00
tblGrading	MaterialExported	0.00	30,200.00
tblGrading	MaterialExported	0.00	3,000.00
tblGrading	MaterialExported	0.00	2,000.00
tblLandUse	LandUseSquareFeet	75,100.00	75,053.00
tblLandUse	LandUseSquareFeet	296,000.00	295,964.00
tblLandUse	LandUseSquareFeet	6,300.00	6,336.00
tblLandUse	LandUseSquareFeet	87,000.00	398,998.00
tblLandUse	LotAcreage	6.80	6.79
tblLandUse	LotAcreage	0.14	0.15
tblLandUse	LotAcreage	1.36	3.29
tblOffRoadEquipment	HorsePower	158.00	97.00
tblOffRoadEquipment	HorsePower	80.00	157.00
tblOffRoadEquipment	HorsePower	80.00	157.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	7.00	1.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblTripsAndVMT	HaulingTripNumber	25.00	72.00
tblTripsAndVMT	HaulingTripNumber	113.00	326.00
tblTripsAndVMT	HaulingTripNumber	3,775.00	5,034.00
tblTripsAndVMT	HaulingTripNumber	375.00	500.00
tblTripsAndVMT	HaulingTripNumber	250.00	334.00
tblTripsAndVMT	HaulingVehicleClass	HHDT	MHDT
tblTripsAndVMT	HaulingVehicleClass	HHDT	MHDT
tblTripsAndVMT	HaulingVehicleClass	HHDT	MHDT
tblTripsAndVMT	HaulingVehicleClass	HHDT	MHDT
tblTripsAndVMT	HaulingVehicleClass	HHDT	MHDT
tblTripsAndVMT	VendorTripNumber	0.00	11.00
tblTripsAndVMT	VendorTripNumber	0.00	16.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	14.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	71.00	30.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	WorkerTripNumber	33.00	2.00
tblTripsAndVMT	WorkerTripNumber	30.00	2.00
tblTripsAndVMT	WorkerTripNumber	15.00	2.00
tblTripsAndVMT	WorkerTripNumber	30.00	2.00
tblTripsAndVMT	WorkerTripNumber	30.00	2.00

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblTripsAndVMT	WorkerTripNumber	221.00	60.00
tblTripsAndVMT	WorkerTripNumber	44.00	4.00
tblTripsAndVMT	WorkerTripNumber	10.00	8.00

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					
2023	0.3905	4.1710	3.2277	8.4100e-003	2.2190	0.1725	2.3915	1.0889	0.1588	1.2477	0.0000	753.1100	753.1100	0.1904	0.0214	764.2509
2024	0.2389	2.2678	3.1790	5.7900e-003	0.0704	0.0988	0.1692	0.0193	0.0924	0.1117	0.0000	515.7449	515.7449	0.1121	0.0116	522.0105
2025	0.1460	1.3872	2.0294	3.9000e-003	0.0632	0.0530	0.1162	0.0173	0.0499	0.0671	0.0000	349.2384	349.2384	0.0658	9.5900e-003	353.7386
2026	5.4500e-003	0.0569	0.0904	1.5000e-004	1.5000e-003	2.1400e-003	3.6400e-003	4.1000e-004	1.9700e-003	2.3800e-003	0.0000	13.3258	13.3258	3.6100e-003	3.2000e-004	13.5118
Maximum	**0.3905**	**4.1710**	**3.2277**	**8.4100e-003**	**2.2190**	**0.1725**	**2.3915**	**1.0889**	**0.1588**	**1.2477**	**0.0000**	**753.1100**	**753.1100**	**0.1904**	**0.0214**	**764.2509**

Date: 2/18/2022 12:08 PM

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2023	0.1093	2.5487	4.2978	8.4100e-003	0.9844	0.0121	0.9965	0.4765	0.0120	0.4885	0.0000	753.1093	753.1093	0.1904	0.0214	764.2502
2024	0.1185	2.1124	3.4962	5.7900e-003	0.0653	0.0107	0.0759	0.0180	0.0106	0.0286	0.0000	515.7444	515.7444	0.1121	0.0116	522.0100
2025	0.0806	1.3312	2.2053	3.9000e-003	0.0586	6.3000e-003	0.0649	0.0161	6.2600e-003	0.0224	0.0000	349.2381	349.2381	0.0658	9.5900e-003	353.7383
2026	3.0100e-003	0.0577	0.0948	1.5000e-004	1.3900e-003	2.3000e-004	1.6200e-003	3.9000e-004	2.2000e-004	6.1000e-004	0.0000	13.3257	13.3257	3.6100e-003	3.2000e-004	13.5118
Maximum	**0.1185**	**2.5487**	**4.2978**	**8.4100e-003**	**0.9844**	**0.0121**	**0.9965**	**0.4765**	**0.0120**	**0.4885**	**0.0000**	**753.1093**	**753.1093**	**0.1904**	**0.0214**	**764.2502**

	ROG	NOx	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	**60.12**	**23.25**	**-18.39**	**0.00**	**52.86**	**91.03**	**57.51**	**54.62**	**90.39**	**62.20**	**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	**6-10-2023**	**9-9-2023**	1.9649	1.2127
2	**9-10-2023**	**12-9-2023**	2.2341	1.2977
3	**12-10-2023**	**3-9-2024**	0.6732	0.4644
4	**3-10-2024**	**6-9-2024**	0.9473	0.8641
5	**6-10-2024**	**9-9-2024**	0.6497	0.5667
6	**9-10-2024**	**12-9-2024**	0.5488	0.4709
7	**12-10-2024**	**3-9-2025**	0.5164	0.4654
8	**3-10-2025**	**6-9-2025**	0.5165	0.4730
9	**6-10-2025**	**9-9-2025**	0.4933	0.4517
10	**9-10-2025**	**12-9-2025**	0.0917	0.0894

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

11	**12-10-2025**	**3-9-2026**	0.0996	0.0969
		Highest	2.2341	1.2977

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation and Demolition	Site Preparation	6/1/2023	7/15/2023	5	32	a
2	Building Demolition Debris Haul	Demolition	6/10/2023	6/30/2023	5	15	b
3	Asphalt Demolition Debris Haul	Demolition	7/1/2023	7/15/2023	5	10	c
4	Rough Grading	Grading	7/1/2023	11/15/2023	5	98	d
5	Rough Grading Soil Haul	Grading	7/1/2023	11/15/2023	5	98	e
6	Site Preparation Soil Haul	Site Preparation	7/15/2023	7/30/2023	5	10	f
7	Utility Trenching	Trenching	10/16/2023	2/6/2024	5	82	g
8	Fine Grading	Grading	11/1/2023	12/31/2023	5	43	h
9	Fine Grading Soil Haul	Grading	11/1/2023	12/31/2023	5	43	i
10	Paving	Paving	2/9/2024	6/26/2024	5	99	j
11	Building Construction (P1+P2)	Building Construction	4/1/2024	9/5/2025	5	375	k
12	Architectural Coating	Architectural Coating	9/13/2025	10/17/2025	5	25	l
13	Finishing/Landscaping	Trenching	10/20/2025	2/5/2026	5	79	m

Acres of Grading (Site Preparation Phase): 32

Acres of Grading (Grading Phase): 294

Acres of Paving: 8.66

Residential Indoor: 0; Residential Outdoor: 42; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 380 (Architectural Coating

OffRoad Equipment

Date: 2/18/2022 12:08 PM

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation and Demolition	Concrete/Industrial Saws	1	4.00	81	0.73
Site Preparation and Demolition	Excavators	4	8.00	158	0.38
Site Preparation and Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation and Demolition	Tractors/Loaders/Backhoes	6	8.00	97	0.37
Rough Grading	Excavators	4	8.00	158	0.38
Rough Grading	Graders	2	8.00	187	0.41
Rough Grading	Rollers	2	8.00	157	0.38
Rough Grading	Rubber Tired Dozers	4	8.00	247	0.40
Utility Trenching	Excavators	2	3.00	97	0.38
Utility Trenching	Tractors/Loaders/Backhoes	4	3.00	97	0.37
Fine Grading	Excavators	4	8.00	158	0.38
Fine Grading	Graders	2	8.00	187	0.41
Fine Grading	Rollers	2	8.00	157	0.38
Fine Grading	Rubber Tired Dozers	4	8.00	247	0.40
Paving	Cement and Mortar Mixers	2	7.00	9	0.56
Paving	Pavers	2	7.00	130	0.42
Paving	Paving Equipment	2	7.00	132	0.36
Paving	Rollers	2	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	4	7.00	97	0.37
Building Construction (P1+P2)	Bore/Drill Rigs	1	1.00	221	0.50
Building Construction (P1+P2)	Cranes	2	1.00	231	0.29
Building Construction (P1+P2)	Forklifts	3	6.00	89	0.20
Building Construction (P1+P2)	Generator Sets	2	6.00	84	0.74
Building Construction (P1+P2)	Tractors/Loaders/Backhoes	6	6.00	97	0.37
Building Construction (P1+P2)	Welders	2	1.00	46	0.45
Finishing/Landscaping	Tractors/Loaders/Backhoes	4	6.00	97	0.37

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation and Demolition	13	2.00	11.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Demolition Debris Haul	0	0.00	0.00	72.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	MHDT
Asphalt Demolition Debris Haul	0	0.00	0.00	326.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	MHDT
Rough Grading	12	2.00	16.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grading Soil Haul	0	0.00	0.00	5,034.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	MHDT
Site Preparation Soil Haul	0	0.00	0.00	500.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	MHDT
Utility Trenching	6	2.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	12	2.00	14.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading Soil Haul	0	0.00	0.00	334.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	MHDT
Paving	12	2.00	10.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction (P1+P2)	16	60.00	30.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	4.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Finishing/Landscaping	4	8.00	8.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation and Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2097	0.0000	0.2097	0.1078	0.0000	0.1078	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0512	0.4953	0.5514	9.5000e-004		0.0234	0.0234		0.0216	0.0216	0.0000	83.6093	83.6093	0.0259	0.0000	84.2558
Total	**0.0512**	**0.4953**	**0.5514**	**9.5000e-004**	**0.2097**	**0.0234**	**0.2331**	**0.1078**	**0.0216**	**0.1294**	**0.0000**	**83.6093**	**83.6093**	**0.0259**	**0.0000**	**84.2558**

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	1.9000e-004	8.2900e-003	2.9700e-003	4.0000e-005	1.1500e-003	4.0000e-005	1.1900e-003	3.3000e-004	4.0000e-005	3.7000e-004	0.0000	3.7393	3.7393	2.3000e-004	5.5000e-004	3.9093
Worker	7.0000e-005	5.0000e-005	6.2000e-004	0.0000	2.5000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.1872	0.1872	0.0000	0.0000	0.1888
Total	**2.6000e-004**	**8.3400e-003**	**3.5900e-003**	**4.0000e-005**	**1.4000e-003**	**4.0000e-005**	**1.4400e-003**	**4.0000e-004**	**4.0000e-005**	**4.4000e-004**	**0.0000**	**3.9265**	**3.9265**	**2.3000e-004**	**5.5000e-004**	**4.0980**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0896	0.0000	0.0896	0.0461	0.0000	0.0461	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0161	0.3655	0.6514	9.5000e-004		1.5400e-003	1.5400e-003		1.5400e-003	1.5400e-003	0.0000	83.6092	83.6092	0.0259	0.0000	84.2557
Total	**0.0161**	**0.3655**	**0.6514**	**9.5000e-004**	**0.0896**	**1.5400e-003**	**0.0912**	**0.0461**	**1.5400e-003**	**0.0476**	**0.0000**	**83.6092**	**83.6092**	**0.0259**	**0.0000**	**84.2557**

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	1.9000e-004	8.2900e-003	2.9700e-003	4.0000e-005	1.0800e-003	4.0000e-005	1.1200e-003	3.1000e-004	4.0000e-005	3.6000e-004	0.0000	3.7393	3.7393	2.3000e-004	5.5000e-004	3.9093
Worker	7.0000e-005	5.0000e-005	6.2000e-004	0.0000	2.3000e-004	0.0000	2.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1872	0.1872	0.0000	0.0000	0.1888
Total	**2.6000e-004**	**8.3400e-003**	**3.5900e-003**	**4.0000e-005**	**1.3100e-003**	**4.0000e-005**	**1.3500e-003**	**3.7000e-004**	**4.0000e-005**	**4.2000e-004**	**0.0000**	**3.9265**	**3.9265**	**2.3000e-004**	**5.5000e-004**	**4.0980**

3.3 Building Demolition Debris Haul - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.6900e-003	0.0000	2.6900e-003	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.6900e-003**	**0.0000**	**2.6900e-003**	**4.1000e-004**	**0.0000**	**4.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	6.0000e-005	2.2200e-003	5.2000e-004	2.0000e-005	6.8000e-004	1.0000e-005	6.9000e-004	2.1000e-004	1.0000e-005	2.1000e-004	0.0000	1.5750	1.5750	0.0000	2.0000e-004	1.6336
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.0000e-005**	**2.2200e-003**	**5.2000e-004**	**2.0000e-005**	**6.8000e-004**	**1.0000e-005**	**6.9000e-004**	**2.1000e-004**	**1.0000e-005**	**2.1000e-004**	**0.0000**	**1.5750**	**1.5750**	**0.0000**	**2.0000e-004**	**1.6336**

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					1.1500e-003	0.0000	1.1500e-003	1.7000e-004	0.0000	1.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.1500e-003**	**0.0000**	**1.1500e-003**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	6.0000e-005	2.2200e-003	5.2000e-004	2.0000e-005	6.4000e-004	1.0000e-005	6.5000e-004	2.0000e-004	1.0000e-005	2.0000e-004	0.0000	1.5750	1.5750	0.0000	2.0000e-004	1.6336
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.0000e-005**	**2.2200e-003**	**5.2000e-004**	**2.0000e-005**	**6.4000e-004**	**1.0000e-005**	**6.5000e-004**	**2.0000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**1.5750**	**1.5750**	**0.0000**	**2.0000e-004**	**1.6336**

3.4 Asphalt Demolition Debris Haul - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0122	0.0000	0.0122	1.8500e-003	0.0000	1.8500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0122**	**0.0000**	**0.0122**	**1.8500e-003**	**0.0000**	**1.8500e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.8000e-004	0.0100	2.3600e-003	8.0000e-005	3.0800e-003	4.0000e-005	3.1200e-003	9.3000e-004	4.0000e-005	9.7000e-004	0.0000	7.1313	7.1313	2.0000e-005	8.9000e-004	7.3967
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.8000e-004**	**0.0100**	**2.3600e-003**	**8.0000e-005**	**3.0800e-003**	**4.0000e-005**	**3.1200e-003**	**9.3000e-004**	**4.0000e-005**	**9.7000e-004**	**0.0000**	**7.1313**	**7.1313**	**2.0000e-005**	**8.9000e-004**	**7.3967**

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					5.2100e-003	0.0000	5.2100e-003	7.9000e-004	0.0000	7.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**5.2100e-003**	**0.0000**	**5.2100e-003**	**7.9000e-004**	**0.0000**	**7.9000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.8000e-004	0.0100	2.3600e-003	8.0000e-005	2.9000e-003	4.0000e-005	2.9400e-003	8.8000e-004	4.0000e-005	9.3000e-004	0.0000	7.1313	7.1313	2.0000e-005	8.9000e-004	7.3967
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.8000e-004**	**0.0100**	**2.3600e-003**	**8.0000e-005**	**2.9000e-003**	**4.0000e-005**	**2.9400e-003**	**8.8000e-004**	**4.0000e-005**	**9.3000e-004**	**0.0000**	**7.1313**	**7.1313**	**2.0000e-005**	**8.9000e-004**	**7.3967**

3.5 Rough Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.3362	0.0000	1.3362	0.6656	0.0000	0.6656	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2242	2.3094	1.7133	3.8400e-003		0.0995	0.0995		0.0916	0.0916	0.0000	337.0931	337.0931	0.1090	0.0000	339.8187
Total	**0.2242**	**2.3094**	**1.7133**	**3.8400e-003**	**1.3362**	**0.0995**	**1.4357**	**0.6656**	**0.0916**	**0.7572**	**0.0000**	**337.0931**	**337.0931**	**0.1090**	**0.0000**	**339.8187**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	8.3000e-004	0.0369	0.0132	1.6000e-004	5.1200e-003	1.9000e-004	5.3100e-003	1.4800e-003	1.8000e-004	1.6600e-003	0.0000	16.6567	16.6567	1.0200e-003	2.4600e-003	17.4140
Worker	2.1000e-004	1.4000e-004	1.9000e-003	1.0000e-005	7.7000e-004	0.0000	7.8000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.5734	0.5734	1.0000e-005	1.0000e-005	0.5781
Total	**1.0400e-003**	**0.0371**	**0.0151**	**1.7000e-004**	**5.8900e-003**	**1.9000e-004**	**6.0900e-003**	**1.6900e-003**	**1.8000e-004**	**1.8700e-003**	**0.0000**	**17.2301**	**17.2301**	**1.0300e-003**	**2.4700e-003**	**17.9921**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5712	0.0000	0.5712	0.2846	0.0000	0.2846	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0566	1.2795	2.3820	3.8400e-003		6.2800e-003	6.2800e-003		6.2800e-003	6.2800e-003	0.0000	337.0927	337.0927	0.1090	0.0000	339.8183
Total	**0.0566**	**1.2795**	**2.3820**	**3.8400e-003**	**0.5712**	**6.2800e-003**	**0.5775**	**0.2846**	**6.2800e-003**	**0.2908**	**0.0000**	**337.0927**	**337.0927**	**0.1090**	**0.0000**	**339.8183**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	8.3000e-004	0.0369	0.0132	1.6000e-004	4.7900e-003	1.9000e-004	4.9800e-003	1.4000e-003	1.8000e-004	1.5800e-003	0.0000	16.6567	16.6567	1.0200e-003	2.4600e-003	17.4140
Worker	2.1000e-004	1.4000e-004	1.9000e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5734	0.5734	1.0000e-005	1.0000e-005	0.5781
Total	**1.0400e-003**	**0.0371**	**0.0151**	**1.7000e-004**	**5.5000e-003**	**1.9000e-004**	**5.7000e-003**	**1.5900e-003**	**1.8000e-004**	**1.7700e-003**	**0.0000**	**17.2301**	**17.2301**	**1.0300e-003**	**2.4700e-003**	**17.9921**

3.6 Rough Grading Soil Haul - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.7100e-003	0.0000	1.7100e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.7100e-003**	**0.0000**	**1.7100e-003**	**2.6000e-004**	**0.0000**	**2.6000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	4.4000e-003	0.1550	0.0365	1.1600e-003	0.0476	6.8000e-004	0.0482	0.0143	6.5000e-004	0.0150	0.0000	110.1195	110.1195	2.6000e-004	0.0137	114.2171
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.4000e-003**	**0.1550**	**0.0365**	**1.1600e-003**	**0.0476**	**6.8000e-004**	**0.0482**	**0.0143**	**6.5000e-004**	**0.0150**	**0.0000**	**110.1195**	**110.1195**	**2.6000e-004**	**0.0137**	**114.2171**

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					7.3000e-004	0.0000	7.3000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.3000e-004**	**0.0000**	**7.3000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	4.4000e-003	0.1550	0.0365	1.1600e-003	0.0447	6.8000e-004	0.0454	0.0136	6.5000e-004	0.0143	0.0000	110.1195	110.1195	2.6000e-004	0.0137	114.2171
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.4000e-003**	**0.1550**	**0.0365**	**1.1600e-003**	**0.0447**	**6.8000e-004**	**0.0454**	**0.0136**	**6.5000e-004**	**0.0143**	**0.0000**	**110.1195**	**110.1195**	**2.6000e-004**	**0.0137**	**114.2171**

3.7 Site Preparation Soil Haul - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.7000e-004	0.0000	1.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive 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	4.4000e-004	0.0154	3.6200e-003	1.2000e-004	4.7200e-003	7.0000e-005	4.7900e-003	1.4200e-003	6.0000e-005	1.4900e-003	0.0000	10.9376	10.9376	3.0000e-005	1.3600e-003	11.3446
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.4000e-004**	**0.0154**	**3.6200e-003**	**1.2000e-004**	**4.7200e-003**	**7.0000e-005**	**4.7900e-003**	**1.4200e-003**	**6.0000e-005**	**1.4900e-003**	**0.0000**	**10.9376**	**10.9376**	**3.0000e-005**	**1.3600e-003**	**11.3446**

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					7.0000e-005	0.0000	7.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	4.4000e-004	0.0154	3.6200e-003	1.2000e-004	4.4400e-003	7.0000e-005	4.5100e-003	1.3500e-003	6.0000e-005	1.4200e-003	0.0000	10.9376	10.9376	3.0000e-005	1.3600e-003	11.3446
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.4000e-004**	**0.0154**	**3.6200e-003**	**1.2000e-004**	**4.4400e-003**	**7.0000e-005**	**4.5100e-003**	**1.3500e-003**	**6.0000e-005**	**1.4200e-003**	**0.0000**	**10.9376**	**10.9376**	**3.0000e-005**	**1.3600e-003**	**11.3446**

3.8 Utility Trenching - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.3300e-003	0.0953	0.1384	1.9000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	16.9678	16.9678	5.4900e-003	0.0000	17.1050
Total	**9.3300e-003**	**0.0953**	**0.1384**	**1.9000e-004**		**4.6900e-003**	**4.6900e-003**		**4.3100e-003**	**4.3100e-003**	**0.0000**	**16.9678**	**16.9678**	**5.4900e-003**	**0.0000**	**17.1050**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	1.2000e-004	5.1800e-003	1.8600e-003	2.0000e-005	7.2000e-004	3.0000e-005	7.4000e-004	2.1000e-004	3.0000e-005	2.3000e-004	0.0000	2.3370	2.3370	1.4000e-004	3.4000e-004	2.4433
Worker	1.2000e-004	8.0000e-005	1.0700e-003	0.0000	4.3000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3218	0.3218	1.0000e-005	1.0000e-005	0.3244
Total	**2.4000e-004**	**5.2600e-003**	**2.9300e-003**	**2.0000e-005**	**1.1500e-003**	**3.0000e-005**	**1.1800e-003**	**3.3000e-004**	**3.0000e-005**	**3.5000e-004**	**0.0000**	**2.6588**	**2.6588**	**1.5000e-004**	**3.5000e-004**	**2.7677**

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	4.3500e-003	0.0846	0.1462	1.9000e-004		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	16.9678	16.9678	5.4900e-003	0.0000	17.1050
Total	**4.3500e-003**	**0.0846**	**0.1462**	**1.9000e-004**		**3.2000e-004**	**3.2000e-004**		**3.2000e-004**	**3.2000e-004**	**0.0000**	**16.9678**	**16.9678**	**5.4900e-003**	**0.0000**	**17.1050**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	1.2000e-004	5.1800e-003	1.8600e-003	2.0000e-005	6.7000e-004	3.0000e-005	7.0000e-004	2.0000e-004	3.0000e-005	2.2000e-004	0.0000	2.3370	2.3370	1.4000e-004	3.4000e-004	2.4433
Worker	1.2000e-004	8.0000e-005	1.0700e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3218	0.3218	1.0000e-005	1.0000e-005	0.3244
Total	**2.4000e-004**	**5.2600e-003**	**2.9300e-003**	**2.0000e-005**	**1.0700e-003**	**3.0000e-005**	**1.1000e-003**	**3.1000e-004**	**3.0000e-005**	**3.3000e-004**	**0.0000**	**2.6588**	**2.6588**	**1.5000e-004**	**3.5000e-004**	**2.7677**

3.8 Utility Trenching - 2024

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	4.3400e-003	0.0441	0.0680	9.0000e-005		2.0200e-003	2.0200e-003		1.8600e-003	1.8600e-003	0.0000	8.3345	8.3345	2.7000e-003	0.0000	8.4019
Total	**4.3400e-003**	**0.0441**	**0.0680**	**9.0000e-005**		**2.0200e-003**	**2.0200e-003**		**1.8600e-003**	**1.8600e-003**	**0.0000**	**8.3345**	**8.3345**	**2.7000e-003**	**0.0000**	**8.4019**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	6.0000e-005	2.5200e-003	9.1000e-004	1.0000e-005	3.5000e-004	1.0000e-005	3.7000e-004	1.0000e-004	1.0000e-005	1.1000e-004	0.0000	1.1269	1.1269	7.0000e-005	1.7000e-004	1.1783
Worker	6.0000e-005	3.0000e-005	4.9000e-004	0.0000	2.1000e-004	0.0000	2.1000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1528	0.1528	0.0000	0.0000	0.1540
Total	**1.2000e-004**	**2.5500e-003**	**1.4000e-003**	**1.0000e-005**	**5.6000e-004**	**1.0000e-005**	**5.8000e-004**	**1.6000e-004**	**1.0000e-005**	**1.7000e-004**	**0.0000**	**1.2797**	**1.2797**	**7.0000e-005**	**1.7000e-004**	**1.3323**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.1300e-003	0.0415	0.0718	9.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	8.3345	8.3345	2.7000e-003	0.0000	8.4019
Total	**2.1300e-003**	**0.0415**	**0.0718**	**9.0000e-005**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**	**0.0000**	**8.3345**	**8.3345**	**2.7000e-003**	**0.0000**	**8.4019**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	6.0000e-005	2.5200e-003	9.1000e-004	1.0000e-005	3.3000e-004	1.0000e-005	3.4000e-004	1.0000e-004	1.0000e-005	1.1000e-004	0.0000	1.1269	1.1269	7.0000e-005	1.7000e-004	1.1783
Worker	6.0000e-005	3.0000e-005	4.9000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1528	0.1528	0.0000	0.0000	0.1540
Total	**1.2000e-004**	**2.5500e-003**	**1.4000e-003**	**1.0000e-005**	**5.3000e-004**	**1.0000e-005**	**5.4000e-004**	**1.5000e-004**	**1.0000e-005**	**1.6000e-004**	**0.0000**	**1.2797**	**1.2797**	**7.0000e-005**	**1.7000e-004**	**1.3323**

3.9 Fine Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5863	0.0000	0.5863	0.2921	0.0000	0.2921	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0984	1.0133	0.7517	1.6800e-003		0.0437	0.0437		0.0402	0.0402	0.0000	147.9082	147.9082	0.0478	0.0000	149.1041
Total	**0.0984**	**1.0133**	**0.7517**	**1.6800e-003**	**0.5863**	**0.0437**	**0.6300**	**0.2921**	**0.0402**	**0.3322**	**0.0000**	**147.9082**	**147.9082**	**0.0478**	**0.0000**	**149.1041**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	3.2000e-004	0.0142	5.0800e-003	6.0000e-005	1.9600e-003	7.0000e-005	2.0400e-003	5.7000e-004	7.0000e-005	6.4000e-004	0.0000	6.3950	6.3950	3.9000e-004	9.4000e-004	6.6857
Worker	9.0000e-005	6.0000e-005	8.3000e-004	0.0000	3.4000e-004	0.0000	3.4000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2516	0.2516	1.0000e-005	1.0000e-005	0.2536
Total	**4.1000e-004**	**0.0142**	**5.9100e-003**	**6.0000e-005**	**2.3000e-003**	**7.0000e-005**	**2.3800e-003**	**6.6000e-004**	**7.0000e-005**	**7.3000e-004**	**0.0000**	**6.6466**	**6.6466**	**4.0000e-004**	**9.5000e-004**	**6.9394**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2506	0.0000	0.2506	0.1249	0.0000	0.1249	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0248	0.5614	1.0452	1.6800e-003		2.7500e-003	2.7500e-003		2.7500e-003	2.7500e-003	0.0000	147.9080	147.9080	0.0478	0.0000	149.1039
Total	**0.0248**	**0.5614**	**1.0452**	**1.6800e-003**	**0.2506**	**2.7500e-003**	**0.2534**	**0.1249**	**2.7500e-003**	**0.1276**	**0.0000**	**147.9080**	**147.9080**	**0.0478**	**0.0000**	**149.1039**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	3.2000e-004	0.0142	5.0800e-003	6.0000e-005	1.8400e-003	7.0000e-005	1.9100e-003	5.4000e-004	7.0000e-005	6.1000e-004	0.0000	6.3950	6.3950	3.9000e-004	9.4000e-004	6.6857
Worker	9.0000e-005	6.0000e-005	8.3000e-004	0.0000	3.1000e-004	0.0000	3.1000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2516	0.2516	1.0000e-005	1.0000e-005	0.2536
Total	**4.1000e-004**	**0.0142**	**5.9100e-003**	**6.0000e-005**	**2.1500e-003**	**7.0000e-005**	**2.2200e-003**	**6.2000e-004**	**7.0000e-005**	**7.0000e-004**	**0.0000**	**6.6466**	**6.6466**	**4.0000e-004**	**9.5000e-004**	**6.9394**

3.10 Fine Grading Soil Haul - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1000e-004	0.0000	1.1000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.9000e-004	0.0103	2.4200e-003	8.0000e-005	3.1600e-003	5.0000e-005	3.2000e-003	9.5000e-004	4.0000e-005	9.9000e-004	0.0000	7.3063	7.3063	2.0000e-005	9.1000e-004	7.5782
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.9000e-004**	**0.0103**	**2.4200e-003**	**8.0000e-005**	**3.1600e-003**	**5.0000e-005**	**3.2000e-003**	**9.5000e-004**	**4.0000e-005**	**9.9000e-004**	**0.0000**	**7.3063**	**7.3063**	**2.0000e-005**	**9.1000e-004**	**7.5782**

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					5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.9000e-004	0.0103	2.4200e-003	8.0000e-005	2.9700e-003	5.0000e-005	3.0100e-003	9.1000e-004	4.0000e-005	9.5000e-004	0.0000	7.3063	7.3063	2.0000e-005	9.1000e-004	7.5782
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.9000e-004**	**0.0103**	**2.4200e-003**	**8.0000e-005**	**2.9700e-003**	**5.0000e-005**	**3.0100e-003**	**9.1000e-004**	**4.0000e-005**	**9.5000e-004**	**0.0000**	**7.3063**	**7.3063**	**2.0000e-005**	**9.1000e-004**	**7.5782**

3.11 Paving - 2024

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	0.0728	0.6953	1.0475	1.5900e-003		0.0331	0.0331		0.0305	0.0305	0.0000	138.1383	138.1383	0.0438	0.0000	139.2335
Paving	2.4500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0753**	**0.6953**	**1.0475**	**1.5900e-003**		**0.0331**	**0.0331**		**0.0305**	**0.0305**	**0.0000**	**138.1383**	**138.1383**	**0.0438**	**0.0000**	**139.2335**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.1000e-004	0.0231	8.3300e-003	1.0000e-004	3.2300e-003	1.2000e-004	3.3500e-003	9.3000e-004	1.2000e-004	1.0500e-003	0.0000	10.3299	10.3299	6.6000e-004	1.5200e-003	10.8009
Worker	2.0000e-004	1.2000e-004	1.8000e-003	1.0000e-005	7.8000e-004	0.0000	7.8000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.5604	0.5604	1.0000e-005	1.0000e-005	0.5648
Total	**7.1000e-004**	**0.0232**	**0.0101**	**1.1000e-004**	**4.0100e-003**	**1.2000e-004**	**4.1300e-003**	**1.1400e-003**	**1.2000e-004**	**1.2600e-003**	**0.0000**	**10.8903**	**10.8903**	**6.7000e-004**	**1.5300e-003**	**11.3657**

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	0.0316	0.7014	1.1816	1.5900e-003		3.7400e-003	3.7400e-003		3.7400e-003	3.7400e-003	0.0000	138.1382	138.1382	0.0438	0.0000	139.2333
Paving	2.4500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0341**	**0.7014**	**1.1816**	**1.5900e-003**		**3.7400e-003**	**3.7400e-003**		**3.7400e-003**	**3.7400e-003**	**0.0000**	**138.1382**	**138.1382**	**0.0438**	**0.0000**	**139.2333**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.1000e-004	0.0231	8.3300e-003	1.0000e-004	3.0300e-003	1.2000e-004	3.1500e-003	8.8000e-004	1.2000e-004	1.0000e-003	0.0000	10.3299	10.3299	6.6000e-004	1.5200e-003	10.8009
Worker	2.0000e-004	1.2000e-004	1.8000e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5604	0.5604	1.0000e-005	1.0000e-005	0.5648
Total	**7.1000e-004**	**0.0232**	**0.0101**	**1.1000e-004**	**3.7500e-003**	**1.2000e-004**	**3.8700e-003**	**1.0700e-003**	**1.2000e-004**	**1.2000e-003**	**0.0000**	**10.8903**	**10.8903**	**6.7000e-004**	**1.5300e-003**	**11.3657**

3.12 Building Construction (P1+P2) - 2024

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	0.1434	1.3574	1.8945	3.0100e-003		0.0627	0.0627		0.0591	0.0591	0.0000	261.9801	261.9801	0.0601	0.0000	263.4820
Total	**0.1434**	**1.3574**	**1.8945**	**3.0100e-003**		**0.0627**	**0.0627**		**0.0591**	**0.0591**	**0.0000**	**261.9801**	**261.9801**	**0.0601**	**0.0000**	**263.4820**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	3.0400e-003	0.1378	0.0497	6.1000e-004	0.0193	7.2000e-004	0.0200	5.5800e-003	6.9000e-004	6.2700e-003	0.0000	61.6665	61.6665	3.9500e-003	9.1000e-003	64.4781
Worker	0.0121	7.4600e-003	0.1077	3.6000e-004	0.0465	2.1000e-004	0.0467	0.0124	2.0000e-004	0.0126	0.0000	33.4554	33.4554	8.0000e-004	8.1000e-004	33.7171
Total	**0.0151**	**0.1452**	**0.1574**	**9.7000e-004**	**0.0658**	**9.3000e-004**	**0.0668**	**0.0180**	**8.9000e-004**	**0.0189**	**0.0000**	**95.1219**	**95.1219**	**4.7500e-003**	**9.9100e-003**	**98.1952**

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	0.0664	1.1985	2.0739	3.0100e-003		5.6900e-003	5.6900e-003		5.6900e-003	5.6900e-003	0.0000	261.9798	261.9798	0.0601	0.0000	263.4816
Total	**0.0664**	**1.1985**	**2.0739**	**3.0100e-003**		**5.6900e-003**	**5.6900e-003**		**5.6900e-003**	**5.6900e-003**	**0.0000**	**261.9798**	**261.9798**	**0.0601**	**0.0000**	**263.4816**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	3.0400e-003	0.1378	0.0497	6.1000e-004	0.0181	7.2000e-004	0.0188	5.2800e-003	6.9000e-004	5.9700e-003	0.0000	61.6665	61.6665	3.9500e-003	9.1000e-003	64.4781
Worker	0.0121	7.4600e-003	0.1077	3.6000e-004	0.0429	2.1000e-004	0.0431	0.0115	2.0000e-004	0.0117	0.0000	33.4554	33.4554	8.0000e-004	8.1000e-004	33.7171
Total	**0.0151**	**0.1452**	**0.1574**	**9.7000e-004**	**0.0610**	**9.3000e-004**	**0.0619**	**0.0168**	**8.9000e-004**	**0.0177**	**0.0000**	**95.1219**	**95.1219**	**4.7500e-003**	**9.9100e-003**	**98.1952**

3.12 Building Construction (P1+P2) - 2025

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	0.1201	1.1395	1.7066	2.7200e-003		0.0478	0.0478		0.0450	0.0450	0.0000	236.8173	236.8173	0.0540	0.0000	238.1677
Total	**0.1201**	**1.1395**	**1.7066**	**2.7200e-003**		**0.0478**	**0.0478**		**0.0450**	**0.0450**	**0.0000**	**236.8173**	**236.8173**	**0.0540**	**0.0000**	**238.1677**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.6700e-003	0.1230	0.0449	5.4000e-004	0.0174	6.5000e-004	0.0181	5.0400e-003	6.2000e-004	5.6600e-003	0.0000	54.6243	54.6243	3.6400e-003	8.0700e-003	57.1204
Worker	0.0104	6.1000e-003	0.0917	3.2000e-004	0.0420	1.8000e-004	0.0422	0.0112	1.7000e-004	0.0114	0.0000	29.2185	29.2185	6.6000e-004	6.9000e-004	29.4402
Total	**0.0131**	**0.1291**	**0.1366**	**8.6000e-004**	**0.0595**	**8.3000e-004**	**0.0603**	**0.0162**	**7.9000e-004**	**0.0170**	**0.0000**	**83.8428**	**83.8428**	**4.3000e-003**	**8.7600e-003**	**86.5606**

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	0.0596	1.0820	1.8736	2.7200e-003		5.0000e-003	5.0000e-003		5.0000e-003	5.0000e-003	0.0000	236.8170	236.8170	0.0540	0.0000	238.1675
Total	**0.0596**	**1.0820**	**1.8736**	**2.7200e-003**		**5.0000e-003**	**5.0000e-003**		**5.0000e-003**	**5.0000e-003**	**0.0000**	**236.8170**	**236.8170**	**0.0540**	**0.0000**	**238.1675**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.6700e-003	0.1230	0.0449	5.4000e-004	0.0163	6.5000e-004	0.0170	4.7700e-003	6.2000e-004	5.3900e-003	0.0000	54.6243	54.6243	3.6400e-003	8.0700e-003	57.1204
Worker	0.0104	6.1000e-003	0.0917	3.2000e-004	0.0388	1.8000e-004	0.0390	0.0104	1.7000e-004	0.0106	0.0000	29.2185	29.2185	6.6000e-004	6.9000e-004	29.4402
Total	**0.0131**	**0.1291**	**0.1366**	**8.6000e-004**	**0.0551**	**8.3000e-004**	**0.0559**	**0.0152**	**7.9000e-004**	**0.0159**	**0.0000**	**83.8428**	**83.8428**	**4.3000e-003**	**8.7600e-003**	**86.5606**

3.13 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.5600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.5600e-003**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0000e-005	2.3000e-003	8.4000e-004	1.0000e-005	3.3000e-004	1.0000e-005	3.4000e-004	9.0000e-005	1.0000e-005	1.1000e-004	0.0000	1.0229	1.0229	7.0000e-005	1.5000e-004	1.0697
Worker	1.0000e-004	6.0000e-005	8.6000e-004	0.0000	3.9000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.2736	0.2736	1.0000e-005	1.0000e-005	0.2757
Total	**1.5000e-004**	**2.3600e-003**	**1.7000e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.4000e-004**	**1.9000e-004**	**1.0000e-005**	**2.2000e-004**	**0.0000**	**1.2965**	**1.2965**	**8.0000e-005**	**1.6000e-004**	**1.3453**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.5600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.5600e-003**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0000e-005	2.3000e-003	8.4000e-004	1.0000e-005	3.1000e-004	1.0000e-005	3.2000e-004	9.0000e-005	1.0000e-005	1.0000e-004	0.0000	1.0229	1.0229	7.0000e-005	1.5000e-004	1.0697
Worker	1.0000e-004	6.0000e-005	8.6000e-004	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2736	0.2736	1.0000e-005	1.0000e-005	0.2757
Total	**1.5000e-004**	**2.3600e-003**	**1.7000e-003**	**1.0000e-005**	**6.7000e-004**	**1.0000e-005**	**6.8000e-004**	**1.9000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**1.2965**	**1.2965**	**8.0000e-005**	**1.6000e-004**	**1.3453**

3.14 Finishing/Landscaping - 2025

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	0.0105	0.1061	0.1773	2.5000e-004		4.3000e-003	4.3000e-003		3.9600e-003	3.9600e-003	0.0000	21.7846	21.7846	7.0500e-003	0.0000	21.9608
Total	**0.0105**	**0.1061**	**0.1773**	**2.5000e-004**		**4.3000e-003**	**4.3000e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**21.7846**	**21.7846**	**7.0500e-003**	**0.0000**	**21.9608**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1000e-004	9.7700e-003	3.5700e-003	4.0000e-005	1.3800e-003	5.0000e-005	1.4400e-003	4.0000e-004	5.0000e-005	4.5000e-004	0.0000	4.3372	4.3372	2.9000e-004	6.4000e-004	4.5354
Worker	4.1000e-004	2.4000e-004	3.6400e-003	1.0000e-005	1.6700e-003	1.0000e-005	1.6800e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.1600	1.1600	3.0000e-005	3.0000e-005	1.1688
Total	**6.2000e-004**	**0.0100**	**7.2100e-003**	**5.0000e-005**	**3.0500e-003**	**6.0000e-005**	**3.1200e-003**	**8.4000e-004**	**6.0000e-005**	**9.0000e-004**	**0.0000**	**5.4972**	**5.4972**	**3.2000e-004**	**6.7000e-004**	**5.7042**

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	5.5400e-003	0.1077	0.1862	2.5000e-004		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	21.7846	21.7846	7.0500e-003	0.0000	21.9607
Total	**5.5400e-003**	**0.1077**	**0.1862**	**2.5000e-004**		**4.0000e-004**	**4.0000e-004**		**4.0000e-004**	**4.0000e-004**	**0.0000**	**21.7846**	**21.7846**	**7.0500e-003**	**0.0000**	**21.9607**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1000e-004	9.7700e-003	3.5700e-003	4.0000e-005	1.3000e-003	5.0000e-005	1.3500e-003	3.8000e-004	5.0000e-005	4.3000e-004	0.0000	4.3372	4.3372	2.9000e-004	6.4000e-004	4.5354
Worker	4.1000e-004	2.4000e-004	3.6400e-003	1.0000e-005	1.5400e-003	1.0000e-005	1.5500e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.1600	1.1600	3.0000e-005	3.0000e-005	1.1688
Total	**6.2000e-004**	**0.0100**	**7.2100e-003**	**5.0000e-005**	**2.8400e-003**	**6.0000e-005**	**2.9000e-003**	**7.9000e-004**	**6.0000e-005**	**8.5000e-004**	**0.0000**	**5.4972**	**5.4972**	**3.2000e-004**	**6.7000e-004**	**5.7042**

3.14 Finishing/Landscaping - 2026

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	5.1500e-003	0.0521	0.0870	1.2000e-004		2.1100e-003	2.1100e-003		1.9400e-003	1.9400e-003	0.0000	10.6868	10.6868	3.4600e-003	0.0000	10.7732
Total	**5.1500e-003**	**0.0521**	**0.0870**	**1.2000e-004**		**2.1100e-003**	**2.1100e-003**		**1.9400e-003**	**1.9400e-003**	**0.0000**	**10.6868**	**10.6868**	**3.4600e-003**	**0.0000**	**10.7732**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	1.0000e-004	4.7300e-003	1.7600e-003	2.0000e-005	6.8000e-004	3.0000e-005	7.0000e-004	2.0000e-004	2.0000e-005	2.2000e-004	0.0000	2.0863	2.0863	1.5000e-004	3.1000e-004	2.1819
Worker	1.9000e-004	1.1000e-004	1.7000e-003	1.0000e-005	8.2000e-004	0.0000	8.2000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.5526	0.5526	1.0000e-005	1.0000e-005	0.5567
Total	**2.9000e-004**	**4.8400e-003**	**3.4600e-003**	**3.0000e-005**	**1.5000e-003**	**3.0000e-005**	**1.5200e-003**	**4.2000e-004**	**2.0000e-005**	**4.4000e-004**	**0.0000**	**2.6390**	**2.6390**	**1.6000e-004**	**3.2000e-004**	**2.7386**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.7200e-003	0.0528	0.0913	1.2000e-004		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	10.6868	10.6868	3.4600e-003	0.0000	10.7732
Total	**2.7200e-003**	**0.0528**	**0.0913**	**1.2000e-004**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**10.6868**	**10.6868**	**3.4600e-003**	**0.0000**	**10.7732**

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	1.0000e-004	4.7300e-003	1.7600e-003	2.0000e-005	6.4000e-004	3.0000e-005	6.6000e-004	1.9000e-004	2.0000e-005	2.1000e-004	0.0000	2.0863	2.0863	1.5000e-004	3.1000e-004	2.1819
Worker	1.9000e-004	1.1000e-004	1.7000e-003	1.0000e-005	7.6000e-004	0.0000	7.6000e-004	2.0000e-004	0.0000	2.1000e-004	0.0000	0.5526	0.5526	1.0000e-005	1.0000e-005	0.5567
Total	**2.9000e-004**	**4.8400e-003**	**3.4600e-003**	**3.0000e-005**	**1.4000e-003**	**3.0000e-005**	**1.4200e-003**	**3.9000e-004**	**2.0000e-005**	**4.2000e-004**	**0.0000**	**2.6390**	**2.6390**	**1.6000e-004**	**3.2000e-004**	**2.7386**

CalEEMod Net Operations Model

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

808 Alameda de Las Pulgas Townhome Development Project

San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	75.10	1000sqft	1.72	75,053.00	0
Other Non-Asphalt Surfaces	296.00	1000sqft	6.79	295,964.00	0
Parking Lot	6.30	1000sqft	0.15	6,336.00	0
Condo/Townhouse High Rise	87.00	Dwelling Unit	3.29	398,998.00	249

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2026
Utility Company	Peninsula Clean Energy				
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on applicant info., see assumptions file

Construction Phase -

Vehicle Trips - Assume 100% primary trips, see assumptions file

Woodstoves - 100% electric project

Area Coating - Based on applicant info., see assumptions file

Energy Use - Additional electricity demand calculated from fuel switching, see assumptions file

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Water And Wastewater - Assume 100% aerobic treatment, see assumptions file

Solid Waste - See assumptions file

Fleet Mix - See fleet mix adjustment in assumptions file

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Residential_Exterior	150	250
tblAreaCoating	Area_Parking	22641	380
tblAreaCoating	Area_Residential_Exterior	269324	42
tblAreaCoating	Area_Residential_Interior	807971	0
tblEnergyUse	NT24E	3,054.10	3,288.00
tblEnergyUse	NT24NG	2,615.00	0.00
tblEnergyUse	T24E	90.83	2,782.00
tblEnergyUse	T24NG	5,828.01	0.00
tblFireplaces	NumberGas	13.05	0.00
tblFireplaces	NumberNoFireplace	3.48	0.00
tblFireplaces	NumberWood	14.79	0.00
tblFleetMix	HHD	1.9940e-003	4.1400e-004
tblFleetMix	LDA	0.46	0.55
tblFleetMix	LDT1	0.07	0.09
tblFleetMix	LDT2	0.24	0.29
tblFleetMix	LHD1	0.03	5.3780e-003
tblFleetMix	LHD2	6.5760e-003	1.3660e-003
tblFleetMix	MCY	0.03	0.04
tblFleetMix	MDV	0.15	0.02
tblFleetMix	MH	2.7100e-003	5.6300e-004
tblFleetMix	MHD	0.01	2.1900e-003
tblFleetMix	OBUS	1.4220e-003	0.00
tblFleetMix	SBUS	4.2900e-004	8.9000e-005

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblFleetMix	UBUS	5.5300e-004	0.00
tblLandUse	LandUseSquareFeet	75,100.00	75,053.00
tblLandUse	LandUseSquareFeet	296,000.00	295,964.00
tblLandUse	LandUseSquareFeet	6,300.00	6,336.00
tblLandUse	LandUseSquareFeet	87,000.00	398,998.00
tblLandUse	LotAcreage	6.80	6.79
tblLandUse	LotAcreage	0.14	0.15
tblLandUse	LotAcreage	1.36	3.29
tblSolidWaste	SolidWasteGenerationRate	40.02	109.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	5.70	6.18
tblVehicleTrips	HS_TL	4.80	6.18
tblVehicleTrips	HW_TL	10.80	6.18
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	4.91	7.33
tblVehicleTrips	SU_TR	4.09	7.33
tblVehicleTrips	WD_TR	5.44	7.33
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	5,668,400.23	4,182,170.00
tblWater	OutdoorWaterUseRate	3,573,556.67	1,098,285.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	1.74	0.00
tblWoodstoves	NumberNoncatalytic	1.74	0.00

2.0 Emissions Summary

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.6025	7.4700e-003	0.6488	3.0000e-005		3.5900e-003	3.5900e-003		3.5900e-003	3.5900e-003	0.0000	1.0620	1.0620	1.0300e-003	0.0000	1.0877
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.2568	0.1633	2.3955	3.9200e-003	0.5214	2.4900e-003	0.5239	0.1386	2.3000e-003	0.1409	0.0000	373.2711	373.2711	0.0303	0.0145	378.3340
Waste						0.0000	0.0000		0.0000	0.0000	22.1260	0.0000	22.1260	1.3076	0.0000	54.8163
Water						0.0000	0.0000		0.0000	0.0000	1.4797	0.0000	1.4797	5.0900e-003	3.2200e-003	2.5659
Total	**1.8593**	**0.1708**	**3.0443**	**3.9500e-003**	**0.5214**	**6.0800e-003**	**0.5275**	**0.1386**	**5.8900e-003**	**0.1445**	**23.6057**	**374.3331**	**397.9388**	**1.3440**	**0.0177**	**436.8038**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.6025	7.4700e-003	0.6488	3.0000e-005		3.5900e-003	3.5900e-003		3.5900e-003	3.5900e-003	0.0000	1.0620	1.0620	1.0300e-003	0.0000	1.0877
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mobile	0.2568	0.1633	2.3955	3.9200e-003	0.5214	2.4900e-003	0.5239	0.1386	2.3000e-003	0.1409	0.0000	373.2711	373.2711	0.0303	0.0145	378.3340
Waste						0.0000	0.0000		0.0000	0.0000	22.1260	0.0000	22.1260	1.3076	0.0000	54.8163
Water						0.0000	0.0000		0.0000	0.0000	1.4797	0.0000	1.4797	5.0900e-003	3.2200e-003	2.5659
Total	**1.8593**	**0.1708**	**3.0443**	**3.9500e-003**	**0.5214**	**6.0800e-003**	**0.5275**	**0.1386**	**5.8900e-003**	**0.1445**	**23.6057**	**374.3331**	**397.9388**	**1.3440**	**0.0177**	**436.8038**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2568	0.1633	2.3955	3.9200e-003	0.5214	2.4900e-003	0.5239	0.1386	2.3000e-003	0.1409	0.0000	373.2711	373.2711	0.0303	0.0145	378.3340
Unmitigated	0.2568	0.1633	2.3955	3.9200e-003	0.5214	2.4900e-003	0.5239	0.1386	2.3000e-003	0.1409	0.0000	373.2711	373.2711	0.0303	0.0145	378.3340

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse High Rise	638.00	638.00	638.00	1,434,149	1,434,149
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	638.00	638.00	638.00	1,434,149	1,434,149

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse High Rise	6.18	6.18	6.18	31.00	15.00	54.00	100	0	0
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse High Rise	0.553794	0.090340	0.289058	0.020000	0.005378	0.001366	0.002190	0.000414	0.000000	0.000000	0.036808	0.000089	0.000563
Other Asphalt Surfaces	0.457911	0.074699	0.239011	0.149017	0.025897	0.006576	0.010546	0.001994	0.001422	0.000553	0.029236	0.000429	0.002710
Other Non-Asphalt Surfaces	0.457911	0.074699	0.239011	0.149017	0.025897	0.006576	0.010546	0.001994	0.001422	0.000553	0.029236	0.000429	0.002710
Parking Lot	0.457911	0.074699	0.239011	0.149017	0.025897	0.006576	0.010546	0.001994	0.001422	0.000553	0.029236	0.000429	0.002710

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse High Rise	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
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse High Rise	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
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse High Rise	615186	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	2217.6	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse High Rise	615186	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	2217.6	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.6025	7.4700e-003	0.6488	3.0000e-005		3.5900e-003	3.5900e-003		3.5900e-003	3.5900e-003	0.0000	1.0620	1.0620	1.0300e-003	0.0000	1.0877
Unmitigated	1.6025	7.4700e-003	0.6488	3.0000e-005		3.5900e-003	3.5900e-003		3.5900e-003	3.5900e-003	0.0000	1.0620	1.0620	1.0300e-003	0.0000	1.0877

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	1.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.5827					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0197	7.4700e-003	0.6488	3.0000e-005		3.5900e-003	3.5900e-003		3.5900e-003	3.5900e-003	0.0000	1.0620	1.0620	1.0300e-003	0.0000	1.0877
Total	**1.6025**	**7.4700e-003**	**0.6488**	**3.0000e-005**		**3.5900e-003**	**3.5900e-003**		**3.5900e-003**	**3.5900e-003**	**0.0000**	**1.0620**	**1.0620**	**1.0300e-003**	**0.0000**	**1.0877**

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	1.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.5827					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0197	7.4700e-003	0.6488	3.0000e-005		3.5900e-003	3.5900e-003		3.5900e-003	3.5900e-003	0.0000	1.0620	1.0620	1.0300e-003	0.0000	1.0877
Total	**1.6025**	**7.4700e-003**	**0.6488**	**3.0000e-005**		**3.5900e-003**	**3.5900e-003**		**3.5900e-003**	**3.5900e-003**	**0.0000**	**1.0620**	**1.0620**	**1.0300e-003**	**0.0000**	**1.0877**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.4797	5.0900e-003	3.2200e-003	2.5659
Unmitigated	1.4797	5.0900e-003	3.2200e-003	2.5659

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse High Rise	4.18217 / 1.09829	1.4797	5.0900e-003	3.2200e-003	2.5659
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**1.4797**	**5.0900e-003**	**3.2200e-003**	**2.5659**

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse High Rise	4.18217 / 1.09829	1.4797	5.0900e-003	3.2200e-003	2.5659
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**1.4797**	**5.0900e-003**	**3.2200e-003**	**2.5659**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	22.1260	1.3076	0.0000	54.8163
Unmitigated	22.1260	1.3076	0.0000	54.8163

808 Alameda de Las Pulgas Townhome Development Project - San Mateo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse High Rise	109	22.1260	1.3076	0.0000	54.8163
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**22.1260**	**1.3076**	**0.0000**	**54.8163**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse High Rise	109	22.1260	1.3076	0.0000	54.8163
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**22.1260**	**1.3076**	**0.0000**	**54.8163**

Energy Calculations

Operation-Related Vehicle Fuel/Energy Usage

PROJECT LAND USE COMMUTE

Vehicle Type	Gas		Diesel		CNG		Electricity	
	VMT	Gallons	VMT	Gallons	VMT	Gallons	VMT	kWh
Passenger Vehicles	1,323,848	46,329	10,294	749	89	11	99,918	36,849
Total	**1,323,848**	**46,329**	**10,294**	**749**	**89**	**11**	**99,918**	**36,849**

Land Use

Land Use

Vehicle type	Fleet percent	VMT	
	Condo/Townhouse High Rise	Condo/Townhouse High Rise	Total
LDA	55.38%	794,223	794,223
LDT1	9.03%	129,561	129,561
LDT2	28.91%	414,552	414,552
MDV	2.00%	28,683	28,683
LHD1	0.54%	7,713	7,713
LHD2	0.14%	1,959	1,959
MHD	0.22%	3,141	3,141
HHD	0.04%	594	594
OBUS	0.00%	0	0
UBUS	0.00%	0	0
MCY	3.68%	52,788	52,788
SBUS	0.01%	128	128
MH	0.06%	807	807
	100.00%	1,434,149	1,434,149

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse High Rise	638.00	638.00	638.00	1,434,149	1,434,149
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	638.00	638.00	638.00	1,434,149	1,434,149

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse High Rise	0.553794	0.090340	0.289058	0.020000	0.005378	0.001366	0.002190	0.000414	0.000000	0.000000	0.036808	0.000089	0.000563
Other Asphalt Surfaces	0.457911	0.074699	0.239011	0.149017	0.025897	0.006576	0.010546	0.001994	0.001422	0.000553	0.029236	0.000429	0.002710
Other Non-Asphalt Surfaces	0.457911	0.074699	0.239011	0.149017	0.025897	0.006576	0.010546	0.001994	0.001422	0.000553	0.029236	0.000429	0.002710
Parking Lot	0.457911	0.074699	0.239011	0.149017	0.025897	0.006576	0.010546	0.001994	0.001422	0.000553	0.029236	0.000429	0.002710

PROPOSED CONDITIONS

Vehicle type	Gas percent	Diesel percent	CNG percent	Electricity percent	
LDA	88.57%	0.17%	0.00%	11.26%	
LDT1	98.98%	0.01%	0.00%	1.01%	
LDT2	97.70%	0.37%	0.00%	1.93%	
MDV	95.93%	1.21%	0.00%	2.85%	
LHD1	64.72%	32.80%	0.00%	2.48%	
LHD2	32.08%	65.22%	0.00%	2.70%	
MHD	20.72%	76.50%	0.94%	1.84%	<< Equal to T6 (https://www.arb.ca.gov/msei/downloads/emfac2014/emfac2014-vol3-technical-documentation-052015.pdf)
HHD	0.39%	88.83%	9.62%	1.17%	<< Equal to T7 (https://www.arb.ca.gov/msei/downloads/emfac2014/emfac2014-vol3-technical-documentation-052015.pdf)
OBUS	14.64%	84.33%	0.75%	0.33%	<< Motor coach, all other buses, and OBUS (https://www.arb.ca.gov/msei/downloads/emfac2014/emfac2014-vol3-technical-documentation-052015.pdf)
UBUS	12.28%	63.05%	13.31%	11.37%	
MCY	100.00%	0.00%	0.00%	0.00%	
SBUS	48.46%	47.76%	2.15%	1.63%	
MH	67.36%	32.64%	0.00%	0.00%	

PROPOSED CONDITIONS

Vehicle type	Gasoline			Diesel			CNG			Electricity		
	VMT	mpg	Gallons	VMT	mpg	Gallons	VMT	mpg	Gallons	VMT	m/kWh	kWh
LDA	703,424	31.25	22,510	1,338	44.50	30	0	0.00	0	89,461	2.69	33,278
LDT1	128,236	26.70	4,802	12	24.41	0	0	0.00	0	1,313	2.77	474
LDT2	405,005	25.82	15,686	1,534	34.02	45	0	0.00	0	8,014	2.86	2,802
MDV	27,516	21.42	1,284	348	25.91	13	0	0.00	0	819	2.77	295
LHD1	4,992	10.40	480	2,530	16.34	155	0	0.00	0	191	1.53	0
LHD2	628	9.23	68	1,278	13.87	92	0	0.00	0	53	1.55	0
MHD	651	5.00	130	2,403	8.52	282	29	7.07	0	58	0.00	0
HHD	2	3.88	1	527	5.54	95	57	4.97	11	7	0.54	0
OBUS	0	5.04	0	0	8.43	0	0	7.88	0	0	0.00	0
UBUS	0	8.99	0	0	8.30	0	0	6.22	0	0	0.57	0
MCY	52,788	42.61	1,239	0	0.00	0	0	0.00	0	0	0.00	0
SBUS	62	10.37	6	61	8.23	7	3	5.63	0	2	0.95	0
MH	544	4.42	123	264	9.35	28	0	0.00	0	0	0.00	0
	1,323,848		**46,329**	**10,294**		**749**	**89**		**11**	**99,918**		**36,849**

EMFAC Fuel Usage: Year 2019

Vehicle type	GAS			DSL			NG			ELEC		
	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	kWh/day	Miles/kWh
All other buses	0	0	0.00	65,365	7,621	8.58	415	55	7.49	0	0	0.00
LDA	7,859,305	263,695	29.80	19,907	460	43.25	0	0	0.00	763,239	283,510	2.69
LDT1	732,966	28,896	25.37	102	4	24.28	0	0	0.00	3,358	1,231	2.73
LDT2	4,741,847	193,449	24.51	18,281	566	32.32	0	0	0.00	54,154	18,615	2.91
LHD1	392,533	39,581	9.92	179,686	11,216	16.02	0	0	0.00	0	0	0.00
LHD2	43,550	4,952	8.79	77,799	5,770	13.48	0	0	0.00	0	0	0.00
MCY	73,820	1,750	42.19	0	0	0.00	0	0	0.00	0	0	0.00
MDV	2,717,722	133,520	20.35	37,908	1,531	24.76	0	0	0.00	42,648	15,281	2.79
MH	7,443	1,685	4.42	3,487	373	9.36	0	0	0.00	0	0	0.00
Motor coach	0	0	0.00	9,382	1,713	5.48	0	0	0.00	0	0	0.00
OBUS	15,177	3,103	4.89	0	0	0.00	0	0	0.00	0	0	0.00
PTO	0	0	0.00	5,180	1,072	4.83	0	0	0.00	2	3	0.48
SBUS	3,412	336	10.14	3,793	467	8.13	153	28	5.53	0	1	0.95
T6	45,998	9,564	4.81	175,901	20,956	8.39	1,833	262	7.00	44	47	0.93
T7	593	156	3.80	113,900	21,605	5.27	10,603	2,227	4.76	39	72	0.54
UBUS	4,166	498	8.37	28,541	4,079	7.00	1,200	206	5.82	15	27	0.57
Total	**16,638,533**	**681,185**	**24.43**	**739,232**	**77,432**	**9.55**	**14,204**	**2,779**	**5.11**	**863,500**	**318,786**	**2.71**

Source: EMFAC2021 (v1.0.1) Emissions Inventory
Region Type: Sub-Area
Region: San Mateo (SF)
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Fuel Consumption	Energy Consumption
San Mateo (SF)	2023	All Other Buses	Aggregate	Aggregate	Diesel	985.9497213	65365.04017	65365.04017	0	8774.95252	7.620550189	0
San Mateo (SF)	2023	All Other Buses	Aggregate	Aggregate	Natural Gas	6.660994224	415.1451968	415.1451968	0	59.2828486	0.055460289	0
San Mateo (SF)	2023	LDA	Aggregate	Aggregate	Gasoline	240378.7755	7727537.252	7727537.252	0	1129354.924	259.343852	0
San Mateo (SF)	2023	LDA	Aggregate	Aggregate	Diesel	833.76116	19906.51935	19906.51935	0	3528.19088	0.460278323	0
San Mateo (SF)	2023	LDA	Aggregate	Aggregate	Electricity	16299.00167	630419.5769	0	630419.5769	81240.99381	0	243393.9881
San Mateo (SF)	2023	LDA	Aggregate	Aggregate	Plug-in Hybrid	6930.414301	264587.6143	131767.8553	132819.759	28657.26313	4.351322574	40115.52588
San Mateo (SF)	2023	LDT1	Aggregate	Aggregate	Gasoline	24557.61445	732297.8125	732297.8125	0	111855.32	28.87343542	0
San Mateo (SF)	2023	LDT1	Aggregate	Aggregate	Diesel	7.65560053	101.9185358	101.9185358	0	22.20172649	0.004198373	0
San Mateo (SF)	2023	LDT1	Aggregate	Aggregate	Electricity	74.62310938	2574.769635	0	2574.769635	357.9525779	0	994.0735863
San Mateo (SF)	2023	LDT1	Aggregate	Aggregate	Plug-in Hybrid	34.6707317	1451.310185	668.3078042	783.0023803	143.3634756	0.022163529	236.490056
San Mateo (SF)	2023	LDT2	Aggregate	Aggregate	Gasoline	139222.3344	4716888.169	4716888.169	0	668266.1465	192.6175289	0
San Mateo (SF)	2023	LDT2	Aggregate	Aggregate	Diesel	541.6893961	18280.97893	18280.97893	0	2609.031231	0.565664818	0
San Mateo (SF)	2023	LDT2	Aggregate	Aggregate	Electricity	855.0521432	26877.4268	0	26877.4268	4389.933781	0	10376.90506
San Mateo (SF)	2023	LDT2	Aggregate	Aggregate	Plug-in Hybrid	1293.229046	52235.96142	24959.10442	27276.857	5347.502104	0.831606168	8238.423795
San Mateo (SF)	2023	LHD1	Aggregate	Aggregate	Gasoline	10572.08032	392533.1442	392533.1442	0	157508.2444	39.581099	0
San Mateo (SF)	2023	LHD1	Aggregate	Aggregate	Diesel	4577.1091	179686.4952	179686.4952	0	57574.27448	11.21605145	0
San Mateo (SF)	2023	LHD2	Aggregate	Aggregate	Gasoline	1231.236334	43549.94007	43549.94007	0	18343.58684	4.952471656	0
San Mateo (SF)	2023	LHD2	Aggregate	Aggregate	Diesel	1952.708679	77798.96503	77798.96503	0	24562.61868	5.769684098	0
San Mateo (SF)	2023	MCY	Aggregate	Aggregate	Gasoline	12536.76923	73820.03874	73820.03874	0	25073.53845	1.749694282	0
San Mateo (SF)	2023	MDV	Aggregate	Aggregate	Gasoline	78398.01795	2704273.204	2704273.204	0	374407.9662	133.066514	0
San Mateo (SF)	2023	MDV	Aggregate	Aggregate	Diesel	1107.903223	37908.13119	37908.13119	0	5305.817596	1.530831348	0
San Mateo (SF)	2023	MDV	Aggregate	Aggregate	Electricity	906.5115211	28548.82259	0	28548.82259	4657.020541	0	11022.20178
San Mateo (SF)	2023	MDV	Aggregate	Aggregate	Plug-in Hybrid	678.1174043	27547.88494	13448.4741	14099.41084	2804.015467	0.453493393	4258.442302
San Mateo (SF)	2023	MH	Aggregate	Aggregate	Gasoline	774.811544	7442.975667	7442.975667	0	77.51214686	1.684884214	0
San Mateo (SF)	2023	MH	Aggregate	Aggregate	Diesel	328.5821927	3487.261646	3487.261646	0	32.85821927	0.372694854	0
San Mateo (SF)	2023	Motor Coach	Aggregate	Aggregate	Diesel	65.84963651	9381.908124	9381.908124	0	1513.224647	1.713309861	0
San Mateo (SF)	2023	OBUS	Aggregate	Aggregate	Gasoline	256.5607122	15177.04243	15177.04243	0	5133.266729	3.102824338	0
San Mateo (SF)	2023	PTO	Aggregate	Aggregate	Diesel	0	5179.542368	5179.542368	0	0	1.072024711	0
San Mateo (SF)	2023	PTO	Aggregate	Aggregate	Electricity	0	1.515461341	0	1.515461341	0	0	3.139306609
San Mateo (SF)	2023	SBUS	Aggregate	Aggregate	Gasoline	62.11288081	3411.923415	3411.923415	0	248.4515233	0.336362853	0
San Mateo (SF)	2023	SBUS	Aggregate	Aggregate	Diesel	168.8117767	3793.040846	3793.040846	0	2444.394527	0.466772458	0
San Mateo (SF)	2023	SBUS	Aggregate	Aggregate	Electricity	0.041475397	0.481131281	0	0.481131281	0.600563742	0	0.506850437
San Mateo (SF)	2023	SBUS	Aggregate	Aggregate	Natural Gas	6.023036101	153.4041036	153.4041036	0	87.21356274	0.027719954	0
San Mateo (SF)	2023	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	1.950940993	129.8011814	129.8011814	0	44.83262401	0.014676575	0
San Mateo (SF)	2023	T6 CAIRP Class 4	Aggregate	Aggregate	Electricity	0.002704481	0.099037889	0	0.099037889	0.062148981	0	0.107583227
San Mateo (SF)	2023	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	2.618078096	178.0845476	178.0845476	0	60.16343463	0.020108486	0
San Mateo (SF)	2023	T6 CAIRP Class 5	Aggregate	Aggregate	Electricity	0.003040768	0.11519404	0	0.11519404	0.069876838	0	0.125133388
San Mateo (SF)	2023	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	8.256700903	465.040603	465.040603	0	189.7389868	0.051785323	0
San Mateo (SF)	2023	T6 CAIRP Class 6	Aggregate	Aggregate	Electricity	0.020534621	0.600420322	0	0.600420322	0.471885597	0	0.652226703
San Mateo (SF)	2023	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	14.23946647	2919.205856	2919.205856	0	327.2229394	0.305125123	0
San Mateo (SF)	2023	T6 CAIRP Class 7	Aggregate	Aggregate	Electricity	0.014757356	1.530002578	0	1.530002578	0.33912404	0	1.662016592
San Mateo (SF)	2023	T6 Instate Delivery Class 4	Aggregate	Aggregate	Diesel	363.4229013	12264.70668	12264.70668	0	5186.044801	1.509415866	0
San Mateo (SF)	2023	T6 Instate Delivery Class 4	Aggregate	Aggregate	Electricity	0.234114932	4.287766504	0	4.287766504	3.340820078	0	4.580531252
San Mateo (SF)	2023	T6 Instate Delivery Class 4	Aggregate	Aggregate	Natural Gas	1.164169101	44.68401511	44.68401511	0	16.61269307	0.006694276	0
San Mateo (SF)	2023	T6 Instate Delivery Class 5	Aggregate	Aggregate	Diesel	288.866353	10005.04224	10005.04224	0	4122.122857	1.222658109	0
San Mateo (SF)	2023	T6 Instate Delivery Class 5	Aggregate	Aggregate	Electricity	0.137323879	2.502123243	0	2.502123243	1.959611754	0	2.672965913
San Mateo (SF)	2023	T6 Instate Delivery Class 5	Aggregate	Aggregate	Natural Gas	0.808476359	30.04476561	30.04476561	0	11.53695764	0.004460453	0
San Mateo (SF)	2023	T6 Instate Delivery Class 6	Aggregate	Aggregate	Diesel	606.1140719	20762.38154	20762.38154	0	8649.247805	2.534174762	0
San Mateo (SF)	2023	T6 Instate Delivery Class 6	Aggregate	Aggregate	Electricity	0.36938953	6.748812455	0	6.748812455	5.271188598	0	7.209615153
San Mateo (SF)	2023	T6 Instate Delivery Class 6	Aggregate	Aggregate	Natural Gas	1.612473481	61.19918012	61.19918012	0	23.00999657	0.009116952	0
San Mateo (SF)	2023	T6 Instate Delivery Class 7	Aggregate	Aggregate	Diesel	147.0168264	8126.742328	8126.742328	0	2097.930112	0.962056865	0
San Mateo (SF)	2023	T6 Instate Delivery Class 7	Aggregate	Aggregate	Electricity	0.018058883	0.388962463	0	0.388962463	0.257700259	0	0.415520462
San Mateo (SF)	2023	T6 Instate Delivery Class 7	Aggregate	Aggregate	Natural Gas	3.669847021	206.330488	206.330488	0	52.36871699	0.030204198	0
San Mateo (SF)	2023	T6 Instate Other Class 4	Aggregate	Aggregate	Diesel	417.9586274	16821.07863	16821.07863	0	4831.601733	1.976927228	0
San Mateo (SF)	2023	T6 Instate Other Class 4	Aggregate	Aggregate	Electricity	0.17178974	3.575572494	0	3.575572494	1.985889394	0	3.790396775
San Mateo (SF)	2023	T6 Instate Other Class 4	Aggregate	Aggregate	Natural Gas	1.0942595	50.57940177	50.57940177	0	12.64963982	0.006783808	0
San Mateo (SF)	2023	T6 Instate Other Class 5	Aggregate	Aggregate	Diesel	986.4553354	43296.81072	43296.81072	0	11403.42368	5.110183488	0
San Mateo (SF)	2023	T6 Instate Other Class 5	Aggregate	Aggregate	Electricity	0.521656364	10.84198096	0	10.84198096	6.030347564	0	11.49337895
San Mateo (SF)	2023	T6 Instate Other Class 5	Aggregate	Aggregate	Natural Gas	2.305598086	102.7037986	102.7037986	0	26.65271387	0.013501549	0
San Mateo (SF)	2023	T6 Instate Other Class 6	Aggregate	Aggregate	Diesel	638.9999049	27342.91134	27342.91134	0	7386.838901	3.21260693	0
San Mateo (SF)	2023	T6 Instate Other Class 6	Aggregate	Aggregate	Electricity	0.326232059	6.809235508	0	6.809235508	3.771242599	0	7.218341776
San Mateo (SF)	2023	T6 Instate Other Class 6	Aggregate	Aggregate	Natural Gas	1.42302627	63.00864627	63.00864627	0	16.45018368	0.008338569	0
San Mateo (SF)	2023	T6 Instate Other Class 7	Aggregate	Aggregate	Diesel	263.4224263	12765.73751	12765.73751	0	3045.163248	1.468213876	0
San Mateo (SF)	2023	T6 Instate Other Class 7	Aggregate	Aggregate	Electricity	0.10436846	3.272750763	0	3.272750763	1.206499402	0	3.469381184
San Mateo (SF)	2023	T6 Instate Other Class 7	Aggregate	Aggregate	Natural Gas	6.338524913	334.921706	334.921706	0	73.273348	0.043138782	0
San Mateo (SF)	2023	T6 Instate Tractor Class 6	Aggregate	Aggregate	Diesel	9.71713387	534.8180701	534.8180701	0	112.3300675	0.064059582	0
San Mateo (SF)	2023	T6 Instate Tractor Class 6	Aggregate	Aggregate	Natural Gas	0.018702605	1.094987758	1.094987758	0	0.216202109	0.000136149	0
San Mateo (SF)	2023	T6 Instate Tractor Class 7	Aggregate	Aggregate	Diesel	61.1408317	3739.486827	3739.486827	0	706.7880145	0.408142724	0
San Mateo (SF)	2023	T6 Instate Tractor Class 7	Aggregate	Aggregate	Electricity	0.012892957	0.431472735	0	0.431472735	0.14904258	0	0.457396086
San Mateo (SF)	2023	T6 Instate Tractor Class 7	Aggregate	Aggregate	Natural Gas	1.088746713	72.51480093	72.51480093	0	12.585912	0.009177839	0
San Mateo (SF)	2023	T6 OOS Class 4	Aggregate	Aggregate	Diesel	1.100489122	72.64808546	72.64808546	0	25.28924002	0.00820776	0
San Mateo (SF)	2023	T6 OOS Class 5	Aggregate	Aggregate	Diesel	1.470755413	99.6601094	99.6601094	0	33.79795938	0.011248513	0
San Mateo (SF)	2023	T6 OOS Class 6	Aggregate	Aggregate	Diesel	4.651574309	260.4147172	260.4147172	0	106.8931776	0.02896941	0
San Mateo (SF)	2023	T6 OOS Class 7	Aggregate	Aggregate	Diesel	7.560294526	1893.538817	1893.538817	0	173.7355682	0.196868981	0
San Mateo (SF)	2023	T6 Public Class 4	Aggregate	Aggregate	Diesel	34.62692147	1168.874844	1168.874844	0	177.6361071	0.155977535	0
San Mateo (SF)	2023	T6 Public Class 4	Aggregate	Aggregate	Electricity	0.003339185	0.060555707	0	0.060555707	0.017130019	0	0.071510269
San Mateo (SF)	2023	T6 Public Class 4	Aggregate	Aggregate	Natural Gas	1.099585208	46.56045343	46.56045343	0	5.640872118	0.007086128	0
San Mateo (SF)	2023	T6 Public Class 5	Aggregate	Aggregate	Diesel	104.2679343	3870.138234	3870.138234	0	534.8945028	0.497359583	0
San Mateo (SF)	2023	T6 Public Class 5	Aggregate	Aggregate	Electricity	0.010761267	0.195148578	0	0.195148578	0.055205302	0	0.230451065
San Mateo (SF)	2023	T6 Public Class 5	Aggregate	Aggregate	Natural Gas	8.01019228	333.9722529	333.9722529	0	41.0922864	0.050989482	0
San Mateo (SF)	2023	T6 Public Class 6	Aggregate	Aggregate	Diesel	67.65442984	2339.029292	2339.029292	0	347.0672251	0.307575502	0
San Mateo (SF)	2023	T6 Public Class 6	Aggregate	Aggregate	Electricity	0.043411111	0.789089835	0	0.789089835	0.222699001	0	0.931836626
San Mateo (SF)	2023	T6 Public Class 6	Aggregate	Aggregate	Natural Gas	2.463805742	103.463577	103.463577	0	12.63932346	0.015641086	0
San Mateo (SF)	2023	T6 Public Class 7	Aggregate	Aggregate	Diesel	146.2573086	6355.118127	6355.118127	0	750.299993	0.83367639	0
San Mateo (SF)	2023	T6 Public Class 7	Aggregate	Aggregate	Electricity	0.061983512	1.779127974	0	1.779127974	0.317975416	0	2.100973216
San Mateo (SF)	2023	T6 Public Class 7	Aggregate	Aggregate	Natural Gas	6.858351349	374.4432546	374.4432546	0	35.18334242	0.055739022	0
San Mateo (SF)	2023	T6 Utility Class 5	Aggregate	Aggregate	Diesel	8.303697546	337.88023	337.88023	0	106.2873286	0.038382963	0
San Mateo (SF)	2023	T6 Utility Class 5	Aggregate	Aggregate	Natural Gas	0.11731664	4.633029136	4.633029136	0	1.501652997	0.000636501	0
San Mateo (SF)	2023	T6 Utility Class 6	Aggregate	Aggregate	Diesel	1.579581298	63.80844339	63.80844339	0	20.21864061	0.007222551	0
San Mateo (SF)	2023	T6 Utility Class 6	Aggregate	Aggregate	Natural Gas	0.023242915	0.919629167	0.919629167	0	0.297509313	0.000125446	0

San Mateo (SF)	2023	T6 Utility Class 7	Aggregate	Aggregate	Diesel	1.790699902	88.27883416	88.27883416	0	22.92095875	0.009952569	0
San Mateo (SF)	2023	T6 Utility Class 7	Aggregate	Aggregate	Electricity	0.002935391	0.083786819	0	0.083786819	0.037573005	0	0.093846548
San Mateo (SF)	2023	T6 Utility Class 7	Aggregate	Aggregate	Natural Gas	0.03876543	1.69562917	1.69562917	0	0.49619751	0.000230509	0
San Mateo (SF)	2023	T6TS	Aggregate	Aggregate	Gasoline	780.1924103	45998.28851	45998.28851	0	15610.08975	9.563594303	0
San Mateo (SF)	2023	T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	83.43492425	17016.75339	17016.75339	0	1917.334559	2.818613398	0
San Mateo (SF)	2023	T7 CAIRP Class 8	Aggregate	Aggregate	Electricity	0.181517138	18.97909825	0	18.97909825	4.171263822	0	34.65443039
San Mateo (SF)	2023	T7 CAIRP Class 8	Aggregate	Aggregate	Natural Gas	0.180917048	37.75567891	37.75567891	0	4.157473758	0.006714249	0
San Mateo (SF)	2023	T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	75.18282605	20271.51275	20271.51275	0	1727.701343	3.327729453	0
San Mateo (SF)	2023	T7 NOOS Class 8	Aggregate	Aggregate	Diesel	31.46389212	7365.999074	7365.999074	0	723.0402409	1.222719762	0
San Mateo (SF)	2023	T7 Other Port Class 8	Aggregate	Aggregate	Diesel	8.352546269	1567.322616	1567.322616	0	136.647657	0.264403002	0
San Mateo (SF)	2023	T7 Other Port Class 8	Aggregate	Aggregate	Electricity	0.003693748	0.406457734	0	0.406457734	0.06042972	0	0.739739759
San Mateo (SF)	2023	T7 POAK Class 8	Aggregate	Aggregate	Diesel	54.72244235	5503.991739	5503.991739	0	895.2591569	0.945195787	0
San Mateo (SF)	2023	T7 POAK Class 8	Aggregate	Aggregate	Electricity	0.033446624	1.412483704	0	1.412483704	0.547186761	0	2.570674065
San Mateo (SF)	2023	T7 POAK Class 8	Aggregate	Aggregate	Natural Gas	0.022756424	2.210828362	2.210828362	0	0.372295103	0.0003935	0
San Mateo (SF)	2023	T7 Public Class 8	Aggregate	Aggregate	Diesel	332.0370215	14462.03824	14462.03824	0	1703.34992	2.789030034	0
San Mateo (SF)	2023	T7 Public Class 8	Aggregate	Aggregate	Electricity	0.145351474	4.172339097	0	4.172339097	0.745653059	0	8.188559955
San Mateo (SF)	2023	T7 Public Class 8	Aggregate	Aggregate	Natural Gas	1.508998548	75.00709289	75.00709289	0	7.74116255	0.016409962	0
San Mateo (SF)	2023	T7 Single Concrete/Transit Mix C	Aggregate	Aggregate	Diesel	47.56830546	3433.828332	3433.828332	0	448.0934374	0.584895111	0
San Mateo (SF)	2023	T7 Single Concrete/Transit Mix C	Aggregate	Aggregate	Electricity	0.1096084	4.175983645	0	4.175983645	1.032511126	0	7.613462012
San Mateo (SF)	2023	T7 Single Concrete/Transit Mix C	Aggregate	Aggregate	Natural Gas	2.784862526	205.4015229	205.4015229	0	26.233405	0.035326802	0
San Mateo (SF)	2023	T7 Single Dump Class 8	Aggregate	Aggregate	Diesel	169.1450945	10386.92663	10386.92663	0	1593.34679	1.797635212	0
San Mateo (SF)	2023	T7 Single Dump Class 8	Aggregate	Aggregate	Natural Gas	8.736077362	563.0791704	563.0791704	0	82.29384875	0.103855357	0
San Mateo (SF)	2023	T7 Single Other Class 8	Aggregate	Aggregate	Diesel	174.9563336	10772.49707	10772.49707	0	1648.088662	1.850349057	0
San Mateo (SF)	2023	T7 Single Other Class 8	Aggregate	Aggregate	Electricity	0.094450534	3.456182582	0	3.456182582	0.889724032	0	6.301153699
San Mateo (SF)	2023	T7 Single Other Class 8	Aggregate	Aggregate	Natural Gas	11.08284424	723.4779399	723.4779399	0	104.4003928	0.1304266	0
San Mateo (SF)	2023	T7 SWCV Class 8	Aggregate	Aggregate	Diesel	139.7825698	9065.634898	9065.634898	0	642.9998213	3.690532871	0
San Mateo (SF)	2023	T7 SWCV Class 8	Aggregate	Aggregate	Electricity	0.028981242	0.783160815	0	0.783160815	0.133313711	0	1.457110406
San Mateo (SF)	2023	T7 SWCV Class 8	Aggregate	Aggregate	Natural Gas	110.1650386	7132.309296	7132.309296	0	506.7591777	1.602842289	0
San Mateo (SF)	2023	T7 Tractor Class 8	Aggregate	Aggregate	Diesel	173.2071705	13783.10051	13783.10051	0	2516.700187	2.267454612	0
San Mateo (SF)	2023	T7 Tractor Class 8	Aggregate	Aggregate	Electricity	0.140082781	5.863722679	0	5.863722679	2.035402812	0	10.67613734
San Mateo (SF)	2023	T7 Tractor Class 8	Aggregate	Aggregate	Natural Gas	23.08398272	1863.478652	1863.478652	0	335.4102689	0.331347941	0
San Mateo (SF)	2023	T7 Utility Class 8	Aggregate	Aggregate	Diesel	5.867087951	270.4057283	270.4057283	0	75.09872577	0.046766201	0
San Mateo (SF)	2023	T7 Utility Class 8	Aggregate	Aggregate	Electricity	0.001648772	0.046977125	0	0.046977125	0.021104276	0	0.088448449
San Mateo (SF)	2023	T7IS	Aggregate	Aggregate	Gasoline	4.303890698	593.3265441	593.3265441	0	86.11224509	0.156284802	0
San Mateo (SF)	2023	UBUS	Aggregate	Aggregate	Gasoline	61.26278416	4165.675726	4165.675726	0	245.0511366	0.49781709	0
San Mateo (SF)	2023	UBUS	Aggregate	Aggregate	Diesel	341.8463182	28540.61963	28540.61963	0	1367.385273	4.079113883	0
San Mateo (SF)	2023	UBUS	Aggregate	Aggregate	Electricity	2.018702775	15.3192995	0	15.3192995	8.074811102	0	26.70527876
San Mateo (SF)	2023	UBUS	Aggregate	Aggregate	Natural Gas	34.94319438	1199.610791	1199.610791	0	139.7727775	0.206243051	0

EMFAC Fuel Usage: Year 2019

Vehicle type	GAS			DSL			NG			ELEC		
	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	kWh/day	Miles/kWh
All other buses	0	0	0.00	65,588	7,589	8.64	493	65	7.61	0	0	0.00
LDA	7,587,857	250,751	30.26	17,557	402	43.63	0	0	0.00	830,766	308,861	2.69
LDT1	729,680	28,274	25.81	88	4	24.31	0	0	0.00	4,482	1,629	2.75
LDT2	4,944,105	198,023	24.97	18,954	577	32.87	0	0	0.00	71,120	24,641	2.89
LHD1	401,258	39,698	10.11	191,551	11,855	16.16	0	0	0.00	3,531	2,311	1.53
LHD2	44,552	4,968	8.97	83,732	6,135	13.65	0	0	0.00	866	558	1.55
MCY	76,675	1,808	42.41	0	0	0.00	0	0	0.00	0	0	0.00
MDV	2,839,650	137,015	20.73	38,157	1,519	25.13	0	0	0.00	59,096	21,257	2.78
MH	7,786	1,762	4.42	3,694	395	9.35	0	0	0.00	0	0	0.00
Motor coach	0	0	0.00	9,414	1,712	5.50	0	0	0.00	0	0	0.00
OBUS	14,439	2,921	4.94	0	0	0.00	0	0	0.00	80	88	0.90
PTO	0	0	0.00	5,213	1,071	4.87	0	0	0.00	16	34	0.48
SBUS	3,562	348	10.23	3,777	463	8.16	159	28	5.57	37	39	0.95
T6	46,997	9,629	4.88	177,028	21,007	8.43	1,936	276	7.02	871	980	0.89
T7	570	149	3.82	114,276	21,358	5.35	11,188	2,317	4.83	348	647	0.54
UBUS	4,178	488	8.56	21,478	2,588	8.30	4,515	726	6.22	3,851	6,714	0.57
Total	**16,701,310**	**675,834**	**24.71**	**750,508**	**76,675**	**9.79**	**18,289**	**3,413**	**5.36**	**975,063**	**367,759**	**2.65**

Source: EMFAC2021 (v1.0.1) Emissions Inventory
Region Type: Sub-Area
Region: San Mateo (SF)
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Fuel Consumption	Energy Consumption
San Mateo (SF)	2024	All Other Buses	Aggregate	Aggregate	Diesel	1010.019767	65588.4382	65588.4382	0	8989.175926	7.589183563	0
San Mateo (SF)	2024	All Other Buses	Aggregate	Aggregate	Natural Gas	7.797527652	492.558504	492.558504	0	69.39799611	0.06472126	0
San Mateo (SF)	2024	LDA	Aggregate	Aggregate	Gasoline	239419.6914	7453999.531	7453999.531	0	1124271.39	246.3186045	0
San Mateo (SF)	2024	LDA	Aggregate	Aggregate	Diesel	770.4429717	17557.02655	17557.02655	0	3247.138152	0.402431808	0
San Mateo (SF)	2024	LDA	Aggregate	Aggregate	Electricity	17934.85844	689392.1346	0	689392.1346	89072.05484	0	266162.2626
San Mateo (SF)	2024	LDA	Aggregate	Aggregate	Plug-in Hybrid	7500.935942	275231.0752	133857.39	141373.6851	31016.37012	4.432253212	42699.06652
San Mateo (SF)	2024	LDT1	Aggregate	Aggregate	Gasoline	25010.0531	728708.633	728708.633	0	114230.1038	28.24158626	0
San Mateo (SF)	2024	LDT1	Aggregate	Aggregate	Diesel	6.907673926	87.50596908	87.50596908	0	19.69867722	0.003599707	0
San Mateo (SF)	2024	LDT1	Aggregate	Aggregate	Electricity	91.59653564	3278.131471	0	3278.131471	443.5442369	0	1265.629307
San Mateo (SF)	2024	LDT1	Aggregate	Aggregate	Plug-in Hybrid	54.25068822	2174.892913	971.290704	1203.60221	224.3265958	0.03231964	363.5237404
San Mateo (SF)	2024	LDT2	Aggregate	Aggregate	Gasoline	149535.9991	4914901.344	4914901.344	0	718035.5655	197.046598	0
San Mateo (SF)	2024	LDT2	Aggregate	Aggregate	Diesel	582.174762	18954.01783	18954.01783	0	2798.232772	0.576636092	0
San Mateo (SF)	2024	LDT2	Aggregate	Aggregate	Electricity	1250.956924	37598.8884	0	37598.8884	6394.245221	0	14516.27413
San Mateo (SF)	2024	LDT2	Aggregate	Aggregate	Plug-in Hybrid	1631.39119	62724.84772	29203.50056	33521.34716	6745.802571	0.976835959	10124.44594
San Mateo (SF)	2024	LHD1	Aggregate	Aggregate	Gasoline	11110.29193	401258.44	401258.44	0	165526.7954	39.69788678	0
San Mateo (SF)	2024	LHD1	Aggregate	Aggregate	Diesel	4996.691619	191551.3871	191551.3871	0	62852.09473	11.8545718	0
San Mateo (SF)	2024	LHD1	Aggregate	Aggregate	Electricity	56.88551675	3530.641734	0	3530.641734	794.6546446	0	2311.167208
San Mateo (SF)	2024	LHD2	Aggregate	Aggregate	Gasoline	1289.384979	44551.75855	44551.75855	0	19209.915	4.968155251	0
San Mateo (SF)	2024	LHD2	Aggregate	Aggregate	Diesel	2173.661875	83732.4448	83732.4448	0	27341.93193	6.135398203	0
San Mateo (SF)	2024	LHD2	Aggregate	Aggregate	Electricity	14.7237506	865.83827	0	865.83827	194.897859	0	558.211816
San Mateo (SF)	2024	MCY	Aggregate	Aggregate	Gasoline	13263.89041	76675.37497	76675.37497	0	26527.78081	1.808115529	0
San Mateo (SF)	2024	MDV	Aggregate	Aggregate	Gasoline	84173.19233	2823183.304	2823183.304	0	402441.5994	136.4569564	0
San Mateo (SF)	2024	MDV	Aggregate	Aggregate	Diesel	1163.666539	38157.49894	38157.49894	0	5552.100301	1.518648076	0
San Mateo (SF)	2024	MDV	Aggregate	Aggregate	Electricity	1347.217163	40547.65645	0	40547.65645	6889.415482	0	15654.74197
San Mateo (SF)	2024	MDV	Aggregate	Aggregate	Plug-in Hybrid	894.3671937	35015.16888	16467.10766	18548.06122	3698.208346	0.557565411	5602.06731
San Mateo (SF)	2024	MH	Aggregate	Aggregate	Gasoline	801.8478893	7786.339137	7786.339137	0	80.21686285	1.762048879	0
San Mateo (SF)	2024	MH	Aggregate	Aggregate	Diesel	356.6508886	3693.518062	3693.518062	0	35.66508886	0.394900465	0
San Mateo (SF)	2024	Motor Coach	Aggregate	Aggregate	Diesel	67.4728227	9413.923513	9413.923513	0	1550.525466	1.711867015	0
San Mateo (SF)	2024	OBUS	Aggregate	Aggregate	Gasoline	254.1966634	14438.68385	14438.68385	0	5085.966841	2.92058158	0
San Mateo (SF)	2024	OBUS	Aggregate	Aggregate	Electricity	0.873406414	79.58076023	0	79.58076023	17.47511553	0	88.16330587
San Mateo (SF)	2024	PTO	Aggregate	Aggregate	Diesel	0	5213.191697	5213.191697	0	0	1.071032644	0
San Mateo (SF)	2024	PTO	Aggregate	Aggregate	Electricity	0	16.32243227	0	16.32243227	0	0	33.81222478
San Mateo (SF)	2024	SBUS	Aggregate	Aggregate	Gasoline	66.88140617	3561.549238	3561.549238	0	267.5256247	0.348304009	0
San Mateo (SF)	2024	SBUS	Aggregate	Aggregate	Diesel	168.9599856	3777.201946	3777.201946	0	2446.540592	0.462822866	0
San Mateo (SF)	2024	SBUS	Aggregate	Aggregate	Electricity	0.908830063	36.62057063	0	36.62057063	8.140217381	0	38.57814485
San Mateo (SF)	2024	SBUS	Aggregate	Aggregate	Natural Gas	6.288614207	158.6097198	158.6097198	0	91.05913372	0.028483159	0
San Mateo (SF)	2024	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	1.983513681	130.4020515	130.4020515	0	45.5811444	0.014621724	0
San Mateo (SF)	2024	T6 CAIRP Class 4	Aggregate	Aggregate	Electricity	0.010349368	0.742575428	0	0.742575428	0.237828479	0	0.806647452
San Mateo (SF)	2024	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	2.646243289	179.0178477	179.0178477	0	60.81067078	0.020068539	0
San Mateo (SF)	2024	T6 CAIRP Class 5	Aggregate	Aggregate	Electricity	0.011838264	0.888997547	0	0.888997547	0.272043297	0	0.965703388
San Mateo (SF)	2024	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	8.646825221	466.3157103	466.3157103	0	198.7040436	0.051484703	0
San Mateo (SF)	2024	T6 CAIRP Class 6	Aggregate	Aggregate	Electricity	0.069996419	3.786023693	0	3.786023693	1.608517719	0	4.112695159
San Mateo (SF)	2024	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	14.56016987	2937.850251	2937.850251	0	334.5927037	0.303274632	0
San Mateo (SF)	2024	T6 CAIRP Class 7	Aggregate	Aggregate	Electricity	0.056100538	10.86543909	0	10.86543909	1.289190369	0	11.80294746
San Mateo (SF)	2024	T6 Instate Delivery Class 4	Aggregate	Aggregate	Diesel	366.2833441	12333.87447	12333.87447	0	5226.863321	1.508506872	0
San Mateo (SF)	2024	T6 Instate Delivery Class 4	Aggregate	Aggregate	Electricity	1.106257593	43.65736255	0	43.65736255	15.78629585	0	46.63824705
San Mateo (SF)	2024	T6 Instate Delivery Class 4	Aggregate	Aggregate	Natural Gas	1.404307203	54.10822375	54.10822375	0	20.03946379	0.00802232	0
San Mateo (SF)	2024	T6 Instate Delivery Class 5	Aggregate	Aggregate	Diesel	293.8153679	10074.01127	10074.01127	0	4192.7453	1.227014671	0
San Mateo (SF)	2024	T6 Instate Delivery Class 5	Aggregate	Aggregate	Electricity	0.616970787	24.30357372	0	24.30357372	8.80417313	0	25.96299935
San Mateo (SF)	2024	T6 Instate Delivery Class 5	Aggregate	Aggregate	Natural Gas	0.943607872	35.43158414	35.43158414	0	13.46528434	0.005216791	0
San Mateo (SF)	2024	T6 Instate Delivery Class 6	Aggregate	Aggregate	Diesel	614.8350364	20894.67489	20894.67489	0	8773.695969	2.539887401	0
San Mateo (SF)	2024	T6 Instate Delivery Class 6	Aggregate	Aggregate	Electricity	1.548728889	60.49169567	0	60.49169567	22.10036125	0	64.62201294
San Mateo (SF)	2024	T6 Instate Delivery Class 6	Aggregate	Aggregate	Natural Gas	1.950903473	74.71166879	74.71166879	0	27.83939256	0.011019471	0
San Mateo (SF)	2024	T6 Instate Delivery Class 7	Aggregate	Aggregate	Diesel	148.2960561	8198.497371	8198.497371	0	2116.18472	0.968884451	0
San Mateo (SF)	2024	T6 Instate Delivery Class 7	Aggregate	Aggregate	Electricity	0.185788329	8.385499202	0	8.385499202	2.651199453	0	8.958053364
San Mateo (SF)	2024	T6 Instate Delivery Class 7	Aggregate	Aggregate	Natural Gas	3.655196841	206.4111391	206.4111391	0	52.15965892	0.030190225	0
San Mateo (SF)	2024	T6 Instate Other Class 4	Aggregate	Aggregate	Diesel	415.5835033	16931.77251	16931.77251	0	4804.145299	1.983456033	0
San Mateo (SF)	2024	T6 Instate Other Class 4	Aggregate	Aggregate	Electricity	0.992766553	44.34149507	0	44.34149507	11.47638135	0	47.00558028
San Mateo (SF)	2024	T6 Instate Other Class 4	Aggregate	Aggregate	Natural Gas	1.299589409	60.77961234	60.77961234	0	15.02325357	0.008046765	0
San Mateo (SF)	2024	T6 Instate Other Class 5	Aggregate	Aggregate	Diesel	999.352634	43641.98074	43641.98074	0	11552.51645	5.140992134	0
San Mateo (SF)	2024	T6 Instate Other Class 5	Aggregate	Aggregate	Electricity	1.383953572	62.738618	0	62.738618	15.99850329	0	66.50802234
San Mateo (SF)	2024	T6 Instate Other Class 5	Aggregate	Aggregate	Natural Gas	2.665543721	121.4962044	121.4962044	0	30.81368542	0.015792543	0
San Mateo (SF)	2024	T6 Instate Other Class 6	Aggregate	Aggregate	Diesel	644.9267498	27528.84395	27528.84395	0	7455.353227	3.226104653	0
San Mateo (SF)	2024	T6 Instate Other Class 6	Aggregate	Aggregate	Electricity	1.520465658	68.33436926	0	68.33436926	17.57658301	0	72.43997242
San Mateo (SF)	2024	T6 Instate Other Class 6	Aggregate	Aggregate	Natural Gas	1.728483917	78.15716702	78.15716702	0	19.98127408	0.010194293	0
San Mateo (SF)	2024	T6 Instate Other Class 7	Aggregate	Aggregate	Diesel	272.5670106	12873.6112	12873.6112	0	3150.874643	1.477380532	0
San Mateo (SF)	2024	T6 Instate Other Class 7	Aggregate	Aggregate	Electricity	0.384250638	26.00897323	0	26.00897323	4.441937373	0	27.57162061
San Mateo (SF)	2024	T6 Instate Other Class 7	Aggregate	Aggregate	Natural Gas	6.430505099	329.8437934	329.8437934	0	74.33663894	0.042543623	0
San Mateo (SF)	2024	T6 Instate Tractor Class 6	Aggregate	Aggregate	Diesel	9.851995087	539.3079959	539.3079959	0	113.8890632	0.064482435	0
San Mateo (SF)	2024	T6 Instate Tractor Class 6	Aggregate	Aggregate	Electricity	0.008442585	0.541719277	0	0.541719277	0.097596279	0	0.57426636
San Mateo (SF)	2024	T6 Instate Tractor Class 6	Aggregate	Aggregate	Natural Gas	0.020352052	1.197239749	1.197239749	0	0.235269727	0.0001485	0
San Mateo (SF)	2024	T6 Instate Tractor Class 7	Aggregate	Aggregate	Diesel	63.41012483	3772.491416	3772.491416	0	733.021043	0.410140477	0
San Mateo (SF)	2024	T6 Instate Tractor Class 7	Aggregate	Aggregate	Electricity	0.064626863	4.540616084	0	4.540616084	0.747086535	0	4.813421232
San Mateo (SF)	2024	T6 Instate Tractor Class 7	Aggregate	Aggregate	Natural Gas	1.1120648	71.92311018	71.92311018	0	12.85546909	0.009102086	0
San Mateo (SF)	2024	T6 OOS Class 4	Aggregate	Aggregate	Diesel	1.123788222	73.34403377	73.34403377	0	25.82465334	0.008182281	0
San Mateo (SF)	2024	T6 OOS Class 5	Aggregate	Aggregate	Diesel	1.492532866	100.6148253	100.6148253	0	34.29840526	0.011231279	0
San Mateo (SF)	2024	T6 OOS Class 6	Aggregate	Aggregate	Diesel	4.898813631	262.9094172	262.9094172	0	112.5747372	0.028829474	0
San Mateo (SF)	2024	T6 OOS Class 7	Aggregate	Aggregate	Diesel	7.68570669	1911.678388	1911.678388	0	176.6175397	0.195918438	0
San Mateo (SF)	2024	T6 Public Class 4	Aggregate	Aggregate	Diesel	34.20999397	1162.950929	1162.950929	0	175.4972691	0.153603171	0
San Mateo (SF)	2024	T6 Public Class 4	Aggregate	Aggregate	Electricity	0.160369606	6.87740272	0	6.87740272	0.822696077	0	8.121528704
San Mateo (SF)	2024	T6 Public Class 4	Aggregate	Aggregate	Natural Gas	1.217342352	51.22595697	51.22595697	0	6.244966266	0.00775953	0
San Mateo (SF)	2024	T6 Public Class 5	Aggregate	Aggregate	Diesel	104.9502653	3865.304928	3865.304928	0	538.3948608	0.494415674	0
San Mateo (SF)	2024	T6 Public Class 5	Aggregate	Aggregate	Electricity	0.391950434	16.70415981	0	16.70415981	2.010705724	0	19.72595162
San Mateo (SF)	2024	T6 Public Class 5	Aggregate	Aggregate	Natural Gas	8.287784814	341.5227447	341.5227447	0	42.5163361	0.052109302	0
San Mateo (SF)	2024	T6 Public Class 6	Aggregate	Aggregate	Diesel	66.92224605	2330.283246	2330.283246	0	343.3111223	0.303570875	0
San Mateo (SF)	2024	T6 Public Class 6	Aggregate	Aggregate	Electricity	0.308873066	12.10297475	0	12.10297475	1.58451883	0	14.29240963
San Mateo (SF)	2024	T6 Public Class 6	Aggregate	Aggregate	Natural Gas	2.686862032	112.0688131	112.0688131	0	13.78360222	0.016885504	0
San Mateo (SF)	2024	T6 Public Class 7	Aggregate	Aggregate	Diesel	143.5330908	6329.543625	6329.543625	0	736.3247557	0.820016689	0
San Mateo (SF)	2024	T6 Public Class 7	Aggregate	Aggregate	Electricity	0.659246533	42.31276549	0	42.31276549	3.381934712	0	49.96716835
San Mateo (SF)	2024	T6 Public Class 7	Aggregate	Aggregate	Natural Gas	7.376587145	390.2663914	390.2663914	0	37.84189205	0.057968499	0

San Mateo (SF)	2024 T6 Utility Class 5	Aggregate	Aggregate	Diesel	8.29809359	337.0120214	337.0120214	0	106.215598	0.038117309	0
San Mateo (SF)	2024 T6 Utility Class 5	Aggregate	Aggregate	Electricity	0.063066278	2.74370955	0	2.74370955	0.807248357	0	3.073128614
San Mateo (SF)	2024 T6 Utility Class 5	Aggregate	Aggregate	Natural Gas	0.110344035	4.323833815	4.323833815	0	1.412403644	0.000590809	0
San Mateo (SF)	2024 T6 Utility Class 6	Aggregate	Aggregate	Diesel	1.575007959	63.65109565	63.65109565	0	20.16010188	0.007173849	0
San Mateo (SF)	2024 T6 Utility Class 6	Aggregate	Aggregate	Electricity	0.011765013	0.51183897	0	0.51183897	0.150592168	0	0.573292091
San Mateo (SF)	2024 T6 Utility Class 6	Aggregate	Aggregate	Natural Gas	0.021890003	0.861137985	0.861137985	0	0.280192032	0.000116913	0
San Mateo (SF)	2024 T6 Utility Class 7	Aggregate	Aggregate	Diesel	1.784439681	88.10009957	88.10009957	0	22.84082792	0.009873541	0
San Mateo (SF)	2024 T6 Utility Class 7	Aggregate	Aggregate	Electricity	0.014117152	0.83513856	0	0.83513856	0.180699539	0	0.935408125
San Mateo (SF)	2024 T6 Utility Class 7	Aggregate	Aggregate	Natural Gas	0.03545986	1.534846409	1.534846409	0	0.453886207	0.00020776	0
San Mateo (SF)	2024 T6TS	Aggregate	Aggregate	Gasoline	803.5706606	46997.13647	46997.13647	0	16077.84178	9.629176874	0
San Mateo (SF)	2024 T6TS	Aggregate	Aggregate	Electricity	4.712404135	429.3725092	0	429.3725092	94.28578193	0	500.8372762
San Mateo (SF)	2024 T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	84.84073748	17133.70801	17133.70801	0	1949.640147	2.803922103	0
San Mateo (SF)	2024 T7 CAIRP Class 8	Aggregate	Aggregate	Electricity	0.518432836	92.356237	0	92.356237	11.91358656	0	168.6356614
San Mateo (SF)	2024 T7 CAIRP Class 8	Aggregate	Aggregate	Natural Gas	0.192916589	39.36784357	39.36784357	0	4.433223213	0.006981924	0
San Mateo (SF)	2024 T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	76.40814562	20499.40957	20499.40957	0	1755.859186	3.29663371	0
San Mateo (SF)	2024 T7 NOOS Class 8	Aggregate	Aggregate	Diesel	32.17354332	7448.809261	7448.809261	0	739.3480255	1.217759609	0
San Mateo (SF)	2024 T7 Other Port Class 8	Aggregate	Aggregate	Diesel	8.837314454	1626.469854	1626.469854	0	144.5784645	0.273643721	0
San Mateo (SF)	2024 T7 Other Port Class 8	Aggregate	Aggregate	Electricity	0.015367303	3.26505997	0	3.26505997	0.251409081	0	5.942302173
San Mateo (SF)	2024 T7 POAK Class 8	Aggregate	Aggregate	Diesel	56.8181039	5636.396346	5636.396346	0	929.5441799	0.966024078	0
San Mateo (SF)	2024 T7 POAK Class 8	Aggregate	Aggregate	Electricity	0.131851273	10.43004771	0	10.43004771	2.157086819	0	18.98234511
San Mateo (SF)	2024 T7 POAK Class 8	Aggregate	Aggregate	Natural Gas	0.028205543	2.725407467	2.725407467	0	0.461442684	0.000480064	0
San Mateo (SF)	2024 T7 Public Class 8	Aggregate	Aggregate	Diesel	332.3453533	14458.55637	14458.55637	0	1704.931662	2.762333038	0
San Mateo (SF)	2024 T7 Public Class 8	Aggregate	Aggregate	Electricity	1.134930373	70.76402518	0	70.76402518	5.822192813	0	138.8802418
San Mateo (SF)	2024 T7 Public Class 8	Aggregate	Aggregate	Natural Gas	1.60266138	78.39394478	78.39394478	0	8.22165288	0.017020398	0
San Mateo (SF)	2024 T7 Single Concrete/Transit Mix C	Aggregate	Aggregate	Diesel	48.33256085	3435.825693	3435.825693	0	455.2927232	0.579451144	0
San Mateo (SF)	2024 T7 Single Concrete/Transit Mix C	Aggregate	Aggregate	Electricity	0.397952369	28.87532303	0	28.87532303	3.748711313	0	52.64416571
San Mateo (SF)	2024 T7 Single Concrete/Transit Mix C	Aggregate	Aggregate	Natural Gas	2.859845123	207.3550381	207.3550381	0	26.93974106	0.035364148	0
San Mateo (SF)	2024 T7 Single Dump Class 8	Aggregate	Aggregate	Diesel	174.077676	10437.83978	10437.83978	0	1639.811708	1.806073866	0
San Mateo (SF)	2024 T7 Single Dump Class 8	Aggregate	Aggregate	Electricity	0.348387641	25.93609401	0	25.93609401	3.281811577	0	47.28549805
San Mateo (SF)	2024 T7 Single Dump Class 8	Aggregate	Aggregate	Natural Gas	9.113712089	572.3361799	572.3361799	0	85.85116787	0.105335289	0
San Mateo (SF)	2024 T7 Single Other Class 8	Aggregate	Aggregate	Diesel	180.5433499	10863.95625	10863.95625	0	1700.718356	1.863044516	0
San Mateo (SF)	2024 T7 Single Other Class 8	Aggregate	Aggregate	Electricity	0.376763203	27.39161443	0	27.39161443	3.54910937	0	49.93913617
San Mateo (SF)	2024 T7 Single Other Class 8	Aggregate	Aggregate	Natural Gas	11.58787791	737.3624714	737.3624714	0	109.1578099	0.132640751	0
San Mateo (SF)	2024 T7 SWCV Class 8	Aggregate	Aggregate	Diesel	131.2263109	8511.736571	8511.736571	0	603.6410304	3.459575938	0
San Mateo (SF)	2024 T7 SWCV Class 8	Aggregate	Aggregate	Electricity	0.782742032	49.03923842	0	49.03923842	3.600613349	0	91.23998962
San Mateo (SF)	2024 T7 SWCV Class 8	Aggregate	Aggregate	Natural Gas	119.1407726	7712.027968	7712.027968	0	548.0475538	1.691284196	0
San Mateo (SF)	2024 T7 Tractor Class 8	Aggregate	Aggregate	Diesel	183.0109509	13952.32317	13952.32317	0	2659.149116	2.283276047	0
San Mateo (SF)	2024 T7 Tractor Class 8	Aggregate	Aggregate	Electricity	0.499999036	37.82532684	0	37.82532684	7.264985994	0	68.86894326
San Mateo (SF)	2024 T7 Tractor Class 8	Aggregate	Aggregate	Natural Gas	24.02355135	1838.262606	1838.262606	0	349.0622011	0.32812323	0
San Mateo (SF)	2024 T7 Utility Class 8	Aggregate	Aggregate	Diesel	6.010973441	270.9164503	270.9164503	0	76.94046005	0.046685062	0
San Mateo (SF)	2024 T7 Utility Class 8	Aggregate	Aggregate	Electricity	0.012198141	0.773029309	0	0.773029309	0.156136203	0	1.455458256
San Mateo (SF)	2024 T7IS	Aggregate	Aggregate	Gasoline	4.384109781	570.1519189	570.1519189	0	87.71726849	0.149160189	0
San Mateo (SF)	2024 T7IS	Aggregate	Aggregate	Electricity	0.004426254	1.309490543	0	1.309490543	0.08856049	0	2.63120371
San Mateo (SF)	2024 UBUS	Aggregate	Aggregate	Gasoline	61.44417623	4178.009813	4178.009813	0	245.7767049	0.487916261	0
San Mateo (SF)	2024 UBUS	Aggregate	Aggregate	Diesel	277.5892805	21477.77652	21477.77652	0	1110.357122	2.588054266	0
San Mateo (SF)	2024 UBUS	Aggregate	Aggregate	Electricity	37.07940274	3851.303292	0	3851.303292	148.317611	0	6713.761815
San Mateo (SF)	2024 UBUS	Aggregate	Aggregate	Natural Gas	65.26113973	4514.572673	4514.572673	0	261.0445589	0.726284068	0

EMFAC Fuel Usage: Year 2019

Vehicle type	GAS			DSL			NG			ELEC		
	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	kWh/day	Miles/kWh
All other buses	0	0	0.00	65,844	7,533	8.74	585	75	7.77	0	0	0.00
LDA	7,320,237	238,152	30.74	15,407	350	44.04	0	0	0.00	894,815	332,952	2.69
LDT1	724,296	27,587	26.25	76	3	24.35	0	0	0.00	5,918	2,141	2.76
LDT2	5,105,177	200,990	25.40	19,447	581	33.45	0	0	0.00	88,574	30,855	2.87
LHD1	405,927	39,534	10.27	200,335	12,320	16.26	0	0	0.00	8,787	5,753	1.53
LHD2	45,031	4,942	9.11	88,315	6,413	13.77	0	0	0.00	2,145	1,384	1.55
MCY	78,703	1,851	42.53	0	0	0.00	0	0	0.00	0	0	0.00
MDV	2,935,201	139,243	21.08	38,223	1,498	25.51	0	0	0.00	75,551	27,224	2.78
MH	8,053	1,822	4.42	3,863	413	9.35	0	0	0.00	0	0	0.00
Motor coach	0	0	0.00	9,461	1,704	5.55	0	0	0.00	0	0	0.00
OBUS	13,715	2,746	4.99	0	0	0.00	0	0	0.00	186	206	0.90
PTO	0	0	0.00	5,226	1,063	4.92	0	0	0.00	47	98	0.48
SBUS	3,680	357	10.30	3,758	458	8.20	164	29	5.60	79	83	0.95
T6	47,613	9,632	4.94	177,558	20,964	8.47	2,054	292	7.04	2,408	2,680	0.90
T7	539	140	3.85	114,335	21,003	5.44	11,843	2,414	4.91	854	1,584	0.54
UBUS	4,190	486	8.62	21,527	2,594	8.30	4,534	730	6.22	3,871	6,747	0.57
Total	**16,692,363**	**667,482**	**25.01**	**763,375**	**76,898**	**9.93**	**19,180**	**3,540**	**5.42**	**1,083,234**	**411,707**	**2.63**

Source: EMFAC2021 (v1.0.1) Emissions Inventory
Region Type: Sub-Area
Region: San Mateo (SF)
Calendar Year: 2025
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Fuel Consumption	Energy Consumption
San Mateo (SF)	2025	All Other Buses	Aggregate	Aggregate	Diesel	1040.8077	65844.05968	65844.05968	0	9263.188531	7.532879185	0
San Mateo (SF)	2025	All Other Buses	Aggregate	Aggregate	Natural Gas	9.184140215	584.7868438	584.7868438	0	81.73884791	0.075279772	0
San Mateo (SF)	2025	LDA	Aggregate	Aggregate	Gasoline	238618.0156	7185689.215	7185689.215	0	1119871.966	233.6839055	0
San Mateo (SF)	2025	LDA	Aggregate	Aggregate	Diesel	710.583414	15407.46136	15407.46136	0	2980.227477	0.34986726	0
San Mateo (SF)	2025	LDA	Aggregate	Aggregate	Electricity	19564.98048	745853.7547	0	745853.7547	96825.51426	0	287961.108
San Mateo (SF)	2025	LDA	Aggregate	Aggregate	Plug-in Hybrid	8044.117209	283509.4476	134548.0823	148961.3653	33262.42466	4.468007362	44990.77207
San Mateo (SF)	2025	LDT1	Aggregate	Aggregate	Gasoline	25473.09348	722986.1754	722986.1754	0	116608.1368	27.54345185	0
San Mateo (SF)	2025	LDT1	Aggregate	Aggregate	Diesel	6.297195674	75.91060561	75.91060561	0	17.66290289	0.003117082	0
San Mateo (SF)	2025	LDT1	Aggregate	Aggregate	Electricity	114.3012571	4207.979092	0	4207.979092	557.9393722	0	1624.627233
San Mateo (SF)	2025	LDT1	Aggregate	Aggregate	Plug-in Hybrid	78.6973584	3019.598639	1309.634959	1709.96368	325.413577	0.043730601	516.4599965
San Mateo (SF)	2025	LDT2	Aggregate	Aggregate	Gasoline	159673.5604	5072144.161	5072144.161	0	766397.1666	199.8804799	0
San Mateo (SF)	2025	LDT2	Aggregate	Aggregate	Diesel	618.927636	19447.23923	19447.23923	0	2972.356105	0.58134958	0
San Mateo (SF)	2025	LDT2	Aggregate	Aggregate	Electricity	1700.502052	48819.40297	0	48819.40297	8654.221885	0	18848.31883
San Mateo (SF)	2025	LDT2	Aggregate	Aggregate	Plug-in Hybrid	1989.466385	72787.25781	33032.95112	39754.30669	8226.443501	1.109503465	12006.98549
San Mateo (SF)	2025	LHD1	Aggregate	Aggregate	Gasoline	11613.81544	405927.2357	405927.2357	0	173028.5455	39.53365219	0
San Mateo (SF)	2025	LHD1	Aggregate	Aggregate	Diesel	5396.711247	200335.3424	200335.3424	0	67883.83842	12.32008971	0
San Mateo (SF)	2025	LHD1	Aggregate	Aggregate	Electricity	157.5841429	8786.545918	0	8786.545918	2203.77465	0	5753.375069
San Mateo (SF)	2025	LHD2	Aggregate	Aggregate	Gasoline	1342.428797	45031.49712	45031.49712	0	20000.18886	4.942436869	0
San Mateo (SF)	2025	LHD2	Aggregate	Aggregate	Diesel	2386.5916	88314.96693	88314.96693	0	30020.32	6.413096055	0
San Mateo (SF)	2025	LHD2	Aggregate	Aggregate	Electricity	40.48817067	2145.223609	0	2145.223609	536.9130925	0	1383.681892
San Mateo (SF)	2025	MCY	Aggregate	Aggregate	Gasoline	13994.77616	78703.41705	78703.41705	0	27989.55232	1.850735134	0
San Mateo (SF)	2025	MDV	Aggregate	Aggregate	Gasoline	89810.74471	2915872.313	2915872.313	0	429459.6994	138.5852907	0
San Mateo (SF)	2025	MDV	Aggregate	Aggregate	Diesel	1216.212956	38222.5519	38222.5519	0	5783.755573	1.498410746	0
San Mateo (SF)	2025	MDV	Aggregate	Aggregate	Electricity	1824.96966	52408.32384	0	52408.32384	9288.746363	0	20233.93849
San Mateo (SF)	2025	MDV	Aggregate	Aggregate	Plug-in Hybrid	1131.123972	42471.44363	19328.4067	23143.03693	4677.197622	0.65739241	6989.886925
San Mateo (SF)	2025	MH	Aggregate	Aggregate	Gasoline	830.5400792	8053.176778	8053.176778	0	83.08722952	1.822052821	0
San Mateo (SF)	2025	MH	Aggregate	Aggregate	Diesel	384.5124606	3863.222216	3863.222216	0	38.45124606	0.413181561	0
San Mateo (SF)	2025	Motor Coach	Aggregate	Aggregate	Diesel	70.7687627	9461.069488	9461.069488	0	1626.266167	1.704157475	0
San Mateo (SF)	2025	OBUS	Aggregate	Aggregate	Gasoline	252.7220053	13715.01944	13715.01944	0	5056.461881	2.746270321	0
San Mateo (SF)	2025	OBUS	Aggregate	Aggregate	Electricity	2.143948864	185.5535584	0	185.5535584	42.89612887	0	205.5649516
San Mateo (SF)	2025	PTO	Aggregate	Aggregate	Diesel	0	5225.78065	5225.78065	0	0	1.062762653	0
San Mateo (SF)	2025	PTO	Aggregate	Aggregate	Electricity	0	47.15436847	0	47.15436847	0	0	97.68115928
San Mateo (SF)	2025	SBUS	Aggregate	Aggregate	Gasoline	71.37135106	3679.781406	3679.781406	0	285.4854042	0.357303751	0
San Mateo (SF)	2025	SBUS	Aggregate	Aggregate	Diesel	168.9397086	3758.239997	3758.239997	0	2446.246981	0.458490745	0
San Mateo (SF)	2025	SBUS	Aggregate	Aggregate	Electricity	1.984894066	78.89105226	0	78.89105226	17.79859501	0	83.10822001
San Mateo (SF)	2025	SBUS	Aggregate	Aggregate	Natural Gas	6.552799461	163.6294666	163.6294666	0	94.88453619	0.029218589	0
San Mateo (SF)	2025	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	2.003877095	130.4859608	130.4859608	0	46.04909564	0.014510315	0
San Mateo (SF)	2025	T6 CAIRP Class 4	Aggregate	Aggregate	Electricity	0.024356646	1.914994938	0	1.914994938	0.559715717	0	2.08022745
San Mateo (SF)	2025	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	2.654036342	179.2922033	179.2922033	0	60.98975514	0.019947866	0
San Mateo (SF)	2025	T6 CAIRP Class 5	Aggregate	Aggregate	Electricity	0.028151688	2.338099023	0	2.338099023	0.646925788	0	2.539838446
San Mateo (SF)	2025	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	8.952440073	465.37636	465.37636	0	205.7270729	0.050977147	0
San Mateo (SF)	2025	T6 CAIRP Class 6	Aggregate	Aggregate	Electricity	0.159149258	9.228816692	0	9.228816692	3.657249952	0	10.02511152
San Mateo (SF)	2025	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	14.76915394	2948.837643	2948.837643	0	339.3951575	0.300366912	0
San Mateo (SF)	2025	T6 CAIRP Class 7	Aggregate	Aggregate	Electricity	0.134084983	28.12591612	0	28.12591612	3.081272905	0	30.55271928
San Mateo (SF)	2025	T6 Instate Delivery Class 4	Aggregate	Aggregate	Diesel	369.1320373	12364.52256	12364.52256	0	5267.514173	1.502211222	0
San Mateo (SF)	2025	T6 Instate Delivery Class 4	Aggregate	Aggregate	Electricity	3.001468811	122.4721858	0	122.4721858	42.83095993	0	130.8344739
San Mateo (SF)	2025	T6 Instate Delivery Class 4	Aggregate	Aggregate	Natural Gas	1.667638074	63.73693569	63.73693569	0	23.79719531	0.009386172	0
San Mateo (SF)	2025	T6 Instate Delivery Class 5	Aggregate	Aggregate	Diesel	298.7234664	10109.26401	10109.26401	0	4262.783866	1.225903906	0
San Mateo (SF)	2025	T6 Instate Delivery Class 5	Aggregate	Aggregate	Electricity	1.964085256	79.67730943	0	79.67730943	28.02749661	0	85.11760273
San Mateo (SF)	2025	T6 Instate Delivery Class 5	Aggregate	Aggregate	Natural Gas	1.117425154	41.88355474	41.88355474	0	15.94565694	0.006127966	0
San Mateo (SF)	2025	T6 Instate Delivery Class 6	Aggregate	Aggregate	Diesel	623.3187412	20961.18077	20961.18077	0	8894.758437	2.535656775	0
San Mateo (SF)	2025	T6 Instate Delivery Class 6	Aggregate	Aggregate	Electricity	4.463666115	180.7077267	0	180.7077267	63.69651546	0	193.0462839
San Mateo (SF)	2025	T6 Instate Delivery Class 6	Aggregate	Aggregate	Natural Gas	2.349234828	89.45009888	89.45009888	0	33.523581	0.013107221	0
San Mateo (SF)	2025	T6 Instate Delivery Class 7	Aggregate	Aggregate	Diesel	151.3727757	8264.289081	8264.289081	0	2160.089509	0.974722227	0
San Mateo (SF)	2025	T6 Instate Delivery Class 7	Aggregate	Aggregate	Electricity	0.508269875	24.50715508	0	24.50715508	7.253011112	0	26.18048106
San Mateo (SF)	2025	T6 Instate Delivery Class 7	Aggregate	Aggregate	Natural Gas	3.662212447	205.0947695	205.0947695	0	52.25977162	0.029981649	0
San Mateo (SF)	2025	T6 Instate Other Class 4	Aggregate	Aggregate	Diesel	416.8784784	16965.32001	16965.32001	0	4819.11521	1.97752927	0
San Mateo (SF)	2025	T6 Instate Other Class 4	Aggregate	Aggregate	Electricity	3.421219274	159.4974179	0	159.4974179	39.54929481	0	169.0801961
San Mateo (SF)	2025	T6 Instate Other Class 4	Aggregate	Aggregate	Natural Gas	1.617942688	75.28484537	75.28484537	0	18.70341747	0.00984102	0
San Mateo (SF)	2025	T6 Instate Other Class 5	Aggregate	Aggregate	Diesel	1019.305927	43794.01901	43794.01901	0	11783.17652	5.139985966	0
San Mateo (SF)	2025	T6 Instate Other Class 5	Aggregate	Aggregate	Electricity	6.465215909	301.3754372	0	301.3754372	74.73789591	0	319.4824009
San Mateo (SF)	2025	T6 Instate Other Class 5	Aggregate	Aggregate	Natural Gas	3.31148479	150.6639629	150.6639629	0	38.28076417	0.019392948	0
San Mateo (SF)	2025	T6 Instate Other Class 6	Aggregate	Aggregate	Diesel	654.034459	27611.46946	27611.46946	0	7560.638346	3.223101596	0
San Mateo (SF)	2025	T6 Instate Other Class 6	Aggregate	Aggregate	Electricity	4.923588924	230.7608663	0	230.7608663	56.91668796	0	244.6252299
San Mateo (SF)	2025	T6 Instate Other Class 6	Aggregate	Aggregate	Natural Gas	2.163987515	98.22711448	98.22711448	0	25.01569567	0.012666258	0
San Mateo (SF)	2025	T6 Instate Other Class 7	Aggregate	Aggregate	Diesel	283.7422774	12927.75181	12927.75181	0	3280.060727	1.477658497	0
San Mateo (SF)	2025	T6 Instate Other Class 7	Aggregate	Aggregate	Electricity	1.537916743	106.3729401	0	106.3729401	17.77831755	0	112.7639419
San Mateo (SF)	2025	T6 Instate Other Class 7	Aggregate	Aggregate	Natural Gas	6.555315159	322.0737754	322.0737754	0	75.77944324	0.041594186	0
San Mateo (SF)	2025	T6 Instate Tractor Class 6	Aggregate	Aggregate	Diesel	10.13467751	539.6263022	539.6263022	0	117.156872	0.064019679	0
San Mateo (SF)	2025	T6 Instate Tractor Class 6	Aggregate	Aggregate	Electricity	0.075355334	4.909706858	0	4.909706858	0.871107657	0	5.204687381
San Mateo (SF)	2025	T6 Instate Tractor Class 6	Aggregate	Aggregate	Natural Gas	0.028468816	1.694023916	1.694023916	0	0.329099518	0.000208467	0
San Mateo (SF)	2025	T6 Instate Tractor Class 7	Aggregate	Aggregate	Diesel	66.10946604	3799.922963	3799.922963	0	764.2254275	0.410838516	0
San Mateo (SF)	2025	T6 Instate Tractor Class 7	Aggregate	Aggregate	Electricity	0.202670826	14.71495974	0	14.71495974	2.342874747	0	15.59905051
San Mateo (SF)	2025	T6 Instate Tractor Class 7	Aggregate	Aggregate	Natural Gas	1.141295304	71.18913069	71.18913069	0	13.19337372	0.009002432	0
San Mateo (SF)	2025	T6 OOS Class 4	Aggregate	Aggregate	Diesel	1.144301481	74.04664904	74.04664904	0	26.29604802	0.008138608	0
San Mateo (SF)	2025	T6 OOS Class 5	Aggregate	Aggregate	Diesel	1.508231121	101.5786871	101.5786871	0	34.65915115	0.011185159	0
San Mateo (SF)	2025	T6 OOS Class 6	Aggregate	Aggregate	Diesel	5.123932276	265.4280157	265.4280157	0	117.7479637	0.028635054	0
San Mateo (SF)	2025	T6 OOS Class 7	Aggregate	Aggregate	Diesel	7.767155493	1929.991731	1929.991731	0	178.4892332	0.194933302	0
San Mateo (SF)	2025	T6 Public Class 4	Aggregate	Aggregate	Diesel	33.75322843	1157.332044	1157.332044	0	173.1540619	0.151338618	0
San Mateo (SF)	2025	T6 Public Class 4	Aggregate	Aggregate	Electricity	0.341576374	14.73327454	0	14.73327454	1.752286797	0	17.39853212
San Mateo (SF)	2025	T6 Public Class 4	Aggregate	Aggregate	Natural Gas	1.326450993	55.4165902	55.4165902	0	6.804693595	0.008365911	0
San Mateo (SF)	2025	T6 Public Class 5	Aggregate	Aggregate	Diesel	105.4894963	3859.615734	3859.615734	0	541.1611158	0.491328066	0
San Mateo (SF)	2025	T6 Public Class 5	Aggregate	Aggregate	Electricity	0.876216732	37.6569447	0	37.6569447	4.494991835	0	44.46910698
San Mateo (SF)	2025	T6 Public Class 5	Aggregate	Aggregate	Natural Gas	8.567226273	348.4917906	348.4917906	0	43.9487078	0.053151091	0
San Mateo (SF)	2025	T6 Public Class 6	Aggregate	Aggregate	Diesel	66.09526361	2320.41664	2320.41664	0	339.0687023	0.299525647	0
San Mateo (SF)	2025	T6 Public Class 6	Aggregate	Aggregate	Electricity	0.656892807	27.03971971	0	27.03971971	3.369860101	0	31.93122007
San Mateo (SF)	2025	T6 Public Class 6	Aggregate	Aggregate	Natural Gas	2.897299196	119.9189051	119.9189051	0	14.86314488	0.018023667	0
San Mateo (SF)	2025	T6 Public Class 7	Aggregate	Aggregate	Diesel	141.2612215	6301.483148	6301.483148	0	724.6700661	0.806625019	0

San Mateo (SF)	2025	T6 Public Class 7	Aggregate	Aggregate	Electricity	1.413246058	91.30419203	0	91.30419203	7.249952279	0	107.8211712
San Mateo (SF)	2025	T6 Public Class 7	Aggregate	Aggregate	Natural Gas	7.882203597	404.9312002	404.9312002	0	40.43570445	0.060057783	0
San Mateo (SF)	2025	T6 Utility Class 5	Aggregate	Aggregate	Diesel	8.294605107	335.5663812	335.5663812	0	106.1709454	0.037767494	0
San Mateo (SF)	2025	T6 Utility Class 5	Aggregate	Aggregate	Electricity	0.14480872	6.292940703	0	6.292940703	1.85355161	0	7.048492483
San Mateo (SF)	2025	T6 Utility Class 5	Aggregate	Aggregate	Natural Gas	0.103816712	4.031474773	4.031474773	0	1.328853918	0.000547552	0
San Mateo (SF)	2025	T6 Utility Class 6	Aggregate	Aggregate	Diesel	1.573247411	63.36584323	63.36584323	0	20.13756686	0.007107166	0
San Mateo (SF)	2025	T6 Utility Class 6	Aggregate	Aggregate	Electricity	0.027559276	1.197667532	0	1.197667532	0.352758737	0	1.341463553
San Mateo (SF)	2025	T6 Utility Class 6	Aggregate	Aggregate	Natural Gas	0.020599173	0.802848017	0.802848017	0	0.263669418	0.000108437	0
San Mateo (SF)	2025	T6 Utility Class 7	Aggregate	Aggregate	Diesel	1.774535015	87.63463766	87.63463766	0	22.7140482	0.009762134	0
San Mateo (SF)	2025	T6 Utility Class 7	Aggregate	Aggregate	Electricity	0.031169532	1.921961607	0	1.921961607	0.398970008	0	2.152718829
San Mateo (SF)	2025	T6 Utility Class 7	Aggregate	Aggregate	Natural Gas	0.032295556	1.389719043	1.389719043	0	0.413383118	0.000187167	0
San Mateo (SF)	2025	T6TS	Aggregate	Aggregate	Gasoline	825.6426507	47612.5764	47612.5764	0	16519.45816	9.632361865	0
San Mateo (SF)	2025	T6TS	Aggregate	Aggregate	Electricity	11.09506799	961.042555	0	961.042555	221.9901204	0	1120.998493
San Mateo (SF)	2025	T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	85.72371699	17218.77993	17218.77993	0	1969.931016	2.780455183	0
San Mateo (SF)	2025	T7 CAIRP Class 8	Aggregate	Aggregate	Electricity	1.029342449	200.556448	0	200.556448	23.65428947	0	366.2012482
San Mateo (SF)	2025	T7 CAIRP Class 8	Aggregate	Aggregate	Natural Gas	0.20030591	40.19751559	40.19751559	0	4.603029823	0.007104561	0
San Mateo (SF)	2025	T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	77.40668477	20729.86847	20729.86847	0	1778.805616	3.253888898	0
San Mateo (SF)	2025	T7 NOOS Class 8	Aggregate	Aggregate	Diesel	32.77989272	7532.550421	7532.550421	0	753.2819347	1.211260748	0
San Mateo (SF)	2025	T7 Other Port Class 8	Aggregate	Aggregate	Diesel	9.056444488	1681.425025	1681.425025	0	148.1634318	0.281179738	0
San Mateo (SF)	2025	T7 Other Port Class 8	Aggregate	Aggregate	Electricity	0.037139323	8.837079872	0	8.837079872	0.607599318	0	16.08319584
San Mateo (SF)	2025	T7 POAK Class 8	Aggregate	Aggregate	Diesel	57.3446348	5708.565925	5708.565925	0	938.1582253	0.97395879	0
San Mateo (SF)	2025	T7 POAK Class 8	Aggregate	Aggregate	Electricity	0.303490253	26.45065172	0	26.45065172	4.965100533	0	48.13931954
San Mateo (SF)	2025	T7 POAK Class 8	Aggregate	Aggregate	Natural Gas	0.033968515	3.313895527	3.313895527	0	0.555724912	0.000578103	0
San Mateo (SF)	2025	T7 Public Class 8	Aggregate	Aggregate	Diesel	333.0153862	14449.86118	14449.86118	0	1708.368931	2.736873884	0
San Mateo (SF)	2025	T7 Public Class 8	Aggregate	Aggregate	Electricity	2.412920398	153.4659998	0	153.4659998	12.37828164	0	301.189695
San Mateo (SF)	2025	T7 Public Class 8	Aggregate	Aggregate	Natural Gas	1.687422911	81.28204728	81.28204728	0	8.656479534	0.017532655	0
San Mateo (SF)	2025	T7 Single Concrete/Transit Mix Cl	Aggregate	Aggregate	Diesel	48.78002678	3418.143462	3418.143462	0	459.5078523	0.570560628	0
San Mateo (SF)	2025	T7 Single Concrete/Transit Mix Cl	Aggregate	Aggregate	Electricity	0.859347171	68.12031453	0	68.12031453	8.095050351	0	124.1938357
San Mateo (SF)	2025	T7 Single Concrete/Transit Mix Cl	Aggregate	Aggregate	Natural Gas	2.91250752	207.748401	207.748401	0	27.43582084	0.03514837	0
San Mateo (SF)	2025	T7 Single Dump Class 8	Aggregate	Aggregate	Diesel	179.2047138	10422.83531	10422.83531	0	1688.108404	1.796572706	0
San Mateo (SF)	2025	T7 Single Dump Class 8	Aggregate	Aggregate	Electricity	1.288763108	101.2247659	0	101.2247659	12.14014847	0	184.5483544
San Mateo (SF)	2025	T7 Single Dump Class 8	Aggregate	Aggregate	Natural Gas	9.499426473	578.0396062	578.0396062	0	89.48459738	0.105677063	0
San Mateo (SF)	2025	T7 Single Other Class 8	Aggregate	Aggregate	Diesel	185.6544659	10944.80091	10944.80091	0	1748.865069	1.872559931	0
San Mateo (SF)	2025	T7 Single Other Class 8	Aggregate	Aggregate	Electricity	0.851976526	68.13374461	0	68.13374461	8.025618872	0	124.2183209
San Mateo (SF)	2025	T7 Single Other Class 8	Aggregate	Aggregate	Natural Gas	12.00587264	746.5082107	746.5082107	0	113.0953203	0.13393807	0
San Mateo (SF)	2025	T7 SWCV Class 8	Aggregate	Aggregate	Diesel	121.065957	7853.609244	7853.609244	0	556.9034021	3.187332907	0
San Mateo (SF)	2025	T7 SWCV Class 8	Aggregate	Aggregate	Electricity	2.081840498	132.5524998	0	132.5524998	9.576466291	0	246.6206469
San Mateo (SF)	2025	T7 SWCV Class 8	Aggregate	Aggregate	Natural Gas	129.3531447	8372.301938	8372.301938	0	595.0244658	1.789563688	0
San Mateo (SF)	2025	T7 Tractor Class 8	Aggregate	Aggregate	Diesel	192.2387457	14103.55303	14103.55303	0	2793.228975	2.292304276	0
San Mateo (SF)	2025	T7 Tractor Class 8	Aggregate	Aggregate	Electricity	1.114566843	89.5405085	0	89.5405085	16.19465623	0	163.0272813
San Mateo (SF)	2025	T7 Tractor Class 8	Aggregate	Aggregate	Natural Gas	24.86229998	1813.264056	1813.264056	0	361.2492188	0.324571533	0
San Mateo (SF)	2025	T7 Utility Class 8	Aggregate	Aggregate	Diesel	6.139513724	270.9104505	270.9104505	0	78.58577567	0.046469367	0
San Mateo (SF)	2025	T7 Utility Class 8	Aggregate	Aggregate	Electricity	0.034492744	2.209200345	0	2.209200345	0.441507118	0	4.159478617
San Mateo (SF)	2025	T7IS	Aggregate	Aggregate	Gasoline	4.335983662	539.4433859	539.4433859	0	86.75436111	0.139960652	0
San Mateo (SF)	2025	T7IS	Aggregate	Aggregate	Electricity	0.009958784	2.756575802	0	2.756575802	0.199255342	0	5.538881144
San Mateo (SF)	2025	UBUS	Aggregate	Aggregate	Gasoline	61.62556829	4190.343901	4190.343901	0	246.5022732	0.485935879	0
San Mateo (SF)	2025	UBUS	Aggregate	Aggregate	Diesel	278.2185493	21526.82546	21526.82546	0	1112.874197	2.593709261	0
San Mateo (SF)	2025	UBUS	Aggregate	Aggregate	Electricity	37.31747983	3870.538449	0	3870.538449	149.2699193	0	6747.293388
San Mateo (SF)	2025	UBUS	Aggregate	Aggregate	Natural Gas	65.51540147	4534.391341	4534.391341	0	262.0616059	0.729524748	0

EMFAC Fuel Usage: Year 2026

Vehicle type	GAS			DSL			NG			ELEC		
	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	kWh/day	Miles/kWh
All other buses	0	0	0.00	66,094	7,480	8.84	669	85	7.88	0	0	0.00
LDA	7,101,587	227,253	31.25	13,511	304	44.50	0	0	0.00	903,178	335,965	2.69
LDT1	718,963	26,923	26.70	66	3	24.41	0	0	0.00	7,361	2,657	2.77
LDT2	5,242,840	203,064	25.82	19,853	584	34.02	0	0	0.00	103,742	36,275	2.86
LHD1	409,380	39,350	10.40	207,453	12,695	16.34	0	0	0.00	15,692	10,277	1.53
LHD2	45,322	4,908	9.23	92,139	6,644	13.87	0	0	0.00	3,811	2,458	1.55
MCY	80,439	1,888	42.61	0	0	0.00	0	0	0.00	0	0	0.00
MDV	3,017,062	140,823	21.42	38,163	1,473	25.91	0	0	0.00	89,758	32,392	2.77
MH	8,289	1,875	4.42	4,016	430	9.35	0	0	0.00	0	0	0.00
Motor coach	0	0	0.00	9,518	1,697	5.61	0	0	0.00	0	0	0.00
OBUS	13,078	2,593	5.04	0	0	0.00	0	0	0.00	297	329	0.90
PTO	0	0	0.00	5,227	1,052	4.97	0	0	0.00	85	177	0.48
SBUS	3,792	366	10.37	3,737	454	8.23	168	30	5.63	128	135	0.95
T6	48,169	9,639	5.00	177,809	20,880	8.52	2,180	308	7.07	4,277	4,740	0.90
T7	504	130	3.88	114,364	20,652	5.54	12,388	2,492	4.97	1,483	2,748	0.54
UBUS	4,203	467	8.99	21,576	2,599	8.30	4,554	733	6.22	3,890	6,781	0.57
Total	**16,693,628**	**659,278**	**25.32**	**773,528**	**76,947**	**10.05**	**19,960**	**3,648**	**5.47**	**1,133,701**	**434,934**	**2.61**

Source: EMFAC2021 (v1.0.1) Emissions Inventory
Region Type: Sub-Area
Region: San Mateo (SF)
Calendar Year: 2026
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Fuel Consumption	Energy Consumption
San Mateo (SF)	2026	All Other Buses	Aggregate	Aggregate	Diesel	1071.749771	66093.76686	66093.76686	0	9538.572966	7.480098176	0
San Mateo (SF)	2026	All Other Buses	Aggregate	Aggregate	Natural Gas	10.41210765	669.4540024	669.4540024	0	92.66775809	0.084940221	0
San Mateo (SF)	2026	LDA	Aggregate	Aggregate	Gasoline	238617.8173	6969046.776	6969046.776	0	1119592.313	222.8390416	0
San Mateo (SF)	2026	LDA	Aggregate	Aggregate	Diesel	645.0663885	13511.2661	13511.2661	0	2704.796627	0.303599498	0
San Mateo (SF)	2026	LDA	Aggregate	Aggregate	Electricity	20627.64382	751657.3862	0	751657.3862	101605.9587	0	290201.7887
San Mateo (SF)	2026	LDA	Aggregate	Aggregate	Plug-in Hybrid	8434.47141	284060.1749	132539.8629	151520.312	34876.53928	4.414336134	45763.65027
San Mateo (SF)	2026	LDT1	Aggregate	Aggregate	Gasoline	25945.78851	717326.6157	717326.6157	0	118989.9407	26.86797204	0
San Mateo (SF)	2026	LDT1	Aggregate	Aggregate	Diesel	5.731398957	66.0990562	66.0990562	0	15.81841118	0.002707983	0
San Mateo (SF)	2026	LDT1	Aggregate	Aggregate	Electricity	141.9821956	5160.147049	0	5160.147049	697.0715685	0	1992.242651
San Mateo (SF)	2026	LDT1	Aggregate	Aggregate	Plug-in Hybrid	104.7442515	3837.145622	1635.986635	2201.158987	433.1174798	0.054800239	664.8156192
San Mateo (SF)	2026	LDT2	Aggregate	Aggregate	Gasoline	169697.6677	5206694.494	5206694.494	0	813724.1914	201.8446961	0
San Mateo (SF)	2026	LDT2	Aggregate	Aggregate	Diesel	655.1695921	19853.41592	19853.41592	0	3139.477845	0.583583851	0
San Mateo (SF)	2026	LDT2	Aggregate	Aggregate	Electricity	2139.96177	58794.01688	0	58794.01688	10836.17661	0	22699.34305
San Mateo (SF)	2026	LDT2	Aggregate	Aggregate	Plug-in Hybrid	2330.736591	81093.04598	36145.08737	44947.95861	9637.595803	1.218835772	13575.62316
San Mateo (SF)	2026	LHD1	Aggregate	Aggregate	Gasoline	12091.27147	409379.6777	409379.6777	0	180141.9289	39.34955303	0
San Mateo (SF)	2026	LHD1	Aggregate	Aggregate	Diesel	5774.561113	207453.2548	207453.2548	0	72636.7144	12.69540425	0
San Mateo (SF)	2026	LHD1	Aggregate	Aggregate	Electricity	302.9677189	15691.65662	0	15691.65662	4239.881138	0	10276.64216
San Mateo (SF)	2026	LHD2	Aggregate	Aggregate	Gasoline	1390.2193	45322.22593	45322.22593	0	20712.19614	4.908236264	0
San Mateo (SF)	2026	LHD2	Aggregate	Aggregate	Diesel	2589.799396	92139.39455	92139.39455	0	32576.41843	6.64361021	0
San Mateo (SF)	2026	LHD2	Aggregate	Aggregate	Electricity	77.23783972	3810.550106	0	3810.550106	1024.58977	0	2458.043967
San Mateo (SF)	2026	MCY	Aggregate	Aggregate	Gasoline	14692.85649	80438.95782	80438.95782	0	29385.71298	1.887773457	0
San Mateo (SF)	2026	MDV	Aggregate	Aggregate	Gasoline	95415.04429	2995461.693	2995461.693	0	456021.9428	140.0847299	0
San Mateo (SF)	2026	MDV	Aggregate	Aggregate	Diesel	1264.363537	38163.08578	38163.08578	0	5993.721667	1.473083462	0
San Mateo (SF)	2026	MDV	Aggregate	Aggregate	Electricity	2288.176316	62843.9263	0	62843.9263	11585.674	0	24262.94234
San Mateo (SF)	2026	MDV	Aggregate	Aggregate	Plug-in Hybrid	1352.288016	48514.48196	21600.3008	26914.18116	5591.710946	0.737854959	8128.884881
San Mateo (SF)	2026	MH	Aggregate	Aggregate	Gasoline	860.1629476	8288.684727	8288.684727	0	86.05070128	1.875026336	0
San Mateo (SF)	2026	MH	Aggregate	Aggregate	Diesel	411.7686174	4016.353273	4016.353273	0	41.17686174	0.429673284	0
San Mateo (SF)	2026	Motor Coach	Aggregate	Aggregate	Diesel	73.74211251	9517.703387	9517.703387	0	1694.593746	1.697441425	0
San Mateo (SF)	2026	OBUS	Aggregate	Aggregate	Gasoline	250.2121671	13078.35836	13078.35836	0	5006.245039	2.592989607	0
San Mateo (SF)	2026	OBUS	Aggregate	Aggregate	Electricity	3.593809842	297.3898089	0	297.3898089	71.90494731	0	329.4624054
San Mateo (SF)	2026	PTO	Aggregate	Aggregate	Diesel	0	5227.241199	5227.241199	0	0	1.051849846	0
San Mateo (SF)	2026	PTO	Aggregate	Aggregate	Electricity	0	85.49217451	0	85.49217451	0	0	177.098644
San Mateo (SF)	2026	SBUS	Aggregate	Aggregate	Gasoline	75.66976685	3792.282786	3792.282786	0	302.6790674	0.365861305	0
San Mateo (SF)	2026	SBUS	Aggregate	Aggregate	Diesel	168.4763887	3737.054112	3737.054112	0	2439.538109	0.453928323	0
San Mateo (SF)	2026	SBUS	Aggregate	Aggregate	Electricity	3.281397015	127.7056975	0	127.7056975	29.50963668	0	134.532281
San Mateo (SF)	2026	SBUS	Aggregate	Aggregate	Natural Gas	6.807776576	168.2676229	168.2676229	0	98.57660481	0.029896115	0
San Mateo (SF)	2026	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	2.011020475	130.2798436	130.2798436	0	46.21325053	0.014374583	0
San Mateo (SF)	2026	T6 CAIRP Class 4	Aggregate	Aggregate	Electricity	0.043084651	3.38947614	0	3.38947614	0.990085284	0	3.681932085
San Mateo (SF)	2026	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	2.648480262	179.1652628	179.1652628	0	60.86207643	0.01979495	0
San Mateo (SF)	2026	T6 CAIRP Class 5	Aggregate	Aggregate	Electricity	0.050195469	4.205006919	0	4.205006919	1.153491886	0	4.567829734
San Mateo (SF)	2026	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	9.18008315	463.5833754	463.5833754	0	210.9583108	0.050414693	0
San Mateo (SF)	2026	T6 CAIRP Class 6	Aggregate	Aggregate	Electricity	0.274934766	15.5683856	0	15.5683856	6.31800092	0	16.91168077
San Mateo (SF)	2026	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	14.9210932	2953.401481	2953.401481	0	342.8867216	0.296980114	0
San Mateo (SF)	2026	T6 CAIRP Class 7	Aggregate	Aggregate	Electricity	0.246392079	52.08055349	0	52.08055349	5.662089968	0	56.57424718
San Mateo (SF)	2026	T6 Instate Delivery Class 4	Aggregate	Aggregate	Diesel	370.8391889	12376.47843	12376.47843	0	5291.875226	1.493477193	0
San Mateo (SF)	2026	T6 Instate Delivery Class 4	Aggregate	Aggregate	Electricity	5.46381972	221.323229	0	221.323229	77.96870741	0	236.4349753
San Mateo (SF)	2026	T6 Instate Delivery Class 4	Aggregate	Aggregate	Natural Gas	1.928242351	73.16250228	73.16250228	0	27.51601836	0.010721714	0
San Mateo (SF)	2026	T6 Instate Delivery Class 5	Aggregate	Aggregate	Diesel	302.1795912	10128.76206	10128.76206	0	4312.102766	1.222170831	0
San Mateo (SF)	2026	T6 Instate Delivery Class 5	Aggregate	Aggregate	Electricity	3.744996512	151.4496275	0	151.4496275	53.44110023	0	161.7904685
San Mateo (SF)	2026	T6 Instate Delivery Class 5	Aggregate	Aggregate	Natural Gas	1.296688965	48.62161573	48.62161573	0	18.50375153	0.007078378	0
San Mateo (SF)	2026	T6 Instate Delivery Class 6	Aggregate	Aggregate	Diesel	629.0480674	20993.86157	20993.86157	0	8976.515922	2.526218511	0
San Mateo (SF)	2026	T6 Instate Delivery Class 6	Aggregate	Aggregate	Electricity	8.349957283	336.3847793	0	336.3847793	119.1538904	0	359.3528222
San Mateo (SF)	2026	T6 Instate Delivery Class 6	Aggregate	Aggregate	Natural Gas	2.754995018	104.482506	104.482506	0	39.3137789	0.015235619	0
San Mateo (SF)	2026	T6 Instate Delivery Class 7	Aggregate	Aggregate	Diesel	154.8880263	8328.724988	8328.724988	0	2210.252136	0.980801849	0
San Mateo (SF)	2026	T6 Instate Delivery Class 7	Aggregate	Aggregate	Electricity	0.830068523	41.26292833	0	41.26292833	11.84507783	0	44.08032307
San Mateo (SF)	2026	T6 Instate Delivery Class 7	Aggregate	Aggregate	Natural Gas	3.706813597	205.2721807	205.2721807	0	52.89623004	0.030009414	0
San Mateo (SF)	2026	T6 Instate Other Class 4	Aggregate	Aggregate	Diesel	417.4456065	16967.45319	16967.45319	0	4825.671211	1.966868056	0
San Mateo (SF)	2026	T6 Instate Other Class 4	Aggregate	Aggregate	Electricity	6.493712786	307.0555645	0	307.0555645	75.06731981	0	325.5037965
San Mateo (SF)	2026	T6 Instate Other Class 4	Aggregate	Aggregate	Natural Gas	1.937705754	90.36567036	90.36567036	0	22.39987852	0.011696556	0
San Mateo (SF)	2026	T6 Instate Other Class 5	Aggregate	Aggregate	Diesel	1035.346598	43850.40591	43850.40591	0	11968.60668	5.122478121	0
San Mateo (SF)	2026	T6 Instate Other Class 5	Aggregate	Aggregate	Electricity	13.42984281	635.6960635	0	635.6960635	155.2489829	0	673.8893737
San Mateo (SF)	2026	T6 Instate Other Class 5	Aggregate	Aggregate	Natural Gas	4.010519879	183.8212505	183.8212505	0	46.3616098	0.023466087	0
San Mateo (SF)	2026	T6 Instate Other Class 6	Aggregate	Aggregate	Diesel	661.4795837	27638.21552	27638.21552	0	7646.703987	3.211166377	0
San Mateo (SF)	2026	T6 Instate Other Class 6	Aggregate	Aggregate	Electricity	9.510222812	449.8666934	0	449.8666934	109.9381757	0	476.8951731
San Mateo (SF)	2026	T6 Instate Other Class 6	Aggregate	Aggregate	Natural Gas	2.623370121	120.0369619	120.0369619	0	30.32615859	0.015344147	0
San Mateo (SF)	2026	T6 Instate Other Class 7	Aggregate	Aggregate	Diesel	294.7193245	12981.39663	12981.39663	0	3406.955391	1.479201881	0
San Mateo (SF)	2026	T6 Instate Other Class 7	Aggregate	Aggregate	Electricity	2.695047422	186.6558629	0	186.6558629	31.1547482	0	197.87035
San Mateo (SF)	2026	T6 Instate Other Class 7	Aggregate	Aggregate	Natural Gas	6.707845674	316.0946653	316.0946653	0	77.54269599	0.040893885	0
San Mateo (SF)	2026	T6 Instate Tractor Class 6	Aggregate	Aggregate	Diesel	10.34842857	539.1088844	539.1088844	0	119.6278343	0.063408357	0
San Mateo (SF)	2026	T6 Instate Tractor Class 6	Aggregate	Aggregate	Electricity	0.151069801	10.13693009	0	10.13693009	1.746366903	0	10.74596787
San Mateo (SF)	2026	T6 Instate Tractor Class 6	Aggregate	Aggregate	Natural Gas	0.036372647	2.21694884	2.21694884	0	0.420467795	0.00027122	0
San Mateo (SF)	2026	T6 Instate Tractor Class 7	Aggregate	Aggregate	Diesel	68.81127668	3824.756657	3824.756657	0	795.4583584	0.411837437	0
San Mateo (SF)	2026	T6 Instate Tractor Class 7	Aggregate	Aggregate	Electricity	0.370940682	27.3040004	0	27.3040004	4.288074289	0	28.94445442
San Mateo (SF)	2026	T6 Instate Tractor Class 7	Aggregate	Aggregate	Natural Gas	1.179337874	70.99152802	70.99152802	0	13.63314583	0.008976545	0
San Mateo (SF)	2026	T6 OOS Class 4	Aggregate	Aggregate	Diesel	1.1599382	74.75599515	74.75599515	0	26.65537983	0.008096577	0
San Mateo (SF)	2026	T6 OOS Class 5	Aggregate	Aggregate	Diesel	1.519730216	102.5517824	102.5517824	0	34.92340037	0.011140431	0
San Mateo (SF)	2026	T6 OOS Class 6	Aggregate	Aggregate	Diesel	5.319887439	267.9707416	267.9707416	0	122.2510133	0.028471098	0
San Mateo (SF)	2026	T6 OOS Class 7	Aggregate	Aggregate	Diesel	7.837655497	1948.48051	1948.48051	0	180.1093233	0.193924008	0
San Mateo (SF)	2026	T6 Public Class 4	Aggregate	Aggregate	Diesel	33.27660166	1151.220717	1151.220717	0	170.7089665	0.149097428	0
San Mateo (SF)	2026	T6 Public Class 4	Aggregate	Aggregate	Electricity	0.540991003	23.30899951	0	23.30899951	2.775283846	0	27.52561051
San Mateo (SF)	2026	T6 Public Class 4	Aggregate	Aggregate	Natural Gas	1.42700592	59.13081006	59.13081006	0	7.320540372	0.0089052	0
San Mateo (SF)	2026	T6 Public Class 5	Aggregate	Aggregate	Diesel	105.8856215	3849.682575	3849.682575	0	543.1932385	0.4876369	0
San Mateo (SF)	2026	T6 Public Class 5	Aggregate	Aggregate	Electricity	1.472116498	63.19865696	0	63.19865696	7.551957633	0	74.63132922
San Mateo (SF)	2026	T6 Public Class 5	Aggregate	Aggregate	Natural Gas	8.832344682	354.2545956	354.2545956	0	45.30992822	0.054020563	0
San Mateo (SF)	2026	T6 Public Class 6	Aggregate	Aggregate	Diesel	65.28354916	2307.945714	2307.945714	0	334.9046072	0.295233278	0
San Mateo (SF)	2026	T6 Public Class 6	Aggregate	Aggregate	Electricity	1.083631433	44.70632547	0	44.70632547	5.559029252	0	52.79372466
San Mateo (SF)	2026	T6 Public Class 6	Aggregate	Aggregate	Natural Gas	3.097864907	127.1429346	127.1429346	0	15.89204697	0.01907351	0
San Mateo (SF)	2026	T6 Public Class 7	Aggregate	Aggregate	Diesel	139.2877578	6267.695184	6267.695184	0	714.5461975	0.793034862	0
San Mateo (SF)	2026	T6 Public Class 7	Aggregate	Aggregate	Electricity	2.303746087	145.7726053	0	145.7726053	11.81821743	0	172.1429508
San Mateo (SF)	2026	T6 Public Class 7	Aggregate	Aggregate	Natural Gas	8.371045233	418.4675512	418.4675512	0	42.94346204	0.062006642	0
San Mateo (SF)	2026	T6 Utility Class 5	Aggregate	Aggregate	Diesel	8.268632299	333.4747904	333.4747904	0	105.8384934	0.037339441	0
San Mateo (SF)	2026	T6 Utility Class 5	Aggregate	Aggregate	Electricity	0.239440879	10.38911105	0	10.38911105	3.064843254	0	11.63646292
San Mateo (SF)	2026	T6 Utility Class 5	Aggregate	Aggregate	Natural Gas	0.097719569	3.76796118	3.76796118	0	1.250810489	0.000508475	0
San Mateo (SF)	2026	T6 Utility Class 6	Aggregate	Aggregate	Diesel	1.567145733	62.96135531	62.96135531	0	20.05946538	0.007026551	0
San Mateo (SF)	2026	T6 Utility Class 6	Aggregate	Aggregate	Electricity	0.045737463	1.984568662	0	1.984568662	0.585439529	0	2.222842699

San Mateo (SF)	2026 T6 Utility Class 6	Aggregate	Aggregate	Natural Gas	0.019376044	0.749461039	0.749461039	0	0.248013361	0.000100669	0
San Mateo (SF)	2026 T6 Utility Class 7	Aggregate	Aggregate	Diesel	1.757418294	86.97159455	86.97159455	0	22.49495416	0.009631623	0
San Mateo (SF)	2026 T6 Utility Class 7	Aggregate	Aggregate	Electricity	0.052218124	3.168792328	0	3.168792328	0.668391991	0	3.54924827
San Mateo (SF)	2026 T6 Utility Class 7	Aggregate	Aggregate	Natural Gas	0.029331009	1.263716209	1.263716209	0	0.375436909	0.000169213	0
San Mateo (SF)	2026 T6TS	Aggregate	Aggregate	Gasoline	848.5573376	48169.43284	48169.43284	0	16977.93521	9.63864115	0
San Mateo (SF)	2026 T6TS	Aggregate	Aggregate	Electricity	18.61977303	1541.604323	0	1541.604323	372.5444189	0	1798.18897
San Mateo (SF)	2026 T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	86.27706712	17265.48651	17265.48651	0	1982.647002	2.747977594	0
San Mateo (SF)	2026 T7 CAIRP Class 8	Aggregate	Aggregate	Electricity	1.767715377	350.8363846	0	350.8363846	40.62209936	0	640.6013032
San Mateo (SF)	2026 T7 CAIRP Class 8	Aggregate	Aggregate	Natural Gas	0.199190547	39.49493033	39.49493033	0	4.577398768	0.006937345	0
San Mateo (SF)	2026 T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	78.26779524	20962.91822	20962.91822	0	1798.593935	3.213761949	0
San Mateo (SF)	2026 T7 NOOS Class 8	Aggregate	Aggregate	Diesel	33.34909656	7617.233016	7617.233016	0	766.3622389	1.202956197	0
San Mateo (SF)	2026 T7 Other Port Class 8	Aggregate	Aggregate	Diesel	9.099874065	1734.628234	1734.628234	0	148.8739397	0.287581343	0
San Mateo (SF)	2026 T7 Other Port Class 8	Aggregate	Aggregate	Electricity	0.070966094	17.92281017	0	17.92281017	1.16100529	0	32.61892731
San Mateo (SF)	2026 T7 POAK Class 8	Aggregate	Aggregate	Diesel	57.30431211	5773.348569	5773.348569	0	937.4985461	0.979143801	0
San Mateo (SF)	2026 T7 POAK Class 8	Aggregate	Aggregate	Electricity	0.55018904	49.66634398	0	49.66634398	9.001092688	0	90.39111882
San Mateo (SF)	2026 T7 POAK Class 8	Aggregate	Aggregate	Natural Gas	0.041245487	4.094230568	4.094230568	0	0.67477616	0.000711325	0
San Mateo (SF)	2026 T7 Public Class 8	Aggregate	Aggregate	Diesel	333.4603247	14426.54863	14426.54863	0	1710.651465	2.709070946	0
San Mateo (SF)	2026 T7 Public Class 8	Aggregate	Aggregate	Electricity	3.977765118	248.0040621	0	248.0040621	20.40593506	0	486.7284476
San Mateo (SF)	2026 T7 Public Class 8	Aggregate	Aggregate	Natural Gas	1.768966116	83.97256194	83.97256194	0	9.074796174	0.018008876	0
San Mateo (SF)	2026 T7 Single Concrete/Transit Mix Cl	Aggregate	Aggregate	Diesel	48.90073603	3389.230356	3389.230356	0	460.6449334	0.559943208	0
San Mateo (SF)	2026 T7 Single Concrete/Transit Mix Cl	Aggregate	Aggregate	Electricity	1.452748875	114.7125636	0	114.7125636	13.6848944	0	209.1386891
San Mateo (SF)	2026 T7 Single Concrete/Transit Mix Cl	Aggregate	Aggregate	Natural Gas	2.941662472	207.1036833	207.1036833	0	27.71046048	0.034771567	0
San Mateo (SF)	2026 T7 Single Dump Class 8	Aggregate	Aggregate	Diesel	182.8200048	10376.37089	10376.37089	0	1722.164445	1.779345529	0
San Mateo (SF)	2026 T7 Single Dump Class 8	Aggregate	Aggregate	Electricity	2.431669144	194.9285346	0	194.9285346	22.90632333	0	355.3847715
San Mateo (SF)	2026 T7 Single Dump Class 8	Aggregate	Aggregate	Natural Gas	9.802292423	581.9960532	581.9960532	0	92.33759462	0.105608392	0
San Mateo (SF)	2026 T7 Single Other Class 8	Aggregate	Aggregate	Diesel	190.282796	11017.28298	11017.28298	0	1792.463939	1.879234996	0
San Mateo (SF)	2026 T7 Single Other Class 8	Aggregate	Aggregate	Electricity	1.493416002	120.9145811	0	120.9145811	14.06797873	0	220.4459231
San Mateo (SF)	2026 T7 Single Other Class 8	Aggregate	Aggregate	Natural Gas	12.37596843	753.447565	753.447565	0	116.5816226	0.134791932	0
San Mateo (SF)	2026 T7 SWCV Class 8	Aggregate	Aggregate	Diesel	112.0764294	7269.564996	7269.564996	0	515.551575	2.945920247	0
San Mateo (SF)	2026 T7 SWCV Class 8	Aggregate	Aggregate	Electricity	3.432519372	219.5032302	0	219.5032302	15.78958911	0	408.3968898
San Mateo (SF)	2026 T7 SWCV Class 8	Aggregate	Aggregate	Natural Gas	138.2319417	8951.736949	8951.736949	0	635.8669318	1.874496146	0
San Mateo (SF)	2026 T7 Tractor Class 8	Aggregate	Aggregate	Diesel	201.051069	14261.31972	14261.31972	0	2921.272033	2.301215664	0
San Mateo (SF)	2026 T7 Tractor Class 8	Aggregate	Aggregate	Electricity	1.985128455	158.3933994	0	158.3933994	28.84391645	0	288.3884146
San Mateo (SF)	2026 T7 Tractor Class 8	Aggregate	Aggregate	Natural Gas	25.24642713	1766.591478	1766.591478	0	366.8305862	0.316853008	0
San Mateo (SF)	2026 T7 Utility Class 8	Aggregate	Aggregate	Diesel	6.231400501	270.5658818	270.5658818	0	79.76192641	0.046179437	0
San Mateo (SF)	2026 T7 Utility Class 8	Aggregate	Aggregate	Electricity	0.062400496	3.928536224	0	3.928536224	0.798726352	0	7.396641259
San Mateo (SF)	2026 T7IS	Aggregate	Aggregate	Gasoline	4.283897728	504.3899135	504.3899135	0	85.71222575	0.129891377	0
San Mateo (SF)	2026 T7IS	Aggregate	Aggregate	Electricity	0.016402331	4.276761744	0	4.276761744	0.328177843	0	8.593442259
San Mateo (SF)	2026 UBUS	Aggregate	Aggregate	Gasoline	61.80696036	4202.677988	4202.677988	0	247.2278414	0.46740945	0
San Mateo (SF)	2026 UBUS	Aggregate	Aggregate	Diesel	278.8478181	21575.8744	21575.8744	0	1115.391272	2.599364256	0
San Mateo (SF)	2026 UBUS	Aggregate	Aggregate	Electricity	37.55555692	3889.773605	0	3889.773605	150.2222277	0	6780.824961
San Mateo (SF)	2026 UBUS	Aggregate	Aggregate	Natural Gas	65.76966322	4554.210008	4554.210008	0	263.0786529	0.732765428	0

APPENDIX D

HEALTH RISK ASSESSMENT

1. Construction Health Risk Assessment

1.1 INTRODUCTION

Veev Group (the project applicant) proposes the development of 87 townhomes (proposed project) in the City of San Carlos, San Mateo County, California. The approximately 11.95-acre proposed project site is currently undeveloped except for three single-family homes. The project site is bounded by Alameda de las Pulgas to the east, single-family residences to the south and west, and an approximately 12-acre property (aka "Vista del Grande Property") to the north. The following provides the background methodology used for the construction health risk assessment for the proposed project.

The latest version of the Bay Area Air Quality Management District (BAAQMD) CEQA Air Quality Guidelines requires projects to evaluate the impacts of construction activities on sensitive receptors (BAAQMD, 2017). Project construction is anticipated to take place starting at the beginning of June 2023 and be completed by February 2026 (approximately 701 workdays or 2.7 years). The nearest sensitive receptors to the project site include the single-family residences to the south. Additional sensitive receptors within 1,000 feet of the site are residences in the surrounding area and students at St. Charles Private K-8 School, approximately 200 feet to the east. The BAAQMD has developed *Screening Tables for Air Toxics Evaluation During Construction* (2017) that evaluate construction-related health risks associated with residential, commercial, and industrial projects. According to the screening tables, the receptors are closer than the distance of 200 meters (656 feet) that would screen out potential health risks and, therefore, could be potentially impacted from the proposed construction activities. As a result, a site-specific construction health risk assessment (HRA) has been prepared for the proposed project. This HRA considers the health impact to off-site sensitive receptors (i.e., the nearby residences and students at the school) from construction emissions at the project site, including diesel equipment exhaust (diesel particulate matter or DPM) and particulate matter less than 2.5 microns ($PM_{2.5}$).

1.2 METHODOLOGY AND SIGNIFICANCE THRESHOLDS

For this HRA, the BAAQMD significance thresholds were deemed to be appropriate and the thresholds that were used for this project are shown below:

- Excess cancer risk of more than 10 in a million
- Non-cancer hazard index (chronic or acute) greater than 1.0
- Incremental increase in average annual $PM_{2.5}$ concentration of greater than 0.3 $\mu g/m^3$

The methodology used in this HRA is consistent with the following BAAQMD and the Office of Environmental Health Hazard Assessment (OEHHA) guidance documents:

- BAAQMD, 2017. *California Environmental Quality Act (CEQA) Air Quality Guidelines*. May 2017.
- BAAQMD, 2016. *Planning Healthy Places*. May 2016.
- BAAQMD, 2010. *Screening Tables for Air Toxics Evaluation During Construction*. May 2010.
- BAAQMD, 2012. *Recommended Methods for Screening and Modeling Local Risks and Hazards*. Version 3.0. May 2012.
- OEHHA. 2015. *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments*. February 2015.

Potential exposures to DPM and $PM_{2.5}$ from proposed project construction were evaluated for off-site sensitive receptors in close proximity to the site. Pollutant concentrations were estimated using an air dispersion model, and excess lifetime cancer risks and chronic non-cancer hazard indexes were calculated. These risks were then compared to the significance thresholds adopted for this HRA.

It should be noted that these health impacts are based on conservative (i.e., health protective) assumptions. The United States Environmental Protection Agency (USEPA, 2005) and OEHHA note that conservative assumptions used in a risk assessment are intended to ensure that the estimated risks do not underestimate the actual risks. Therefore, the estimated risks may not necessarily represent actual risks experienced by populations at or near a site. The use of conservative assumptions tends to produce upper-bound estimates of exposure and thus risk.

For residential-based receptors, the following conservative assumptions were used:

- It was assumed that maximum-exposed off-site residential receptors (both children and adults) stood outdoors and are subject to DPM at their residence for 8 hours per day, and approximately 260 construction days per year. In reality, California residents typically will spend on average 2 hours per day outdoors at their residences (USEPA, 2011), so actual exposures and risks would be significantly lower than those calculated in this HRA.

- The calculated risk for infants from third trimester to age 2 is multiplied by a factor of 10 and for children age 2 to age 16 is multiplied by a factor of 3 to account for early life exposure and uncertainty in child versus adult exposure impacts (OEHHA, 2015).

For K-8 students, the following conservative assumptions were used:

- It was assumed that maximum exposed receptor (K-8 student) stood outside and are subject to DPM for 8 hours per weekday and approximately 180 school days per year (OEHHA, 2004). In reality, students are exposed to outdoor pollutant concentration levels for a portion of the day and are exposed to reduced indoor pollutant concentrations for the remaining hours.

- The calculated risk for children age 2 to age 16 is multiplied by a factor of 3 to account for early life exposure and uncertainty in child versus adult exposure impacts (OEHHA, 2015).

1.3 CONSTRUCTION EMISSIONS

Construction emissions were calculated as average daily emissions in pounds per day, using the proposed construction schedule and the latest version of California Emissions Estimation Model, known as CalEEMod Version 2020.4 (CAPCOA, 2021). DPM emissions were based on the CalEEMod construction runs, using annual exhaust PM_{10} construction emissions presented in pounds (lbs) per day. The $PM_{2.5}$ emissions were taken from the CalEEMod output for exhaust $PM_{2.5}$ also presented in lbs per day.

The project was assumed to take place over approximately 33 months (701 workdays) from June 2023 to February 2026. The average daily emission rates from construction equipment used during the proposed project were determined by dividing the annual average emissions for each construction year by the number of construction days in that particular calendar year (i.e., 2023, 2024, 2025, and 2026). The off-site hauling emission rates were adjusted to evaluate localized emissions from the 0.47-mile haul route within 1,000 feet of the project site. The CalEEMod construction emissions output and emission rate calculations are provided in Appendix A of the HRA.

1.4 DISPERSION MODELING

Air quality modeling was performed using the AERMOD atmospheric dispersion model to assess the impact of emitted compounds on sensitive receptors near the project. The model is a steady state Gaussian plume model and is an approved model by BAAQMD for estimating ground level impacts from point and fugitive sources in simple and complex terrain. The on-site construction emissions for the project were modeled as poly-area sources. The off-site mobile sources were modeled as adjacent line volume sources. The model requires additional input parameters, including chemical emission data and local meteorology. Inputs for the construction emission rates are those described in Section 1.3. Meteorological data obtained from the California Air Resources Control Board (CARB) for the nearest representative meteorological station (San Carlos Airport) with the five latest available years (2009 to 2013) of record were used to represent local weather conditions and prevailing winds (CARB, 2022).

The modeling analysis also considered the spatial distribution and elevation of each emitting source in relation to the sensitive receptors. To accommodate the model's Cartesian grid format, direction-dependent calculations were obtained by identifying the Universal Transverse Mercator (UTM) coordinates for each source location. In addition, digital elevation model (DEM) data for the area were obtained and included in the model runs to account for complex terrain. An emission release height of 4.15 meters was used as representative of the stack exhaust height for off-road construction equipment and diesel truck traffic (CARB, 2000).

To determine contaminant impacts during construction hours, the model's Season-Hour-Day (HRDOW) scalar option was invoked to predict flagpole-level concentrations (1.5 m for ground floor receptors; 6.1 m for 2nd floor receptors, and 9.14 m for 3rd floor receptors) for construction emissions generated between the hours of 7:00 AM and 4:00 PM with a 1-hour lunch break.

A unit emission rate of 1 gram per second was used for all modeling runs. The unit emission rates were proportioned over the poly-area sources for on-site construction emissions and divided between the volume sources for off-site hauling emissions. The maximum modeled concentrations from the output files were then

multiplied by the emission rates calculated in Appendix A to obtain the maximum flagpole-level concentrations at the off-site maximum exposed individual receptor (MEIR). The air dispersion modeling predicted the off-site MEIR is a single-family residence south of the site.[1]

The receptor locations are presented in Figure 1. The air dispersion model output is presented in Appendix B. The DPM and $PM_{2.5}$ concentrations at the MEIR and maximum exposed school receptor are provided in Appendix C.

1.5 RISK CHARACTERIZATION

1.5.1 Carcinogenic Chemical Risk

A threshold of ten in a million ($10x10^{-6}$) has been established as a level posing no significant risk for exposures to carcinogens. Health risks associated with exposure to carcinogenic compounds can be defined in terms of the probability of developing cancer as a result of exposure to a chemical at a given concentration. The cancer risk probability is determined by multiplying the chemical's annual concentration by its cancer potency factor (CPF), a measure of the carcinogenic potential of a chemical when a dose is received through the inhalation pathway. It is an upper-limit estimate of the probability of contracting cancer as a result of continuous exposure to an ambient concentration of one microgram per cubic meter ($\mu g/m^3$) over a lifetime of 70 years.

Recent guidance from OEHHA recommends a refinement to the standard point estimate approach with the use of age-specific breathing rates and age sensitivity factors (ASFs) to assess risk for susceptible subpopulations such as children. For the inhalation pathway, the procedure requires the incorporation of several discrete variates to effectively quantify dose for each age group. Once determined, contaminant dose is multiplied by the cancer potency factor in units of inverse dose expressed in milligrams per kilogram per day $(mg/kg/day)^{-1}$ to derive the cancer risk estimate. Therefore, to accommodate the unique exposures associated with the sensitive receptors, the following dose algorithm was used.

$$\text{Dose}_{\text{AIR,per age group}} = \left(C_{air} \times EF \times \left[\frac{BR}{BW}\right] \times A \times CF\right)$$

Where:

Dose_{AIR}	=	dose by inhalation (mg/kg-day), per age group
C_{air}	=	concentration of contaminant in air ($\mu g/m^3$)
EF	=	exposure frequency (number of days/365 days)
BR/BW	=	daily breathing rate normalized to body weight (L/kg-day)
A	=	inhalation absorption factor (default = 1)
CF	=	conversion factor ($1x10^{-6}$, µg to mg, L to m^3)

The inhalation absorption factor (A) is a unitless factor that is only used if the cancer potency factor included a correction for absorption across the lung. The default value of 1 was used for this assessment. For

[1] The MEIR location is the receptor location associated with the maximum predicted AERMOD concentrations from off-road equipment (i.e., on-site emissions). The calculated on-site emission rates are approximately 3 to 4 orders of magnitude higher than the calculated off-site (hauling) emission rates (see Appendix A). Therefore, the maximum concentrations associated with the on-site emission sources produce the highest overall ground-level MEIR concentrations and, consequently, highest calculated health risks.

residential receptors, the exposure frequency (EF) of 0.96 is used to represent 350 days per year to allow for a two-week period away from home each year (OEHHA, 2015). For student receptors at St. Charles Private School, which operates as a preschool through grade 8 school on a traditional academic calendar, an EF of 0.49 is used to represent 180 days per year for students (OEHHA, 2004).

For construction analysis, the exposure duration spans the length of construction (e.g., 701 workdays, approximately 2.7 years). As the length of construction is longer than 2.25 years, the third trimester, 0-2, and 2-9 age bins apply to the construction analysis for the off-site residential receptors. For residential receptors, the 95th percentile daily breathing rates (BR/BW), exposure duration (ED), age sensitivity factors (ASFs), and fraction of time at home (FAH) for the various age groups are provided herein:

Age Groups	BR/BW (L/kg-day)	ED	ASF	FAH
Third trimester	361	0.25	10	0.85
0-2 age group	1,090	2	10	0.85
2-9 age group	861	0.43	3	0.72

For students at St. Charles Private School, the 95th percentile 8-hour breathing rates (moderate intensity activity), ED, and ASF for the 2 to 16-year-old age group is provided herein:

Age Groups	BR/BW (L/kg-day)	ED	ASF
2–16 age group	520	2.7	3

To calculate the overall cancer risk, the risk for each appropriate age group is calculated per the following equation:

$$\text{Cancer Risk}_{\text{AIR}} = \text{Dose}_{\text{AIR}} \times \text{CPF} \times \text{ASF} \times \text{FAH} \times \frac{\text{ED}}{AT}$$

Where:

Dose_{AIR}	=	dose by inhalation (mg/kg-day), per age group
CPF	=	cancer potency factor, chemical-specific $(\text{mg/kg-day})^{-1}$
ASF	=	age sensitivity factor, per age group
FAH	=	fraction of time at home, per age group (for residential receptors only)
ED	=	exposure duration (years)
AT	=	averaging time period over which exposure duration is averaged (70 years)

The CPFs used in the assessment were obtained from OEHHA guidance. The excess lifetime cancer risks during the construction period to the maximally exposed resident were calculated based on the factors provided above. The cancer risks for each age group are summed to estimate the total cancer risk for each toxic chemical species. The final step converts the cancer risk in scientific notation to a whole number that expresses the cancer risk in "chances per million" by multiplying the cancer risk by a factor of 1×10^6 (i.e., 1 million). The calculated results are provided in Appendix C.

1.5.2 Non-Carcinogenic Hazards

An evaluation was also conducted of the potential non-cancer effects of chronic chemical exposures. Adverse health effects are evaluated by comparing the annual receptor level (flagpole) concentration of each chemical compound with the appropriate reference exposure limit (REL). Available RELs promulgated by OEHHA were considered in the assessment.

The hazard index approach was used to quantify non-carcinogenic impacts. The hazard index assumes that chronic sub-threshold exposures adversely affect a specific organ or organ system (toxicological endpoint). Target organs presented in regulatory guidance were used for each discrete chemical exposure. To calculate the hazard index, each chemical concentration or dose is divided by the appropriate toxicity value. This ratio is summed for compounds affecting the same toxicological endpoint. A health hazard is presumed to exist where the total equals or exceeds one.

The chronic hazard analysis for DPM is provided in Appendix C. The calculations contain the relevant exposure concentrations and corresponding reference dose values used in the evaluation of non-carcinogenic exposures.

1.5.3 Criteria Pollutants

The BAAQMD has recently incorporated $PM_{2.5}$ into the District's CEQA significance thresholds due to recent studies that show adverse health impacts from exposure to this pollutant. An incremental increase of greater than 0.3 $\mu g/m^3$ for the annual average $PM_{2.5}$ concentration is considered to be a significant impact.

1.6 CONSTRUCTION HRA RESULTS

The calculated results are provided in Appendix C and the results are summarized in Table 1.

TABLE 1. CONSTRUCTION RISK SUMMARY – UNMITIGATED

Receptor	Cancer Risk (per million)	Chronic Hazards	$PM_{2.5}$ ($\mu g/m^3$)
Maximum Exposed Individual Resident (MEIR)	**58.4**	0.157	**0.46**
Maximum Exposed School Receptor - St. Charles School Student	1.0	0.025	0.073
BAAQMD Threshold	10	1.0	0.30
Exceeds Threshold?	**Yes**	**No**	**Yes**

Note: Cancer risk calculated using 2015 OEHHA HRA guidance.

Cancer risk for the MEIR from project-related construction emissions was calculated to be 58.4 in a million, which would exceed the 10 in a million significance threshold. In accordance with the latest 2015 OEHHA guidance, the calculated total cancer risk conservatively assumes that the risk for the MEIR consists of a pregnant woman in the third trimester that subsequently gives birth to an infant during the approximately 2.7-year construction period; therefore, calculated risk values for the first 2.25 years were multiplied by a factor of 10 and the remaining risk values by a factor of 3. In addition, it was conservatively assumed that the residents

were outdoors 8 hours a day and exposed to all of the daily construction emissions. The cancer risk for the maximum exposed school receptor at St. Charles Private K-8 School would not exceed 10 per million.

For non-carcinogenic effects, the chronic hazard index identified for each toxicological endpoint totaled less than one for both the MEIR and the maximum exposed school receptor. Therefore, chronic non-carcinogenic hazards are less than significant. The highest $PM_{2.5}$ annual concentration of 0.46 $\mu g/m^3$ at the MEIR location would exceed the 0.3 $\mu g/m^3$ significance threshold. However, the $PM_{2.5}$ annual concentration at the maximum exposed school receptor was calculated to be less than the 0.3 $\mu g/m^3$ significance threshold.

Because cancer risk and $PM_{2.5}$ concentrations at the MEIR would exceed BAAQMD significance thresholds due to construction activities associated with the proposed project, the following mitigation measure is proposed:

> **Mitigation Measure AQ-2:** The proposed project's construction contractors shall use equipment that meets the United States Environmental Protection Agency Tier 4 Interim emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower, unless it can be demonstrated to the City of San Carlos Building Division that such equipment is not commercially available. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Tier 4 Interim emissions standard for a similarly sized engine, as defined by the California Air Resources Board's regulations. The requirement to use Tier 4 Interim equipment for engines over 50 horsepower shall be identified in construction bids.
>
> - Prior to construction, the project engineer shall ensure that all demolition and grading plans clearly show the requirement for United States Environmental Protection Agency Tier 4 Interim or higher emissions standards for construction equipment over 50 horsepower.
>
> - During construction, the construction contractor shall maintain a list of all operating equipment in use over 20 hours on the construction site for verification by the San Carlos Building Division
>
> - The construction equipment list shall state the makes, models, and numbers of construction equipment on-site.
>
> - To the extent that equipment is available and cost-effective, contractors shall use electric, hybrid, or alternate-fueled off-road construction equipment.
>
> - Contractors shall use electric construction tools, such as saws, drills, and compressors, where grid electricity is available.
>
> - Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted to 5 minutes or less in compliance with Section 2449 of the California Code of Regulations, Title 13, Article 4.8, Chapter 9.

- Communicate with all sub-contractors in contracts and construction documents that all non-essential idling of construction equipment is restricted to 5 minutes or less in compliance with California Air Resources Board Rule 2449 and is responsible for ensuring that this requirement is met.

Mitigation Measure AQ-2 would reduce the project's localized construction emissions, as shown in the following table. The results indicate that, with mitigation, cancer risk and the maximum annual $PM_{2.5}$ concentration would be less than the South Coast AQMD's significance thresholds for residential-based receptors. Therefore, the project would not expose off-site sensitive receptors to substantial concentrations of air pollutant emissions during construction and impacts would be *less than significant* with mitigation.

TABLE 2 CONSTRUCTION RISK SUMMARY – MITIGATED

Receptor	Cancer Risk (per million)	Chronic Hazards	$PM_{2.5}$ ($\mu g/m^3$)[a]
Maximum Exposed Individual Resident (MEIR)	4.8	0.012	0.032
Maximum Exposed School Receptor - St. Charles School Student	0.08	0.002	0.005
BAAQMD Threshold	10	1.0	0.3
Exceeds Threshold?	**No**	**No**	**No**

Modeling includes Mitigation Measure AQ-2, which requires use of Tier 4 Interim equipment for engines 50 horsepower and higher.
Note: Cancer risk calculated using 2015 OEHHA HRA guidance.

2. References

Bay Area Air Quality Management District. 2017. *California Environmental Quality Act Air Quality Guidelines.*

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California Air Resources Board (CARB). 2022. *Meteorological Files.* https://ww2.arb.ca.gov/resources/documents/harp-aermod-meteorological-files, accessed February 18, 2022.

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United States Environmental Protection Agency (USEPA). 2011. *Exposure Factors Handbook 2011 Edition (Final).* EPA/600/R-09/052F, 2011.

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Source: Nearmap, 2022

Figure 1
Project Site and Offsite Receptor Locations

Appendix A. Emission Rate Calculations

Average Daily Emissions and Emission Rates (Unmitigated)

Onsite Construction PM10 Exhaust Emissions[1]

Year	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/hr)	Emission Rate (g/s)
2023	2.25	2.82E-01	3.55E-02
2024	0.75	9.33E-02	1.18E-02
2025	0.40	4.99E-02	6.29E-03
2026	0.16	2.03E-02	2.56E-03

Onsite Construction PM2.5 Exhaust Emissions[2]

Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/hr)	Emission Rate (g/s)
2.08	2.59E-01	3.27E-02
0.70	8.73E-02	1.10E-02
0.38	4.69E-02	5.91E-03
0.15	1.87E-02	2.35E-03

Offsite Construction PM10 Exhaust Emissions[1]

Year	Average Daily Emissions (lbs/day)	Hauling Emissions w/in 1,000ft (lbs/day) [3]	Emission Rate (lbs/hr)	Emission Rate (g/s)
2023	1.55E-02	3.62E-04	4.52E-05	5.70E-06
2024	8.09E-03	1.89E-04	2.36E-05	2.97E-06
2025	6.90E-03	1.61E-04	2.01E-05	2.53E-06
2026	2.31E-03	5.38E-05	6.72E-06	8.47E-07

Offsite Construction PM2.5 Exhaust Emissions[2]

Average Daily Emissions (lbs/day)	Hauling Emissions w/in 1,000ft (lbs/day) [3]	Emission Rate (lbs/hr)	Emission Rate (g/s)
1.47E-02	3.44E-04	4.29E-05	5.41E-06
7.79E-03	1.82E-04	2.27E-05	2.86E-06
6.59E-03	1.54E-04	1.92E-05	2.42E-06
1.54E-03	3.59E-05	4.48E-06	5.65E-07

Note: Emissions evenly distributed over 68 modeled volume sources.

Hauling Length (miles)	20	miles
Haul Length within 1,000 ft of Site (mile) [3]	0.47	miles
Hours per work day (7:00 AM to 4:00 PM, 1-hour of breaks) [4]	8	hours

Year	Workdays	Risk Scalar [5]
2023	152	0.58
2024	262	1.00
2025	261	1.00
2026	26	0.10

[1] DPM emissions taken as PM_{10} exhaust emissions from CalEEMod average daily emissions.

[2] $PM_{2.5}$ emissions taken as $PM_{2.5}$ exhaust emissions from CalEEMod average daily emissions.

[3] Emissions from CalEEMod offsite average daily emissions, which is based on proportioned haul truck trip distances, are adjusted to evaluate emissions from the 0.47-mile route within 1,000 of the project site.

[4] Work hours applied in By Hour/Day (HRDOW) variable emissions module in air dispersion model (see App B - Air Dispersion Model Output).

[5] Risk scalars determined for each year of construction to adjust receptor exposures to the exposure durations for each construction year (see App C - Risk Calculations).

Average Daily Emissions and Emission Rates (Mitigated)

Onsite Construction PM10 Exhaust Emissions[1]

Year	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/hr)	Emission Rate (g/s)
2023	0.14	1.79E-02	2.26E-03
2024	0.07	9.15E-03	1.15E-03
2025	0.04	5.17E-03	6.52E-04
2026	0.02	1.92E-03	2.42E-04

Onsite Construction PM2.5 Exhaust Emissions[2]

Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/hr)	Emission Rate (g/s)
0.14	1.79E-02	2.26E-03
0.07	9.15E-03	1.15E-03
0.04	5.17E-03	6.52E-04
0.02	1.92E-03	2.42E-04

Offsite Construction PM10 Exhaust Emissions[1]

Year	Average Daily Emissions (lbs/day)	Hauling Emissions w/in 1,000ft (lbs/day) [3]	Emission Rate (lbs/hr)	Emission Rate (g/s)
2023	1.55E-02	3.62E-04	4.52E-05	5.70E-06
2024	8.09E-03	1.89E-04	2.36E-05	2.97E-06
2025	6.90E-03	1.61E-04	2.01E-05	2.53E-06
2026	2.31E-03	5.38E-05	6.72E-06	8.47E-07

Offsite Construction PM2.5 Exhaust Emissions[2]

Average Daily Emissions (lbs/day)	Hauling Emissions w/in 1,000ft (lbs/day) [3]	Emission Rate (lbs/hr)	Emission Rate (g/s)
1.47E-02	3.44E-04	4.29E-05	5.41E-06
7.79E-03	1.82E-04	2.27E-05	2.86E-06
6.59E-03	1.54E-04	1.92E-05	2.42E-06
1.54E-03	3.59E-05	4.48E-06	5.65E-07

Note: Emissions evenly distributed over 68 modeled volume sources.

Hauling Length (miles)	20	miles
Haul Length within 1,000 ft of Site (mile) [3]	0.47	miles
Hours per work day (7:00 AM to 4:00 PM, 1-hour of breaks) [4]	8	hours

Year	Workdays	Risk Scalar [5]
2023	152	0.58
2024	262	1.00
2025	261	1.00
2026	26	0.10

[1] DPM emissions taken as PM_{10} exhaust emissions from CalEEMod average daily emissions.

[2] $PM_{2.5}$ emissions taken as $PM_{2.5}$ exhaust emissions from CalEEMod average daily emissions.

[3] Emissions from CalEEMod offsite average daily emissions, which is based on proportioned haul truck trip distances, are adjusted to evaluate emissions from the 0.47-mile route within 1,000 of the project site.

[4] Work hours applied in By Hour/Day (HRDOW) variable emissions module in air dispersion model (see App B - Air Dispersion Model Output).

[5] Risk scalars determined for each year of construction to adjust receptor exposures to the exposure durations for each construction year (see App C - Risk Calculations).

Appendix B. Air Dispersion Model Output

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

                                        ***   MODEL SETUP OPTIONS SUMMARY   ***
- -

**Model Is Setup For Calculation of Average CONCentration Values.

  -- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION. DRYDPLT = F
**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses URBAN Dispersion Algorithm for the SBL for   69 Source(s),
  for Total of   1 Urban Area(s):
  Urban Population =   760249.0 ; Urban Roughness Length = 1.000 m

**Model Uses Regulatory DEFAULT Options:
        1. Stack-tip Downwash.
        2. Model Accounts for ELEVated Terrain Effects.
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.
        6. Urban Roughness Length of 1.0 Meter Assumed.

**Other Options Specified:
        CCVR_Sub - Meteorological data includes CCVR substitutions
        TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Accepts FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: OTHER

**Model Calculates PERIOD Averages Only

**This Run Includes: 69 Source(s);   2 Source Group(s); and   1173 Receptor(s)

               with: 0 POINT(s), including
                          0 POINTCAP(s) and   0 POINTHOR(s)
                and: 68 VOLUME source(s)
                and: 1 AREA type source(s)
                and: 0 LINE source(s)
                and: 0 RLINE/RLINEXT source(s)
                and: 0 OPENPIT source(s)
                and: 0 BUOYANT LINE source(s) with a total of   0 line(s)

**Model Set To Continue RUNning After the Setup Testing.

```
**The AERMET Input Meteorological Data Version Date:  14134

**Output Options Selected:
         Model Outputs Tables of PERIOD Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

**Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =     1.50 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                 Emission Units = GRAMS/SEC                              ;  Emission Rate Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

**Approximate Storage Requirements of Model =      3.7 MB of RAM.

**Input Runstream File:          aermod.inp
**Output Print File:             aermod.out

**Detailed Error/Message File:   COSC-07.err
**File for Summary of Results:   COSC-07.sum
```

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000001	0	0.14706E-01	564615.0	4150511.9	35.2	4.15	5.12	3.26	YES	HRDOW
L0000002	0	0.14706E-01	564618.1	4150501.3	36.8	4.15	5.12	3.26	YES	HRDOW
L0000003	0	0.14706E-01	564621.3	4150490.8	38.6	4.15	5.12	3.26	YES	HRDOW
L0000004	0	0.14706E-01	564624.5	4150480.3	40.0	4.15	5.12	3.26	YES	HRDOW
L0000005	0	0.14706E-01	564627.7	4150469.7	40.8	4.15	5.12	3.26	YES	HRDOW
L0000006	0	0.14706E-01	564630.8	4150459.2	41.4	4.15	5.12	3.26	YES	HRDOW
L0000007	0	0.14706E-01	564634.0	4150448.7	41.9	4.15	5.12	3.26	YES	HRDOW
L0000008	0	0.14706E-01	564637.2	4150438.1	42.5	4.15	5.12	3.26	YES	HRDOW
L0000009	0	0.14706E-01	564640.4	4150427.6	42.9	4.15	5.12	3.26	YES	HRDOW
L0000010	0	0.14706E-01	564643.5	4150417.1	43.4	4.15	5.12	3.26	YES	HRDOW
L0000011	0	0.14706E-01	564646.7	4150406.5	44.1	4.15	5.12	3.26	YES	HRDOW
L0000012	0	0.14706E-01	564649.9	4150396.0	44.8	4.15	5.12	3.26	YES	HRDOW
L0000013	0	0.14706E-01	564653.1	4150385.5	45.4	4.15	5.12	3.26	YES	HRDOW
L0000014	0	0.14706E-01	564656.2	4150374.9	46.0	4.15	5.12	3.26	YES	HRDOW
L0000015	0	0.14706E-01	564659.4	4150364.4	46.5	4.15	5.12	3.26	YES	HRDOW
L0000016	0	0.14706E-01	564662.6	4150353.9	46.4	4.15	5.12	3.26	YES	HRDOW
L0000017	0	0.14706E-01	564665.8	4150343.3	46.3	4.15	5.12	3.26	YES	HRDOW
L0000018	0	0.14706E-01	564668.9	4150332.8	46.2	4.15	5.12	3.26	YES	HRDOW
L0000019	0	0.14706E-01	564668.9	4150322.0	46.5	4.15	5.12	3.26	YES	HRDOW
L0000020	0	0.14706E-01	564667.5	4150311.1	47.2	4.15	5.12	3.26	YES	HRDOW
L0000021	0	0.14706E-01	564666.0	4150300.2	47.7	4.15	5.12	3.26	YES	HRDOW
L0000022	0	0.14706E-01	564664.6	4150289.3	47.8	4.15	5.12	3.26	YES	HRDOW
L0000023	0	0.14706E-01	564663.1	4150278.4	47.7	4.15	5.12	3.26	YES	HRDOW
L0000024	0	0.14706E-01	564661.6	4150267.5	47.8	4.15	5.12	3.26	YES	HRDOW
L0000025	0	0.14706E-01	564660.2	4150256.6	48.1	4.15	5.12	3.26	YES	HRDOW
L0000026	0	0.14706E-01	564658.7	4150245.7	48.2	4.15	5.12	3.26	YES	HRDOW
L0000027	0	0.14706E-01	564657.2	4150234.8	48.5	4.15	5.12	3.26	YES	HRDOW
L0000028	0	0.14706E-01	564655.8	4150223.9	49.4	4.15	5.12	3.26	YES	HRDOW
L0000029	0	0.14706E-01	564656.5	4150213.4	50.1	4.15	5.12	3.26	YES	HRDOW
L0000030	0	0.14706E-01	564662.0	4150203.9	50.0	4.15	5.12	3.26	YES	HRDOW
L0000031	0	0.14706E-01	564667.5	4150194.4	50.2	4.15	5.12	3.26	YES	HRDOW
L0000032	0	0.14706E-01	564673.1	4150184.9	50.4	4.15	5.12	3.26	YES	HRDOW
L0000033	0	0.14706E-01	564678.6	4150175.4	50.8	4.15	5.12	3.26	YES	HRDOW
L0000034	0	0.14706E-01	564684.1	4150165.9	51.9	4.15	5.12	3.26	YES	HRDOW
L0000035	0	0.14706E-01	564689.6	4150156.4	52.9	4.15	5.12	3.26	YES	HRDOW
L0000036	0	0.14706E-01	564695.2	4150146.9	53.7	4.15	5.12	3.26	YES	HRDOW
L0000037	0	0.14706E-01	564700.7	4150137.4	54.9	4.15	5.12	3.26	YES	HRDOW
L0000038	0	0.14706E-01	564706.2	4150127.8	55.9	4.15	5.12	3.26	YES	HRDOW
L0000039	0	0.14706E-01	564711.7	4150118.3	56.7	4.15	5.12	3.26	YES	HRDOW
L0000040	0	0.14706E-01	564717.3	4150108.8	56.8	4.15	5.12	3.26	YES	HRDOW

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000041	0	0.14706E-01	564722.8	4150099.3	56.6	4.15	5.12	3.26	YES	HRDOW
L0000042	0	0.14706E-01	564728.3	4150089.8	56.2	4.15	5.12	3.26	YES	HRDOW
L0000043	0	0.14706E-01	564733.9	4150080.3	55.5	4.15	5.12	3.26	YES	HRDOW
L0000044	0	0.14706E-01	564739.4	4150070.8	54.5	4.15	5.12	3.26	YES	HRDOW
L0000045	0	0.14706E-01	564744.9	4150061.3	53.7	4.15	5.12	3.26	YES	HRDOW
L0000046	0	0.14706E-01	564750.2	4150051.6	53.2	4.15	5.12	3.26	YES	HRDOW
L0000047	0	0.14706E-01	564754.9	4150041.7	53.3	4.15	5.12	3.26	YES	HRDOW
L0000048	0	0.14706E-01	564759.6	4150031.7	53.6	4.15	5.12	3.26	YES	HRDOW
L0000049	0	0.14706E-01	564764.3	4150021.8	54.0	4.15	5.12	3.26	YES	HRDOW
L0000050	0	0.14706E-01	564769.0	4150011.8	55.0	4.15	5.12	3.26	YES	HRDOW
L0000051	0	0.14706E-01	564773.7	4150001.9	56.0	4.15	5.12	3.26	YES	HRDOW
L0000052	0	0.14706E-01	564778.4	4149992.0	56.9	4.15	5.12	3.26	YES	HRDOW
L0000053	0	0.14706E-01	564783.1	4149982.0	57.4	4.15	5.12	3.26	YES	HRDOW
L0000054	0	0.14706E-01	564787.8	4149972.1	58.0	4.15	5.12	3.26	YES	HRDOW
L0000055	0	0.14706E-01	564792.5	4149962.1	58.6	4.15	5.12	3.26	YES	HRDOW
L0000056	0	0.14706E-01	564797.2	4149952.2	58.5	4.15	5.12	3.26	YES	HRDOW
L0000057	0	0.14706E-01	564801.9	4149942.2	58.5	4.15	5.12	3.26	YES	HRDOW
L0000058	0	0.14706E-01	564806.6	4149932.3	58.6	4.15	5.12	3.26	YES	HRDOW
L0000059	0	0.14706E-01	564811.3	4149922.4	58.1	4.15	5.12	3.26	YES	HRDOW
L0000060	0	0.14706E-01	564816.0	4149912.4	57.6	4.15	5.12	3.26	YES	HRDOW
L0000061	0	0.14706E-01	564820.7	4149902.5	57.4	4.15	5.12	3.26	YES	HRDOW
L0000062	0	0.14706E-01	564823.2	4149891.8	56.8	4.15	5.12	3.26	YES	HRDOW
L0000063	0	0.14706E-01	564825.0	4149881.0	56.1	4.15	5.12	3.26	YES	HRDOW
L0000064	0	0.14706E-01	564826.8	4149870.1	55.5	4.15	5.12	3.26	YES	HRDOW
L0000065	0	0.14706E-01	564828.7	4149859.3	53.9	4.15	5.12	3.26	YES	HRDOW
L0000066	0	0.14706E-01	564830.5	4149848.4	52.2	4.15	5.12	3.26	YES	HRDOW
L0000067	0	0.14706E-01	564832.4	4149837.6	50.5	4.15	5.12	3.26	YES	HRDOW
L0000068	0	0.14706E-01	564834.2	4149826.7	49.7	4.15	5.12	3.26	YES	HRDOW

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** AREAPOLY SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	LOCATION OF AREA X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	NUMBER OF VERTS.	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
1	0	0.18987E-04	564452.3	4150078.7	100.1	4.15	11	1.93	YES	HRDOW

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ONSITE	1 ,
OFFSITE	L0000001 , L0000002 , L0000003 , L0000004 , L0000005 , L0000006 , L0000007 , L0000008 ,
	L0000009 , L0000010 , L0000011 , L0000012 , L0000013 , L0000014 , L0000015 , L0000016 ,
	L0000017 , L0000018 , L0000019 , L0000020 , L0000021 , L0000022 , L0000023 , L0000024 ,
	L0000025 , L0000026 , L0000027 , L0000028 , L0000029 , L0000030 , L0000031 , L0000032 ,
	L0000033 , L0000034 , L0000035 , L0000036 , L0000037 , L0000038 , L0000039 , L0000040 ,
	L0000041 , L0000042 , L0000043 , L0000044 , L0000045 , L0000046 , L0000047 , L0000048 ,
	L0000049 , L0000050 , L0000051 , L0000052 , L0000053 , L0000054 , L0000055 , L0000056 ,
	L0000057 , L0000058 , L0000059 , L0000060 , L0000061 , L0000062 , L0000063 , L0000064 ,
	L0000065 , L0000066 , L0000067 , L0000068 ,

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
	760249.	1 , L0000001 , L0000002 , L0000003 , L0000004 , L0000005 , L0000006 , L0000007 ,
		L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 , L0000014 , L0000015 ,
		L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 , L0000022 , L0000023 ,
		L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , L0000029 , L0000030 , L0000031 ,
		L0000032 , L0000033 , L0000034 , L0000035 , L0000036 , L0000037 , L0000038 , L0000039 ,
		L0000040 , L0000041 , L0000042 , L0000043 , L0000044 , L0000045 , L0000046 , L0000047 ,
		L0000048 , L0000049 , L0000050 , L0000051 , L0000052 , L0000053 , L0000054 , L0000055 ,
		L0000056 , L0000057 , L0000058 , L0000059 , L0000060 , L0000061 , L0000062 , L0000063 ,
		L0000064 , L0000065 , L0000066 , L0000067 , L0000068 ,

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = 1 ; SOURCE TYPE = AREAPOLY :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.0000E+00	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000001 TO L0000068 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.0000E+00	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

```
                                   *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                                      (1=YES; 0=NO)

          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1

            NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.


                              *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                                     (METERS/SEC)

                                      1.54,   3.09,   5.14,   8.23,  10.80,
```

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: \\Pw102\mend_l\COSC-07.0\03_ProductFiles\99_Tech Team\AQGHG\HRA\B - AirDispersio Met Version: 14134
Profile file: \\Pw102\mend_l\COSC-07.0\03_ProductFiles\99_Tech Team\AQGHG\HRA\B - AirDispersio
Surface format: FREE
Profile format: FREE
Surface station no.: 93231 Upper air station no.: 23230
Name: UNKNOWN Name: OAKLAND/WSO_AP
Year: 2009 Year: 2009

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
09	01	01	1	01	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.04	0.55	1.00	999.00	999.	-9.0	999.0	-9.0
09	01	01	1	02	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.04	0.55	1.00	999.00	999.	-9.0	999.0	-9.0
09	01	01	1	03	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.04	0.55	1.00	999.00	999.	-9.0	999.0	-9.0
09	01	01	1	04	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.04	0.55	1.00	999.00	999.	-9.0	999.0	-9.0
09	01	01	1	05	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.04	0.55	1.00	999.00	999.	-9.0	999.0	-9.0
09	01	01	1	06	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.04	0.55	1.00	999.00	999.	-9.0	999.0	-9.0
09	01	01	1	07	-3.0	0.063	-9.000	-9.000	-999.	38.	7.5	0.04	0.55	1.00	1.76	5.	10.0	281.1	2.0
09	01	01	1	08	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.04	0.55	0.74	0.00	0.	10.0	280.1	2.0
09	01	01	1	09	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.04	0.55	0.38	999.00	999.	-9.0	280.1	2.0
09	01	01	1	10	5.5	0.179	0.236	0.014	87.	181.	-95.0	0.04	0.55	0.26	2.36	61.	10.0	280.1	2.0
09	01	01	1	11	12.1	-9.000	-9.000	-9.000	156.	-999.	-99999.0	0.04	0.55	0.21	0.00	0.	10.0	280.1	2.0
09	01	01	1	12	16.0	0.328	0.455	0.016	215.	451.	-201.4	0.04	0.55	0.20	4.36	336.	10.0	281.1	2.0
09	01	01	1	13	16.6	0.226	0.493	0.015	262.	263.	-63.2	0.04	0.55	0.19	2.86	293.	10.0	281.1	2.0
09	01	01	1	14	69.0	-9.000	-9.000	-9.000	402.	-999.	-99999.0	0.04	0.55	0.20	0.00	0.	10.0	282.1	2.0
09	01	01	1	15	49.6	0.205	0.847	0.017	445.	223.	-15.9	0.04	0.55	0.23	2.36	999.	10.0	283.1	2.0
09	01	01	1	16	18.0	0.192	0.607	0.016	451.	202.	-35.7	0.04	0.55	0.31	2.36	999.	10.0	283.1	2.0
09	01	01	1	17	-17.1	0.203	-9.000	-9.000	-999.	220.	44.6	0.04	0.55	0.55	3.36	999.	10.0	282.1	2.0
09	01	01	1	18	-11.3	0.104	-9.000	-9.000	-999.	86.	9.1	0.04	0.55	1.00	2.86	337.	10.0	282.1	2.0
09	01	01	1	19	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.04	0.55	1.00	0.00	0.	10.0	281.1	2.0
09	01	01	1	20	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.04	0.55	1.00	0.00	0.	10.0	281.1	2.0
09	01	01	1	21	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.04	0.55	1.00	0.00	0.	10.0	280.1	2.0
09	01	01	1	22	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.04	0.55	1.00	999.00	999.	-9.0	999.0	-9.0
09	01	01	1	23	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.04	0.55	1.00	999.00	999.	-9.0	999.0	-9.0
09	01	01	1	24	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.04	0.55	1.00	999.00	999.	-9.0	999.0	-9.0

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
09	01	01	01	10.0	1	-999.	-99.00	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ONSITE ***
INCLUDING SOURCE(S): 1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***
** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564251.86	4149786.11	0.53224	564271.86	4149786.11	0.57593
564291.86	4149786.11	0.62208	564311.86	4149786.11	0.67449
564371.86	4149786.11	0.86269	564451.86	4149786.11	1.03009
564551.86	4149786.11	0.91529	564591.86	4149786.11	0.81918
564671.86	4149786.11	0.63380	564691.86	4149786.11	0.59296
564751.86	4149786.11	0.49159	564771.86	4149786.11	0.45782
564231.86	4149806.11	0.52583	564251.86	4149806.11	0.57917
564291.86	4149806.11	0.68173	564371.86	4149806.11	0.95467
564391.86	4149806.11	1.05119	564411.86	4149806.11	1.11919
564451.86	4149806.11	1.14054	564511.86	4149806.11	1.08648
564551.86	4149806.11	0.99850	564571.86	4149806.11	0.94256
564591.86	4149806.11	0.89392	564611.86	4149806.11	0.84391
564631.86	4149806.11	0.79366	564691.86	4149806.11	0.64183
564711.86	4149806.11	0.60474	564771.86	4149806.11	0.49573
564811.86	4149806.11	0.43304	564211.86	4149826.11	0.50032
564231.86	4149826.11	0.56017	564271.86	4149826.11	0.68212
564291.86	4149826.11	0.74945	564391.86	4149826.11	1.19991
564411.86	4149826.11	1.25009	564451.86	4149826.11	1.26156
564471.86	4149826.11	1.24087	564491.86	4149826.11	1.21271
564511.86	4149826.11	1.17241	564651.86	4149826.11	0.79613
564731.86	4149826.11	0.60839	564771.86	4149826.11	0.53210
564811.86	4149826.11	0.46281	564851.86	4149826.11	0.41409
564191.86	4149846.11	0.47189	564211.86	4149846.11	0.53310
564251.86	4149846.11	0.66819	564271.86	4149846.11	0.73994
564351.86	4149846.11	1.10538	564371.86	4149846.11	1.23009
564391.86	4149846.11	1.34752	564411.86	4149846.11	1.40084
564431.86	4149846.11	1.42062	564451.86	4149846.11	1.40969
564531.86	4149846.11	1.20500	564551.86	4149846.11	1.14845
564571.86	4149846.11	1.09485	564591.86	4149846.11	1.04175
564611.86	4149846.11	0.98608	564671.86	4149846.11	0.80197
564691.86	4149846.11	0.74278	564731.86	4149846.11	0.65053
564771.86	4149846.11	0.57018	564811.86	4149846.11	0.49623
564891.86	4149846.11	0.39796	564171.86	4149866.11	0.43888
564191.86	4149866.11	0.50197	564211.86	4149866.11	0.56905
564231.86	4149866.11	0.64052	564251.86	4149866.11	0.71717
564271.86	4149866.11	0.80251	564291.86	4149866.11	0.90047
564311.86	4149866.11	1.01549	564331.86	4149866.11	1.12618
564351.86	4149866.11	1.23095	564451.86	4149866.11	1.60097
564471.86	4149866.11	1.56397	564491.86	4149866.11	1.49239
564511.86	4149866.11	1.38603	564531.86	4149866.11	1.30892

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ONSITE ***
INCLUDING SOURCE(S): 1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564551.86	4149866.11	1.25195	564631.86	4149866.11	1.01217
564651.86	4149866.11	0.94280	564711.86	4149866.11	0.74731
564731.86	4149866.11	0.69694	564771.86	4149866.11	0.60984
564791.86	4149866.11	0.57112	564811.86	4149866.11	0.53446
564851.86	4149866.11	0.47414	564891.86	4149866.11	0.42232
564231.86	4149886.11	0.68435	564251.86	4149886.11	0.77210
564271.86	4149886.11	0.86812	564291.86	4149886.11	0.97458
564392.29	4149887.91	1.62973	564431.86	4149886.11	1.83209
564651.86	4149886.11	1.04724	564671.86	4149886.11	0.97383
564691.86	4149886.11	0.90122	564751.86	4149886.11	0.70775
564771.86	4149886.11	0.66000	564851.86	4149886.11	0.50430
564871.86	4149886.11	0.47378	564931.86	4149886.11	0.39793
564951.86	4149886.11	0.37627	564231.86	4149906.11	0.73076
564303.45	4149918.73	1.22680	564324.65	4149914.52	1.36117
564345.25	4149906.71	1.44436	564364.65	4149898.30	1.50346
564431.86	4149906.11	2.09799	564471.86	4149906.11	2.05158
564491.86	4149906.11	1.95517	564511.86	4149906.11	1.88521
564531.86	4149906.11	1.83409	564551.86	4149906.11	1.77149
564691.86	4149906.11	1.02272	564711.86	4149906.11	0.91608
564751.86	4149906.11	0.77343	564771.86	4149906.11	0.71642
564791.86	4149906.11	0.66441	564891.86	4149906.11	0.47042
564911.86	4149906.11	0.44263	564231.86	4149926.11	0.77985
564271.86	4149926.11	1.02090	564291.86	4149926.11	1.18316
564451.86	4149926.11	2.46172	564571.86	4149926.11	1.94715
564611.86	4149926.11	1.65326	564631.86	4149926.11	1.54437
564651.86	4149926.11	1.43972	564711.86	4149926.11	1.03686
564751.86	4149926.11	0.84935	564791.86	4149926.11	0.71563
564831.86	4149926.11	0.60931	564851.86	4149926.11	0.56649
564871.86	4149926.11	0.52881	564951.86	4149926.11	0.40798
564971.86	4149926.11	0.38285	564334.86	4149953.32	1.75049
564351.86	4149946.11	1.83952	564371.86	4149946.11	2.01363
564451.86	4149946.11	2.86759	564491.86	4149946.11	2.77622
564511.86	4149946.11	2.69709	564531.86	4149946.11	2.57928
564591.86	4149946.11	2.09170	564611.86	4149946.11	1.93423
564651.86	4149946.11	1.65336	564671.86	4149946.11	1.49652
564711.86	4149946.11	1.15040	564751.86	4149946.11	0.92347
564831.86	4149946.11	0.64806	564911.86	4149946.11	0.48404

564931.86	4149946.11	0.45282	564237.27	4149957.10	0.90851
564257.27	4149957.10	1.05909	564277.27	4149957.10	1.22797
564297.27	4149957.10	1.42063	564391.86	4149966.11	2.47326

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ONSITE ***
INCLUDING SOURCE(S): 1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564456.88	4149957.18	3.12969	564498.55	4150002.37	4.53894
564511.86	4149966.11	3.19994	564531.86	4149966.11	3.04722
564551.86	4149966.11	2.86854	564651.86	4149966.11	1.85371
564671.86	4149966.11	1.65277	564711.86	4149966.11	1.26186
564751.86	4149966.11	1.00136	564891.86	4149966.11	0.54317
564951.86	4149966.11	0.44056	564971.86	4149966.11	0.41145
564314.19	4149956.67	1.57855	564351.86	4149986.11	2.32383
564391.86	4149986.11	2.86138	564462.46	4149977.74	3.72513
564491.86	4149986.11	3.96627	564511.86	4149986.11	3.75038
564561.90	4149993.36	3.46800	564591.86	4149986.11	2.79064
564611.86	4149986.11	2.49415	564631.86	4149986.11	2.24062
564651.86	4149986.11	1.98454	564711.86	4149986.11	1.36497
564751.86	4149986.11	1.08421	564871.86	4149986.11	0.61747
564911.86	4149986.11	0.52843	564931.86	4149986.11	0.49174
564223.28	4149998.90	0.94888	564243.28	4149998.90	1.13378
564263.28	4149998.90	1.34465	564283.28	4149998.90	1.57981
564304.65	4149997.70	1.84105	564322.85	4149998.90	2.10208
564351.86	4150006.11	2.66178	564400.87	4149995.29	3.21422
564404.05	4150016.33	3.89540	564494.09	4150018.38	5.43041
564551.86	4150015.04	4.37716	564591.86	4150006.11	3.22480
564691.86	4150006.11	1.69888	564731.86	4150006.11	1.32604
564911.86	4150006.11	0.55387	564971.86	4150006.11	0.44044
564211.86	4150026.11	0.94176	564271.86	4150026.11	1.65343
564311.86	4150026.11	2.30106	564351.86	4150026.11	3.08947
564371.86	4150026.11	3.52124	564411.86	4150026.11	4.46723
564490.74	4150037.27	7.04455	564545.72	4150032.25	5.24137
564591.86	4150026.11	3.74827	564691.86	4150026.11	1.91258
564731.86	4150026.11	1.46441	564931.86	4150026.11	0.53430
564951.86	4150026.11	0.49292	564971.86	4150026.11	0.45486
564231.86	4150046.11	1.23837	564251.86	4150046.11	1.51351
564271.86	4150046.11	1.83899	564291.86	4150046.11	2.20386
564331.86	4150046.11	3.10380	564351.86	4150046.11	3.66133
564371.86	4150046.11	4.24621	564411.86	4150046.11	5.57331
564489.07	4150053.36	9.12690	564544.61	4150050.57	6.03145
564591.86	4150046.11	4.35547	564671.86	4150046.11	2.54493
564711.86	4150046.11	1.88570	564951.86	4150046.11	0.50936
564971.86	4150046.11	0.46905	564251.86	4150066.11	1.66570

564311.86	4150066.11	3.01702	564331.86	4150066.11	3.64952
564351.86	4150066.11	4.40168	564391.86	4150066.11	6.37781
564411.86	4150066.11	7.89160	564551.86	4150066.11	6.39281

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ONSITE ***
INCLUDING SOURCE(S): 1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564591.86	4150066.11	5.03253	564651.86	4150066.11	3.52697
564701.05	4150086.46	2.76096	564711.86	4150066.11	2.15090
564971.86	4150066.11	0.48129	563891.86	4150086.11	0.12350
563911.86	4150086.11	0.13474	563950.37	4150092.06	0.16620
564231.86	4150086.11	1.46634	564251.86	4150086.11	1.84507
564291.86	4150086.11	2.87044	564311.86	4150086.11	3.52214
564371.86	4150086.11	6.71489	564391.86	4150086.11	9.41504
564551.86	4150086.11	7.65151	564611.86	4150086.11	5.48119
564631.86	4150086.11	4.96404	563891.86	4150106.11	0.12639
563922.30	4150104.53	0.14654	563957.57	4150126.91	0.17869
564211.86	4150106.11	1.21053	564231.86	4150106.11	1.59794
564271.86	4150106.11	2.64450	564331.86	4150106.11	5.18391
564351.86	4150106.11	6.72353	564549.63	4150120.06	11.55056
564571.86	4150106.11	8.34546	564594.49	4150116.61	8.43517
564626.95	4150120.55	7.87395	564652.52	4150113.33	6.18523
564681.05	4150098.89	3.85690	563891.86	4150126.11	0.12791
563911.86	4150126.11	0.14093	563943.63	4150137.99	0.16671
563914.09	4150047.60	0.13225	564191.86	4150126.11	0.92472
564231.86	4150126.11	1.73025	564251.86	4150126.11	2.33736
564311.86	4150126.11	5.04683	564331.86	4150126.11	6.36297
564140.38	4150196.22	0.45166	563891.86	4150146.11	0.12854
563911.86	4150146.11	0.14136	563937.34	4150153.65	0.16164
563923.49	4150066.48	0.13927	564171.86	4150146.11	0.70145
564211.86	4150146.11	1.28213	564231.86	4150146.11	1.86400
564271.86	4150146.11	3.66986	564291.86	4150146.11	4.83116
564169.34	4150215.64	0.56548	564155.44	4150207.02	0.50361
563891.86	4150166.11	0.12815	564171.86	4150166.11	0.68073
564191.86	4150166.11	0.88805	564211.86	4150166.11	1.27187
564251.86	4150166.11	3.13766	564271.86	4150166.11	4.48724
564184.40	4150229.32	0.64662	563888.20	4150187.48	0.12632
564231.86	4150186.11	2.10559	564251.86	4150186.11	3.68849
564195.43	4150243.00	0.71333	564211.86	4150206.11	1.12686
564231.86	4150206.11	2.13946	563891.86	4150226.11	0.12981
563907.06	4150220.40	0.13912	564211.75	4150254.84	0.90236
564751.86	4150226.11	1.45834	564771.86	4150226.11	1.24736
564791.86	4150226.11	1.08004	564971.86	4150226.11	0.41380
564691.86	4150246.11	1.95088	564751.86	4150246.11	1.20727

564771.86	4150246.11	1.05647	564931.86	4150246.11	0.45553
564951.86	4150246.11	0.41864	564971.86	4150246.11	0.38629
564751.86	4150266.11	0.98521	564771.86	4150266.11	0.88151

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ONSITE ***
INCLUDING SOURCE(S): 1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564791.86	4150266.11	0.79285	564931.86	4150266.11	0.41763
564951.86	4150266.11	0.38598	564971.86	4150266.11	0.35785
563971.86	4150286.11	0.13107	563991.86	4150286.11	0.14635
564131.86	4150286.11	0.30386	564151.86	4150286.11	0.34665
564702.79	4150281.91	1.07861	564731.86	4150286.11	0.88208
564751.86	4150286.11	0.80128	564771.86	4150286.11	0.73075
564791.86	4150286.11	0.66855	564811.86	4150286.11	0.61314
564851.86	4150286.11	0.51881	564931.86	4150286.11	0.38009
564971.86	4150286.11	0.32957	563891.86	4150306.11	0.08473
563955.34	4150115.05	0.17516	563991.86	4150306.11	0.14169
564011.86	4150306.11	0.15936	564121.92	4150313.34	0.26764
564171.86	4150306.11	0.41108	564310.92	4150485.44	0.69926
564702.79	4150301.91	0.84743	564751.86	4150306.11	0.65485
564771.86	4150306.11	0.60586	564791.86	4150306.11	0.56205
564831.86	4150306.11	0.48605	564851.86	4150306.11	0.45272
564891.86	4150306.11	0.39371	564951.86	4150306.11	0.32198
564971.86	4150306.11	0.30210	563891.86	4150326.11	0.08211
563931.86	4150326.11	0.09498	563951.86	4150326.11	0.10536
563971.86	4150326.11	0.12288	564011.86	4150326.11	0.15720
564031.86	4150326.11	0.17363	564131.86	4150326.11	0.28113
564171.86	4150326.11	0.40404	564702.79	4150321.91	0.68547
564751.86	4150326.11	0.54077	564791.86	4150326.11	0.47316
564831.86	4150326.11	0.41796	564851.86	4150326.11	0.39339
564891.86	4150326.11	0.34882	564931.86	4150326.11	0.30977
564951.86	4150326.11	0.29228	564971.86	4150326.11	0.27612
563891.86	4150346.11	0.08379	563911.86	4150346.11	0.08815
563931.86	4150346.11	0.09464	563971.86	4150346.11	0.12117
563991.86	4150346.11	0.13917	564038.31	4150337.98	0.17801
564064.63	4150346.11	0.19826	564091.86	4150346.11	0.22300
564131.86	4150346.11	0.28501	564171.86	4150346.11	0.40994
564698.54	4150341.91	0.57802	564751.86	4150346.11	0.45252
564771.86	4150346.11	0.42455	564811.86	4150346.11	0.37889
564831.86	4150346.11	0.35932	564851.86	4150346.11	0.34118
564871.86	4150346.11	0.32412	564891.86	4150346.11	0.30792
564931.86	4150346.11	0.27797	564951.86	4150346.11	0.26429
564136.85	4150387.80	0.31182	564092.70	4150415.81	0.28723
564107.28	4150388.70	0.26121	563971.86	4150366.11	0.12082

563991.86	4150366.11	0.14017	564071.44	4150383.28	0.22894
564158.31	4150376.05	0.36912	564698.54	4150361.91	0.48583
564751.86	4150366.11	0.38389	564771.86	4150366.11	0.36086

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ONSITE ***
INCLUDING SOURCE(S): 1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564851.86	4150366.11	0.29599	564871.86	4150366.11	0.28330
564911.86	4150366.11	0.25964	564931.86	4150366.11	0.24868
564971.86	4150366.11	0.22819	564692.82	4150376.54	0.44143
564746.14	4150380.74	0.34966	564786.14	4150380.74	0.31018
564806.14	4150380.74	0.29499	564906.14	4150380.74	0.24029
564926.14	4150380.74	0.23137	564946.14	4150380.74	0.22285
564686.14	4150400.74	0.37579	564726.14	4150400.74	0.32431
564746.14	4150400.74	0.30278	564826.14	4150400.74	0.24483
564926.14	4150400.74	0.20593	564686.14	4150420.74	0.32562
564726.14	4150420.74	0.28312	564806.14	4150420.74	0.22377
564866.14	4150420.74	0.19960	564886.14	4150420.74	0.19361
564906.14	4150420.74	0.18809	564946.14	4150420.74	0.17895
564966.14	4150420.74	0.17470	564666.14	4150440.74	0.30541
564686.14	4150440.74	0.28536	564726.14	4150440.74	0.24949
564786.14	4150440.74	0.20769	564806.14	4150440.74	0.19752
564846.14	4150440.74	0.18212	564866.14	4150440.74	0.17635
564946.14	4150440.74	0.16051	564666.14	4150460.74	0.27032
564686.14	4150460.74	0.25295	564726.14	4150460.74	0.22194
564786.14	4150460.74	0.18505	564846.14	4150460.74	0.16195
564906.14	4150460.74	0.14934	564926.14	4150460.74	0.14654
564666.14	4150480.74	0.24210	564706.14	4150480.74	0.21253
564726.14	4150480.74	0.19934	564766.14	4150480.74	0.17617
564826.14	4150480.74	0.15096	564866.14	4150480.74	0.14063
564886.14	4150480.74	0.13697	564906.14	4150480.74	0.13416
564966.14	4150480.74	0.12855	564666.14	4150500.74	0.21914
564706.14	4150500.74	0.19259	564766.14	4150500.74	0.15984
564806.14	4150500.74	0.14314	564826.14	4150500.74	0.13660
564866.14	4150500.74	0.12709	564886.14	4150500.74	0.12379
564946.14	4150500.74	0.11824	564966.14	4150500.74	0.11748
564646.14	4150520.74	0.21415	564706.14	4150520.74	0.17619
564746.14	4150520.74	0.15545	564806.14	4150520.74	0.13079
564866.14	4150520.74	0.11580	564906.14	4150520.74	0.11047
564926.14	4150520.74	0.10887	564946.14	4150520.74	0.10832
564646.14	4150540.74	0.19721	564686.14	4150540.74	0.17328
564706.14	4150540.74	0.16263	564746.14	4150540.74	0.14345
564786.14	4150540.74	0.12724	564846.14	4150540.74	0.11012
564906.14	4150540.74	0.10193	564966.14	4150540.74	0.09971

564626.14	4150560.74	0.19506	564686.14	4150560.74	0.16108
564726.14	4150560.74	0.14201	564746.14	4150560.74	0.13336
564786.14	4150560.74	0.11826	564846.14	4150560.74	0.10214

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ONSITE ***
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*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564906.14	4150560.74	0.09500	564626.14	4150580.74	0.18141
564666.14	4150580.74	0.16029	564686.14	4150580.74	0.15067
564726.14	4150580.74	0.13295	564786.14	4150580.74	0.11077
564826.14	4150580.74	0.09973	564886.14	4150580.74	0.09003
564906.14	4150580.74	0.08919	564946.14	4150580.74	0.08519
564966.14	4150580.74	0.08300	564547.13	4150306.35	2.12830
564542.54	4150342.35	1.34191	564531.95	4150355.41	1.23717
564523.13	4150362.82	1.21996	564510.42	4150375.52	1.11512
564502.31	4150385.76	1.03784	564488.19	4150393.52	1.06126
564476.54	4150406.58	0.96285	564454.66	4150412.93	1.00470
564435.96	4150431.29	0.90199	564420.07	4150459.52	0.71262
564613.12	4150405.17	0.48045	564601.12	4150418.23	0.45467
564591.59	4150427.40	0.44114	564579.95	4150436.23	0.43410
564565.83	4150445.05	0.43234	564553.83	4150453.52	0.42796
564539.01	4150460.58	0.43173	564533.01	4150470.81	0.41355
564511.13	4150478.22	0.42376	564608.89	4150458.81	0.33561
564604.65	4150472.22	0.31557	564595.48	4150481.05	0.31125
564323.57	4150502.65	0.62170	564320.61	4150516.63	0.55810
564315.10	4150529.75	0.49603	564301.97	4150541.19	0.45443
564288.43	4150553.47	0.42051	564568.73	4150497.15	0.31499
564542.90	4150507.74	0.32474	564534.01	4150514.51	0.32209
564458.64	4150533.14	0.35230	564445.52	4150537.38	0.35444
564429.00	4150554.31	0.33557	564412.91	4150566.17	0.32546
564399.36	4150575.91	0.31729	564532.32	4150566.17	0.25212
564269.98	4150359.33	0.87177	564281.85	4150416.92	0.91580
564287.61	4150440.67	0.86580	564296.25	4150479.18	0.71689
564279.34	4150466.23	0.74771	564257.74	4150463.35	0.67608
564217.43	4150431.67	0.73534	564201.95	4150449.31	0.66989
564195.96	4150403.26	0.66275	564172.05	4150425.18	0.52550
564152.62	4150445.60	0.46116	564133.73	4150451.59	0.41948
564106.33	4150438.64	0.33428	564061.00	4150433.16	0.29592
564067.47	4150456.58	0.32521	564083.91	4150471.02	0.35440
564098.86	4150476.00	0.37358	564120.28	4150488.96	0.42570
564138.21	4150490.45	0.45662	564160.13	4150483.48	0.49515
564206.46	4150488.96	0.47262	564257.77	4150529.81	0.45517
564244.32	4150548.24	0.40652	564236.35	4150567.17	0.36832
564237.35	4150574.64	0.35754	564242.33	4150585.10	0.34101

564261.26	4150587.59	0.33958	564275.70	4150591.58	0.33244
564287.66	4150601.54	0.31367	564303.60	4150599.55	0.31526
564316.06	4150593.07	0.32469	564335.48	4150597.56	0.31083

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ONSITE ***
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*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC	
564346.94	4150597.56	0.30664	564360.89	4150594.57	0.30579	
564344.45	4150556.71	0.39765	564374.84	4150593.07	0.30204	
564392.77	4150584.60	0.30674	564184.54	4150627.94	0.26354	
564172.58	4150595.56	0.29148	564161.13	4150544.25	0.34143	
564118.29	4150563.68	0.28882	564098.36	4150642.89	0.22110	
564518.31	4150570.66	0.25588	564498.88	4150573.64	0.26384	
564453.55	4150583.61	0.27540	564430.13	4150599.05	0.26673	
564424.65	4150612.50	0.25261	564423.66	4150626.95	0.23676	
564418.18	4150641.39	0.22387	564539.73	4150604.03	0.21145	
564532.26	4150626.45	0.19685	564514.82	4150650.86	0.18540	
564562.64	4150585.60	0.21480	564613.96	4150596.06	0.17846	
564602.50	4150618.48	0.17079	564469.34	4150074.74	14.03046	Residential Mer
564341.64	4150484.35	0.70158	564256.01	4150516.32	0.47802	
564270.56	4150544.16	0.44097	564355.97	4150472.98	0.74110	
564386.66	4150495.12	0.55765	564374.96	4150513.47	0.50110	
564381.91	4150534.03	0.41975	564365.78	4150540.36	0.41581	
564420.51	4150503.66	0.45916	564402.79	4150472.98	0.65079	
564213.70	4150540.86	0.38847	564209.07	4150575.89	0.33657	
564149.83	4150594.95	0.28013	564136.43	4150608.35	0.26132	
564125.10	4150619.16	0.24750	564147.77	4150634.10	0.24624	
564269.85	4150637.71	0.26048	564202.88	4150628.44	0.26767	
564167.86	4150634.10	0.25307	564285.82	4150646.47	0.24969	
564300.76	4150654.71	0.23909	564176.86	4150464.17	0.57805	
564232.02	4150318.48	0.80226	564471.46	4150572.80	0.28027	
564472.66	4150619.50	0.22627	564515.76	4150611.12	0.21646	
564476.25	4150656.61	0.19311	564094.38	4150577.18	0.25923	
564070.43	4150589.73	0.23595	564050.84	4150581.89	0.22482	
564033.20	4150574.05	0.21265	564007.72	4150552.50	0.19452	
563995.96	4150540.74	0.18518	564039.08	4150415.32	0.24869	
564011.64	4150419.24	0.20510	563933.26	4150438.84	0.13165	
564390.91	4149768.55	0.84277	564397.08	4149757.44	0.80138	
564331.69	4149759.91	0.65379	564503.17	4149784.58	0.99665	
564543.88	4149772.25	0.87734	564514.27	4149756.21	0.85958	
564550.05	4149743.87	0.76758	563941.13	4150036.18	0.14905	
563964.26	4150046.33	0.16932	563968.77	4150039.00	0.17300	
563984.56	4150023.77	0.18706	563994.71	4150010.24	0.19711	
563999.79	4149995.57	0.20245	564867.28	4150261.18	0.56610	

564874.65	4150255.78	0.56358	564883.01	4150250.37	0.55730
564889.89	4150245.46	0.55261	564942.96	4150213.02	0.48919
564929.69	4150177.15	0.57283	564951.81	4150171.74	0.51971

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*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ONSITE ***
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** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC		X-COORD (M)	Y-COORD (M)	CONC
564976.38	4150162.41	0.47111		564968.02	4150125.06	0.50444
564944.93	4150127.51	0.56141		564922.81	4150132.92	0.62539
564900.70	4150139.80	0.70106		564916.92	4150107.86	0.64232
564948.37	4150100.98	0.54998		564822.56	4150131.94	1.14555
564803.89	4150144.71	1.32385		564790.62	4150157.98	1.46553
564772.44	4150172.23	1.67948		564756.22	4150187.96	1.84600
564739.02	4150186.98	2.22595	School MER	564748.85	4150173.71	2.12974
564762.61	4150162.90	1.89581		564763.59	4150145.70	1.90444
564775.38	4150130.95	1.67458		564785.21	4150117.69	1.49789
564794.06	4150103.43	1.34777		564251.86	4149786.11	0.51172
564271.86	4149786.11	0.55316		564291.86	4149786.11	0.59672
564311.86	4149786.11	0.64600		564371.86	4149786.11	0.82173
564451.86	4149786.11	1.00391		564551.86	4149786.11	0.92925
564591.86	4149786.11	0.83852		564671.86	4149786.11	0.65011
564691.86	4149786.11	0.60744		564751.86	4149786.11	0.50140
564771.86	4149786.11	0.46553		564231.86	4149806.11	0.50453
564251.86	4149806.11	0.55500		564291.86	4149806.11	0.65207
564371.86	4149806.11	0.90716		564391.86	4149806.11	0.99706
564411.86	4149806.11	1.06768		564451.86	4149806.11	1.13806
564511.86	4149806.11	1.09691		564551.86	4149806.11	1.01849
564571.86	4149806.11	0.96567		564591.86	4149806.11	0.91720
564611.86	4149806.11	0.86677		564631.86	4149806.11	0.81558
564691.86	4149806.11	0.65796		564711.86	4149806.11	0.61936
564771.86	4149806.11	0.50489		564811.86	4149806.11	0.43872
564211.86	4149826.11	0.47991		564231.86	4149826.11	0.53630
564271.86	4149826.11	0.65144		564291.86	4149826.11	0.71485
564391.86	4149826.11	1.13431		564411.86	4149826.11	1.20967
564451.86	4149826.11	1.26926		564471.86	4149826.11	1.25776
564491.86	4149826.11	1.23464		564511.86	4149826.11	1.19869
564651.86	4149826.11	0.81883		564731.86	4149826.11	0.62190
564771.86	4149826.11	0.54189		564811.86	4149826.11	0.46879
564191.86	4149846.11	0.45229		564211.86	4149846.11	0.50994
564251.86	4149846.11	0.63724		564271.86	4149846.11	0.70478
564351.86	4149846.11	1.04542		564371.86	4149846.11	1.16247
564391.86	4149846.11	1.27023		564411.86	4149846.11	1.35698
564431.86	4149846.11	1.41506		564451.86	4149846.11	1.42268
564531.86	4149846.11	1.24400		564551.86	4149846.11	1.18576

564571.86	4149846.11	1.13010	564591.86	4149846.11	1.07489
564611.86	4149846.11	1.01691	564671.86	4149846.11	0.82307
564691.86	4149846.11	0.75993	564731.86	4149846.11	0.66367

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ONSITE ***
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*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564771.86	4149846.11	0.58020	564811.86	4149846.11	0.50273
564171.86	4149866.11	0.42027	564191.86	4149866.11	0.47965
564211.86	4149866.11	0.54283	564231.86	4149866.11	0.61009
564251.86	4149866.11	0.68213	564271.86	4149866.11	0.76218
564291.86	4149866.11	0.85360	564311.86	4149866.11	0.95997
564331.86	4149866.11	1.06296	564351.86	4149866.11	1.16020
564451.86	4149866.11	1.60941	564471.86	4149866.11	1.59106
564491.86	4149866.11	1.53487	564511.86	4149866.11	1.43381
564531.86	4149866.11	1.35287	564551.86	4149866.11	1.29310
564631.86	4149866.11	1.04299	564651.86	4149866.11	0.96961
564711.86	4149866.11	0.76107	564731.86	4149866.11	0.70873
564771.86	4149866.11	0.61932	564791.86	4149866.11	0.57969
564811.86	4149866.11	0.54198	564231.86	4149886.11	0.65002
564251.86	4149886.11	0.73217	564271.86	4149886.11	0.82189
564291.86	4149886.11	0.92095	564392.29	4149887.91	1.52763
564431.86	4149886.11	1.77218	564651.86	4149886.11	1.07841
564671.86	4149886.11	1.00112	564691.86	4149886.11	0.92424
564751.86	4149886.11	0.71914	564771.86	4149886.11	0.67033
564851.86	4149886.11	0.51123	564871.86	4149886.11	0.48022
564231.86	4149906.11	0.69196	564303.45	4149918.73	1.14879
564324.65	4149914.52	1.27247	564345.25	4149906.71	1.35049
564364.65	4149898.30	1.40649	564431.86	4149906.11	1.96977
564471.86	4149906.11	2.08283	564491.86	4149906.11	2.01244
564511.86	4149906.11	1.94514	564531.86	4149906.11	1.88748
564551.86	4149906.11	1.81753	564691.86	4149906.11	1.05451
564711.86	4149906.11	0.93749	564751.86	4149906.11	0.78663
564771.86	4149906.11	0.72790	564791.86	4149906.11	0.67440
564231.86	4149926.11	0.73589	564271.86	4149926.11	0.95898
564291.86	4149926.11	1.10764	564451.86	4149926.11	2.36107
564571.86	4149926.11	1.98871	564611.86	4149926.11	1.71086
564631.86	4149926.11	1.59729	564651.86	4149926.11	1.48741
564711.86	4149926.11	1.06752	564751.86	4149926.11	0.86536
564791.86	4149926.11	0.72559	564831.86	4149926.11	0.61547
564851.86	4149926.11	0.57195	564871.86	4149926.11	0.53399
564951.86	4149926.11	0.41234	564334.86	4149953.32	1.61361
564351.86	4149946.11	1.69617	564371.86	4149946.11	1.85155
564451.86	4149946.11	2.64013	564491.86	4149946.11	2.76733

564511.86	4149946.11	2.66220	564531.86	4149946.11	2.55850
564591.86	4149946.11	2.14397	564611.86	4149946.11	1.99125
564651.86	4149946.11	1.70436	564671.86	4149946.11	1.54809

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ONSITE ***
INCLUDING SOURCE(S): 1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564711.86	4149946.11	1.18581	564751.86	4149946.11	0.93898
564831.86	4149946.11	0.65252	564911.86	4149946.11	0.48741
564931.86	4149946.11	0.45628	564237.27	4149957.10	0.85104
564257.27	4149957.10	0.98895	564277.27	4149957.10	1.14257
564297.27	4149957.10	1.31656	564391.86	4149966.11	2.24258
564456.88	4149957.18	2.86557	564498.55	4150002.37	4.02986
564511.86	4149966.11	2.96365	564531.86	4149966.11	2.85880
564551.86	4149966.11	2.78877	564651.86	4149966.11	1.92180
564671.86	4149966.11	1.71860	564711.86	4149966.11	1.29714
564751.86	4149966.11	1.01352	564891.86	4149966.11	0.54438
564314.19	4149956.67	1.45862	564351.86	4149986.11	2.09911
564391.86	4149986.11	2.55732	564462.46	4149977.74	3.36076
564491.86	4149986.11	3.57634	564511.86	4149986.11	3.38874
564561.90	4149993.36	3.38594	564591.86	4149986.11	2.87864
564611.86	4149986.11	2.60203	564631.86	4149986.11	2.34229
564651.86	4149986.11	2.06851	564711.86	4149986.11	1.38627
564751.86	4149986.11	1.08909	564223.28	4149998.90	0.88046
564243.28	4149998.90	1.04702	564263.28	4149998.90	1.23551
564283.28	4149998.90	1.44390	564304.65	4149997.70	1.67378
564322.85	4149998.90	1.89964	564351.86	4150006.11	2.37020
564400.87	4149995.29	2.84161	564404.05	4150016.33	3.35648
564494.09	4150018.38	4.70690	564551.86	4150015.04	4.20677
564591.86	4150006.11	3.35712	564691.86	4150006.11	1.71198
564731.86	4150006.11	1.32417	564211.86	4150026.11	0.86769
564271.86	4150026.11	1.49465	564311.86	4150026.11	2.04870
564351.86	4150026.11	2.70091	564371.86	4150026.11	3.04700
564411.86	4150026.11	3.77325	564490.74	4150037.27	5.91278
564545.72	4150032.25	5.16407	564591.86	4150026.11	3.93587
564691.86	4150026.11	1.90070	564731.86	4150026.11	1.44946
564231.86	4150046.11	1.12318	564251.86	4150046.11	1.36205
564271.86	4150046.11	1.64079	564291.86	4150046.11	1.94841
564331.86	4150046.11	2.68364	564351.86	4150046.11	3.12224
564371.86	4150046.11	3.56552	564411.86	4150046.11	4.50836
564489.07	4150053.36	7.41639	564544.61	4150050.57	6.27954
564591.86	4150046.11	4.58693	564671.86	4150046.11	2.50621
564711.86	4150046.11	1.85114	564251.86	4150066.11	1.47855
564311.86	4150066.11	2.58161	564331.86	4150066.11	3.07001

564351.86	4150066.11	3.62585	564391.86	4150066.11	4.97822
564411.86	4150066.11	5.97200	564551.86	4150066.11	6.64246
564591.86	4150066.11	5.13862	564651.86	4150066.11	3.43419

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ONSITE ***
INCLUDING SOURCE(S): 1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564701.05	4150086.46	2.63607	564711.86	4150066.11	2.09109
563891.86	4150086.11	0.12459	563911.86	4150086.11	0.13604
563950.37	4150092.06	0.16788	564231.86	4150086.11	1.29507
564251.86	4150086.11	1.60990	564291.86	4150086.11	2.42969
564311.86	4150086.11	2.92526	564371.86	4150086.11	5.09881
564391.86	4150086.11	6.80526	564551.86	4150086.11	7.38058
564611.86	4150086.11	5.24473	564631.86	4150086.11	4.72572
563891.86	4150106.11	0.12756	563922.30	4150104.53	0.14807
563957.57	4150126.91	0.17981	564211.86	4150106.11	1.06722
564231.86	4150106.11	1.38599	564271.86	4150106.11	2.21361
564331.86	4150106.11	4.02178	564351.86	4150106.11	5.04395
564549.63	4150120.06	10.11382	564571.86	4150106.11	7.55050
564594.49	4150116.61	7.47984	564626.95	4150120.55	6.90333
564652.52	4150113.33	5.49920	564681.05	4150098.89	3.57572
563891.86	4150126.11	0.12919	563911.86	4150126.11	0.14249
563943.63	4150137.99	0.16817	563914.09	4150047.60	0.13356
564191.86	4150126.11	0.81922	564231.86	4150126.11	1.46763
564251.86	4150126.11	1.93406	564311.86	4150126.11	3.84382
564331.86	4150126.11	4.78840	563891.86	4150146.11	0.12994
563911.86	4150146.11	0.14303	563937.34	4150153.65	0.16325
563923.49	4150066.48	0.14072	564171.86	4150146.11	0.62585
564211.86	4150146.11	1.09476	564231.86	4150146.11	1.53668
564271.86	4150146.11	2.81004	564291.86	4150146.11	3.60739
563891.86	4150166.11	0.12964	564171.86	4150166.11	0.60373
564191.86	4150166.11	0.77189	564211.86	4150166.11	1.06801
564251.86	4150166.11	2.36098	564271.86	4150166.11	3.28693
563888.20	4150187.48	0.12802	564231.86	4150186.11	1.63486
564251.86	4150186.11	2.73286	564211.86	4150206.11	0.93245
564231.86	4150206.11	1.74059	563891.86	4150226.11	0.12810
563907.06	4150220.40	0.13730	563971.86	4150286.11	0.12057
563991.86	4150286.11	0.13395	564131.86	4150286.11	0.27598
564151.86	4150286.11	0.31312	564851.86	4150286.11	0.51324
563891.86	4150306.11	0.08004	563955.34	4150115.05	0.17650
563991.86	4150306.11	0.12968	564011.86	4150306.11	0.14500
564121.92	4150313.34	0.24380	564171.86	4150306.11	0.36694
564310.92	4150485.44	0.65758	564791.86	4150306.11	0.55378
564831.86	4150306.11	0.48057	564851.86	4150306.11	0.44829

564971.86	4150306.11	0.30149	563891.86	4150326.11	0.07775
563931.86	4150326.11	0.08972	563951.86	4150326.11	0.09901
563971.86	4150326.11	0.11331	564011.86	4150326.11	0.14263

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ONSITE ***
INCLUDING SOURCE(S): 1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564031.86	4150326.11	0.15746	564131.86	4150326.11	0.25518
564171.86	4150326.11	0.35992	564791.86	4150326.11	0.46689
564831.86	4150326.11	0.41371	564851.86	4150326.11	0.38993
563891.86	4150346.11	0.07863	563911.86	4150346.11	0.08312
563931.86	4150346.11	0.08917	563971.86	4150346.11	0.11162
563991.86	4150346.11	0.12661	564038.31	4150337.98	0.16133
564064.63	4150346.11	0.18075	564091.86	4150346.11	0.20418
564131.86	4150346.11	0.25800	564171.86	4150346.11	0.36396
564811.86	4150346.11	0.37493	564831.86	4150346.11	0.35605
564851.86	4150346.11	0.33854	564871.86	4150346.11	0.32204
564891.86	4150346.11	0.30635	564136.85	4150387.80	0.28011
564092.70	4150415.81	0.25004	564107.28	4150388.70	0.23631
563971.86	4150366.11	0.11099	563991.86	4150366.11	0.12694
564071.44	4150383.28	0.20391	564158.31	4150376.05	0.32882
564851.86	4150366.11	0.29402	564871.86	4150366.11	0.28181
564692.82	4150376.54	0.43208	564786.14	4150380.74	0.30687
564746.14	4150400.74	0.29867	564726.14	4150420.74	0.27892
564806.14	4150420.74	0.22209	564866.14	4150420.74	0.19909
564886.14	4150420.74	0.19341	564786.14	4150440.74	0.20591
564806.14	4150440.74	0.19618	564846.14	4150440.74	0.18156
564866.14	4150440.74	0.17612	564786.14	4150460.74	0.18357
564846.14	4150460.74	0.16164	564766.14	4150480.74	0.17456
564826.14	4150480.74	0.15052	564866.14	4150480.74	0.14089
564766.14	4150500.74	0.15849	564806.14	4150500.74	0.14253
564826.14	4150500.74	0.13635	564746.14	4150520.74	0.15395
564806.14	4150520.74	0.13033	564746.14	4150540.74	0.14212
564786.14	4150540.74	0.12656	564726.14	4150560.74	0.14054
564746.14	4150560.74	0.13217	564786.14	4150560.74	0.11769
564726.14	4150580.74	0.13163	564786.14	4150580.74	0.11029
564547.13	4150306.35	2.21895	564542.54	4150342.35	1.40236
564531.95	4150355.41	1.29531	564523.13	4150362.82	1.26493
564510.42	4150375.52	1.15787	564502.31	4150385.76	1.07796
564488.19	4150393.52	1.03862	564476.54	4150406.58	0.97338
564454.66	4150412.93	0.94344	564435.96	4150431.29	0.86572
564420.07	4150459.52	0.73990	564613.12	4150405.17	0.46793
564601.12	4150418.23	0.44310	564591.59	4150427.40	0.43013
564579.95	4150436.23	0.42360	564565.83	4150445.05	0.42246

564553.83	4150453.52	0.41859	564539.01	4150460.58	0.42298
564533.01	4150470.81	0.40546	564511.13	4150478.22	0.41629
564608.89	4150458.81	0.32834	564604.65	4150472.22	0.30899

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ONSITE ***
INCLUDING SOURCE(S): 1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564595.48	4150481.05	0.30487	564323.57	4150502.65	0.61616
564320.61	4150516.63	0.57384	564315.10	4150529.75	0.51441
564301.97	4150541.19	0.46874	564288.43	4150553.47	0.43131
564568.73	4150497.15	0.30862	564542.90	4150507.74	0.31835
564534.01	4150514.51	0.31587	564458.64	4150533.14	0.34593
564445.52	4150537.38	0.34836	564429.00	4150554.31	0.33055
564412.91	4150566.17	0.32124	564399.36	4150575.91	0.31374
564532.32	4150566.17	0.24754	564269.98	4150359.33	0.72583
564281.85	4150416.92	0.75782	564287.61	4150440.67	0.74248
564296.25	4150479.18	0.67790	564279.34	4150466.23	0.72538
564257.74	4150463.35	0.70301	564217.43	4150431.67	0.75863
564201.95	4150449.31	0.65267	564195.96	4150403.26	0.54656
564172.05	4150425.18	0.43909	564152.62	4150445.60	0.38897
564133.73	4150451.59	0.35641	564106.33	4150438.64	0.28653
564061.00	4150433.16	0.26371	564067.47	4150456.58	0.29278
564083.91	4150471.02	0.31651	564098.86	4150476.00	0.33225
564120.28	4150488.96	0.39236	564138.21	4150490.45	0.44522
564160.13	4150483.48	0.50268	564206.46	4150488.96	0.46956
564257.77	4150529.81	0.46384	564244.32	4150548.24	0.41082
564236.35	4150567.17	0.37042	564237.35	4150574.64	0.35968
564242.33	4150585.10	0.34213	564261.26	4150587.59	0.34068
564275.70	4150591.58	0.33293	564287.66	4150601.54	0.31282
564303.60	4150599.55	0.31455	564316.06	4150593.07	0.32453
564335.48	4150597.56	0.30954	564346.94	4150597.56	0.30488
564360.89	4150594.57	0.30357	564344.45	4150556.71	0.40377
564374.84	4150593.07	0.29931	564392.77	4150584.60	0.30345
564184.54	4150627.94	0.26059	564172.58	4150595.56	0.28840
564161.13	4150544.25	0.33854	564118.29	4150563.68	0.28660
564098.36	4150642.89	0.21871	564518.31	4150570.66	0.25132
564498.88	4150573.64	0.25923	564453.55	4150583.61	0.27077
564430.13	4150599.05	0.26253	564424.65	4150612.50	0.24872
564423.66	4150626.95	0.23314	564418.18	4150641.39	0.22052
564539.73	4150604.03	0.20813	564532.26	4150626.45	0.19395
564514.82	4150650.86	0.18281	564562.64	4150585.60	0.21131
564469.34	4150074.74	10.98690	564341.64	4150484.35	0.67521
564256.01	4150516.32	0.48462	564270.56	4150544.16	0.45374
564355.97	4150472.98	0.72837	564386.66	4150495.12	0.57439

564374.96	4150513.47	0.51365	564381.91	4150534.03	0.42091
564365.78	4150540.36	0.41836	564420.51	4150503.66	0.45507
564402.79	4150472.98	0.67658	564213.70	4150540.86	0.38637

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ONSITE ***
INCLUDING SOURCE(S): 1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564209.07	4150575.89	0.33501	564149.83	4150594.95	0.27706
564136.43	4150608.35	0.25833	564125.10	4150619.16	0.24463
564147.77	4150634.10	0.24347	564269.85	4150637.71	0.25713
564202.88	4150628.44	0.26471	564167.86	4150634.10	0.25023
564285.82	4150646.47	0.24645	564300.76	4150654.71	0.23590
564176.86	4150464.17	0.55901	564232.02	4150318.48	0.68387
564471.46	4150572.80	0.27540	564472.66	4150619.50	0.22270
564515.76	4150611.12	0.21305	564476.25	4150656.61	0.19035
564094.38	4150577.18	0.25684	564070.43	4150589.73	0.23398
564050.84	4150581.89	0.22310	564033.20	4150574.05	0.21109
564007.72	4150552.50	0.19344	563995.96	4150540.74	0.18441
564039.08	4150415.32	0.22195	564011.64	4150419.24	0.18342
563933.26	4150438.84	0.11886	564390.91	4149768.55	0.80350
564397.08	4149757.44	0.76479	564331.69	4149759.91	0.62692
564503.17	4149784.58	0.99283	564543.88	4149772.25	0.88614
564514.27	4149756.21	0.85312	564550.05	4149743.87	0.77220
563941.13	4150036.18	0.15060	563964.26	4150046.33	0.17113
563968.77	4150039.00	0.17474	563984.56	4150023.77	0.18871
563994.71	4150010.24	0.19852	563999.79	4149995.57	0.20321
564613.12	4150405.17	0.45248	564601.12	4150418.23	0.42875
564591.59	4150427.40	0.41641	564579.95	4150436.23	0.41042
564565.83	4150445.05	0.40988	564553.83	4150453.52	0.40652
564539.01	4150460.58	0.41147	564533.01	4150470.81	0.39474
564511.13	4150478.22	0.40604	564608.89	4150458.81	0.31918
564604.65	4150472.22	0.30064	564595.48	4150481.05	0.29674
564568.73	4150497.15	0.30044	564542.90	4150507.74	0.31004
564534.01	4150514.51	0.30773			

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: OFFSITE ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564251.86	4149786.11	0.10509	564271.86	4149786.11	0.11322
564291.86	4149786.11	0.12246	564311.86	4149786.11	0.13328
564371.86	4149786.11	0.17760	564451.86	4149786.11	0.27069
564551.86	4149786.11	0.47681	564591.86	4149786.11	0.61598
564671.86	4149786.11	1.09497	564691.86	4149786.11	1.29679
564751.86	4149786.11	2.34469	564771.86	4149786.11	3.06888
564231.86	4149806.11	0.09901	564251.86	4149806.11	0.10680
564291.86	4149806.11	0.12460	564371.86	4149806.11	0.18129
564391.86	4149806.11	0.20329	564411.86	4149806.11	0.22729
564451.86	4149806.11	0.28487	564511.86	4149806.11	0.39605
564551.86	4149806.11	0.50550	564571.86	4149806.11	0.57680
564591.86	4149806.11	0.65225	564611.86	4149806.11	0.74123
564631.86	4149806.11	0.84792	564691.86	4149806.11	1.39599
564711.86	4149806.11	1.65143	564771.86	4149806.11	3.44073
564811.86	4149806.11	6.85252	564211.86	4149826.11	0.09247
564231.86	4149826.11	0.09978	564271.86	4149826.11	0.11651
564291.86	4149826.11	0.12661	564391.86	4149826.11	0.20956
564411.86	4149826.11	0.23427	564451.86	4149826.11	0.29720
564471.86	4149826.11	0.33497	564491.86	4149826.11	0.37666
564511.86	4149826.11	0.42553	564651.86	4149826.11	1.07834
564731.86	4149826.11	2.26292	564771.86	4149826.11	3.93262
564811.86	4149826.11	8.75566	564851.86	4149826.11	10.09519
564191.86	4149846.11	0.08650	564211.86	4149846.11	0.09316
564251.86	4149846.11	0.10867	564271.86	4149846.11	0.11770
564351.86	4149846.11	0.17060	564371.86	4149846.11	0.19080
564391.86	4149846.11	0.21382	564411.86	4149846.11	0.23946
564431.86	4149846.11	0.26988	564451.86	4149846.11	0.30603
564531.86	4149846.11	0.52009	564551.86	4149846.11	0.59227
564571.86	4149846.11	0.67149	564591.86	4149846.11	0.76026
564611.86	4149846.11	0.86487	564671.86	4149846.11	1.39303
564691.86	4149846.11	1.70812	564731.86	4149846.11	2.60275
564771.86	4149846.11	4.56379	564811.86	4149846.11	10.84640
564891.86	4149846.11	4.84419	564171.86	4149866.11	0.08099
564191.86	4149866.11	0.08713	564211.86	4149866.11	0.09380

564231.86	4149866.11	0.10115	564251.86	4149866.11	0.10932
564271.86	4149866.11	0.11868	564291.86	4149866.11	0.12959
564311.86	4149866.11	0.14253	564331.86	4149866.11	0.15686
564351.86	4149866.11	0.17290	564451.86	4149866.11	0.31077
564471.86	4149866.11	0.35396	564491.86	4149866.11	0.40781
564511.86	4149866.11	0.47943	564531.86	4149866.11	0.55538

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: OFFSITE ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564551.86	4149866.11	0.63245	564631.86	4149866.11	1.06891
564651.86	4149866.11	1.25560	564711.86	4149866.11	2.37068
564731.86	4149866.11	3.03205	564771.86	4149866.11	5.45689
564791.86	4149866.11	8.02091	564811.86	4149866.11	13.47228
564851.86	4149866.11	10.37613	564891.86	4149866.11	4.89683
564231.86	4149886.11	0.10161	564251.86	4149886.11	0.10994
564271.86	4149886.11	0.11937	564291.86	4149886.11	0.13019
564392.29	4149887.91	0.21637	564431.86	4149886.11	0.27648
564651.86	4149886.11	1.31621	564671.86	4149886.11	1.55653
564691.86	4149886.11	1.88937	564751.86	4149886.11	4.39349
564771.86	4149886.11	6.16022	564851.86	4149886.11	9.70194
564871.86	4149886.11	6.47035	564931.86	4149886.11	2.85793
564951.86	4149886.11	2.33156	564231.86	4149906.11	0.10196
564303.45	4149918.73	0.13906	564324.65	4149914.52	0.15354
564345.25	4149906.71	0.16895	564364.65	4149898.30	0.18554
564431.86	4149906.11	0.27814	564471.86	4149906.11	0.36793
564491.86	4149906.11	0.42468	564511.86	4149906.11	0.48307
564531.86	4149906.11	0.54279	564551.86	4149906.11	0.60987
564691.86	4149906.11	1.85981	564711.86	4149906.11	2.50826
564751.86	4149906.11	4.68026	564771.86	4149906.11	6.83583
564791.86	4149906.11	10.88681	564891.86	4149906.11	4.33840
564911.86	4149906.11	3.38105	564231.86	4149926.11	0.10221
564271.86	4149926.11	0.12041	564291.86	4149926.11	0.13218
564451.86	4149926.11	0.32100	564571.86	4149926.11	0.70805
564611.86	4149926.11	0.95990	564631.86	4149926.11	1.09705
564651.86	4149926.11	1.25415	564711.86	4149926.11	2.44353
564751.86	4149926.11	4.84077	564791.86	4149926.11	13.63643
564831.86	4149926.11	10.87539	564851.86	4149926.11	7.07469
564871.86	4149926.11	5.11161	564951.86	4149926.11	2.08295
564971.86	4149926.11	1.75455	564334.86	4149953.32	0.16231
564351.86	4149946.11	0.17616	564371.86	4149946.11	0.19479
564451.86	4149946.11	0.32112	564491.86	4149946.11	0.42478
564511.86	4149946.11	0.47771	564531.86	4149946.11	0.54330
564591.86	4149946.11	0.84503	564611.86	4149946.11	0.97722

564651.86	4149946.11	1.29782	564671.86	4149946.11	1.54083
564711.86	4149946.11	2.59366	564751.86	4149946.11	5.44536
564831.86	4149946.11	8.74766	564911.86	4149946.11	2.75070
564931.86	4149946.11	2.27985	564237.27	4149957.10	0.10502
564257.27	4149957.10	0.11409	564277.27	4149957.10	0.12440
564297.27	4149957.10	0.13628	564391.86	4149966.11	0.21733

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: OFFSITE ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564456.88	4149957.18	0.33294	564498.55	4150002.37	0.45032
564511.86	4149966.11	0.47751	564531.86	4149966.11	0.54694
564551.86	4149966.11	0.63563	564651.86	4149966.11	1.40126
564671.86	4149966.11	1.69391	564711.86	4149966.11	2.89011
564751.86	4149966.11	6.46216	564891.86	4149966.11	3.01257
564951.86	4149966.11	1.77678	564971.86	4149966.11	1.52981
564314.19	4149956.67	0.14725	564351.86	4149986.11	0.17724
564391.86	4149986.11	0.21887	564462.46	4149977.74	0.34849
564491.86	4149986.11	0.42611	564511.86	4149986.11	0.48327
564561.90	4149993.36	0.71978	564591.86	4149986.11	0.92802
564611.86	4149986.11	1.11004	564631.86	4149986.11	1.32371
564651.86	4149986.11	1.61319	564711.86	4149986.11	3.50281
564751.86	4149986.11	8.42179	564871.86	4149986.11	3.35289
564911.86	4149986.11	2.22730	564931.86	4149986.11	1.90720
564223.28	4149998.90	0.10009	564243.28	4149998.90	0.10848
564263.28	4149998.90	0.11797	564283.28	4149998.90	0.12868
564304.65	4149997.70	0.14164	564322.85	4149998.90	0.15418
564351.86	4150006.11	0.17805	564400.87	4149995.29	0.23115
564404.05	4150016.33	0.23715	564494.09	4150018.38	0.44277
564551.86	4150015.04	0.69314	564591.86	4150006.11	0.98258
564691.86	4150006.11	3.12903	564731.86	4150006.11	6.66729
564911.86	4150006.11	2.05684	564971.86	4150006.11	1.32493
564211.86	4150026.11	0.09619	564271.86	4150026.11	0.12274
564311.86	4150026.11	0.14701	564351.86	4150026.11	0.17898
564371.86	4150026.11	0.19877	564411.86	4150026.11	0.24952
564490.74	4150037.27	0.44291	564545.72	4150032.25	0.68723
564591.86	4150026.11	1.04185	564691.86	4150026.11	3.77239
564731.86	4150026.11	9.18139	564931.86	4150026.11	1.65591
564951.86	4150026.11	1.43508	564971.86	4150026.11	1.24139
564231.86	4150046.11	0.10412	564251.86	4150046.11	0.11290
564271.86	4150046.11	0.12297	564291.86	4150046.11	0.13434
564331.86	4150046.11	0.16250	564351.86	4150046.11	0.18015
564371.86	4150046.11	0.20040	564411.86	4150046.11	0.25224
564489.07	4150053.36	0.44719	564544.61	4150050.57	0.71883

564591.86	4150046.11	1.11237	564671.86	4150046.11	3.11079
564711.86	4150046.11	7.12844	564951.86	4150046.11	1.34723
564971.86	4150046.11	1.17796	564251.86	4150066.11	0.11304
564311.86	4150066.11	0.14775	564331.86	4150066.11	0.16317
564351.86	4150066.11	0.18115	564391.86	4150066.11	0.22761
564411.86	4150066.11	0.25893	564551.86	4150066.11	0.81010

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: OFFSITE ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564591.86	4150066.11	1.21355	564651.86	4150066.11	2.53058
564701.05	4150086.46	7.92789	564711.86	4150066.11	8.96432
564971.86	4150066.11	1.12182	563891.86	4150086.11	0.04617
563911.86	4150086.11	0.04750	563950.37	4150092.06	0.04855
564231.86	4150086.11	0.10448	564251.86	4150086.11	0.11319
564291.86	4150086.11	0.13485	564311.86	4150086.11	0.14809
564371.86	4150086.11	0.20386	564391.86	4150086.11	0.23334
564551.86	4150086.11	0.87145	564611.86	4150086.11	1.69089
564631.86	4150086.11	2.14516	563891.86	4150106.11	0.04465
563922.30	4150104.53	0.04592	563957.57	4150126.91	0.04850
564211.86	4150106.11	0.09667	564231.86	4150106.11	0.10458
564271.86	4150106.11	0.12344	564331.86	4150106.11	0.16372
564351.86	4150106.11	0.18285	564549.63	4150120.06	1.00132
564571.86	4150106.11	1.19612	564594.49	4150116.61	1.70408
564626.95	4150120.55	2.74969	564652.52	4150113.33	3.63678
564681.05	4150098.89	5.42041	563891.86	4150126.11	0.04403
563911.86	4150126.11	0.04499	563943.63	4150137.99	0.04718
563914.09	4150047.60	0.04738	564191.86	4150126.11	0.08942
564231.86	4150126.11	0.10449	564251.86	4150126.11	0.11346
564311.86	4150126.11	0.14849	564331.86	4150126.11	0.16403
564140.38	4150196.22	0.07491	563891.86	4150146.11	0.04367
563911.86	4150146.11	0.04491	563937.34	4150153.65	0.04660
563923.49	4150066.48	0.04891	564171.86	4150146.11	0.08336
564211.86	4150146.11	0.09614	564231.86	4150146.11	0.10426
564271.86	4150146.11	0.12371	564291.86	4150146.11	0.13529
564169.34	4150215.64	0.08155	564155.44	4150207.02	0.07822
563891.86	4150166.11	0.04351	564171.86	4150166.11	0.08325
564191.86	4150166.11	0.08889	564211.86	4150166.11	0.09565
564251.86	4150166.11	0.11352	564271.86	4150166.11	0.12386
564184.40	4150229.32	0.08556	563888.20	4150187.48	0.04247
564231.86	4150186.11	0.10352	564251.86	4150186.11	0.11352
564195.43	4150243.00	0.08866	564211.86	4150206.11	0.09473
564231.86	4150206.11	0.10318	563891.86	4150226.11	0.04134
563907.06	4150220.40	0.04280	564211.75	4150254.84	0.09406

564751.86	4150226.11	4.21002	564771.86	4150226.11	3.34470
564791.86	4150226.11	2.72876	564971.86	4150226.11	0.84438
564691.86	4150246.11	10.61774	564751.86	4150246.11	4.08859
564771.86	4150246.11	3.25045	564931.86	4150246.11	0.99434
564951.86	4150246.11	0.89729	564971.86	4150246.11	0.81740
564751.86	4150266.11	3.96775	564771.86	4150266.11	3.15739

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: OFFSITE ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564791.86	4150266.11	2.57376	564931.86	4150266.11	0.96298
564951.86	4150266.11	0.86933	564971.86	4150266.11	0.79054
563971.86	4150286.11	0.04720	563991.86	4150286.11	0.04965
564131.86	4150286.11	0.07043	564151.86	4150286.11	0.07387
564702.79	4150281.91	8.24930	564731.86	4150286.11	4.97202
564751.86	4150286.11	3.82109	564771.86	4150286.11	3.04180
564791.86	4150286.11	2.48062	564811.86	4150286.11	2.06226
564851.86	4150286.11	1.50604	564931.86	4150286.11	0.93237
564971.86	4150286.11	0.76649	563891.86	4150306.11	0.03877
563955.34	4150115.05	0.04838	563991.86	4150306.11	0.04933
564011.86	4150306.11	0.05197	564121.92	4150313.34	0.06736
564171.86	4150306.11	0.07785	564310.92	4150485.44	0.15680
564702.79	4150301.91	8.02758	564751.86	4150306.11	3.66106
564771.86	4150306.11	2.91094	564791.86	4150306.11	2.37332
564831.86	4150306.11	1.67560	564851.86	4150306.11	1.44964
564891.86	4150306.11	1.12166	564951.86	4150306.11	0.81490
564971.86	4150306.11	0.74380	563891.86	4150326.11	0.03844
563931.86	4150326.11	0.04168	563951.86	4150326.11	0.04387
563971.86	4150326.11	0.04657	564011.86	4150326.11	0.05171
564031.86	4150326.11	0.05438	564131.86	4150326.11	0.06836
564171.86	4150326.11	0.07745	564702.79	4150321.91	7.69629
564751.86	4150326.11	3.47971	564791.86	4150326.11	2.24876
564831.86	4150326.11	1.60074	564851.86	4150326.11	1.39055
564891.86	4150326.11	1.08506	564931.86	4150326.11	0.87511
564951.86	4150326.11	0.79431	564971.86	4150326.11	0.72509
563891.86	4150346.11	0.03855	563911.86	4150346.11	0.03996
563931.86	4150346.11	0.04159	563971.86	4150346.11	0.04632
563991.86	4150346.11	0.04889	564038.31	4150337.98	0.05509
564064.63	4150346.11	0.05851	564091.86	4150346.11	0.06209
564131.86	4150346.11	0.06824	564171.86	4150346.11	0.07822
564698.54	4150341.91	7.72357	564751.86	4150346.11	3.24310
564771.86	4150346.11	2.58321	564811.86	4150346.11	1.77830
564831.86	4150346.11	1.52189	564851.86	4150346.11	1.32812
564871.86	4150346.11	1.17281	564891.86	4150346.11	1.04346

564931.86	4150346.11	0.84421	564951.86	4150346.11	0.76731
564136.85	4150387.80	0.07013	564092.70	4150415.81	0.06374
564107.28	4150388.70	0.06486	563971.86	4150366.11	0.04610
563991.86	4150366.11	0.04871	564071.44	4150383.28	0.05991
564158.31	4150376.05	0.07537	564698.54	4150361.91	6.89822
564751.86	4150366.11	2.97904	564771.86	4150366.11	2.39002

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: OFFSITE ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564851.86	4150366.11	1.25948	564871.86	4150366.11	1.11679
564911.86	4150366.11	0.89204	564931.86	4150366.11	0.80777
564971.86	4150366.11	0.66874	564692.82	4150376.54	7.05041
564746.14	4150380.74	2.97684	564786.14	4150380.74	1.95961
564806.14	4150380.74	1.65583	564906.14	4150380.74	0.88223
564926.14	4150380.74	0.79865	564946.14	4150380.74	0.72601
564686.14	4150400.74	6.80432	564726.14	4150400.74	3.47082
564746.14	4150400.74	2.69460	564826.14	4150400.74	1.31979
564926.14	4150400.74	0.75040	564686.14	4150420.74	5.88784
564726.14	4150420.74	3.08184	564806.14	4150420.74	1.39690
564866.14	4150420.74	0.95803	564886.14	4150420.74	0.85613
564906.14	4150420.74	0.76817	564946.14	4150420.74	0.63546
564966.14	4150420.74	0.57863	564666.14	4150440.74	7.64403
564686.14	4150440.74	5.03865	564726.14	4150440.74	2.69082
564786.14	4150440.74	1.46856	564806.14	4150440.74	1.26962
564846.14	4150440.74	0.98573	564866.14	4150440.74	0.87855
564946.14	4150440.74	0.58474	564666.14	4150460.74	6.26250
564686.14	4150460.74	4.19731	564726.14	4150460.74	2.29557
564786.14	4150460.74	1.30208	564846.14	4150460.74	0.89111
564906.14	4150460.74	0.64548	564926.14	4150460.74	0.58478
564666.14	4150480.74	4.84224	564706.14	4150480.74	2.43498
564726.14	4150480.74	1.89664	564766.14	4150480.74	1.32463
564826.14	4150480.74	0.89082	564866.14	4150480.74	0.71083
564886.14	4150480.74	0.63905	564906.14	4150480.74	0.57676
564966.14	4150480.74	0.43312	564666.14	4150500.74	3.27513
564706.14	4150500.74	1.85301	564766.14	4150500.74	1.11746
564806.14	4150500.74	0.86961	564826.14	4150500.74	0.77574
564866.14	4150500.74	0.62252	564886.14	4150500.74	0.56048
564946.14	4150500.74	0.41596	564966.14	4150500.74	0.37718
564646.14	4150520.74	2.64897	564706.14	4150520.74	1.34852
564746.14	4150520.74	1.03101	564806.14	4150520.74	0.73874
564866.14	4150520.74	0.53693	564906.14	4150520.74	0.43769
564926.14	4150520.74	0.39716	564946.14	4150520.74	0.35687
564646.14	4150540.74	1.50760	564686.14	4150540.74	1.11269

564706.14	4150540.74	0.98369	564746.14	4150540.74	0.80722
564786.14	4150540.74	0.67884	564846.14	4150540.74	0.50980
564906.14	4150540.74	0.36851	564966.14	4150540.74	0.27922
564626.14	4150560.74	1.23678	564686.14	4150560.74	0.81669
564726.14	4150560.74	0.68139	564746.14	4150560.74	0.63294
564786.14	4150560.74	0.56240	564846.14	4150560.74	0.43431

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: OFFSITE ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564906.14	4150560.74	0.30992	564626.14	4150580.74	0.90692
564666.14	4150580.74	0.72041	564686.14	4150580.74	0.64614
564726.14	4150580.74	0.54269	564786.14	4150580.74	0.47111
564826.14	4150580.74	0.40864	564886.14	4150580.74	0.29770
564906.14	4150580.74	0.26298	564946.14	4150580.74	0.23332
564966.14	4150580.74	0.22524	564547.13	4150306.35	0.95399
564542.54	4150342.35	0.89988	564531.95	4150355.41	0.78121
564523.13	4150362.82	0.69719	564510.42	4150375.52	0.60632
564502.31	4150385.76	0.55575	564488.19	4150393.52	0.47871
564476.54	4150406.58	0.43394	564454.66	4150412.93	0.36321
564435.96	4150431.29	0.31942	564420.07	4150459.52	0.29269
564613.12	4150405.17	5.39304	564601.12	4150418.23	4.13554
564591.59	4150427.40	3.28017	564579.95	4150436.23	2.39161
564565.83	4150445.05	1.66283	564553.83	4150453.52	1.30793
564539.01	4150460.58	1.00818	564533.01	4150470.81	0.93122
564511.13	4150478.22	0.71260	564608.89	4150458.81	7.78909
564604.65	4150472.22	6.85463	564595.48	4150481.05	4.40022
564323.57	4150502.65	0.16845	564320.61	4150516.63	0.16755
564315.10	4150529.75	0.16618	564301.97	4150541.19	0.15888
564288.43	4150553.47	0.15153	564568.73	4150497.15	1.90206
564542.90	4150507.74	1.16912	564534.01	4150514.51	1.02994
564458.64	4150533.14	0.50419	564445.52	4150537.38	0.45349
564429.00	4150554.31	0.39653	564412.91	4150566.17	0.35192
564399.36	4150575.91	0.32041	564532.32	4150566.17	0.92191
564269.98	4150359.33	0.11922	564281.85	4150416.92	0.13225
564287.61	4150440.67	0.13794	564296.25	4150479.18	0.14640
564279.34	4150466.23	0.13596	564257.74	4150463.35	0.12650
564217.43	4150431.67	0.10503	564201.95	4150449.31	0.09745
564195.96	4150403.26	0.09178	564172.05	4150425.18	0.08360
564152.62	4150445.60	0.07797	564133.73	4150451.59	0.07312
564106.33	4150438.64	0.06654	564061.00	4150433.16	0.05932
564067.47	4150456.58	0.06037	564083.91	4150471.02	0.06301
564098.86	4150476.00	0.06571	564120.28	4150488.96	0.07106
564138.21	4150490.45	0.07637	564160.13	4150483.48	0.08340

564206.46	4150488.96	0.11604	564257.77	4150529.81	0.13367
564244.32	4150548.24	0.13028	564236.35	4150567.17	0.13019
564237.35	4150574.64	0.13120	564242.33	4150585.10	0.13731
564261.26	4150587.59	0.14901	564275.70	4150591.58	0.16102
564287.66	4150601.54	0.17789	564303.60	4150599.55	0.18869
564316.06	4150593.07	0.19423	564335.48	4150597.56	0.21988

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: OFFSITE ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC	
564346.94	4150597.56	0.23560	564360.89	4150594.57	0.25534	
564344.45	4150556.71	0.19992	564374.84	4150593.07	0.27833	
564392.77	4150584.60	0.30870	564184.54	4150627.94	0.13887	
564172.58	4150595.56	0.12602	564161.13	4150544.25	0.10708	
564118.29	4150563.68	0.09415	564098.36	4150642.89	0.10587	
564518.31	4150570.66	0.81467	564498.88	4150573.64	0.68987	
564453.55	4150583.61	0.48824	564430.13	4150599.05	0.41373	
564424.65	4150612.50	0.39697	564423.66	4150626.95	0.38472	
564418.18	4150641.39	0.36065	564539.73	4150604.03	0.73033	
564532.26	4150626.45	0.59322	564514.82	4150650.86	0.47550	
564562.64	4150585.60	0.93841	564613.96	4150596.06	0.79435	
564602.50	4150618.48	0.64474	564469.34	4150074.74	0.39401	Residential MER
564341.64	4150484.35	0.18391	564256.01	4150516.32	0.13387	
564270.56	4150544.16	0.13873	564355.97	4150472.98	0.19974	
564386.66	4150495.12	0.24568	564374.96	4150513.47	0.23047	
564381.91	4150534.03	0.25494	564365.78	4150540.36	0.23109	
564420.51	4150503.66	0.34402	564402.79	4150472.98	0.26649	
564213.70	4150540.86	0.12561	564209.07	4150575.89	0.12777	
564149.83	4150594.95	0.11777	564136.43	4150608.35	0.11655	
564125.10	4150619.16	0.11434	564147.77	4150634.10	0.12400	
564269.85	4150637.71	0.19693	564202.88	4150628.44	0.14789	
564167.86	4150634.10	0.13210	564285.82	4150646.47	0.20981	
564300.76	4150654.71	0.22192	564176.86	4150464.17	0.08815	
564232.02	4150318.48	0.09954	564471.46	4150572.80	0.55907	
564472.66	4150619.50	0.49457	564515.76	4150611.12	0.62970	
564476.25	4150656.61	0.41555	564094.38	4150577.18	0.09290	
564070.43	4150589.73	0.08668	564050.84	4150581.89	0.07996	
564033.20	4150574.05	0.07564	564007.72	4150552.50	0.06699	
563995.96	4150540.74	0.06266	564039.08	4150415.32	0.05594	
564011.64	4150419.24	0.05173	563933.26	4150438.84	0.04208	
564390.91	4149768.55	0.19183	564397.08	4149757.44	0.19418	
564331.69	4149759.91	0.14253	564503.17	4149784.58	0.35273	
564543.88	4149772.25	0.43694	564514.27	4149756.21	0.34906	
564550.05	4149743.87	0.41818	563941.13	4150036.18	0.04897	

563964.26	4150046.33	0.05088	563968.77	4150039.00	0.05096
563984.56	4150023.77	0.05227	563994.71	4150010.24	0.05311
563999.79	4149995.57	0.05316	564867.28	4150261.18	1.41458
564874.65	4150255.78	1.35916	564883.01	4150250.37	1.29928
564889.89	4150245.46	1.25619	564942.96	4150213.02	0.99006
564929.69	4150177.15	1.12871	564951.81	4150171.74	1.01475

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: OFFSITE ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC		X-COORD (M)	Y-COORD (M)	CONC
564976.38	4150162.41	0.90939		564968.02	4150125.06	1.01317
564944.93	4150127.51	1.14672		564922.81	4150132.92	1.28869
564900.70	4150139.80	1.45342		564916.92	4150107.86	1.42352
564948.37	4150100.98	1.19296		564822.56	4150131.94	2.76317
564803.89	4150144.71	3.13177		564790.62	4150157.98	3.37397
564772.44	4150172.23	3.87726		564756.22	4150187.96	4.42853
564739.02	4150186.98	5.68516	School MER	564748.85	4150173.71	5.27185
564762.61	4150162.90	4.61042		564763.59	4150145.70	5.07396
564775.38	4150130.95	4.77780		564785.21	4150117.69	4.56998
564794.06	4150103.43	4.48564		564251.86	4149786.11	0.10291
564271.86	4149786.11	0.11083		564291.86	4149786.11	0.11981
564311.86	4149786.11	0.13034		564371.86	4149786.11	0.17336
564451.86	4149786.11	0.26275		564551.86	4149786.11	0.45690
564591.86	4149786.11	0.58542		564671.86	4149786.11	1.01703
564691.86	4149786.11	1.19478		564751.86	4149786.11	2.08037
564771.86	4149786.11	2.75427		564231.86	4149806.11	0.09692
564251.86	4149806.11	0.10450		564291.86	4149806.11	0.12180
564371.86	4149806.11	0.17677		564391.86	4149806.11	0.19799
564411.86	4149806.11	0.22103		564451.86	4149806.11	0.27589
564511.86	4149806.11	0.38103		564551.86	4149806.11	0.48313
564571.86	4149806.11	0.54895		564591.86	4149806.11	0.61842
564611.86	4149806.11	0.69978		564631.86	4149806.11	0.79634
564691.86	4149806.11	1.27882		564711.86	4149806.11	1.49604
564771.86	4149806.11	2.93113		564811.86	4149806.11	6.12213
564211.86	4149826.11	0.09049		564231.86	4149826.11	0.09761
564271.86	4149826.11	0.11386		564291.86	4149826.11	0.12367
564391.86	4149826.11	0.20383		564411.86	4149826.11	0.22750
564451.86	4149826.11	0.28729		564471.86	4149826.11	0.32303
564491.86	4149826.11	0.36230		564511.86	4149826.11	0.40802
564651.86	4149826.11	1.00097		564731.86	4149826.11	1.99749
564771.86	4149826.11	3.26556		564811.86	4149826.11	7.68381
564191.86	4149846.11	0.08464		564211.86	4149846.11	0.09111
564251.86	4149846.11	0.10616		564271.86	4149846.11	0.11492
564351.86	4149846.11	0.16615		564371.86	4149846.11	0.18563

564391.86	4149846.11	0.20774	564411.86	4149846.11	0.23227
564431.86	4149846.11	0.26120	564451.86	4149846.11	0.29542
564531.86	4149846.11	0.49505	564551.86	4149846.11	0.56175
564571.86	4149846.11	0.63459	564591.86	4149846.11	0.71568
564611.86	4149846.11	0.81032	564671.86	4149846.11	1.27395
564691.86	4149846.11	1.54295	564731.86	4149846.11	2.26575

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: OFFSITE ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564771.86	4149846.11	3.70013	564811.86	4149846.11	9.19200
564171.86	4149866.11	0.07925	564191.86	4149866.11	0.08521
564211.86	4149866.11	0.09168	564231.86	4149866.11	0.09880
564251.86	4149866.11	0.10672	564271.86	4149866.11	0.11578
564291.86	4149866.11	0.12635	564311.86	4149866.11	0.13889
564331.86	4149866.11	0.15274	564351.86	4149866.11	0.16822
564451.86	4149866.11	0.29972	564471.86	4149866.11	0.34044
564491.86	4149866.11	0.39075	564511.86	4149866.11	0.45680
564531.86	4149866.11	0.52677	564551.86	4149866.11	0.59778
564631.86	4149866.11	0.99130	564651.86	4149866.11	1.15441
564711.86	4149866.11	2.08534	564731.86	4149866.11	2.60098
564771.86	4149866.11	4.33182	564791.86	4149866.11	6.02247
564811.86	4149866.11	10.19545	564231.86	4149886.11	0.09918
564251.86	4149886.11	0.10724	564271.86	4149886.11	0.11635
564291.86	4149886.11	0.12682	564392.29	4149887.91	0.20977
564431.86	4149886.11	0.26711	564651.86	4149886.11	1.20562
564671.86	4149886.11	1.40920	564691.86	4149886.11	1.68291
564751.86	4149886.11	3.54855	564771.86	4149886.11	4.69487
564851.86	4149886.11	7.78387	564871.86	4149886.11	5.60073
564231.86	4149906.11	0.09945	564303.45	4149918.73	0.13519
564324.65	4149914.52	0.14917	564345.25	4149906.71	0.16406
564364.65	4149898.30	0.18008	564431.86	4149906.11	0.26841
564471.86	4149906.11	0.35299	564491.86	4149906.11	0.40605
564511.86	4149906.11	0.46044	564531.86	4149906.11	0.51590
564551.86	4149906.11	0.57781	564691.86	4149906.11	1.65500
564711.86	4149906.11	2.16231	564751.86	4149906.11	3.67568
564771.86	4149906.11	4.97646	564791.86	4149906.11	7.41346
564231.86	4149926.11	0.09961	564271.86	4149926.11	0.11717
564291.86	4149926.11	0.12852	564451.86	4149926.11	0.30863
564571.86	4149926.11	0.66709	564611.86	4149926.11	0.89320
564631.86	4149926.11	1.01434	564651.86	4149926.11	1.15132
564711.86	4149926.11	2.10866	564751.86	4149926.11	3.71175
564791.86	4149926.11	8.88771	564831.86	4149926.11	9.61568
564851.86	4149926.11	6.79681	564871.86	4149926.11	5.11373

564951.86	4149926.11	2.13814	564334.86	4149953.32	0.15726
564351.86	4149946.11	0.17060	564371.86	4149946.11	0.18842
564451.86	4149946.11	0.30839	564491.86	4149946.11	0.40553
564511.86	4149946.11	0.45493	564531.86	4149946.11	0.51573
564591.86	4149946.11	0.79046	564611.86	4149946.11	0.90869
564651.86	4149946.11	1.19057	564671.86	4149946.11	1.39785

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: OFFSITE ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564711.86	4149946.11	2.22495	564751.86	4149946.11	4.05099
564831.86	4149946.11	8.39249	564911.86	4149946.11	2.83787
564931.86	4149946.11	2.35772	564237.27	4149957.10	0.10220
564257.27	4149957.10	0.11093	564277.27	4149957.10	0.12084
564297.27	4149957.10	0.13227	564391.86	4149966.11	0.20969
564456.88	4149957.18	0.31930	564498.55	4150002.37	0.42820
564511.86	4149966.11	0.45441	564531.86	4149966.11	0.51882
564551.86	4149966.11	0.60037	564651.86	4149966.11	1.27959
564671.86	4149966.11	1.52595	564711.86	4149966.11	2.44730
564751.86	4149966.11	4.62479	564891.86	4149966.11	3.03727
564314.19	4149956.67	0.14280	564351.86	4149986.11	0.17122
564391.86	4149986.11	0.21088	564462.46	4149977.74	0.33350
564491.86	4149986.11	0.40598	564511.86	4149986.11	0.45936
564561.90	4149993.36	0.67670	564591.86	4149986.11	0.86386
564611.86	4149986.11	1.02465	564631.86	4149986.11	1.21019
564651.86	4149986.11	1.45463	564711.86	4149986.11	2.87643
564751.86	4149986.11	5.72884	564223.28	4149998.90	0.09727
564243.28	4149998.90	0.10533	564263.28	4149998.90	0.11443
564283.28	4149998.90	0.12470	564304.65	4149997.70	0.13710
564322.85	4149998.90	0.14908	564351.86	4150006.11	0.17178
564400.87	4149995.29	0.22243	564404.05	4150016.33	0.22781
564494.09	4150018.38	0.42075	564551.86	4150015.04	0.65181
564591.86	4150006.11	0.91191	564691.86	4150006.11	2.61477
564731.86	4150006.11	4.82226	564211.86	4150026.11	0.09340
564271.86	4150026.11	0.11883	564311.86	4150026.11	0.14200
564351.86	4150026.11	0.17245	564371.86	4150026.11	0.19127
564411.86	4150026.11	0.23937	564490.74	4150037.27	0.42029
564545.72	4150032.25	0.64551	564591.86	4150026.11	0.96396
564691.86	4150026.11	3.05147	564731.86	4150026.11	6.28729
564231.86	4150046.11	0.10089	564251.86	4150046.11	0.10929
564271.86	4150046.11	0.11890	564291.86	4150046.11	0.12975
564331.86	4150046.11	0.15657	564351.86	4150046.11	0.17334
564371.86	4150046.11	0.19256	564411.86	4150046.11	0.24162
564489.07	4150053.36	0.42370	564544.61	4150050.57	0.67285

564591.86	4150046.11	1.02534	564671.86	4150046.11	2.59518
564711.86	4150046.11	5.08135	564251.86	4150066.11	0.10930
564311.86	4150066.11	0.14235	564331.86	4150066.11	0.15700
564351.86	4150066.11	0.17406	564391.86	4150066.11	0.21805
564411.86	4150066.11	0.24758	564551.86	4150066.11	0.75375
564591.86	4150066.11	1.11116	564651.86	4150066.11	2.18208

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: OFFSITE ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564701.05	4150086.46	5.39279	564711.86	4150066.11	6.02127
563891.86	4150086.11	0.04407	563911.86	4150086.11	0.04542
563950.37	4150092.06	0.04705	564231.86	4150086.11	0.10102
564251.86	4150086.11	0.10931	564291.86	4150086.11	0.12991
564311.86	4150086.11	0.14249	564371.86	4150086.11	0.19533
564391.86	4150086.11	0.22314	564551.86	4150086.11	0.80581
564611.86	4150086.11	1.51370	564631.86	4150086.11	1.88730
563891.86	4150106.11	0.04283	563922.30	4150104.53	0.04442
563957.57	4150126.91	0.04717	564211.86	4150106.11	0.09347
564231.86	4150106.11	0.10100	564271.86	4150106.11	0.11893
564331.86	4150106.11	0.15711	564351.86	4150106.11	0.17521
564549.63	4150120.06	0.91193	564571.86	4150106.11	1.08470
564594.49	4150116.61	1.50545	564626.95	4150120.55	2.32332
564652.52	4150113.33	2.97775	564681.05	4150098.89	4.07328
563891.86	4150126.11	0.04236	563911.86	4150126.11	0.04349
563943.63	4150137.99	0.04584	563914.09	4150047.60	0.04537
564191.86	4150126.11	0.08647	564231.86	4150126.11	0.10081
564251.86	4150126.11	0.10933	564311.86	4150126.11	0.14252
564331.86	4150126.11	0.15721	563891.86	4150146.11	0.04207
563911.86	4150146.11	0.04342	563937.34	4150153.65	0.04525
563923.49	4150066.48	0.04675	564171.86	4150146.11	0.08063
564211.86	4150146.11	0.09277	564231.86	4150146.11	0.10049
564271.86	4150146.11	0.11893	564291.86	4150146.11	0.12988
563891.86	4150166.11	0.04193	564171.86	4150166.11	0.08044
564191.86	4150166.11	0.08579	564211.86	4150166.11	0.09221
564251.86	4150166.11	0.10918	564271.86	4150166.11	0.11895
563888.20	4150187.48	0.04106	564231.86	4150186.11	0.09959
564251.86	4150186.11	0.10908	564211.86	4150206.11	0.09115
564231.86	4150206.11	0.09917	563891.86	4150226.11	0.04020
563907.06	4150220.40	0.04162	563971.86	4150286.11	0.04578
563991.86	4150286.11	0.04812	564131.86	4150286.11	0.06777
564151.86	4150286.11	0.07100	564851.86	4150286.11	1.56778
563891.86	4150306.11	0.03767	563955.34	4150115.05	0.04704
563991.86	4150306.11	0.04778	564011.86	4150306.11	0.05030

564121.92	4150313.34	0.06478	564171.86	4150306.11	0.07468
564310.92	4150485.44	0.14717	564791.86	4150306.11	2.47893
564831.86	4150306.11	1.74739	564851.86	4150306.11	1.50968
564971.86	4150306.11	0.76335	563891.86	4150326.11	0.03731
563931.86	4150326.11	0.04040	563951.86	4150326.11	0.04250
563971.86	4150326.11	0.04511	564011.86	4150326.11	0.05002

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: OFFSITE ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564031.86	4150326.11	0.05256	564131.86	4150326.11	0.06567
564171.86	4150326.11	0.07424	564791.86	4150326.11	2.34354
564831.86	4150326.11	1.66938	564851.86	4150326.11	1.44790
563891.86	4150346.11	0.03741	563911.86	4150346.11	0.03874
563931.86	4150346.11	0.04029	563971.86	4150346.11	0.04484
563991.86	4150346.11	0.04730	564038.31	4150337.98	0.05322
564064.63	4150346.11	0.05643	564091.86	4150346.11	0.05977
564131.86	4150346.11	0.06553	564171.86	4150346.11	0.07494
564811.86	4150346.11	1.85497	564831.86	4150346.11	1.58670
564851.86	4150346.11	1.38126	564871.86	4150346.11	1.21496
564891.86	4150346.11	1.07647	564136.85	4150387.80	0.06726
564092.70	4150415.81	0.06129	564107.28	4150388.70	0.06232
563971.86	4150366.11	0.04461	563991.86	4150366.11	0.04710
564071.44	4150383.28	0.05772	564158.31	4150376.05	0.07222
564851.86	4150366.11	1.30651	564871.86	4150366.11	1.15215
564692.82	4150376.54	6.99481	564786.14	4150380.74	2.03946
564746.14	4150400.74	2.76954	564726.14	4150420.74	3.14222
564806.14	4150420.74	1.45185	564866.14	4150420.74	0.97369
564886.14	4150420.74	0.86531	564786.14	4150440.74	1.52813
564806.14	4150440.74	1.31228	564846.14	4150440.74	1.00006
564866.14	4150440.74	0.88421	564786.14	4150460.74	1.34966
564846.14	4150460.74	0.89278	564766.14	4150480.74	1.37118
564826.14	4150480.74	0.88841	564866.14	4150480.74	0.69230
564766.14	4150500.74	1.14586	564806.14	4150500.74	0.86713
564826.14	4150500.74	0.76160	564746.14	4150520.74	1.06374
564806.14	4150520.74	0.72834	564746.14	4150540.74	0.83427
564786.14	4150540.74	0.67878	564726.14	4150560.74	0.70904
564746.14	4150560.74	0.65646	564786.14	4150560.74	0.56171
564726.14	4150580.74	0.56214	564786.14	4150580.74	0.47025
564547.13	4150306.35	0.86679	564542.54	4150342.35	0.81547
564531.95	4150355.41	0.70994	564523.13	4150362.82	0.63514
564510.42	4150375.52	0.55264	564502.31	4150385.76	0.50664
564488.19	4150393.52	0.43794	564476.54	4150406.58	0.39704
564454.66	4150412.93	0.33388	564435.96	4150431.29	0.29404

564420.07	4150459.52	0.26921	564613.12	4150405.17	3.72617
564601.12	4150418.23	2.96326	564591.59	4150427.40	2.42155
564579.95	4150436.23	1.83762	564565.83	4150445.05	1.33429
564553.83	4150453.52	1.07447	564539.01	4150460.58	0.84872
564533.01	4150470.81	0.78698	564511.13	4150478.22	0.61466
564608.89	4150458.81	4.93891	564604.65	4150472.22	4.38986

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: OFFSITE ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564595.48	4150481.05	2.94902	564323.57	4150502.65	0.15754
564320.61	4150516.63	0.15655	564315.10	4150529.75	0.15498
564301.97	4150541.19	0.14798	564288.43	4150553.47	0.14091
564568.73	4150497.15	1.47875	564542.90	4150507.74	0.97299
564534.01	4150514.51	0.87074	564458.64	4150533.14	0.44991
564445.52	4150537.38	0.40659	564429.00	4150554.31	0.35704
564412.91	4150566.17	0.31759	564399.36	4150575.91	0.28872
564532.32	4150566.17	0.89991	564269.98	4150359.33	0.11339
564281.85	4150416.92	0.12529	564287.61	4150440.67	0.13035
564296.25	4150479.18	0.13777	564279.34	4150466.23	0.12835
564257.74	4150463.35	0.11955	564217.43	4150431.67	0.09995
564201.95	4150449.31	0.09287	564195.96	4150403.26	0.08772
564172.05	4150425.18	0.07998	564152.62	4150445.60	0.07467
564133.73	4150451.59	0.07011	564106.33	4150438.64	0.06392
564061.00	4150433.16	0.05711	564067.47	4150456.58	0.05808
564083.91	4150471.02	0.06056	564098.86	4150476.00	0.06312
564120.28	4150488.96	0.06812	564138.21	4150490.45	0.07307
564160.13	4150483.48	0.07962	564206.46	4150488.96	0.10753
564257.77	4150529.81	0.12463	564244.32	4150548.24	0.12077
564236.35	4150567.17	0.12003	564237.35	4150574.64	0.12085
564242.33	4150585.10	0.12594	564261.26	4150587.59	0.13635
564275.70	4150591.58	0.14682	564287.66	4150601.54	0.16161
564303.60	4150599.55	0.17110	564316.06	4150593.07	0.17601
564335.48	4150597.56	0.19861	564346.94	4150597.56	0.21266
564360.89	4150594.57	0.23032	564344.45	4150556.71	0.18345
564374.84	4150593.07	0.25154	564392.77	4150584.60	0.27938
564184.54	4150627.94	0.13171	564172.58	4150595.56	0.11786
564161.13	4150544.25	0.09865	564118.29	4150563.68	0.08696
564098.36	4150642.89	0.10227	564518.31	4150570.66	0.77437
564498.88	4150573.64	0.64246	564453.55	4150583.61	0.45455
564430.13	4150599.05	0.38789	564424.65	4150612.50	0.37621
564423.66	4150626.95	0.37400	564418.18	4150641.39	0.35752
564539.73	4150604.03	0.73657	564532.26	4150626.45	0.60425
564514.82	4150650.86	0.48670	564562.64	4150585.60	0.95055

564469.34	4150074.74	0.37365	564341.64	4150484.35	0.17170
564256.01	4150516.32	0.12471	564270.56	4150544.16	0.12959
564355.97	4150472.98	0.18612	564386.66	4150495.12	0.22619
564374.96	4150513.47	0.21208	564381.91	4150534.03	0.23089
564365.78	4150540.36	0.21028	564420.51	4150503.66	0.30758
564402.79	4150472.98	0.24551	564213.70	4150540.86	0.11544

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE PERIOD (43872 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: OFFSITE ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564209.07	4150575.89	0.11713	564149.83	4150594.95	0.11037
564136.43	4150608.35	0.11026	564125.10	4150619.16	0.10910
564147.77	4150634.10	0.11818	564269.85	4150637.71	0.18814
564202.88	4150628.44	0.14006	564167.86	4150634.10	0.12581
564285.82	4150646.47	0.20136	564300.76	4150654.71	0.21545
564176.86	4150464.17	0.08416	564232.02	4150318.48	0.09512
564471.46	4150572.80	0.51645	564472.66	4150619.50	0.49061
564515.76	4150611.12	0.63210	564476.25	4150656.61	0.42402
564094.38	4150577.18	0.08628	564070.43	4150589.73	0.08055
564050.84	4150581.89	0.07427	564033.20	4150574.05	0.07025
564007.72	4150552.50	0.06224	563995.96	4150540.74	0.05823
564039.08	4150415.32	0.05394	564011.64	4150419.24	0.04994
563933.26	4150438.84	0.04074	564390.91	4149768.55	0.18726
564397.08	4149757.44	0.18961	564331.69	4149759.91	0.13950
564503.17	4149784.58	0.34063	564543.88	4149772.25	0.41995
564514.27	4149756.21	0.33756	564550.05	4149743.87	0.40273
563941.13	4150036.18	0.04712	563964.26	4150046.33	0.04912
563968.77	4150039.00	0.04931	563984.56	4150023.77	0.05072
563994.71	4150010.24	0.05165	563999.79	4149995.57	0.05183
564613.12	4150405.17	2.67033	564601.12	4150418.23	2.20276
564591.59	4150427.40	1.85031	564579.95	4150436.23	1.45397
564565.83	4150445.05	1.09476	564553.83	4150453.52	0.90119
564539.01	4150460.58	0.72808	564533.01	4150470.81	0.67805
564511.13	4150478.22	0.53977	564608.89	4150458.81	3.05560
564604.65	4150472.22	2.73330	564595.48	4150481.05	2.00584
564568.73	4150497.15	1.17568	564542.90	4150507.74	0.82236
564534.01	4150514.51	0.74602			

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** THE SUMMARY OF MAXIMUM PERIOD (43872 HRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ONSITE	1ST HIGHEST VALUE IS	14.03046 AT (564469.34, 4150074.74, 99.23, 186.86, 1.50)	DC	
	2ND HIGHEST VALUE IS	11.55056 AT (564549.63, 4150120.06, 77.09, 186.86, 1.50)	DC	
	3RD HIGHEST VALUE IS	10.98690 AT (564469.34, 4150074.74, 99.23, 186.86, 6.10)	DC	
	4TH HIGHEST VALUE IS	10.11382 AT (564549.63, 4150120.06, 77.09, 186.86, 6.10)	DC	
	5TH HIGHEST VALUE IS	9.41504 AT (564391.86, 4150086.11, 105.26, 186.86, 1.50)	DC	
	6TH HIGHEST VALUE IS	9.12690 AT (564489.07, 4150053.36, 99.09, 186.86, 1.50)	DC	
	7TH HIGHEST VALUE IS	8.43517 AT (564594.49, 4150116.61, 73.97, 186.86, 1.50)	DC	
	8TH HIGHEST VALUE IS	8.34546 AT (564571.86, 4150106.11, 78.84, 186.86, 1.50)	DC	
	9TH HIGHEST VALUE IS	7.89160 AT (564411.86, 4150066.11, 106.65, 186.86, 1.50)	DC	
	10TH HIGHEST VALUE IS	7.87395 AT (564626.95, 4150120.55, 71.07, 186.86, 1.50)	DC	
OFFSITE	1ST HIGHEST VALUE IS	13.63643 AT (564791.86, 4149926.11, 60.53, 186.86, 1.50)	DC	
	2ND HIGHEST VALUE IS	13.47228 AT (564811.86, 4149866.11, 55.36, 186.86, 1.50)	DC	
	3RD HIGHEST VALUE IS	10.88681 AT (564791.86, 4149906.11, 59.91, 186.86, 1.50)	DC	
	4TH HIGHEST VALUE IS	10.87539 AT (564831.86, 4149926.11, 55.04, 186.86, 1.50)	DC	
	5TH HIGHEST VALUE IS	10.84640 AT (564811.86, 4149846.11, 52.82, 186.86, 1.50)	DC	
	6TH HIGHEST VALUE IS	10.61774 AT (564691.86, 4150246.11, 44.78, 186.86, 1.50)	DC	
	7TH HIGHEST VALUE IS	10.37613 AT (564851.86, 4149866.11, 54.29, 186.86, 1.50)	DC	
	8TH HIGHEST VALUE IS	10.19545 AT (564811.86, 4149866.11, 55.36, 186.86, 6.10)	DC	
	9TH HIGHEST VALUE IS	10.09519 AT (564851.86, 4149826.11, 49.36, 186.86, 1.50)	DC	
	10TH HIGHEST VALUE IS	9.70194 AT (564851.86, 4149886.11, 54.86, 186.86, 1.50)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN

*** Message Summary : AERMOD Model Execution ***

 --------- Summary of Total Messages --------

A Total of   0 Fatal Error Message(s)
A Total of   0 Warning Message(s)
A Total of   20266 Informational Message(s)

A Total of   43872 Hours Were Processed

A Total of   7316 Calm Hours Identified

A Total of   12950 Missing Hours Identified (29.52 Percent)

CAUTION!: Number of Missing Hours Exceeds 10 Percent of Total!
           Data May Not Be Acceptable for Regulatory Applications.
           See Section 5.3.2 of "Meteorological Monitoring Guidance
           for Regulatory Modeling Applications" (EPA-454/R-99-005).

   ******** FATAL ERROR MESSAGES ********
              *** NONE ***

   ********   WARNING MESSAGES   ********
              *** NONE ***

   ****
   *** AERMOD Finishes Successfully ***
   ****

Results Summary

COSC-07 Construction HRA
San Carlos

Concentration - Source Group: OFFSITE

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
PERIOD		13.63643	ug/m^3	564791.86	4149926.11	60.53	1.50	186.86	

Concentration - Source Group: ONSITE

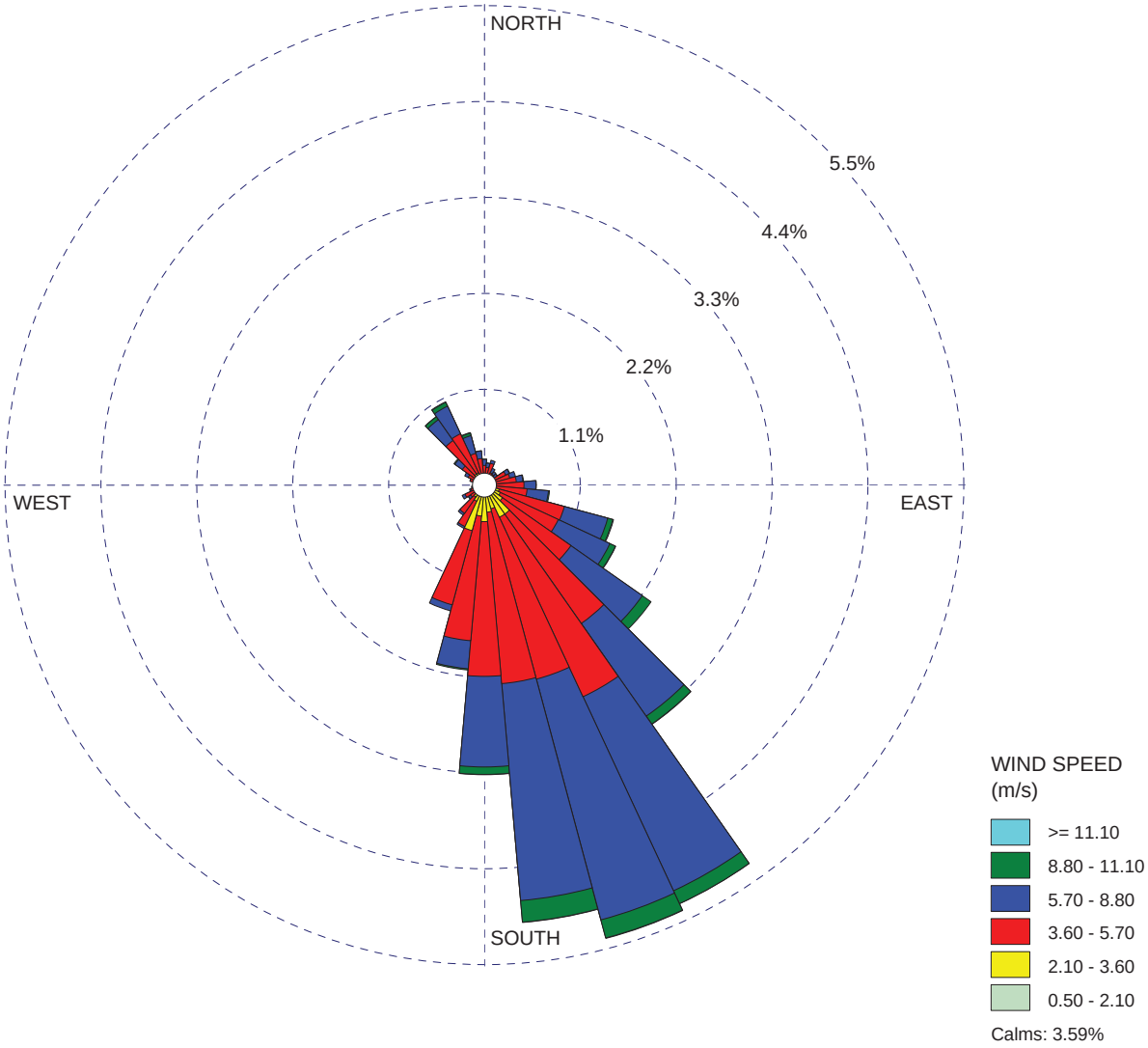
Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
PERIOD		14.03046	ug/m^3	564469.34	4150074.74	99.23	1.50	186.86	

WIND ROSE PLOT:

Station #23289

DISPLAY:

Wind Speed
Flow Vector (blowing to)



COMMENTS:	DATA PERIOD: **Start Date: 1/1/2009 - 01:00** **End Date: 1/2/2014 - 23:59**	COMPANY NAME:	
		MODELER:	
	CALM WINDS: **3.59%**	TOTAL COUNT: **19687 hrs.**	
	AVG. WIND SPEED: **5.08 m/s**	DATE: **2/17/2022**	PROJECT NO.:

Appendix C. Construction Risk Calculations

Table C2
Residential MER Health Risk Calculations

Contaminant	Source		Model Output [1] ($\mu g/m^3$)	Emission Rates [2] (g/s)	MEIR Conc. ($\mu g/m^3$)	Total MEIR Conc. Annual Average ($\mu g/m^3$)
(a)	(b)		(c)	(d)	(e)	(f)
Residential Receptors - Unmitigated						
DPM	2023	On-Site Emissions	14.03	3.55E-02	4.98E-01	4.98E-01
		Truck Route	0.39	5.70E-06	2.25E-06	
	2024	On-Site Emissions	14.03	1.18E-02	1.65E-01	1.65E-01
		Truck Route	0.39	2.97E-06	1.17E-06	
	2025	On-Site Emissions	14.03	6.29E-03	8.82E-02	8.82E-02
		Truck Route	0.39	2.53E-06	9.98E-07	
	2026	On-Site Emissions	14.03	2.56E-03	3.59E-02	3.59E-02
		Truck Route	0.39	8.47E-07	3.34E-07	
					Total DPM concentrations used for Cancer Risk and Chronic Hazard calculations	
$PM_{2.5}$	2023	On-Site Emissions	14.03	3.27E-02	4.59E-01	4.59E-01
		Truck Route	0.39	5.41E-06	2.13E-06	
	2024	On-Site Emissions	14.03	1.10E-02	1.54E-01	1.54E-01
		Truck Route	0.39	2.86E-06	1.13E-06	
	2025	On-Site Emissions	14.03	5.91E-03	8.29E-02	8.29E-02
		Truck Route	0.39	2.42E-06	9.53E-07	
	2026	On-Site Emissions	14.03	2.35E-03	3.30E-02	3.30E-02
		Truck Route	0.39	5.65E-07	2.23E-07	
					Maximum Annual $PM_{2.5}$ Concentration	**0.46**
Residential Receptors - Mitigated Run: Tier 4 Interim Engines for eq. >50 HP						
DPM	2023	On-Site Emissions	14.03	2.26E-03	3.17E-02	3.17E-02
		Truck Route	0.39	5.70E-06	2.25E-06	
	2024	On-Site Emissions	14.03	1.15E-03	1.62E-02	1.62E-02
		Truck Route	0.39	2.97E-06	1.17E-06	
	2025	On-Site Emissions	14.03	6.52E-04	9.14E-03	9.14E-03
		Truck Route	0.39	2.53E-06	9.98E-07	
	2026	On-Site Emissions	14.03	2.42E-04	3.40E-03	3.40E-03
		Truck Route	0.39	8.47E-07	3.34E-07	
					Total DPM concentrations used for Cancer Risk and Chronic Hazard calculations	
$PM_{2.5}$	2023	On-Site Emissions	14.03	2.26E-03	3.17E-02	3.17E-02
		Truck Route	0.39	5.41E-06	2.13E-06	
	2024	On-Site Emissions	14.03	1.15E-03	1.62E-02	1.62E-02
		Truck Route	0.39	2.86E-06	1.13E-06	
	2025	On-Site Emissions	14.03	6.52E-04	9.14E-03	9.14E-03
		Truck Route	0.39	2.42E-06	9.53E-07	
	2026	On-Site Emissions	14.03	2.42E-04	3.40E-03	3.40E-03
		Truck Route	0.39	5.65E-07	2.23E-07	
					Maximum Annual $PM_{2.5}$ Concentration	**0.032**

Maximum Exposed Individual Resident (MEIR) UTM coordinates: 564469.34 E, 4150074.74 N

[1] Model Output at the MEIR based on unit emission rates for sources (1 g/s).

[2] Emission Rates from Emission Rate Calculations (Appendix A - Construction Emissions).

Table C2
Residential MER Health Risk Calculations

Source		MEIR	Weight	Contaminant			Dose (by age bin)			Carcinogenic Risks (by age bin)			**Total Cancer Risk**	**Chronic Hazards [3]**	
		Conc. ($\mu g/m^3$)	Fraction		URF $(\mu g/m^3)^{-1}$	CPF $(mg/kg/day)^{-1}$	3rd Trimester (mg/kg-day)	0 < 2 years (mg/kg-day)	0 < 9 years (mg/kg-day)	3rd Trimester per million	0 < 2 years per million	0 < 9 years per million	per million	REL ($\mu g/m^3$)	RESP
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
Residential Receptors - Unmitigated															
2023	On & Off-	4.98E-01	1.00E+00	DPM	3.0E-04	1.1E+00	1.72E-04	5.21E-04		5.50E+00	2.22E+01		27.7	5.0E+00	9.96E-02
2024	Site	1.65E-01						1.72E-04			2.20E+01		22.0		3.30E-02
2025	Emission	8.82E-02						9.22E-05	7.28E-05		7.82E+00	7.90E-01	8.61		1.76E-02
2026	s	3.59E-02							2.96E-05			9.56E-02	0.10		7.17E-03
												Total	**58.4**		**0.157**
Residential Receptors - Mitigated Run: Tier 4 Interim Engines for eq. >50 HP															
2023	On & Off-	3.17E-02	1.00E+00	DPM	3.0E-04	1.1E+00	1.10E-05	3.31E-05		3.49E-01	1.41E+00		1.8	5.0E+00	6.33E-03
2024	Site	1.62E-02						1.69E-05			2.16E+00		2.2		3.24E-03
2025	Emission	9.14E-03						9.56E-06	7.55E-06		8.11E-01	8.19E-02	0.9		1.83E-03
2026	s	3.40E-03							2.81E-06			9.06E-03	0.009		6.80E-04
												Total	**4.8**		**0.012**

Maximum Exposed Individual Resident (MEIR) UTM coordinates: 564469.34 E, 4150074.74 N

		OEHHA age bin	3rd Trimester	0 < 2 years	2 < 9 years
		exposure year(s)	2023	2023-2024	2024-2026
Dose Exposure Factors:		exposure frequency (days/year)	350	350	350
		inhalation rate (L/kg-day) [1]	361	1090	861
		inhalation absorption factor	1	1	1
		conversion factor (mg/µg; m^3/L)	1.0E-06	1.0E-06	1.0E-06
Risk Calculation Factors:		age sensitivity factor	10	10	3
		averaging time (years)	70	70	70
		per million	1.0E+06	1.0E+06	1.0E+06
		fraction of time at home	0.85	0.85	0.72

exposure durations per age bin			exposure durations (year)		
	Construction Year	Duration [2]	3rd Trimester	0 < 2 years	0 < 9 years
	2023	0.58	0.25	0.33	
	2024	1.00		1.00	
	2025	1.00		0.67	0.33
	2026	0.10			0.10
	Total	2.68	0.25	2.00	0.43

[1] Inhalation rate taken as the 95th percentile breathing rates (OEHHA, 2015).

[2] Construction durations determined for each year of construction to adjust receptor exposures to the exposure durations for each construction year (see App A - Construction Emissions)

[3] Chronic Hazards for DPM using the chronic reference exposure level (REL) for the Respiratory Toxicological Endpoint

Table C3
Day Care/High School MER Concentrations for Risk Calculations

Contaminant		Source	Model Output [1] ($\mu g/m^3$)	Emission Rates [2] (g/s)	MER Conc. ($\mu g/m^3$)	Total MER Conc. Annual Average ($\mu g/m^3$)
(a)		(b)	(c)	(d)	(e)	(f)
School Receptors - Unmitigated						
DPM	2023	On-Site Emissions	2.23	3.55E-02	7.90E-02	7.90E-02
		Truck Route	5.69	5.70E-06	3.24E-05	
	2024	On-Site Emissions	2.23	1.18E-02	2.62E-02	2.62E-02
		Truck Route	5.69	2.97E-06	1.69E-05	
	2025	On-Site Emissions	2.23	6.29E-03	1.40E-02	1.40E-02
		Truck Route	5.69	2.53E-06	1.44E-05	
	2026	On-Site Emissions	2.23	2.56E-03	5.69E-03	5.70E-03
		Truck Route	5.69	8.47E-07	4.82E-06	
Total DPM concentrations used for Cancer Risk and Chronic Hazard calculations						
$PM_{2.5}$	2023	On-Site Emissions	2.23	3.27E-02	7.28E-02	7.28E-02
		Truck Route	5.69	5.41E-06	3.08E-05	
	2024	On-Site Emissions	2.23	1.10E-02	2.45E-02	2.45E-02
		Truck Route	5.69	2.86E-06	1.63E-05	
	2025	On-Site Emissions	2.23	5.91E-03	1.32E-02	1.32E-02
		Truck Route	5.69	2.42E-06	1.38E-05	
	2026	On-Site Emissions	2.23	2.35E-03	5.23E-03	5.24E-03
		Truck Route	5.69	5.65E-07	3.21E-06	
				Maximum Annual $PM_{2.5}$ Concentration		**0.073**
St. Charles Catholic School UTM coordinates: 564739.02 E, 4150186.98N						
School Receptors - Mitigated						
DPM	2023	On-Site Emissions	2.23	2.26E-03	5.02E-03	5.06E-03
		Truck Route	5.69	5.70E-06	3.24E-05	
	2024	On-Site Emissions	2.23	1.15E-03	2.57E-03	2.58E-03
		Truck Route	5.69	2.97E-06	1.69E-05	
	2025	On-Site Emissions	2.23	6.52E-04	1.45E-03	1.47E-03
		Truck Route	5.69	2.53E-06	1.44E-05	
	2026	On-Site Emissions	2.23	2.42E-04	5.39E-04	5.44E-04
		Truck Route	5.69	8.47E-07	4.82E-06	
Total DPM concentrations used for Cancer Risk and Chronic Hazard calculations						
$PM_{2.5}$	2023	On-Site Emissions	2.23	2.26E-03	5.02E-03	5.05E-03
		Truck Route	5.69	5.41E-06	3.08E-05	
	2024	On-Site Emissions	2.23	1.15E-03	2.57E-03	2.58E-03
		Truck Route	5.69	2.86E-06	1.63E-05	
	2025	On-Site Emissions	2.23	6.52E-04	1.45E-03	1.46E-03
		Truck Route	5.69	2.42E-06	1.38E-05	
	2026	On-Site Emissions	2.23	2.42E-04	5.39E-04	5.43E-04
		Truck Route	5.69	5.65E-07	3.21E-06	
				Maximum Annual $PM_{2.5}$ Concentration		**0.005**
St. Charles Catholic School UTM coordinates: 564739.02 E, 4150186.98N						

[1] Model Output at the MER based on unit emission rates for sources (1 g/s).

[2] Emission Rates from Emission Rate Calculations (Appendix A - Construction Emissions).

Table C4
Day Care/High School MER Health Risk Calculations

Source		MER	Weight	Contaminant			Dose (by age bin)	Carcinogenic Risks (by age bin)	**Total Cancer Risk**	**Chronic Hazards [3]**	
		Conc.	Fraction		URF	CPF	School 2 < 16 years	School 2 < 16 years		REL	RESP
		($\mu g/m^3$)			$(\mu g/m^3)^{-1}$	$(mg/kg/day)^{-1}$	(mg/kg-day)	per million	per million	($\mu g/m^3$)	
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
School Receptors - Unmitigated											
2023	On & Off-Site Emissions	7.90E-02	1.00E+00	DPM	3.0E-04	1.1E+00	2.03E-05	5.33E-01	0.5	5.0E+00	1.58E-02
2024		2.62E-02					6.72E-06	3.02E-01	0.3	5.0E+00	5.24E-03
2025		1.40E-02					3.59E-06	1.62E-01	0.2	5.0E+00	2.80E-03
2026		5.70E-03					1.46E-06	6.55E-03	0.0	5.0E+00	1.14E-03
								Total	**1.0**		**0.025**
School Receptors - Mitigated											
2023	On & Off-Site Emissions	5.06E-03	1.00E+00	DPM	3.0E-04	1.1E+00	1.30E-06	3.41E-02	0.03	5.0E+00	1.01E-03
2024		2.58E-03					6.62E-07	2.98E-02	0.03	5.0E+00	5.17E-04
2025		1.47E-03					3.76E-07	1.69E-02	0.02	5.0E+00	2.93E-04
2026		5.44E-04					1.40E-07	6.26E-04	0.00	5.0E+00	1.09E-04
								Total	**0.08**		**0.002**

	OEHHA age bin	PreK to 8th Grade 2 < 16 years
	exposure year(s)	2023-2026
Dose Exposure Factors:	exposure frequency (days/year)	180
	8-hour inhalation rate (L/kg-day) [1]	520
	inhalation absorption factor	1
	conversion factor (mg/µg; m^3/L)	1.0E-06
Risk Calculation Factors:	age sensitivity factor	3
	averaging time (years)	70
	per million	1.0E+06

exposure durations per age bin			
	Construction Year	Duration [2]	2 < 16 years
	2023	0.58	0.58
	2024	1.00	1.00
	2025	1.00	1.00
	2026	0.10	0.10
	Total	2.68	2.68

[1] Inhalation rate taken as the 8-hour 95th percentile breathing rates, Moderate Activity (OEHHA, 2015).

[2] Construction duration determined for each year of construction to adjust receptor exposures to the exposure durations for each construction year (see App A - Construction Emissions).

[3] Chronic Hazards for DPM using the chronic reference exposure level (REL) for the Respiratory Toxicological Endpoint

APPENDIX E

BIOLOGICAL RESOURCES

Appendix E1:
List of Plant Species Observed

List of Plant Species Observed During Systematic Botanical Surveys
Black Mountain Project Site
Conducted on April 2 and May 26, 2020

Scientific name	Common name	Native
Acacia melanoxylon	Blackwood acacia	no
Aesculus californica	California buckeye	yes
Agrostis stolonifera	Redtop	no
Arum italicum	Italian arum	no
Arundo donax	Giant reed grass	no
Avena barbata	Slender wild oats	no
Avena fatua	Wild oats	no
Baccharis pilularis	Coyote brush	yes
Brodiaea elegans ssp. *elegans*	Harvest brodiaea	yes
Bromus carinatus	California brome	yes
Bromus diandrus	Ripgut brome	no
Bromus hordeaceus	Soft chess	no
Calystegia subacaulis	Hill morning glory	yes
Cardamine oligosperma	Bitter cress	yes
Carduus pycnocephalus	Italian thistle	no
Centaurea calcitrapa	Purple star thistle	no
Centaurea solstitialis	Yellow star thistle	no
Chasmanthe floribunda	African flag	no
Chlorogalum pomeridianum	Soap plant	yes
Cirsium vulgare	Bull thistle	no
Claytonia parviflora	Miner's lettuce	yes
Cortaderia jubata	Pampass grass	no
Cotoneaster lacteus	Milkflower cotoneaster	no
Cotoneaster pannosus	Woolly cotoneaster	no
Crepis vesicaria ssp. *taraxacifolia*	Beakes hawskbeard	no
Cyperus eragrostis	Tall flatsedge	yes
Dactylis glomerata	Orchard grass	no
Dichelostemma capitatum	Blue dicks	yes
Dittrichia graveolens	Stinkwort	no
Ehrharta erecta	Panic veldtgrass	no
Elymus glaucus	Blue wild rye	yes
Erodium botrys	Long beaked filaree	no
Erodium cicutarium	Coastal heron’s bill	no
Erodium moschatum	Whitestem filaree	no
Eschscholzia californica	California poppy	yes
Eucalyptus camaldulensis	River red gum	no
Eucalyptus crenulata	Silver gum	no
Eucalyptus polyanthemos	Silver dollar gum	no
Eucalyptus pulverulenta	Silver leaf mountain gum	no
Euphorbia characias	Albanian spurge	no
Euphorbia oblongata	Eggleaf spurge	no
Euphorbia peplus	Petty spurge	no
Euphorbia peplus	Petty spurge	no

List of Plant Species Observed During Systematic Botanical Surveys
Black Mountain Project Site
Conducted on April 2 and May 26, 2020

Festuca bromoides	Brome fescue	no
Festuca perennis	Italian ryegrass	no
Foeniculum vulgare	Sweet fennel	no
Fumaria capreolata	White rumping fumatory	no
Galium aparine	Common bedstraw	yes
Galium parisiense	Wall bedstraw	no
Genista monspessulana	French broom	no
Geranium dissectum	Cut-leaf geranium	no
Geranium molle	Woodland geranium	no
Geranium rotundifolium	Roundleaf geranium	no
Hedera canariensis	Canarian ivy	no
Helminthotheca echioides	Bristly ox-tongue	no
Hesperocyparis macrocarpa	Monterey cypress	no
Heteromeles arbutifolia	Toyon	yes
Heterotheca sessiliflora	Golden aster	yes
Hirschfeldia incana	Shortpod mustard	no
Hordeum marinum ssp. *gussoneanum*	Mediterranean barley	no
Hordeum murinum ssp. *leporinum*	Lepor barley	no
Hypochaeris glabra	Smooth cat's ears	no
Iris douglasiana	Douglas iris	yes
Iris pseudoacorus	Pale-yellow iris	no
Juncus effusus	Common rush	yes
Ligustrum lucidum	Privet	no
Lupinus bicolor	Miniature lupine	yes
Lysimachia arvensis	Scarlet pimpernel	no
Medicago arabica	Spotted burclover	no
Medicago polymorpha	Bur-clover	no
Nerium oleander	Oleander	no
Olea europaea	Olive tree	no
Opuntia ficus-indica	Prickly pear	no
Oxalis pes-caprae	Bermuda buttercup	no
Paspalum dilatatum	Dallis grass	no
Pennisetum clandestinum	Kikuyu grass	no
Pennisetum setaceum	Fountain grass	no
Phalaris aquatica	Harding grass	no
Photinia x fraseri	Fraser photinia	no
Pinus halepensis	Aleppo pine	no
Pinus radiata	Monterey pine	no
Pittosporum undulatum	Sweet pittosporum	no
Plantago coronopus	Cut leaf plantain	no
Plantago lanceolata	English plantain	no
Polypogon monspeliensis	Rabbitfoot grass	no
Populus nigra	Lombardy poplar	no
Poterium sanguisorba	Garden burnet	no

List of Plant Species Observed During Systematic Botanical Surveys
Black Mountain Project Site
Conducted on April 2 and May 26, 2020

Prunus dulcis	Almond	no
Pseudognaphalium californicum	Ladies tobacco	yes
Pseudognaphalium microcephalum	Cudweed	yes
Pyracantha sp.	Pyracantha	no
Pyrus calleryana	Callery pear	no
Quercus agrifolia	Coast live oak	yes
Quercus lobata	Valley oak	yes
Rubus ursinus	California blackberry	yes
Rumex pulcher	Fiddle dock	no
Sanicula crassicaulis	Gamble weed	yes
Schinus molle	Pepper tree	no
Scrophularia californica	Bee plant	yes
Senecio vulgaris	Common groundsel	no
Sequoia sempervirens	Coast redwood	yes
Sherardia arvensis	Field madder	no
Silybum marianum	Milk thistle	no
Sisymbrium officinale	Hedge mustard	no
Sisyrinchium bellum	Blue-eyed grass	yes
Sonchus asper ssp. *asper*	Sow thistle	no
Sonchus oleraceus	Common sow thistle	no
Stellaria media	Chickweed	no
Stipa pulchra	Purple needle grass	yes
Taraxacum officinale	Dandelion	no
Taraxia ovata	Sun cups	yes
Torilis arvensis	Field hedge parsley	no
Toxicodendron diversilobum	Poison oak	yes
Trifolium campestre	Hop trefoil	no
Trifolium hirtum	Rose clover	no
Typha angustifolia	Narrow leaf cattail	yes
Typha latifolia	Broadleaf cattail	yes
Ulmus americana	American elm	no
Umbellularia californica	California bay	yes
Vicia sativa ssp. *nigra*	Common vetch	no
Vinca major	Bigleaf periwinkle	no
Zantedeschia aethiopica	Calla lily	no
Zeltnera muehlenbergii	Muhlenberg's centaury	yes

Nomenclature according to on-line Jepson eFlora and Calflora

APPENDIX E2:
ARBORIST REPORT: PRELIMINARY TREE RESOURCE EVALUATION

ARBORIST REPORT

Preliminary Tree Resource Evaluation

Revised & Updated, October 15, 2017

Revised & Updated July 9, 2018 (Second Revision)

Revised November 30, 2018 (Third Revision: Tree Assessment Chart Only)

Revised September 3, 2019 (Fourth Revision)

Revised September 13, 2020 (Fifth Revision)

Revised February 22, 2021 (Sixth Revision)

800 Alameda de las Pulgas Project
San Carlos, CA

JULY 2016

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Table of Contents

Introduction & Overview.....2
Assignment/Scope of Services.....3
Tree Evaluation and Recording Methods.....4
Tree Inventory.....4-6
Regulated Trees in the City of San Carlos.....7
Protected Trees at 808 Alameda de las Pulgas.....8
Tree Condition.....9 -10
Suitability for Preservation 11-14
Tree Removal Plan.....15
Tree Removal by Species.....16
Tree Removal by Condition.....17
Tree Replacement.....18
Conclusion.....19
Recommendations.....19

List of Tables

Table 1 Protected Tree Species at 808 Alameda de las Pulgas.....8
Table 2 Public Tree Species on Alameda de las Pulgas.....8
Table 3 Species Composition & Suitability for Preservation.....13
Table 4 Trees Suitable for Preservation by Location.....14
Table 5 Total Tree Count.....15
Table 6 Tree Removal Due to Impacts, Species List.....16
Table 7 Heritage Tree Removal Due to Condition.....17

Attachments

Appendix 'A' Tree Assessment Chart
Tree Removal Plan by BKF Engineers, updated 9/15/2020
Existing Tree Plan by BKF Engineers dated, 12/5/2018
Tree Location Maps
Aerial Images of Protected Trees
Addendum (Tree Evaluation Methods, Tree Protection Guidelines)
Assumptions and Limiting Conditions

INTRODUCTION and OVERVIEW

Veev is conducting a feasibility assessment for development of approximately 10 acres known as 808 Alameda de las Pulgas. The property is located off Alameda de las Pulgas, in San Carlos. As an element of the feasibility study, Veev Investments Group requested certified arborist services for a tree resource evaluation. The purpose of this evaluation is to inventory and evaluate the health and structural condition of the trees and access their suitability for preservation.

A "**tree resource evaluation"**, sometimes called a "tree inventory", or "tree survey report" is the first step in documenting the existing trees on a proposed development or building project site. This survey is used to aid in planning and project review, for the identification and location of existing trees on the site during the design of the project, placement of structures, driveways, utilities, and landscape components.

It also is used to identify trees of designated size and species that are protected under the municipal or county code that is applicable for the site location.

Suitability for preservation of individual trees is included in this evaluation, with the criteria for retention based on an evaluation of the heath and structural condition of each tree.

As planning of the development progresses, additional preservation suitability assessments will be required, with criteria related to development parameters such as grading, drainage, utilities, building construction foundations and the proposed distance each of these elements are to be located from individual trees.

When all factors have been considered, tree protection zones and protective fencing will be prescribed by the arborist consultants.

View of public trees adjacent to 808 Alameda de las Pulgas, fronting Alameda de las Pulgas

ASSIGNMENT/SCOPE OF SERVICES

Kurt Fouts and Don Cox, independent certified arborists, working in collaboration as associates, have been contracted by Veev to inventory and evaluate the condition of the existing trees on this site. The inventory is to be oriented to trees that are protected under the City of San Carlos tree protection regulations.

In order to complete this assignment, the following services were performed:

- **Plan Review:** Reviewed provided plans including topographic survey maps and boundary maps provided by BKF engineers.
- **Ordinance Review:** Reviewed the city of San Carlos Municipal Code Chapter 18.41, Section 18.41.020 as it pertains to protected trees. Also reviewed was Chapter 18.18 Section 18.18.070b: Protected Trees and c: Protected Tree Removal Permit.
- **Tree Preservation Evaluation:** Multiple site visits by the arborists for orientation and tree inspection. Visually examining each group of trees and measuring as necessary to confirm city of San Carlos 'protected' tree status. Measuring and evaluating each City protected tree for health and structural condition. Assessing each tree for suitability for preservation.
- **Mapping:** Tagged tree numbers were plotted onto topographic maps provided by BkF engineers. Individual trees coded as 'Heritage' or 'Significant' trees.
- **Revised elements of the report, (October 15, 2017 revision date), are entered in red type. Revised elements of the report (July 9, 2018), are entered in blue type. Revised elements of the report (February 11, 2019), are entered in purple type.**

Plans used for site and tree assessment are:

1) Topographic Survey of the Lands of Black Mountain Holdings, LLC. Dated 7/13/2016.
2) Topographic Survey and Boundary by BKF Engineers. Dated April 2010.
3) *Topographic Survey of the Lands of Black Mountain Holdings, DRAWING 4 OF 4, 11/2/2017.*
4) *Existing Tree Plan-Black Mountain Property by BKF Engineers, sheet C2.1, dated 12/5/2018*
5) *Tree Removal Plan-Black Mountain Property by BKF Engineers, sheet C2.2, dated 12/5/2018*

Unless expressed otherwise, the information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection. The inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the trees in questions may not arise in the future.

TREE EVALUATION AND RECORDING METHODS

Site evaluations were made on May 19th, June 21st and July 20, 2016. A site evaluation was made in October of 2017, for trees #260-A – 336. The assessments included all protected trees, located within the property boundaries of the proposed project. Also evaluated were trees located in the easement area between Coronado Avenue and the northwest corner of the upper property.
The trees were tagged with numbered metal tags. The health and structural condition of each tree was assessed and recorded. Based on the trees health and structural condition, each trees suitability for preservation was rated and recorded.
The recorded data is included in the *Tree Assessment Chart, Appendix A,* of this report. **To correlate the data in the Tree Assessment Chart to the tree's location on the site, refer to the Tree Location Maps.** A new master tree survey plan sheet is included with this revised report (Drawing 4 of 4, 11/2/2017). This topographic survey plan sheet includes all trees evaluated in this report. Note: The new plan sheet also includes approximately 60 trees plotted that are not protected. Fifteen of these 60 were tagged, evaluated and are included in this report.

Tree numbers were drawn onto existing tree locations plotted on topographic survey site plans provided by BKF Engineers. If a tree was found in the field that did not exist on the engineer's survey, it was numbered, plotted and added to the topographic survey. Two different site plans were utilized for tree location mapping including:

1) Topographic Survey and Boundary by BKF Engineers. Dated 4/19/2010. *Used to survey and plot trees onto Tree Location Maps for upper section (Map #1) and easement to Coronado Avenue (Map #1A).*
2) Topographic Survey of the Lands of Black Mountain Holdings, LLC. Dated 7/13/2016. *Used to survey and plot trees onto Tree Location Maps for lower section located adjacent to Alameda de las Pulgas. (Map#2).*
3) Topographic Survey of the Lands of Black Mountain Holdings, DRAWING 4 OF 4, 11/2/2017. Used to survey and plot trees located on APN# 050-220-160.

TREE INVENTORY

Summary Tree and Site Description

Note: The updating and revision to the 2016 report includes 77 additional trees located on parcel APN 050-220-160. It also includes 3 additional trees (#260,261 &262) added that were previously identified as located on adjacent properties but were since determined to be on 808 Alameda de las Pulgas parcels or have canopies overhanging on 808 Alameda de las Pulgas parcels. This revised report includes 339 tagged trees, 262 (original report) + 77 (= 339), trees. The new data occurs on the Tree Assessment Chart spreadsheet, tree #'s 260-A to 336. Also, the various tables found in the text portion of this report have been updated to reflect the additional data. Three hundred thirty-nine (339), trees were evaluated, representing seventeen (17) species. An additional forty-five (45) *not protected,* trees are included in the updated inventory and are shown on the updated Tree Assessment Spreadsheet, as trees number 337-384. These trees were not tagged in the field and not evaluated, but were surveyed by BKF engineers, and so are included in this update. This increases the total inventory to three hundred eighty-four (384) trees.

Two hundred thirty- three (233) trees, of the total tree inventory (384), are “protected” under city of San Carlos ordinance.
The protected trees at the 808 Alameda de las Pulgas property fall into two categories, as defined by the San Carlos planning department municipal code. The two categories include “Heritage” and “Significant” trees.

Additionally, there are several “Public” trees located adjacent to the property which front the Alameda de las Pulgas roadway . Since these trees would be a component of the development proposal, they have been included in this tree inventory.
(Note: “Public” trees in the city of San Carlos have a separate protected category.)

City of San Carlos definitions of “protected” tree categories are described in the Regulated Trees in the City of San Carlos, section below.

Four of the species evaluated are indigenous and categorized as “Heritage” by city ordinance. Coast Live Oak (*Quercus agrifolia*) is the most common “Heritage” tree with a total one hundred eighty-six (187) trees occurring on the property.

Coast Live Oak “heritage” trees in upper section of 808 Alameda de las Pulgas.

In the time period between the first report revision dated 10/15/2017, and the current revision dated 7/9/2018, a change was made to the City of San Carlos Municipal Code. The change removes regulation of any Eucalyptus species from "protected" status. The "protected" status of three species of Eucalyptus in the inventory, Silver Dollar Gum (*Eucalyptus polyanthemos.*), Silver Dollar Tree (*Eucalyptus cineria*), and Red Gum (*Eucalyptus camaldulensis*), previously categorized as "Significant" trees, with a total ninety (93) trees occurring on the property, have been removed from the "protected" tree status according to the revised City of San Carlos Municipal Code. Before this current revision, eight species of "protected" trees were categorized as "Significant". There are now six species categorized as "Significant" trees.

The upper (Coronado Avenue) area of the property is represented by an oak woodland community of trees, with coast live oak as the dominant species. The live oaks are joined by buckeyes, as the second most common species. Valley oaks and bay trees round out the native tree species population.

The lower (Alameda de las Pulgas roadway entrance) section, is comprised of developed parcels whose tree populations are a blend of native oaks and introduced, non-native tree species.

The entire property (upper and lower sections), is surrounded by residential suburbs to the South, East and West. Undeveloped property exists to the North.

In addition to the two hundred thirty-three (233) "protected" trees evaluated, one-hundred six (106) trees, representing 12 species of trees "not protected" by ordinance were evaluated. Additionally, forty- five (45) trees "not protected" and not tagged or evaluated were added to the inventory in the revised report dated 2/15/2019. The total number of trees evaluated is three hundred eighty-four (384).

Silver Dollar Gum trees in lower section of 808 Alameda de las Pulgas.

REGULATED TREES IN THE CITY OF SAN CARLOS

PUBLIC TREES
Any tree located within any street median, City park or other parcel of publicly owned property, including any tree located in a City maintained park strip on Laurel Street, and San Carlos Avenue (1100 and 1200 blocks only)

HERITAGE TREES
☐*Aesculus californica* (buckeye) with a single stem or multiple stems touching each other at 48 inches above natural grade and measuring 30 inches in circumference
☐*Arbutus menziesii* (madrone) with a single stem or multiple stems touching each other at 48 inches above natural grade and measuring 30 inches in circumference
☐*Quercus agrifolia* (coast live oak) of more than 30 inches in circumference
☐*Quercus lobata* (valley oak) of more than 30 inches in circumference
☐*Quercus douglasii* (blue oak) of more than 24 inches in circumference
☐*Quercus wislizenii* (interior live oak) of more than 24 inches in circumference
☐*Sequoia sempervirens* (redwood) of more than 72 inches in circumference
☐*Umbellularia californica* (California bay laurel) with a single stem or multiple stems touching each other at 48" above natural grade and measuring 30 inches in circumference
☐Community of trees
☐Founders tree: Any tree known to have been planted prior to the City's 1925 incorporation
☐Tree so designated by the City Council, based upon findings that the particular tree is unique and of importance to the public due to its unusual age, appearance, location or other factors

SIGNIFICANT TREES
Any tree that is 36 inches in circumference (or more), (which is approximately 11.5 inches in diameter), outside of bark, measured at 48 inches above natural grade

The following trees are NOT classified as protected trees regardless of size.
☐Bailey, Green or Black Acacia: *A. baileyana, A. decurrens or A. melanoxylon*
☐Tree of Heaven: *Ailanthus altissima*
☐Fruit trees of any kind
☐Monterey Pine: *Pinus radiata*
☐~~Eucalyptus: *Eucalyptus globulus* (unless a founder tree or group of trees)~~
- Eucalyptus sp.

Protected Trees at the 808 Alameda de las Pulgas Property

The following table represents a list of all "Protected" tree species found on the 808 Alameda de las Pulgas property.

Table 1 – Protected Trees
808 Alameda de las Pulgas, San Carlos, CA

Heritage Trees:

California Bay	*Umbellularia californica*
California Buckeye	*Aesculus californica*
Coast Live Oak	*Quercus agrifolia*
Valley Oak	*Quercus lobata*

Significant Trees:

Aleppo Pine	*Pinus halepensis*
American Elm	*Ulmus americana*
Monterey Cypress	*Hesperocyparis macrocarpa*
Olive	Olea europaea
Peruvian Pepper	*Schinus molle*
~~Silver Dollar Gum~~	~~*Eucalyptus polyanthemos N.P.*~~
~~Silver Dollar Tree~~	~~*Eucalyptus cineria N.P.*~~
Victorian Box	*Pittosporum undulatum*

Public Trees Adjacent to 808 Alameda de las Pulgas Property

The following table represents a list of all public trees found on property adjacent to 808 Alameda de las Pulgas.

Table 2 – Public Trees - Alameda de las Pulgas Roadway
Adjacent to 808 Alameda de las Pulgas Property

Public Trees:

Coast Live Oak	*Quercus agrifolia*
Peruvian Pepper Tree	*Schinus molle*
~~Red gum~~	~~*Eucalyptus camaldulensis N.P.*~~

TREE CONDITON

The condition of each tree was evaluated in the field and given a health condition rating and a structure condition rating.

Of the 233 “protected” trees evaluated, 203 exhibited either fair or good health and fair or good structure.

Of the remaining “protected” trees, 30 had either poor health or a significant structural defect that indicated a poor structural rating.

Example of a tree with ‘Poor’ structure rating. Tree #67, Coast Live Oak rated in poor condition (structural), due to vertical split in trunk (arrows).

Condition Rating Methods

Below is a description of the criteria utilized to evaluate and rate the health and structure of the trees:

Health and Structural Rating Description:

Health and structure ratings reflect relative conditions such as vigor, the extent of decay, structure, and insect or disease problems. Good and fair ratings indicate limited structural problems, acceptable vigor, and an absence of significant disease issues. Poor ratings indicate serious health or structural problems. Trees rated as poor are often a moderate to high risk of structural failure.

Health Ratings:

Good: A healthy, vigorous tree, reasonably free of signs and symptoms of disease.

Fair: Moderate vigor, moderate twig and small branch dieback, crown may be thinning leaf color may be poor.

Poor: Tree in severe decline, dieback of scaffold branches and/or trunk, most of foliage from epicormics (indicates last stage of foliar push from stored moisture and nutrients in stems).

Structure Ratings:

Good: No significant structural defects. Growth habit and form typical of the species.

Fair: Moderate structural defects that are not at risk of failure, and might be mitigated with management practices.

Poor: Extensive structural defects that cannot be abated.

SUITABILITY FOR PRESERVATION

Suitability for Preservation Criteria

Before evaluating the impacts that will occur during development, it is important to consider the quality of the tree resource itself and the potential for individual trees to function well over an extended period of time. Trees that are preserved must be carefully selected to make sure they perform favorably in the landscape and will be an asset to the site over time.

Our goal is to identify trees that have a potential for long term health, structural stability and longevity. For trees growing in open fields, away from areas where people and property are present, structural defects and/or poor health present a low risk of damage or injury if they fail. However, we must be concerned about safety in use areas. Therefore, where development encroaches into existing plantings, we must consider the potential for trees to grow and thrive in a new environment as well as their structural stability.

Evaluation of suitability for preservation considers several factors. *For the purposes of this report numbers 1 and 2 (below), were the criteria used. If this project proceeds beyond feasibility examinations, the criteria included in numbers 3, 4 and 5 would also be utilized.*

1) **Tree health**
   Healthy vigorous trees are better able to generate impacts such as root injury, demolition of existing structures, changes in soil grade and moisture and soil compaction than are non-vigorous trees.

2) **Structural integrity**
   Trees with significant amounts of wood decay and other structural defects that cannot be corrected are likely to fail. Such trees should not be preserved in areas where damage to people of property is likely. Trees that have been harshly topped are not ideal for preservation due to structural problems and decay caused from topping.

3) **Species response**
   There is a wide variation in the response of individual species to construction impacts and changes in the environment.

4) **Tree age and longevity**
   Old trees, while having significant appeal, have limited physiological capacity to adjust to an altered environment. Young trees are better able to generate new tissue and respond to change. In general, the older the tree, the larger the Tree Protection Zone (TPZ). The TPZ is the area surrounding the tree that must remain undisturbed during construction activities.

5) **Invasiveness**
Species that spread across a site and displace desired vegetation are not always appropriate for retention. This is particularly true when indigenous species are displaced. The California Invasive Plant Inventory Database (http://www.calipc.org/paf/) lists species identified as being invasive. The City of San Carlos lists several trees including *Acaia baileyana, Acacia decurrens, Acaia melanoxylon, Ailanthus altissima* and *Eucalyptus globulus* as non-protected trees, at any size, in part due to their invasiveness.

Suitability for Preservation Summary
Based on its health and structural condition, each tree was given a suitability for preservation rating.

Of the 233 "protected" trees evaluated for the proposed project, 203 are rated suitable for retention in a development project. These trees exhibit any combination of fair or good health and fair or good structure, indicating they have potential for longevity on the site. These trees would be expected to function well over an extended period of time and should prove to be an asset to any proposed project.

Of the remaining "protected" trees, 30 were rated not suitable for retention. These trees are in poor health or contain significant defects in structure that cannot be abated with treatment indicating, they would be poor candidates for retention in the proposed project.

Suitability for Preservation Rating Methods

Below is a description of the criteria utilized in assessment of suitability for preservation:

Suitability for Preservation Ratings:

Rating factors:

Tree Health: Healthy vigorous trees are more tolerant of construction impacts such as root loss, grading and soil compaction, then are less vigorous specimens.

Structural integrity: Preserved trees should be structurally sound and absent of defects or have defects that can be effectively reduced, especially near structures or high use areas.

Rating Scale:
Good: Trees in good health and structural condition with potential for longevity on the site.

Fair: Trees in fair health and/or with structural defects that may be reduced with treatment procedures.

Poor: Trees in poor health and/or with poor structure that cannot be effectively abated with treatment. Trees can be expected to decline or fail regardless of construction impacts or management.

Tree Suitability for Preservation by Species

Using the criteria described above, a summary table was created below. It lists each species occurring on the property (or adjacent "Public" trees), with their suitability for preservation ratings.

Table 3 – Species Composition & Suitability for Preservation Ratings ("Protected" Trees)
808 Alameda de las Pulgas, San Carlos, CA

Common Name	Scientific Name	Suitability for Preservation			
		Poor	Fair	Good	Total
Aleppo Pine	*Pinus halepensis*	1	2		3
American Elm	*Ulmus americana*			1	1
California Bay	*Umbellularia californica*	1	2	1	4
California Buckeye	*Aesculus californica*	9	11	1	21
Coast Live Oak	*Quercus agrifolia*	18	99	68	187
Monterey Cypress	*Hesperocyparis macrocarpa*			1	1
Olive	*Olea europaea*		2	2	4
Peruvian Pepper	*Schinus molle*		1	1	2
~~Red Gum~~	~~*Eucalyptus camaldulensis*~~		~~1~~	~~2~~	~~3~~
~~Silver Dollar Gum~~	~~*Eucalyptus polyanthemos*~~	~~16~~	~~60~~	~~7~~	~~83~~
~~Silver Dollar Tree~~	~~*Eucalyptus cinerea*~~	~~5~~	~~5~~		~~10~~
Valley Oak	*Quercus lobata*	1	2	6	9
Victorian Box	*Pittosporum undulatum*		1		1
Total		30	122	81	233

Trees Suitable for Preservation by Location – Protected Trees

Table 4 below lists trees by location, suitability for preservation and protected designation.
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Table 4 - Location, Suitability for Preservation & Protected Designation
Protected Trees – 808 Alameda de las Pulgas, San Carlos, CA

Location	Suitable for Preservation (Good or Fair Condition)	Not Suitable for Preservation (Poor Condition)	Protected Designation
Upper Section (Map #1) and easement to Coronado St. (Map #1 A)	~~84~~ 83	15	Heritage
Upper Section (Map #1) and easement to Coronado St. (Map #1 A)	~~12~~ 0	~~5~~ 0	Significant
Upper Section- Refer to Tree Inventory- APN 050-220-160 (aerial image)	~~48~~ 46 ~~15~~ 6	5 ~~6~~ 0	Heritage Significant
Lower Section (Map #2)	~~59~~ 61	~~8~~ 9	Heritage
Lower Section (Map #2)	~~55~~ 4	~~8~~ 1	Significant
Lower Section (Map #2)	3	0	Public
Total Upper & Lower Sections	**~~191~~ 190**	**~~28~~ 29**	**Heritage Tree**
Total Upper & Lower Sections	**~~78~~ 10**	**~~19~~ 1**	**Significant Tree**
Total Lower Section	**4 3**	**0**	**Public Tree**

Tree Removal Plan

A preliminary site plan showing proposed units and grading limits, by BKF engineers, has been revised and completed. The plan overlays the existing trees and identifies trees recommended for removal. The BKF site plan titled *Tree Removal Plan*, sheet C2.2 and dated 9/15/2020, is attached. Table 5 below, copied from sheet C2.2 lists the total number of trees to be removed and total trees to be retained. The attached Tree Assessment Chart spreadsheet inventory includes the trees listed for removal below in itemized form.

Table 5

CLASSIFICATION	PRE-DEVELOPMENT	REMOVAL	POST-DEVELOPMENT
HERITAGE TREE	219	149	70
SIGNIFICANT TREE	11	9	2
PUBLIC TREE	3	1	2
NOT PROTECTED TREE	151	110	41
TOTAL TREES	384	269	115

Table 6, on the following page lists the number of trees proposed for removal due to construction impacts (grading), by species. It also indicates the protected designation, 'Heritage', 'Significant' and 'Public' (all protected categories), and 'Not Protected' trees.

Tree Removal by Species (Protected & Not Protected Trees)

Table 6

	TREES REMOVED BY SPECIES		
SPECIES & DESIGNATION	**PRE-DEVELOPMENT**	**REMOVAL-IMPACTS**	**RETAINED**
NATIVE –'HERITAGE'			
COAST LIVE OAK	185	134	51
VALLEY OAK	9	8	1
CALIFORNIA BUCKEYE	21	4	17
CALIFORNIA BAY	4	3	1
TOTAL	**219**	**149**	**70**
NON-NATIVE 'SIGNIFICANT'			
OLIVE	4	4	0
ALLEPO PINE	3	2	1
AMERICAN ELM	1	1	0
PERUVIAN PEPPER	1	1	0
MONTEREY CYPRESS	1	0	1
PITTOSPORUM	1	1	0
TOTAL	**11**	**9**	**2**
'PUBLIC TREES'			
COAST LIVE OAK	**2**	**0**	**2**
PERUVIAN PEPPER	**1**	**1**	**0**
TOTAL	**3**	**1**	**2**
NOT PROTRECTED			
EUCALYPTUS SILVER DOLLAR GUM	**78**	**52**	**26**
PITTOSPORUM,EUCALYPTUS,OLIVE , COAST LIVE OAK	**45**	**40**	**5**
COAST LIVE OAK (<9,5" DIAMETER)	**1**	**1**	**0**
EUCALYPTUS SILVER DOLLAR TREE	**10**	**7**	**3**
MONTEREY PINE	**9**	**6**	**3**
EUCALYPTUS RED GUM	**3**	**1**	**2**
AVOCADO	**1**	**1**	**0**
ACACIA	**1**	**1**	**0**
PLUM	**1**	**0**	**1**
PRIVET	**1**	**0**	**1**
COAST REDWOOD	**1**	**1**	**0**
TOTAL	**151**	**110**	**41**
TOTAL INVENTORY	**384**	**269**	**115**

Note that Table 6 above inventories trees to be removed based on *high* construction impacts (grading), only. It does not inventory trees recommended for removal due to poor condition. Table 7 below contains 'Heritage' trees with *low* construction impacts (not on Table 6 removal inventory), but in poor condition. An additional 16 'Heritage' trees recommended for removal due to poor condition are included in the list below. There are no 'Significant' or 'Public' trees recommended for removal due to poor condition in the tree inventory. Most of the trees listed below have extensive decay as the primary reason for poor condition. Depending on risk levels (locations relative to structures and other targets), is possible that some of these trees may be retained for habitat.

TABLE 7

HERITAGE TREES RECOMMENDED FOR REMOVAL DUE TO CONDITION

SPECIES & DESIGNATION	PRE-DEVELOPMENT	REMOVAL-IMPACTS	REMOVAL-CONDITION	RETAINED
NATIVE - 'HERITAGE'				
COAST LIVE OAK	185	134	8	43
VALLEY OAK	9	8	1	0
CALIFORNIA BUCKEYE	21	4	7	10
CALIFORNIA BAY	4	3	0	1
TOTAL	219	149	16	**54**

If all 'Heritage' trees recommended for removal due to poor condition, are removed and none are retained for habitat, the total number of protected 'Heritage' trees retained will *decrease* from 70 trees, as shown on Table 6, to 54 trees as shown on Table 7 above.

Tree Replacement

When final civil plans are completed, the total number of trees requiring removal may increase from the tree count above (Table 5), based on several factors including, grading, utility placement, road and hardscape placement, home placement and the distance of each of these elements to existing trees. Also, some trees marked for removal on the preliminary BKF *Tree Removal Plan,* sheet C2.2 and Table 5 above, may be retained, depending on field placement of grading stakes and the distance of these stakes from some trees.

Tree removal may be offset by the replanting of replacement trees. As a condition of approval, the City of San Carlos will require replacement trees. The number, size and location of replacement trees shall be approved by the City of San Carlos.

CONCLUSION

With careful planning, the extensive and diverse tree resources at 808 Alameda de las Pulgas, will enhance any development project.

RECOMMENDATIONS

1. Prune trees 12,87,89,125,127 and 130, that are within 5-feet of fire-safe zone, as necessary to enhance defensible space.

Respectfully submitted,

Kurt Fouts ISA Certified Arborist WE-0681A

Kurt Fouts

In association with:

Donald W. Cox ISA Board Certified Master Arborist WE-3023BUM

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Black Mountain Properties

Tree Assessment Chart - Appendix A

Revised 7/9/2018
Revised 11/29/2018 (removal reccomendation
Revised 9/3/2019 / Revised 9/13/2020

Suitability for Preservation Ratings:

Good: Trees in good health and structural condition with potential for longevity on the site

Fair: Trees in fair health and/or with structural defects that may be reduced with treatment procedures

Poor: Trees in poor health and/or with poor structure that cannot be effectively abated with treatment

Protected Tree Code:

ST: Significant Tree - Any tree, 11.5 inches or greater in diameter

HT: Heritage Tree - Select California native trees listed in the City of San Carlos Municipal Code, 9.5 inches or greater in diameter, including Coast Live Oak, Valley Oak, Buckeye & Calif. Bay Laurel

PT: Public Tree - Any tree located within any street median,City park or other parcel of publicly owned property.

Tree #	Species	Trunk Diameter @ 4'	Protected Tree (Type)	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Remove- Within grading limits	Comments
1	coast live oak (*Quercus agrifolia*)	34"	HT	40'X60'	Good	Poor	Fair		Significant cavities and dead wood in trunk and scaffold limb. Tree should not be retained if located near structures or frequently used common areas. Needs pruning to remove extensive dead wood.
2	California bay laurel (*Umbellularia californica*)	10", 9"	HT	40'X25'	Good	Fair	Good		Unbalanced canopy.
3	California buckeye *(Aesculus californica*)	17",16", 9"	HT	30'X40'	Fair	Fair	Fair	Yes	Needs pruning to remove extensive dead wood.
4	coast live oak	20",9"	HT	38'X50'	Good	Good	Good	Yes	Excellent condition.
5	coast live oak	20"	HT	30'X35'	Good	Good	Good	Yes	
6	coast live oak	21"	HT	25'X35'	Good	Poor	Poor	Yes	Extensive trunk fracture. Lower scaffold tear out.

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9/13/2020

Black Mountain Properties

Tree Assessment Chart - Appendix A

Tree #	Species	Trunk Diameter @ 4'	Protected Tree (Type)	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Remove- Within grading limits	Comments
7	coast live oak *(Quercus agrifolia)*	11", 11"	HT	25'X35'	Good	Good	Good	Yes	
8	coast live oak	16"	HT	35'X30'	Good	Fair	Fair	Yes	
9	California bay laurel (*Umbellularia californica*)	10"	HT	20'X16'	Good	Fair	Fair	Yes	
10	coast live oak	40"	HT	8'X5'	Good	Poor	Poor	Yes	Stump of tree. Extensive trunk cavity. No limb structure.
11	coast live oak	33"	HT	46'X35'	Good	Good	Good	Yes	
12	coast live oak	34"	HT	50'X60'	Good	Fair	Fair		Trunk lean. Unbalanced canopy. **Within 5' of fire-safe zone. Prune as necessary to enhance defensible space.**
13	coast live oak	39"	HT	60'X40'	Good	Fair	Fair	Yes	Within grading limits but will be retained.
14	coast live oak	11", 14"	HT	45'X32'	Good	Fair	Fair	Yes	Co-dominant trunks.
15	coast live oak	24", 22"	HT	40'X45'	Good	Good	Good	Yes	
16	coast live oak	19"	HT	25'X30'	Good	Fair	Fair	Yes	Co-dominant trunks, at 4 feet above grade. Embedded bark.

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Black Mountain Properties

Tree Assessment Chart - Appendix A

Tree #	Species	Trunk Diameter @ 4'	Protected Tree (Type)	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Remove- Within grading limits	Comments
17	coast live oak (Quercus agrifolia)	15"	HT	25'X30'	Good	Fair	Fair	Yes	Co-dominant trunks, at 4 feet above grade. Embedded bark.
18	coast live oak	16"	HT	30'X25'	Good	Good	Good	Yes	
19	coast live oak	18"	HT	30'X20'	Good	Fair	Fair	Yes	Trunk lean 10 degrees to South
20	coast live oak	16", 13"	HT	35'X32'	Good	Fair	Fair	Yes	Co-dominant trunks, at 2 feet above grade. Embedded bark.
21	coast live oak	19", 16", 16", 15",12"	HT	40'X45'	Good	Fair	Fair	Yes	Multiple trunks, at one foot above grade. Five stems.
22	coast live oak	28"	HT	48'X35'	Good	Fair	Fair	Yes	Co -dominant trunks at 4 feet above grade. Trunk lean 20 degrees to North.
23	coast live oak	14"	HT	40'X25'	Good	Good	Good	Yes	
24	coast live oak	14"	HT	40'X25'	Good	Good	Good	Yes	
25	coast live oak	44"	HT	60'X60'	Fair	Fair	Fair		Trunk bleeding sap, at 12 feet above grade.
26	California buckeye (Aesculus californica)	12",11", 11"	HT	20'X25'	Poor	Poor	Poor	Yes	Needs pruning to remove extensive dead wood.

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27	California buckeye *(Aesculus californica)*	11", 8"	HT	20'X25'	Good	Fair	Fair		Canopy suppressed by adjacent coast live oak.
28	California buckeye	16", 15"	HT	20'X30'	Fair	Poor	Poor		Extensive basal cavity.
29	California buckeye	16", 13"	HT	35'X40'	Fair	Fair	Fair		Climbing poison oak in canopy.
30	California buckeye	11"	HT	30'X30'	Fair	Fair	Fair		Needs pruning to remove extensive deadwood. Canopy is thin.
31	California buckeye	10", 9"	HT	30'X30'	Fair	Poor	Fair		Double leader trunk. Basal decay. Needs pruning to remove extensive dead wood.
32	coast live oak *(Quercus agrifolia)*	11"	HT	35'X20'	Good	Fair	Fair	Yes	
33	coast live oak	18"	HT	40'X40'	Good	Fair	Fair	Yes	Trunk lean, 10 degrees to North.
34	coast live oak	28"	HT	45'X45'	Good	Good	Good	Yes	
35	coast live oak	20"	HT	42'X25'	Good	Fair	Fair	Yes	Trunk lean, 15 degrees to North.
36	coast live oak	19"	HT	48'X40'	Good	Good	Good	Yes	Trunk lean, 10 degrees to South.

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37	California buckeye *(Aesculus californica)*	19", 10", 9", 7"	HT	40'X35'	Good	Poor	Poor		Multiple trunks. Extensive basal cavity. Poison oak in canopy.
38	California buckeye	17"	HT	40'X30'	Fair	Fair	Fair		Trunk has 15 degree lean to North East.
39	California buckeye	16"	HT	35'X30'	Fair	Poor	Poor		Basal cavity, at 3 feet above grade. Trunk has 30 degree lean to South West. Needs pruning to remove extensive dead wood.
40	coast live oak *(Quercus agrifolia)*	18"	HT	48'X40'	Good	Good	Good		
41	California buckeye	10", 9", 9", 7", 6"	HT	22'X25'	Poor	Poor	Poor		Basal decay. Trunk has lean to South. Suppressed canopy. Needs pruning to remove extensive dead wood.
42	coast live oak	14"	HT	25'X26'	Fair	Poor	Fair		Co-dominant trunks at 2 feet above grade. Included bark. Canopy topped for view.
43	coast live oak	12", 12"	HT	25'X25'	Fair	Poor	Fair		Co-dominant trunks at one foot above grade. Canopy topped for view.
44	coast live oak	10", 5", 5"	HT	20'X20'	Fair	Poor	Fair		Co-dominant trunks at 5 feet above grade. Included bark. Canopy topped for view.
45	coast live oak	11"	HT	18'X20'	Fair	Fair	Fair		Canopy topped for view.
46	Valley Oak *(Quercus lobata)*	24"	HT	20'X30'	Fair	Fair	Poor		Extensive topping of major scaffold limbs.

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Black Mountain Properties

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47	coast live oak *(Quercus agrifolia)*	9.5"	HT	30'X30'	Fair	Fair	Fair		
48	coast live oak	9.5"	HT	30'X30'	Fair	Fair	Fair		
49	coast live oak	10"	HT	28'X26'	Good	Good	Good		
50	coast live oak	14"	HT	30'X40'	Good	Fair	Good		Co-dominant trunks.
51	coast live oak	11"	HT	20'X25'	Good	Poor	Fair		Trunk has 30 degree lean. Suppressed canopy.
52	coast live oak	12"	HT	38'X25'	Good	Fair	Fair		Trunk has 10 degree lean to North.
53	coast live oak	10"	HT	35'X18'	Good	Fair	Good		Trunk has 10 degree lean to North East.
54	coast live oak	18"	HT	50'X40'	Good	Good	Good		
55	California buckeye *(Aesculus californica)*	20", 12", 12", 11", 8"	HT	26'X42'	Fair	Poor	Poor		Multiple trunks. Extensive basal decay.
56	coast live oak	16"	HT	40'X28'	Good	Fair	Fair		Co- dominant trunks at 6 feet above grade. Bacterial wetwood infection/exudation (not significant health issue).

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Black Mountain Properties

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57	California buckeye *(Aesculus californica)*	14", 10", 10", 8"	HT	25'X30'	Good	Fair	Fair		Basal decay.
58	coast live oak (*Quercus agrifolia*)	13"	HT	35'X26'	Good	Fair	Fair		Trunk has 10 degree lean to East.
59	coast live oak	10", 8"	HT	36'X28'	Good	Fair	Fair		Trunk has 20 degree lean to East.
60	California buckeye	13"	HT	25'X25'	Poor	Poor	Poor		Basal decay. Extensive dead wood. Trunk has 30 degree lean to east.
61	coast live oak	12"	HT	38'X26'	Fair	Fair	Fair		
62	coast live oak	11",9"	HT	32'X32'	Good	Fair	Fair		Trunk has 10 degree lean to North East. Unbalanced canopy.
63	coast live oak	14"	HT	35'X26'	Good	Fair	Fair		
64	California buckeye	14", 14", 7"	HT	40'X32'	Good	Good	Good		
65	California buckeye	14", 10"	HT	20'X20'	Poor	Poor	Poor		Fallen tree. Extensive basal decay.
66	coast live oak	12"	HT	42'X26'	Good	Fair	Fair	Yes	Trunk has 15 degree lean to North.

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Black Mountain Properties

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67	coast live oak *(Quercus agrifolia)*	35"	H.T.	45'X45'	Good	Poor	Poor	Yes	Trunk has extensive vertical split at ground level to 4 feet above grade.
68	coast live oak	16"	H.T.	55'X20'	Poor	Poor	Poor	Yes	Tree is dead.
69	valley oak *(Quercus lobata)*	31"	H.T.	55'X65'	Good	Good	Good	Yes	
70	coast live oak	28"	H.T.	46'X36'	Good	Fair	Fair	Yes	Co-dominant trunks at 4 feet above grade. Included bark.
71	coast live oak	24"	H.T.	40'X36'	Good	Fair	Fair	Yes	Unbalanced canopy.
72	coast live oak	16", 14", 13"	H.T.	45'X45'	Good	Good	Good		
73	coast live oak	24", 16"	H.T.	40'X45'	Good	Fair	Good	Yes	
74	coast live oak	8", 8"	H.T.	18'X16'	Good	Good	Fair	Yes	
75	Monterey pine (Pinus radiata)	12"	not protected	20'X10'	Poor	Poor	Poor	Yes	Tree is dead.
76	Monterey pine	22"	not protected	60'X40'	Poor	Fair	Poor	Yes	Evidence of Red Turpentine beetle.

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Black Mountain Properties

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77	coast live oak *(Quercus agrifolia)*	26"	H.T.	50'X40'	Fair	Good	Good	Yes	
78	coast live oak	16"	H.T.	42'X38'	Good	Good	Good	Yes	
79	coast live oak	16"	H.T.	36'X28'	Good	Fair	Fair	Yes	
80	coast live oak	8", 6", 5"	H.T.	25'X25'	Good	Fair	Fair	Yes	
81	coast live oak	12", 11", 10"	H.T.	32'X26'	Good	Fair	Fair	Yes	Co-dominant trunks at 1 feet above grade.
82	coast live oak	10"	H.T.	30'X15'	Poor	Poor	Poor	Yes	Tree is dead.
83	coast live oak	13", 11", 8"	H.T.	22'X25'	Poor	Good	Fair	Yes	Stem canker. Epicormic growth on limbs.
84	coast live oak	15", 12", 11", 10"	H.T.	36'X36'	Fair	Fair	Fair	Yes	Multi-trunked tree. Stem canker.
85	coast live oak	23"	H.T.	45'X40'	Poor	Fair	Poor	Yes	Lower limb tear out. Extensive dead wood. Stem canker.
86	coast live oak	19", 19", 19"	H.T.	45'X48'	Good	Fair	Good	Yes	Multi-trunked tree.

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Black Mountain Properties

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87	coast live oak *(Quercus agrifolia)*	20"	H.T.	36'X45'	Good	Fair	Good		**Within 5' of fire-safe zone. Prune as necessary to enhance defensible space.**
88	coast live oak	16", 11", 8"	H.T.	28'X36'	Fair	Fair	Fair		
89	coast live oak	12"	H.T.	29'X32'	Good	Good	Good		**Within 5' of fire-safe zone. Prune as necessary to enhance defensible space.**
90	coast live oak	18"	H.T.	35'X27'	Good	Good	Good		
91	coast live oak	11"	H.T.	25'X20'	Good	Good	Good		
92	Aleppo pine (*Pinus halepensis*)	19"	S.T.	55'X30'	Fair	Fair	Fair		Western gall rust fungal infection in foliar crown.
93	silver dollar gum (*Eucalyptus polyanthemos*)	11.5", 11.5"	not protected	35'X25'	Fair	Fair	Fair	Yes	
94	silver dollar gum	23"	not protected	60'X24'	Good	Good	Good	Yes	
95	silver dollar gum	26"	not protected	65'X40'	Good	Fair	Fair	Yes	Unbalanced canopy. Pruned for line clearance.
96	silver dollar gum	23"	not protected	60'X15'	Fair	Poor	Poor	Yes	Significant lean.

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Black Mountain Properties

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97	silver dollar gum (*Eucalyptus polyanthemos*)	27"	not protected	70'X30'	Good	Good	Good	Yes	
98	silver dollar gum	16"	not protected	45'X25'	Good	Fair	Fair	Yes	Unbalanced canopy. Growing conditions for structural roots is limited.
99	silver dollar gum	17"	not protected	70'X25'	Good	Fair	Fair	Yes	Growing conditions for structural roots is limited.
100	silver dollar gum	16"	not protected	55'X25'	Fair	Fair	Fair	Yes	
101	silver dollar gum	20"	not protected	60'X28'	Fair	Fair	Fair	Yes	
102	silver dollar gum	22"	not protected	60'X30'	Good	Good	Fair		Within grading limits but will be retained.
103	silver dollar gum	15"	not protected	50'X25'	Good	Fair	Fair		
104	coast live oak (*Quercus agrifolia*)	20",15",14"	H.T.	30'X60'	Good	Good	Good	Yes	Low horizontal limbs.
105	coast live oak	16"	H.T.	12'X24'	Poor	Fair	Poor	Yes	Fungal cankers on trunk and lower scaffold limbs.
106	silver dollar gum	40"	not protected	60'X45'	Good	Fair	Fair		

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Black Mountain Properties

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107	silver dollar gum (*Eucalyptus polyanthemos*)	23"	not protected	75'X45'	Good	Good	Fair	Yes	Very thin canopy. (Low live crown ratio)
108	silver dollar gum	16"	not protected	45'X25'	Fair	Fair	Fair		
109	coast live oak (*Quercus agrifolia*)	11",9"	H.T.	26'X36'	Good	Fair	Fair	Yes	
110	coast live oak	15"	H.T.	23'X30'	Fair	Fair	Fair		
111	Monterey Pine (*Pinus radiata*)	12"	not protected	60'X40'	Fair	Poor	Poor		Pitch canker fungal disease present.
112	Monterey Pine	20"	not protected	60'X28'	Poor	Fair	Poor		
113	Monterey Pine	17"	not protected	50'X15'	Poor	Poor	Poor		
114	Monterey cypress (*Hesperocyparis macrocarpa*)	27"	S.T.	60'X26'	Good	Good	Good		
115	coast live oak	16"	H.T.	20'X25'	Fair	Fair	Fair	Yes	
116	California bay laurel (*Umbellularia californica*)	13",11"	H.T.	20'X20'	Fair	Poor	Poor	Yes	Previously topped canopy.

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117	coast live oak (*Quercus agrifolia*)	15"	H.T.	20'X20'	Good	Poor	Poor	Yes	Unbalanced canopy. Suppressed growth.
118	coast live oak	22",18"	H.T.	25'X50'	Good	Fair	Good		Largest specimen in grove of eleven trees.
119	coast live oak	9.5"	H.T.	8'X20'	Good	Poor	Poor		Significant lean. Suppressed growth. Ivy growth on trunk, canopy.
120	coast live oak	7", 5"	H.T.	10'X20'	Good	Poor	Poor		Significant lean. Suppressed growth. Ivy growth on trunk, canopy.
121	coast live oak	12"	H.T.	12'X20'	Good	Poor	Poor	Yes	Significant lean. Suppressed growth. Ivy growth on trunk, canopy.
122	coast live oak	23"	H.T.	30'X28'	Good	Good	Good	Yes	Heavy ivy growth on canopy.
123	coast live oak	13"	H.T.	20'X20'	Good	Fair	Fair	Yes	Heavy ivy growth on canopy.
124	coast live oak	9",10"	H.T.	25'X25'	Good	Poor	Poor		Co-dominant trunks at 3 feet above grade. Embedded bark.
125	coast live oak	16"	H.T.	35'X26'	Good	Fair	Good		**Within 5' of fire-safe zone. Prune as necessary to enhance defensible space.**
126	coast redwood	11.5"	not protected	40'X12'	Good	Good	Fair	Yes	Crowded growing conditions with oaks. Tree diameter is below 23" threshold for 'Heritage tree' designation (protected type).

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Black Mountain Properties

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127	coast live oak (*Quercus agrifolia*)	9",5",5"	H.T.	16'X18'	Fair	Fair	Fair		**Within 5' of fire-safe zone. Prune as necessary to enhance defensible space.**
128	Bailey's acacia (*Acacia baileyana*)	11"	not protected	40'X30'	Poor	Fair	Poor	Yes	Outside grading limits but will be removed.
129	California buckeye (*Aesculus callifornica*)	8",7",6"	H.T.	18'X22'	Good	Fair	Fair		Suppressed growth. Low branching scaffold limbs.
130	coast live oak	16"	H.T.	32'X28'	Good	Good	Fair		**Within 5' of fire-safe zone. Prune as necessary to enhance defensible space.**
131	coast live oak	13",10"	H.T.	30'X32'	Good	Fair	Fair	Yes	Located at edge of grove.
132	coast live oak	16"	H.T.	40'X45'	Good	Fair	Fair	Yes	Located at edge of grove.
133	coast live oak	13"	H.T.	33'X28'	Good	Fair	Fair	Yes	
134	coast live oak	16"	H.T.	38'X32'	Good	Fair	Fair	Yes	
135	coast live oak	16"	H.T.	36'X33'	Good	Good	Fair	Yes	
136	coast live oak	9.5"	H.T.	18'X26'	Good	Poor	Fair	Yes	Suppressed growth. Significant lean (south).

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Black Mountain Properties

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137	coast live oak (*Quercus agrifolia*)	11"	H.T.	28'X22'	Good	Good	Good	Yes	
138	coast live oak	10"	H.T.	23'X22'	Good	Poor	Fair	Yes	Suppressed growth. Significant lean (south).
139	coast live oak	10"	H.T.	23'X22'	Good	Poor	Fair	Yes	Suppressed growth. Significant lean (south).
140	coast live oak	11"	H.T.	26'X16'	Good	Fair	Fair	Yes	Significant lean (north).
141	coast live oak	12"	H.T.	24'X27'	Good	Fair	Fair	Yes	
142	coast live oak	11"	H.T.	36'X24'	Good	Good	Good	Yes	
143	coast live oak	16"	H.T.	30'X34'	Good	Fair	Good	Yes	
144	coast live oak	12"	H.T.	33'X24'	Good	Fair	Fair	Yes	Significant lean (south).
145	coast live oak	12"	H.T.	28'X28'	Good	Good	Good	Yes	
146	coast live oak	11"	H.T.	29'X28'	Good	Fair	Good	Yes	

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147	valley oak (*Quercus lobata*)	18",12"	H.T.	40'X38'	Good	Good	Good	Yes	Co-dominant trunks at 4 feet above grade.
148	coast live oak (*Quercus agrifolia*)	19"	H.T.	30'X21'	Fair	Poor	Poor	Yes	Unbalanced canopy. Growth suppressed by tree #149.
149	coast live oak	28"	H.T.	52'X48'	Good	Good	Good	Yes	
150	coast live oak	17"11"	H.T.	52'X35'	Good	Fair	Good	Yes	Trunks divided at soil grade.
151	American elm (*Ulmus americana*)	28"	S.T.	60'X60'	Good	Good	Good	Yes	
152	valley oak	38"	H.T.	48'X40'	Fair	Good	Good	Yes	Signs of drought stress.
153	coast live oak	19"	H.T.	48'X38'	Fair	Fair	Fair	Yes	Unbalanced canopy. Significant lean.
154	coast live oak	13"	H.T.	36'X28'	Fair	Fair	Fair	Yes	Suppressed growth. Significant lean (east).
155	coast live oak	13",13"	H.T.	40'X28'	Fair	Fair	Fair	Yes	
156	coast live oak	9",7", 5"	H.T.	8'X18'	Fair	Poor	Fair	Yes	

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157	coast live oak (*Quercus agrifolia*)	17"	H.T.	42'X32'	Good	Good	Good	Yes	
158	coast live oak	12"	H.T.	22'X30'	Fair	Poor	Fair	Yes	Suppressed growth. Significant lean (east).
159	coast live oak	19"	H.T.	34'X28'	Good	Fair	Good	Yes	
160	coast live oak	21",9"	H.T.	40'X38'	Good	Good	Good	Yes	Co-dominant trunks at 4 feet above grade. .
161	valley oak (*Quercus lobata*)	23"	H.T.	38'X35'	Fair	Fair	Fair	Yes	
162	coast live oak	27"	H.T.	38'X50'	Good	Good	Good	Yes	
163	coast live oak	18"	H.T.	40'X30'	Fair	Fair	Fair	Yes	
164	coast live oak	11",11",10"	H.T.	48'X40'	Fair	Fair	Fair	Yes	
165	coast live oak	18"	H.T.	42'X32'	Fair	Good	Good	Yes	
166	coast live oak	9",8"	H.T.	20'X22'	Fair	Good	Good	Yes	

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Black Mountain Properties

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167	valley oak (*Quercus lobata*)	18",18",18"	H.T.	55'X54'	Fair	Fair	Fair	Yes	
168	coast live oak (Quercus agrifolia)	17"	H.T.	38'X34'	Good	Fair	Good	Yes	Significant lean.
169	coast live oak	13"	H.T.	36'X35'	Good	Good	Good	Yes	Within grading limits but will be retained.
170	coast live oak	14"	H.T.	36'X40'	Fair	Good	Good	Yes	
171	coast live oak	11"	H.T.	33'X16'	Fair	Fair	Fair	Yes	
172	coast live oak	18"	H.T.	35'X35'	Good	Poor	Poor	Yes	Co-dominant trunks at 5 feet above grade, with embedded bark.
173	coast live oak	16",15"	H.T.	40'X40'	Fair	Fair	Fair	Yes	Two trunks separate at grade. Significant lean with large horizontal scaffolds.
174	victorian box (*Pittosporum undulatum*)	7",6"	S.T.	18'X20'	Good	Fair	Fair	Yes	Unbalanced canopy. Suppressed growth. Two trunks separate at grade.
175	coast live oak	17",16",15"	H.T.	38'X40'	Good	Good	Good	Yes	
176	coast live oak	14",11"	H.T.	28'X26'	Good	Fair	Fair	Yes	Co-dominant trunks at 3 feet above grade. Suppressed growth.

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Black Mountain Properties

Tree Assessment Chart - Appendix A

Tree #	Species	Trunk Diameter @ 4'	Protected Tree (Type)	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Remove- Within grading limits	Comments
177	coast live oak (*Quecus agrifolia*)	8",7"	H.T.	20'X20'	Good	Fair	Fair	Yes	Co-dominant trunks at 3 feet above grade.
178	coast live oak	9.5"	H.T.	20'X22'	Good	Fair	Fair	Yes	
179	coast live oak	13"	H.T.	20'X21'	Good	Good	Good	Yes	
180	coast live oak	13"	H.T.	23'X26'	Good	Good	Good	Yes	
181	Aleppo pine (*Pinus halapensis*)	24",22"	S.T.	75'X32'	Poor	Good	Fair	Yes	Within grading limits but will be retained. Co-dominant trunks at 1 foot above grade. Canopy is thinning and chlorotic. Western Gall Rust cankers present on limbs.
182	Aleppo pine	28"	S.T.	65'X35'	Poor	Poor	Poor	Yes	Significant failure of major scaffold limbs.
183	coast live oak	18",14"	H.T.	50'X28'	Good	Good	Good	Yes	. Co-dominant trunks at 1 foot above grade.
184	valley oak (*Quecus lobata*)	32"	H.T.	48'X50'	Fair	Good	Good	Yes	Multiple trunks dividing at grade level.
185	silver dollar gum (*Eucalyptus polyanthemos*)	24",16",14"	not protected	45'X20'	Good	Fair	Fair	Yes	Multiple trunks dividing at grade level.
186	silver dollar gum	10",7",5"	not protected	30'X20'	Good	Poor	Poor	Yes	Multiple trunks dividing at grade level.

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187	silver dollar gum (*Eucalyptus polyanthemos*)	16",10",10"	not protected	40'X20'	Fair	Fair	Fair	Yes	Multiple trunks divide at grade.
188	silver dollar gum	14",9"	not protected	45'X20'	Fair	Fair	Fair	Yes	Multiple trunks divide at grade.
189	silver dollar gum	16"	not protected	45'X20'	Fair	Fair	Fair	Yes	Multiple trunks divide at grade.
190	silver dollar gum	18"	not protected	45'X12'	Fair	Fair	Fair	Yes	Multiple trunks divide at grade.
191	silver dollar gum	13"	not protected	45'X25'	Fair	Poor	Poor	Yes	Suppressed growth.
192	silver dollar gum	17",10"7"	not protected	50'X25'	Fair	Fair	Fair	Yes	
193	silver dollar gum	12"10"	not protected	40'X25'	Fair	Fair	Fair	Yes	
194	silver dollar gum	10",10",9"	not protected	40'X15'	Fair	Fair	Fair	Yes	
195	silver dollar gum	22",14"	not protected	55'X26'	Fair	Fair	Fair	Yes	
196	silver dollar gum	10",9"	not protected	30'X15'	Fair	Fair	Fair	Yes	Suppressed growth.

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Black Mountain Properties

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197	silver dollar gum (*Eucalyptus polyanthemos*)	15",13"	not protected	60'X15'	Fair	Good	Fair	Yes	
198	silver dollar gum	16"	not protected	65'X20'	Fair	Fair	Fair	Yes	
199	silver dollar gum	12"	not protected	60'X15'	Fair	Fair	Fair	Yes	
200	silver dollar gum	15"	not protected	45'X20'	Fair	Fair	Fair	Yes	Significant lean (south).
201	silver dollar gum	12"	not protected	40'X20'	Fair	Fair	Fair	Yes	Significant lean (south).
202	silver dollar gum	13"	not protected	55'X20'	Fair	Fair	Fair	Yes	
203	silver dollar gum	12",10"	not protected	40'X18'	Fair	Fair	Fair	Yes	
204	silver dollar gum	15"	not protected	50'X28'	Fair	Fair	Fair	Yes	
205	silver dollar gum	19"	not protected	60'X30'	Good	Good	Good	Yes	
206	silver dollar gum	12"	not protected	50'X12'	Fair	Fair	Fair	Yes	

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207	silver dollar gum (*Eucalyptus polyanthemos*)	10",9"	not protected	45'X20'	Fair	Fair	Fair	Yes	Co-dominant trunks at 1 foot above grade.
208	silver dollar gum	16",15",14"	not protected	50'X40'	Good	Fair	Fair	Yes	Co-dominant trunks at 2 foot above grade.
209	silver dollar gum	12"	not protected	50'X25'	Fair	Fair	Fair	Yes	
210	silver dollar gum	17"	not protected	60'X28'	Good	Good	Good	Yes	
211	silver dollar gum	12",11"	not protected	60'X35'	Poor	Fair	Poor	Yes	
212	silver dollar gum	9",9",3"	not protected	40'X16'	Fair	Poor	Poor	Yes	Co-dominant trunks at 2 foot above grade.
213	silver dollar gum	10",8"	not protected	40'X28'	Poor	Fair	Poor	Yes	Co-dominant trunks at 2 foot above grade.
214	silver dollar gum	17"	not protected	60'X30'	Good	Good	Good	Yes	
215	silver dollar gum	13"	not protected	65'X24'	Good	Fair	Fair		
216	silver dollar gum	14"	not protected	50'X20'	Good	Fair	Fair		

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Black Mountain Properties

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217	silver dollar gum (*Eucalyptus polyanthemos*)	10", 9"	not protected	50'X28'	Fair	Fair	Fair		Co-dominant trunks at 1 foot above grade.
218	silver dollar gum	22"	not protected	65'X45'	Good	Good	Good		
219	coast live oak (*Quercus agrifolia*)	6",5"	H.T.	15'X20'	Good	Good	Fair	Yes	Unbalanced canopy. Suppressed growth.
220	silver dollar gum	16",12"	not protected	65'X40'	Good	Fair	Fair		Co-dominant trunks at 3 feet above grade.
221	silver dollar gum	14",12",9"	not protected	70'X35'	Good	Fair	Fair		Co-dominant trunks at 3 feet above grade.
222	silver dollar gum	11",9",9", 9",8"	not protected	65'X30'	Good	Fair	Fair		Co-dominant trunks at 3 feet and 1 foot above grade.
223	silver dollar gum	11",10",9"	not protected	75'X38'	Fair	Fair	Fair		Co-dominant trunks at 4 feet above grade.
224	silver dollar gum	14"	not protected	70'X20'	Fair	Poor	Poor		Co-dominant trunks at 5 feet above grade. Trunks have narrow branching angles.
225	silver dollar gum	12"	not protected	40'X20'	Fair	Poor	Poor		Significant lean.
226	red gum (*Eucalyptus camaldulensis*)	7",5",5",5",4"	not protected	35'X22'	Good	Fair	Fair		Growth suppressed by tree # 227.

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Black Mountain Properties

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Tree #	Species	Trunk Diameter @ 4'	Protected Tree (Type)	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Remove- Within grading limits	Comments
227	red gum (*Eucalyptus camalulensis*)	44"	not protected	80'X60'	Good	Good	Good		
228	coast live oak (*Quercus agrifolia*)	12"	P.T.	20'x20'	Good	Fair	Fair		Growth suppressed by tree #227.
229	coast live oak	15"	P.T.	25'X25'	Good	Good	Good		
230	Peruvian pepper tree (Schinus molle)	24"	P.T.	32'X36'	Good	Good	Good	Yes	
231	Monterey pine (*Pinus radiata*)	25"	not protected	40'X40'	Fair	Fair	Fair	Yes	Significant lean.
232	Monterey pine	19"	not protected	38'X28'	Good	Good	Good	Yes	
233	coast live oak (*Quercus agrifolia*)	10",9"	H.T.	26'X27'	Good	Good	Fair		Co-dominant trunks divide at grade level.
234	silver dollar gum (*Eucalyptus polyanthemos*)	20"	not protected	70'X40'	Good	Fair	Fair		Co-dominant trunks at 6 feet above grade.
235	silver dollar gum	17"	not protected	45'X12'	Good	Poor	Poor		Leaders topped and all laterals severely headed.
236	silver dollar gum	11.5"	not protected	43'X10'	Fair	Poor	Poor		Leaders topped and all laterals severely headed.

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Black Mountain Properties

Tree Assessment Chart - Appendix A

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237	silver dollar gum *(Eucalyptus polyanthemos)*	13"	not protected	45'X18'	Fair	Fair	Fair		Leader topped.
238	silver dollar gum	16"	not protected	45'X15'	Fair	Fair	Fair		Co-dominant at 6 feet above grade. Leader topped.
239	silver dollar gum	12"	not protected	40'X8'	Poor	Poor	Poor		Leaders topped and all laterals severely headed.
240	silver dollar gum	11.5"	not protected	40'X8'	Fair	Poor	Poor		Leaders topped and all laterals severely headed.
241	silver dollar gum	18"	not protected	45'X16'	Fair	Fair	Fair		Cavity and deadwood at 2 feet above grade. Co-dominant at 5 feet above grade.
242	silver dollar gum	24"	not protected	45'X18'	Fair	Fair	Fair		Leaders topped.
243	silver dollar gum	16"	not protected	35'X6'	Poor	Poor	Poor		Very sparse live crown area. Leaders topped.
244	silver dollar gum	16"	not protected	35'X15'	Fair	Fair	Fair		Co-dominant at 4 feet above grade. Leaders topped.
245	silver dollar gum	14",10",8"	not protected	35'X10'	Fair	Fair	Fair		Co-dominant at 3 feet above grade. Leaders topped.
246	silver dollar gum	14"	not protected	38'X18'	Fair	Fair	Fair		Co-dominant at 7 feet above grade. Leaders topped.

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Black Mountain Properties

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Tree #	Species	Trunk Diameter @ 4'	Protected Tree (Type)	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Remove- Within grading limits	Comments
247	silver dollar gum (*Eucalyptus polyanthemos*)	16"	35'X15'	not protected	Fair	Fair	Fair		Leaders topped.
248	silver dollar gum	11.5"	36'X10'	not protected	Fair	Fair	Fair		Leaders topped.
249	silver dollar gum	14"	30'X15'	not protected	Fair	Fair	Fair		Co-dominant at 6 feet above grade. Leaders topped.
250	coast live oak (*Quercus agrifolia*)	11", 10"	53'X18'	H.T.	Good	Good	Good	Yes	Co-dominant at 1 foot above grade.
251	coast live oak	11",10"	50'X30'	H.T.	Good	Good	Good	Yes	Co-dominant at 1 foot above grade.
252	coast live oak	15"	28'X18'	H.T.	Good	Good	Good	Yes	Co-dominant at 5 feet above grade.
253	coast live oak	9",8"	16'X20'	H.T.	Good	Good	Good		Co-dominant at 1 foot above grade. Leaders lightly topped. Located along easement to Coronado Avenue.
254	coast live oak	12"	35'X28'	H.T.	Good	Good	Good		No trunk taper at grade. Grade raised slightly around trunk. Located along easement to Coronado Avenue.
255	coast live oak	11"	35'X25'	H.T.	Good	Good	Good		No trunk taper at grade. Grade raised slightly around trunk. Located along easement to Coronado Avenue.
256	coast live oak	11"	14'X16'	H.T.	Good	Good	Good		No trunk taper at grade. Grade raised slightly around trunk. Located along easement to Coronado Avenue.

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257	coast live oak (*Quercus agrifolia*)	12"	H.T.	26'X20'	Good	Good	Good		Located along easement to Coronado Avenue.
258	coast live oak	11",9"	H.T.	28'X22'	Good	Good	Good		Co-dominant at 2 feet above grade. Located along easement to Coronado Avenue.
259	coast live oak	10"	H.T.	28'X18'	Good	Good	Good		Located along easement to Coronado Avenue.
260	coast live oak	24",12"	H.T.	45'X35'	Good	Good	Good		Co-dominant at 3 feet above grade. Lowest scaffolds are 16 feet above grade.
261	coast live oak	29"	H.T.	45'X45'	Good	Fair	Good		Significant lean. Unbalanced canopy. Branch structure grows to N.E. Subsequent boundary survey indicates tree is located on adjacent property.
262	red gum *(Eucalyptus camaldulensis*)	27"	not protected	60'X60'	Good	Good	Good	Yes	Significant lean to east.

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Black Mountain Properties

Tree Assessment Chart - Appendix A

Revised 7/9/2018

Revised 2/11/2019

Suitability for Preservation Ratings:

Good: Trees in good health and structural condition with potential for longevity on the site

Fair: Trees in fair health and/or with structural defects that may be reduced with treatment procedures

Poor: Trees in poor health and/or with poor structure that cannot be effectively abated with treatment

Protected Tree Code:

ST: Significant Tree - Any tree, 11.5 inches or greater in diameter

HT: Heritage Tree - Select California native trees listed in the City of Carlos Municipal Code, 9.5 inches or greater in diameter, Live Oak, Valley Oak, Buckeye & Calif. Bay Laurel

Tree #	Species	Trunk Diameter @ 4' A.G.	Protected Tree (Type)	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Remove- Within grading limits	Comments
START NEW SECTION- PROPERTY LOCATION IS APN 050-220-160 (APN # FROM BASE MAP DATED 7/19/2016)									
260-A	coast live oak (*Quercus agrifolia*)	14"	Heritage	30'X30'	Good	Good	Good	Yes	
261-A	valley oak (*Quercus lobata*)	10"	Heritage	30'X26'	Fair	Good	Good	Yes	Minor tip dieback, up to 1" diameter, < 20% of canopy.
262-A	California buckeye (*Aesculus californica*)	4",4",3",3"	Heritage	15'X18'	Poor	Poor	Poor	Yes	Sparse canopy. Extensive deadwood in basal area & up to 4' above grade.
263	Monterey pine (*Pinus radiata*)	14"	not protected	42'X22'	Fair	Fair	Fair	Yes	Not protected. Minor needle dieback over 50% of canopy.
264	silver dollar tree (*Eucalyptus cineria*)	28"	not protected	40'X60'	Good	Fair	Fair	Yes	Co-dominant trunks at 5' above grade. 12"X12' cavity at trunk flare. Basal decay.

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Tree #	Species	Trunk Diameter @ 4' A.G.	Protected Tree (Type)	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Remove- Within grading limits	Comments
265	silver dollar tree (*Eucalyptus cineria*)	8",6",4"	not protected	40'X15'	Fair	Fair	Fair	Yes	Co-dominant trunks at grade.
266	silver dollar tree	19"	not protected	42'X20'	Poor	Poor	Poor	Yes	Extensive dieback throughout canopy, declining.
267	silver dollar tree	36"	not protected	42'X18'	Fair	Fair	Fair	Yes	Co-dominant trunks at 3' above grade. Trunk tear out and associated decay at 10' above grade.
268	coast live oak (*Quercus agrifolia*)	29"	Heritage	45'X40'	Fair	Fair	Fair	Yes	
269	California buckeye (*Aesculus californica*)	10",9"	Heritage	25'X38'	Fair	Fair	Fair	Yes	Sited at edge of paved driveway.
270	olive (*Olea europaea*)	10",6"	Significant	20'X20'	Fair	Fair	Fair	Yes	Within grading limits but will be relocated on site. Suppressed. Thin canopy. Competes with #268 &271.
271	olive	10",7",5", 4"	Significant	18'X22'	Fair	Good	Fair	Yes	Within grading limits but will be relocated on site. Co-dominant trunks at 2' above grade. Cavity and basal decay at 6" above grade.
272	silver dollar gum (*Eucalyptus polyanthemos*)	19"	not protected	50'X30'	Good	Fair	Fair	Yes	Large scaffold tear out at 20' above grade.
273	olive	5",4",4",3 "	Significant	16'X20'	Fair	Good	Good	Yes	Within grading limits but will be relocated on site. Suppressed. Thin canopy. Competes with #272 & 274.
274	silver dollar gum	18"	not protected	54'X25'	Good	Good	Good	Yes	

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275	olive (*Olea europaea*)	9",8"	Significant	20'X20'	Good	Good	Good	Yes	Within grading limits but will be relocated on site.
276	silver dollar gum (*Eucalyptus polyanthemos*)	16",16"	not protected	52'X30'	Fair	Fair	Fair	Yes	Co-dominant trunks at 2' above grade.
277	silver dollar gum	16",14"	not protected	42'X37'	Fair	Fair	Fair	Yes	Co-dominant trunks at 4' above grade.
278	silver dollar gum	7",5",4"	not protected	22'X15'	Poor	Poor	Poor	Yes	Co-dominant trunks at grade. Suppressed. Thin canopy.
279	silver dollar gum	16"	not protected	42'X30'	Fair	Fair	Fair	Yes	Significant lean. Unbalanced canopy. Large (4'X1'), basal wound from past co-dominant trunk failure.
280	silver dollar gum	11",8"	not protected	35'X18'	Fair	Fair	Fair	Yes	Co-dominant trunks at grade. Unbalanced canopy.
281	silver dollar gum	9",8"	not protected	35'X14'	Poor	Poor	Poor	Yes	
282	coast live oak (*Quercus agrifolia*)	9",5" (33" cir.)	Heritage	18'X20'	Fair	Fair	Fair	Yes	Open branching structure. Missing growth on one side of tree due to suppression from (previously removed), adjacent tree.
283	coast live oak	9", (29" cir.)	not protected	16'X16'	Good	Good	Good	Yes	Not protected.
284	Monterey pine (*Pinus radiata*)	29"	not protected	45'X38'	Fair	Fair	Fair	Yes	Not protected.

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285	coast live oak (*Quercus agrifolia*)	14"	Heritage	30'X27'	Good	Good	Good	Yes	
286	coast live oak	13"	Heritage	28'X28'	Good	Good	Good	Yes	
287	avocado (*Persea sp.*)	15",15"	not protected	24'X20'	Poor	Poor	Poor	Yes	Not protected. Co-dominant trunks at 1' above grade. Nearly dead. Extensive dieback with < 10% live canopy.
288	Peruvian pepper tree (*Schinus molle*)	12"	Significant	18'X18'	Fair	Fair	Fair	Yes	
289	coast live oak	13",7"	Heritage	27'X25'	Good	Good	Good	Yes	Co-dominant trunks at grade.
290	valley oak (*Quercus lobata*)	22"	Heritage	45'X45'	Good	Good	Good	Yes	Co-dominant trunks at 6' above grade.
291	silver dollar tree (*Eucalyptus cineria*)	9",7", 6"	not protected	45'X25'	Good	Poor	Fair	Yes	Co-dominant trunks at grade. One co-dominant trunk has failed at basal area and is still partially attached.
292	coast live oak	7",5",3"	Heritage	17'X17'	Good	Good	Good	Yes	
293	coast live oak	10",8"	Heritage	18'X20'	Good	Fair	Fair	Yes	Unbalanced canopy.
294	coast live oak	9.5"	Heritage	18'X20'	Good	Good	Good	Yes	

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295	coast live oak (*Quercus agrifolia*)	29"	Heritage	33'X50'	Fair	Fair	Fair	Yes	2'X2' cavity and basal decay at 1' above grade, from previous co-dominant trunk failure
296	coast live oak	17",12"	Heritage	25'X35'	Fair	Fair	Fair	Yes	12"X12" cavity and decay at 2'above grade. Nest in canopy.
297	coast live oak	10"	Heritage	15'X20'	Poor	Fair	Poor	Yes	Trunk makes sharp bend at 8'above grade. Unbalanced canopy.
298	coast live oak	14"	Heritage	27'X27'	Fair	Fair	Fair	Yes	Extensive dieback. < 50% live canopy. Epicormic growth.
299	coast live oak	11"	Heritage	35'X15'	Fair	Fair	Fair	Yes	Significant lean. Unbalanced canopy.
300	coast live oak	8",7",6"	Heritage	27'X22'	Fair	Fair	Fair	Yes	
301	coast live oak	10"	Heritage	25'X25'	Fair	Fair	Fair	Yes	Significant lean. Unbalanced canopy.
302	coast live oak	10"	Heritage	30'X20'	Fair	Fair	Fair	Yes	Significant lean. Unbalanced canopy.
303	coast live oak	9.5" (30" cir.)	Heritage	21'X15'	Fair	Fair	Fair	Yes	Unbalanced canopy.
304	coast live oak	7",4",3"	Heritage	25'X10'	Fair	Fair	Fair	Yes	Co-dominant trunks at 1' above grade.

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305	coast live oak (*Quercus agrifolia*)	10"	Heritage	37'X15'	Fair	Fair	Fair	Yes	
306	coast live oak	16"	Heritage	37'X25'	Fair	Fair	Fair	Yes	Significant lean. Unbalanced canopy.
307	coast live oak	10"	Heritage	32'X15'	Fair	Fair	Fair	Yes	Significant lean. Unbalanced canopy.
308	coast live oak	24"	Heritage	36'X40'	Good	Good	Good	Yes	Co-dominant trunks at 5' above grade.
309	coast live oak	9",4"	Heritage	27'X12'	Fair	Fair	Fair	Yes	
310	coast live oak	11"	Heritage	27'X20'	Fair	Fair	Fair	Yes	Co-dominant trunks at 5' above grade. Significant lean. Unbalanced canopy.
311	coast live oak	10"	Heritage	27'X16'	Good	Fair	Fair	Yes	
312	coast live oak	9.5" (30" cir.)	Heritage	27'X18'	Fair	Fair	Fair	Yes	
313	coast live oak	10"	Heritage	33'X16'	Fair	Fair	Fair	Yes	Significant lean.
314	coast live oak	8",4"	Heritage	20'X10'	Fair	Fair	Fair	Yes	Co-dominant trunks at 3' above grade.

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9/13/2020

Black Mountain Properties

Tree Assessment Chart - Appendix A

Tree #	Species	Trunk Diameter @ 4' A.G.	Protected Tree (Type)	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Remove- Within grading limits	Comments
315	coast live oak (*Quercus agrifolia*)	14"	Heritage	35'X20'	Fair	Fair	Fair	Yes	Co-dominant trunks at 6'above grade.
316	coast live oak	13"	Heritage	40'X15'	Fair	Fair	Fair		Unbalanced canopy.
317	glossy privet (*Ligustrum lucidum*)	5",4",4",3"	not Protected	25'X20'	Fair	Fair	Fair		Not protected.
318	coast live oak	11",7"	Heritage	20'X17'	Fair	Poor	Poor		4"X4" basal cavity and decay. < 50% live canopy. Epicormic growth.
319	silver dollar tree (*Eucalyptus cineria*)	24"	not protected	50'X30'	Fair	Fair	Fair		Strong trunk bend to West at 28' above grade.
320	coast live oak	7",6"	Heritage	18'X18'	Fair	Fair	Fair		
321	coast live oak	13",13"	Heritage	33'X36'	Good	Fair	Fair		Co-dominant trunks at grade. Dense foliar canopy.
322	plum (Prunus sp.)	10"	not protected	15'X15'	Poor	Fair	Poor		Not protected. Nearly dead.
323	California buckeye (*Aesculus californica*)	10",4"	Heritage	15'X18'	Fair	Poor	Fair		Significant lean.
324	silver dollar tree	12",12",10",6"	not protected	12'X30'	Fair	Poor	Poor		Co-dominant at 2' above grade. Failed co-dominant trunk at 6' above grade. Very poor structured tree.

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Black Mountain Properties

Tree Assessment Chart - Appendix A

Tree #	Species	Trunk Diameter @ 4' A.G.	Protected Tree (Type)	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Remove- Within grading limits	Comments
325	silver dollar tree (*Eucalyptus cineria*)	12",10"	not protected	30'X15'	Poor	Fair	Poor		Co-dominant trunks at grade. Failed co-dominant trunk at 1' above grade. 1'X1' cavity and deadwood on main trunk.
326	California buckeye (*Aesculus californica*)	8",7",7"	Heritage	15'X20'	Fair	Fair	Fair		Co-dominant trunks at grade.
327	coast live oak (*Quercus agrifolia*)	30"	Heritage	35'X30'	Fair	Poor	Poor		Co-dominant trunks at 10' above grade. Significant trunk decay at previous failure point of two co-dominant trunks. High risk tree if target present.
328	coast live oak	42"	Heritage	50'X75'	Good	Good	Good	Yes	Co-dominant trunks at 5' above grade. Impressive oak specimen (size and sructure). Would require pruning and cabling for risk reduction if retained and target (home or other structure), present.
329	coast live oak	35"	Heritage	45'X60'	Good	Poor	Poor		High risk tree if target present. Significant cavity at 4' - 6' above grade. < 30% sound trunk wood.
330	silver dollar tree	18"	not protected	55'X15'	Fair	Poor	Poor	Yes	High risk tree if target present. Sharp bend in trunk, due to previous limb failure at 35' above grade. Significant weight bias to west.
331	coast live oak	9.5" (30" cir.)	Heritage	28'X16'	Fair	Fair	Fair	Yes	
332	coast live oak	17"	Heritage	40'X40'	Fair	Fair	Fair	Yes	2"X4" cavity and decay at 2' above grade.
333	coast live oak	11"	Heritage	47'X17'	Good	Fair	Fair	Yes	
334	coast live oak	17"	Heritage	50'X30'	Good	Fair	Fair	Yes	Co-dominant trunks at 8' above grade.

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Black Mountain Properties

Tree Assessment Chart - Appendix A

Tree #	Species	Trunk Diameter @ 4' A.G.	Protected Tree (Type)	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Remove-Within grading limits	Comments
335	California bay laurel (*Umbellularia californica*)	12",11"	Heritage	33'X30'	Good	Fair	Fair	Yes	Co-dominant trunks at 4' above grade.
336	silver dollar tree (*Eucalyptus cineria*)	24"	not protected	30'X15'	Poor	Poor	Poor	Yes	Nearly dead. Failed trunks at 4' above grade.
337-384 No Tag	Eucalyptus, Pittosporum, Olive & Coast Live Oak	<15" diameter, eucalyptus, pittosporum & olive, <9.5" diameter, coast live oak	not protected	Not Evaluated	Not Evaluated	Not Evaluated	Not evaluated	Yes (Remove 40 of 45)	Trees in this row (#'s 337-384), include 45 trees surveyed by BkF Engineering, but not evaluated by arborist.
	A) Total Heritage Trees Proposed for Removal					**149**			
	B) Total Significant Trees Proposed for Removal					**05**			
	C) Total Not Protected Trees Proposed for Removal					**109**			
	D) Total Trees Proposed for Removal					**263**			
	TOTAL TREES INVENTORIED					**384**			

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APPENDIX B – CRITERIA FOR TREE ASSESSMENT CHART

Following is an explanation of the data used in the tree evaluations. The data is incorporated in the *Tree Assessment Chart, Appendix A.*

Trunk Diameter and Number of Trunks:

Trunk diameter as measured at 4.5 feet above grade. The number of trunks refers to a single or multiple trunked tree. Multiple trunks are measured at 4.5 feet above grade.

Health Ratings:

Good: A healthy, vigorous tree, reasonably free of signs and symptoms of disease

Fair: Moderate vigor, moderate twig and small branch dieback, crown may be thinning and leaf color may be poor

Poor: Tree in severe decline, dieback of scaffold branches and/or trunk, most of foliage from epicormics

Structure Ratings:

Good: No significant structural defects. Growth habit and form typical of the species

Fair: Moderate structural defects that might be mitigated with regular care

Poor: Extensive structural defects that cannot be abated.

Suitability for Preservation Ratings:

Rating factors:

Tree Health: Healthy vigorous trees are more tolerant of construction impacts such as root loss, grading and soil compaction, then are less vigorous specimens.

Structural integrity: Preserved trees should be structurally sound and absent of defects or have defects that can be effectively reduced, especially near structures or high use areas.

Tree Age: Over mature trees have a reduced ability to tolerate construction impacts, generate new tissue and adjust to an altered environment. Young to maturing specimens are better able to respond to change.

Species response: There is a wide variation in the tolerance of individual tree species to construction impacts.

Rating Scale:

Good: Trees in good health and structural condition with potential for longevity on the site

Fair: Trees in fair health and/or with structural defects that may be reduced with treatment procedures.

Poor: Trees in poor health and/or with poor structure that cannot be effectively abated with treatment. Trees can be expected to decline or fail regardless of construction impacts or management . The species or individual may possess characteristics that are incompatible or undesirable in landscape settings or unsuited for the intended use of the site.

Construction Impacts:

Rating Scale:

High: Development elements proposed that are located within the Tree Protection Zone that would severely impact the health and /or stability of the tree. The tree impacts cannot be mitigated without design changes. The tree may be located within the building footprint.

Moderate: Development elements proposed that are located within the Tree Protection Zone that will impact the health and/or stability of the tree and can be mitigated with tree protection treatments.

Low: Development elements proposed that are located within or near the Tree Protection Zone that will have a minor impact on the health of the tree and can be mitigated with tree protection treatments.

None: Development elements will have no impact on the health and stability of the Tree.

Tree Protection Zone (TPZ):

Defined area within which certain activities are prohibited or restricted to prevent or minimize potential injury to designated trees, particularly during construction or development.

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TOTAL TREE COUNT	
CLASSIFICATION	PRE-DEVELOPMENT
HERITAGE TREE	219
SIGNIFICANT TREE	11
PUBLIC TREE	3
NOT PROTECTED TREE	151
TOTAL TREES	384

*TREE NUMBERS SHOWN CORRESPOND TO THE PROJECT ARBORIST REPORT BY KURT FOUTS ARBORIST CONSULTANT, DATED JULY 2016 AND REVISED/UPDATED FEBRUARY 11, 2019.

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www.bkf.com

EXISTING TREE PLAN
806 ALAMEDA DE LAS PULGAS
ALAMEDA DE LAS PULGAS
SAN MATEO COUNTY CALIFORNIA
SAN CARLOS

REVIEW ONLY NOT FOR CONSTRUCTION

No.	Revisions	Date
	PLAN CHECK COMMENTS	02/25/2019
	PLANNING APPLICATION - REV.	09/12/2019

Date: 12/05/2018
Scale: 1" = 50'
Design: DJL
Drawn: DP/AG
Approved: RH
Job No: 20160150

Drawing Number:
C2.1
OF

DRAWING NAME: K:\2016\160150_Black_Mountain_San_Carlos\ENG\bmsheets.dwg
PLOT DATE: 09-13-19 PLOTTED BY: wort

© BKF ENGINEERS

LEGEND:

- HERITAGE TREE
- SIGNIFICANT TREE
- PUBLIC TREE
- NOT PROTECTED TREE
- HERITAGE TREE TO BE REMOVED
- SIGNIFICANT TREE TO BE REMOVED
- NOT PROTECTED TREE TO BE REMOVED
- GRADING LIMIT

TOTAL TREE COUNT

CLASSIFICATION	PRE-DEVELOPMENT	REMOVAL	POST-DEVELOPMENT
HERITAGE TREE	219	149	70
SIGNIFICANT TREE	11	9	2
PUBLIC TREE	3	1	2
NOT PROTECTED TREE	151	110	41
TOTAL TREES	384	269	115

*TREE NUMBERS SHOWN CORRESPOND TO THE PROJECT ARBORIST REPORT BY KURT FOUTS ARBORIST CONSULTANT, DATED JULY 2016 AND REVISED/UPDATED SEPTEMBER 11, 2020.

**TREE NUMBERS 12, 87, 89, 125, 127, AND 130 TO BE PRUNED PER THE ARBORIST REPORT TO ENHANCE DEFENSIBLE SPACE AROUND THE PROPOSED BUILDINGS.

0 50 100
GRAPHIC SCALE

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TREE REMOVAL PLAN
808 ALAMEDA DE LAS PULGAS
ALAMEDA DE LAS PULGAS
SAN MATEO COUNTY CALIFORNIA
SAN CARLOS

REGISTERED PROFESSIONAL ENGINEER
REVIEW ONLY
NOT FOR CONSTRUCTION
CIVIL
STATE OF CALIFORNIA

No.	Revisions	Date
	PLANNING RESUBMITTAL	06/15/2020
	PLANNING RESUBMITTAL	02/14/2020

Date: 12/05/2018
Scale: 1" = 50'
Design: DJL
Drawn: DP/AG
Approved: RH
Job No: 20160150

Drawing Number:
C2.2
OF

DRAWING NAME: K:\2016\160150_Black_Mountain_San_Carlos\ENG\bmsheets.dwg
PLOT DATE: 02-24-21 PLOTTED BY: wort

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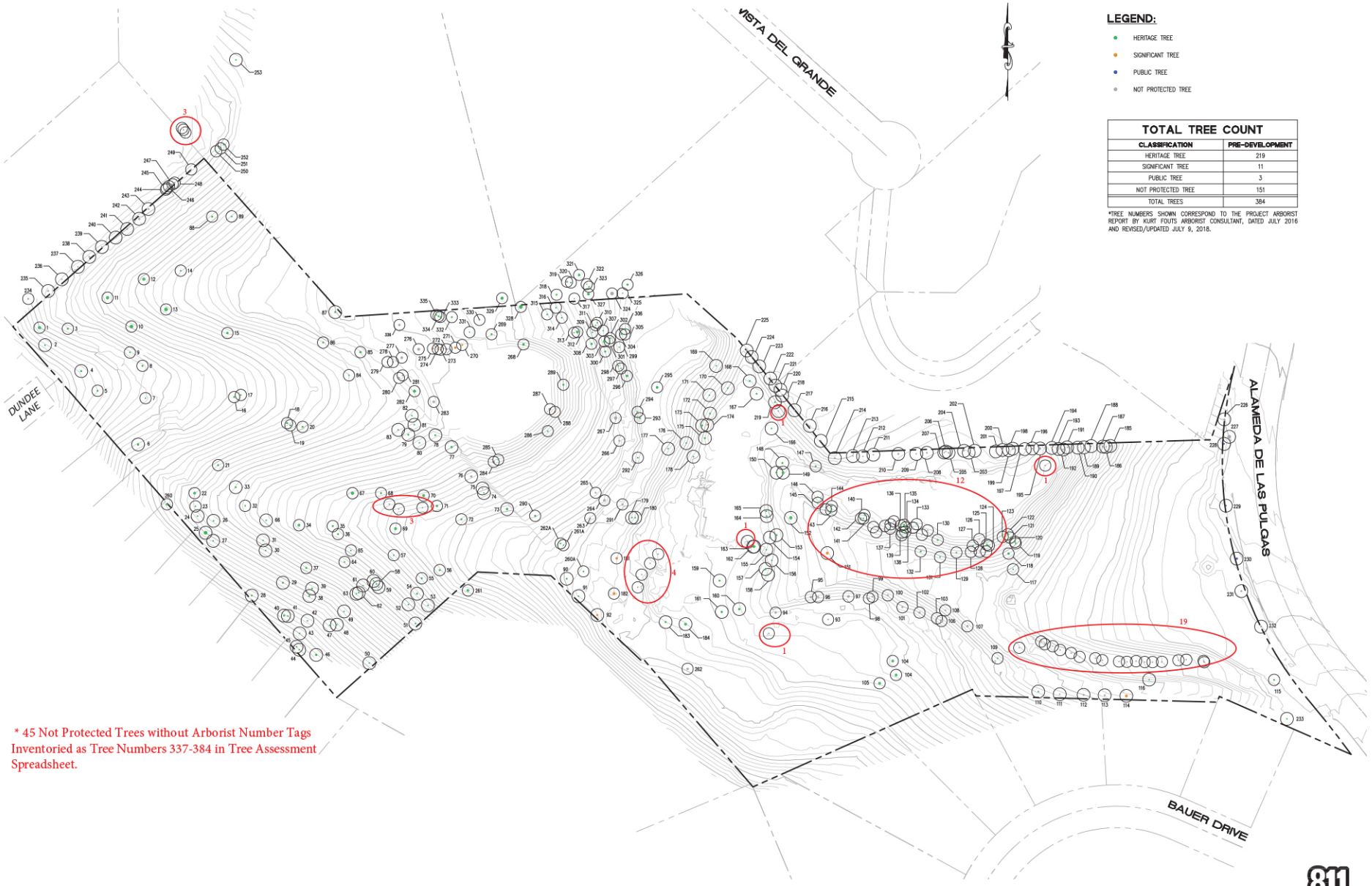

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EXISTING TREE PLAN
BLACK MOUNTAIN PROPERTY
ALAMEDA DE LAS PULGAS
SAN MATEO COUNTY CALIFORNIA
SAN CARLOS

REVIEW ONLY NOT FOR CONSTRUCTION

No.	Revisions	Date

Date: 12/05/2018
Scale: 1" = 50'
Design: DJL
Drawn: DP/AG
Approved: RH
Job No: 20160150

Drawing Number:
C2.1
OF

DRAWING NAME: J:\2016\160150_Black_Mountain_San_Carlos\ENG\bmsheets.dwg
PLOT DATE: 02-01-19 PLOTTED BY: pdt

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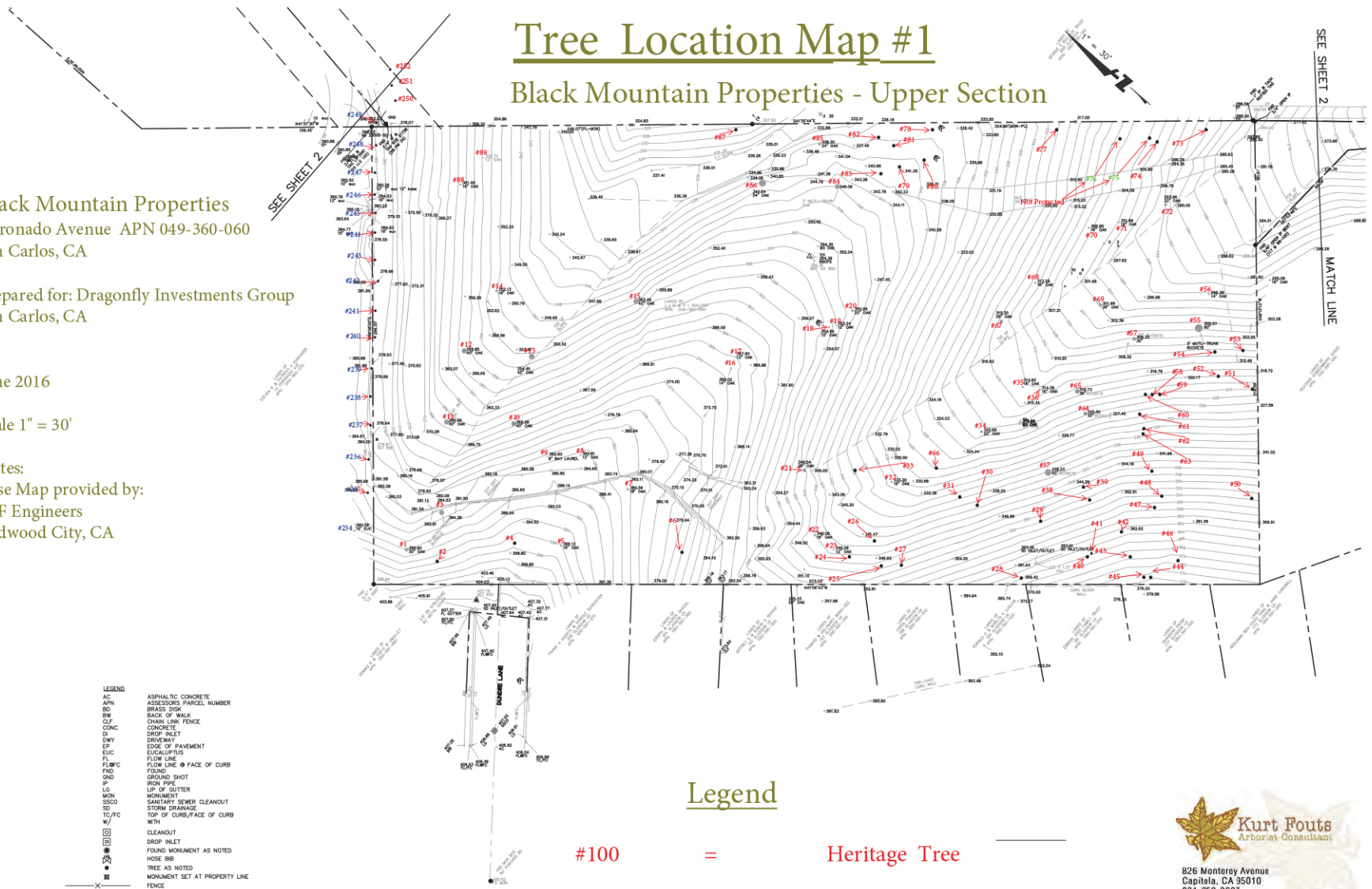
Tree Location Map #1

Black Mountain Properties - Upper Section



Black Mountain Properties
Coronado Avenue APN 049-360-060
San Carlos, CA

Prepared for: Dragonfly Investments Group
San Carlos, CA

June 2016

Scale 1" = 30'

Notes:
Base Map provided by:
BkF Engineers
Redwood City, CA

LEGEND

AC	ASPHALTIC CONCRETE
APN	ASSESSORS PARCEL NUMBER
BD	BRASS DISK
BW	BACK OF WALK
CLF	CHAIN LINK FENCE
CONC	CONCRETE
DI	DROP INLET
DWY	DRIVEWAY
EP	EDGE OF PAVEMENT
EUC	EUCALUPTUS
FL	FLOW LINE
FL@FC	FLOW LINE @ FACE OF CURB
FND	FOUND
GND	GROUND SHOT
IP	IRON PIPE
LG	LIP OF GUTTER
MON	MONUMENT
SSCO	SANITARY SEWER CLEANOUT
SD	STORM DRAINAGE
TC/FC	TOP OF CURB/FACE OF CURB
W/	WITH
	CLEANOUT
	DROP INLET
	FOUND MONUMENT AS NOTED
	HOSE BIB
	TREE AS NOTED
	MONUMENT SET AT PROPERTY LINE
	FENCE
	PROPERTY LINE

Legend

#100 = Heritage Tree

#100 = Significant Tree

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CORANADO AVENUE
APN 049-360-060

TREE INVENTORY MAP
BLACK MOUNTAIN PROPERTIES

Date: 6/11/16
Scale: 1" = 30'
Drawn: K.F.

Sheet 1of 3

T-1

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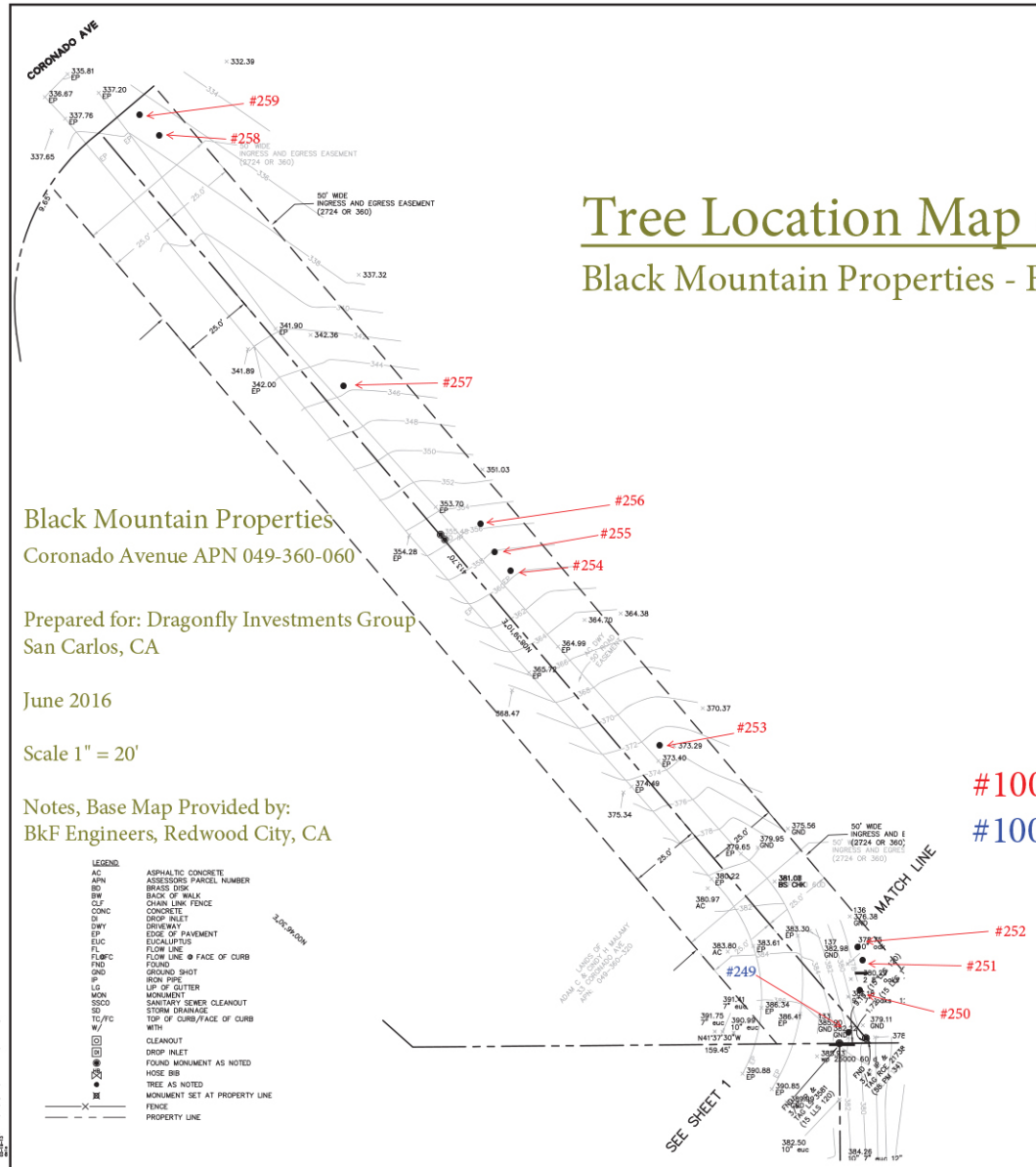
Tree Location Map #1A

Black Mountain Properties - Easement to Coronodo Avenue



Black Mountain Properties

Coronado Avenue APN 049-360-060

Prepared for: Dragonfly Investments Group
San Carlos, CA

June 2016

Scale 1" = 20'

Notes, Base Map Provided by:
BkF Engineers, Redwood City, CA

Legend

#100	=	Heritage Tree
#100	=	Significant Tree

Easement to Coronado Avenue

Tree Inventory Map
Black Mountain Properties

Date: 7/20/16
Scale: 1" = 20'
Drawn: K.F.

Sheet 2 of 3

T-1

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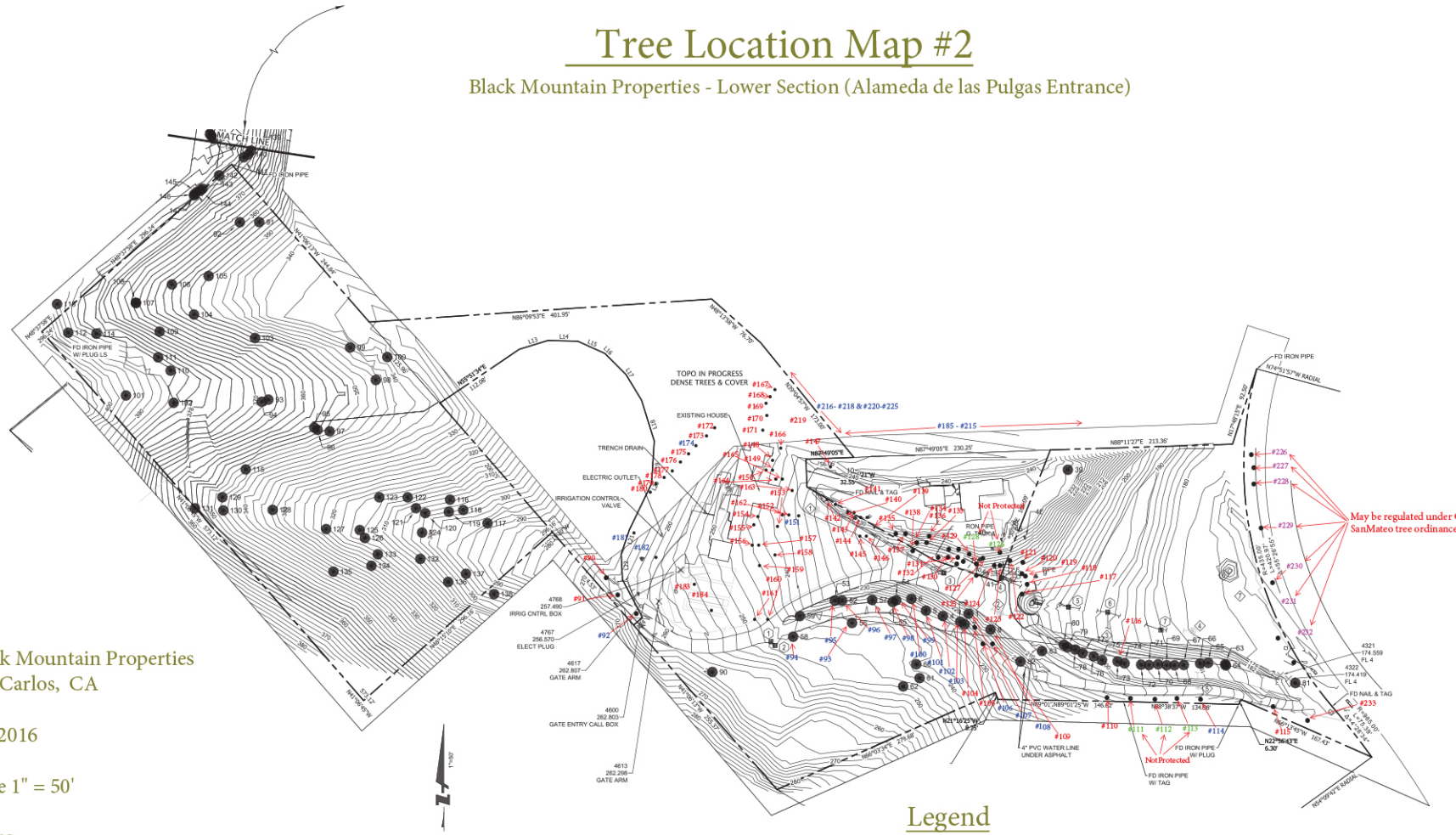
Tree Location Map #2

Black Mountain Properties - Lower Section (Alameda de las Pulgas Entrance)



Black Mountain Properties
San Carlos, CA

July2016

Scale 1" = 50'

Notes:
Base map provided by:
Bkf Engineers
Redwood City, CA

Legend

#100	=	Heritage Tree
#100	=	Significant Tree
#100	=	Public Tree

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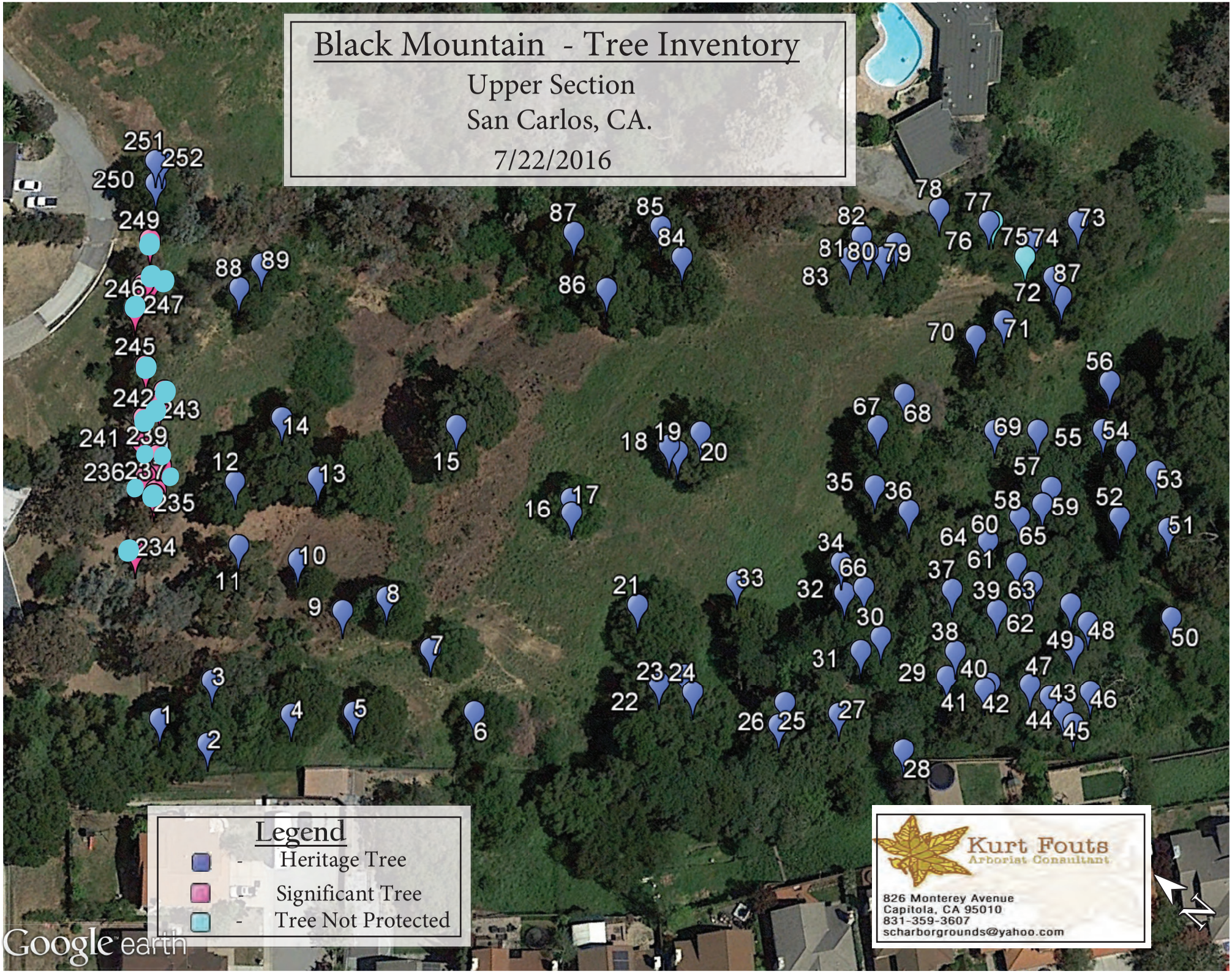
LOWER SECTION
ALAMEDA DE LAS PULGAS ENTRANCE

TREE INVENTORY MAP
BLACK MOUONTAIN PROPERTIES

Date 7/7/2016
Scale 1"=50'
Drawn: K.F.

Sheet 3 of 3

T-1


Black Mountain - Tree Inventory
Upper Section
San Carlos, CA.
7/22/2016
Legend
- Heritage Tree
- Significant Tree
- Tree Not Protected
Kurt Fouts
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scharborgrounds@yahoo.com
Google earth

Black Mountain - Tree Inventory
Easement to Coronado Avenue
San Carlos, CA
7/22/2016
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Legend
- Heritage Tree
- Significant Tree
- Tree Not Protected
Kurt Fouts
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Google earth

Black Mountain - Tree Inventory
Upper Section - APN-050-220-160
San Carlos, CA
8/23/2017
Legend
Heritage Tree
Significant Tree
Tree Not Protected
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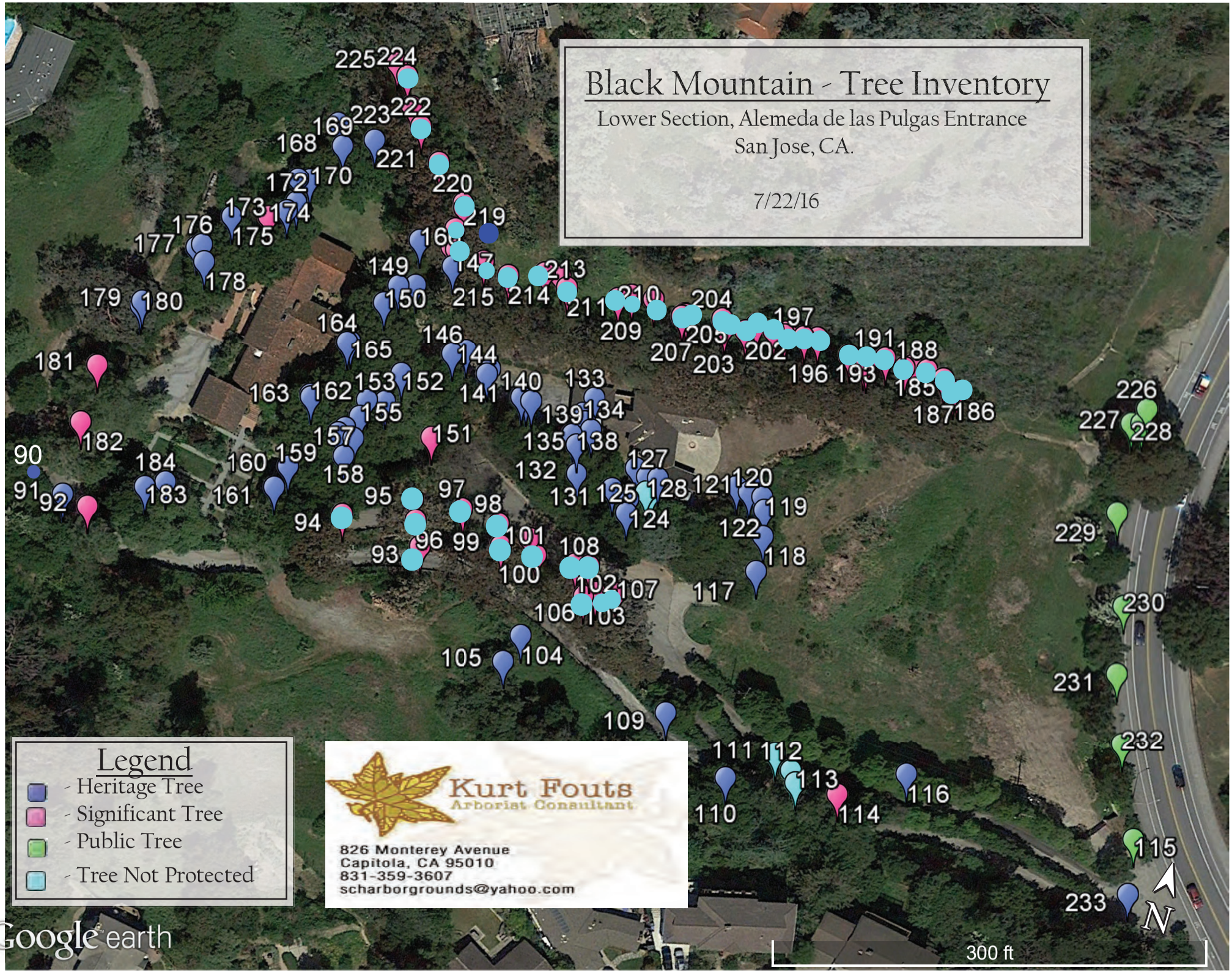
Black Mountain - Tree Inventory
Lower Section, Alemeda de las Pulgas Entrance
San Jose, CA.
7/22/16
Legend
- Heritage Tree
- Significant Tree
- Public Tree
- Tree Not Protected
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Google earth
300 ft
N

Coast Live Oaks along easement to Coronado Avenue.

Silver Dollar Gums at top of property.

Appendix F - TREE PROTECTION GUIDELINES AND RESTRICTIONS

Protecting Trees During Construction:

1) Before the start of site work, equipment or materials move in, clearing, excavation, construction, or other work on the site, every tree to be retained shall be securely fenced- off as delineated in approved plans. Such fences shall remain continuously in place for the duration of the work undertaken in connection with the development.

2) If the proposed development, including any site work, will encroach upon the tree protection zone, special measures shall be utilized, as approved by the project arborist, to allow the roots to obtain necessary oxygen, water, and nutrients.

3) Underground trenching shall avoid the major support and absorbing tree roots of protected trees. If avoidance is impractical, hand excavation undertaken under the supervision of the project arborist may be required. Trenches shall be consolidated to service as many units as possible. Boring/tunneling under roots should be considered as an alternative to trenching.

4) Concrete or asphalt paving shall not be placed over the root zones of protected trees, unless otherwise permitted by the project arborist.

5) Artificial irrigation shall not occur within the root zone of native oaks, unless deemed appropriate on a temporary basis by the project arborist to improve tree vigor or mitigate root loss.

6) Compaction of the soil within the tree protection zone shall be avoided.

7) Any excavation, cutting, or filling of the existing ground surface within the tree protection zone shall be minimized and subject to such conditions as the project arborist may impose. Retaining walls shall likewise be designed, sited, and constructed to minimize their impact on protected trees.

8) Burning or use of equipment with an open flame near or within the tree protection zone shall be avoided. All brush, earth, and other debris shall be removed in a manner that prevents injury to the tree.

9) Oil, gas, chemicals, paints, cement, stucco or other substances that may be harmful to trees shall not be stored or dumped within the tree protection zone of any protected tree, or at any other location on the site from which such substances might enter the tree protection zone of a protected tree.

10) Construction materials shall not be stored within the tree protection zone of a protected tree.

Project Arborist Duties and Inspection Schedule:

The project arborist is the person(s) responsible for carrying out technical tree inspections, assessment of tree health, structure and risk, arborist report preparation, consultation with designers and municipal planners, specifying tree protection measures, monitoring, progress reports and final inspection.
A qualified project arborist (or firm) should be designated and assigned to facilitate and insure tree preservation practices. He/she/they should perform the following inspections:

Inspection of site: Prior to equipment and materials move in, site work, demolition, landscape construction and tree removal: The project arborist will meet with the general contractor, architect / engineer, and owner or their representative to review tree preservation measures, designate tree removals, delineate the location of tree protection fencing, specify equipment access routes and materials storage areas, review the existing condition of trees and provide any necessary recommendations.

Inspection of site: During excavation or any activities that could affect trees: Inspect site during any activity within the Tree Protection Zones of preserved trees and any recommendations implemented. Assess any changes in the health of trees since last inspection.

Final Inspection of Site: Inspection of site following completion of construction. Inspect for tree health and make any necessary recommendations.

Kurt Fouts shall be the Project Arborist for this project. All scheduled inspections shall include a brief Tree Monitoring report, documenting activities and provided to the City Arborist.

Tree Protection Fencing

Tree Protection fencing shall be installed prior to the arrival of construction equipment or materials. Fence shall be comprised of six -foot chain link fence mounted on eight - foot tall, 1 and 7/8-inch diameter galvanized posts, driven 24 inches into the ground and spaced on a minimum of 10-foot centers. Once established, the fence must remain undisturbed and be maintained throughout the construction process until final inspection.

A final inspection by the City Arborist at the end of the project will be required prior to removing any tree protection fencing.

Tree Protection Signs

All sections of fencing should be clearly marked with signs stating that all areas within the fencing are Tree Protection Zones and that disturbance is prohibited.

Monitoring

Any trenching, construction or demolition that is expected to damage or encounter tree roots should be monitored by the project arborist or a qualified ISA Certified Arborist and should be documented.

The site should be evaluated by the project arborist or a qualified ISA Certified Arborist after construction is complete, and any necessary remedial work that needs to be performed should be noted.

Root Pruning

Root pruning shall be supervised by the project arborist. When roots over two inches in diameter are encountered they should be pruned by hand with loppers, handsaw, reciprocating saw, or chain saw rather than left crushed or torn. Roots should be cut beyond sinker roots or outside root branch junctions and be supervised by the project arborist. When completed, exposed roots should be kept moist with burlap or backfilled within one hour.

Tree Work Standards and Qualifications

All tree work, removal, pruning, planting, shall be performed using industry standards of workmanship as established in the Best Management Practices of the International Society of Arboriculture (ISA) and the American National Standards Institute series, *Safety Requirements in Arboriculture Operations* ANSI Z133-2017,

Contractor licensing and insurance coverage shall be verified.

During tree removal and clearance, sections of the Tree Protection Fencing may need to be temporarily dismantled to complete removal and pruning specifications. After each section is completed, the fencing is to be re-installed.

Trees to be removed shall be cut into smaller manageable pieces consistent with safe arboricultural practices, and carefully removed so as not to damage any surrounding trees or structures. The trees shall be cut down as close to grade as possible. Tree removal is to be performed by a qualified contractor with valid City Business/ State Licenses and General Liability and Workman’s Compensation insurance.

Development Site Tree Health Care Measures

RECOMMENDED TO PROVIDE OPTIMUM GROWING CONDITIONS, PHYSIOLOGICAL INVIGORATION AND STAMINA, FOR PROTECTION AND RECOVERY FROM CONSTRUCTION IMPACT.

Establish and maintain TPZ fencing, trunk and scaffold limb barriers for protection from mechanical damage, and other tree protection requirements as specified in the arborist report.

Project arborist to specify site-specific soil surface coverings (wood chip mulch or other) for prevention of soil compaction and loss of root aeration capacity.

Soil, water and drainage management is to follow the ISA BMP for "Managing Trees During Construction" and the ANSI Standard A300(Part 2)- 2011 Soil Management (a. Modification, b. 'Fertilization, c. Drainage.)

Fertilizer / soil amendment product(s) amounts and method of application to be specified by certified arborist.

REGULATED TREES IN THE CITY OF SAN CARLOS
San Carlos Municipal Code, (Applicable sections) 18.18.070 Trees, 18.41.020 Definitions:

d. "Heritage tree" means any:

i. Indigenous tree whose size, as measured at forty-eight inches above natural grade (unless otherwise indicated), is defined below:
Quercus agrifolia (coast live oak) of more than 9.5 inches in diameter
Sequoia sempervirens (redwood) of more than 22.9 inches in diameter.

f. "Protected tree" means any significant or heritage tree.

h. "Significant tree" means any tree that is thirty-six inches in circumference (or more) (which is approximately eleven and one-half inches in diameter), outside of bark, measured at forty-eight inches above natural grade. The following trees shall not be classified as significant or heritage trees regardless of size:

1). Bailey, Green or Black Acacia: A. baileyana, A. decurrens or A. melanoxylon;

i. "Street-oriented tree" means a private tree that is within the first five feet of the front property line, in a park strip of a sidewalk, or in a portion of a public street or within the public right-of-way that is not improved or maintained by the City.

ASSUMPTIONS AND LIMITING CONDITIONS

1. Any legal description provided by the appraiser/consultant is assumed to be correct. No responsibility is assumed for matters legal in character nor is any opinion rendered as the quality of any title.
2. The appraiser/consultant can neither guarantee nor be responsible for accuracy of information provided by others.
3. The appraiser/consultant shall not be required to give testimony or to attend court by reason of this appraisal unless subsequent written arrangements are made, including payment of an additional fee for services.
4. Loss or removal of any part of this report invalidates the entire appraisal/evaluation.
5. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person(s) to whom it is addressed without written consent of this appraiser/consultant.
6. This report and the values expressed herein represent the opinion of the appraiser/consultant, and the appraiser/consultant's fee is in no way contingent upon the reporting of a specified value nor upon any finding to be reported.
7. Sketches. Diagrams. Graphs. Photos. Etc., in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering reports or surveys.
8. This report has been made in conformity with acceptable appraisal/evaluation/diagnostic reporting techniques and procedures, as recommended by the International Society of Arboriculture.
9. When applying any pesticide, fungicide, or herbicide, always follow label instructions.
10. No tree described in this report was climbed, unless otherwise stated. We cannot take responsibility for any defects which could only have been discovered by climbing. A full root collar inspection, consisting of excavating around the tree to uncover the root collar and major buttress roots, was not performed, unless otherwise stated. We cannot take responsibility for any root defects which could only have been discovered by such an inspection.

CONSULTING ARBORIST DISCLOSURE STATEMENT

Arborists are tree specialists who use their education. Knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce risk of living near trees, Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like medicine, cannot be guaranteed.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.

Kurt Fouts
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MEMBER
INTERNATIONAL SOCIETY OF ARBORICULTURE
ISA

APPENDIX E3:
BIOLOGICAL RESOURCES DUE DILIGENCE REPORT

FIRSTCARBONSOLUTIONS™

Biological Resources Due Diligence Report
Black Mountain Property
City of San Carlos, San Mateo County, California

Prepared for:
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Date: June 21, 2016

Table of Contents

Section 1: Executive Summary 1

Section 2: Introduction 3
2.1 - Project Site Location 3
2.2 - Project Description 3
2.3 - Regulatory Framework 3
2.3.1 - Federal Endangered Species Act 3
2.3.2 - Migratory Bird Treaty Act 4
2.3.3 - Bald and Golden Eagle Protection Act 4
2.3.4 - Executive Order 13112—Invasive Species 4
2.3.5 - Clean Water Act 9
2.3.6 - Clean Water Act Section 401 9
2.3.7 - California Fish and Game Code 9
2.3.8 - California Porter-Cologne Water Quality Control Act 11
2.3.9 - Local Ordinances: San Mateo County 11

Section 3: Methodology 13
3.1 - Literature Review 13
3.1.1 - Existing Environmental Documentation 13
3.1.2 - Topographic Maps and Aerial Photographs 13
3.1.3 - Soil Surveys 13
3.1.4 - Special-Status Species Database Search 14
3.1.5 - Trees 14
3.1.6 - Jurisdictional Waters of the U.S./Wetlands 15
3.2 - Field Survey 15
3.2.1 - Vegetation 15
3.2.2 - Wildlife Species 15
3.2.3 - Wildlife Movement Corridors 15

Section 4: Existing Conditions 17
4.1 - Environmental Setting 17
4.1.1 - Soils 17
4.2 - Vegetation Communities 17
4.3 - Wildlife 17
4.3.1 - Nesting Raptors and Migratory Birds 17
4.3.2 - Mammals 18
4.4 - Trees 18

Section 5: Sensitive Biological Resources 19
5.1 - Special-Status Plant Communities 19
5.2 - Special-Status Plant Species 19
5.3 - Special-Status Wildlife Species 19
5.3.1 - Threatened or Endangered Species 19
5.3.2 - California Species of Special Concern 19
5.4 - Wildlife Movement Corridors 20
5.5 - Jurisdictional Waters and Wetlands 20

Section 6: Impact Analysis and Recommendations 23
6.1 - Special-Status Plant Species 23

6.2 - Special-Status Wildlife Species 23
6.2.1 - Bat Species 23
6.3 - Nesting Birds 23
6.4 - Trees 24
6.5 - Jurisdictional Waters and Wetlands 24

Section 7: Certification 25

Section 8: References 27

Appendix A: Special-status Species-Habitat Tables
A.1 - Special-status Plant Species Table
A.2 - Special-Status Wildlife Species Table

List of Exhibits

Exhibit 1: Regional Location Map 5
Exhibit 2: Local Vicinity Map, Aerial Base 7
Exhibit 3: Sensitive Biological Resources (CNDDB) Map 21

SECTION 1: EXECUTIVE SUMMARY

At the request of Dragonfly investments Group, FirstCarbon Solutions (FCS) conducted a Biological Resources Study to document the existing biological conditions and analyze potential impacts to biological resources within the proposed Black Mountain property site, located in the city of San Carlos California.

Black Mountain Property is located in the city of San Carlos, in San Mateo County. It consists of approximately 10 acres of undeveloped open space. The site is part of the last 25 acres of undeveloped open space remaining in the City of San Carlos.

The project proposes to construct a residential development on approximately 10 acres of undeveloped space. The project consists of a mix of disturbed land, with ruderal exotic species, non-native grasses and forbs, with interspersed oak woodland and ornamental trees. Two California Native Plant Society sensitive plant species that have been recorded within 1 mile of the site. One special status wildlife species has the potential to occur on-site the pallid bat. The hoary bat is a species of medium priority (western Bat Working Group) and also has the potential to inhabit the site. No threatened or endangered wildlife species were observed on-site or have the potential to occur on-site. No emergent wetlands are documented on the project site however; evidence of aquatic seasonal swales in the northern portion of the site may require a wetland delineation to determine its jurisdiction, should that portion of the site be impacted by the project.

The following sections will discuss the methodology used, existing conditions found on-site, including sensitive biological communities, the potential for special status species to occur on-site, and the presences or absence of wetland features, followed by an impact analysis and recommendations section.

SECTION 2: INTRODUCTION

At the request of Dragonfly investments group FirstCarbon Solutions (FCS) conducted a biological resources analysis proposed Black Mountain property site. The purpose of this assessment is to document the existing biological conditions; identify any potentially jurisdictional waters of the U.S., including wetlands; assess the potential for special-status species; and analyze potential impacts to biological resources on the site.

2.1 - Project Site Location

The project site is located along Alameda de las Pulgas in the City of San Carlos, California (Exhibit 1 and Exhibit 2). The site comprises approximately 11.4 acres of a mix of undeveloped and developed land surrounded by residential development. Primary access to the site is from Alameda de las Pulgas bordering the eastern portion of the project site. Coronada Avenue borders most of the northern portion of the site, Glasgow Lane borders most of the western portion of the site and Bauer Drive borders most of the southern portion of the site. There are three private homes within the project site. The three homes within the project area will be removed. The property includes the following APNs: APN 050-220-170, APN 050-220-160, APN 050-220-020, and APN 049-360-060.

2.2 - Project Description

The client proposes to develop a residential development on approximately 11.4 acres of relatively undeveloped land.

2.3 - Regulatory Framework

This section provides an overview of the laws and regulations that influence biological resources. Many of these regulations will not apply to the project if sensitive biological resources are avoided.

2.3.1 - Federal Endangered Species Act

The USFWS has jurisdiction over species listed as threatened or endangered under the FESA. Section 9 of FESA protects listed species from "take," which is broadly defined as actions taken to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." FESA protects threatened and endangered plants and animals and their critical habitat. Candidate species are those proposed for listing; these species are usually treated by resource agencies as if they were actually listed during the environmental review process. Procedures for addressing impacts to federally listed species follow two principal pathways, both of which require consultation with the USFWS, which administers the FESA for all terrestrial species. The first pathway, Section 10(a) incidental take permit, applies to situations where a non-federal government entity must resolve potential adverse impacts to species protected under the FESA. The second pathway, Section 7 consultation, applies to projects directly undertaken by a federal agency or private projects requiring a federal permit or approval.

2.3.2 - Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the U.S. and other nations devised to protect migratory birds, their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the Fish and Game Code (FGC).

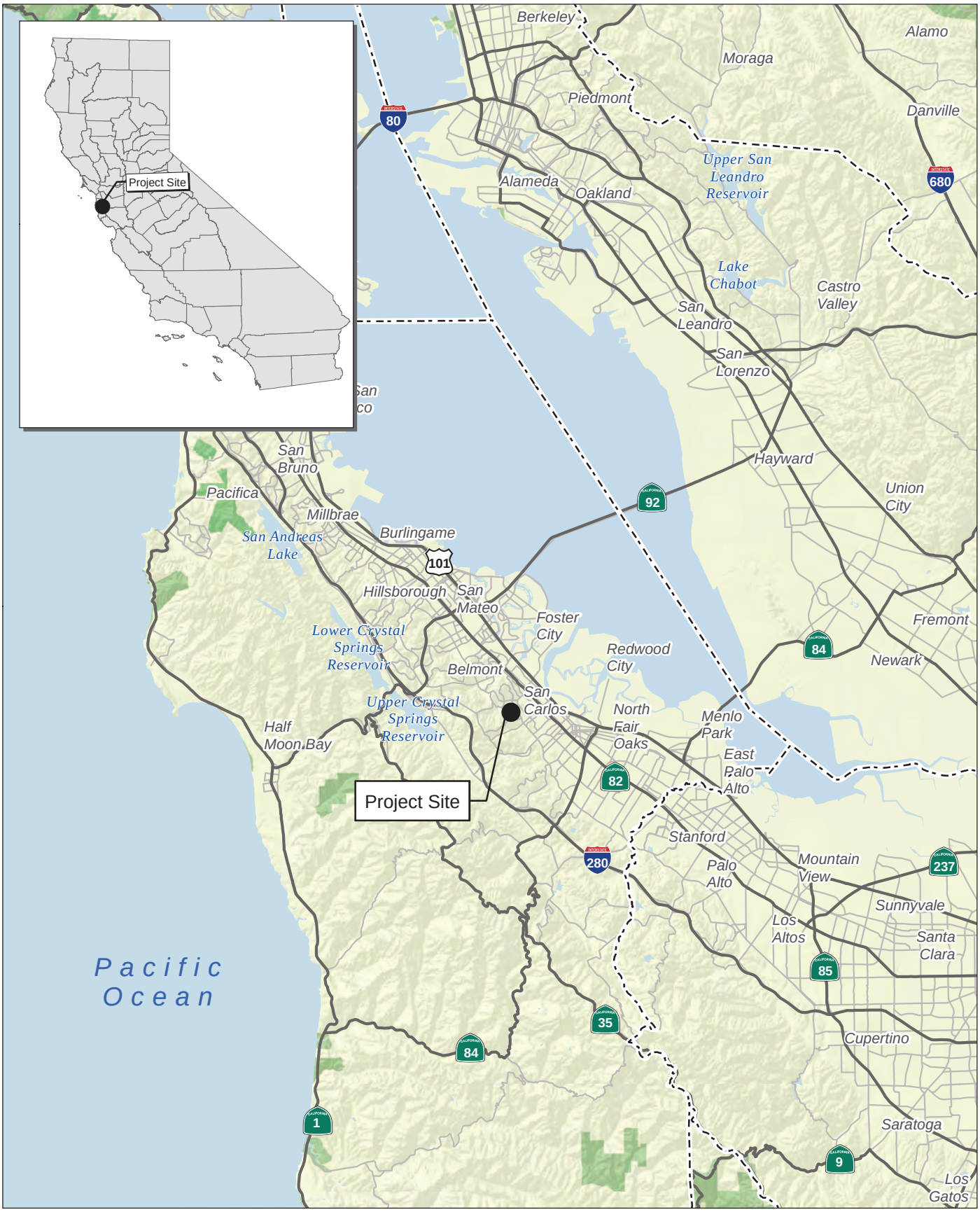
All raptors and their nests are protected from take or disturbance under the MBTA (16 United States Code [USC], Section 703, et seq.) and California statute (FGC Section 3503.5). The Golden Eagle (*Aquila chrysaetos*) and Bald Eagle (*Haliaeetus leucocephalus*) are also afforded additional protection under the Eagle Protection Act, amended in 1973 (16USC, Section 669, et seq.).

2.3.3 - Bald and Golden Eagle Protection Act

With few exceptions, this act (16 USC 668–668d) prohibits take of Bald Eagles and Golden Eagles. Unlike the MBTA, which defines "take" to mean only direct killing or taking of birds or their body parts, eggs, and nests, the Bald and Golden Eagle Protection Act defines take in a manner similar to FESA as including "pursuing, shooting, shooting at, poisoning, wounding, killing, capturing, trapping, collecting, molesting, and disturbing," with "disturb" further defined (50 CFR 22.3) as ''to agitate or bother a Bald or Golden Eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.'' Therefore, the requirements for guarding against impacts to eagles generally are far more stringent than those required by the MBTA alone.

2.3.4 - Executive Order 13112—Invasive Species

Executive Order (EO) 13112 directs all federal agencies to refrain from authorizing, funding, or carrying out actions or projects that may spread invasive species. The order further directs federal agencies to prevent the introduction of invasive species, control and monitor existing invasive species populations, restore native species to invaded ecosystems, research and develop prevention and control methods for invasive species, and promote public education on invasive species. As part of the proposed action, the USFWS and United States Army Corps of Engineers (USACE) would issue permits and therefore would be responsible for ensuring that the proposed action complies with EO 13112 and does not contribute to the spread of invasive species.



Source: Census 2000 Data, The CaSIL, FCS GIS 2013.

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5 2.5 0 5 Miles

Exhibit 1
Regional Location Map

Source: ESRI Imagery, 2015

FirstCarbon SOLUTIONS

1,000 500 0 1,000
Feet

Exhibit 2
Local Vicinity Map
Aerial Base

2.3.5 - Clean Water Act

The USACE and the United States Environmental Protection Agency (EPA) regulate the discharge of dredged or fill material into waters of the U.S., including wetlands, under Section 10 and 404 of the Clean Water Act (CWA). Waters of the U.S. include wetlands, lakes, and rivers, streams, and their tributaries. Wetlands that fall under the jurisdiction of the USACE (referred to as jurisdictional wetlands) are defined as areas "inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Areas not considered jurisdictional waters include, for example, non-tidal drainage and irrigation ditches excavated on dry land; artificially irrigated or created bodies such as small ponds, lakes or swimming pools; and water-filled depressions (33 CFR 328.3; 40 CFR 230.3).

Project proponents must obtain a permit from USACE for all discharges of fill material into waters of the U.S., including jurisdictional wetlands, before proceeding with a proposed action. If wetlands are jurisdictional and could be filled as part of the project, USACE may issue either an individual permit or a general permit. Individual permits are prepared on a project-specific basis for projects that are expected to have adverse effects on the aquatic environment. General permits are pre-authorized permits issued to cover similar activities that are expected to cause only minimal individual and cumulative adverse environmental effects.

A Section 404 permit may not be required if the project avoids the discharge of any fill material into waters of the U.S., including wetlands. If the project cannot be designed to avoid the discharge of fill or excavating in waters of the U.S., including wetlands, a Section 404 permit must be obtained.

2.3.6 - Clean Water Act Section 401

The CWA requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the U.S. to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards. The appropriate Regional Water Quality Control Board (RWQCB) regulates Section 401 requirements.

2.3.7 - California Fish and Game Code

Under the CESA, the CDFW has the responsibility for maintaining a list of endangered and threatened species (FGC 2070). Sections 2050 through 2098 of the FGC outline the protection provided to California's rare, endangered, and threatened species. Section 2080 of the FGC prohibits the taking of plants and animals listed under the CESA. Section 2081 established an incidental take permit program for state-listed species. CDFW maintains a list of "candidate species," which it formally notices as being under review for addition to the list of endangered or threatened species.

In addition, the Native Plant Protection Act of 1977 (FGC Section 1900, et seq.) prohibits the taking, possessing, or sale within the State of any plants with a state designation of rare, threatened, or endangered (as defined by CDFW). An exception to this prohibition in the Native Plant Protection Act allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify CDFW and give that state agency at least 10 days to come and retrieve (and

presumably replant) the plants before they are plowed under or otherwise destroyed. (FGC Section 1913 exempts from "take" prohibition "the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, or other right of way.") Project impacts to these species are not considered significant unless the species are known to have a high potential to occur within the area of disturbance associated with construction of the proposed project.

CDFW also maintains lists of "Species of Special Concern" that serve as species "watch lists." The CDFW has identified many Species of Special Concern. Species with this status have limited distribution or the extent of their habitats has been reduced substantially, such that their populations may be threatened. Thus, their populations are monitored, and they may receive special attention during environmental review. While they do not have statutory protection, they may be considered rare under CEQA and thereby warrant specific protection measures.

Sensitive species that would qualify for listing but are not currently listed are afforded protection under CEQA. CEQA Guidelines Section 15065 (Mandatory Findings of Significance) requires that a substantial reduction in numbers of a rare or endangered species be considered a significant effect. CEQA Guidelines Section 15380 (Rare or Endangered Species) provides for assessment of unlisted species as rare or endangered under CEQA if the species can be shown to meet the criteria for listing. Unlisted plant species on the CNPS's Lists 1A, 1B, and 2 would typically be considered under CEQA.

Sections 3500 to 5500 of the FGC outline protection for fully protected species of mammals, birds, reptiles, amphibians, and fish. Species that are fully protected by these sections may not be taken or possessed at any time. The CDFW cannot issue permits or licenses that authorize the take of any fully protected species, except under certain circumstances such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock.

Under Section 3503.5 of the FGC, it is unlawful to take, possess, or destroy any birds in the orders of *Falconiformes* or *Strigiformes* (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto. To comply with the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present in the project study area and determine whether the proposed project will have a potentially significant impact on such species. In addition, CDFW encourages informal consultation on any proposed project that may impact a candidate species.

Project-related impacts to species on the CESA endangered or threatened list would be considered significant. State-listed species are fully protected under the mandates of the CESA. "Take" of protected species incidental to otherwise lawful management activities may be authorized under FGC Section 206.591. Authorization from CDFW would be in the form of an Incidental Take Permit.

Section 1602 of the FGC requires any entity to notify CDFW before beginning any activity that "may substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of any river, stream, or lake" or "deposit debris, waste, or other materials that could pass into any river, stream, or lake." "River, stream, or lake" includes waters that are

episodic and perennial; and ephemeral streams, desert washes, and watercourses with a subsurface flow. A Lake or Streambed Alteration Agreement will be required if CDFW determines that project activities may substantially adversely affect fish or wildlife resources through alterations to a covered body of water.

2.3.8 - California Porter-Cologne Water Quality Control Act

The RWQCB has regulatory authority over wetlands and waterways under both the CWA and the State of California's Porter-Cologne Water Quality Control Act (California Water Code, Division 7). Under the CWA, the RWQCB has regulatory authority over actions in waters of the U.S., through the issuance of water quality certifications under Section 401 of the CWA in conjunction with permits issued by the USACE under Section 404 of the CWA. When the RWQCB issues Section 401 certifications, it simultaneously issues general Waste Discharge Requirements for the project under the Porter-Cologne Water Quality Control Act. Activities in areas that are outside of the jurisdiction of the USACE (e.g., isolated wetlands, vernal pools, seasonal streams, intermittent streams, channels that lack a nexus to navigable waters, or stream banks above the ordinary high water mark) are regulated by the RWQCB under the authority of the Porter-Cologne Water Quality Control Act. Activities that lie outside of USACE jurisdiction may require the issuance of either individual or general waste discharge requirements.

2.3.9 - Local Ordinances: San Mateo County

13.52.025 Tree Protection and Preservation

Any person, who owns, controls, has custody or possession of any real property within the City shall use reasonable efforts to maintain and preserve all heritage trees located thereon in a state of good health, pursuant to the provisions of this chapter.

(a) Any application for discretionary development approval for real property or for any other Development Project shall be accompanied by a signed statement by the property owner or authorized agent which discloses whether any heritage trees exist on the property and describes on the plans associated with the application the location of each such tree, its species, trunk size and drip line area. In addition, the location of any tree within thirty feet of the area proposed for construction that is within the public right-of-way shall be shown on the plans and identified by species.

(b) With regard to any tree required to be identified under section (a) above, (hereafter "protected tree"), any exterior construction work associated with any Development Project performed within a radius measured from the trunk center equal to ten times the diameter of the tree trunk measured at 4' above grade shall require the preparation and submittal of a Tree Protection Plan for review and approval by the City Arborist prior to the issuance of any permit for a Development Project. The Tree Protection Plan shall be prepared by a certified arborist.

(c) A Tree Protection Plan shall at a minimum include the following requirements:

(1) Prior to the commencement of any Development Project, a chain link fence shall be installed at the drip line of any protected tree which will be affected by the construction and shall prohibit the storage of any construction materials, equipment or other materials inside the fence. The drip line shall not be altered in any way so as to increase the encroachment of the construction.

(2) Prohibit excavation, grading, soil deposit, drainage and leveling within the drip line unless approved by the City Arborist.

(3) Prohibit disposal or depositing of oil, gasoline, chemicals, paints, solvents or other materials within the drip line or in drainage channels, swales or areas that may lead to the drip line.

(4) Prohibit the attachment of wires, signs and ropes to any protected tree.

(5) Utility service and irrigation lines shall be located outside of the drip line when feasible.

(6) Include provision for the retention of the services of a certified arborist for periodic monitoring of the project site and the health of protected trees. The arborist shall be present whenever activities occur which will pose a potential threat to the health of the protected trees or whenever any work needs to be done within the drip line of such tree.

(7) Include other provisions as deemed necessary by the City Arborist to preserve the protected tree and insure compliance with those provisions.

(8) Require that the City Building Official be notified whenever any damage or injury occurs to a protected tree during construction so that proper treatment may be administered.

(9) Contain the signature of the property owner and building permit applicant.

(d) Tree Protection Plan Review. The Tree Protection Plan described in Section (c), above, shall be reviewed by the City Arborist. If the plan is sufficient to prevent harm to protected trees from reasonably foreseeable construction activities, it shall be approved and related building permits otherwise complete shall issue. (Ord. 2007-1 § 3; Ord. 2005-3, § 1, 2005; Ord. 2004-6, § 1, 2004).

SECTION 3: METHODOLOGY

Analysis of the biological resources associated with the project site began with a thorough review of relevant literature followed by a reconnaissance-level field survey. The survey area included the entire project site as well as the survey buffer area that extended 100 feet from the project site boundary to accommodate any changes to project limits and project design that may occur during project development.

The primary objective of the survey was to document existing site conditions and determine the potential presence of special-status biological resources and wetlands.

For the purpose of this report, special-status species refers to all species formally listed as threatened and/or endangered under ESA or CESA; California Species of Special Concern; designated as Fully Protected by CDFW; given a status of 1A, 1B, or 2 by California Native Plant Society (CNPS); or designated as special-status by city, county, or other regional planning documents. Federal and state listed threatened and/or endangered species are legally protected under ESA/CESA. The designated special-status species listed by CNPS have no direct legal protection, but require an analysis of the significance of potential impacts under CEQA guidelines.

3.1 - Literature Review

The literature review provides a baseline from which to evaluate the biological resources potentially occurring on the project site as well as the surrounding area.

3.1.1 - Existing Environmental Documentation

As part of the literature review, an FCS biologist examined existing environmental documentation for the project site and local vicinity. This documentation included biological studies for the area; literature pertaining to habitat requirements of special-status species potentially occurring in the vicinity of the site; federal register listings, protocols, and species data provided by the USFWS and CDFW. These and other documents are listed in the references section of this report.

3.1.2 - Topographic Maps and Aerial Photographs

An FCS biologist reviewed current USGS 7.5-minute topographic quadrangle map(s) and aerial photographs as a preliminary analysis of the existing conditions within the project site and immediate vicinity. Information obtained from the review of the topographic maps included elevation range, general watershed information, and potential drainage feature locations (USGS 1986). Aerial photographs provide a perspective of the most current site conditions relative to on-site and off-site land use, plant community locations, and potential locations of wildlife movement corridors.

3.1.3 - Soil Surveys

The United States Department of Agriculture (USDA) has published soil surveys that describe the soil series (i.e., group of soils with similar profiles) occurring within a particular area (USDA 1980). These

profiles include major horizons with similar thickness, arrangement, and other important characteristics. These series are further subdivided into soil mapping units that provide specific information regarding soil characteristics. Many special-status plant species have a limited distribution based exclusively on soil type. Therefore, pertinent USDA soil survey maps were reviewed to determine the existing soil mapping units within the project site and to establish if soil conditions on-site are suitable for any special-status plant species (Soil Survey Staff 2015).

3.1.4 - Special-Status Species Database Search

An FCS biologist compiled a list of threatened, endangered, and otherwise special-status species previously recorded within the general project vicinity. The list was based on a search of the CDFW's California Natural Diversity Database (CNDDB; CDFW 2015), a special-status species and plant community account database, and the CNPS's Electronic Inventory (CNPSEI) of Rare and Endangered Vascular Plants of California database (CNPS 2014) for the San Mateo California USGS 7.5-minute topographic quadrangle map.

The CNDDB Biogeographic Information and Observation System (BIOS 5; CDFW 2005) database was used to determine the distance between known recorded occurrences of special-status species and the project site.

3.1.5 - Trees

Prior to conducting the reconnaissance-level survey, FCS's biologist reviewed any applicable City and County ordinances pertaining to tree preservation and protective measures and their tree replacement conditions or permits required. An arborist report will be submitted separately by Kurt Fouts Arborist consultant along with FCS biological resource assessment, and will include an inventory, assessment and mapping of approximately 292 protected trees out of the total 493 trees found on-site. The report will include the following information:

Inventory to include

- Tag all trees with numbered metal tags. Numbers to correspond with specific data recorded for each tree.

Assessment to include

- Species Identification
- Trunk Diameter Recorded
- Identify as Significant or Heritage Tree
- Crown Height & Spread
- Health Rating
- Structural Rating
- Suitability for Preservation based on Condition
- Comments—Specific pests, disease and structural defects observed described and identified.

Mapping to include

- Plot tagged tree numbers onto topographic/tree location maps provided by BkF Engineers.
  - Code individual trees as 'Heritage' or 'Significant' trees

3.1.6 - Jurisdictional Waters of the U.S./Wetlands

Prior to conducting the reconnaissance-level survey, FCS's biologists reviewed USGS topographic maps and aerial photography to identify any potential natural drainage features and water bodies. In general, all surface drainage features identified as blue-line streams on USGS maps and linear patches of vegetation are expected to exhibit evidence of flows and considered potentially subject to state and federal regulatory authority as "waters of the U.S. and/or State." A preliminary assessment was conducted to determine the location of any existing drainages and limits of project-related grading activities, to aid in determining if a formal delineation of waters of the U.S. or State is necessary.

3.2 - Field Survey

FCS biologists Brian Mayerle and Ashley Laor conducted the reconnaissance-level field survey on May 25, 2016. The reconnaissance-level survey was conducted on foot during daylight hours. The object of the survey was not to extensively search for every species occurring within the project site, but to ascertain general site conditions and identify potentially suitable habitat areas for various special-status plant and wildlife species. Special-status or unusual biological resources identified during the literature review were ground-truthed during the survey for mapping accuracy. Special attention was paid to sensitive habitats and areas potentially supporting special-status floral and faunal species.

3.2.1 - Vegetation

Common plant species observed during the reconnaissance-level survey were identified by visual characteristics and morphology in the field and recorded in a field notebook. Uncommon and less familiar plants were identified off-site with the use of taxonomical guides, such as Clarke, et al. (2007), Hitchcock (1971), McAuley (1996), and Munz (1974). Taxonomic nomenclature used in this study follows Baldwin, et al. (2012). Common plant names, when not available from Baldwin, et al. (2012), were taken from other regionally specific references.

3.2.2 - Wildlife Species

Wildlife species detected during the reconnaissance-level survey by sight, calls, tracks, scat, or other signs were recorded in a field notebook. Notations were made regarding suitable habitat for those special-status species determined to potentially occur within the project site (CDFW 2015). Appropriate field guides were used to assist with species identification during surveys, such as Peterson (2010), Reid (2006), and Stebbins (2003).

3.2.3 - Wildlife Movement Corridors

Wildlife movement corridors link areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. Urbanization and the resulting fragmentation of open space areas create isolated "islands" of wildlife habitat, forming separated populations. Corridors act as an effective link between populations.

The project site was evaluated for evidence of a wildlife movement corridor during the survey. However, the scope of the biological resources study did not include a formal wildlife movement corridor study utilizing track plates, camera stations, scent stations, or snares. Therefore, the focus of this study was to determine if the change of current land use of the project site may have significant impacts on the regional movement of wildlife. These conclusions are made based on the information compiled during the literature review, including: aerial photographs, USGS topographic maps and resource maps for the vicinity, the field survey conducted, and professional knowledge of desired topography and resource requirements for wildlife potentially utilizing the project site and vicinity.

SECTION 4: EXISTING CONDITIONS

FCS biologists Brian Mayerle and Ashley Laor conducted the reconnaissance-level field survey on May 25, 2016 from 0900 to 1300 hours. Weather conditions during the field survey were sunny, clear sky with a high of 75 degrees.

4.1 - Environmental Setting

4.1.1 - Soils

The soils on-site are a soil series called Orthents, cut and fill-Urban land complex, 5 to 75 percent slopes. Orthents are very shallow, to deep, very poorly drained to excessively drained soils on uplands, hills and ridgetop's, alluvial fans, coastal terraces, flood plains, and tidal flats. These soils formed in alluvial derived from various kinds of rock, sandy coastal deposits, hard and soft sandstone, shale, siltstone, serpentine, and volcanic rock and various manmade fill material. Slope is 0 to 75 percent. (USDA SOIL SURVEY)

4.2 - Vegetation Communities

The project consists of a mix of disturbed land, with ruderal exotic species, non-native grasses and forbs, with interspersed oak woodland and ornamental trees. Ornamental trees are mostly planted along eastern, western and northern edges of the project site, generally following driveways, access roads, and associated with the existing residences. The lower portions of the site include a mix of native oak species, and exotic species including eucalyptus and olive trees. The upper portion of the site consist of oak woodland including live oaks, valley oak and buckeye. Common several native and non-native species include but are not limited to brome grasses (*Bromus* sp.), Italian rye grass (*Festuca perennis*), and wild oats (*Avena barbata*), and herbaceous species.

4.3 - Wildlife

The vegetation community and land cover types discussed above provide habitat for local wildlife species. Wildlife activity was low during the field survey and consisted of primarily avian species. The following are brief discussions of wildlife species observed within the project site during the field survey, separated into taxonomic groups. Each discussion contains representative examples of a particular taxonomic group either observed on-site or expected to occur.

4.3.1 - Nesting Raptors and Migratory Birds

Trees and shrubs located within the project may provide suitable nesting habitat for birds protected under the MBTA, and other special-status birds, including raptors covered by FGC Section 3503.5, are Fully Protected by the State and/or the Bald and Golden Eagle Protection Act. Particularly, the stands of mature eucalyptus trees and native oaks that is present within the project site. Birds observed during the survey include but not limited but not limited to Mourning dove (*Zenaida macroura)*, Anna's Hummingbird (*Calypte anna*) and Western scrub jay (*Aphelocoma californica*).

4.3.2 - Mammals

Bat Species

Bats of various species can utilize the large trees in this area as well as the several abandoned structures and debris piles located in the northwestern project study area. Based on the existing roosting and foraging habitat it is likely that bats inhabit this area. The project site and surrounding areas contains suitable habitat for several bat species, including one special-status bat species: the pallid bat (*Antrozous pallidus*) and the hoary bat (*Lasiurus cinereus*) a species of medium priority designated by the Western Bat Working Group. No bats were observed on-site during the survey.

Mule Deer

The mule deer is a common species in Northern California and there are six subspecies of mule deer in California. These species are an important mammal to California as they provide ecological, recreational and economical value to the state. Mule deer populations are managed by CDFW along with bordering state agencies to ensure successful management of their populations. This species was observed on-site during the survey.

4.4 - Trees

Tree species found on-site consisted of a mix of native species and exotic species. Native oak species included valley oaks (*Quercus lobata*) and live oaks (*Quercus chrysolepis*). Other native trees included California buckeye (*Aesculus californica*).

An arborist report will be submitted by Kurt Fouts Arborist consultant and will include an inventory, assessment and mapping of approximately 292 protected trees out of the total 493 trees found on-site. As discussed in the methodology section.

SECTION 5: SENSITIVE BIOLOGICAL RESOURCES

The following section discusses the existing site conditions and potential for special-status biological resources to occur within the project site. Exhibit 3 depicts the location of known occurrences of these resources in the vicinity of the project site.

5.1 - Special-Status Plant Communities

Special-status plant communities are considered sensitive biological resources based on federal, state, or local laws regulating their development, limited distributions, and habitat requirements of special-status plant or wildlife species that occur within them.

No special status plant communities are found on-site.

5.2 - Special-Status Plant Species

Two special status plant species and CNPS sensitive species that have been recorded to occur within 1 mile of the San Mateo California topographic quadrangle (USGS 1986), (Table 1) as recorded by the CNDDB and CNPS (CDFW 2016; CNPS 2016). The arcuate bush-mallow (*Malacothamnus arcuatus*), and the woodland woollythreads (*Monolopia gracilens*) are native species to California with a CNPS rare plant rank of 1B.2 fairly threatened throughout its range both have the potential to be found on-site.

5.3 - Special-Status Wildlife Species

The Special-Status Wildlife Species (Table 1) identifies federal and state listed threatened and/or endangered wildlife species, and state Species of Special Concern that have been recorded in the CNDDB (CDFW 2015) as occurring within San Mateo, California topographic quadrangle (USGS, 1986). The table also includes the species' status, required habitat, and potential to occur within the project site. One special status species has the potential to occur on-site the pallid bat. The hoary bat is a species of medium priority designated by the Western Bat Working Group, and has potential to occur on-site.

5.3.1 - Threatened or Endangered Species

There are no threatened or endangered species known to occur on-site. No threatened or endangered species were observed on-site.

5.3.2 - California Species of Special Concern

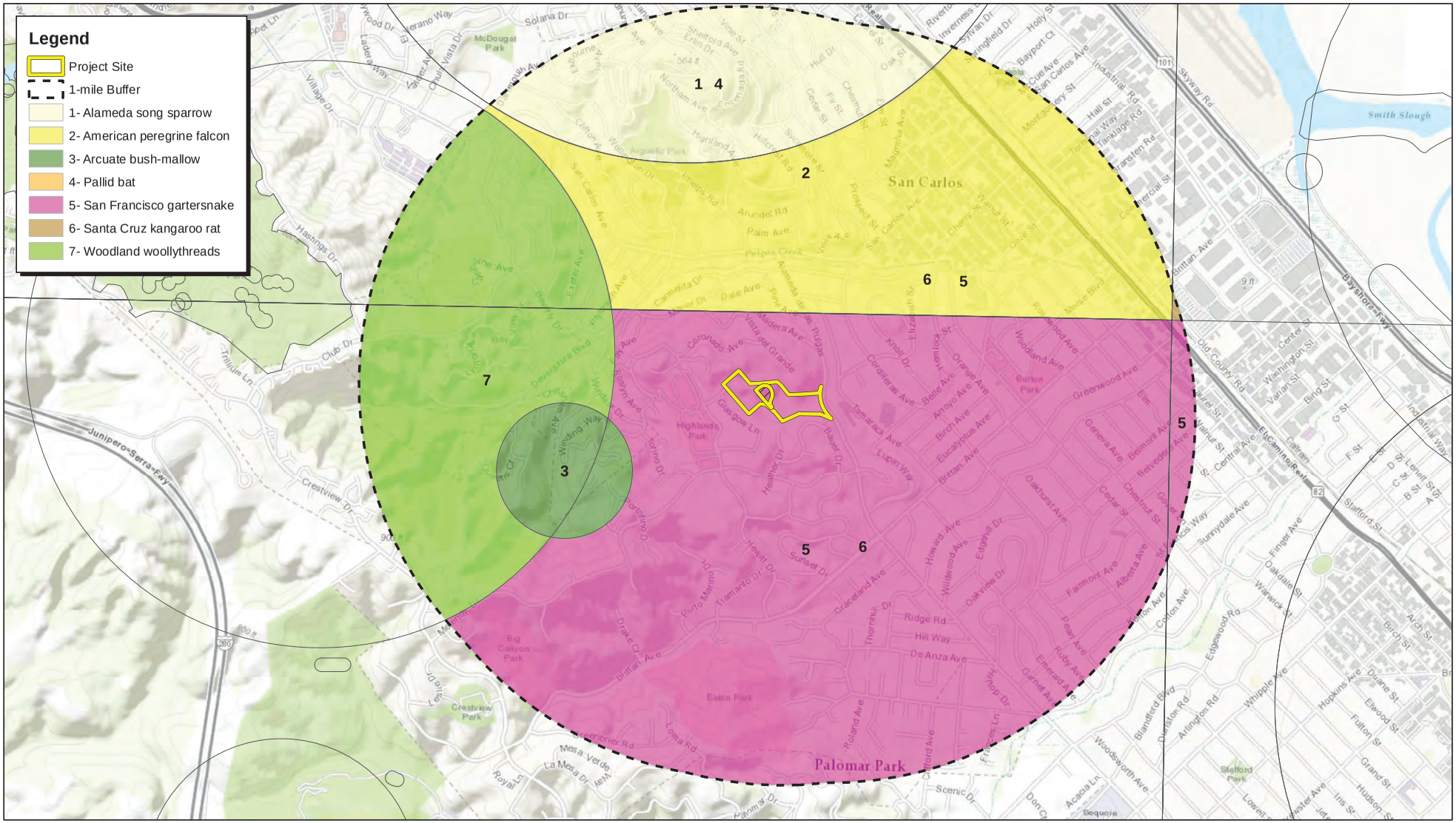
California Species of Special Concern do not have legal protection under ESA or CESA, but are recognized as sensitive by CDFW, and therefore require an independent assessment under the CEQA process to determine if project-related impacts are significant. The Pallid bat (*Antrozous pallidus*) is a species of special concern and has potential to occur on-site.

5.4 - Wildlife Movement Corridors

The project site is surrounded by residential developments and is bordered to the east by Alameda del las Pulgas. The site does not appear to be a wildlife corridor and is not within any designated wildlife movement corridors according to CDFW. There are also no critical habitats within the project site designated by the UFWS. Significant impacts to the movement of regional wildlife would not seem evident. As mentioned above the scope of this survey was to determine if the project would have significant impacts on the movement of regional wildlife.

5.5 - Jurisdictional Waters and Wetlands

An assessment of potentially jurisdictional features was conducted as part of the literature review and reconnaissance-level survey for the project site. The Black mountain spring runs under ground. No emergent aquatic features were observed on-site; however, there is evidence of potential seasonal swales in the upper portion of the project site. If that area will be impacted, then a wetland delineation may be required to determine potential jurisdictional wetland features.



Source: CNDDB, June 2016

FirstCarbon SOLUTIONS

1,300 650 0 1,300 Feet

Exhibit 3
Sensitive Biological Resources (CNDDB) Map

SECTION 6: IMPACT ANALYSIS AND RECOMMENDATIONS

The following discussion addresses potential impacts to special-status biological resources resulting from the proposed project and recommends mitigation measures where appropriate to minimize those impacts to a level of "less than significant" under CEQA.

6.1 - Special-Status Plant Species

The Woodland woollythreads (*Monolopia gracilens*) and arcuate bush-mallow (*Malacothamnus arcuatus*) are native species to California with a CNPS rare plant rank of 1B.2, moderately threatened throughout its range with the potential to be found on-site. A floristic level survey for these species may be required according to the CDFW special status plant survey protocol guidelines. If found on-site populations of the target species shall be mapped and the number of each species occurring on-site shall be determined. If avoidance measures during construction activities is not feasible appropriate buffer zone shall be implemented. Impacts to current populations should be assessed and appropriate mitigation measures addressed by a qualified biologist.

6.2 - Special-Status Wildlife Species

6.2.1 - Bat Species

The Pallid bat is a California Species of Special Concern, and The Western Bat Working Group lists the hoary bat as a species of medium priority. The project contains oak woodland, eucalyptus groves, abandoned buildings, and scattered trees suitable for roosting and foraging habitat with the potential to support both special-status bat species. Impacts to potential habitat should be avoided, if feasible. If avoidance is not feasible, additional surveys are recommended to verify presence/absence of these species within the project site, or an alternative mitigation plan should be developed in consultation with the CDFW.

6.3 - Nesting Birds

Suitable habitat for raptors and other birds protected by the MBTA occurs within and adjacent to the project areas. Most native, breeding birds are protected under Section 3503 of the FGC, and raptors specifically are protected under Section 3503.5 of the FGC. Additionally, both Section 3513 of the FGC and the federal MBTA prohibit the killing, possession, or trading of migratory birds. Section 3800 of the FGC prohibits the taking of nongame birds and state Fully Protected species.

Most raptors nest in mature, large coniferous or deciduous trees and use twigs and branches as nesting material. Smaller raptors may nest in cavities in anthropogenic structures and trees. The nesting period for raptors generally occurs between February 15 and August 31. Potential impacts could occur to resident and migratory species during project construction, which would render the project temporarily unsuitable for birds because of the noise, vibrations, and increased activity levels associated with various construction activities. These activities could potentially subject birds to risk of death or injury, and they are likely to avoid using the area until such construction activities have

dissipated or ceased. Relocation, in turn, could cause hunger or stress among individual birds by displacing them into adjacent territories belonging to other individuals.

Construction activities that occur during the nesting season (generally March 1 to August 31) would disturb nesting sites for birds protected by the MBTA and FGC. No action is necessary if no active nests are found or if construction occurs during the non-breeding season (generally September 1 through February 14).

Implementation of the following avoidance and minimization measures would reduce impacts to raptors and other nesting birds.

- To prevent impacts to MBTA-protected birds, nesting raptors, and their nests, removal of trees will be limited to only those necessary to construct the proposed project.
- If any tree removal is necessary, then it will occur outside the nesting season between September 1 and February 14. If trees cannot be removed outside the nesting season, pre-construction surveys will be conducted three days prior to tree removal to verify the absence of active nests.
- If an active nest is located during pre-construction surveys, USFWS and/or CDFW (as appropriate) shall be notified regarding the status of the nest. Construction activities shall be restricted as necessary to avoid disturbance of the nest until it is abandoned or the agencies deem disturbance potential to be minimal. Restrictions may include establishment of exclusion zones (no ingress of personnel or equipment at a minimum radius of 100 feet around an active raptor nest and a 50-foot radius around an active migratory bird nest) or alteration of the construction schedule.
- A qualified biologist will delineate the buffer using Environmentally Sensitive Area fencing, pin flags, and or yellow caution tape. The buffer zone will be maintained around the active nest site(s) until the young have fledged and are foraging independently.

6.4 - Trees

An arborist report will be submitted separately by Kurt Fouts Arborist consultant and will include an inventory, assessment and mapping of approximately 292 protected trees out of the total 493 trees found on-site. A follow up with any applicable City and County ordinances pertaining to tree preservation and protective measures and their tree replacement conditions including permits required.

6.5 - Jurisdictional Waters and Wetlands

No emergent wetlands are documented on the project site however; evidence of aquatic seasonal swales in the northern portion of the site may require a wetland delineation to determine its jurisdiction, should that portion of the site be impacted by the project.

SECTION 7: CERTIFICATION

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

Date: June 10, 2016 Signed:

Brian Mayerle, Biologist
FirstCarbon Solutions
1350 Treat Boulevard, Suite 380
Walnut Creek, CA 94597

SECTION 8: REFERENCES

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Appendix A:
Special-status Species-Habitat Tables

A.1 - Special-status Plant Species Table

Table 1: Special-status Plant Species Potentially Occurring within the Project

Scientific Name Common Name	Regulatory Status			Habitat Description[4]	Potential to Occur and Rationale	Included in Impact Analysis
	USFWS[1]	CDFW[2]	CNPS[3]			
Malacothamnus arcuatus arcuate bush-mallow	—	—	1B.2	Perennial evergreen shrub found in cismontane woodland, and chaparral Prefers gravelly alluvium. 1–735 m. Bloom period: April–September	**Potential to Occur**: suitable habitat is present within the project. Recorded occurrences are within 1 mile of the project.	Yes
Monolopia gracilens woodland woollythreads	—	—	1B.2	Annual herb found in chaparral, valley and foothill grassland, cismontane woodland, broadleafed upland forest, north coast coniferous forest. 120–2,000 m Bloom period: February–July	**Potential to Occur**: suitable habitat is present within the project. Recorded occurrences are within 1 mile of the project.	Yes

Code Designations

[1] Federal Status: 2015 USFWS Listing

FE = Listed as endangered under the Endangered Species Act
FT = Listed as threatened under the Endangered Species Act
FC = Candidate for listing (threatened or endangered) under Endangered Species Act
FD = Delisted in accordance with the Endangered Species Act
— = Not federally listed

[2] State Status: 2015 CDFW Listing

SE = Listed as endangered under the California Endangered Species Act
ST = Listed as threatened under the California Endangered Species Act
SSC = Species of Special Concern as identified by CDFW
CFP = Listed as fully protected under FGC
CR = Species identified as rare by CDFW
— = Not state listed

[3] CNPS: 2015 CNPS-California Rare Plant Ranks (CRPR)

1A = Plants species that presumed extinct in California.
1B = Plant species that are rare, threatened, or endangered in California and elsewhere.
List 2 = Plant species that are rare, threatened, or endangered in California, but more common elsewhere.
Blooming period: Months in parentheses are uncommon.

[4] **Habitat description:** Habitat description adapted from CNDDB (CDFW 2015) and CNPS online inventory (CNPS 2015)

A.2 - Special-Status Wildlife Species Table

Table 2: Special-status Wildlife Species Potentially Occurring within the Project

Scientific Name Common Name	Status		Habitat Description[3]	Potential to Occur and Rationale	Included in Impact Analysis
	USFWS[1]	CDFW[2]			
Plants					
Malacothamnus arcuatus arcuate bush-mallow	—	—	Found in Chaparral, cismontane woodland.	**Likely to Occur**: suitable habitat is present within the project. No recorded occurrences are within 1 mile of the project.	Yes
Monolopia gracilens woodland woollythreads	—	—	Chaparral, valley and foothill grassland, cismontane woodland, broadleafed upland forest, north coast coniferous forest.	**Likely to Occur**: no suitable habitat is present within the project. No recorded occurrences are within 1 mile of the project.	Yes
Invertebrates					
Bombus caliginosus obscure bumble bee	—	—	Found in coastal areas from Santa Barbara county to north to Washington state. Food plant genera include Baccharis, Cirsium, Lupinus, Lotus, Grindelia, and Phacelia.	**Unlikely to Occur**: no suitable habitat is present within the project. No recorded occurrences are within 1 mile of the project.	No
Bombus occidentalis Western bumble bee	—	—	Once common and widespread, species has declined precipitously from central CA to southern B.C., perhaps from disease.	**Unlikely to Occur**: no suitable habitat is present within the project. No recorded occurrences are within 1 mile of the project.	No
Euphydryas editha bayensis Bay checkerspot butterfly	FT	—	Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. Plantago erecta is the primary host plant; *Orthocarpus densiflorus* and *O. purpurscens* are the secondary host plants.	**Unlikely to Occur:** no suitable habitat is present within the Project. No recorded occurrences are within 1 mile of the Project.	No
Speyeria zerene myrtleae Myrtle's silverspot butterfly	FE	—	Restricted to the foggy, coastal dunes/hills of the Point Reyes peninsula; extirpated from coastal San Mateo County. Larval foodplant thought to be *Viola adunca*.	**Unlikely to Occur:** no suitable habitat is present within the Project. No recorded occurrences are within 1 mile of the Project.	No

Table 2 (cont.): Special-status Wildlife Species Potentially Occurring within the Project

Scientific Name Common Name	Status		Habitat Description[3]	Potential to Occur and Rationale	Included in Impact Analysis
	USFWS[1]	CDFW[2]			
Fish					
Spirinchus thaleichthys Longfin smelt	FC	ST SSC	Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15–30 ppt, but can be found in completely freshwater to almost pure seawater.	**Unlikely to Occur:** no suitable habitat is present within the Project. No recorded occurrences are within 1 mile of the Project.	No
Amphibians					
Rana draytonii California red-legged frog	FT	—	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation	**Unlikely to Occur:** no suitable habitat is present within the Project. No recorded occurrences are within 1 mile of the Project.	No
Reptiles					
Thamnophis sirtalis tetrataenia San Francisco gartersnake	FE	SE	Vicinity of freshwater marshes, ponds, and slow-moving streams in San Mateo County and extreme northern Santa Cruz County. Prefers dense cover and water depths of at least one foot. Upland areas near water are also very important.	**Unlikely to Occur**: no suitable habitat is present within the project. Recorded occurrences are within 1 mile of the project.	No
Emys marmorata western pond turtle	—	SSC	This species is a thoroughly aquatic turtle found in ponds, marshes, rivers, streams, and irrigation ditches, usually with aquatic vegetation below 6000 feet elevation. Requires basking sites and suitable upland habitat (sandy banks or grassy open fields) up to 0.5 km from water for egg-laying.	**Unlikely to Occur:** no suitable habitat is present within the Project. No recorded occurrences are within 1 mile of the Project	No

Table 2 (cont.): Special-status Wildlife Species Potentially Occurring within the Project

Scientific Name Common Name	Status USFWS[1]	Status CDFW[2]	Habitat Description[3]	Potential to Occur and Rationale	Included in Impact Analysis
Birds					
Athene cunicularia Burrowing owl	— MBTA	SSC FGC	Found in open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. A subterranean nester, dependent upon burrowing mammals, most notably the California ground squirrel.	**Unlikely to Occur:** no suitable habitat is present within the Project. No recorded occurrences are within 1 mile of the Project.	No
Charadrius alexandrinus nivosus Western snowy plover	FT MBTA	SSC	Found in sandy beaches, salt pond levees, and shores of large alkali lakes. Requires sandy, gravelly, or friable soils for nesting.	**Unlikely to Occur:** no suitable habitat is present within the Project. No recorded occurrences are within 1 mile of the Project.	No
Laterallus jamaicensis coturniculus California black rail	— MBTA	ST FP	Inhabits freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays. Requires water depth of about 1 inch that does not fluctuate during the year, and dense vegetation for nesting.	**Unlikely to Occur:** no suitable habitat is present within the Project. No recorded occurrences are within 1 mile of the Project.	No
Falco peregrinus anatum American Peregrine Falcon	FD MBTA	SD FGC	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site.	**Unlikely to Occur:** no suitable habitat is present within the Project. Recorded occurrences are within 1 mile of the Project	No
Rallus longirostris obsoletus California Clapper Rail	FE MBTA	SE	Found in salt-water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with abundant growths of pickleweed, but feeds away from cover on invertebrates from mud-bottomed sloughs.	**Unlikely to Occur:** no suitable habitat is present within the Project. No recorded occurrences are within 1 mile of the Project.	No

Table 2 (cont.): Special-status Wildlife Species Potentially Occurring within the Project

Scientific Name Common Name	Status		Habitat Description[3]	Potential to Occur and Rationale	Included in Impact Analysis
	USFWS[1]	CDFW[2]			
Melospiza melodia pusillula Alameda song sparrow	—	SSC	Inhabits Salicornia marshes; nests low in Grindelia bushes (high enough to escape high tides) and in Salicornia. Inhabits Salicornia marshes; nests low in Grindelia bushes (high enough to escape high tides) and in Salicornia.	Unlikely to Occur: no suitable habitat is present within the Project. No recorded occurrences are within 1 mile of the Project.	No
Mammals					
Antrozous pallidus Pallid bat	—	SSC	Found in deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Species is very sensitive to disturbance of roosting sites.	**Potential to Occur:** Suitable habitat capable of supporting this species is present within the project. Recorded occurrences within 1 mile of the project.	Yes
Lasiurus cinereus Hoary bat	—	—	Prefers open habitats or habitat mosaics, with access to trees for cover, and open areas or habitat edges for feeding. Roosts in dense foliage of medium-to-large trees. Feeds primarily on moths. Requires a water source nearby.	**Potential to Occur:** Suitable habitat capable of supporting this species is present within the project. No recorded occurrences are within 1 mile of the Project.	Yes
Reithrodontomys raviventris salt marsh harvest mouse	FE	—	Only in the saline emergent wetlands of San Francisco Bay and its tributaries. Pickleweed (*Salicornia virginica*) is primary habitat. Require higher areas for flood escape.	**Low Potential to Occur**: No suitable habitat present within the project. Two recorded occurrences within 1 mile, most recent dated 2010.	No

Table 2 (cont.): Special-status Wildlife Species Potentially Occurring within the Project

Scientific Name Common Name	Status USFWS[1]	Status CDFW[2]	Habitat Description[3]	Potential to Occur and Rationale	Included in Impact Analysis
Code Designations					
[1] Federal Status: 2015 USFWS Listing			**[2] State Status: 2015 CDFW Listing**		
ESU = Evolutionary Significant Unit is a distinctive population.			**SE** = Listed as endangered under the CESA.		
FE = Listed as endangered under the FESA.			**ST** = Listed as threatened under the CESA.		
FT = Listed as threatened under the FESA.			**SSC** = Species of Special Concern as identified by the CDFW.		
FC = Candidate for listing (threatened or endangered) under FESA.			**FP** = Listed as fully protected under FGC.		
FD = Delisted in accordance with the FESA.			**CFG** = FGC =protected by FGC 3503.5		
FPD = Federally Proposed to be Delisted.			**CR** = Rare in California.		
MBTA = protected by the Migratory Bird Treaty Act			**—** = Not state listed		
— = Not federally listed					
[3] **Habitat description**: Habitat description adapted from CNDDB (CDFW 2015a).					

APPENDIX E4:
JURISDICTIONAL WATERS/WETLAND DETERMINATION

August 24, 2018

Dafna Akiva
Dragonfly Investment Group
777 Mariners Island Blvd. Suite 150
San Mateo CA 94404

Subject: **Jurisdictional Waters/Wetland Determination for the Black Mountain Property Project**

Dear Dafna:

At your request, FirstCarbon Solutions (FCS) has prepared a focused assessment of the potential for federal and state jurisdictional waters at the Black Mountain Property site in San Carlos, California. The property is the subject of the Black Mountain Property Mitigated Negative Declaration (MND) prepared with the City of San Carlos. Since the MND analyzes the project's impacts in light of the California Environmental Quality Act (CEQA) process, this assessment focused on the likely jurisdictional status for a potential wetland found in 2016 as part of that process.

Project Site Location

The project site is located along Alameda de las Pulgas in the City of San Carlos, California. The site comprises approximately 11.4 acres of a mix of undeveloped and developed land surrounded by residential development. Primary access to the site is from Alameda de las Pulgas bordering the eastern portion of the project site. Coronada Avenue borders most of the northern portion of the site, Glasgow Lane borders most of the western portion of the site and Bauer Drive borders most of the southern portion of the site.

Methods

Literature Review

As discussed above, we reviewed previously prepared biological and other documentation that was made available throughout the review process, including the Administrative Biological Resource Assessment (BRA) that was prepared for the Black Mountain Property Project. The area mentioned in the BRA cited "evidence of potential seasonal swales in the upper portion of the project site." This area was further evaluated to determine the presence or absence of potential seasonal jurisdictional features. A review of aerial photography was also conducted for the project site and surrounding vicinity prior to the site visit, as well as after the site visit as information became available.

Field Survey

A general site survey was conducted by FCS Senior Biologist Brian Mayerle and FCS Associate Biologist Joaquin Pacheco on August 15, 2018 from 11:00AM to 12:30PM and focused on the wetland evaluation. The weather was sunny with partial clouds and a temperature of 68 degrees Fahrenheit. During the survey, the southern portion of the project site was visually evaluated to reverify the extent of vegetation communities and assess the potential for presence of wetlands. Wetland parameters

assessed included hydric soil conditions, hydrophytic vegetation, and wetland hydrology. Other parameters assessed included slope, aspect, and any apparent geologic features.

Existing Site Conditions

The site primarily consists of open non-native grassland wherein the majority of the area is highly disturbed through soil compaction and removal or alteration of native vegetation from historic usage of the property. The southern portion of the site previously mentioned was dominated by invasive species of plants, such as French broom (*Genista monspessulana*), dogtail grass (*Cynosurus*), wild oat (*Avena sativa*), canary grass (*Phalaris canariensis*), and Italian thistle (*Carduus pycnocephalus*). There were several coast live oak trees (*Quercus agrifolia*) throughout this portion of the site. The soil was dry, lacking any evidence of hydrologic features.

Regulatory Background

Federal

The United States Army Corps of Engineers (USACE) and the United States Environmental Protection Agency (EPA) regulate the discharge of dredged or fill material into waters of the U.S., including wetlands, under Section 404 of the federal Clean Water Act (CWA). Waters of the U.S. include wetlands and lakes, and rivers, streams, and their tributaries. Project proponents must obtain a permit from USACE for all discharges of fill material into waters of the U.S., including jurisdictional wetlands, before proceeding with a proposed action. A Section 404 permit is not generally required if the Project avoids the discharge of any fill material into waters of the U.S.

The CWA under Section 401 also requires any applicant for a permit to conduct any activity that may result in a discharge of a pollutant into waters of the U.S. to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards. The appropriate Regional Water Quality Control Board (RWQCB) regulates Section 401 requirements.

State

The RWQCB has regulatory authority over wetlands and waterways under both the CWA and the State of California's Porter-Cologne Water Quality Control Act. Under the CWA, the RWQCB has regulatory authority over actions in waters of the U.S., through the issuance of water quality certifications under Section 401 of the CWA in conjunction with permits issued by the USACE under Section 404 of the CWA. When the RWQCB issues Section 401 certifications, it simultaneously issues general Waste Discharge Requirements for the Project under the Porter-Cologne Water Quality Control Act. Activities in areas that are outside of the jurisdiction of the USACE are regulated by the RWQCB under the authority of the Porter-Cologne Water Quality Control Act. Activities that lie outside of USACE jurisdiction may require the issuance of either individual or general waste discharge requirements.

In addition, Fish and Game Code Section 1600, et seq. require any entity to notify CDFW before beginning any activity that may substantially divert or obstruct the natural flow of, or substantially change or use, any material from the bed, channel, or bank of any river, stream, or lake.

Results and Discussion

Based on our review and site survey, FCS found that the site's current state is largely the result of the previous activities that occurred on the project site. Additionally, the area of focus in the northwestern portion of the site did not contain any hydrophytic obligate wetland species of plants, only displaying several facultative species, such as California wild oat grass (*Danthonia californica*). Moreover, there was no evidence of redoximorphic features in the soil at a depth of up to 10 inches as well as no evidence of prolonged hydrological conditions.

In consideration of these results, no jurisdictional features that would require permitting were found within the project boundaries. The evaluated areas would not be regulated by the USACE, RWQCB, or CDFW; as such, any fills or otherwise removal of these areas will not require permits with these respective agencies. Given these results, review by the respective agencies would not be necessary.

FCS appreciates the opportunity to assist you on this project. If we can be of any further assistance, or if you have any questions concerning this letter, please contact me at 916.305.5823.

Sincerely,

Brian Mayerle, Senior Biologist
FirstCarbon Solutions
1350 Treat Boulevard, Suite 350
Walnut Creek, CA 94597

APPENDIX F

WETLAND DELINEATION

FIRSTCARBONSOLUTIONS™

Jurisdictional Delineation
808 Alameda de las Pulgas
City of San Carlos, San Mateo County, California

Prepared for:
Veev
777 Mariners Island Boulevard, Suite 150
San Mateo, California 94404
650.292.0752

Contact: Sean Gibson

Prepared by:
FirstCarbon Solutions
1350 Treat Boulevard, Suite 380
Walnut Creek, CA 94597
888.826.5814

Contacts: Mary Bean, Project Director
Kevin Derby, Senior Biologist

Date: March 4, 2021

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Table of Contents

Section 1: Introduction 1
1.1 - Purpose of Assessment 1
1.2 - Project Location 1
1.3 - Driving Directions 1
1.4 - Contact Information 1

Section 2: Environmental Setting 7
2.1 - Existing Site Conditions 7
2.2 - Soils 7
2.3 - Hydrology 7
2.4 - Vegetation 7

Section 3: Regulatory Setting 11
3.1 - Federal: Clean Water Act 11
3.2 - State of California: Wetlands and Waters Protection–Regional Water Quality Control Board 11
3.3 - State of California: Sections 1600—1616 of the California Fish and Game Code–California Department of Fish and Wildlife 11

Section 4: Methods 13
4.1 - Wetlands 13
4.2 - Additional Background Information Review 13

Section 5: Results 15
5.1 - Climatic Conditions 15
5.2 - Aquatic Features 15
5.3 - Jurisdictional Determination 15

Section 6: Conclusion 19

Appendix A: WETS Precipitation Data

Appendix B: Site Photographs

Appendix C: Wetland Delineation Data Forms

List of Tables

Table 1: Summary of Aquatic Features within the Study Area 15

List of Exhibits

Exhibit 1: Regional Location Map 3
Exhibit 2: Project Overview 5
Exhibit 3: Soils Map 9
Exhibit 4: Delineation Map 17

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SECTION 1: INTRODUCTION

1.1 - Purpose of Assessment

Rare plant surveys conducted in 2020 identified a small wetland seep in the lower portion of the property. Consequently, FirstCarbon Solutions (FCS) prepared a delineation of waters of the United States and waters of the State, including wetlands, for the 808 Alameda de las Pulgas project (proposed project). The purpose of the delineation is to identify potential waters of the United States and the State, including wetlands, occurring within the project site. The results of the delineation are preliminary until verified by the United States Army Corps of Engineers (USACE) or the Regional Water Quality Control Board (RWQCB).

1.2 - Project Location

The project site is located along Alameda de las Pulgas in the City of San Carlos, California (Exhibit 1). The site comprises approximately 11.4 acres of a mix of undeveloped and developed land surrounded by residential development. Primary access to the site is from Alameda de las Pulgas bordering the eastern portion of the project site. Coronado Avenue borders most of the northern portion of the site, Glasgow Lane borders most of the western portion of the site, and Bauer Drive borders most of the southern portion of the site (Exhibit 2).

1.3 - Driving Directions

From Highway 101 exit Holly Street and travel west to El Camino Real. Take a left on El Camino Real and then an immediate right on San Carlos Avenue. Travel approximately 1 mile to Alameda de Las Pulgas. Take a left on Alameda de las Pulgas and the site is about a mile on the right, at Castor Road.

1.4 - Contact Information

The project applicant for the proposed project is Veev. If necessary, please contact Sean Gibson (sgibson@veev.com; 650.292-0752.)

Delineation Representative
FirstCarbon Solutions
Kevin Derby, Senior Biologist
916.626.7573
kderby@fcs-intl.com

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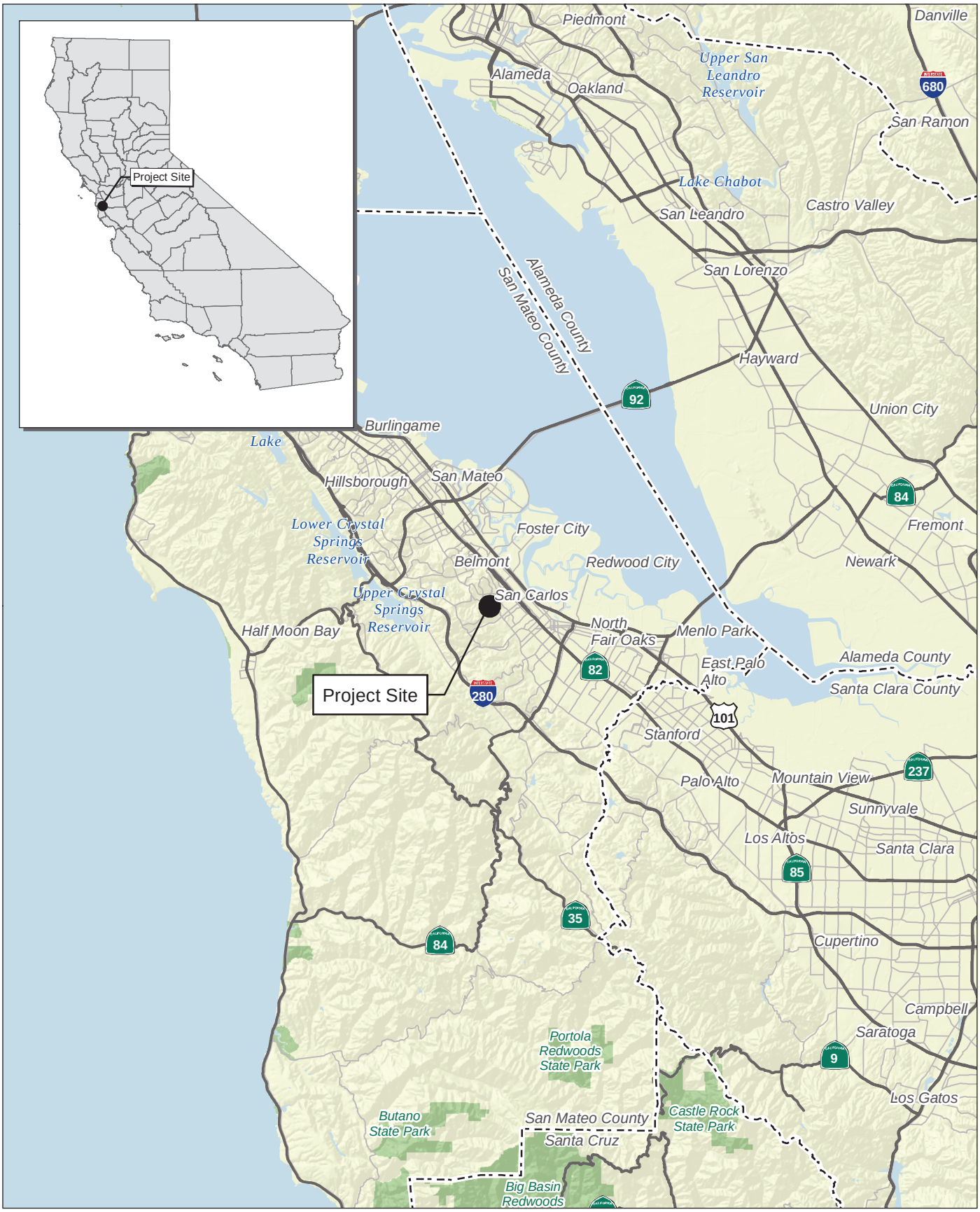

Source: Census 2000 Data, The California Spatial Information Library (CaSIL).

FIRSTCARBON SOLUTIONS™

5 2.5 0 5 Miles

Exhibit 1
Regional Location Map

55060001 • 02/2021 | 1_regional.mxd

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808 ALAMEDA DE LAS PULGAS
JURISDICTIONAL DELINEATION

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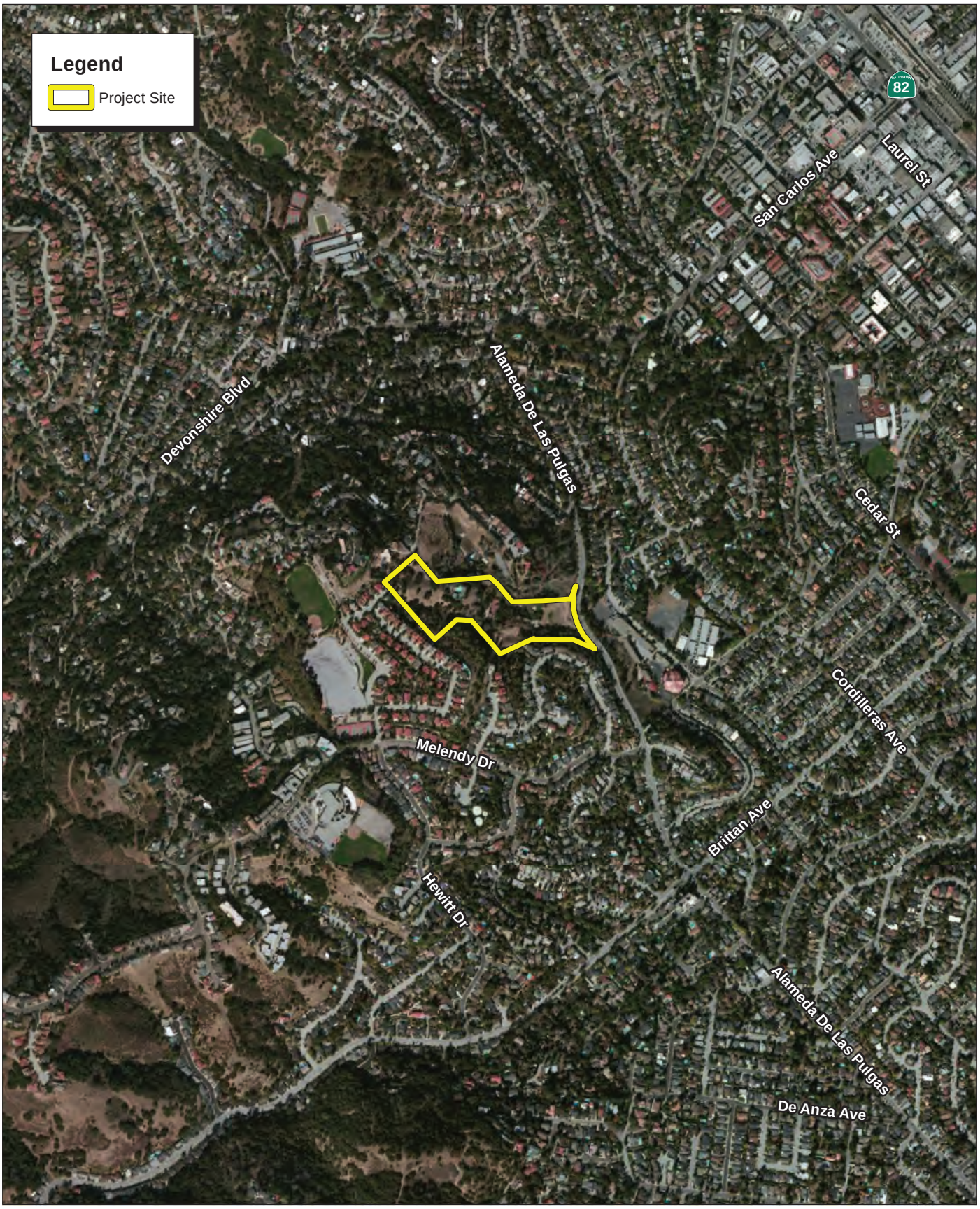

Source: ESRI Aerial Imagery.

FIRSTCARBON SOLUTIONS™

1,000 500 0 1,000 Feet

Exhibit 2
Local Vicinity Map

55060001 • 02/2021 | 2_local_vicinity.mxd

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808 ALAMEDA DE LAS PULGAS
JURISDICTIONAL DELINEATION

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SECTION 2: ENVIRONMENTAL SETTING

2.1 - Existing Site Conditions

The site primarily consists of open non-native grassland wherein most of the area is highly disturbed through soil compaction and removal or alteration of native vegetation from historic usage of the property.

2.2 - Soils

The Natural Resource Conservation Service (NRCS) Web Soil Survey (WSS) depicts the one soil type within the project site. The WSS indicates that the soils on the site (11.4 acres) consist entirely of Orthents–cut/fill urban land complex 5-75 percent slopes (Exhibit 3). The Orthents–cut/fill urban land complex consists of soils that have been cut and filled for urban development. These soils are gently rolling to very steep, and vary greatly in thickness and in the texture of the surface layer.[1]

2.3 - Hydrology

The project site is located within the Cordilleras Creek Watershed, a local watershed in San Mateo County that originates in the Pulgas Ridge Open Space Preserve, but is dominated by urban development in San Carlos and neighboring communities. The on-site hydrology is highly manipulated from years of development. The mapped wetland seep is the only natural aquatic feature on the project site.

2.4 - Vegetation

The southern portion of the site previously mentioned was dominated by invasive species of plants, such as French broom (*Genista monspessulana*), dogtail grass (*Cynosurus*), wild oat (*Avena sativa*), canary grass (*Phalaris canariensis*), and Italian thistle (*Carduus pycnocephalus*). There were several coast live oak trees (*Quercus agrifolia*) throughout this portion of the project site. An isolated wetland seep dominated by nutsedge and cattails was also observed in the nonnative grassland area. Other than the one wetland seep, the soil was dry, lacking any evidence of additional hydrologic features.

[1] United States Department of Agriculture (USDA), Natural Resources Conservation Service. 2020. Web Soil Survey 3.3.2. Website: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed February 2021.

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Source: Google Aerial Imagery. USDA Soils Data Mart, San Mateo East.

FIRSTCARBON SOLUTIONS™

200 100 0 200
Feet

Exhibit 3
Soils Map

55060001 • 02/2021 | 3_soils.mxd

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808 ALAMEDA DE LAS PULGAS
JURISDICTIONAL DELINEATION

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SECTION 3: REGULATORY SETTING

3.1 - Federal: Clean Water Act

The USACE administers Section 404 of the federal Clean Water Act (CWA), which regulates the discharge of dredge and fill material into waters of the United States. Waters of the United States are defined in the Navigable Waters Protection Rule.[2] "Wetland" refers to areas that are inundated or saturated by surface or groundwater at frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and seasonal wetlands. In general, a USACE permit must be obtained before placing fill in wetlands or other waters of the United States. The type of permit depends on acreage involved and purpose of the proposed fill.

As of June 2020, the USACE no longer regulates isolated wetlands and ephemeral streams under the Navigable Waters Protection Rule (NWPR). The NWPR, strips isolated wetlands and intermittent streams of federal protection pursuant to the CWA.

3.2 - State of California: Wetlands and Waters Protection–Regional Water Quality Control Board

The RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, within any region that could affect the water of the state" (Water Code § 13260(a)), pursuant to provisions of the Porter-Cologne Water Quality Act and the State Wetland Definition and the Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures) that were adopted in 2019 and implemented in 2020. "Waters of the State" are defined in the Procedures and generally include all wetlands and surface waters (regardless of connectivity or type of water) within the boundaries of the state.

3.3 - State of California: Sections 1600—1616 of the California Fish and Game Code–California Department of Fish and Wildlife

Streams, lakes, and riparian vegetation that provide habitat for fish and other wildlife species are subject to jurisdiction by the California Department of Fish and Wildlife (CDFW) pursuant to Sections 1600—1616 of the California Fish and Game Code. These sections regulate any activity that may: (1) substantially obstruct or divert the natural flow of a river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake. When an existing fish or wildlife resource may be substantially adversely affected, the CDFW is required to propose reasonable project changes to protect the resource. These modifications are formalized in a Streambed Alteration Agreement that becomes part of the plans, specifications, and estimates documents for the project.

[2] The Navigable Waters Protection Rule: Definition of "Waters of the United States." 2020. Department of the Army, Corps of Engineers, Department of Defense; and Environmental Protection Agency (EPA). 85 Federal Register 22250; 33 Code of Federal Regulations Part 328. Effective June 22, 2020.

The term "stream," which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as follows: "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation" (14 CCR 1.72). In addition, the term stream can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife.[3] Stream-dependent riparian habitat is defined in the California Fish and Game Code (Section 2785) as "lands which contain habitat which grows close to and which depends upon soil moisture from a nearby freshwater source." Removal of stream-dependent riparian vegetation may also require a Streambed Alteration Agreement from the CDFW.

[3] California Department of Fish and Game (CDFG) Environmental Services Division (ESD). 1994. A Field Guide to Lake and Streambed Alteration Agreements, Sections 1600–1607, California Fish and Game Code.

SECTION 4: METHODS

FCS Senior Biologist, Kevin Derby, surveyed the proposed project site on February 16, 2021, as described in this section.

4.1 - Wetlands

The presence/absence of wetlands was determined based on the requirements of the Corps of Engineers Wetlands Delineation Manual and revised procedures in the Regional Supplement to the *Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region*.[4,5] These procedures include standards that define wetlands, including specific saturation and/or ponding regimes, and evaluation of hydrophytic vegetation, hydric soils, and wetland hydrology. Wetland indicator status of vegetation follows the *2018 National Wetland Plant List for the Western Mountains, Valleys and Coast Region*.[6] Additionally, methods integrated guidance provided in the 2020 Navigable Waters Protection Rule.[7]

4.2 - Additional Background Information Review

Additional relevant information about the Study Area was reviewed including current and historical aerial imagery, the Watershed Assessment, Tracking and Environmental Results System (WATERS), and the United States Department of Agriculture (USDA), Natural Resources Conservation Service's (NRCS's) Web Soil Survey and Climate Analysis for Wetlands (WETS).[8,9,10] Average precipitation data was gathered from the nearest WETS-listed station in Redwood City, California over a 30-year period (Appendix A).

[4] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1.
[5] United States Army Corps of Engineers (USACE). 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (Version 2.0), ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-10-3.
[6] The National Wetland Plant List – Western Mountains, Valleys and Coast Region Version 1. 2018. United States Army Corps of Engineers.
[7] The Navigable Waters Protection Rule: Definition of "Waters of the United States." 2020. Department of the Army, Corps of Engineers, Department of Defense; and Environmental Protection Agency (EPA). 85 Federal Register 22250; 33 Code of Federal Regulations Part 328. Effective June 22, 2020.
[8] United States Environmental Protection Agency (EPA). WATERS (Watershed Assessment, Tracking and Environmental Results System. Website: https://www.epa.gov/waterdata/waters-watershed-assessment-tracking-environmental-results-system. Accessed June 2020.
[9] United States Department of Agriculture (USDA), Natural Resources Conservation Service. 2020. Web Soil Survey 3.3.2. Website: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed June 2020.
[10] United States Department of Agriculture (USDA), Natural Resources Conservation Service. 1997. Part 650 Engineering Field Handbook - Chapter 19: Hydrology Test for Wetland Determination.

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SECTION 5: RESULTS

5.1 - Climatic Conditions

The average annual rainfall for the City of San Carlos is approximately 21.3 inches. Precipitation falls primarily as rain, with most precipitation events occurring between November and March. The average rainfall for the month of February is approximately 4.4 inches.[11] The project site has received below-average rainfall so far during the current annual rainfall year (November 2020 to March 2021) (Appendix A). The weather during the February 16, 2021, site visit was sunny and breezy with an average temperature of 52°F (degrees Fahrenheit).

5.2 - Aquatic Features

One aquatic feature is shown in Exhibit 4. Dimensions of the feature occurring within the Study Area boundaries is presented in Table 1.

Table 1: Summary of Aquatic Features within the Study Area

Map Feature	Area (square feet)	Area (acre)
Isolated Wetland Seep	485.3	0.01

5.2.1 - Isolated Wetland Seep

A small wetland seep (0.01 acre) is located on the lower elevations of the property. The area has been disturbed/graded in the past and occurs northeast and directly downhill of a spring. The area has been recently mowed, but the vegetation in the seep area is dominated by cattail (*Typha* sp.), nutsedge (*Cyperus eragrostis*), and rush (*Juncus effusus*). The hydric soils had a low chroma, black organic streaks, and a strong sulfidic odor. Indicators of hydrology included saturation at the surface, and standing water in the soil pit at 12 inches. Representative photos of the seep are included in Appendix B and field data sheets are included in Appendix C.

5.3 - Jurisdictional Determination

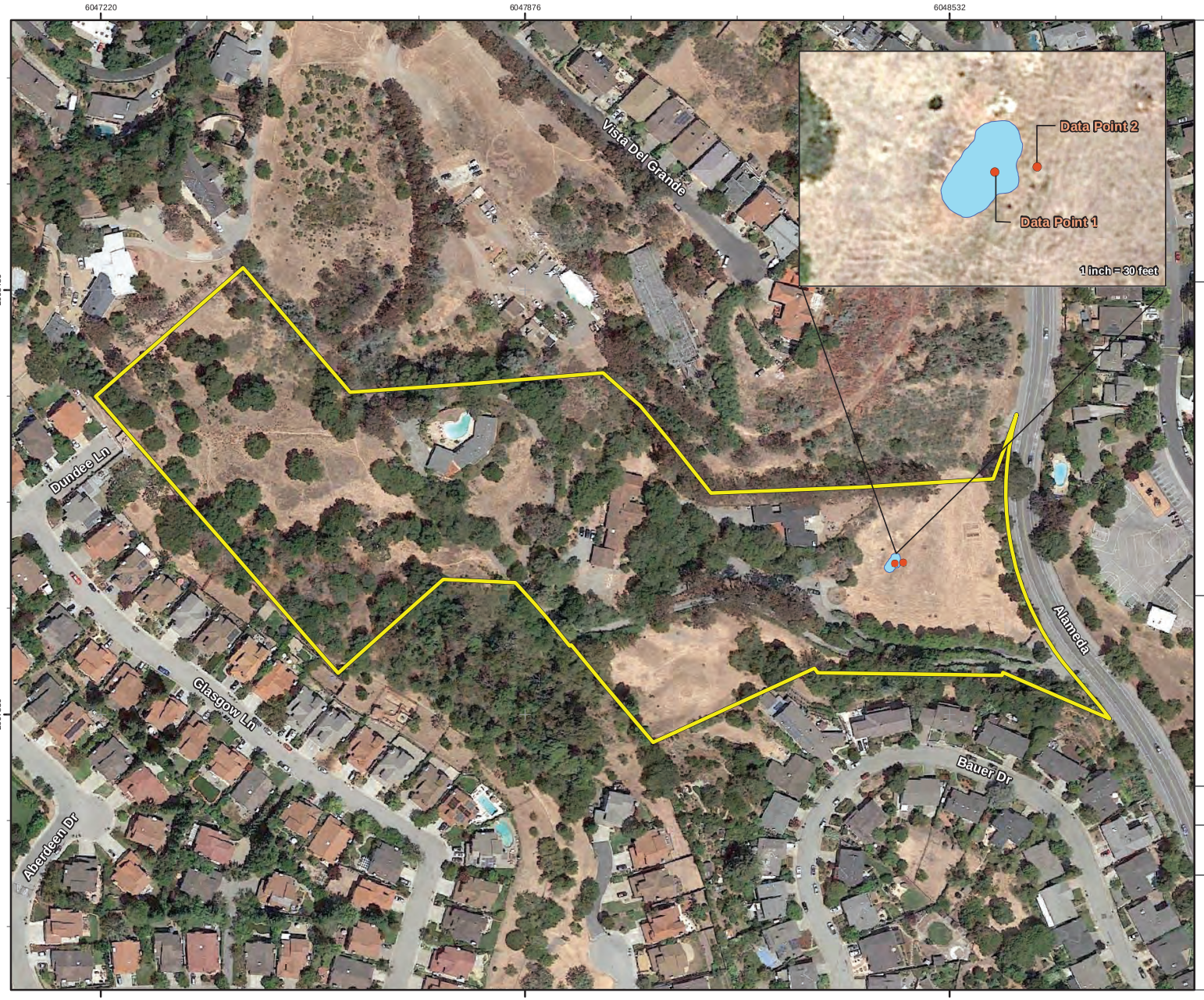
5.3.1 - USACE Jurisdiction

To be a jurisdictional wetland it must be adjacent to or connected to an intermittent or perennial water of the United States that connects to a navigable waterway. The on-site isolated wetland seep has no hydrologic connection to downgradient waters, culverts, or wetlands. Therefore, it is likely not jurisdictional pursuant to the federal Clean Water Act and is exempt from USACE permitting requirements.

[11] United States Department of Agriculture (USDA), Natural Resources Conservation Service. 1997. Part 650 Engineering Field Handbook - Chapter 19: Hydrology Test for Wetland Determination.

5.3.2 - Regional Water Quality Control Board Jurisdiction

Waters of the state are defined as “any surface water or groundwater, including saline waters, within the boundaries of the state” (Water Code § 13050(e)), and are under the jurisdiction of the RWQCB. Therefore, the isolated wetland seep within the project site boundary as shown on Exhibit 4 would likely fall under the jurisdiction of the RWQCB. This proposed jurisdictional determination is preliminary until confirmed by the RWQCB.



Legend

- Project Site
- Isolated Seep Wetland
- Data Points

Isolated Seep Wetland

ID	Avg width (ft)	Length (ft)	Area (sqft)	Acres
1	17	32	485.3	0.01

150 75 0 150 Feet

1 inch = 150 feet

UTM Zone 10N, NAD 83
LandGrant: PULGAS

Woodside Quadrangle
HUC 8: 18050004

Data Source: Google Aerial Imagery.

Delineator(s): K. Derby
Map Preparer: K. McCracken

Delineation Date: 02/24/2021

Exhibit 4
Jurisdictional Delineation

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808 ALAMEDA DE LAS PULGAS
JURISDICTIONAL DELINEATION

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SECTION 6: CONCLUSION

The isolated wetland seep present within the project site covers an area of approximately 485.3 square feet (0.01 acre) (Exhibit 4). No additional aquatic features were observed within the Study Area. This feature is potentially excluded from USACE jurisdiction under the Navigable Waters Protection Rule. However, this feature likely qualifies as a water of the State, regulated by the RWQCB Procedures.

The findings and conclusions presented in this report, including the location and extent of waters subject to regulatory jurisdiction, represent the professional opinion of FCS. These findings and conclusions should be considered preliminary until confirmed by the USACE and RWQCB.

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Appendix A:
WETS Precipitation Data

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WETS Table

WETS Station: REDWOOD CITY, CA								
Requested years: 1971 - 2000								
Month	Avg Max Temp	Avg Min Temp	Avg Mean Temp	Avg Precip	30% chance precip less than	30% chance precip more than	Avg number days precip 0.10 or more	Avg Snowfall
Jan	58.5	39.7	49.1	4.19	1.88	5.11	7	0.0
Feb	62.3	42.4	52.3	3.88	1.59	4.72	7	0.0
Mar	65.2	44.3	54.8	3.30	1.36	4.01	7	0.0
Apr	70.4	45.7	58.1	1.07	0.41	1.30	3	0.0
May	74.9	49.0	62.0	0.43	0.11	0.37	1	0.0
Jun	80.3	52.7	66.5	0.10	0.00	0.10	0	0.0
Jul	82.7	55.0	68.9	0.03	0.00	0.03	0	0.0
Aug	82.5	55.0	68.7	0.10	0.00	0.06	0	0.0
Sep	80.4	53.5	67.0	0.22	0.00	0.23	1	0.0
Oct	75.0	49.4	62.2	1.06	0.43	1.20	2	0.0
Nov	64.8	43.6	54.2	2.62	0.77	2.99	5	0.0
Dec	58.6	39.3	48.9	2.79	1.39	3.36	5	0.0
Annual:					15.47	23.79		
Average	71.3	47.5	59.4	-	-	-	-	-
Total	-	-	-	19.78			39	0.0

GROWING SEASON DATES			
Years with missing data:	24 deg = 2	28 deg = 2	32 deg = 2
Years with no occurrence:	24 deg = 28	28 deg = 23	32 deg = 2
Data years used:	24 deg = 28	28 deg = 28	32 deg = 28
Probability	24 F or higher	28 F or higher	32 F or higher
50 percent *	No occurrence	No occurrence	1/28 to 12/18: 324 days
70 percent *	No occurrence	No occurrence	1/18 to 12/29: 345 days
* Percent chance of the growing season occurring between the Beginning and Ending dates.			

STATS TABLE - total precipitation (inches)													
Yr	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annl
1906				0.98	1.52	0.83						M2.19	5.52
1907	M2.95	2.72	M7.86	MT	0.28	0.60			0.09	M0.92		4.32	19.74
1908	3.15	3.93	0.93	0.20	0.47				M0.01	M0.24	0.70	2.10	11.73
1909	11.63	5.97	2.75						M0.96	M1.05	M1.41	M4.81	28.58
1910	M3.47	M0.65	M2.43							M0.30	M0.35	M0.45	7.65
1911		M0.61		M0.83						0.10		M1.81	3.35
1912	M1.40	0.29			0.68	1.01			0.50	M0.05	0.49	0.71	5.13
1913	3.17	0.60	M1.07	0.29	0.57	0.00	0.24	0.00		0.00	M4.69	M4.42	15.05

1914	M10.76	4.56	0.63	0.64	M0.06	0.27			0.00	0.54	0.64	5.01	23.11
1915	4.51	M7.64	1.72	0.60	M2.10	0.00	0.00	0.00	0.00	0.00	0.38	M7.08	24.03
1916	13.66	1.59	0.87	0.00	0.03		0.00	M0.10	0.71	M1.18	0.57	M4.63	23.34
1917	M0.86	M4.86	M0.73										6.45
1918		M1.98	M3.63	M0.40									6.01
1919													
1920													
1921													
1922													
1923													
1924													
1925													
1926													
1927													
1928													
1929													
1930										0.57	1.42	0.25	2.24
1931	4.96	0.87	1.16	0.45	0.79	0.75	0.01		T	0.45	1.66	9.14	20.24
1932	2.76	3.23	0.17	0.45	0.20	T	0.00	0.00	0.00	0.00	0.27	2.77	9.85
1933	5.86	0.60	2.96	0.13	1.21	0.05	0.00	0.00	0.02	1.09	0.00	5.55	17.47
1934	1.07	3.83	T	0.30	0.28	0.67	0.00	T	0.16	0.69	2.91	2.67	12.58
1935	5.21	1.01	4.15	3.71	0.00	0.00	0.00	0.31	T	1.55	0.41	2.03	18.38
1936	3.82	8.19	0.98	1.48	0.12	0.15	0.01	0.00	0.00	0.42	0.02	4.91	20.10
1937	4.64	5.67	6.54	0.87	0.02	0.31	0.00	0.00		0.82	2.97	4.01	25.85
1938	3.25	7.73	6.26	1.55	0.00	0.00	0.00	0.00	0.06	1.11	1.30	1.29	22.55
1939	2.94	1.66	1.58	0.66	1.05	0.00	0.00	0.00	0.44	1.08	0.33	0.72	10.46
1940	12.28	8.99	M4.88	M0.36	0.32	0.00	0.00	0.00	M0.27	0.68	M0.41	M7.59	35.78
1941	M6.72	6.99	M3.39	4.04	M0.41	0.05	0.01	T	0.00	0.98	1.13	M7.10	30.82
1942	5.62	3.03	2.45	2.91	1.64	0.00	0.00	0.00	0.15	1.14	3.06	2.43	22.43
1943	7.65	1.78	3.15	1.32	T	0.02	0.00	0.00	T	0.55	0.65	1.86	16.98
1944	3.19	6.30	1.03	0.99	0.50	T	0.00	0.00	0.00	1.67	4.09	3.13	20.90
1945	0.65	4.80	3.46	0.30	0.39	T	T	T	T	2.21	2.33	6.04	20.18
1946	1.05	1.64	2.19	0.04	0.27	0.00	0.20	0.00	0.04	0.19	4.56	2.93	13.11
1947	0.99	1.59	2.91	0.19	0.15	0.43	0.00	T	T	2.84	0.76	1.33	11.19
1948	0.26	M1.61	3.14	3.35	0.41	0.00	0.02	0.00	0.00	0.25	M0.12	4.10	13.26
1949	1.20	3.39	4.91	T	0.72	0.01	0.09	0.21	0.03	0.07	1.54	2.09	14.26
1950	7.44	2.52	1.47	1.05	0.53	0.03	0.00	0.00	T	1.66	6.54	5.69	26.93
1951	2.92	2.21	1.18	0.89	0.64	0.02	0.00	T	T	1.03	2.58	9.34	20.81
1952	8.57	1.90	4.43	0.80	0.25	0.09	0.03	0.00	0.01	0.14	2.51	10.19	28.92
1953	3.12	0.04	1.76	2.11	0.48	0.16	0.00	0.03	T	0.	2.44	0.	10.

										24		36	74
1954	4.33	2.67	3.07	0.98	0.04	0.24	0.00	0.00	0.00	0.02	2.30	4.00	17.65
1955	4.58	1.71	0.11	1.55	0.60	0.00	T	0.00	0.00	T	1.45	14.16	24.16
1956	7.85	2.36	0.19	0.94	0.93	0.01	M0.00	0.00	0.22	1.10	0.00	0.35	13.95
1957	2.97	4.06	1.42	1.32	2.76	T	T	0.00	0.72	1.95	0.66	4.12	19.98
1958	4.61	8.82	6.52	6.37	0.30	0.20	0.00	0.00	0.10	0.01	0.12	1.06	28.11
1959	5.05	4.55	0.14	0.21	T	0.00	0.00	0.02	3.07	0.00	T	1.65	14.69
1960	4.51	4.57	0.89	0.65	0.63	0.00	T	0.00	T	0.05	3.15	0.99	15.44
1961	1.95	0.83	2.70	0.94	0.76	0.03	0.00	0.02	0.36	0.19	3.11	1.77	12.66
1962	1.84	7.58	3.29	0.25	T	0.00	0.00	0.01	0.01	6.39	0.33	2.82	22.52
1963	4.46	3.20	3.63	2.92	0.55	T	0.00	T	0.29	0.95	3.98	0.26	20.24
1964	3.60	0.27	1.67	0.13	0.56	0.75	T	0.08	0.00	1.30	3.59	6.63	18.58
1965	3.88	1.08	1.96	3.25	0.00	T	0.00	0.07	0.01	T	4.45	5.17	19.87
1966	2.18	1.81	0.24	0.66	0.13	0.09	0.30	0.04	0.10	T	4.04	3.56	13.15
1967	10.90	0.17	5.44	4.68	0.15	0.52	0.00	0.00	0.00	0.25	1.33	2.86	26.30
1968	5.44	1.42	3.43	0.78	0.07	0.00	0.00	0.11	0.00	0.37	1.95	4.75	18.32
1969	9.39	8.90	1.42	1.79	0.01	0.04	0.00	0.00	0.01	1.24	0.73	4.11	27.64
1970	8.77	2.04	1.43	0.40	0.04	0.06	0.00	0.00	0.00	0.74	6.69	7.42	27.59
1971	1.22	0.36	2.73	0.73	0.21	0.00	0.01	0.35	0.12	0.03	0.81	4.36	10.93
1972	1.15	1.21	0.09	0.86	0.00	0.08	0.00	0.00	0.47	4.19	6.29	1.80	16.14
1973	7.61	6.07	2.09	0.11	T	0.00	0.00	0.00	0.03	1.96	7.36	4.83	30.06
1974	3.46	1.05	4.64	2.11	T	0.13	0.22	0.00	0.00	1.20	0.69	2.59	16.09
1975	1.50	4.33	5.72	1.57	T	0.11	0.13	0.46	T	1.55	0.22	0.22	15.81
1976	0.27	1.92	0.84	0.79	0.00	0.03	0.02	0.90	0.52	0.38	1.11	1.23	8.01
1977	1.46	0.86	1.97	0.01	1.07	0.00	0.10	T	0.85	0.25	2.17	3.49	12.23
1978	9.05	4.95	5.01	2.83	0.02	0.00	0.00	0.00	0.36	T	1.73	0.52	24.47
1979	5.73	4.94	3.53	1.00	0.38	0.00	0.23	0.00	0.00	2.08	1.65	M1.03	20.57
1980	4.56	8.08	1.79	1.43	0.10	0.02	0.10	0.00	T	0.05	0.07	2.54	18.74
1981	7.21	2.50	4.39	0.19	0.06	0.00	0.00	0.00	0.26	2.20	7.23	5.20	29.24
1982	7.29	3.41	8.23	3.27	0.00	0.10	0.00	0.02	1.03	2.05	5.94	5.25	36.59
1983	8.07	7.36	9.20	3.58	0.37	0.00	0.00	0.00	0.37	0.69	7.09	6.09	42.82
1984	0.46	1.66	1.58	0.54	0.00	0.03	T	0.20	0.22	1.83	5.67	2.03	14.22
1985	0.66	1.97	4.15	0.08	0.45	0.15	0.05	0.01	0.18	0.99	M2.87	2.57	14.13
1986	2.98	10.06		0.67	0.45	0.00	0.03	0.00	0.63	T	0.04	1.33	16.19
1987	2.84	5.01	1.60	0.22	0.03	T	0.00	0.00	0.	1.	1.60	3.	16.

									00	05		93	28
1988	3.31	0.58	0.05	1.65	0.24	0.03	0.00	0.00	0.00	0.18	1.87	M3.09	11.00
1989	1.59	1.37	3.27	0.95	0.05	0.03	0.00	0.00	0.64	1.72	1.42	T	11.04
1990	2.48	2.68	0.76	0.18	1.61	0.00	0.01	0.00	0.11	0.20	0.09	2.04	10.16
1991	0.33	2.94	7.87	0.33	0.15	0.15	0.00	0.17	0.13	1.70	0.40	2.63	16.80
1992	1.85	6.34	3.05	0.20	0.00	0.20	0.00	0.05	T	1.58	0.09	6.26	19.62
1993	9.81	4.78	2.51	0.63	0.44	0.31	0.00	0.00	0.00	0.41	1.40	2.08	22.37
1994	1.97	4.90	0.40	0.99	1.52	0.00	0.00	0.00	0.08	0.62	5.30	2.30	18.08
1995	8.55	0.13	8.45	1.16	1.53	0.69	0.00	0.00	0.00	0.00	0.00	6.10	26.61
1996	6.51	6.26	3.11	1.01	1.06	0.00	0.00	0.00	0.00	0.60	2.29	6.46	27.30
1997	7.84	0.08	0.31	0.28	0.37	0.35	0.00	0.81	T	0.62	7.60	2.61	20.87
1998	7.48	12.42	2.43	2.05	2.23	T	0.00	0.00	0.06	0.70	3.26	0.89	31.52
1999		4.33	3.46	1.77	0.03	0.39	0.00	0.06	0.22	0.32	M1.53	0.34	12.45
2000			2.36	0.92		0.13	0.00			M2.57	0.77	0.21	6.96
2001	2.44	4.48	1.48	0.83	0.00	T	0.00		0.19	0.36	4.54	6.50	20.82
2002	M0.24	1.40		0.21	0.28	0.00	0.00	0.00	0.00		1.38	11.75	15.26
2003	1.58	1.36	M0.25	3.75	0.64	0.00	T	0.00	0.00	0.00	1.27	M6.44	15.29
2004	4.60	5.12	0.47		0.00	0.00	0.00	0.00	0.03	4.41	0.64	6.07	21.34
2005		4.47	4.35	1.90	0.75	0.27		0.00	0.02	M0.00			11.76
2006	2.25				0.47	0.00	0.00	0.00	0.00		0.49	1.98	5.19
2007	0.59	3.04	0.26	0.46	M0.03	0.00	0.00	0.00	0.29	1.16	0.01	2.42	8.26
2008	M4.43	2.42		0.00	0.00	M0.00	M0.00	M0.00	M0.00	M0.00	M0.00	M3.86	10.71
2009	M1.18	M4.78	2.06	M0.02	0.43	0.06	0.01	0.00	0.24	3.88	0.13	2.25	15.04
2010	6.33	2.88	2.31	2.83	0.66	0.00	0.00	0.00	0.00	M0.14	2.50	M1.75	19.40
2011	M0.70	4.36	5.43	0.18	0.34	M1.04	0.00	0.00	0.00	M0.97	M1.21	M0.04	14.27
2012	M2.82	1.00	6.17	3.12	0.02	0.17	0.00	0.00	0.00	M1.75	3.71	M6.40	25.16
2013	M0.30	0.50	0.71	0.51	0.01	0.03	0.00	0.00	M0.00	0.00	0.53	M0.04	2.63
2014	0.00	3.59	1.60	0.84	0.00	0.00	0.00	0.00	0.60	0.35	M1.00	10.73	18.71
2015	0.00	M0.01	0.05	M0.01	0.04	0.10	0.00	0.00	0.01	0.02	2.04	3.89	6.17
2016	5.20	0.97	6.82	M0.69	0.00	0.00	0.00	0.00	0.00	3.64	1.19	3.51	22.02
2017	10.42	7.52	3.05	M2.18	0.00	0.01	0.00	M0.00	0.01	0.21	M0.92	0.08	24.40
2018	4.44	0.26	4.17	1.41	0.00	0.00	0.00	0.00	0.00	0.00	M0.07	1.77	12.12
2019	5.00	7.45	3.87	0.26	1.87	0.00	0.00	0.00	0.03	0.00	M1.00	3.56	23.04
2020	1.17	0.00	2.12	1.30	M0.35	0.01	0.00	0.00	0.00	0.00	0.41	1.11	6.47
2021	M3.00	M0.66											3.66

Notes: Data missing in any month have an "M" flag. A "T" indicates a trace of precipitation.
Data missing for all days in a month or year is blank.
Creation date: 2016-07-22

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Appendix B:
Site Photographs

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Photograph 1: Looking northeast at isolated seep wetland. 12/10/2020

Photograph 2: Looking north at the isolated seep wetland. 2/16/2021

Photograph 3: Looking north standing at western edge of isolated seep wetland. 2/16/2021

Photograph 4: Hydric soil at Data Point 1. 2/16/2021

Appendix C:
Wetland Delineation Data Forms

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WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: _____ City/County: _____ Sampling Date: _____

Applicant/Owner: _____ State: _____ Sampling Point: _____

Investigator(s): _____ Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** _____

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** _____ **No** _____

Remarks:

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: _____ City/County: _____ Sampling Date: _____

Applicant/Owner: _____ State: _____ Sampling Point: _____

Investigator(s): _____ Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** _____

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
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	_____ = Total Cover		
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	_____ = Total Cover		
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1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** _____ **No** _____

Remarks:

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

APPENDIX G

CULTURAL RESOURCE REPORTS

APPENDIX G1:
ARCHEOLOGICAL STUDY

EVANS & DE SHAZO
ARCHAEOLOGY HISTORIC PRESERVATION

RESULTS OF AN ARCHAEOLOGICAL STUDY FOR THE PROPOSED ALAMEDA DE LAS PULGAS TOWNHOMES PROJECT, AT 804, 806 AND 808 ALAMEDA DE LAS PULGAS, SAN CARLOS, SAN MATEO COUNTY, CALIFORNIA

SUBMITTED TO:

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SUBMITTED BY:

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Principal Archaeologist
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July 5, 2021

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STATEMENT OF CONFIDENTIALITY

This report identifies the locations of archaeological resources within San Mateo County, which is confidential information, as the cultural, scientific, and artistic values associated with these archaeological sites can be damaged or destroyed through uncontrolled public disclosure of information about their locations.

Disclosure of this information to the public may be in violation of both federal and state laws. Information regarding the location, character or ownership of a historic resource is exempt from the Freedom of Information Act. Applicable United States (U.S.) laws include, but may not be limited to, Section 304 of the National Historic Preservation Act (16 USC 470w-3) and the Archaeological Resources Protection Act (16 USC 470hh). California state laws that apply include, but may not be limited to, Government Code Sections 6250 et seq. and 6254 et seq.

If any information in this document is to be released for public review, all locational information associated with archaeological resources must be redacted before public distribution.

Table of Contents

INTRODUCTION 1

PROJECT DESCRIPTION 1
PROJECT LOCATION 1

REGULATORY SETTING 4

THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) 4
Historical Resources 4
Unique Archaeological Resources 5
Tribal Cultural Resources 6

STUDY METHODS 6

RECORD SEARCH AND LITERATURE REVIEW 6
NWIC Record Search 7
Literature Review 7
SACRED LANDS INVENTORY AND TRIBAL OUTREACH 8
FIELD SURVEY 9

NATURAL AND CULTURAL OVERVIEW 9

ENVIRONMENTAL SETTING 9
Geology and Soils 10
Geoarchaeology 10
PREHISTORIC/ARCHAEOLOGICAL OVERVIEW 11
Chronology and Cultural Patterns of the San Francisco Bay-Delta Region 11
Terminal Pleistocene (13,500 – 11,700 cal BP) 12
Early Holocene (11,700 – 8,200 cal BP) 12
Late Holocene (4,200 – 180 cal BP) 13
ETHNOHISTORIC SETTING 15
HISTORIC SETTING 18
Spanish Period (1769 – 1821) 18
Mexican Period (1821 – 1848) 19
Early American Period (1848 – 1890's) 20
History of San Carlos (1850s – 1970s) 21
History of the Project Area 30

RESULTS OF RECORD SEARCH 43

NWIC RECORD SEARCH 43
Previous Cultural Resource Studies 43
Previously Identified Cultural Resources 44

RESULTS OF SACRED LANDS INVENTORY AND TRIBAL OUTREACH 45

SACRED LANDS INVENTORY RESULTS 45
TRIBAL OUTREACH 45

RESULTS OF FIELD SURVEY 46

CULTURAL RESOURCES OBSERVED 51
Historic-period Artifacts and Features Associated with Black Mountain Spring Water 51
Historic-period Artifacts and Features Representing General Use of the Project Area 56

SIGNIFICANCE EVALUATION 56

CRHR ELIGIBILITY 56
Integrity 58
UNIQUE ARCHAEOLOGICAL RESOURCE ELIGIBILITY 60

CONCLUSIONS 60

RECOMMENDATIONS 61

ATTACHMENTS:

APPENDIX A: Native American Heritage Commission and Tribal Correspondence

APPENDIX B: Department of Parks and Recreation (DPR) 523 Forms

INTRODUCTION

Evans & De Shazo, Inc. (EDS) was contracted by PlaceWorks, Inc. to complete an Archaeological Study and an Historic Resource Evaluation (HRE) for the proposed Alameda de las Pulgas Townhomes project (Project) within four adjacent parcels totaling 11.4-acre (Project Area) located off Alameda De Las Pulgas in San Carlos, San Mateo County, California. The Project Area includes the property at 804 Alameda De Las Pulgas (APN 050-220-020) that contains a ca. 1958 house and associated landscape; the property at 806 Alameda De Las Pulgas (APN 050-220-170) that currently contains a ca. 1958 house, ca. 1960 octagonal structure and associated landscape; the property at 808 Alameda De Las Pulgas (APN 050-220-160) that currently contains a ca. 1954 house, ca. 1965 ancillary building, ca. 1954 in-ground pool, and associated landscape; and APN 049-360-060, which is vacant (Figure 1). The Project Area also contains a freshwater spring and a water conveyance tunnel previously used by the Black Mountain Spring Water Company that was established within the Project Area in 1939.

Before the Project is approved, the California Environmental Quality Act (CEQA) requires the City of San Carlos (lead agency) to prepare and certify an Environmental Impact Report (EIR) to identify potential effects to the environment and allow the public to comment. Historical resources (buildings, structures, or archeological resources) are considered part of the environment; therefore, the purpose of the HRE and Archaeological Study is to determine if there are any historical resources, as defined in Section 15064.5 of the CEQA Guidelines, within the Project Area that could be adversely impacted by the Project and to provide Project-specific recommendations as needed.

The HRE was completed by EDS Principal Architectural Historian Stacey De Shazo, M.A., who exceeds the Secretary of Interior's professional qualification standards in architectural history and history. The purpose of the HRE was to evaluate the built environment resources that are at least 45 years of age to determine their eligibility for listing on the California Register of Historical Resources (CRHR) and assess potential impacts to built environment historical resources. The methods and results of the HRE are presented in a separate report (De Shazo 2021).

The Archaeological Study was completed by EDS Principal Archaeologist Sally Evans, M.A., RPA, who exceeds the Secretary of Interior's professional qualification standards in archaeology. The results of the Archaeological Study are presented herein.

PROJECT DESCRIPTION

The proposed Project includes merging the four parcels (APNs 049-360-060, 050-220-020, 050-220-170, and 050-220-160) into one parcel, demolishing the existing built environment resources, and constructing 87 attached townhouse units in 21 "clusters", with up to five units each, as well as reconfigured and new rights-of-way, new landscaping, a public walking trail and recreational components, and erosion control elements (Figure 2). Approximately 3.7 acres of the 11.4-acre Project Area will remain undeveloped. The natural spring used by the former Black Mountain Spring Water Company will be transformed into one of three proposed biorentention areas.

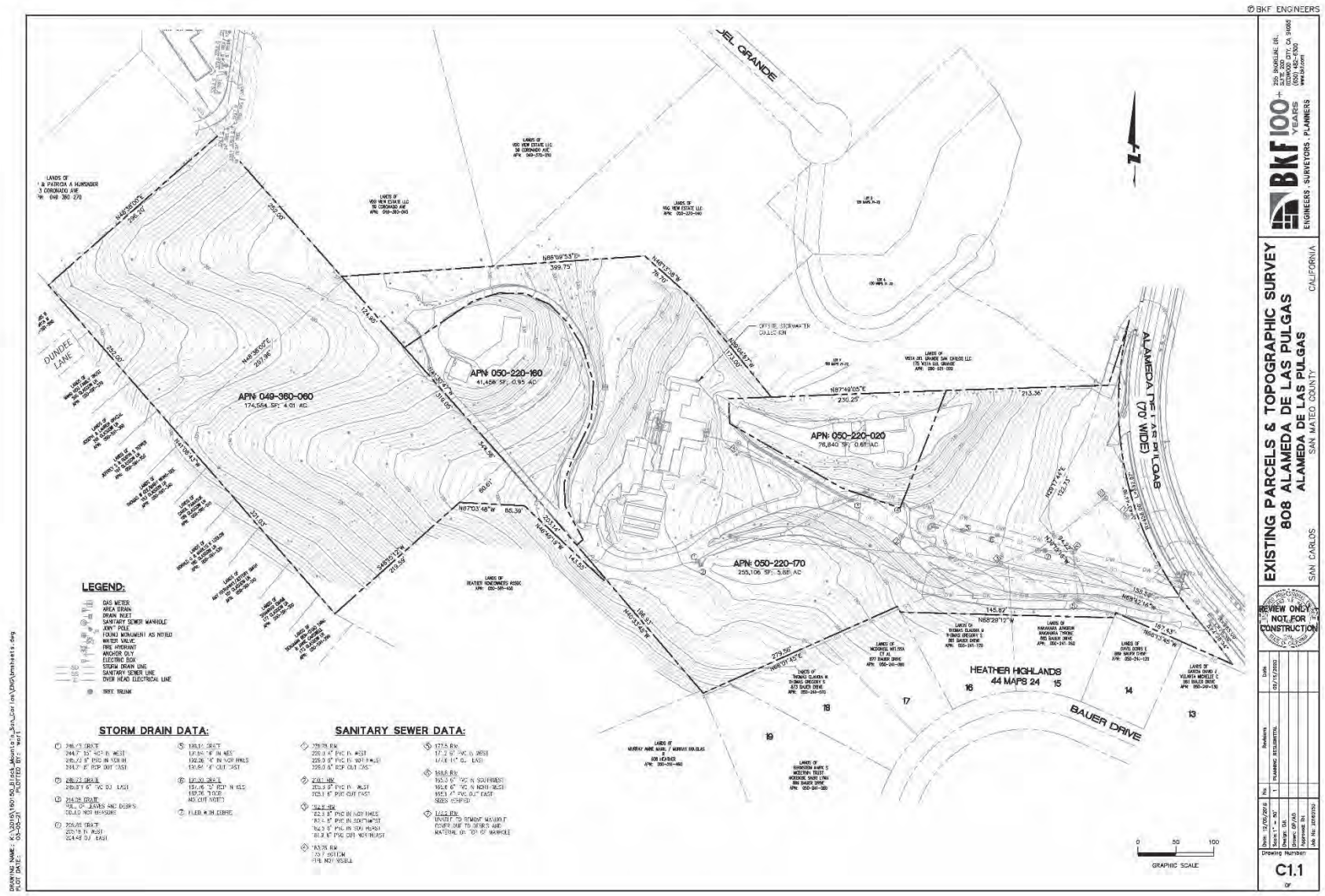

Figure 1: Existing parcels and topographic survey (BKF Engineering, 9/15/2020).

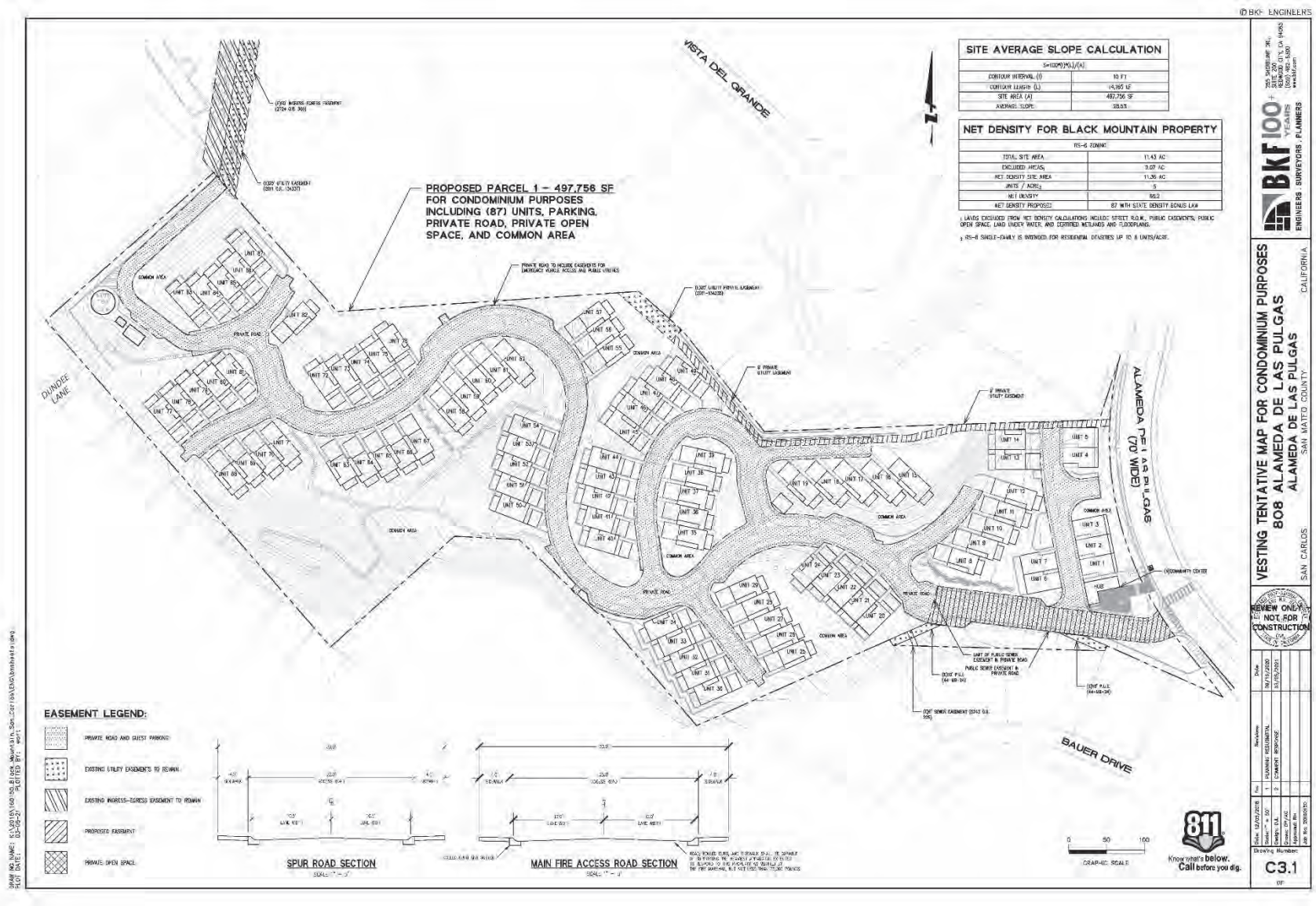

Figure 2: Vesting Tentative Map (BKF Engineering, 3/5/2021).

PROJECT LOCATION

The Project Area includes four adjacent properties located in San Carlos, San Mateo County, California. The Project Area is 11.4-acres and includes the properties at 804 Alameda De Las Pulgas (APN 050-220-020; 0.61 acres), 806 Alameda De Las Pulgas (APN 050-220-170; 5.86 acres), 808 Alameda De Las Pulgas (APN 050-220-160; 0.95 acres), and APN 049-360-060 (no associated street address; 4.01 acres). The Project Area is bounded by Alameda de las Pulgas on the east, and single-family homes on the north, south, and west (Figure 3).

The Project Area is located on the United States Geological Survey (USGS) 7.5-minute Woodside, California quadrangle (1991), within the unsectioned Rancho de las Pulgas land grant in Township 5 South, Range 4 West, Mount Diablo Meridian (Figure 4). The Universal Transverse Mercator (UTM) grid coordinates at the approximate center of the Project Area are: 5140233 meters North and 564473 meters East, Zone 10, NAD83.

Figure 3: Aerial photograph of the Project Area.

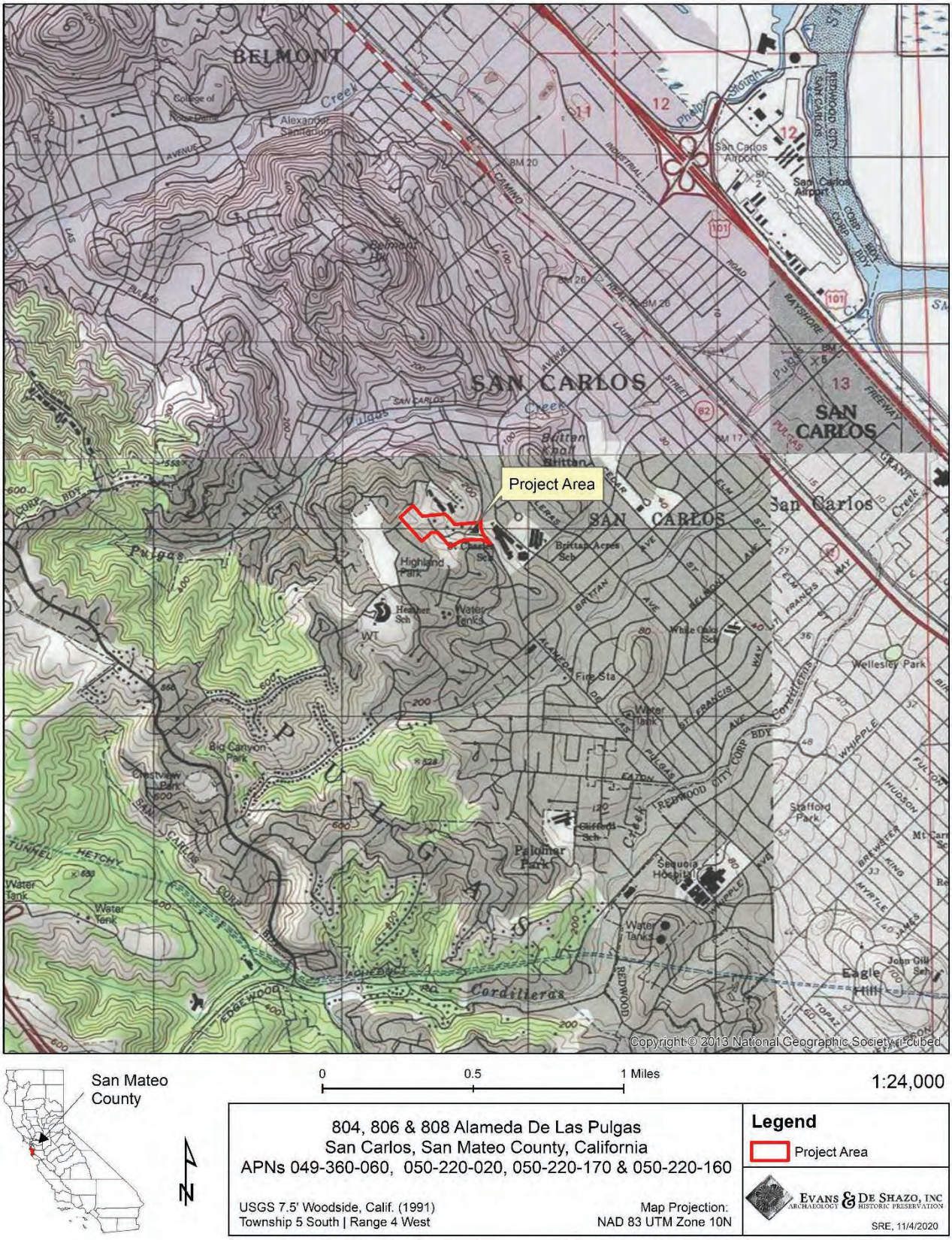

Figure 4: Project Area location map.

REGULATORY SETTING

The proposed Project is subject to CEQA and the Guidelines for Implementing CEQA (State CEQA Guidelines, 14 CCR Section 15064.5). These regulations, as they pertain to cultural resources, are outlined below.

THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

CEQA regulations are encoded in Sections (§) 21000 et seq of the Public Resources Code (PRC) with Guidelines for implementation codified in the California Code of Regulations (CCR), Title 14, Chapter 3, § 15000 et seq. CEQA requires state and local public agencies to identify the environmental impacts of proposed discretionary activities or projects, determine if the impacts will be significant, and identify alternatives and mitigation measures that will substantially reduce or eliminate significant impacts to the environment. According to CEQA, historical resources, unique archaeological resources, and tribal cultural resources are aspects of the environment that require identification and consideration regarding potential impacts.

There are five classes of cultural resources defined by the State Office of Historic Preservation (OHP) that include:

- **Building**: A structure created principally to shelter or assist in carrying out any form of human activity. A "building" may also be used to refer to a historically and functionally related unit, such as a courthouse and jail or a house and barn.
- **Structure**: A construction made for a functional purpose rather than creating human shelter. Examples include mines, bridges, and tunnels.
- **Object**: Construction primarily artistic in nature or relatively small in scale and simply constructed. It may be movable by nature or design or made for a specific setting or environment. Objects should be in a setting appropriate to their significant historic use or character. Examples include fountains, monuments, maritime resources, sculptures, and boundary markers.
- **Site**: The location of a significant event. A prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historic, cultural, or archaeological value regardless of the value of any existing building, structure, or object. A site need not be marked by physical remains if it is the location of a prehistoric or historic event and if no buildings, structures, or objects marked it at that time. Examples include trails, designed landscapes, battlefields, habitation sites, Native American ceremonial areas, petroglyphs, and pictographs.
- **District**: Unified geographic entities which contain a concentration of historic buildings, structures, or sites united historically, culturally, or architecturally.

Historical Resources

According to CCR § 15064.5, historical resources shall include buildings, structures, objects, sites, or districts that meet one or more of the following criteria:

- Listed in, or eligible for listing in the California Register of Historic Resources (CRHR) (PRC § 5024.1, Title 14 CCR § 4850 et. seq.).
- A resource included in a local register of historical resources, as defined in PRC § 5020.1(k) or identified as significant in an historical resource survey meeting the requirements PRC § 5024.1(g),

shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (PRC § 5024.1, Title 14 CCR § 4852) including the following:

    a. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

    b. Is associated with the lives of persons important in our past;

    c. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

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

- The fact that a resource is not listed in or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to PRC § 5020.1(k)) or identified in an historical resources survey (meeting the criteria in PRC § 5024.1(g)) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC § 5020.1(j) or § 5024.1.

- To understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than 45 years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (see 14 CCR 4852(d)(2)).

Unique Archaeological Resources

CEQA (PRC § 21083.2) distinguishes between two classes of archaeological resources: archaeological sites that meet the definition of an historical resource as described above, and "unique archaeological resources." A unique archaeological resource is defined as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information,

2. Has a special and particular quality such as being the oldest of its type or the best available example of its type, or

3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Tribal Cultural Resources

Assembly Bill 52 (AB 52) was passed in 2014 to address California Native American tribal concerns regarding how cultural resources of importance to tribes are treated under CEQA. The passage of AB 52 created a new category of resource called a "tribal cultural resource". CEQA specifies that a project that may cause a substantial adverse change in the significance of a "tribal cultural resource" (as defined in PRC § 21074[a]) is a project that may have a significant effect on the environment. To help determine whether a project may have such an effect, the PRC requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of the proposed project. According to AB 52, tribes may have expertise in tribal history and "tribal knowledge about land and tribal cultural resources at issue should be included in environmental assessments for projects that may have a significant impact on those resources."

PRC §21074 defines a "tribal cultural resource" as any of the following:

A. Sites, features, places, cultural landscapes, sacred places, or objects with cultural value to a California Native American tribe that are either (A) included or determined to be eligible for inclusion in the CRHR, or (B) included in a local register of historical resources as defined in subdivision (k) of § 5020.1.; or,

B. A resource that the lead agency determines, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of § 5024.1 - taking into account the significance of the resource to a California Native American tribe.

PRC § 21080.3.2 provides that as part of the tribal consultation process, parties could propose mitigation measures. If the California Native American tribe requests consultation to include project alternatives, mitigation measures, or significant effects, the consultation would be required to cover those topics. PRC § 21082.3 provides that any mitigation measures agreed upon during this consultation "shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring program" if determined to avoid or lessen a significant impact on a tribal cultural resource.

STUDY METHODS

The following methods were utilized to complete the Archaeological Study of the Project Area: a record search and literature review that includes research at the Northwest Information Center (NWIC) of the California Historical Resources Information Systems (CHRIS) and a review of background information pertaining to the environmental setting, prehistory, ethnohistory, and history of the Project Area and vicinity; a Native American Sacred Lands Inventory and tribal outreach; and a field survey of the Project Area. The methods used to complete each of these tasks are described below.

RECORD SEARCH AND LITERATURE REVIEW

EDS completed a record search and literature review to develop a natural and cultural setting of the Project Area and vicinity and to obtain and review information pertaining to previous cultural resource studies and

previously recorded cultural resources in the vicinity of the Project Area, and to assess the potential/sensitivity for buried archaeological resources in the Project Area.

NWIC Record Search

EDS requested a record search from the NWIC of the CHRIS on November 5, 2020. The NWIC record search included a review of previous cultural resource studies and Primary resource records pertaining to properties located within 0.25-miles of the Project Area, as well as additional documentation on listed or eligible historic properties located within 0.25-miles of the Project Area, including the following lists of documents:

- Office of Historic Preservation (OHP) Built Environment Resource Directory (BERD) for San Mateo County, California (OHP 2020)[1]
- Archaeological Resources Directory for San Mateo County, California (OHP 2012)
- National Register of Historic Places (OHP 2020)
- California Register of Historical Resources (OHP 2020)
- California Inventory of Historic Resources (OHP 1976)
- California Historical Landmarks (OHP 2021)
- California Points of Historical Interest (OHP 1992)
- Five Views: Ethnic Sites Survey for California (OHP 1988)
- Historic Sites Mater List for San Mateo County (1980)

Literature Review

EDS completed a review of relevant environmental data, including soils, geologic and geoarchaeological information pertaining to the Project Area to assess the Project Area's potential/sensitivity for buried archaeological resources, and relevant prehistoric, ethnohistoric and historic references, to provide a cultural setting for the Project Area and vicinity. EDS also completed a review of historical maps and aerial photographs dating from 1856 to 1975, as well as historical literature and online resources such as Ancestry.com, Newspapers.com, and Calisphere.com, to determine past land use activities within the Project Area that could indicate the likelihood of encountering historic-period cultural resources during Project-related construction, as well as researching for any historical persons associated with the Project Area. Below is a list of the historical maps, aerial photographs, literature, and other sources that were reviewed.

Historical Maps

- 1856 Plat of the Pulgas Rancho confirmed to Maria de la Soledad Ortega de Arguello et al., surveyed under the orders of the U.S. Surveyor General by T.S. Stevens, Dep. Sur., November 1856

[1] The BERD contains updated information previously found within the Historic Properties Directory (HPD). The BERD contains information regarding built environment cultural resources that are included in the OHP Tracking and Inventory System (OTIS). The resources were submitted to the OHP through one of its programs (Registration, Review and Compliance, Local Government Surveys, Architectural Review, etc.).The BERD also includes built-environment historic resources listed on the CRHR and the NRHP, as well as California Registered Historical Landmarks, and the California Points of Historical Interest.

- 1894 Official Map of San Mateo County, California by Davenport Bromfield, County Surveyor (Schmidt Label & Litho. Co.)
- 1902 USGS Santa Cruz, California Quadrangle, scale 1:250,000
- 1921 Map of the original 455.823 Acre Tract in San Mateo County, California left by Nathaniel J. Brittan showing the interests conveyed to others, also Map in Partition of the 396.346 Acre Tract. Recorded at the request of Charles F. Hanlon, April 2, 1921, San Mateo County Records. T.C. Rice, Recorder.
- 1940 USGS 15' Half Moon Bay, California Quadrangle, scale 1:62,500
- 1953 USGS 7.5' Woodside, California Quadrangle, scale 1:24,000
- 1961 USGS 7.5' Woodside, California Quadrangle, scale 1:24,000
- 1975 update of 1961 USGS 7.5' Woodside, California Quadrangle, scale 1:24,000

Aerial Photographs

- 1930 aerial photograph, Flight C-1025, Frame B-9, Scale 1:14,400 (U.C. Santa Barbara Library)
- 1941 aerial photograph, Flight C-6660, Frame 470, Scale 1:24,000 (U.C. Santa Barbara Library)
- 1946 aerial photograph, Flight GS-CP, Frame 2-190, Scale 1:23,600 (U.C. Santa Barbara Library)
- 1956 aerial photograph, Flight GS-VLX, Frame 1-7, Scale 1:23,600 (U.C. Santa Barbara Library)
- 1965 aerial photograph, Flight CAS-65-130, Frame 2-30, Scale 1:12,000, dated May 1, 1965 (U.C. Santa Barbara Library)

Other Resources

- Ancestry.com
- Newspapers.com
- Find a Grave.com
- Calisphere.com

SACRED LANDS INVENTORY AND TRIBAL OUTREACH

A Sacred Lands inventory request was made to the Native American Heritage Commission (NAHC) on November 5, 2020, to identify Sacred Sites located within or near to the Project Area and to obtain a Native American contact list. The Native American Sacred Lands inventory is intended to address the preservation and mitigation of impacts to California Native American historic, cultural, or sacred sites, including sites that are listed or may be eligible for listing in the CRHR, historic or prehistoric ruins, burial grounds, any archaeological, prehistoric or historic period Native American rock art, any archaeological, prehistoric or historic period features, inscriptions made by Native Americans at such a site, places of worship, sacred or ceremonial sites, and sacred shrines on public and private properties.

On December 2, 2020, the Tribal organizations listed on the Native American contact list provided by the NAHC were contacted via electronic mail (email) or letter sent via the U.S. Postal Service (USPS) to inquire about Sacred Sites within or near the Project Area and to identify concerns about Native American issues related to the overall project. The Tribal outreach completed by EDS is separate from the government-to-

government consultation that is required to determine the presence or absence, or potential effects to, Tribal Cultural Resources, as defined in PRC § 21074.

FIELD SURVEY

A Secretary of Interior-qualified archaeologist conducted a field survey on December 10, 2020, to physically inspect the Project Area for potentially significant archaeological resources. The field survey included an inspection of the Project Area for evidence of prehistoric artifacts, such as chipped stone (obsidian, chert and basalt) flakes and tools (e.g., projectile points, knives, scrapers), shellfish remains, ground stone, fire-affected rock, as well as historic-era artifacts and evidence of historic archaeological deposits and features associated with historic-era activities within the Project Area, such as those associated with the former Black Mountain Spring Water Company, including surface scatters of historic-period artifacts (e.g, glass, ceramic, metal, etc.), as well as features such as alignments of stone or brick, foundation elements from previous structures and minor earthworks. The built-environment resources located within the Project Area that are at least 45 years of age were surveyed and evaluated as part of the HRE (De Shazo 2021).

NATURAL AND CULTURAL OVERVIEW

The following natural and cultural overview provides an environmental setting of the Project Area and the prehistory, ethnohistory and history of the Project Area and vicinity. These contexts provide the basis for understanding past land use activities in the region and within the Project Area that could have resulted in the presence of archaeological resources within the Project Area that could be considered historically significant.

ENVIRONMENTAL SETTING

The Project Area is located within the City of San Carlos, a somewhat densely-populated urban environment in San Mateo County that encompasses approximately 5.5 square miles with a population of approximately 30,185 in 2019 (U.S. Census Bureau 2021). Located in the southwest region of the San Francisco Bay Area, San Carlos borders the cities of Belmont on the north and Redwood City on the south and is situated adjacent to the San Francisco Bay. The regional topography varies and includes level terrain along the bay shores to the east, and steeper slopes along the Santa Cruz Mountain range to the west.

The regional climate in the area of San Carlos is characterized as Mediterranean, with mild, wet winters, and hot, dry summers. The average annual precipitation is 27 inches, with rainfall concentrated in the fall, winter and spring. The average high temperature is 71.1 degrees Fahrenheit (°F), and the average low temperature is 48.6 °F. The proximity of the Pacific Ocean and San Francisco Bay provides for mild temperatures throughout the year.

The Project Area is situated within a topographically hilly area of San Carlos at approximately 180 feet to 350 feet above mean sea level (amsl) and is surrounded by residential development. The Project Area is bordered on the east by Alameda de las Pulgas, and on the north, east and south by single-family houses; Highlands Park is located about 4,450 feet to the west. The nearest creeks include Pulgas Creek located 0.3 miles to the north and an unnamed creek located 0.4 miles to the south; however, the Project Area appears to have once contained a seasonal drainage that appears to have been placed underground sometime after 1950. The Project Area currently contains a natural spring water source. The Project Area is located approximately 1.5

miles west of the San Francisco Bay tidal marsh and about 4.5 miles west of the San Francisco Bay; however, prior to filling of marshlands and mudflats, the San Francisco Bay tidal marsh came within 1.1 miles of the Project Area (Figure 5).

Geology and Soils

San Mateo County and the Project Area are within the Southern Coast Range Geomorphic Province, situated within the larger Coast Range Geomorphic Province (Harden 1998). The Coast Range province lies between the Pacific Ocean and Great Valley (Sacramento to San Joaquin valleys) provinces and trends northwest from stretches from the Santa Ynez Mountains near Santa Barbra to the border with Oregon. The northern and southern Coast Ranges are separated by a depression containing the San Francisco Bay, where the Sacramento River and the San Joaquin River discharge into the Pacific Ocean (California Department of Conservation 2002). The San Francisco Bay lies within a broad depression created from an east-west expansion between the San Andreas and Hayward fault systems.

At least two regional geologic maps exist that cover the Project Area (Graymer et al. 2006; Wagner et al. 1991). According to the geological maps, the Project Area has geology largely comprised of Early Cretaceous (145 to 100.5 million years ago) and (or) Late Jurassic (approximately 163 to 145 million years ag) Franciscan Complex sedimentary rocks (geologic unit: KJfs), specifically metagraywacke.

Current soil maps can be found on Google Earth and at the Natural Resources Conservation Service (NRCS) Web Soil Survey website (Soil Survey Staff 2021). According to the current soil map provided by the NRCS, the soil within the Project Area is “Orthents, cut and fill-Urban land complex” that occurs on five to 75 percent slopes (Soils Survey Staff 2021). Orthents are described as very shallow to very deep, very poorly drained to excessively drained soils on uplands, including hills and ridge tops, alluvial fans, coastal terraces, floodplains, and tidal flats. These soils formed in alluvium derived from various kinds of rock; sandy coastal deposits; hard and soft sandstone, shale, siltstone, serpentine, and volcanic rock; and various artificial fill materials. Also included in this unit can be deep, dark alluvial soils in areas that are loam or fine sandy loam throughout. The properties and characteristics of the soils in this unit can be highly variable because of the differences in the kind and amount of fill material used. Urban Land is described as areas covered by asphalt, concrete, buildings, and other features of the built environment. The properties and characteristics of Urban Land soils are highly variable because of the differences in the kind and amount of fill material used.

The review of the geology and soils of the Project Area suggests that the Project Area has a low sensitivity/potential for buried prehistoric archaeological resources.

Geoarchaeology

In addition to information about the geological and soil/sediments associated with the Project Area, EDS also reviewed two regional geoarchaeological studies that focus on landform evolution and the potential/sensitivity for encountering archaeological resources using a predictive model that incorporates soil/sediment deposits, geologic and geomorphic formations, and environmental setting (i.e., slope, proximity to water, etc.) (Meyer and Kaijankoski 2017; Meyer and Rosenthal 2007).

According to Meyer and Rosenthal (2007:18), the Project Area is located on a pre-Holocene (>11,800 years) age landform, which due to its age, would have little or no potential to contain buried prehistoric

archaeological resources. According to Meyer and Kaijankoski (2017:4-5,4-8), the Project Area has a low sensitivity for buried prehistoric archaeological resources and a low/moderate sensitivity for surficial prehistoric archaeological resources; however, the presence of natural source of freshwater within the Project Area at least part of the year suggests a moderate sensitivity for surficial prehistoric archaeological resources.

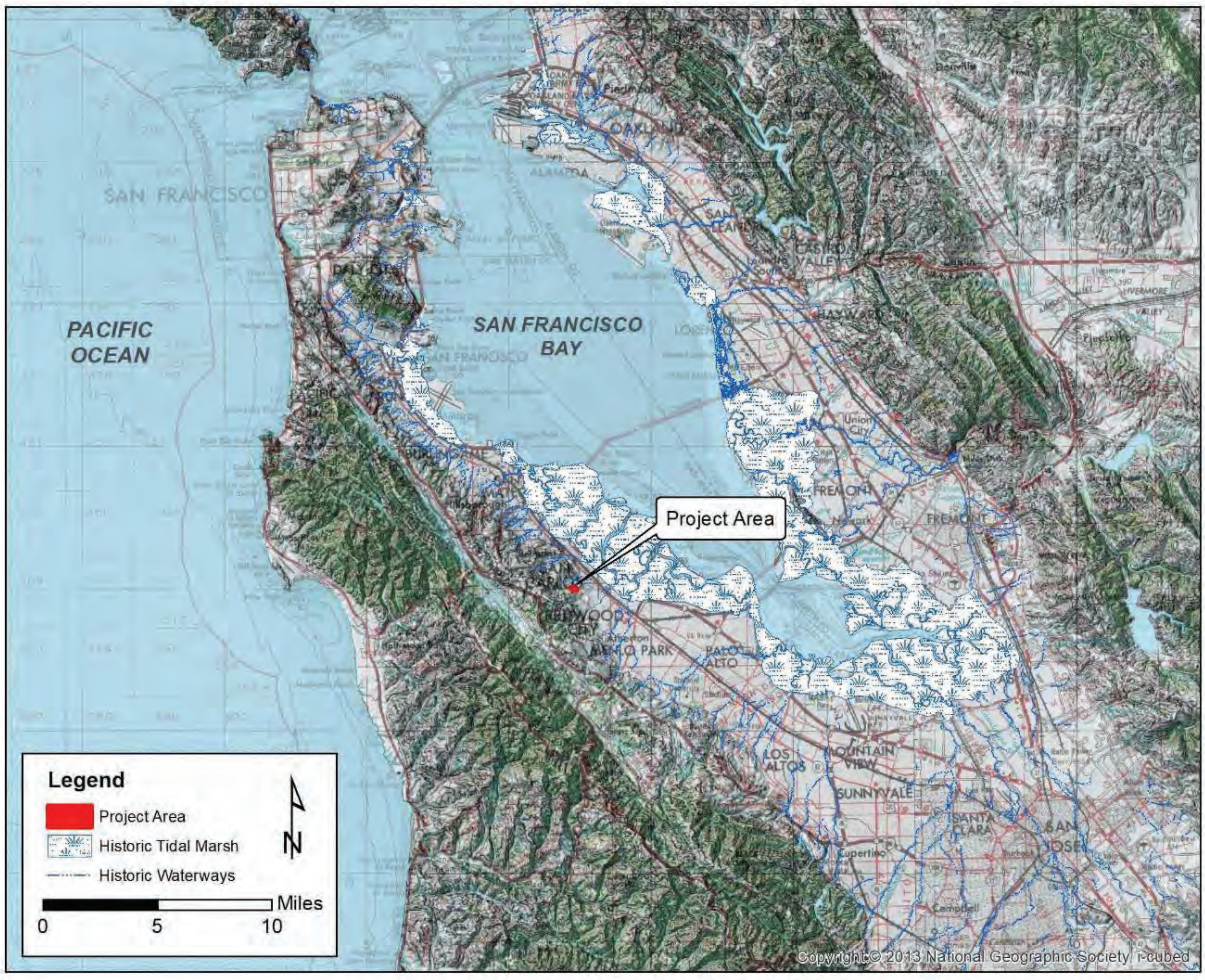

Figure 5: Environmental setting of the Project Area.

PREHISTORIC/ARCHAEOLOGICAL OVERVIEW

This section provides information derived from the archaeological record of the San Francisco Bay-Delta region of California regarding settlement strategies, levels of social organization, subsistence economies, and food procurement strategies of prehistoric Native populations. Cultural patterns that emerged in the San Francisco Bay-Delta region, recognized by specific artifact assemblages that indicate differences in living strategies, are also discussed.

Chronology and Cultural Patterns of the San Francisco Bay-Delta Region

The following sections provide an overview of the prehistory San Francisco Bay-Delta region that is based on a hybrid classification system organized by geologic time segments that include the Terminal Pleistocene

(13,500 – 11,700 cal BP), Early Holocene (11,700 – 8,200 cal BP), Middle Holocene (8,200 – 4,200 cal BP), and Late Holocene (post 4,200 cal BP). The Late Holocene is further divided into shorter time periods using the Late Holocene Scheme D chronological sequence for the San Francisco Bay Area that is divided into the following time periods: Early Period (4,200 – 2,550 cal BP), Early/Middle Transition Period (2,550 – 2,150 cal BP), Middle Period (2,150 – 930 cal BP), Middle/Late Transition Period (930 – 685 cal BP), Late Period (685 – 180 cal BP), and Historic/Mission period (180 – 115 cal BP).

Terminal Pleistocene (13,500 – 11,700 cal BP)

Solid evidence of human occupation in California during the Terminal Pleistocene (13,500 – 11,700 cal BP) is scarce and poorly understood; however, there have been some discoveries of isolated fluted projectile points in California that are thought to be similar in cultural affiliation and age as the fluted points associated with the Clovis tradition dating to around 11,500 cal BP. While fluted points are rare in California, they have been documented at the Borax Lake site (CA-LAK-36) in Lake County (Meighan and Haynes 1970; Moratto 1984:82–85), at Tracey Lake in the Delta (Heizer 1938), at the Wolfsen mound (CA-MER-215) along the middle San Joaquin River in Merced County (Peak and Weber 1978), and in the Mojave Desert and coastal southern California (Byrd et al. 2017). No fluted points or archaeological deposits dating to the Terminal Pleistocene have been documented in the San Francisco Bay Area (Byrd et al. 2017). The paucity of Terminal Pleistocene archaeological remains is, in part, because populations were small, highly mobile, and left little evidence of their activities on the landscape. Furthermore, landscape changes that have occurred, including sea-level rise, erosion, and localized subsidence along the coast, have likely buried evidence of these sites (Byrd et al. 2017).

Early Holocene (11,700 – 8,200 cal BP)

During the Early Holocene (11,700 – 8,200 cal BP) semi-mobile hunter-gatherers utilized a wide range of plant and animal foods from marine, lacustrine, and terrestrial environments (Erlandson et al. 2007; Jones et al. 2002; Meyer and Rosenthal 1995; Moratto 2002). Populations that emerged in the San Francisco Bay-Delta region were mobile foragers, characterized by a "Millingstone culture" that used milling slabs and handstones, crude cores and core tools, and various types of large wide-stemmed and leaf-shaped projectile points (Milliken et al. 2007:114; Wiberg 2010:31). The settlement pattern is thought to be based on high residential mobility and limited exchange (Wiberg 2010:31). There are only four Early Holocene-age archaeological deposits documented in the San Francisco Bay-Delta region, including two at Los Vaqueros Reservoir (CA-CCO-696 and CA-CCO-637) in the East Bay (Meyer and Rosenthal 1997, 1998), one in Solano County (P-48-000897) (Hildebrandt et al. 2012), and one in Fremont (P-01-011556) (Meyer 2015), all of which were found in a buried context.

Middle Holocene (8,200 – 4,200 cal BP)

There is more direct evidence of occupation in the San Francisco Bay-Delta region during the Middle Holocene than there is in the Early Holocene, as indicated by the 60 plus sites that have been documented in the San Francisco Bay-Delta region dating to this period (Byrd et al. 2017). Artifacts found in sites dating to this period include a variety of ground stone tools (mortars/pestles and metates/manos), side-notched dart points, cobble tools, and a variety of shell beads and ornaments (Fitzgerald 1993; Meyer and Rosenthal 1998). The presence of an extensive trade network by at least 5,200 cal BP is indicated by the Type N *Olivella* shell beads that are found in sites across a large region, and obsidian from sources located in the Napa Valley

and eastern Sierra Nevada (Casa Diablo and Bodie Hills sources) that are found in sites located throughout the San Francisco Bay-Delta region (Byrd et al. 2017). The first evidence for use of the San Francisco Bay's estuarine resources is also indicated during this period by the presence of shell midden deposits in Marin County (CA-MRN-17), Contra Costa County (CA-CCO-474/H), and in San Mateo County (CA-SMA-40) that date between 6,300 and 5,000 cal BP, and at one site in Alameda County (CA-ALA-307) that dates to 4,900 cal BP (Byrd et al. 2017). Faunal remains indicate reliance on seasonal waterfowl and anadromous and freshwater fish. "Archaeobotanical assemblages from Middle Holocene contexts are varied; for example, CCO-18/H features produced a varied assemblage of nutshell, small seeds, and fruit pits, including acorn, gray pine, bay, buckeye, red maids, goosefoot, farewell-to-spring, juniper, and manzanita berry pits (Wohlgemuth 2010). These remains suggest that a wide range of habitats was exploited throughout the year, consistent with either semi-permanent occupation or multi-season visits" (Byrd et al. 2017).

Late Holocene (4,200 – 180 cal BP)

Due to the greater number of archaeological sites that have produced stylistic artifacts and radiocarbon dates, there is more information about Late Holocene occupation in the San Francisco Bay-Delta region than in earlier periods, and so the Late Holocene can be subdivided into shorter time periods. As such, the Late Holocene is generally divided into the Early Period (4,200–2,550 cal BP), Early/Middle Transition Period (2,550–2,150 cal BP), Middle Period (2,150–930 cal BP), Middle/Late Transition Period (930–685 cal BP), and Late Period (685–180 cal BP). "The Late Holocene is very well-documented in the Bay-Delta Area, with more than 240 radiocarbon-dated sites reflecting widespread occupation" (Milliken et al. 2007).

Early Period (4,200 – 2,550 cal BP)

The Early Period (4,200–2,550 cal BP) marks a shift from a mobile foraging pattern to a sedentary and semi-sedentary land use pattern along the Bay Shore and interior valleys (Milliken et al. 2007). This more sedentary way of life seems to have been in response to the availability of new resources as the San Francisco Bay estuary matured, and an increased dietary reliance on acorns rather than hard seeds. As a result, populations in the San Francisco Bay region increased in number, and the social organization became more complex, which is evidenced by mortuary practices and an increase in ornamental grave associations, regional symbolic integration, and the establishment of trade networks. "Bay margin sites reveal a strong emphasis on marine shellfish, marine fishes, and marine mammals…In contrast, interior sites emphasized freshwater fish and shellfish along with terrestrial mammals. Nuts, berries, and small seeds appear to have been particularly important plant foods" (Byrd et al. 2017). Cultural patterns that emerged in the San Francisco Bay region during this period include Windmiller in the Delta Region and Lower Berkeley along the Bay Shore. Artifacts that typify the Early Period include corner-notched, concave-based, lanceolate, and side-notched style projectile points, cut marine shell (*Olivella* sp.) beads that are often found in a mortuary context, mortars and pestles, and more obsidian from Napa Valley sources than Annadel obsidian from Sonoma County (Milliken et al. 2007). The Early Period was also marked by significant climatic changes during which warmer and drier conditions led to the desiccation of lake basins in southern California (Schwitalla 2013).

Middle Period (2,150–930 cal BP)

The Middle Period (2,150–930 cal BP) is marked by a population increase and a greater level of sedentism, as indicated by evidence of permanent villages used most of the year (Milliken et al. 2007). The population increase led to restricted mobility, which led to resource intensification, increased cooperation and a greater

level of social complexity (Milliken et al. 2007). In the latter half of the Middle Period and the Middle/Late Period Transition (930–685 cal BP), a dramatic cultural disruption occurred, marked by changes in shell bead types, settlement patterns and food resources (Milliken et al. 2007). The Berkeley Pattern, which developed from the preceding Lower Berkeley Pattern, was well established by the Middle Period (Moratto 1984). Berkeley Pattern traits typically include tightly flexed burials, with fewer grave offerings and no preference toward orientation. Cremations are occasionally encountered and are associated with more grave goods than flexed burials, a mortuary treatment suggesting differentiation in wealth or status. Burial artifacts typically include *Olivella* saddle and saucer beads and *Haliotis* pendants. Berkeley Pattern sites are also characterized by utilitarian objects that include numerous mortars and pestles, which imply greater reliance on nuts and seeds, as well as a highly-developed bone tool industry. New types of bone tools, such as the single-barbed bone fish spear, indicate a greater reliance on fish and marine mammals like sea otter, seal and sea lion (Elsasser 1978; Hildebrandt and Jones 1992). Shellfish collecting was also very important. This is indicated by the deposition of large quantities of shell, mostly mussel, which make up a good portion of shellmound constituents. Hunting is implied by spear and dart-sized projectile points, which were propelled using an atlatl, as well as high frequencies of deer and elk remains (Beardsley 1954; Hildebrandt and Jones 1992).

Middle/Late Transition Period (930–685 cal BP)

Starting at the end of the Middle Period and continuing in the Middle/Late Period Transition, many Bay Shore sites were abandoned as residential places and then later reused as special-purpose sites in the Late Period (685–180 cal BP) (Lightfoot and Luby 2003). The reasons postulated for the abandonment of shellmound sites along the Bay include population decline, environmental degradation resulting from drought conditions of the MCA that affected the availability of marine resources, a shift towards greater reliance on acorns rather than shellfish, intrusion of Patwin speaking people into the North Bay, or the return to a semisedentary settlement system whereby year-round occupation of shellmounds gave way to seasonal use of interior localities (Ingram 1998; Lightfoot and Luby 2003; Schwitalla 2013). Zooarchaeological data suggest that the abandonment of shellmounds as residential places does not coincide with a population decline, as some sites evince continued resource intensification due to overhunting in the Late Period (Broughton 1994).

Late Period (685–180 cal BP)

Occupation during the Late Period (685–180 cal BP) is well-documented in the San Francisco Bay-Delta region and is thought to be associated with a new level of sedentism, status ascription, an increase in ceremonialism, and regional trade. It appears that an economic relationship was maintained among the many small autonomous socio-political groups called tribelets, and trade was frequent between coastal groups, valley groups and Bay Shore groups (Hylkema 2002). Sites from this time period are associated with the Augustine Pattern, and artifacts typically include large, well-formed mortars, pestles and hopper mortars that indicate a continued reliance on acorns, flanged steatite smoking pipes, toggle harpoons, baked clay figurines, clamshell disk beads, small projectile points such as the Rattlesnake corner-notched and Desert side-notched points that suggest the use of the bow-and-arrow (use of the bow and arrow is first documented in the region circa 700 cal BP) in oppose to the atlatl that was used previously in conjunction with spear points, steatite and magnesite beads and tubes, *Olivella* callus cup beads, and *Haliotis* banjo shaped pendants. The manufacture of clamshell disk beads, which were used as exchange currency with a standardized value, seems to have centered primarily on the Santa Rosa Plain in Sonoma County and within the Napa Valley. The burial practice of cremation was also introduced in the North Bay during this time (Milliken et al. 2007). These

shifts in technology, artifact types and mortuary practices appear to indicate that another upward cycle of regional integration took place during this period. However, this cycle was stopped short by Spanish colonization and missionization of Native populations

ETHNOHISTORIC SETTING

The Project Area is situated within a territory that was occupied by the Costanoan (also known as Ohlone[2]) (Figure 6). The first instance of European contact with the Costanoan people occurred in late 1769 when Gaspar de Portola "discovered" the San Francisco Bay, the initiating event of European colonization of the area (Milliken 1995). Early accounts documented that there were approximately 10,000 Costanoan people living around the Bay. However, with the arrival of the Spanish came the establishment of missions with a concerted effort to convert the Native population to Catholicism and the introduction of European disease for which the Natives had no immunity, and these factors quickly led to a decrease in Bay Area native populations (Milliken 1995). According to mission records, the Costanoan organization was severely disrupted by 1810 and by 1832 only 2,000 individuals had survived (Cook 1943). Much of the ethnographic literature pertaining to the Costanoan comes from the diaries of early Spanish explorers describing their incursions into the San Francisco Bay region between 1769 and 1776. This information is supplemented by early ethnographers who located Native informants and obtained information about language, territory, material cultural, political and social organization and subsistence practices.

Costanoan is from the Spanish word Costaños, which means "coast people," and refers to a language family, not a political entity. Modern descendants of the Costanoan prefer to be called Ohlone, a name derived from a Native coastal village by that name (Heizer and Elsasser 1980). The two names (Costanoan and Ohlone) are used interchangeably in much of the ethnographic literature. The Costanoans spoke a language considered one of the major subdivisions of the Miwok-Costanoan, which belonged to the Utian family within the Penutian language stock (Shipley 1978). It has been postulated that Penutian-speaking ancestral Costanoans moved into the region and replaced or assimilated with an earlier Hokan-speaking population as early as 4,500 BP (Moratto 1984).

Costanoan denotes a family of eight languages, four of which were spoken by people occupying the San Francisco Bay area. Each language group was subdivided into smaller village communities or tribelets that were independent political entities that occupied specific territories, eight to twelve miles across and defined by physiographic features (Milliken 1995). Each tribelet controlled access to the natural resources within its territory, which typically required that there be one or more primary villages and numerous smaller villages used seasonally for resource procurement. Usually, a common language was shared with one or more neighboring tribelets (Heizer and Elsasser 1980). The San Francisco peninsula, including the area of San Carlos, was occupied by the *Ramaytush*, who numbered about 1,400 and consisted of about twelve tribelets, including the *Lamchin* who occupied the area that extended from Belmont south to Redwood City and included interior valleys to the west (Figure 7) (Levy 1978:485; Milliken 1995:246-247). Five *Lamchin* villages are mentioned in historic mission records, the most important of which was "Cachanigtrac, alias Las Pulgas" that was located on Pulgas Creek in the present-day city of San Carlos. The other villages included *Ussete*,

[2] Modern descendants of the Costanoan prefer to be called Ohlone, a name derived from a Native coastal village by that name (Heizer and Elsasser 1980).

Guloinsisac, Oromstac, and *Ssupichom* (Milliken 1995:247). The largest village in a tribelet area was occupied by a chief (Heizer and Elsasser 1980). Both men and women acted as chief, who was responsible for organizing activities; however, "Costanoan ideas of personal freedom precluded the existence of any type of institutionalized coercive power" (Levy 1978).

The Costanoan were successful hunter/gatherers who utilized a wide range of resources in a very favorable environment. They practiced specialized horticultural techniques, including the use of fire, that increased the numbers and health of the numerous plants and animals on which they relied. A variety of plant foods were gathered on a seasonal basis. Important plant foods included the nuts of coast live oak, valley oak, California black oak, tanbark oak, buckeye, California laurel and hazelnuts. The acorns from oaks were the most important plant food and were collected in large quantities and stored. They were processed by removing the hard exterior shells, pulverizing the inner nut in a mortar bowl (basketry, wood, and stone mortars of various types were used), then leaching with water to remove the tannins. Buckeyes were made edible in much the same way. Seeds that were roasted before consumption included dock, tarweed, chia, and digger pine. Hazelnuts and California laurel nuts were also eaten, as well as seeds from a number of other plants. Many types of berries, including blackberries, elderberries, strawberries, Manzanita berries, gooseberries, madrone berries, grapes and toyon berries, were also collected and eaten, as well as a number of tubers and roots such as wild onions, cattail roots, amole, hog fennel and wild and tubers (Levy 1978). In the hills and valleys, some mammals that were hunted included deer, elk, antelope, bear, rabbit, squirrel, woodrat, mouse, and mole.

The bow-and-arrow constituted a part of the hunting technology. Both unbacked and sinew-backed bows ranging from 3 to 4½ feet long were used to launch arrows fitted with lithic or bone points. Bowstrings were manufactured from animal sinew or vegetal fibers. The typical arrow was a compound arrow consisting of a cane shaft fletched with three feathers and a hardwood fore shaft to which a projectile point was usually, but not necessarily, attached. Hunting arrows seem to have been rather long in comparison to war arrows. Asphaltum was used as the adhesive for fletching (Levy 1978; Switzer 1974).

Basketry was a well-developed craft and was used for the collection, preparation and storage of food, and a variety of other reasons. Other kinds of baskets included mush bowls, cooking baskets, parching trays, storage baskets, sifters, fish traps, trinket containers, canteens, and possibly cradles (Levy 1978). The Costanoan also constructed "balsa" boats using about twenty bundles of tule reeds, also called bulrushes, tied together with cordage made from milkweed, Indian hemp or nettle, that were stabilized with Willow poles. They were propelled using double-bladed wooded paddles and anchored with stones tied to a rope (Font 1930; Levy 1978). Boats were used to navigate the Bay and major river systems and during hunting and gathering forays. The presence of archaeological sites on islands in San Francisco Bay suggests the use of balsa boats as early as 3,400 BP (Morgan and Dexter 2008).

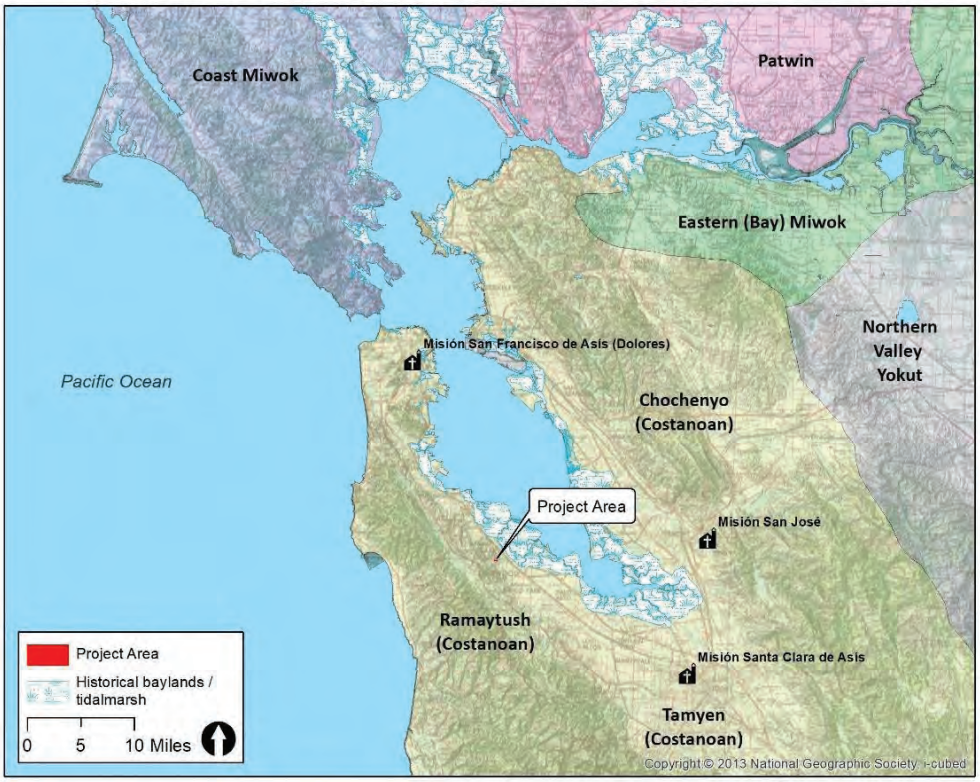

Figure 6: Ethnohistoric Tribal linguistic boundaries in the San Francisco Bay Area.

Figure 7: Tribal groups in the San Francisco Bay-Delta Area at the time of Spanish settlement in 1776 (based on map produced by Beverly Ortiz, East Bay Regional Park District).

HISTORIC SETTING

The following historic setting is intended to provide an overview of broader historic themes, as well as specific historic themes associated with the Project Area.

Spanish Period (1769 – 1821)

The discovery of San Francisco Bay was due to the determination of King Carlos III of Spain to occupy and colonize Alta California,[3] and was the joint work of both church and state. The Spanish entered present-day San Mateo County as early as 1769 with the Portola expedition, which was likely the first European contact with the native people who occupied the peninsula, including the *Lamchin* tribe of the *Ramaytush* Costanoan who occupied the area (Milliken 1995:34). The Portola expedition was soon followed by the Fages-Crespi expedition in 1772 that traveled from Monterey up the Santa Clara Valley then along the Fremont Plain, east of the San Francisco Bay, and into the delta region before heading back to Monterey by way of the San Ramon Valley and Pleasanton areas (Cook 1957). Then in 1775, Lieutenant Juan Manuel de Ayala sailed his ship, the *San Carlos*,[4] into San Francisco Bay and anchored in what is now Ayala Cove on Angel Island. His mission was to develop a map of the bay and he also explored the lower reaches of the Sacramento and San Joaquin rivers by boat. In 1776, the expedition of Juan Bautista de Anza and Father Pedro Font (Anza-Font expedition) traveled through the same area as the Fages-Crespi expedition four years earlier; however, this expedition visited a small *Lamchin* settlement in present-day Belmont on Laurel Creek (Milliken 1995:52-53). These expeditions resulted in the establishment of the Presidio of San Francisco and Mission San Francisco de Asís (1776) in present-day San Francisco, Mission Santa Clara de Asís (1777) in present-day Santa Clara, and the Mission San Jose de Guadalupe (1797) located in present-day City of Fremont. Altogether, 21 missions were established between San Diego and Sonoma between 1769 and 1823, as well as three civil settlements or pueblos within present-day Los Angeles, San Jose and Santa Cruz. A few Spanish land grants were also issued during this time.

In 1793, the Franciscan priests at *San Francisco de Asís* established a mission outpost on the Peninsula near San Mateo Creek, approximately 5.5 miles north of the Project Area, for the purpose of overseeing the Christianized Native Americans responsible for taking care of the mission livestock begin grazed in the area, and to provide food for the mission. The land was referred to as the *Las Pulgas* tract. In 1795, Governor Diego de Borica made a provisional land grant of the *Las Pulgas* tract to José Darío Argüello. Argüello was born in Querétaro, Mexico about 1753 and enlisted in the Mexico regiment of dragoons (calvary) where he served as a private for six years and then as a sergeant for two and a half years. In 1781, Argüello was promoted to sublieutenant of a company organized by Captain Fernando de Rivera y Moncada for the purpose of traveling to Santa Barbara to establish a presidio. Argüello accompanied Rivera overland from Mexico to Alta California, during which Rivera was killed. Argüello continued onto the San Gabriel Mission, where he stayed until the founding of the Santa Barbara Presidio in April of 1782. In 1787, Argüello was appointed lieutenant and served two terms as comandante of the San Francisco Presidio (1787-1791 and 1796-1806), and one

[3] *Alta California* was a polity of New Spain founded in 1769 and became a territory of Mexico after the end of the Mexican War of Independence on 1821.

[4] Possible namesake of the City of San Carlos (City of San Carlos 2021).

term as the comandante of the Monterey Presidio (1791-1796). He was promoted to captain in 1797 and was assigned as comandante of the Presidio of Santa Barbara from 1807 until 1815. In 1814, Argüello became acting Governor of Alta California, and in 1815, he assumed the governorship of Baja California, where he served until 1822. Argüello died in Guadalajara in 1828 at the age of 75 (Hardwick 2017).

José Darío Argüello's son, Don Luis Antonio Argüello, moved onto the rancho around 1821. He married Maria de Soledad de Ortega and they built an adobe house believed to be at the corner of present-day Magnolia Avenue and Cedar Street until 1854 (City of San Carlos 2021). Don Luis served as comandante of the San Francisco Presidio in 1806, and in 1822 he came Governor of Alta California. In 1823, Don Luis and his family moved to Monterey, where he died in 1830. "It was in his time that the rancho in San Carlos became known as "*Rancho de las Pulgas*" (The San Carlos Villagers 1982:2).

Mexican Period (1821 – 1848)

When civil war erupted in Mexico in 1810, Alta California found itself cut off from Mexico, which prior to this time, was the main source of supplies and the primary market for surplus crops produced in Alta California. As a result, illegal trading took place with foreign ships, which allowed locals to exchange surplus agricultural products and hides and tallow for imported products such as tea, coffee, spices, clothing, leather goods, etc. This also resulted in some of the first American and Anglo-European settlers to the area. However, in 1821, Mexico won its independence from Spain with the signing of the Treaty of Córdoba and took possession of Alta California, and soon the economy of the area began to improve due to the changing administrative policies of the new Mexican government. One policy that led to a major change in Alta California was the legalizing of trade with foreign ships, which stimulated commerce and resulted in the establishment of new settlements that served as early centers of trade.

In 1824, Mexico passed a law that allowed for the settlement of vacant lands in Alta California in an effort to stimulate further colonization. As such, any citizen, whether foreign or native, could petition the Mexican governor for a specific tract of land, which after investigation and if there were no objections, was granted to them. However, to retain ownership of the land, each grantee was required to occupy the land and build a dwelling within a certain period of time (Broek 1932).

The changing administrative policies of the new Mexican government also led to the secularization of the missions beginning in 1833 (Broek 1932). The law secularizing the missions required that the church relinquish secular control over the neophytes, convert the Spanish missions into pueblos, and divide the mission lands, livestock and equipment among the resident neophytes. The remaining mission property was to be administered by civil administrators who would oversee the missions until secularization was complete. However, most of the land and property designated for the resident neophytes fell into the hands of the *gente de razón*[5] and were turned into ranchos, and the neophytes were driven off. Some sought employment on the newly established ranchos, some withdrew into the interior, and a few attempted to petition the government for land grants.

[5] A Spanish term used in colonial Spanish America to refer to people who were culturally Hispanicized. It was a social distinction that existed alongside the racial categories. Native Americans and mixed-race people, especially the poor in urban centers, were generally considered not to be *gente de razón*.

As a result of the Mexican government's new administrative policies, the 20 or so ranchos that had been issued during the Spanish period increased to roughly 800 that varied between 10,000 and 20,000 acres in size. The main economy of the ranchos was dependent on the amount of hide and tallow it could produce; therefore a rancho owner's wealth was often determined by the size of the rancho, the number of cattle owned, and the availability of a labor force, which mainly consisted of Native Americans who had been released from the missions, as well as lower-class Mexican citizens who depended on the rancho owners for their basic needs during this time. Nine land grants were issued in present-day San Mateo County between 1833 and 1846, including the 35,240-acre *Rancho de las Pulgas* that was officially granted by Mexican Governor José Castro to José Darío Argüello's widow, Maria Soledad Ortega de Argüello, and the heirs of his son, Don Luis Antonio Argüello, in 1835 (Bancroft 1885).

Early American Period (1848 – 1890's)

The American Period in California is marked by the end of the Mexican American War (1846-1848) when the U.S. took possession of the territories of California, New Mexico, Utah, Nevada, parts of Arizona, Colorado, Oklahoma, Kansas, and Wyoming in the signing of the Treaty of Guadalupe Hidalgo (1848). The treaty provided the resident Mexicans their American citizenship and guaranteed title to land granted during the Mexican period. However, on January 24, 1848, two weeks before the treaty signing, James W. Marshall discovered gold at Sutter's Mill along the American River in the Sierra Nevada foothills, which marked the beginning of California's Gold Rush-era (1848 to 1855). Soon the excitement of the Gold Rush and the promise of fertile and abundant land brought between 150,000 and 200,000 new settlers – often referred to as "49ers" - to California from places all over the U.S., as well as Scotland, Ireland, England, Germany, France, China, and other countries.

The massive influx of new settlers who came to California during the Gold Rush soon gave rise to land disputes, as settlers began to move into rancho lands that they perceived as unoccupied and available for settlement. To investigate and confirm the titles of land claims of former (now American) Mexican citizens in California, officials acquired the provincial records of the Spanish and Mexican governments in Monterey and transferred them to the U.S. Surveyor General's Office in San Francisco, including land deeds, sketch maps (*disenos*), and various other documents, that were used to verify land claims. In 1851, the U.S. passed the California Land Act that established the Public Land Commission to review these records and determine the validity of the Spanish and Mexican era land grants and charged the Surveyor General with surveying confirmed land grants. Of the 813 land grants ultimately claimed, the land commission approved only 553 of them; however, many of the confirmed grants were reduced in original size, and in most cases, the lawyers who were hired to defend the land titles in court received a portion of the land in return for services, or to pay legal fees, the land was sold to settlers who had been "squatting" on their land (Olmsted 1986).

In accordance with the California Land Act, in 1852, the heirs of Luis Antonio Argüello filed a claim with the Public Land Commission for *Rancho de las Pulgas* for 12 square leagues (91,535.2 acres) of land. The Public Land Commission rejected the claim for 12 square leagues and so the Argüello filed a second claim for four square leagues (30,511.7 acres), which was confirmed by both the District Court and the U.S. Supreme Court. In 1857, following an official survey of the rancho in 1856 (Figure 8), the grant was patented to Maria Soledad Ortega de Argüello (one half), Jose Ramon Argüello (one fourth), Luis Antonio Argüello (one-tenth), and Simon Monserrat Mezes (three twentieths). Mezes was the Argüello family's lawyer who they hired to handle the land confirmation process (Bancroft 1885).

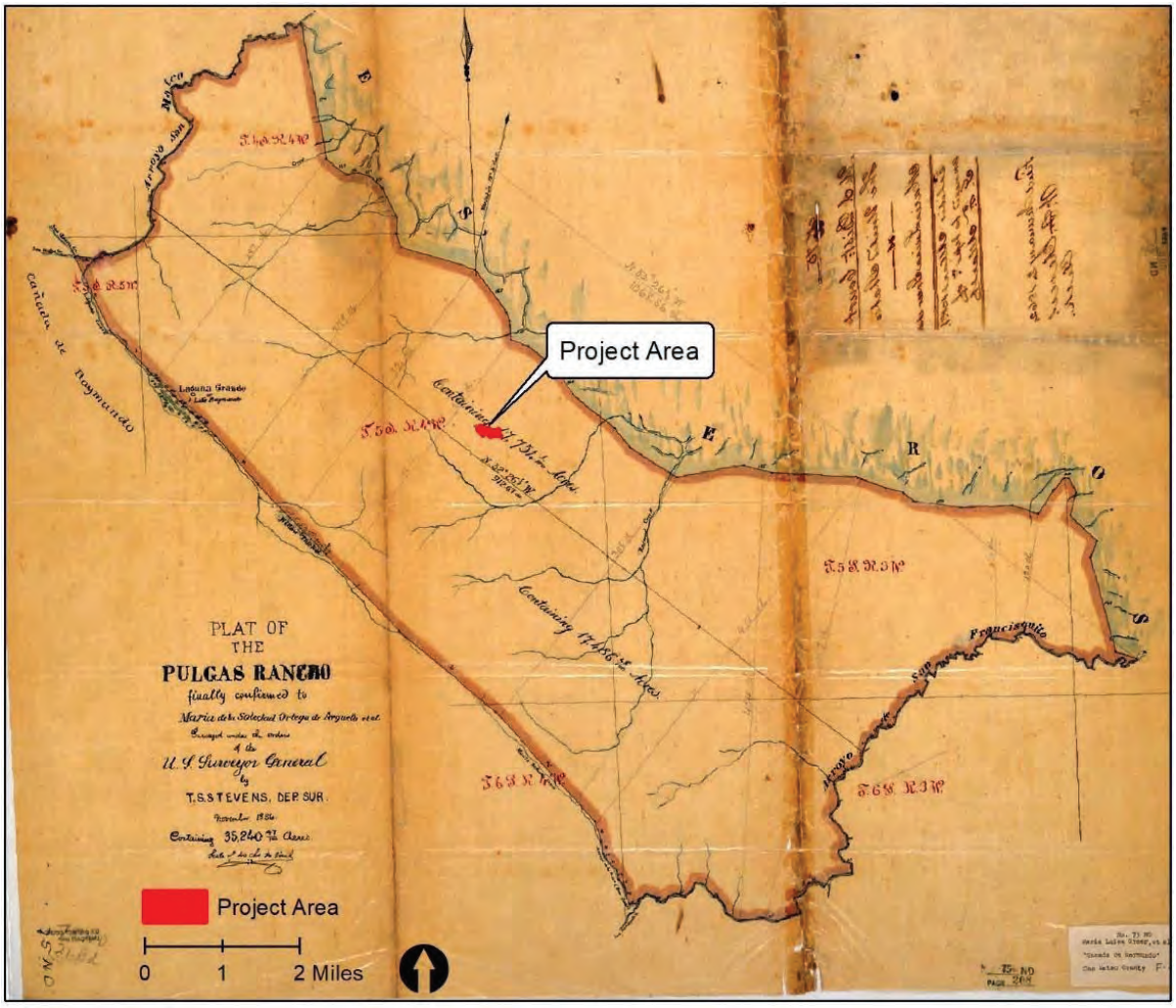

Figure 8: Project Area shown on the 1856 Plat of the Pulgas Rancho (Calisphere.org).

History of San Carlos (1850s – 1970s)

During the early 1850s, the present-day City of San Carlos was situated within the portion of *Rancho de las Pulgas* that was given to Simon Mezes, the lawyer hired by the Argüello family to defend the land grant before the Public Land Commission. In 1854, prior to the confirmation of the land, Mezes sold portions of his land to two American businessmen, Timothy Guy Phelps and John Wesley Brittan (Seavey 1994). Phelps purchased 200-acres that included the original Argüello adobe where he lived until he built a wood-framed house adjacent to the adobe (The San Carlos Villagers 1982). Phelps, who was a successful grain speculator and mercantile owner, then purchased an additional 3,500-acres of rancho land, including a large portion of the area that would become San Carlos, where he established a cattle ranch and built an estate (no longer extant) near El Camino Real and Holly Street (City of San Carlos 2021). Phelps was known as having been "one of the most important men in the history of San Mateo County" (Cloud 1928), being one of its founders, as well as the first president of the Southern Pacific (SP) Railroad, a California State Senator in the 1850s, a U.S. Congressman in the 1860s, a Regent of the University of California at Berkeley, and Collector of Customs in San Francisco (City of San Carlos 2021; The San Carlos Villagers 1982).

John Wesley Brittan, who purchased approximately 3,000-acres of the former *Rancho de las Pulgas* from Mezes in 1854, made a fortune as a successful importer and dealer of stoves and hardware from San Francisco, having founded the firm of Brittan & Holbrook (later Holbrook, Merrill & Stetson) during the Gold Rush period. His land within the former *Rancho de las Pulgas* extended from Cordilleras Creek (near Redwood City) to Pulgas Creek (between Arroyo Avenue and Olive Street) and encompassed the other portion of present-day San Carlos, including the Project Area (City of San Carlos 2021). Brittan planted most of the property in hay and grain with some dairy pasturage, and he built a country home – called Wesley Bays – at what is now St. Francis Way and Elm Street in San Jose where he and his wife, Mary Alista Brittan, raised two children, including Nathaniel (born 1848 in New York) and Mary Burt (born 1861 in San Francisco) (Ancestry.com 2012b; Seavey 1994).

William Whipple Hull was also an early settler of San Carlos. Hull was a former gold miner who purchased 40-acres of land from Phelps in 1858 due to the good quality of clay found in the area, which he intended to use to make bricks. Hull built two houses within this property as well as a brickyard and brick kilns, from which he produced bricks used in the construction of the Palace Hotel, the post office, part of the Ferry Building, and Fort Mason in San Francisco, and San Quentin Prison in Marin County (Veronico and Veronico 2007). Hull had four children, two of which – Asa and Guy – also started a dairy farm on part of the Hull property, with Asa taking over the dairy when Guy took a job with the SP Railroad. Asa later became the 3rd Mayor of San Carlos, serving three terms from 1932 to 1940 (City of San Carlos 2021; The San Carlos Villagers 1982).

In the late 1850s, as the nearby cities of San Francisco and San Jose flourished, there was a need to connect the two cities, as travel by stagecoach took approximately nine hours. Soon wealthy businessmen and landowners Henry Mayo Newhall and Peter Donahue formed a partnership to establish a rail line between San Francisco and San Jose. In 1859, the San Francisco & San Jose Railroad (SF & SJ) company was formed, and in 1861, the SF & SJ issued a two million dollar bond to fund construction of the railroad; the major shareholders included the counties of Santa Clara, San Francisco, and San Mateo (City of San Carlos 2021), and John Brittan donated part of his land for the railroad right-of-way (Veronico and Veronico 2007). In 1862, the construction of a rail line to connect San Francisco with San Jose began and the section of the new rail line within San Mateo County was completed in 1864. However, despite Brittan's donation of land at the request of a rail stop, no official rail stop was established in present-day San Carlos when the rail line through San Mateo County was built.

With the coming of the railroad, three attempts were made to develop what would become San Carlos. The first attempt was in the 1880s, when Captain Nicholas T. Smith, the treasurer of the SP Railroad and a long-time friend of Senator Phelps and Leland Stanford, as well as other SP Railroad officials and a few businessmen, formed the San Carlos Land Company to create a town west of the SP Railroad that would "offer residents spacious living within an hour of San Francisco" (Caltrain 2021). As a result, in 1887, the San Carlos Land Company was formed to finance the development of the new townsite, and they purchased 173.2-acres from Phelps, in which they subdivided and laid out a town to be called "Lomitas" (Estep 1984; Historic Structures 2021; Veronico and Veronico 2007). Streets were also graded, and sewer lines were installed (The San Carlos Villagers 1982). To attract new residents, they sought the help of Leland Stanford, then President of the SP Railroad, and in 1888, the San Carlos railroad depot (extant) was constructed by the SP Railroad with Leland Stanford facilitating its construction by donating the excess sandstone from the then newly-built Stanford University and providing the masons and laborers who had been working for him (Figure 9) (Caltrain

2021; Historic Structures 2021). In 1895, the town's first post office was established within the train depot. The construction of the SP depot and post office provided incentivized interest in the new town, which had only 30 residents at this time; however, despite the real estate promoters' efforts to sell lots, the new town did not develop as rapidly as expected, partly due to the lack of a good water supply (Caltrain 2021; Cloud 1928). By 1895, only about 50 people lived within the new subdivision created by the San Carlos Land Company (The San Carlos Villagers 1982).

During this time, the agricultural flower industry was booming, and Chrysanthemum growers, mainly Japanese immigrants, were thriving. But for those living in the San Carlos area, to get their flowers to market, the growers would have to build a fire on the SP railroad tracks to stop the train at the rarely used San Carlos train station (Caltrain 2021). One of San Carlos' first flower growers was Jim Mock, a Chinese immigrant who was the first Chinese grower of sweet pears, asters, and chrysanthemums in the San Carlos area. Mock arrived in California in the 1880s, first finding work with the SP Railroad, supervising Chinese workers and later employed as a gardener on the Stanford University campus (Lai 1998). Mock learned flower cultivation from a Japanese gardener during the late 1890s before establishing his chrysanthemum business near San Carlos. Later, Mock taught his flower growing skills to Chinese immigrant Mo Yuqin (Yee Him Mock), who in 1908 became San Carlos' second chrysanthemum grower (Lai 1998).

The second attempt to establish San Carlos was in 1907 when the San Carlos Park Syndicate was formed and purchased the 173.2-acre community plus additional land from Phelps and promoted the new town as "San Carlos Park" (Figure 10 and Figure 11) (City of San Carlos 2021; The San Carlos Villagers 1982:5; Veronico and Veronico 2007). The San Carlos Park Syndicate was a real estate development company run by William Woolsey, who advertised the qualities of the pastoral area and showed photographs with green-tinted images of parks, clearings, orchards, and large homes, marketing the ability to live in an area with "City Comforts Plus Country Delights", with an easy commute to San Francisco without crossing the San Francisco Bay (The San Francisco Call 1913). To attract potential buyers, the company even laid out sidewalks, installed concrete urns filled with flowers along the avenues, and began construction of a reservoir to supply water. Despite the real estate promoters' efforts, and even after the San Francisco earthquake struck in 1906, San Carlos grew slowly, with the train depot serving as the only public building at this time. It was not until 1911 when the town began to show signs of growth, and in 1915 the Panama-Pacific Ohio Building was relocated from San Francisco to San Carlos to use as a proposed millionaire's playground, and in 1916 a one-room schoolhouse was constructed on Elm Street (City of San Carlos 2021; The San Carlos Villagers 1982; Veronico and Veronico 2007). During World War I (WWI) (1914 – 1918), the San Carlos Park Syndicate closed, and in 1917, the mortgages were acquired by the Mercantile Trust Company (later known as the American Trust Company).

The third attempt to establish San Carlos was in 1917 when the Mercantile Trust Company took over the mortgages of the San Carlos Park Syndicate and placed 100 acres of foreclosed real estate located in San Carlos in the hands of Fred Hugh Drake, who was subject to their deed of trust (The San Carlos Villagers 1982). Drake was a prominent real estate and business promoter, and under Drake's leadership, the third attempt was a success, as Drake expanded the existing infrastructure, established a chamber of commerce, and encouraged the development of housing, giving the city the motto "The City of Good Living" (City of San Carlos 2021). Drake paved the streets, installed gas and electricity, completed the reservoir started by Woolsey, installed water pipes, and piped water to residential homes. He also established the *San Carlos*

Enquirer newspaper (now the *Independent Newspaper*). During this time, new housing and businesses were established, including the C.C. Morse Seed Company, which purchased 60-acres south of Pulgas Creek (by Arroyo) to use as a sweet pea farm in 1918; and in 1923, a volunteer fire department was formed, and a firehouse was built, as well as other buildings (Figure 13) (City of San Carlos 2021; The San Carlos Villagers 1982). The San Carlos Aviation field (aka the San Carlos airfield) was also established (in 1917) and soon afterward, J. Paulding Edwards constructed a five-plane hangar (extant) along what is now Terminal Way, approximately 1.5 northeast of the Project Area, where he operated the San Carlos Flying School, and built runways of grass or packed dirt within a five-acre area extending south to Cordilleras Creek (Hull 2017). During the 1930s, the Cooley brothers - William and Charles - ran a pilot training school from the hanger where they trained local pilots and Chinese student pilots who travel to San Carlos to attend the Cooley brother's flight training school (Figure 14). The Cooley brothers trained the Chinese student pilots, and once certified, the Chinese pilots returned to China (Hull 2011, 2017).

The City of San Carlos continued to grow and was officially incorporated in 1925 with a population of 600 residents. New residential neighborhoods were constructed, such as Oak Park (Figure 12) located between the then city limits of San Carlos and Redwood City, as well other commercial businesses around San Carlos Avenue and El Camino Real, including the San Carlos Feed and Fuel, and James H. Martin's lumberyard in 1926, as well as a butcher shop, restaurant, gas station, general store, a barber shop, a bank, and a theater (The San Carlos Villagers 1982; Veronico and Veronico 2007). The first church – the Community Church – was established in 1928, followed by a second church – St. Charles – in 1929 (The San Carlos Villagers 1982).

By the mid-1930s, the nation was emerging from the Great Depression (1929 – 1933), which had created a surge of bank closures, resulting in the decrease of available capital that impacted agriculture and led to reduced market prices. After the depression ended, the city embarked on several community improvements projects. In 1938, the city purchased land for a city park, which was funded by the citizens of San Carlos, who passed a 20-year bond issue on buying the land with the provision that baseball games would be banned from the new park. However, Edward R. Burton, Sr., the president of the San Carlos Men's Athletic Club, arranged for the purchase of an additional 3.38 acres for a baseball field. In 1938, the Workers Progress Administration (WPA) constructed the amphitheater and the adobe brick building within the city park. The city park was dedicated in 1940 and re-dedicated in June 1960 as "Burton Park" in honor of Edward Burton, Sr., who also served on the city council for 18 years, including four years as mayor. The 1930s also saw the formation of the Black Mountain Spring Water Company in 1937, and by 1946 the Black Mountain Spring Water bottling facility (no longer extant) was constructed within a portion of the Project Area.

By 1940, the population in San Carlos was 3,500, and the downtown continued to develop with new businesses (The San Carlos Villagers 1982) (Figure 15). In 1941, when the U.S. entered World War II (WWII) (1939-1945), many service men and women came to the area as military installations and government contracting businesses developed, which revitalized the local economy. At the end of WWII, many cities saw unprecedented growth, particularly in residential development, as former military personnel returned from overseas and needed housing. As such, areas including the city of San Carlos saw most of its growth after WWII. During this time, as more Black Americans moved from south of the San Francisco Bay along the peninsula to the East Bay to work in the shipyards and military stations in Richmond, Oakland, Vallejo, and San Francisco, some real estate companies in the San Mateo County urged designing the entire San Mateo

County area as a "sundown area". Although the ordinance was not passed in the city of San Carlos, acts of violence and hate crimes against people of color in the area did keep many people of color from moving to cities along the peninsula.

By the 1950s, San Carlos' population had tripled, reaching 14,371, as the downtown commercial area developed further (Figure 16 and Figure 17) and new industries were established. During this time, there were a total of 89 industrial wholesalers, manufactures, and distributors of goods in San Carlos (San Mateo County Historic Resources Advisory Board 1984). In 1947, the "Lenkurt Electric Company", a microwave and telecommunications company, relocated from San Francisco to San Carlos and constructed a 20,000 square foot facility (Appert 1974). By the mid-1950s, it had outgrown its 20,000 square foot facility, and the owners engaged architects Frank Lloyd Wright and Aaron Green to build a new facility in San Carlos; however, in 1959, before the construction of the new building, the company was purchased by General Telephone and Electronics Company (GTE). By the 1960s, San Carlos, with approximately 21,370 residents, was a well-established town with thriving commercial and industrial businesses. By the 1970s, the population of San Carlos had increased to 25,924, and although growth slowed during this time, additional housing was developed, including apartment buildings and single-family houses, and by 1981, the population of San Carlos reached 28,200 residents (The San Carlos Villagers 1982).

Figure 9: 1905 photograph of the Southern Pacific Railroad depot in San Carlos (courtesy of the City of San Carlos). The building was designated a City landmark in 1976 and was listed to the NRHP in 1984.

Figure 10: Advertisement for San Carlos Park in the November 1907 issue of *Sunset Magazine* (Veronico and Veronico 2007).

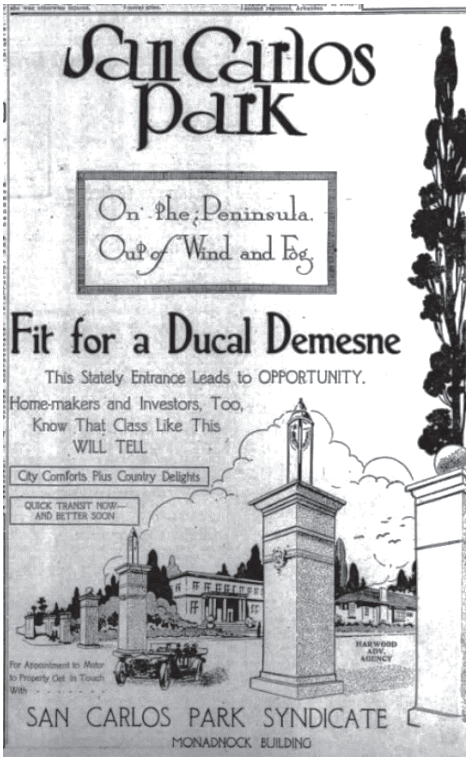

Figure 11: 1907 newspaper advertisement for San Carlos Park (courtesy of the City of San Carlos).

Figure 12: Koff Realty Company billboard advertising lots in Oak Park (Veronico and Veronico 2007:21).

Figure 13: ca. 1920 photo take along San Carlos Avenue with the San Carlos train station in the background (Veronico and Veronico 2007)

Figure 14: 1937 photograph of the Cooley Brothers (Charles in back row, left, and William in back row, middle) and other Chinese pilots in San Carlos (Hull 2011).

Figure 15: 1936 aerial photograph of San Carlos with the 1888 train station at San Carlos Avenue (lower center) and El Camino Real, facing west (*The San Francisco Examiner* 1936).

Figure 16: ca. 1940s postcard of the intersection of San Carlos Avenue and Laurel Avenue (City of San Mateo).

Figure 17: ca. 1950 postcard of downtown San Carlos, on San Carlos Avenue (City of San Mateo).

History of the Project Area

During the Mexican period (1821-1848), the Project Area was part of the 35,240-acre *Rancho de las Pulgas* that was granted by Mexican Governor José Castro to José Darío Argüello's widow, Maria Soledad Ortega de Argüello, and the heirs of his son, Don Luis Antonio Argüello, in 1835. During the American period (post-1848), *Rancho de las Pulgas* was officially surveyed, and a patent for the land was granted to Maria Soledad Ortega de Argüello (one half), Jose Ramon Argüello (one fourth), Luis Antonio Argüello (one-tenth), and Simon Monserrat Mezes (three twentieths) (Bancroft 1885). The Project Area was in the portion that came to be owned by Simon Mezes. The 1856 plat of the northern part of the Pulgas Rancho does not show any buildings, roads or other built environment features near the Project Area during this time (Figure 18); however, the "County Road" (present-day El Camilo Real) and three houses are depicted within 1.5-miles of the Project Area.

The 1894 Map of San Mateo County depicts the Project Area within two adjacent properties, both owned by Captain Nathaniel "Nat" John (also Jones) Brittan, which totaled 438.49 acres. Nathaniel was the son of John Brittan, an early pioneer of San Carlos (see History of San Carlos section above). Nathaniel was born in Newberg, New York in 1848 to John and Mary Alista Brittan. When Nathaniel was four years of age, his parents brought him to California and they settled in San Francisco, where his father founded Brittan & Holbrook (later Holbrook, Merrill & Stetson). As his father's wealth increased, he sent Nathaniel abroad to be educated in Europe, and upon returning to the U.S., Nathaniel attended Harvard University (Ancestry.com 2012a, 2012b). While at Harvard, John died, and so after graduating from Harvard, Nathaniel returned to San Francisco and took over the management of his father's business and affairs. Nathaniel soon amassed a personal estate consisting of businesses and properties in San Francisco, Oakland, and San Mateo County (San Francisco Chronicle 1912). In 1879, Nathaniel married Isabelle (Belle) Fallon - born in San Jose about 1862. In 1881, Nathanial and Isabelle built a large country estate on present-day Pine Street called "San Carlos Manor" that was described as "one of the most beautiful estates on the peninsula" also featured a landscape of exotic trees and shrubs collected during his family's world travels, a bear pit for a bear he acquired on a trip to Alaska, and a Japanese tea garden (Ancestry.com 2012b; Seavey 1994; Veronico and Veronico 2007). Nathaniel and Isabelle had three daughters: Isabella Jane "Belle" in 1881, Carmelita Burt in 1881, and Nathalie Theodora in 1883 (Ancestry.com 2009, 2010a). The couple divorced sometime around 1900 and Isabella remarried to her divorce attorney, J. J. Bullock, in 1906; and she died two years later, in 1908 (The San Francisco Examiner 1906). Nathaniel remained at his home in San Carlos until his death in 1914 (San Francisco Chronicle 1912).

The 1894 map shows several buildings within Nathaniel's property during this time, which were situated approximately 900 feet north of the Project Area, including "San Carlos Manor" and the "Party House" (extant; NR #94001500), which Nathaniel had constructed in 1872 as a hunting lodge and to entertain guests of the Bohemian Club, which he co-founded with a group of San Francisco artists and journalists (Seavey 1994). No buildings are shown as having been located within the Project Area during this time; however, Alameda de las Pulgas road was established by this time and is shown traversing north/south through the east end of the Project Area (Figure 19). Nathaniel donated the 50-foot right-of-way of Alameda de las Pulgas, which passed through his land, to San Mateo County in 1885 (San Mateo County Records). The 1902 USGS Santa Cruz quadrangle map also indicates that the Project Area was vacant during this time and shows the route of Alameda de las Pulgas passing through the Project Area (Figure 20).

When Nathaniel Brittan died in 1914, his estate was divided amongst his three daughters, and according to a 1921 map of the original 455 acre tract left by Nathaniel (Figure 21), the Project Area became part of two parcels, including a 95 acre parcel owned by his daughter Carmelita Burt and a 162.8 acre parcel owned by his daughter Belle Jane.[6] The map also depicts a water tunnel (to tap into underground water) and a house within the portion of the Project Area owned by Belle Jane, and a creek. The house is faintly visible in the 1930 aerial photograph (Figure 22). The water tunnel and house may have been previously developed by Nathaniel, who is known to have established water wells on his land and his neighbor's property, which were the only source of water for the community until the 1920s (Seavey 1994).

In 1940, George Washington Faulstich (Figure 23) was deeded the land that includes the Project Area (Ancestry.com 2007). George was born in San Francisco in 1907 to Lorenz and Minnie Faulstich (Ancestry.com 2006). In 1926, George married Altha (also spelled Althea in some documents) E. Hunt, born in Washington about 1908 (Ancestry.com 2010b). George and Altha had three daughters, including Carole J. born in 1930, Darma Elayne born in 1930, and Shirley Louise born in 1932 (Ancestry.com 2002, 2015). During this time, George and Altha lived in Redwood City, where George worked delivering milk until the Great Depression when he changed to delivering water for the Mountain Springs Water Company as their San Francisco peninsula driver (Ancestry.com 2002; Veronico and Veronico 2007). Around 1932, George located a spring within the Carolans Estate along Black Mountain Road in Hillsborough, and after making a deal with the landowners, he established his own bottled water company that he named Black Mountain Spring Water Company after the road along which the spring was located. During this time, the Black Mountain Spring Water company was located at 719 B Street in the City of San Mateo (The Times 1940).

By 1936, George and Altha had designed and built a home along Carmelita Drive in San Carlos, and while horseback riding in the area in 1937, George discovered the water source within the Project Area (likely the water tunnel previously developed by Nathaniel Brittan) and immediately began to purchase land around the spring, where he moved the Black Mountain Spring Water Company in 1939 (The San Francisco Examiner 1984; Veronico and Veronico 2007). The 1940 USGS 15' Half Moon Bay quadrangle does not depict any buildings within the Project Area, but a creek is shown traversing west/east through the Project Area (Figure 24). However, the 1941 aerial photograph shows a building within the eastern portion of the Project Area adjacent to Alameda de las Pulgas, which curved into the Project Area during this time, as well as an access road within the Project Area (Figure 25). The 1946 aerial photograph (Figure 26) also shows the building in the eastern Project Area, which was the Black Mountain Spring Water Company bottling facility shown in the photo in Figure 27 (no longer extant). In addition, the 1946 aerial photograph shows a second building in the east-central portion of the Project Area, which appears to be the building shown in Figure 28. During this time (1942 - 1950), George and Altha lived in Redwood City (Ancestry.com 2011b).

[6] According to the 1921 map, Carmelita Burt received 95 acres that included San Carlos Manor, stables, a carriage house, a well and pump house, a tunnel (to tap into underground water), four cisterns, a water tank, and three water pipelines; Bella Jane received 162.8 acres that included an orchard with a well and windmill, a tunnel (to tap into underground water), a house, three springs, and one quarry (unknown type); and the heirs of Natalie Theodore received 129.346 acres that included two quarries (unknown type) and two springs. According to Veronico and Veronico (2007:17), the windmills and water tanks were used as the sole source of water for the city up until the 1920s.

According to the 1953 USGS 7.5' Woodside quadrangle (Figure 29) and the 1956 aerial photograph (Figure 30), by 1956, the Project Area contained three buildings, including the Black Mountain Spring Water Company botting facility in the eastern portion of the Project Area, the building shown in Figure 28 (no longer extant), and the ca. 1954 house located at 808 Alameda de las Pulgas (APN 050-220-160). At some point, a small masonry tunnel was also built (or the existing one was rehabilitated) to access the natural spring water within the property, and the creek that flowed through the Project Area was placed underground within the existing storm drain. The storm drain appears to have been constructed sometime after 1952, which is the year that major flooding in San Carlos occurred, and "listed as a trouble spot in flood control was the area above Alameda de las Pulgas, according to city administrator Harry L. Grant, where debris and water rushes down from Three Sisters ranch and Black Mountain Water company" (The Times 1952).

By the early 1960s, with George as the President and Altha as the Vice President (Ancestry.com 2011b), the company was thriving, with offices in San Mateo, San Carlos, Redwood City, Palo Alto, South City, and San Jose, and water delivery to homes, factories and businesses throughout San Francisco and San Mateo counties (**Error! Reference source not found.**), as well as offering items such as "Oasis" electric water coolers f or $3.00 or those that included both hot or cold water for $5.00 per month (Figure 32) (The Times 1964) (The San Francisco Examiner 1958; The Times 1959). In 1964, George and his grandson, Joseph "Sparkey" Bullock Jr.[7] (Carole's son), who had started working at the water company in his early twenties, invented and patented the "Cap Snap Seal" (Figure 33), which was the world's first leak-proof, tamper-proof, snap-on plastic bottle cap, and they formed the Cap Snap Seal Company.[8] In 1965, George invented and patented the tearable bottle cap that was used on five-gallon water carboy containers, and eventually, the company held more than 30 patents on water and milk-packing products and processing technologies (Dailey 2020; Veronico and Veronico 2007). According to 1965 aerial photograph (Figure 34), by this time, the Project Area contained six buildings, including the three buildings previously mentioned (the bottling facility in the eastern Project Area, the building in the east-central Project area, and the ca. 1954 house at 808 Alameda de las Pulgas), as well as the ca. 1965 ancillary building at 808 Alameda de las Pulgas, and the two ca. 1958 houses at 804 and 806 Alameda de las Pulgas[9]; a parking lot had also been added east of the botting facility building and Alameda de las Pulgas road was pushed westward and realigned so that it no longer passed through the Project Area. At some point, an underground fuel storage tank was also installed, which was used to service the water delivery trucks.

In 1967, a $50,000 lawsuit against Owens-Illinois Inc., which manufactured the bottles for the Black Mountain Spring Water Company, was filed on behalf of a man living in San Jose who was severely injured on his face, chin and neck when a five-gallon glass water carboy broke in his hands. "According to the complaint, certain bottles were defective and dangerous in that the wall thickness of the glass was not uniform, causing one side to be thinner than it was supposed to be" (The Times 1967). After this time, the company appears to have discontinued the use of glass bottles, and instead, water was provided in one, two and a half, and five-

[7] Joe lived in the ca. 1958 house at 804 Alameda de las Pulgas from 1973 to 1976

[8] Acquired by Portola Packaging in 1986 (Veronico and Veronico 2007).

[9] The three houses built within the Project Area between ca. 1954 and ca. 1958 were constructed by George and Altha as rental properties, or as investment properties for their three daughters (De Shazo 2021).

gallon plastic bottles. In 1969, George was given permission by the city of San Carlos to build a new office building and warehouse for the Black Mountain Spring Water Company at 3605 Haven Avenue in San Carlos, where the new Cap Snap Seal bottle caps were manufactured (The Times 1969).

George retired in the late 1970s, and afterward, George and Joe founded the Three Sisters Ranch Enterprises, named for George and Altha's three daughters, to develop commercial, retail and residential real estate throughout Northern California, "all the while, the water company was generating double-digit growth year after year under Joe's leadership" (Black Mountain Properties, LLC 2021). Shortly after, Ross Markley, who started with the company as a truck driver in 1955, took over as President of the company, and by the 1980s, the company was supplying water to more than 17,000 families, as well as businesses and factories, in nine Bay Area counties, serving customers as far north as Santa Rosa and as far south as Gilroy (The San Francisco Examiner 1984). A 1984 article in *The San Francisco Examiner* revealed that in 1983, the company also spent thousands of dollars on water testing to comply with the state Department of Agriculture and Federal Food and Drug Administration (FDA) that required a chemical analysis on the water once a year. The article also states that during this time, the "Black Mountain spring water is pumped from behind a dam built in a spring running inside an 80-foot tunnel of granite rock. It is run through a couple of filters to remove any sediments and placed in storage takes. The water then goes through another round of filtering and a process that sterilizes the water" (Figure 35) (The San Francisco Examiner 1984).

In 1991, Joe took over the family business, which had become the largest independently-owned bottled water company in the U.S., serving more than 75,000 homes and businesses in the Bay Area and available in stores across the western U.S., and in 2001, he sold the company to Nestle for $100 million (Black Mountain Properties, LLC 2021; Dailey 2020; The San Francisco Examiner 1990), and by 2002, the Black Mountain Water Company buildings previously located within the Project Area were demolished. "Through the water company's affiliate, Three Sisters Ranch Enterprises (now called Black Mountain Properties), a sizable portion of the proceeds [from the sale of the company] went into commercial and industrial real estate in San Carlos, and eventually other locales including Burlingame, Sunnyvale and the greater East Bay and North Bay" (Dailey 2020).

Based on the extensive review of historical maps and aerial photographs dating from 1856 to 1975, as well as various other primary and secondary sources, it appears that the Project Area has a high potential to contain both surficial and buried historic-period archaeological resources due to the presence of a water conveyance tunnel and house with the Project Area by 1921 (likely constructed by Nathaniel Brittan) and extensive use of the Project Area by the Black Mountain Spring Water Company between 1939 and 2001. It is not known if the water conveyance tunnel built by 1921 was the same one used by George Washington Faulstich for the Black Mountain Spring Water Company.

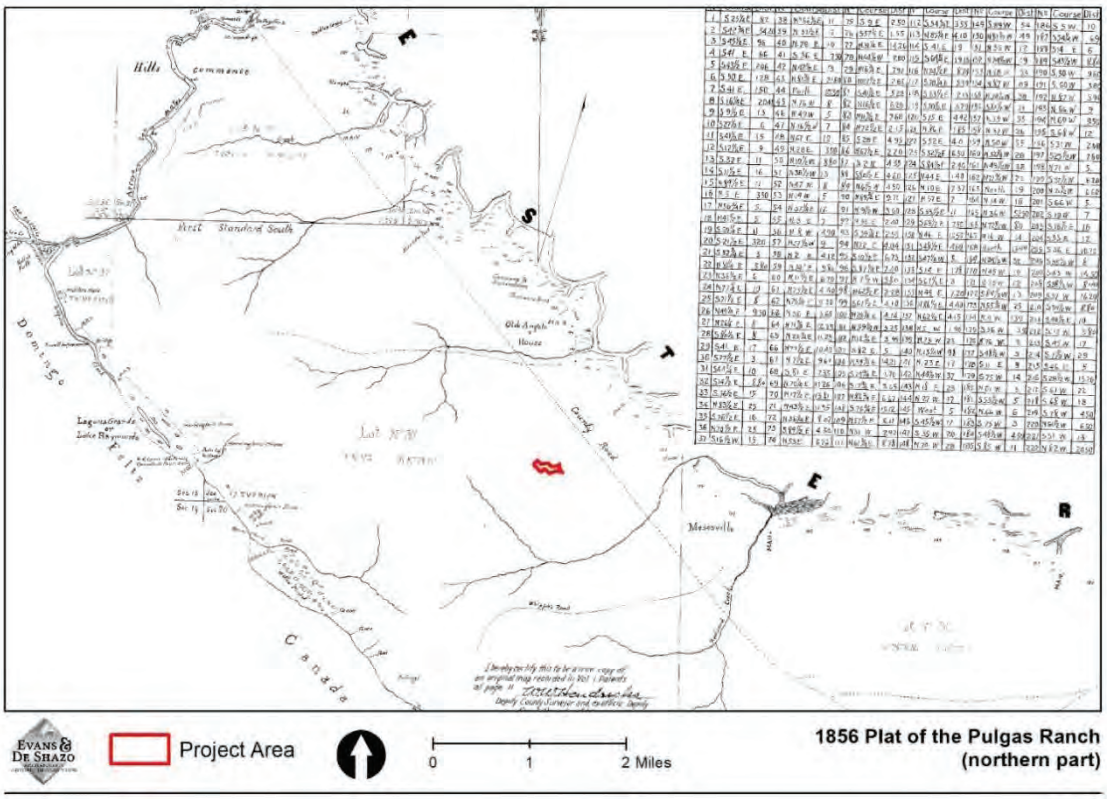

Figure 18: Project Area shown on the 1856 Plat of the Pulgas Ranch (northern part).

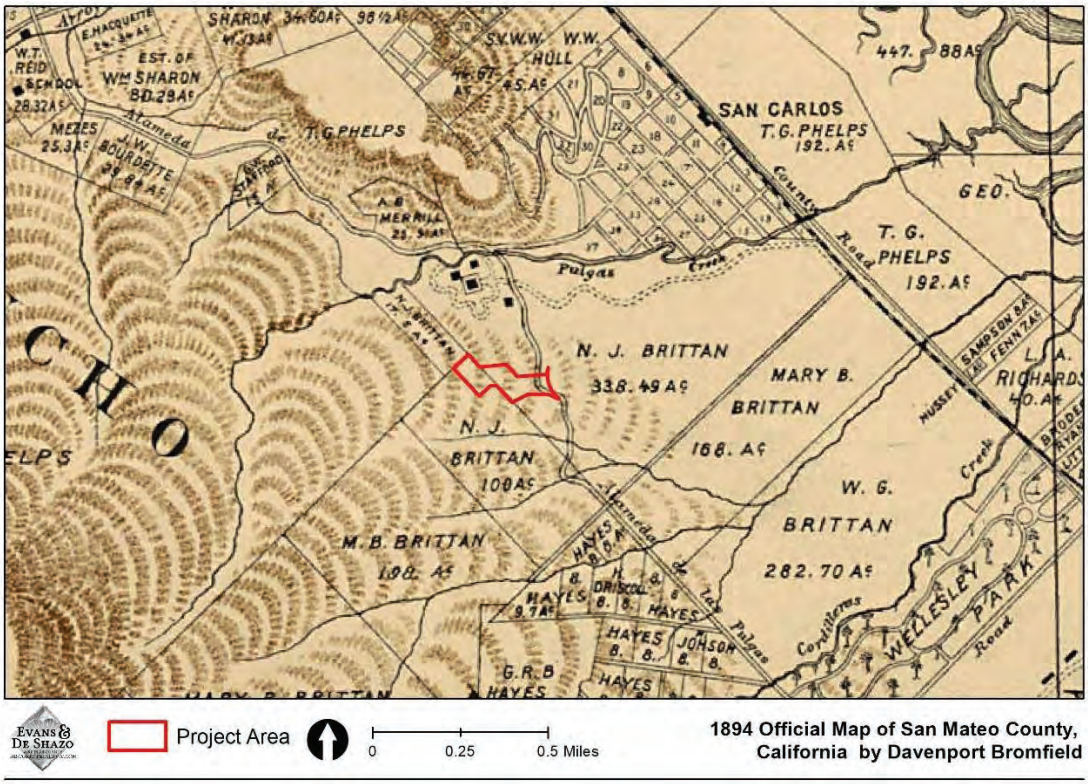

Figure 19: Project Area shown on the 1894 map of San Mateo County.

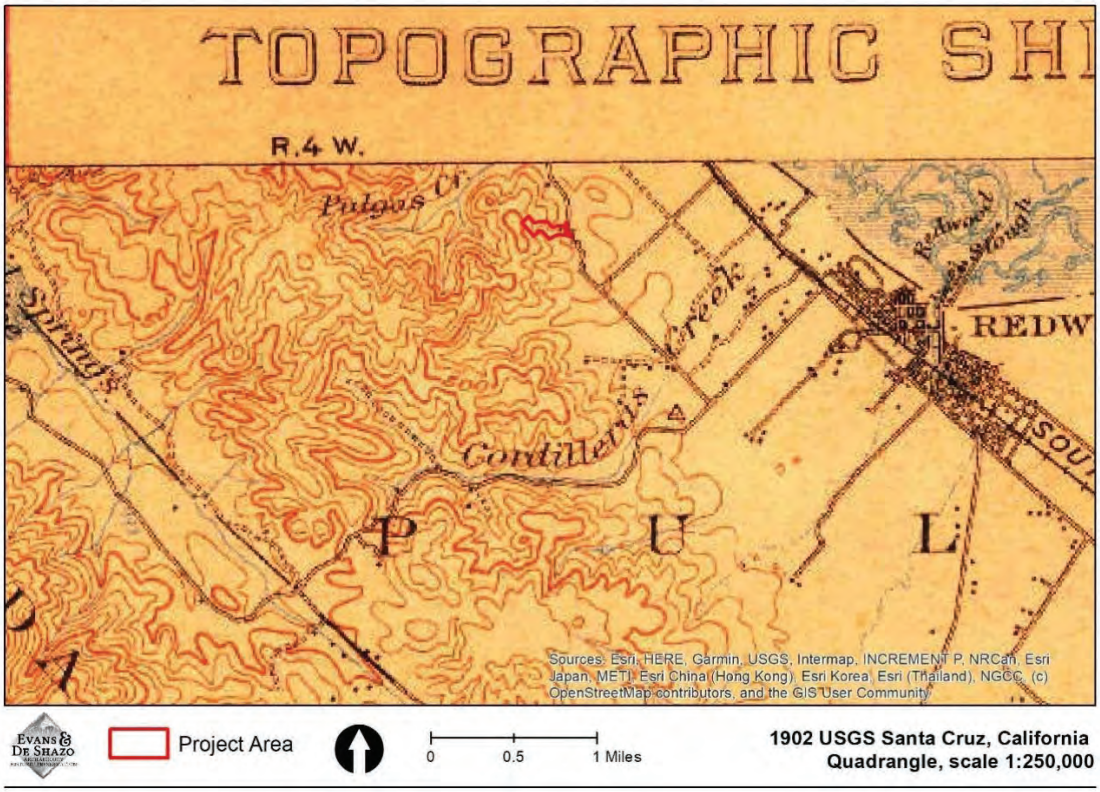

Figure 20: Project Area shown on the 1902 USGS 1:250,000 scale Santa Cruz quadrangle.

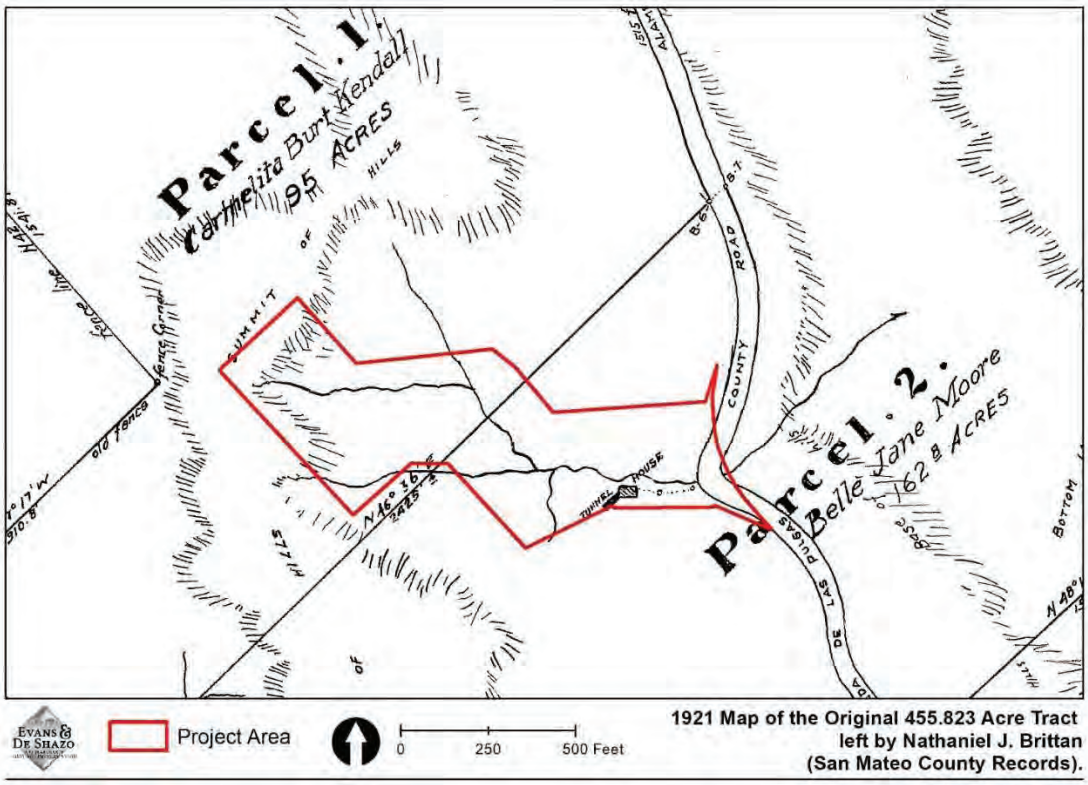

Figure 21: Project Area shown on the 1921 "Map of the Original 455.823 Acre Tract in San Mateo County, California left by Nathaniel J. Brittan showing the interests conveyed to others" (San Mateo County Records).

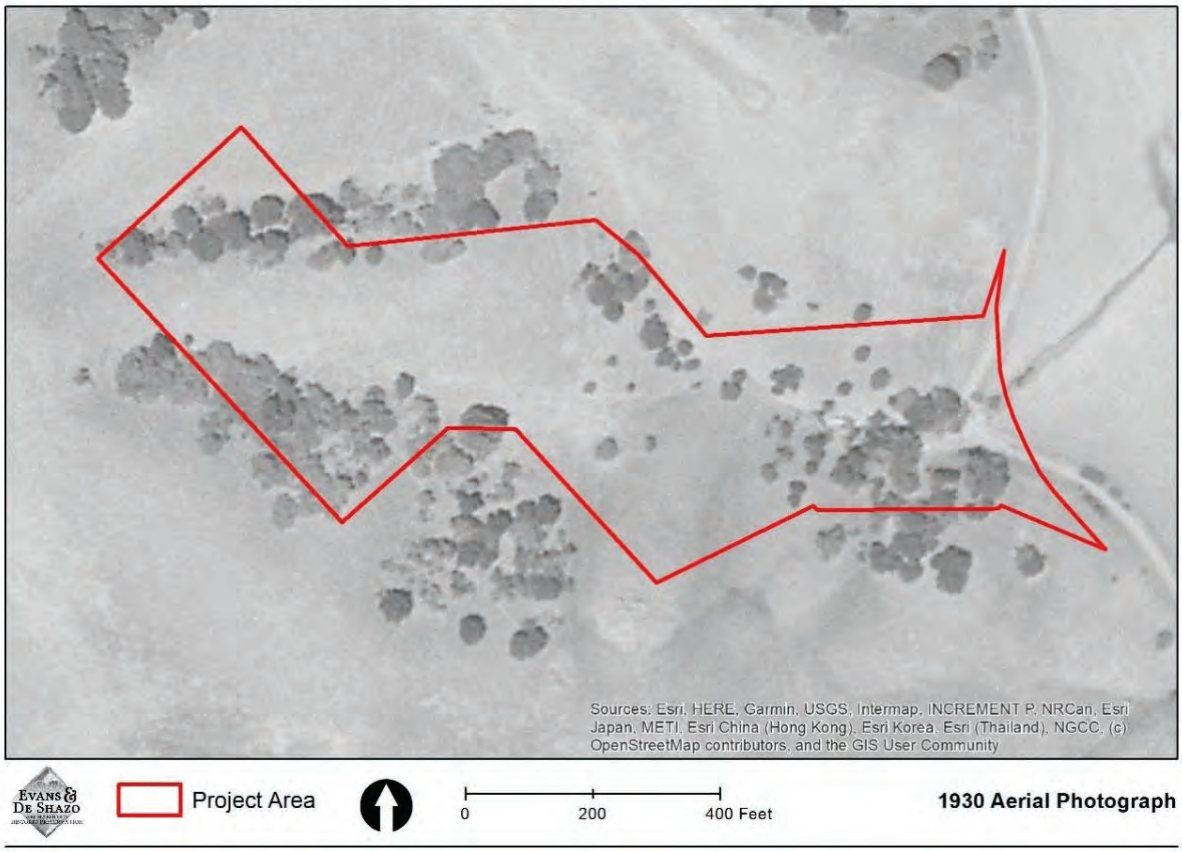

Figure 22: Project Area shown on the 1930 aerial photograph.

Figure 23: Photograph of George Washington Faulstich (Veronico and Veronico 2007:54).

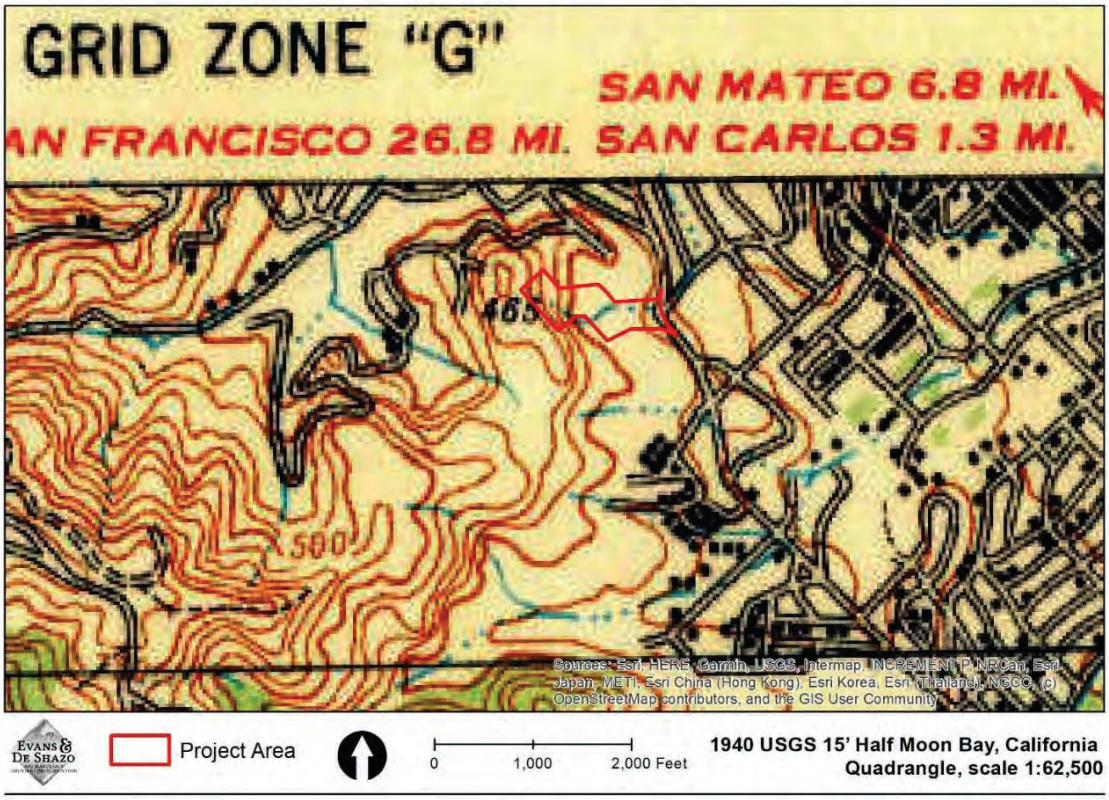

Figure 24: Project Area shown on the 1940 USGS 15' Half Moon Bay quadrangle.

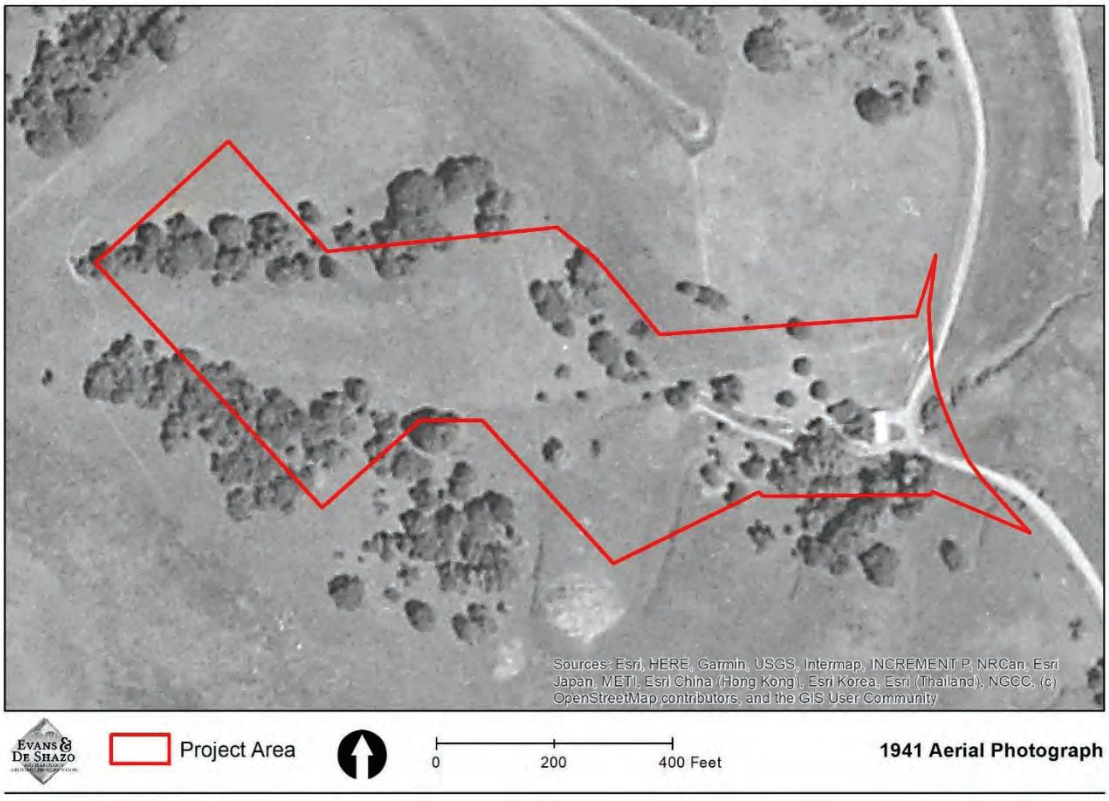

Figure 25: Project Area shown on the 1941 aerial photograph.

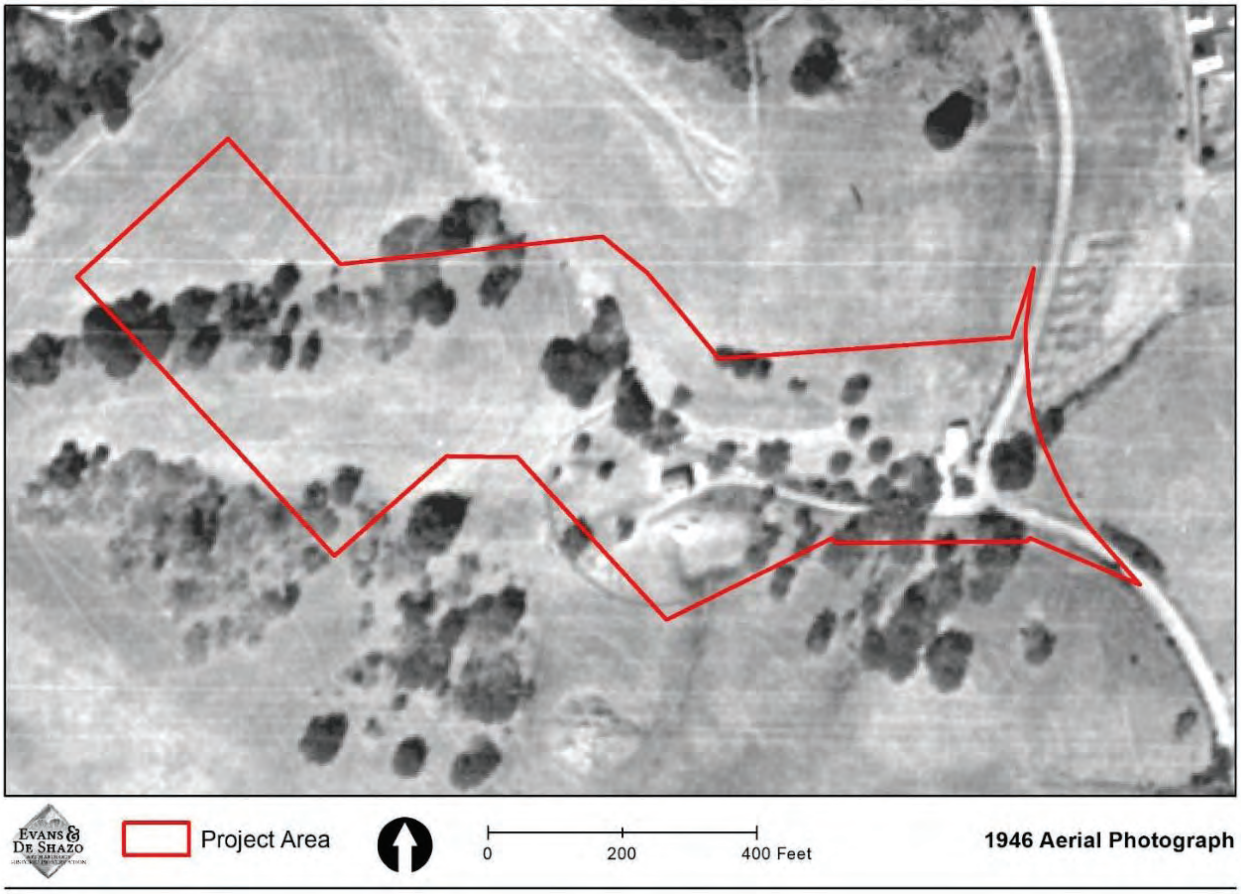

Figure 26: Project Area shown on the 1946 aerial photograph.

Figure 27: Photograph of the Black Mountain Spring Water Company bottling facility (no longer extant) within the eastern Project Area. The address of the facility was 800 Alameda de Las Pulgas (Veronico and Veronico 2007:54).

Figure 28: ca. 1955 promotional photograph of Bud Hunt delivering a five-gallon glass bottle of water to a building (no longer extant) within the Project Area (Veronico and Veronico 2007:55).

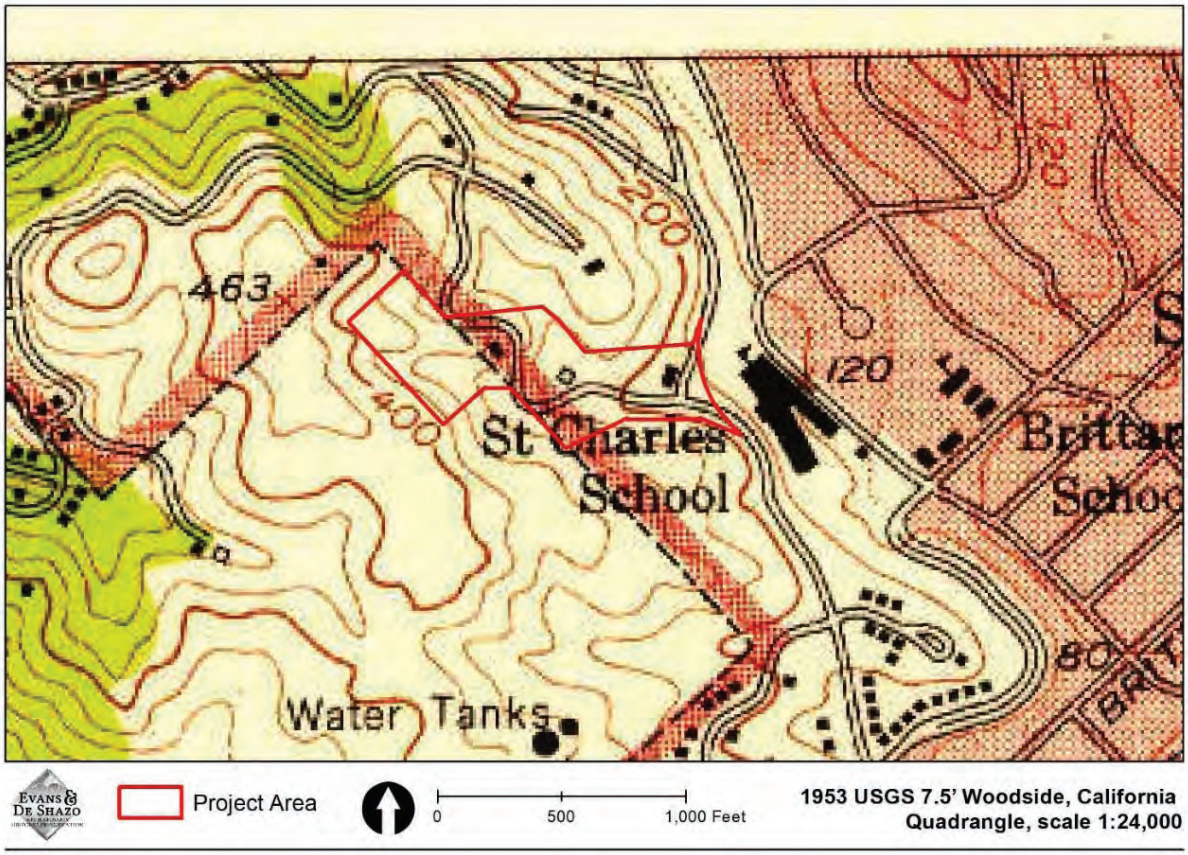

Figure 29: Project Area shown on the 1953 USGS 7.5' Woodside quadrangle.

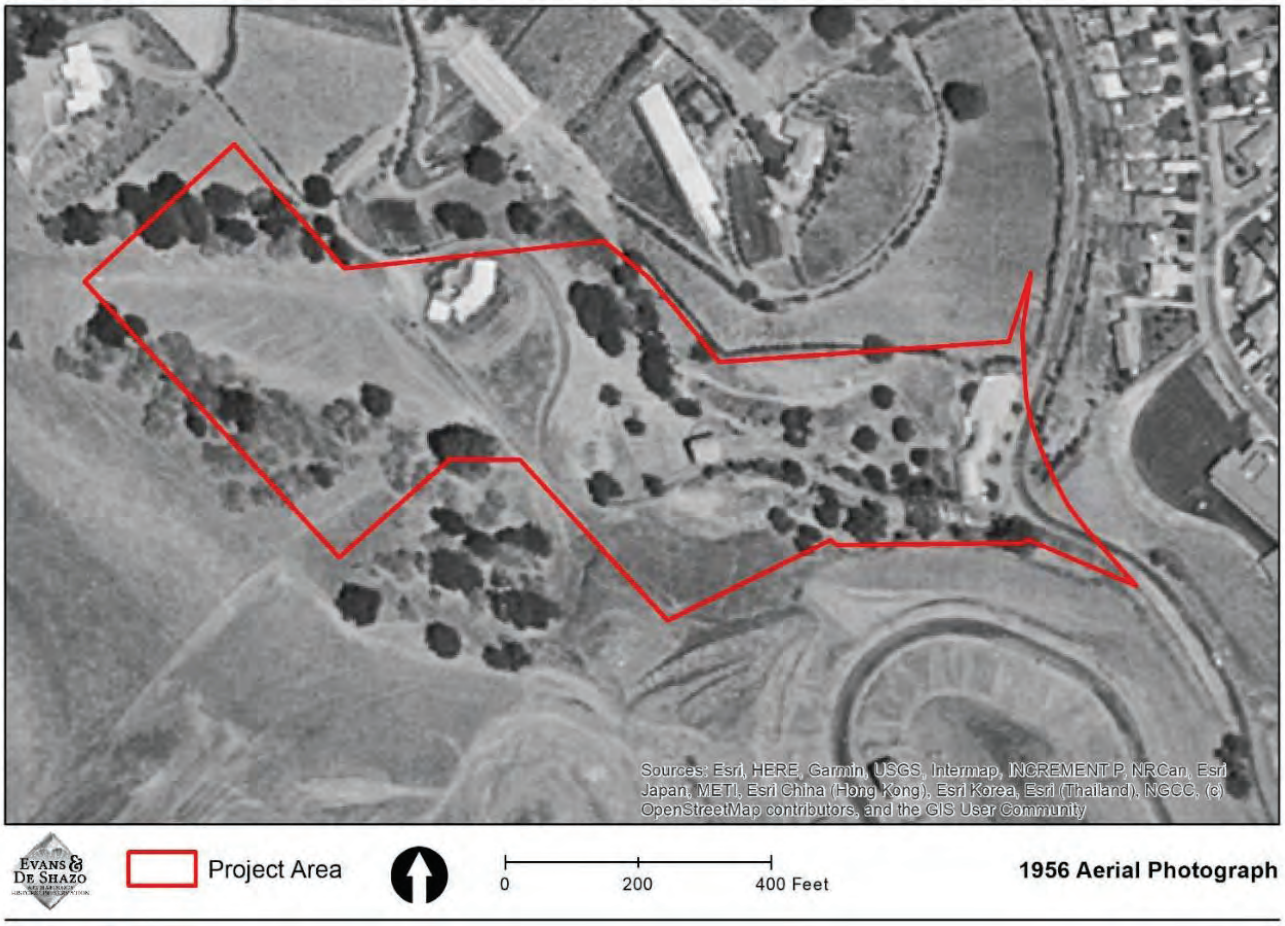

Figure 30: Project Area shown on the 1956 aerial photograph.

Figure 31: 1959 advertisement for Black Mountain Spring Water (The Times 1959).

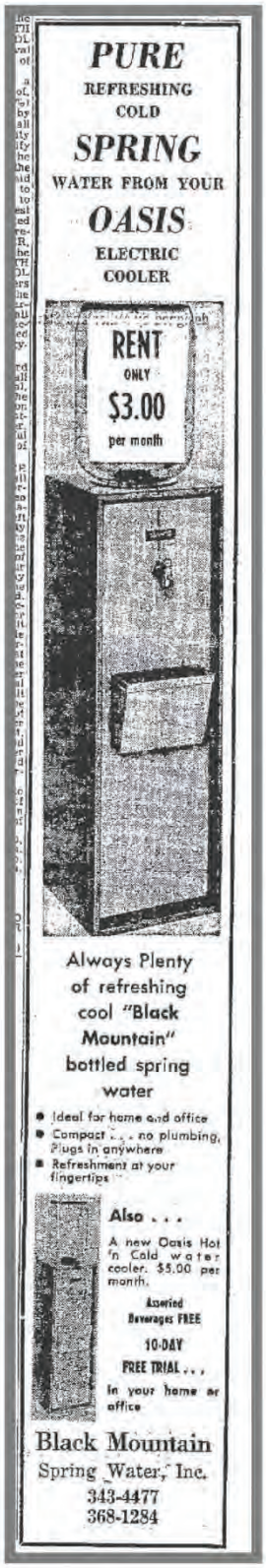

Figure 32: 1965 advertisement for Black Mountain Spring Water Oasis electric coolers (The Times 1964).

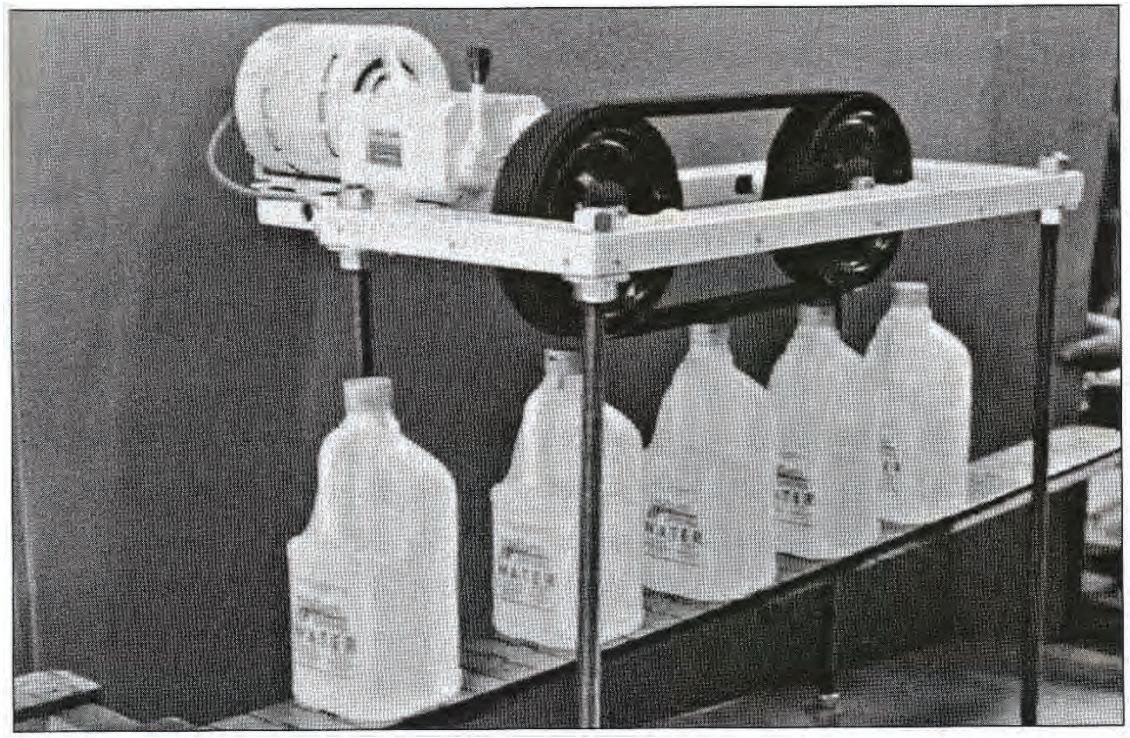

Figure 33: Photograph of an in-line cap sealer seating caps onto one-gallon plastic bottles on a conveyor (Veronico and Veronico 2007:55).

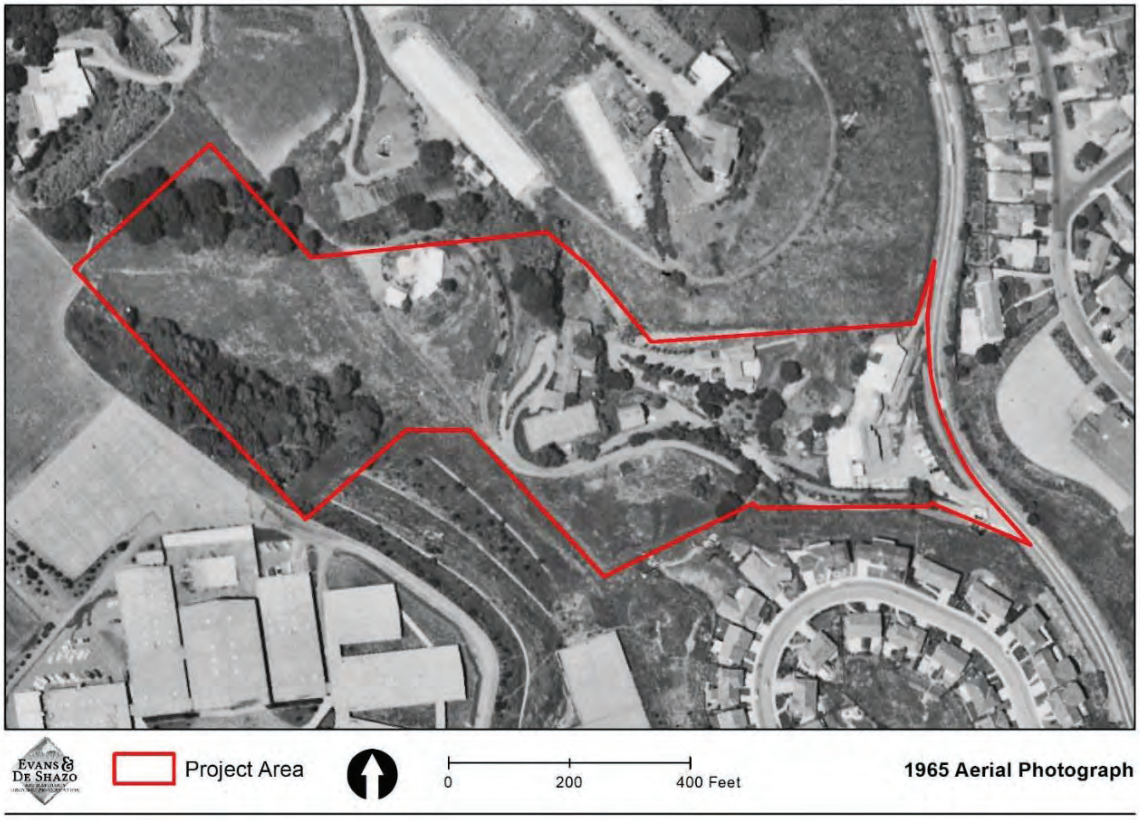

Figure 34: Project Area shown on the 1965 aerial photograph.

Figure 35: 1984 photograph in *The San Francisco Examiner* of the Black Mountain Spring water conveyance tunnel.

RESULTS OF RECORD SEARCH

NWIC RECORD SEARCH

A record search was completed by the NWIC on November 30, 2020 (NWIC File #20-0889) that was supplemented by cultural resource information available at the EDS office and within the digital files of EDS. The purpose of the record search was to review documentation pertaining to previous cultural resource studies and previously documented archaeological resources within the Project Area and 0.25-miles of the Project Area. Below are the results of the NWIC record search.

Previous Cultural Resource Studies

According to information on file at the NWIC and EDS, the Project Area has been subject to one previous cultural resources study (Bean 2016), and there have been three other previous cultural sources studies completed within 0.25-miles of the Project Area. The previous cultural resource study of the Project Area is described below; all previous studies are listed below in Table 2.

In 2016, FirstCarbon Solution (FCS) completed a cultural resource due diligence survey for Dragonfly Investments Group that included the entire Project Area. The methods included a record search at the NWIC, background research, and a field survey. The results of the study indicated a low probability of undiscovered prehistoric cultural resources within the Project Area, and no archaeological resources were identified within

the Project Area; however, the two residences at 804 and 806 Alameda de las Pulgas and associated features including an ornate ornamental garden, and a series of concrete steps leading to a metal door of a subterranean feature (spring) associated with the historic Black Mountain Spring Bottled Water Company were identified within the Project Area. As such, FCS recommended a full Cultural Resources Assessment and that the historic-period buildings, structures and features within the Project Area are evaluated for historical significance and recorded on Department of Parks and Recreation (DPR) 523 forms (Bean 2016).

Table 1: Previous Cultural Resource Studies.

NWIC #	Year	Title	Author(s), Affiliation
S-3097	1979	Archaeological Evaluation of Parcel APN 050-220-150 Ruiz Subdivision Project.	Robert cartier, Archaeological Resource Management
S-037276	2010	New Tower ("NT") Submission Packet, FCC From 620, Heather Drive Water Tank, SF-13235A	Lorna Billat, EarthTouch, Inc.
-	2016	Cultural Resources Due Diligence Assessment – Black Mountain Property, San Carlos, California.	Mary Bean, FCS
-	2019	Cultural resources Inventory Report for the San Carlos Fuel Management Project, City of San Carlos, California – Negative Findings.	William Burns, Dudek

Previously Identified Cultural Resources

According to information on file at the NWIC and EDS, there are no previously recorded cultural resources within the Project Area or within 0.25-miles of the Project Area; although historic resources were previously identified within the Project Area by FCS. The closest recorded prehistoric resource is P-41-000305 (CA-SMA-310) located along Pulgas Creek between 0.25 and 0.5 miles north of the Project Area. P-41-000305 is not listed in the Archaeological Resource Directory (OHP 2012).

EDS also reviewed the OHP's BERD for San Mateo County. The BERD includes built-environment historic resources listed on the NRHP, CRHR, California Historical Landmarks, California Points of Historical Interest, and resources listed in the California Inventory of Historic resources after 1976[10] (OHP 2020). The BERD does not list any built-environment cultural resources within or near the Project Area.

EDS also reviewed the *California Inventory of Historic Resources* (OHP 1976) and the *Five Views: An Ethnic Sites Survey for California* (OHP 1988); however, neither lists any cultural resources within or adjacent to the Project Area.

The Historic Sites Master List for San Mateo County lists one resource in San Carlos, including the 1890 San Carlos railroad station on El Camino Real, which is not located in the immediate vicinity of the Project Area.

[10] The list of resources placed on the California Inventory of Historic Resources prior to 1976 was also reviewed (DRP 1976).

RESULTS OF SACRED LANDS INVENTORY AND TRIBAL OUTREACH

SACRED LANDS INVENTORY RESULTS

A search of the Sacred Lands file was conducted by the NAHC on November 16, 2020. The Sacred Lands inventory was positive for the presence of Native American Sacred Sites within or in the immediate vicinity of the Project Area, and the NAHC recommended contacting the Amah Mutsun Tribal Band of Mission San Juan Bautista for further information, as well as the other tribal representatives on the Native American contact list provided by the NAHC (Appendix A/Fonseca 2021).

TRIBAL OUTREACH

As recommended by the NAHC, a letter was sent via electronic mail (email) to the Amah Mutsun Tribal Band of Mission San Juan Bautista, and via email or the U.S. Postal Service (USPS) to the other six individuals on the Native American contact list provided by the NAHC to request further information about Native American traditional cultural resources, including Sacred Sites, or Tribal Cultural Resources within or near the Project Area, and to inquire about Native American issues related to the overall Project. Correspondence with these Tribes and individuals is summarized below in Table 2 and is included in Appendix A.

Table 2: Summary of Native American Correspondence.

Tribe	Contact	Correspondence/Response
Amah Mutsun Tribal Band of Mission San Juan Bautista	Irenne Zwierlein, Chairperson	Letter sent via USPS on 12/1/2020. No response received to date.
Costanoan Rumsen Carmel Tribe	Tony Cerda, Chairperson	Letter sent via email on 12/1/2020. No response received to date.
Indian Canyon Mutsun Band of Costanoan	Kanyon Sayers-Roods, MLD Contact	Letter sent via email on 12/1/2020. No response received to date.
Indian Canyon Mutsun Band of Costanoan	Ann Marie Sayers, Chairperson	Letter sent via USPS on 12/1/2020. No response received to date.
Muwekma Ohlone Indian Tribe of the SF Bay Area	Monica Arellano	Letter sent via email on 12/1/2020. No response received to date.
Muwekma Ohlone Indian Tribe of the SF Bay Area	Charlene Nijmeh, Chairperson	Letter sent via email on 12/1/2020. No response received to date.
The Ohlone Indian Tribe	Andrew Galvan	Letter sent via email on 12/1/2020. No response received to date.

RESULTS OF FIELD SURVEY

A pedestrian field survey of the 11.4-acre Project Area was completed by EDS Principal Archaeologist, Sally Evans, M.A., RPA, on December 10, 2020. The Project Area is situated between 180 feet and 350 feet amsl and consists of hillsides with slopes up to 45 percent, as well as level and terraced areas. The vegetation throughout the Project Area includes a variety of trees such as eucalyptus, oak, bay, buckeye, cypress, olive, and others, as well as a wide-variety of shrubs, grasses, and ornamental plants.

Three of the parcels contain buildings and associated landscape features (i.e., wood, rock and masonry block retaining walls, fences, patios, gardens, etc.), including the properties at 804, 806 and 808 Alameda De Las Pulgas (APNs 050-220-020, 050-220-170, and 050-220-160); and APN 049-360-060, at the west end of the Project Area, is vacant. There are also three entrances into the property off Alameda de las Pulgas. Of these, the southernmost entrance consists of two main driveways that are used to access the three houses within the Project Area and a third driveway that is used to access the lower, vacant portion of the eastern Project Area where the Black Mountain Spring Water Company bottling facility building was once located (Figure 36). The two main driveways are narrow and paved, with one serving as an entrance road and one serving an exit road. They run east/west and parallel to each other uphill at different elevations, with a swath of vegetation between them, for a distance of approximately 720 feet before merging into a single driveway that continues uphill in a northwest/southeast direction for another 640 feet before terminating at the residence at 808 Alameda de las Pulgas. The exit driveway is supported on the south (uphill) side by a low masonry block wall. The third driveway at the first entry point is paved and heads northwest for approximately 30 feet to a double gate that is flanked by two brick pillars and a brick fence that continues along the eastern boundary of the Project Area (Figure 37).

The two other entrance driveways into the property are also along Alameda de las Pulgas and access the lower, vacant portion of the eastern Project Area where the Black Mountain Spring Water Company botting facility was once located. One driveway is situated at the northeast corner of the Project Area and the other is approximately 140 feet to the south (Figure 38). The driveway at the northeast corner of the Project Area heads uphill into the property for approximately 60 feet and is paved and supported on the west by a two- to four-foot-high masonry block wall; there is also a concrete culvert with a corrugated metal pipe at the north end of the driveway that is used to drain water from the adjacent hillside. The driveway located 140 feet to the south heads up the hill into the property for approximately 25 feet to a gate, flanked by two brick pillars, which is part of the same brick fence located along the eastern boundary of the Project Area). This driveway is paved and supported on the northwest by a low masonry block wall.

A mixed strategy was used to complete the field survey of the Project Area and consisted of both linear transects spaced approximately five meters apart in the open and vacant portions of the Project Area, and meandering transects spaced approximately five to seven meters apart in the location of the three residences. Slopes greater than 30 percent were not surveyed. The ground visibility throughout the Project Area varied from 10 to 50 percent due to the presence of buildings, pavement, and vegetation. In the areas where the soil was visible and exposed, the soil consisted of light yellowish-brown silty loam that contained small gravels (less than 5 centimeters) and pebbles (5-10 centimeters) of basalt, schist, quartz, and other rock types.

Figure 36: Main access into the Project Area off Alameda de las Pulgas showing the exit driveway (left), entrance driveway (center) and driveway leading to the vacant portion of the eastern Project Area where the Black Mountain Spring Company building was located, facing west/northwest.

Figure 37: Overview of the eastern portion of the Project Area showing the double entrance gate and brick fence along the eastern Project Area, facing southeast.

Figure 38: Overview of the northeastern portion of the Project Area with the two red arrows pointing to the other two entrance driveways, facing northeast.

Figure 39: Overview of the south-central portion of the Project Area, facing east.

Figure 40: Overview of 804 Alameda de las Pulgas, facing northeast.

Figure 41: Overview of 806 Alameda de las Pulgas, facing northeast.

Figure 42: Overview of the northwestern portion of the Project Area within APN 049-360-060, facing east.

Figure 43: Overview of the south-central portion of the western Project Area within APN 049-360-060, facing west.

CULTURAL RESOURCES OBSERVED

Cultural resources were observed within the Project Area, including historic built environment resources and historic-period artifacts and features. The built environment resources within the properties at 804 Alameda de las Pulgas (APN 050-220-020), 806 Alameda de las Pulgas (APN 050-220-170) and 808 Alameda de las Pulgas (APN 050-220-160) are described and evaluated within the HRE report prepared by EDS Architectural Historian Stacey De Shazo (De Shazo 2021). The cultural resources identified and described herein include 18 historic-period artifacts and 11 historic-period features associated with the former Black Mountain Spring Water Company that occupied the Project Area from 1939 to ca. 2001, and 3 historic-period features and 2 historic-period artifacts that represent general use of the Project Area. These artifacts and features are described below, and their locations are shown on the map in Figure 57.

Historic-period Artifacts and Features Associated with Black Mountain Spring Water

- **Features:**
    - Ca. 1937 water conveyance tunnel that is accessed via a set of nine concrete steps and bordered on the west by a circular driveway The ca. 1937 water conveyance tunnel is an "engineered" tunnel designed to allow the spring water to flow downhill utilizing gravity. The tunnel, which appears to be hand-dug, is constructed of concrete; however, the inner walls of the tunnel have been applied with shotcrete, likely to reinforce the tunnel walls. The tunnel outlet is a segmental headwall constructed of brick masonry laid out in row lock and running bond pattern, topped with a header. Figure 44 below provides measurements of the feature. Photos are provided in **Error! Reference source not found.**, **Error! Reference source not found.**, Figure 47, and Figure 48.

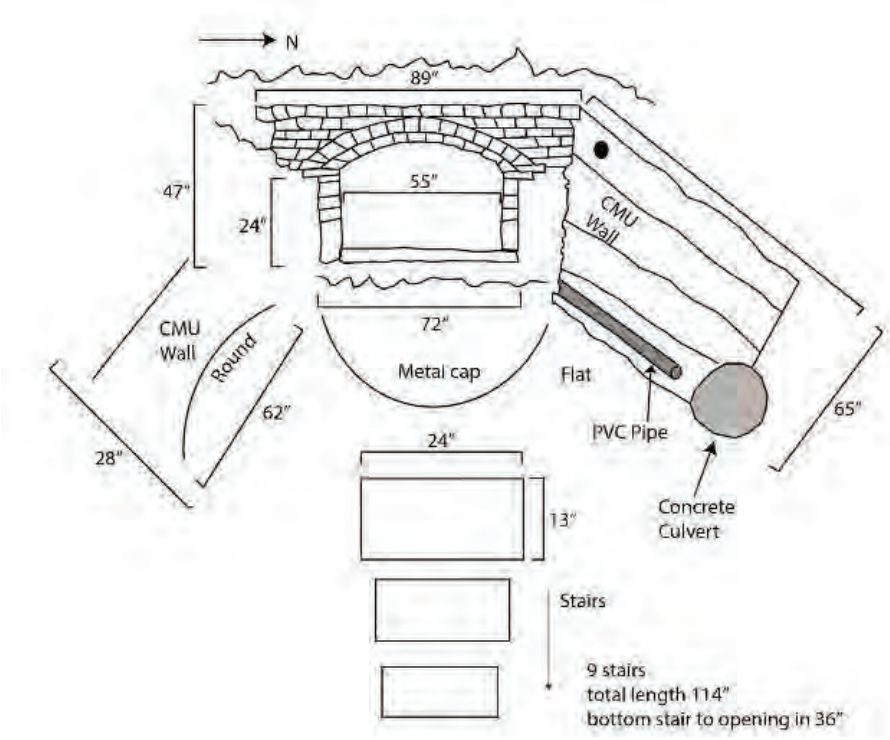

Figure 44: Sketch map showing measurements of the ca. 1937 water conveyance opening and tunnel.

- Three fenced-off openings in the ground along an existing underground storm drain,[11] the westernmost one of which is lined with red brick and mortar and partly covered with a steel plate (Figure 49 and Figure 50), and the others consist of a concrete enclosure covered with a metal grate.
- Two depressions in the ground. One is approximately 25 feet in diameter and five feet deep, with a metal maintenance hole cover at the bottom (Figure 51). The other is approximately five feet in diameter and one and a half feet deep (Figure 52). There is also a sinkhole two feet to the north of the small depression that extends partly under the brick fence along the eastern property boundary.
- A concrete structure located along the south side of the driveway, across (south of) from the gated entrance to the house at 806 Alameda de las Pulgas (Figure 53). The structure faces north/northwest with the south/southeast side against the hill. It measures 72 inches long, 72 inches wide, 88 inches high along the back wall (against hillside), and the threshold along the front is 12 inches tall and 14 inches thick. The thickness of poured concrete walls is 6 inches. There is a round opening along the east side of the south wall that is 9 inches in

[11] The existing storm drain appears to have been constructed sometime after 1952, the year that major flooding in San Carlos occurred, and "listed as a trouble spot in flood control was the area above Alameda de las Pulgas, according to city administrator Harry L. Grant, where debris and water rushes down from Three Sisters ranch and Black Mountain Water company" (The Times 1952).

diameter and covered with two pieces of flat stock steel placed vertically on either side of the opening that are bolted to the concrete, with two short sections of rebar placed horizontally across the opening that are welded to the steel plates. The opening is clogged with a log and stones (Figure 54). The structure appears to be a concrete spring structure that allowed spring water to flow through the opening and possibly into containers.

- Brick fence that borders the Project Area on the east and three main entrances off Alameda de las Pulgas associated with the former Black Mountain Spring Water Company facility.

- **Artifacts**
  - One Black Mountain Spring Water Company white plastic bottle, approximately 10 blue-colored, tearable, plastic, sealing lids and Cap Snap Seal bottle caps, and one plastic water cooler nozzle; all post-1960 (Figure 55).
  - One fragment of colorless bottle glass (undated).
  - Two fragments of light green bottle glass (undated).
  - One fragment of aqua colored bottle glass (undated).
  - One fragment of colorless glass from a 5-gallon Black Mountain Spring carboy. Likely manufactured by Owens-Illinois Inc. between 1940 and 1965 (Figure 56).
  - An approximate three-foot-long segment of a metal water pipe (undated).

Figure 45: Photograph of the water conveyance tunnel opening, facing west.

Figure 46: Photograph of the water conveyance tunnel opening, facing northwest.

Figure 47: Water conveyance tunnel, facing west.

Figure 48: Circular drive on the west side of water conveyance tunnel, facing southeast.

Figure 49: The fenced-off, brick-lined opening leading to an underground storm drain, facing south.

Figure 50: View of the brick-lined sidewall of the storm drain opening.

Figure 51: Depression with a metal maintenance hole cover at the center, facing northwest.

Figure 52: Small round depression (right) with a sinkhole on the north (left), facing east.

Figure 53: Concrete structure in the hillside along the south side of the main driveway, facing south.

Figure 54: Piped opening along the back wall of concrete spring structure, facing south.

Figure 55: (left to right): 3 tearable bottle cap plastic seals, 1 Cap Snap Seal plastic cap, one plastic Black Mountain Water Spring Company water bottle, and one plastic water cooler nozzle; all post-1960.

Figure 56: Fragment of a Black Mountain Spring Water five-gallon glass carboy container. Manufactured by Owens-Illinois Inc. between 1940 and 1965.

Historic-period Artifacts and Features Representing General Use of the Project Area

- **Features**
  - Old sewer line exposed and eroding from the north-facing hillside (hillside is somewhat terraced) near the entrance to the property.
  - Two trees with rock circles. One is 100 inches in diameter (northwestern-most) and the other is 180 inches east/west by 160 inches north/south.
- **Artifacts**
  - One pull tab Anheuser-Busch beer can, post-1962.
  - One segment of a vitrified clay utility pipe broken into 10 fragments, unknown date.

Figure 57: Map showing the locations of the historic-period artifacts and features identified within the Project Area.

SIGNIFICANCE EVALUATION

The 18 historic-period artifacts and 11 historic-period features identified during the survey are the remaining remnants of the former Black Mountain Spring Water Company that occupied the Project Area from 1939 to ca. 2001. As such, EDS completed an evaluation of what remains of the Black Mountain Spring Water Company facility to determine if the resource meets one or more of the CRHR criteria and retains integrity, or if any of the artifacts or features are unique archaeological resources. The three historic-period features and two historic-period artifacts representing the general use of the Project Area during the twentieth century are not considered potentially significant archaeological resources.

CRHR ELIGIBILITY

Criterion 1 (Event): ***Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage*****.**

The 18 historic-period artifacts and 11 historic-period features are remnants of the Black Mountain Spring Water Company that operated within the Project Area between 1939 and 2001 (period of significance for the event). The Black Mountain Spring Water Company was established in 1937 in San Mateo and was moved to the Project Area in 1939 by George Washington Faulstich, who discovered a source of freshwater within the Project Area and began to extract and bottle the water for sale. The Black Mountain Spring Water Company was highly successful in the bottled water industry during the last half of the twentieth century. By the 1980s, the company was supplying bottled water to more than 17,000 families, as well as businesses and factories, in nine Bay Area counties, serving customers as far north as Santa Rosa and as far south as Gilroy (The San Francisco Examiner 1984). By 1991, the company had become the largest independently-owned bottled water company in the U.S., serving more than 75,000 homes and businesses in the Bay Area and available in stores across the western U.S. By 2000, the company was ranked second in the home and office water delivery market in Northern California with a strong market density and share (Nestle 2000). In 2001, the Faulstich family sold the company to Nestle for $100 million (Black Mountain Properties, LLC 2021; Dailey 2020; The San Francisco Examiner 1990). In addition to water bottling and delivery, the company also invented several water and milk-packing products that made significant contributions to processing technologies were used throughout the U.S. In 1964, George and his grandson, Joseph Bullock Jr., invented and patented the “Cap Snap Seal”, which was the world's first leak-proof, tamper-proof, snap-on plastic bottle cap, and in 1965, George invented and patented the tearable bottle cap that was used on five-gallon water containers. Eventually, the company held more than 30 patents on water and milk-packing products and processing technologies that were used throughout the U.S. (Dailey 2020; Veronico and Veronico 2007).

The development and operation of the Black Mountain Spring Water Company within the Project Area and the company’s patents on water and milk-packing products and processing technologies are events that made a significant contribution to the broad patterns of California and local history. As such, the Black Mountain Spring Company appears eligible for listing in the CRHR under Criterion 1; however, the remnant of the Black Mountain Spring Water Company, including the 18 historic-period artifacts and 11 historic-period features, does not have the ability to convey association with this event due to lack of integrity (see Integrity section below).

Criterion 2 (Person): *Is associated with the lives of persons important in our past*.

The Black Mountain Spring Water Company was owned by George Washington Faulstich from 1937 to when he died in 1981, afterward it was run by his grandson, Joseph Bullock Jr. George achieved importance as an entrepreneur in the early bottled water business, and along with his grandson Joseph, invented several water and milk-packing products that made significant contributions to processing technologies used throughout the U.S. In 1964, George and Joseph, invented and patented the "Cap Snap Seal", which was the world's first leak-proof, tamper-proof, snap-on plastic bottle cap, and in 1965, George invented and patented the tearable bottle cap that was used on five-gallon water containers. Eventually, the company held more than 30 patents on water and milk-packing products and processing technologies that were used throughout the U.S. (Dailey 2020; Veronico and Veronico 2007).

The Black Mountain Spring Water Company is associated with the lives of a person important in our past, namely George Washington Faulstich, founder of the Black Mountain Spring Company and holder of more than 30 patents on water and milk-packing products and processing technologies; therefore, the Black Mountain Spring Water Company appears eligible for listing in the CRHR under Criterion 2 with a period of significance dating from 1937, when George founded the company, to 1981, when he died. However, the Black Mountain Spring Water Company facility previously located within the Project Area does not have the ability to convey association with George Washington Faulstich due to lack of integrity (see Integrity section below).

Criterion 3 (Construction/Architecture): *Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values*.[12]

Of the 11 historic-period features, the ca. 1937 water conveyance tunnel is an "engineered" tunnel designed to allow the spring water to flow downhill utilizing gravity. The tunnel, which appears to be hand-dug, is constructed of concrete; however, the inner walls of the tunnel have been applied with shotcrete, likely to reinforce the tunnel walls. The shotcrete does not appear to be original to the construction of the tunnel. The tunnel outlet is a segmental headwall constructed of brick masonry laid out in row lock and running bond pattern, topped with a header.

While the water conveyance tunnel appears to have been originally hand-dug in ca. 1937 and represents perseverance, hard work, and competent engineering on the part of George Washington Faulstich, it cannot be considered the work of a master or a feature that possesses high artistic value. Moreover, due to lack of integrity (see Integrity section below), the ca. 1937 water conveyance tunnel is not individually eligible for the CRHR under Criterion 3.

Criterion 4 (Information Potential): *Has yielded, or may be likely to yield, information important in prehistory or history*.

[12] The evaluation of the ca. 1937 water conveyance tunnel under Criterion 3 was completed by EDS principal Architectural Historian Stacey De Shazo.

The 18 historic-period artifacts and 11 historic-period features that are remnants of the Black Mountain Spring Water Company do not appear to have the ability to contribute additional information about the Black Mountain Spring Water Company that is not already available in the historical literature.

Therefore, the 18 historic-period artifacts and 11 historic-period features do not appear eligible for listing in the CRHR under Criterion 4; however, the Project Area has the potential to contain additional archaeological remnants of the Black Mountain Spring Water Company that may have the ability to contribute information about the Black Mountain Spring Water Company that is not available in the historical literature (see Recommendation Section).

Integrity

To qualify for listing in the CRHR, a resource must possess significance under one or more of the CRHR criteria and have historic integrity. Integrity is the authenticity of the resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. A resource must retain enough of its historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association.

The following is an assessment of integrity for the 18 historic-period artifacts and 11 historic-period features (remnants of the Black Mountain Spring Water Company) within the Project Area.[13]

- **Location:** the place where the historic property was constructed. *The Black Mountain Spring Water Company facility, including the 18 historic-period artifacts and 11 historic-period features present, including the water conveyance tunnel, retains integrity of location.*
- **Design:** the combination of elements that create the form, plans, space, structure, and style of the property. *The Black Mountain Spring Water Company facility does not appear to retain integrity of design. The water conveyance tunnel is an engineered element designed to carry water via gravity flow. The portion of the tunnel that was accessible consists of a segmental headwall constructed of brick masonry laid out in row lock and running bond pattern, topped with a header and a concrete tunnel covered in shotcrete, which was applied in the 1970s or 1980s. The application of the shotcrete was a significant change to the design. As such, the water conveyance tunnel does not appear to retain integrity of the engineered design.*
- **Setting:** addresses the physical environment of the historic property inclusive of the landscape and spatial relationships of the building(s). *The Black Mountain Spring Water Company facility does not appear to retain integrity of setting, as all the buildings and most infrastructure associated with the company have been demolished and are no longer extant. The water conveyance tunnel is one of the very few features that remains within the Project Area associated with the Black Mountain Spring Water Company, but this is not enough for the resource to retain integrity of setting.*
- **Materials:** the physical elements that were combined or deposited during a particular period of time

[13] The integrity analysis as it relates to the ca. 1937 water conveyance tunnel was completed by EDS principal Architectural Historian Stacey De Shazo.

and in a particular pattern of configuration to form the historic property. *The Black Mountain Spring Water Company facility does not retain integrity of materials, as all the buildings and most infrastructure associated with the company have been demolished and are no longer present. The water conveyance tunnel retains some original materials including the brick masonry; however, the concrete walls of the tunnel were applied with shotcrete in the 1970s or 1980s. In addition, there appears to be an additional material underneath the shotcrete that was added to ensure the shotcrete would adhere to the tunnel walls. Thus the concrete, which is the most significant material of the tunnel, is likely present; however it is likely significantly damage. Thus, the water conveyance tunnel does not appear to retain integrity of the materials.*

- **Workmanship:** the physical evidence of the crafts of a particular culture or people during any given period in history. *The Black Mountain Spring Water Company facility does not retain integrity of workmanship, as all the buildings and most infrastructure associated with the company have been demolished and are no longer present. The water conveyance tunnel retains workmanship related to the exterior brick masonry segmented arched opening; however, the workmanship of the majority of the interior portion of the tunnel cannot be verified due to inaccessibility, and the portion that is accessible is covered in shotcrete. Thus, the water conveyance tunnel does not appear to retain integrity of the workmanship.*

- **Feeling:** the property's expression of the aesthetic or historic sense of a particular period of time. *The Black Mountain Spring Water Company facility does not retain integrity of feeling, as all the buildings and most infrastructure associated with the company have been demolished and are no longer present. The water conveyance tunnel from the exterior does convey a feeling of a water conveyance tunnel constructed in ca. 1937; however, the interior of the tunnel has modified so that it no longer conveys a feeling from ca. 1937.*

- **Association** is the direct link between an important historic event or person and a historic property. *The Black Mountain Spring Water Company facility does not retain integrity of association as a water bottling facility, or its association with George Washington Faulstich, as all the buildings and most infrastructure associated with the company have been demolished and are no longer extant. The water conveyance tunnel also does not retain integrity of association with the Black Spring Mountain Water as there is no physical indication that the tunnel is associated with the company, such as plaques or markers, and the surrounding buildings and infrastructure are no longer present. Thus, the water conveyance tunnel does not appear to retain integrity of the association either.*

Summary of CRHR Evaluation

EDS completed an evaluation of the Black Mountain Spring Water Company facility that occupied the Project Area from 1939 to ca. 2001. to determine if the resource as a whole meet one or more of the CRHR criteria and regains integrity. The evaluation determined that the resource appears to qualify under CRHR criteria 1 and 2 but does not retain enough of its historic character or appearance to be recognizable as historical resources and to convey the reasons for its significance; therefore, the resource is not eligible for listing on the CRHR.

UNIQUE ARCHAEOLOGICAL RESOURCE ELIGIBILITY

A unique archaeological resource is defined as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the three criteria:

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

The 18 historic-period artifacts and 11 historic-period features that are the remnants of the former Black Mountain Spring Water Company that occupied the Project Area from 1939 to ca. 2001 do not contain information needed to answer any important scientific research questions in which there is a demonstratable public interest in, do not have any special or particular qualities, such as being the oldest type or the best available example of its type, and are not directly associated with a scientifically recognized important prehistoric or historic event or person. Therefore, the remaining remnants of the former Black Mountain Spring Water Company are not considered to be unique archaeological resources.

CONCLUSIONS

In accordance with CEQA and the Guidelines for Implementing CEQA (14 CCR Section 15064.5), EDS completed an archaeological study to determine if the proposed Project will have any direct impacts to historical resources, unique archaeological resources or cultural resources that could be considered tribal cultural resources. The methods used to complete the Archaeological Study included a record search at the NWIC, a literature review of relevant information pertaining to the prehistory, history, and ethnohistory of the Project Area and vicinity, a Native American Sacred Lands inventory and Tribal outreach, and a field survey of the Project Area.

The archaeological study resulted in the identification 18 historic-period artifacts and 11 historic-period features that are the remnants of the former Black Mountain Spring Water Company that occupied the Project Area from 1939 to ca. 2001, as well as 3 historic-period features and 2 historic-period artifacts that represent general use of the Project Area during the twentieth century. The 3 historic-period features and 2 historic-period artifacts are not considered potentially significant archaeological resources and were not evaluated for the CRHR or documented on DPR 523 forms. However, an evaluation was completed for the Black Mountain Spring Water Company in order to determine if the remnants identified are part of a resource that is eligible for the CRHR. The CRHR evaluation found that the Black Mountain Spring Water Company appears to meet Criterion 1 and Criterion 2 of the CRHR but does not retain enough of its historic character or appearance to be recognizable as historical resources and to convey the reasons for its significance; therefore, the resource is not eligible for listing on the CRHR and is not considered a historical resource under CEQA. The ca. 1937 water conveyance tunnel was also evaluated as an individual resource under criterion 3 of the CRHR because it is an “engineered” tunnel designed to allow the spring water to flow downhill utilizing gravity. The evaluation of the ca. 1937 water conveyance tunnel was completed by EDS Principal Architectural

Historian Stacey De Shazo. The resource was determined ineligible for individual listing on the CRHR under Criterion 3 and is therefore not considered a historical resource under CEQA.

EDS also assessed the potential for the Project Area to contain buried archaeological resources that could be encountered during Project-related ground-disturbing activities. It was determined that the Project Area has a low potential/sensitivity for buried prehistoric archaeological resources, and a high potential to contain buried historic-period archaeological resources, including archaeological deposits and features associated with the former Black Mountain Spring Water Company that could be considered historically significant.

RECOMMENDATIONS

EDS has provided the following recommendations due to the high potential to encounter buried historic-period archaeological resources within the Project Area during Project-related ground-disturbing activities.

Archaeological Resource Awareness Training: EDS recommends that Project supervisors, contractors, and equipment operators are familiarized with the types of artifacts and features that could be encountered during Project-related ground-disturbing activities, as well as the procedures to follow if archaeological resources are unearthed during construction and an archaeologist is not present. To accomplish this, a Secretary of Interior-qualified archaeologist should conduct an Archeological Resource Awareness Training prior to commencement of Project-related ground-disturbing activities in order to familiarize the team who will be conducting ground-disturbing activities (including sub-contractors) with the potential to encounter prehistoric or historic-era archaeological deposits or artifacts, the types of archaeological material that could be encountered within the Project Area, and procedures to follow if archaeological deposits and/or artifacts are observed during construction.

Archaeological Monitoring: Due to the potential for the Project Area to contain additional artifacts and features associated with the Black Mountain Spring Water Company, which may have the ability to contribute information important about history, EDS recommends that a Secretary of Interior qualified archaeologist is retained to provide archaeological monitoring for Project-related ground-disturbing activities within the eastern half of the Project Area. The archaeological monitor shall be empowered to halt construction activities at the location of a discovery to review possible archaeological material and to protect the resource while the find is being assessed. Monitoring shall continue until, in the archaeologist's judgment, archaeological resources are not likely to be encountered. A report shall also be prepared to document negative findings after construction is completed if no archaeological resources are discovered during construction.

If an archaeological deposit is encountered during project activities, all work within 50 feet of the discovery shall be redirected until the archaeologist assesses the find, consults with agencies as appropriate, and makes recommendations for the treatment of the discovery. If avoidance of the archaeological deposit is not feasible, the archaeological deposit shall be evaluated for its eligibility for listing in the CRHR. If the deposit is not eligible, mitigation is not necessary. If the deposit is eligible, adverse impacts shall be mitigated. Mitigation may include excavation of the archaeological deposit in accordance with the California Office of Historic Preservation guidelines, such as data recovery using standard archaeological field methods and procedures; laboratory and technical analyses of recovered archaeological materials; preparation of a report detailing the methods, findings, and significance of the archaeological site and associated materials; and

accessioning of archaeological materials and a technical data recovery report at a curation facility. Upon completion of the assessment, the archaeologist shall prepare a report to document the methods and results of the assessment. The report shall be submitted to the Project applicant, City of San Carlos and the NWIC upon completion of the resource assessment. It is anticipated that the implementation of this recommendation will reduce or eliminate adverse impacts to historical resources or unique archaeological resources if discovered during construction.

If human remains are encountered within the Project Area, all work must stop within 100-feet of the discovery area, the area shall be secured to prevent further disturbance, and the San Mateo County Coroner must be notified immediately. It is very important that the suspected human remains, and the area around them, are undisturbed and the proper authorities are called to the scene as soon as possible, as it could be a crime scene. The Coroner will determine if the remains are pre-contact period Native American remains or of modern origin and if there are any further investigation by the Coroner/Sheriff is warranted. If the remains are suspected to be those of a pre-contact period Native American, the Coroner shall contact the NAHC by telephone within 24-hours. The NAHC will immediately notify the person it believes to be the most likely descendant (MLD) of the remains. The MLD has 48-hours to make recommendations to the landowner for treatment or disposition of the human remains. If the MLD does not make recommendations within 48-hours, the landowner shall reinter the remains in an area of the property secure from further disturbance. If the landowner does not accept the descendant's recommendations, the owner or the descendant may request mediation by NAHC. According to the California Health and Safety Code, six (6) or more human burials at one (1) location constitute a cemetery (Section 8100), and willful disturbance of human remains is a felony (Section 7052). An archaeologist should also be retained to evaluate the historical significance of the discovery, the potential for additional remains, and to provide further recommendations for treatment of the site in coordination with the MLD.

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APPENDIX A:

Native American Heritage Commission and Tribal Correspondence

November 5, 2020

Sacred Lands File & Native American Contacts List Request

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: Black Mountain Development Project - San Carlos, CA

County: San Mateo County

USGS Quadrangle Name: USGS 7.5' Woodside, Calif. (1991)

Township: 5 South **Range:** 4 West **Section(s):** un

Company/Firm/Agency: Evans & De Shazo, Inc.

Street Address: 1141 Gravenstein Highway S

City: Sebastopol, CA **Zip:** 95472

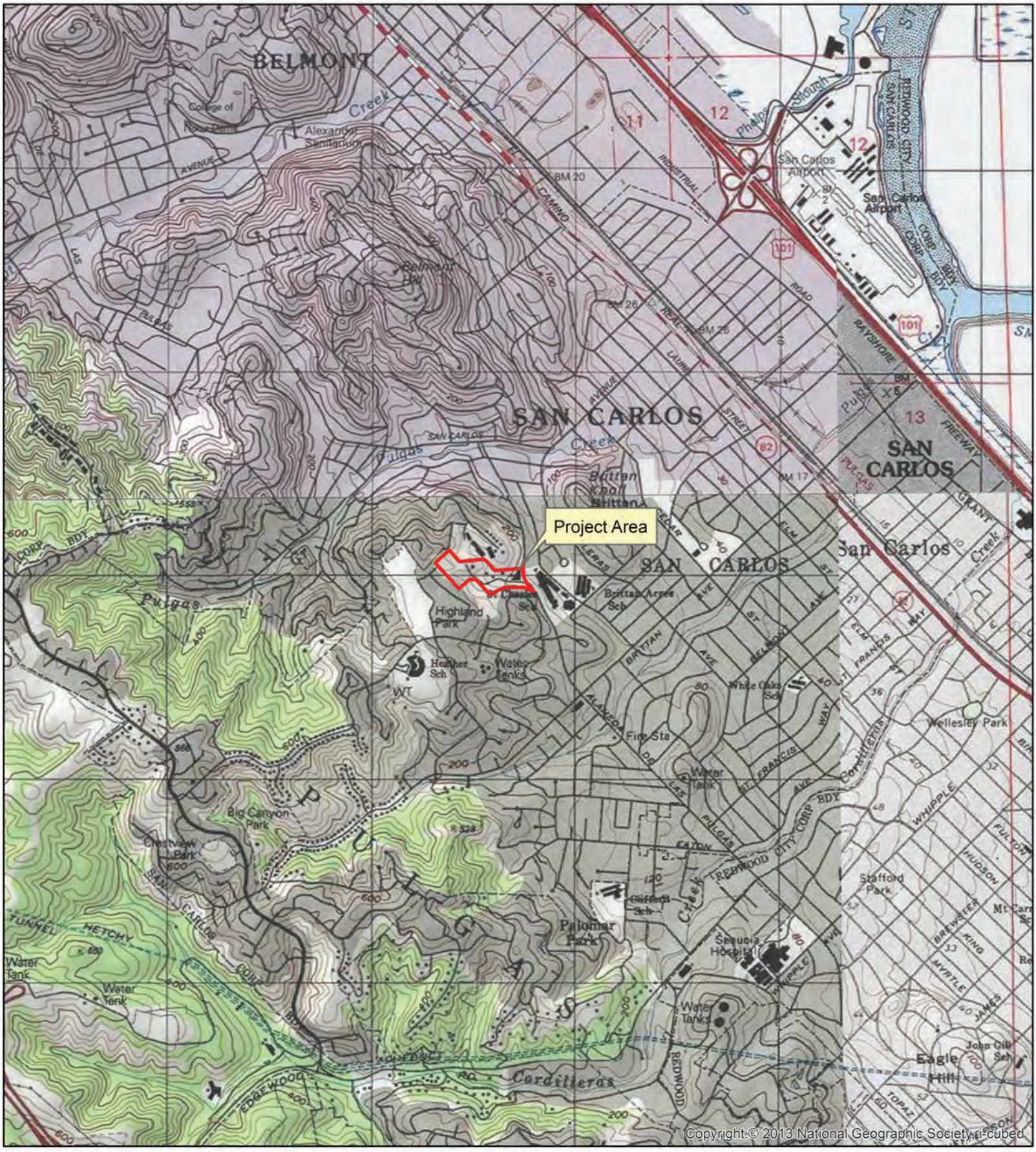
Phone: 707-484-9628

Fax:

Email: sally@evans-deshazo.com

Project Description:

The proposed Project includes the merging of four adjacent parcels (APN 049-360-060, APN 050-220-020, APN 050-220-170, and APN 050-220-160, into one parcel, demolishing three existing residential buildings and three associated buildings, and the construction of 68 attached townhouse units in 14 “clusters”, as well as reconfigured and new rights-of-way, new landscaping, a public walking trail and other recreational components, and erosion control elements. Approximately 3.7 acres of the 11.4-acre Project Area will remain undeveloped. The existing natural spring previously used by the former Black Mountain Spring Water Company will be transformed into one of three proposed biorentention areas. The proposed Project is subject to review under the California Environmental Quality Act (CEQA).



0 0.5 1 Miles

1:24,000

N

804, 806 & 808 Alameda De Las Pulgas
San Carlos, San Mateo County, California
APNs 049-360-060, 050-220-020, 050-220-170 & 050-220-160

USGS 7.5' Woodside, Calif. (1991)
Township 5 South | Range 4 West

Map Projection:
NAD 83 UTM Zone 10N

Legend

Project Area

Evans & De Shazo, Inc
Archaeology & Historic Preservation

SRE, 11/4/2020

NATIVE AMERICAN HERITAGE COMMISSION

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NAHC HEADQUARTERS
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nahc@nahc.ca.gov
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November 16, 2020

Sally Evans, MA, RPA, Principal Archaeologist, Cultural Resource Specialist
Evans & De Shazo, Inc.

Via Email to: sally@evans-deshazo.com
Cc: amahmutsuntribal@gmail.com

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Black Mountain Development – San Carlos Project, San Mateo County

Dear Ms. Evans:

Pursuant to Public Resources Code section 21080.3.1 (c), attached is a consultation list of tribes that are traditionally and culturally affiliated with the geographic area of the above-listed project. Please note that the intent of the AB 52 amendments to CEQA is to avoid and/or mitigate impacts to tribal cultural resources, (Pub. Resources Code §21084.3 (a)) ("Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.")

Public Resources Code sections 21080.3.1 and 21084.3(c) require CEQA lead agencies to consult with California Native American tribes that have requested notice from such agencies of proposed projects in the geographic area that are traditionally and culturally affiliated with the tribes on projects for which a Notice of Preparation or Notice of Negative Declaration or Mitigated Negative Declaration has been filed on or after July 1, 2015. Specifically, Public Resources Code section 21080.3.1 (d) provides:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The AB 52 amendments to CEQA law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction prior to receiving requests for notification of projects in the tribe's areas of traditional and cultural affiliation. The Native American Heritage Commission (NAHC) recommends, but does not require, early consultation as a best practice to ensure that lead agencies receive sufficient information about cultural resources in a project area to avoid damaging effects to tribal cultural resources.

The NAHC also recommends, but does not require 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 on or 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 section 6254.10.

3. The result of any Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was positive. Please contact the Amah Mutsun Tribal Band of Mission San Juan Bautista on the attached list for more information.

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 and a negative response to these searches does not preclude the existence of a tribal cultural resource. 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 can 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
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Tribal Consultation List
San Mateo County
11/16/2020

Amah MutsunTribal Band of Mission San Juan Bautista
Irenne Zwierlein, Chairperson
789 Canada Road — Costanoan
Woodside, CA, 94062
Phone: (650) 851 - 7489
Fax: (650) 332-1526
amahmutsuntribal@gmail.com

Costanoan Rumsen Carmel Tribe
Tony Cerda, Chairperson
244 E. 1st Street — Costanoan
Pomona, CA, 91766
Phone: (909) 629 - 6081
Fax: (909) 524-8041
rumsen@aol.com

Indian Canyon Mutsun Band of Costanoan
Kanyon Sayers-Roods, MLD Contact
1615 Pearson Court — Costanoan
San Jose, CA, 95122
Phone: (408) 673 - 0626
kanyon@kanyonkonsulting.com

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28 — Costanoan
Hollister, CA, 95024
Phone: (831) 637 - 4238
ams@indiancanyon.org

Muwekma Ohlone Indian Tribe of the SF Bay Area
Monica Arellano,
20885 Redwood Road, Suite 232 — Costanoan
Castro Valley, CA, 94546
Phone: (408) 205 - 9714
marellano@muwekma.org

Muwekma Ohlone Indian Tribe of the SF Bay Area
Charlene Nijmeh, Chairperson
20885 Redwood Road, Suite 232 — Costanoan
Castro Valley, CA, 94546
Phone: (408) 464 - 2892
cnijmeh@muwekma.org

The Ohlone Indian Tribe
Andrew Galvan,
P.O. Box 3388 — Bay Miwok
Fremont, CA, 94539 — Ohlone
Phone: (510) 882 - 0527 — Patwin
Fax: (510) 687-9393 — Plains Miwok
chochenyo@AOL.com

This list is current only as of the date of this document. 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 and section 5097.98 of the Public Resources Code.

This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed Black Mountain Development – San Carlos Project, San Mateo County.

EVANS & DE SHAZO, INC
ARCHAEOLOGY HISTORIC PRESERVATION

1141 Gravenstein Highway South
Sebastopol, CA 95472
Tel. 707-823-7400
www.evans-deshazo.com

December 2, 2020

Ms. Ann Marie Sayers, Chairperson
Indian Canyon Mutsun Band of Costanoan
P.O. Box 28
Hollister, CA 95024

RE: Proposed Alameda de las Pulgas Townhomes Project, San Carlos, San Mateo County, California

Dear Ms. Sayers,

Evans & De Shazo, Inc. (EDS) was retained to complete an Archaeological Study for the proposed Alameda de las Pulgas Townhomes project (Project) within four adjacent parcels totaling 11.4-acre located off Alameda De Las Pulgas in San Carlos, San Mateo County, California, including Assessor Parcel Number (APN) 049-360-060 (no associated street address), APN 050-220-020 at 804 Alameda De Las Pulgas, APN 050-220-170 at 806 Alameda De Las Pulgas, and APN 050-220-160 at 808 Alameda De Las Pulgas (Project Area; map attached). The proposed Project includes merging the four parcels into one parcel, demolishing the three residential buildings and three associated buildings and landscapes, and constructing 68 attached townhouse units in 14 "clusters" with up to five units each, as well as reconfigured and new rights-of-way, new landscaping, a public walking trail and recreational components, and erosion control elements; and approximately 3.7 acres of the 11.4-acre Project Area will remain undeveloped. The natural spring used by the former Black Mountain Spring Water Company will be transformed into one of three proposed biorentention areas. The proposed Project is subject to review under the California Environmental Quality Act (CEQA).

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Thank you in advance for taking the time to review this request for information and consultation. I look forward to hearing from you at your earliest convenience.

Respectfully,

Sally Evans, M.A., RPA
Principal Archaeologist
(707) 484-9628 mobile
sally@evans-deshazo.com

Gmail

Sally Evans <sally@evans-deshazo.com>

Archaeological Study - Proposed Black Mountain Development, San Carlos, CA

1 message

Sally Evans <sally@evans-deshazo.com> Tue, Dec 1, 2020 at 7:09 AM
To: Amah Mutsun <amahmutsuntribal@gmail.com>

Dear Zwierlein,

Evans & De Shazo, Inc. (EDS) was retained to complete an Archaeological Study for the proposed Black Mountain Property Development project (Project) within four adjacent parcels totaling 11.4-acre located off Alameda De Las Pulgas in San Carlos, San Mateo County, California, including Assessor Parcel Number (APN) 049-360-060 (no associated street address), APN 050-220-020 at 804 Alameda De Las Pulgas, APN 050-220-170 at 806 Alameda De Las Pulgas, and APN 050-220-160 at 808 Alameda De Las Pulgas (Project Area; map attached). The proposed Project includes merging the four parcels into one parcel, demolishing the three residential buildings and three associated buildings and landscapes, and constructing 68 attached townhouse units in 14 "clusters" with up to five units each, as well as reconfigured and new rights-of-way, new landscaping, a public walking trail and recreational components, and erosion control elements; and approximately 3.7 acres of the 11.4-acre Project Area will remain undeveloped. The natural spring used by the former Black Mountain Spring Water Company will be transformed into one of three proposed biorentention areas. The proposed Project is subject to review under the California Environmental Quality Act (CEQA).

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Respectfully,

Sally Evans

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Sally Evans, M.A., RPA | *Principal Archaeologist / Cultural Resource Specialist*
Evans & De Shazo, Inc. - Archaeology ▪ Historic Preservation

Main Office: 1141 Gravenstein Hwy S | Sebastopol | CA | 95472 |
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http://www.evans-deshazo.com/

Project Location Map.pdf
14077K

Gmail

Sally Evans <sally@evans-deshazo.com>

Archaeological Study - Proposed Black Mountain Development, San Carlos, CA

1 message

Sally Evans <sally@evans-deshazo.com> Tue, Dec 1, 2020 at 7:14 AM
To: kanyon@kanyonkonsulting.com

Dear Kanyon Sayers-Roods,

Evans & De Shazo, Inc. (EDS) was retained to complete an Archaeological Study for the proposed Black Mountain Property Development project (Project) within four adjacent parcels totaling 11.4-acre located off Alameda De Las Pulgas in San Carlos, San Mateo County, California, including Assessor Parcel Number (APN) 049-360-060 (no associated street address), APN 050-220-020 at 804 Alameda De Las Pulgas, APN 050-220-170 at 806 Alameda De Las Pulgas, and APN 050-220-160 at 808 Alameda De Las Pulgas (Project Area; map attached). The proposed Project includes merging the four parcels into one parcel, demolishing the three residential buildings and three associated buildings and landscapes, and constructing 68 attached townhouse units in 14 "clusters" with up to five units each, as well as reconfigured and new rights-of-way, new landscaping, a public walking trail and recreational components, and erosion control elements; and approximately 3.7 acres of the 11.4-acre Project Area will remain undeveloped. The natural spring used by the former Black Mountain Spring Water Company will be transformed into one of three proposed biorentention areas. The proposed Project is subject to review under the California Environmental Quality Act (CEQA).

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Gmail

Sally Evans <sally@evans-deshazo.com>

Archaeological Study - Proposed Black Mountain Development, San Carlos, CA

1 message

Sally Evans <sally@evans-deshazo.com> Tue, Dec 1, 2020 at 7:11 AM
To: ams@indiancanyon.org

Dear Ms. Sayers,

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Project Location Map.pdf

Gmail

Sally Evans <sally@evans-deshazo.com>

Archaeological Study - Proposed Black Mountain Development, San Carlos, CA

1 message

Sally Evans <sally@evans-deshazo.com> Tue, Dec 1, 2020 at 7:12 AM
To: cnijmeh@muwekma.org

Dear Ms. Nijmeh,

Evans & De Shazo, Inc. (EDS) was retained to complete an Archaeological Study for the proposed Black Mountain Property Development project (Project) within four adjacent parcels totaling 11.4-acre located off Alameda De Las Pulgas in San Carlos, San Mateo County, California, including Assessor Parcel Number (APN) 049-360-060 (no associated street address), APN 050-220-020 at 804 Alameda De Las Pulgas, APN 050-220-170 at 806 Alameda De Las Pulgas, and APN 050-220-160 at 808 Alameda De Las Pulgas (Project Area; map attached). The proposed Project includes merging the four parcels into one parcel, demolishing the three residential buildings and three associated buildings and landscapes, and constructing 68 attached townhouse units in 14 "clusters" with up to five units each, as well as reconfigured and new rights-of-way, new landscaping, a public walking trail and recreational components, and erosion control elements; and approximately 3.7 acres of the 11.4-acre Project Area will remain undeveloped. The natural spring used by the former Black Mountain Spring Water Company will be transformed into one of three proposed biorentention areas. The proposed Project is subject to review under the California Environmental Quality Act (CEQA).

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Sally Evans <sally@evans-deshazo.com>

Archaeological Study - Proposed Black Mountain Development, San Carlos, CA

1 message

Sally Evans <sally@evans-deshazo.com> Tue, Dec 1, 2020 at 7:13 AM
To: Andy Galvan <chochenyo@aol.com>

Dear Mr. Galvan,

Evans & De Shazo, Inc. (EDS) was retained to complete an Archaeological Study for the proposed Black Mountain Property Development project (Project) within four adjacent parcels totaling 11.4-acre located off Alameda De Las Pulgas in San Carlos, San Mateo County, California, including Assessor Parcel Number (APN) 049-360-060 (no associated street address), APN 050-220-020 at 804 Alameda De Las Pulgas, APN 050-220-170 at 806 Alameda De Las Pulgas, and APN 050-220-160 at 808 Alameda De Las Pulgas (Project Area; map attached). The proposed Project includes merging the four parcels into one parcel, demolishing the three residential buildings and three associated buildings and landscapes, and constructing 68 attached townhouse units in 14 "clusters" with up to five units each, as well as reconfigured and new rights-of-way, new landscaping, a public walking trail and recreational components, and erosion control elements; and approximately 3.7 acres of the 11.4-acre Project Area will remain undeveloped. The natural spring used by the former Black Mountain Spring Water Company will be transformed into one of three proposed biorentention areas. The proposed Project is subject to review under the California Environmental Quality Act (CEQA).

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Sally Evans

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Sally Evans <sally@evans-deshazo.com>

Archaeological Study - Proposed Black Mountain Development, San Carlos, CA

1 message

Sally Evans <sally@evans-deshazo.com> Tue, Dec 1, 2020 at 7:10 AM
To: Tony Cerda <rumsen@aol.com>

Dear Mr. Cerda,

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Sally Evans <sally@evans-deshazo.com>

Archaeological Study - Proposed Black Mountain Development, San Carlos, CA

1 message

Sally Evans <sally@evans-deshazo.com> Tue, Dec 1, 2020 at 7:12 AM
To: "Monica V. Arellano" <marellano@muwekma.org>

Dear Ms. Arellano,

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Project Location Map.pdf

APPENDIX B:

Department of Parks and Recreation (DPR) 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

Page 1 **of** 13 ***Resource Name or #:** Black Mountain Spring Water Company (remnant)
P1. Other Identifier:

***P2. Location:** ■ **Not for Publication** □ **Unrestricted**

***a. County** San Mateo **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Woodside **Date** 1991 **T** 5S; **R** 4W; __ □ **of** __ □ **of Sec** Un; MD**B.M.**

c. Address 804, 806, 808 Alameda de las Pulgas (previous address: 800 Alameda de las Pulgas)
City San Carlos Zip 94070 UTM: Zone 10 , 564608 mE/ 4150191 mN NAD83

e. Other Locational Data: The resource is located within the properties at 804, 806 and 808 Alameda de las Pulgas north of Bauer Drive. The Assessor Parcel Numbers (APN) are 050-220-020, 050-220-170, 050-220-160, respectively. The majority of artifacts and features are located in the eastern portion of the property at 806 Alameda de las Pulgas within APN 050-220-170.

***P3a. Description:** The cultural resource described herein includes 11 historic-period features and 18 historic-period artifacts that are associated with the former Black Mountain Spring Water Company that occupied the properties from 1939 to ca. 2001, including a ca. 1937 "engineered" water conveyance tunnel designed to allow the spring water to flow downhill utilizing gravity (see Figures 1-4 on Continuation record). The tunnel, which appears to be hand-dug, is constructed of concrete; however, the inner walls of the tunnel have been applied with shotcrete, likely to reinforce the tunnel walls. The shotcrete does not appear to be original to the construction of the tunnel. The tunnel outlet is a segmental headwall constructed of brick masonry laid out in row lock and running bond pattern, topped with a header. (see Continuation record).

P5a. Photograph or Drawing

***P3b. Resource Attributes:** AH6. Water conveyance tunnel; AH11. Fences; AH15. Standing structure; AH7. Driveways; AH16. Other (artifacts)

***P4.Resources Present:** □Building ■Structure □Object ■Site □District □Element of District □Other

P5b. Description of Photo: Photograph of the ca. 1937 water conveyance tunnel opening, facing northwest

***P6. Date Constructed/Age and Source:** ■Historic □Prehistoric □Both
1939 – ca. 2001; various sources (i.e., historical maps, aerial photographs, literature)

***P7. Owner and Address:**

***P8. Recorded by:** Sally Evans, M.A., RPA and Stacey De Shazo, M.A, Evans & De Shazo, Inc., 1141 Gravenstein Highway S., Sebastopol, CA 95472

***P9. Date Recorded:** 12/10/2020

***P10. Survey Type:** Reconnaissance

***P11. Report Citation:** Evans, Sally (2021): Results of An Archaeological Study for the Alameda de las Pulgas Townhomes Project, at 804, 806 and 808 Alameda De Las Pulgas, San Carlos, San Mateo County, California.

***Attachments:** □NONE ■Location 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): Sketch map

(Continued from Primary Record)

The other 10 historic-period features that are associated with the former Black Mountain Spring Water Company include:

- Three fenced-off openings in the ground along an existing underground storm drain,[1] the westernmost one of which is lined with red brick and mortar and partly covered with a steel plate (Figure 5 and Figure 6), and the others consist of a concrete enclosure covered with a metal grate.
- Two depressions in the ground. One is approximately 25 feet in diameter and five feet deep, with a metal maintenance hole cover at the bottom (Figure 7). The other is approximately five feet in diameter and one and a half feet deep (Figure 8). There is also a sinkhole two feet to the north of the small depression that extends partly under the brick fence along the eastern property boundary.
- A concrete structure located along the south side of the driveway, across (south of) from the gated entrance to the house at 806 Alameda de las Pulgas (Figure 9). The structure faces north/northwest with the south/southeast side against the hill. It measures 72 inches long, 72 inches wide, 88 inches high along the back wall (against hillside), and the threshold along the front is 12 inches tall and 14 inches thick. The thickness of poured concrete walls is 6 inches. There is a round opening along the east side of the south wall that is 9 inches in diameter and covered with two pieces of flat stock steel placed vertically on either side of the opening that are bolted to the concrete, with two short sections of rebar placed horizontally across the opening that are welded to the steel plates. The opening is clogged with a log and stones (Figure 10). The structure appears to be a concrete spring structure that allowed spring water to flow through the opening and possibly into containers.
- A brick fence that borders the property on the east and three main entrances off Alameda de las Pulgas associated with the former Black Mountain Spring Water Company facility.

The 18 historic-period artifacts that are associated with the former Black Mountain Spring Water Company include:

- One Black Mountain Spring Water Company white plastic bottle, approximately 10 blue-colored, tearable, plastic, sealing lids and Cap Snap Seal bottle caps, and one plastic water cooler nozzle; all post-1960 (Figure 11).
- One fragment of colorless bottle glass (undated).
- Two fragments of light green bottle glass (undated).
- One fragment of aqua colored bottle glass (undated).
- One fragment of colorless glass from a 5-gallon Black Mountain Spring carboy. Likely manufactured by Owens-Illinois Inc. between 1940 and 1965 (Figure 12).
- An approximate three-foot-long segment of a metal water pipe (undated).

[1] The existing storm drain was constructed sometime after 1952, the year that major flooding in San Carlos occurred, and "listed as a trouble spot in flood control was the area above Alameda de las Pulgas, according to city administrator Harry L. Grant, where debris and water rushes down from Three Sisters ranch and Black Mountain Water company" (The Times 1952).

Figure 1: ca. 1937 water conveyance tunnel opening, facing west.

Figure 2: ca. 1937 water conveyance tunnel opening and access stairs, facing northwest.

Figure 3: ca. 1937 water conveyance tunnel, facing west.

Figure 4: Circular drive along the west side of the ca. 1937 water conveyance tunnel, facing southeast.

Figure 5: The fenced-off, brick-lined opening leading to an underground storm drain, facing south.

Figure 6: View of the brick-lined sidewall of the storm drain opening.

Figure 7: Depression with a metal maintenance hole cover at the center, facing northwest.

Figure 8: Small round depression (right) with a sinkhole on the north (left), facing east.

Figure 9: Concrete structure in the hillside along the south side of the main driveway, facing south.

Figure 10: Piped opening along the back wall of concrete spring structure, facing south.

Figure 11: (left to right): 3 tearable bottle cap plastic seals, 1 Cap Snap Seal plastic cap, one plastic Black Mountain Water Spring Company water bottle, and one plastic water cooler nozzle; all post-1960.

Figure 12: Fragment of a Black Mountain Spring Water five-gallon glass carboy container. Manufactured by Owens-Illinois Inc. between 1940 and 1965.

EVALUATION

The 11 historic-period features and 18 historic-period artifacts are the remaining remnants of the former Black Mountain Spring Water Company that occupied the property from 1939 to ca. 2001. As such, an evaluation of what remains of the Black Mountain Spring Water Company facility was completed to determine if the resource meets one or more of the California Register of Historical Resources (CRHR) criteria and retains integrity, or if any of the artifacts or features are unique archaeological resources.

CRHR ELIGIBILITY

Criterion 1 (Event): ***Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage*****.**

The 18 historic-period artifacts and 11 historic-period features are remnants of the Black Mountain Spring Water Company that operated within the property between 1939 and 2001 (period of significance for the event). The Black Mountain Spring Water Company was established in 1937 in San Mateo and was moved to the property in 1939 by George Washington Faulstich, who discovered a source of freshwater within and began to extract and bottle the water for sale. The Black Mountain Spring Water Company was highly successful in the bottled water industry during the last half of the twentieth century. By the 1980s, the company was supplying bottled water to more than 17,000 families, as well as businesses and factories, in nine Bay Area counties, serving customers as far north as Santa Rosa and as far south as Gilroy (The San Francisco Examiner 1984). By 1991, the company had become the largest independently-owned bottled water company in the U.S., serving more than 75,000 homes and businesses in the Bay Area and available in stores across the western U.S. By 2000, the company was ranked second in the home and office water delivery market in Northern California with a strong market density and share (Nestle 2000). In 2001, the Faulstich family sold the company to Nestle for $100 million (Black Mountain Properties, LLC 2021; Dailey 2020; The San Francisco Examiner 1990). In addition to water bottling and delivery, the company also invented several water and milk-packing products that made significant contributions to processing technologies that were used throughout the U.S. In 1964, George and his grandson, Joseph Bullock Jr., invented and patented the “Cap Snap Seal”, which was the world's first leak-proof, tamper-proof, snap-on plastic bottle cap, and in 1965, George invented and patented the tearable bottle cap that was used on five-gallon water containers. Eventually, the company held more than 30 patents on water and milk-packing products and processing technologies that were used throughout the U.S. (Dailey 2020; Veronico and Veronico 2007).

The development and operation of the Black Mountain Spring Water Company and the company’s patents on water and milk-packing products and processing technologies are events that made a significant contribution to the broad patterns of California and local history. As such, the Black Mountain Spring Company appears eligible for listing in the CRHR under Criterion 1; however, the remnant of the Black Mountain Spring Water Company, including the 18 historic-period artifacts and 11 historic-period features, does not have the ability to convey association with this event due to lack of integrity (see Integrity section below).

Criterion 2 (Person): ***Is associated with the lives of persons important in our past*.**

The Black Mountain Spring Water Company was owned by George Washington Faulstich from 1937 to when he died in 1981, afterward it was run by his grandson, Joseph Bullock Jr. George achieved importance as an entrepreneur in the early bottled water business, and along with Joseph, invented several water and milk-packing products that made significant contributions to processing technologies used throughout the U.S. In 1964, George and Joseph invented and patented the "Cap Snap Seal", which was the world's first leak-proof, tamper-proof, snap-on plastic bottle cap, and in 1965, George invented and patented the tearable bottle cap that was used on five-gallon water containers. Eventually, the company held more than 30 patents on water and milk-packing products and processing technologies that were used throughout the U.S. (Dailey 2020; Veronico and Veronico 2007).

The Black Mountain Spring Water Company is associated with the lives of a person important in our past, namely George Washington Faulstich, founder of the Black Mountain Spring Company and holder of more than 30 patents on water and milk-packing products and processing technologies; therefore, the Black Mountain Spring Water Company appears eligible for listing in the CRHR under Criterion 2 with a period of significance dating from 1937, when George founded the company, to 1981, when he died. However, what is left of the Black Mountain Spring Water Company facility does not have the ability to convey association with George Washington Faulstich due to lack of integrity (see Integrity section below).

Criterion 3 (Construction/Architecture): ***Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values*.**[2]

Of the 11 historic-period features, the ca. 1937 water conveyance tunnel is an "engineered" tunnel designed to allow the spring water to flow downhill utilizing gravity. The tunnel, which appears to be hand-dug, is constructed of concrete; however, the inner walls of the tunnel have been applied with shotcrete, likely to reinforce the tunnel walls. The shotcrete does not appear to be original to the construction of the tunnel. The tunnel outlet is a segmental headwall constructed of brick masonry laid out in row lock and running bond pattern, topped with a header.

While the water conveyance tunnel appears to have been originally hand-dug in ca. 1937 and represents perseverance, hard work, and competent engineering on the part of George Washington Faulstich, it cannot be considered the work of a master or a feature that possesses high artistic value. Moreover, due to lack of integrity (see Integrity section below), the ca. 1937 water conveyance tunnel is not individually eligible for the CRHR under Criterion 3.

[2] The evaluation of the ca. 1937 water conveyance tunnel under Criterion 3 was completed by EDS principal Architectural Historian Stacey De Shazo.

Criterion 4 (Information Potential): ***Has yielded, or may be likely to yield, information important in prehistory or history*****.**

The 18 historic-period artifacts and 11 historic-period features that are remnants of the Black Mountain Spring Water Company do not appear to have the ability to contribute additional information about the Black Mountain Spring Water Company that is not already available in the historical literature.

Therefore, the 18 historic-period artifacts and 11 historic-period features do not appear eligible for listing in the CRHR under Criterion 4.

Integrity

The following is an assessment of integrity for the 18 historic-period artifacts and 11 historic-period features (remnants of the Black Mountain Spring Water Company).[3]

- **Location:** the place where the historic property was constructed. *The Black Mountain Spring Water Company facility, including the 18 historic-period artifacts and 11 historic-period features present, including the water conveyance tunnel, retains integrity of location.*
- **Design:** the combination of elements that create the form, plans, space, structure, and style of the property. *The Black Mountain Spring Water Company facility does not appear to retain integrity of design. The water conveyance tunnel is an engineered element designed to carry water via gravity flow. The portion of the tunnel that was accessible consists of a segmental headwall constructed of brick masonry laid out in row lock and running bond pattern, topped with a header and a concrete tunnel covered in shotcrete, which was applied in the 1970s or 1980s. The application of the shotcrete was a significant change to the design. As such, the water conveyance tunnel does not appear to retain integrity of the engineered design.*
- **Setting:** addresses the physical environment of the historic property inclusive of the landscape and spatial relationships of the building(s). *The Black Mountain Spring Water Company facility does not appear to retain integrity of setting, as all the buildings and most infrastructure associated with the company have been demolished and are no longer extant. The water conveyance tunnel is one of the very few features that remains within the property associated with the Black Mountain Spring Water Company, but this is not enough for the resource to retain integrity of setting.*
- **Materials:** the physical elements that were combined or deposited during a particular period of time and in a particular pattern of configuration to form the historic property. *The Black Mountain Spring Water Company facility does not retain integrity of materials, as all the buildings and most infrastructure associated with the company have been demolished and are*

[3] The integrity analysis as it relates to the ca. 1937 water conveyance tunnel was completed by EDS principal Architectural Historian Stacey De Shazo.

no longer present. The water conveyance tunnel retains some original materials including the brick masonry; however, the concrete walls of the tunnel were applied with shotcrete in the 1970s or 1980s. In addition, there appears to be an additional material underneath the shotcrete that was added to ensure the shotcrete would adhere to the tunnel walls. Thus the concrete, which is the most significant material of the tunnel, is likely present; however it is likely significantly damage. Thus, the water conveyance tunnel does not appear to retain integrity of the materials.

- **Workmanship:** the physical evidence of the crafts of a particular culture or people during any given period in history. *The Black Mountain Spring Water Company facility does not retain integrity of workmanship, as all the buildings and most infrastructure associated with the company have been demolished and are no longer present. The water conveyance tunnel retains workmanship related to the exterior brick masonry segmented arched opening; however, the workmanship of the majority of the interior portion of the tunnel cannot be verified due to inaccessibility, and the portion that is accessible is covered in shotcrete. Thus, the water conveyance tunnel does not appear to retain integrity of the workmanship.*

- **Feeling:** the property's expression of the aesthetic or historic sense of a particular period of time. *The Black Mountain Spring Water Company facility does not retain integrity of feeling, as all the buildings and most infrastructure associated with the company have been demolished and are no longer present. The water conveyance tunnel from the exterior does convey a feeling of a water conveyance tunnel constructed in ca. 1937; however, the interior of the tunnel has modified so that it no longer conveys a feeling from ca. 1937.*

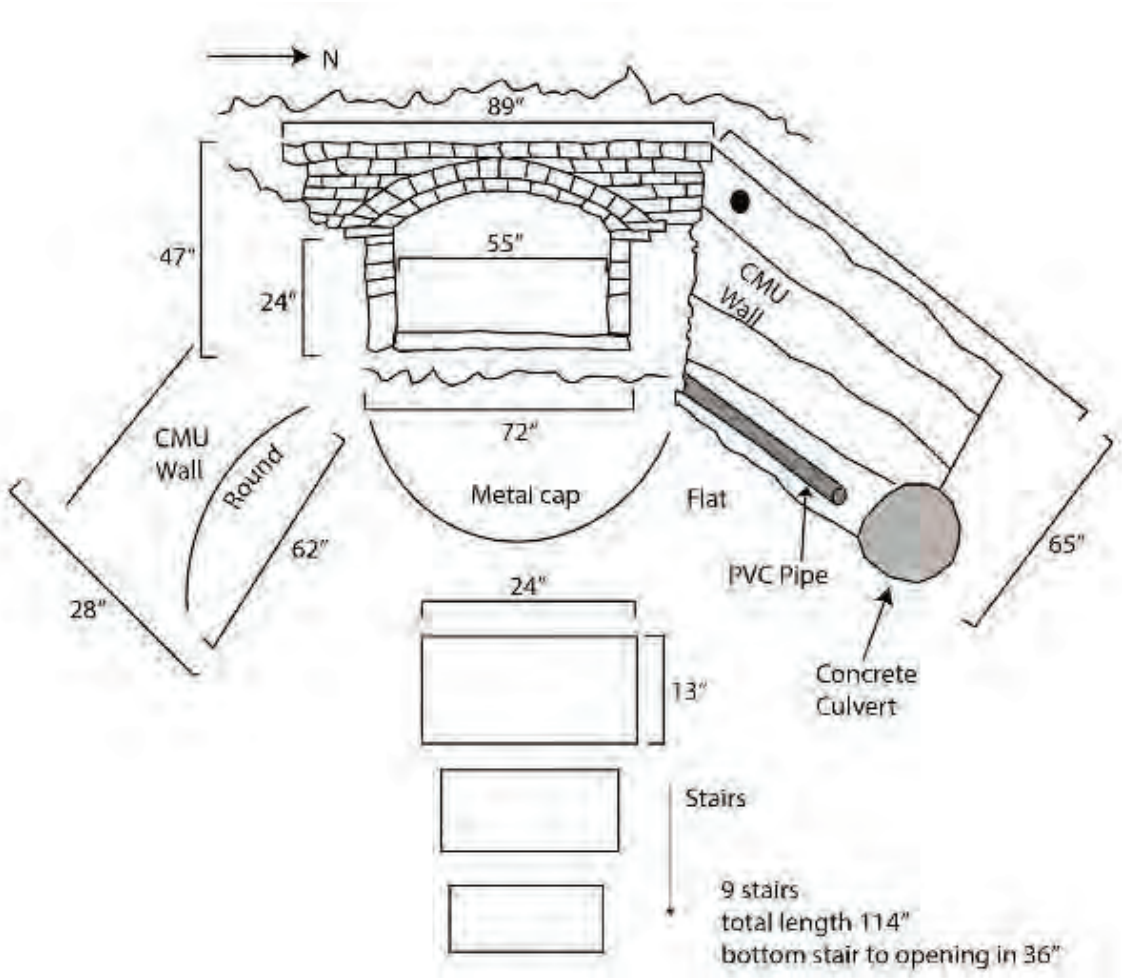
- **Association** is the direct link between an important historic event or person and a historic property. *The Black Mountain Spring Water Company facility does not retain integrity of association as a water bottling facility, or its association with George Washington Faulstich, as all the buildings and most infrastructure associated with the company have been demolished and are no longer extant. The water conveyance tunnel also does not retain integrity of association with the Black Spring Mountain Water as there is no physical indication that the tunnel is associated with the company, such as plaques or markers, and the surrounding buildings and infrastructure are no longer present. Thus, the water conveyance tunnel does not appear to retain integrity of the association either.*

Summary of CRHR Evaluation

The CRHR evaluation determined that the resource appears to qualify under CRHR criteria 1 and 2 but does not retain enough of its historic character or appearance to be recognizable as historical resources and to convey the reasons for its significance; therefore, the resource is not eligible for listing on the CRHR.

UNIQUE ARCHAEOLOGICAL RESOURCE ELIGIBILITY

The 18 historic-period artifacts and 11 historic-period features that are the remnants of the former Black Mountain Spring Water Company that occupied the property from 1939 to ca. 2001 do not contain information needed to answer any important scientific research questions in which there is a demonstratable public interest in, do not have any special or particular qualities, such as being the oldest type or the best available example of its type, and are not directly associated with a scientifically recognized important prehistoric or historic event or person. Therefore, the remaining remnants of the former Black Mountain Spring Water Company are not considered to be unique archaeological resources



Sketch map showing measurements of the ca. 1937 water conveyance opening and tunnel within APN 050-220-170.

State of California ♦ Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

SKETCH MAP

Primary #
HRI#
Trinomial

Page 12 **of** 13 ***Resource Name or #** Black Mountain Spring Water Company (remnant)

***Drawn by:** S. Evans ***Date of map:** 7/3/2021

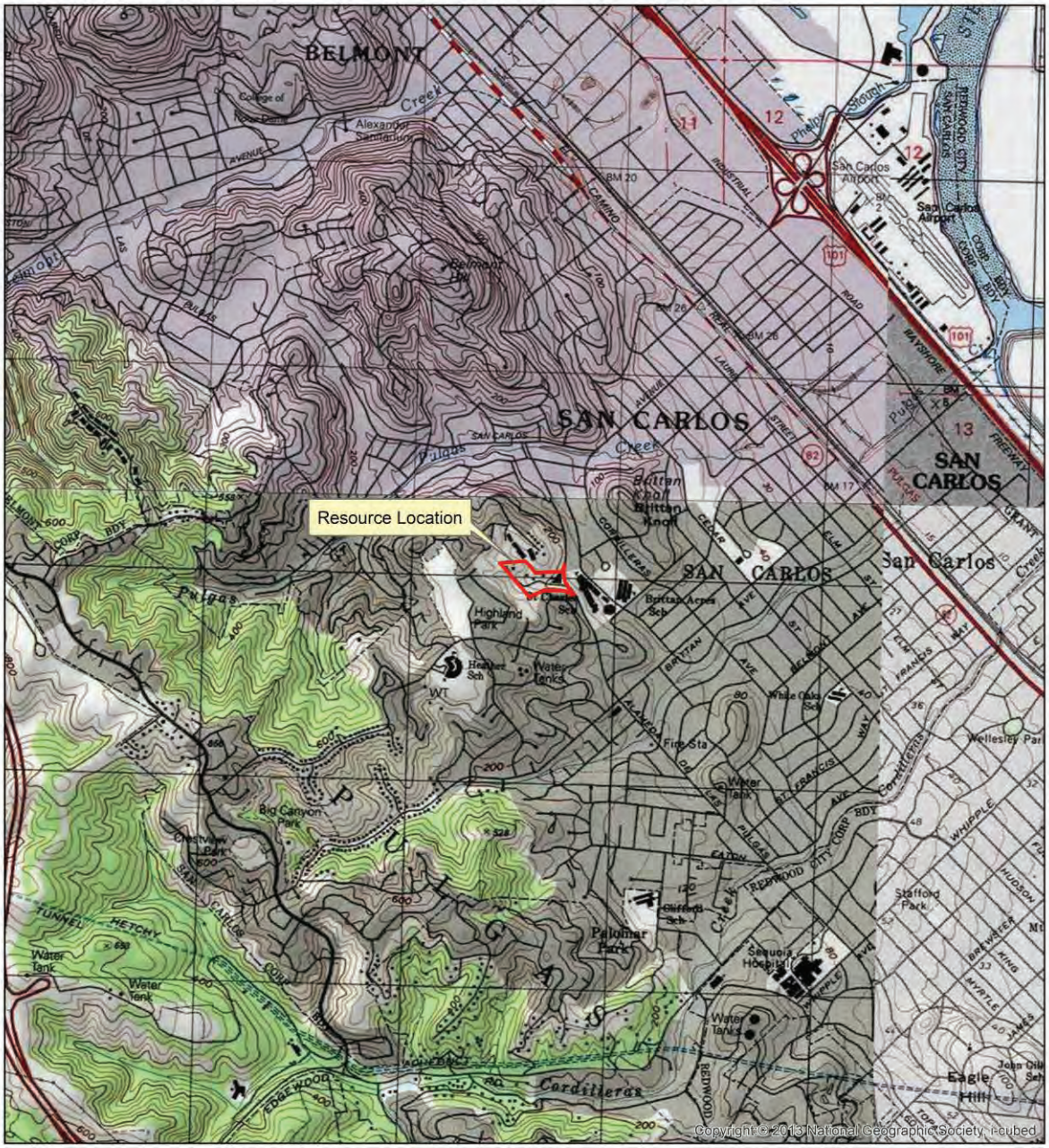
State of California ♦ Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI#
Trinomial

Page 13 **of** 13 ***Resource Name or #** Black Mountain Spring Water Company (remnant)

***Map Name:** USGS 7.5' Woodside Quadrangle Map ***Scale:** 1:24,000 ***Date of map:** 1991



0 0.5 1 Miles

1:24,000

Resource Location Map
804, 806 and 808 Alameda de las Pulgas
San Carlos, San Mateo County, California
(APNs 050-220-170, 050-220-020 & 050-220-160)

USGS 7.5' Woodside, Calif. (1991)
Township 5 South | Range 4 West

Map Projection:
NAD 83 UTM Zone 10N

Legend
Resource Area

Evans & De Shazo, Inc Archaeology Historic Preservation

Map by: Sally Evans, 7/3/2021

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APPENDIX G2:
HISTORIC RESOURCE EVALUATION

EVANS & DE SHAZO
ARCHAEOLOGY HISTORIC PRESERVATION

HISTORIC RESOURCE EVALUATION FOR THE ALAMEDA DE LAS PULGAS TOWNHOMES PROJECT AT 804, 806 AND 808 ALAMEDA DE LAS PULGAS, SAN CARLOS, SAN MATEO COUNTY, CALIFORNIA

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SUBMITTED BY:

Stacey De Shazo, M.A.
Principal Architectural Historian
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July 5, 2021

Table of Contents

INTRODUCTION **1**
PROJECT DESCRIPTION 2
PROJECT LOCATION 2

REGULATORY SETTING **4**
CALIFORNIA ENVIRONMENTAL QUALITY ACT 4

METHODS **5**

HISTORIC SETTING **6**
MEXICAN PERIOD (1821 – 1846) 6
EARLY AMERICAN PERIOD (1848 – 1850S) 7
HISTORY OF SAN CARLOS (1850S– 1970S) 8
PROJECT AREA HISTORY 18
Parcel 1: 804 Alameda de las Pulgas (APN 050-220-020) *22*
Parcel 2: 806 Alameda de las Pulgas (APN 050-220-170) *23*
Parcel 3: 808 Alameda De Las Pulgas (APN 050-220-160) *25*

ARCHITECTURAL STYLES **25**
"RANCH" ARCHITECTURE (1930-1975) 26
SPANISH COLONIAL REVIVAL (1910 – 1940) 26
MID-CENTURY MODERN ARCHITECTURE 27

HISTORIC ARCHITECTURAL SURVEY **27**
PARCEL 1: 804 ALAMEDA DE LAS PULGAS (APN 050-220-020) 28
ca. 1958 House *28*
Associated Landscape *33*
PARCEL 2: 806 ALAMEDA DE LAS PULGAS (APN 050-220-170) 34
ca. 1958 House *34*
ca. 1960 Octagonal Structure *43*
Associated Landscape *43*
PARCEL 3: 808 ALAMEDA DE LAS PULGAS (APN 050-220-160) 44
ca. 1954 House *44*
ca. 1965 Ancillary Building *52*
ca. 1954 In-ground Pool *54*
Associated Landscape *55*

EVALUATION OF HISTORICAL SIGNIFICANCE **56**
CALIFORNIA REGISTER OF HISTORICAL RESOURCES 56
CRHR EVALUATION 57
INTEGRITY 59

CONCLUSIONS AND RECOMMENDATIONS **60**

BIBLIOGRAPHY **61**

ATTACHMENTS: Department of Parks and Recreation (DPR) 523 forms (Appendix A)

INTRODUCTION

Evans & De Shazo, Inc. (EDS) was contracted by PlaceWorks, Inc. to complete a Historic Resource Evaluation (HRE) and an Archaeological Study for the proposed Alameda de las Pulgas Townhomes project (Project) within four adjacent parcels, including Assessor Parcel Number (APN) 050-220-020 at 804 Alameda De Las Pulgas, APN 050-220-170 at 806 Alameda De Las Pulgas, APN 050-220-160 at 808 Alameda De Las Pulgas, and APN 049-360-060 (no associated street address) (Project Area) totaling 11.4-acre located adjacent and west of Alameda De Las Pulgas in San Carlos, San Mateo County, California. The Project Area consists of three parcels with built environment resources, including 804 Alameda De Las Pulgas (Parcel 1) that contains a ca. 1958 house and associated landscape; 806 Alameda De Las Pulgas (Parcel 2) that contains a ca. 1958 house, ca. 1960 octagonal structure, and associated landscape; and 808 Alameda De Las Pulgas (Parcel 3) that includes a ca. 1954 house, ca. 1965 ancillary building, ca. 1954 in-ground pool, and associated landscape. The fourth parcel, APN 049-360-060 (no street address), is vacant.

The proposed Project includes merging the four parcels into one parcel, demolishing the current built environment resources within the Project Area, and constructing 87 attached townhouse units in 21 "clusters" with up to five units each, as well as the reconfiguration of paved roads to allow for a new right-of-way, new landscaping, a public walking trail and recreational components, and erosion control elements. Approximately 3.7 acres of the 11.4-acre Project Area will remain undeveloped. The natural spring used by the former Black Mountain Spring Water Company will be transformed into one of three proposed bioretention areas.

Before the Project is approved, the California Environmental Quality Act (CEQA) requires the City of San Carlos (lead agency) to prepare and certify an Environmental Impact Report (EIR) to identify potential effects to the environment and allow the public to comment. Historical resources (buildings, structures, or archeological resources) are considered part of the environment. The purpose of the HRE and Archaeological Study is to determine if there are any historical resources, as defined in Section 15064.5 of the CEQA Guidelines, within the Project Area that could be adversely impacted by the proposed Project and to provide Project-specific recommendations, if warranted.

The archaeological study was completed by EDS Principal Archaeologist Sally Evans, M.A., RPA, who exceeds the Secretary of Interior's professional qualification standards in archaeology. The archaeological study methods and results are presented in a separate report, which addresses any remnants of the Black Mountain Water Spring within the Project Area.[1] The HRE was completed by EDS Principal Architectural Historian Stacey De Shazo, M.A., who exceeds the Secretary of Interior's professional qualification standards in Architectural History and History. The purpose of the HRE was to evaluate the built-environment resources, at least 45 years of age, within the Project Area to determine eligibility for listing on the California Register of Historical Resources (CRHR), in order to assess potential impacts to the built-environment historical resources. The results of the HRE are presented herein.

[1] Sally Evans, *Archaeological Study for the Alameda de las Pulgas Townhomes Project, at 804, 806 and 808 Alameda De Las Pulgas, San Carlos*, San Mateo County, California, 2021.

PROJECT DESCRIPTION

The proposed Project includes merging the four parcels (APNs 049-360-060, 050-220-020, 050-220-170, and 050-220-160) into one parcel, demolishing of the current built environment resources, and constructing 87 attached townhouse units in 21 "clusters" with up to five units each, as well as reconfigured of paved roads, new rights-of-way, new landscaping, a public walking trail and recreational components, and erosion control elements. Approximately 3.7 acres of the 11.4-acre Project Area will remain undeveloped. The natural spring used by the former Black Mountain Spring Water Company will be transformed into one of three proposed bioretention areas.

PROJECT LOCATION

The Project Area includes four adjacent properties located in San Carlos, San Mateo County, California. The Project Area is 11.4-acres and includes the properties at 804 Alameda De Las Pulgas (APN 050-220-020), 806 Alameda De Las Pulgas (APN 050-220-170), 808 Alameda De Las Pulgas (APN 050-220-160), and APN 049-360-060 (no associated street address). The Project Area is bounded by the street known as Alameda de las Pulgas on the east and single-family homes on the north, south, and west (Figure 1).

The Project Area is located on the United States Geological Survey (USGS) 7.5-minute Woodside, California quadrangle (1991), within the unsectioned Rancho de las Pulgas land grant in Township 5 South, Range 4 West, Mount Diablo Meridian (Figure 2).

Figure 1: Aerial photograph of the Project Area.

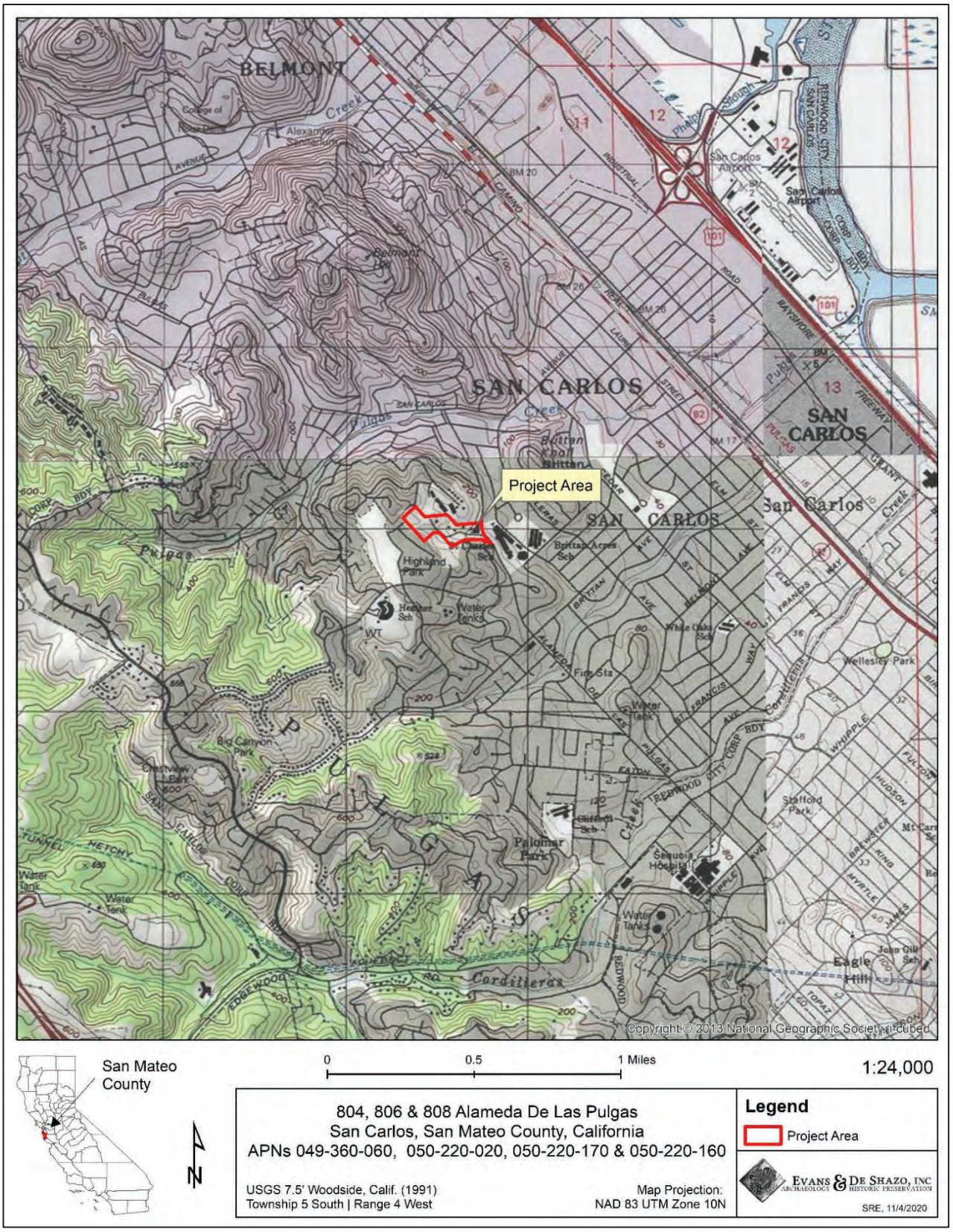

Figure 2: Project Area location map.

REGULATORY SETTING

The CEQA regulations, as they pertain to "cultural resources", are outlined below.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

CEQA and the Guidelines for Implementing CEQA (State CEQA Guidelines § 15064.5) give direction and guidance for evaluating properties, and the preparation of Initial Studies, Categorical Exemptions, Negative Declarations, and Environmental Impact Reports. Pursuant to California State law, the City of San Carlos is legally responsible and accountable for determining the environmental impact of any land use proposal it approves. Cultural resources are aspects of the environment that require identification and assessment for potential significance under CEQA (14 CCR § 15064.5 and PRC § 21084.1).

There are five classes of cultural resources defined by the State OHP. These are:

- **Building**: A structure created principally to shelter or assist in carrying out any form of human activity. A "building" may also be used to refer to a historically and functionally related unit, such as a courthouse and jail or a house and barn.

- **Structure**: A construction made for a functional purpose rather than creating human shelter. Examples include mines, bridges, and tunnels.

- **Object**: Construction primarily artistic in nature or relatively small in scale and simply constructed. It may be movable by nature or design or made for a specific setting or environment. Objects should be in a setting appropriate to their significant historic use or character. Examples include fountains, monuments, maritime resources, sculptures, and boundary markers.

- **Site**: The location of a significant event. A prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historic, cultural, or archaeological value regardless of the value of any existing building, structure, or object. A site need not be marked by physical remains if it is the location of a prehistoric or historic event and if no buildings, structures, or objects marked it at that time. Examples include trails, designed landscapes, battlefields, habitation sites, Native American ceremonial areas, petroglyphs, and pictographs.

- **Historic District**: Unified geographic entities which contain a concentration of historic buildings, structures, or sites united historically, culturally, or architecturally.

According to CCR § 15064.5, cultural resources are historically significant if they are:

(1) A resource listed in or determined to be eligible by the State Historical Resources Commission for listing in the California Register of Historical Resources (PRC §5024.1, 14 CCR § 4850 et seq.).

(2) A resource included in a local register of historical resources, as defined in PRC § 5020.1(k) or identified as significant in a historical resource survey meeting the requirements PRC § 5024.1(g), shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of the evidence demonstrates that it is not

historically or culturally significant.

(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (PRC § 5024.1, 14 CCR § 4852), including the following:

(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Is associated with the lives of persons important in our past;

(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

(D) Has yielded, or may be likely to yield, information important in prehistory or history.

(4) The fact that a resource is not listed in or determined to be eligible for listing in the CRHR, not included in a local register of historical resources pursuant to PRC § 5020.1(k), or identified in a historical resources survey meeting the criteria in PRC § 5024.1(g) does not preclude a lead agency from determining that the resource may be a historical resource as defined in PRC § 5020.1(j) or § 5024.1.

METHODS

The methods used to complete the HRE included a review of a record search completed by the Northwest Information enter (NWIC) of the California Historical Information Systems (CHRIS) (NWIC file #20-0889) as part of the archaeological study. EDS also conducted extensive online research, including the San Mateo County Assessor/Recorder office database, San Mateo County Historical Association, San Carlos Heritage Association, and various local repositories, and reviewed the cultural resource inventories listed in the section below. EDS also reviewed digital documents on file with EDS, such as historic maps, Sanborn Fire Insurance maps, historic aerial photographs, and other primary source documents. The purpose of the research was to understand the history of the Project Area and the surrounding area to develop a historic context in which to evaluate the historic significance of the built environment resources. EDS Principal Architectural Historian Stacey De Shazo, M.A. also conducted an architectural survey to identify the age, any known architectural style or form, character-defining features, materials, and alterations of built environment resources. Department of Parks and Recreation (DPR) 523 forms were also completed for the three parcels with built environment resources (Appendix A).

Cultural Resource Inventories

As part of the record search, the following inventories were reviewed:

- National Register of Historic Places (NRHP)

- California Register of Historical Resources (CRHR)
- California Historical Landmarks (CHL)
- California Points of Historical Interest (CPHI)
- California Inventory of Historic Resources
- California Office of Historic Preservation's (OHP) Built Environment Resources Directory (BERD) for San Mateo County, California

Online Research

Online research was also conducted that utilized the following sources:

- www.newspapers.com
- www.ancestry.com
- www.calisphere.com (University of California)
- http://www.library.ca.gov/ (California State Library)
- https://cdnc.ucr.edu/ California Digital Newspaper Collection
- https://historysmc.org/ (San Mateo County Historical Association)
- http://pcad.lib.washington.edu (Pacific Coast Architecture Database)
- https://aiahistoricaldirectory.atlassian.net (American Architects Directory)
- https://historysmc.org/ (San Mateo County Historical Association)

The results of the local and online research are within the Historic Setting section of this report.

HISTORIC SETTING

The following section provides a brief history of the area where the Project Area is located and the specific history of the built environment resources within the Project Area to assist in providing an understanding of the development of the area and specific context within which the built environment resources were evaluated for historical significance.

MEXICAN PERIOD (1821 – 1846)

In 1821, Mexico declared its independence from Spain and took possession of "Alta California,"[2] marking the end of the Spanish period (1769 – 1821) and the beginning of the Mexican period, also referred to as the "rancho" period, in Alta California. During this time, extraordinary changes occurred throughout Alta California, as the Mexican government lacked the strong oversight and military rule previously imposed by the Spanish, and as such, there were new opportunities for trade when foreign ships that had previously been

[2] Alta California was a polity of New Spain founded in 1769 and became a territory of Mexico after the Mexican War of Independence in 1821.

held off by Spanish guarded military ports could dock and provide a variety of provisions to settlers throughout California. These new provisions, including tea, coffee, sugars, spices, and spirits, as well as a variety of manufactured goods soon, made their way into the region; and the taxes on these imported goods became the main source of revenue for the Mexican government in Alta California. Likewise, products produced in Alta California were exported, which bolstered the hide and tallow trade that became the primary business activity in Alta California during this time. In 1833, the missions in California were secularized by the Mexican government, and mission-owned land was dissolved. During this time, the Mexican colonial authorities encouraged the settlement of Alta California by providing large land grants called ranchos to politically prominent persons that were loyal to the Mexican government and permitting foreigners to settle the land.

In 1835, San Carlos was part of a 35,240-acre Mexican-era land grant known as *Rancho de las Pulgas*, granted by Mexican Governor José Castro to José Darío Argüello's widow, Maria Soledad Ortega de Argüello, and José Dario's son, Don Luis Antonio Argüello.

EARLY AMERICAN PERIOD (1848 – 1850S)

The early American Period in California is marked by the end of the Mexican American War (1846-1848), when the U.S. took possession of the territories of California, New Mexico, Utah, Nevada, parts of Arizona, Colorado, Oklahoma, Kansas, and Wyoming in the signing of the Treaty of Guadalupe Hidalgo (1848). The treaty provided the resident Mexicans their American citizenship and guaranteed title to land granted during the Mexican period. However, on January 24, 1848, two weeks before the treaty signing, James W. Marshall discovered gold at Sutter's Mill along the American River in the Sierra Nevada foothills, marking California's Gold Rush-era (1848 to 1855). Soon, the excitement of the Gold Rush and the promise of fertile and abundant land brought between 150,000 and 200,000 new settlers to California from all over the U.S. and Scotland, Ireland, England, Germany, France, and other countries.

During the Gold Rush, California saw a massive influx of new settlers, which soon gave rise to land disputes as some settlers moved into rancho lands. To investigate and confirm the titles of land claims of former (now American) Mexican citizens in California, officials acquired the provincial records of the Spanish and Mexican governments in Monterey and transferred them to the U.S. Surveyor General's Office in San Francisco, including land deeds, Mexican land grant maps (*diseños*), and various other documents, that were used to verify land claims. In 1851, the U.S. passed the California Land Act that established the Public Land Commission (the Commission) to review these records and determine the validity of the Spanish and Mexican era land grants and charged the Surveyor General with surveying confirmed land grants.[3] Of the 813 land grants ultimately claimed, the land commission approved only 553 of them; however, some of the confirmed grants were reduced in original size or had been slowly sold off to pay for the lawyers hired to defend the

[3] The Spanish government-controlled California land from approximately 1770 to 1821 and the Mexican government-controlled California land from 1821 to 1846.

land titles in court. Typically, the land was then sold to newly arriving settlers. [4]

In accordance with the 1851 California Land Act, in 1852 the Argüello family filed their first land claim for twelve square leagues (91,535-acres) of land, which the Commission rejected. But confirmed a second claim for four square leagues (30,511.7 acres), which was confirmed by both the District Court and the U.S. Supreme Court. In 1857, following an official survey of the rancho in 1856 (Figure 3),[5] the grant was patented to Maria Soledad Ortega de Argüello (one half), Jose Ramon Argüello (one fourth), Luis Antonio Argüello (one-tenth), and Simon Monserrat Mezes (three twentieths). Mezes was the Argüello family's lawyer who they hired to handle the land confirmation process.

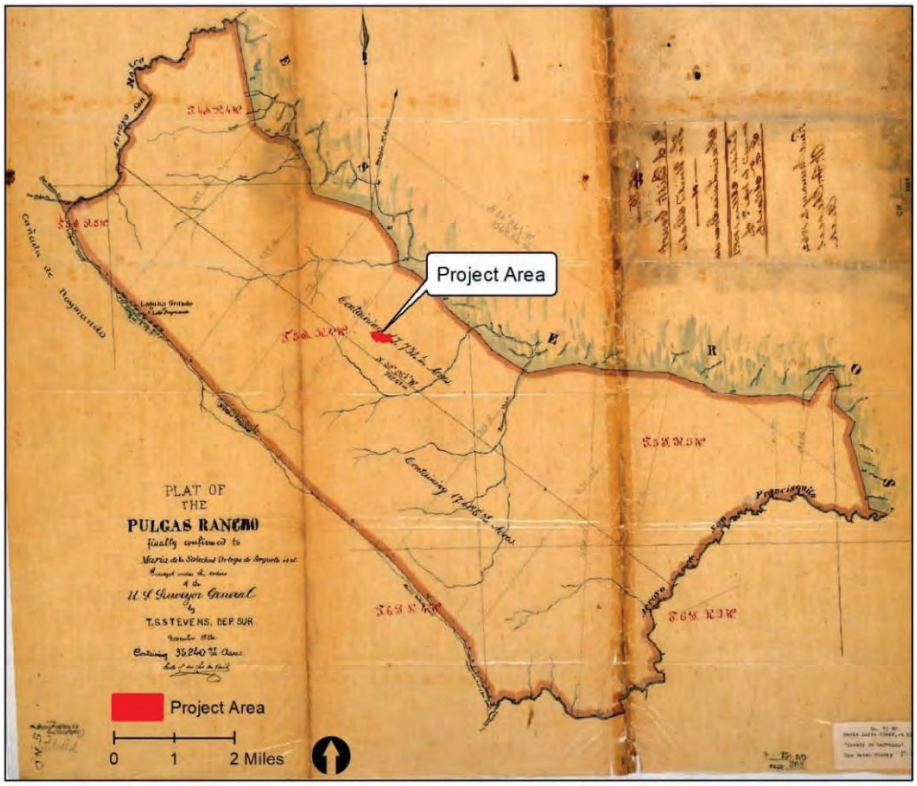

Figure 3: Project Area shown on the 1856 Plat of the "Pulgas Rancho".

HISTORY OF SAN CARLOS (1850S– 1970S)

During the early 1850s, the present-day City of San Carlos was situated within *Rancho de las Pulgas*, which at this time was owned by Maria Soledad Ortega de Argüello. In 1854, prior to the confirmation of the land, the first American, Timothy Guy Phelps, purchased 200-acres of land, including the Argüello adobe from Maria. Phelps, a prosperous mercantile owner, then bought an additional 3,500-acres of rancho land from Maria,

[4] Nancy Olmsted. *Vanished Waters: A History of San Francisco's Mission Bay*, Mission Creek Conservancy, San Francisco, 1986.

[5] Calisphere.org, "[Diseño del Rancho de las Pulgas: San Mateo Co., Calif.], accessed June 18, 2021, UC Berkeley, Bancroft Library.

including a large portion of present-day San Carlos. He then established a cattle ranch and built an estate (no longer extant) near El Camino Real and Holly Street. Phelps was a wealthy businessman, politician, and the first president of the Southern Pacific (SP) railroad from 1865 until 1868. In 1858, Captain Nathan John Brittan, a wealthy hardware dealer from San Francisco, bought approximately 3,000-acres of rancho land from Maria. The land extended from Cordilleras Creek (near Redwood City) to Pulgas Creek (between Arroyo Avenue and Olive Street) and encompassed the other portion of present-day San Carlos, including the Project Area. During the late 1850s, present-day San Carlos was mainly utilized for cattle crazing, dairy farming, and wheat production; however, the area was also becoming a popular destination for wealthy San Francisco residents, many of whom purchased small parcels from Phelps, built summer estates within the region.[6]

In the late 1850s, as San Francisco and San Jose flourished, there was a need to connect the two cities, as travel by stagecoach took approximately nine hours. Soon wealthy businessmen and landowners Henry Mayo Newhall and Peter Donahue formed a partnership to establish a rail line between San Francisco and San Jose. In 1859, the San Francisco & San Jose Railroad (SF&SJ) company was formed, and in 1861, SF&SJ issued a 2-million-dollar bond to fund construction; the major shareholders included the counties of Santa Clara, San Francisco, and San Mateo. In 1862, the construction of a rail line to connect San Francisco with San Jose was started, and the section of the new rail line passed through San Mateo County; however, no permanent rail stop was established in present-day San Carlos.

During 1870s, nearby towns adjacent to present-day San Carlos were developing, primarily because of the construction of the SF&SJ rail line; however, despite efforts by Phelps and others, the area of San Carlos had failed to be established as a town. In 1888, in an attempt to develop a town, Senator Phelps sold 173.20-acres of land to the "San Carlos Land Company", of which a portion was granted to the SP railroad to establish a rail depot.[7] The San Carlos Land Company was formed to finance the development of the proposed new townsite to be called "Lomitas", which would be established west of the SP rail line. The San Carlos Land Company was run by Captain Nathan T. Smith, who was president of the land company and the treasurer of the SP railroad, as well as a long-time friend of Phelps and Stanford. In 1888, the San Carlos railroad depot (extant) (Figure 4) was constructed out of excess sandstone provided by Stanford, who was building Stanford University in Palo Alto at the same time.[8] The depot was designed in the Richardsonian Romanesque Revival style, which was prevalent at Stanford University. Although during this time, there were less than 30 residents within the area,[9] the construction of the train depot was intended to incentivized interest in the development of a town. However, the San Carlos Land Company failed to establish a town, and by 1895, approximately 50 people lived within the new subdivision created by the San Carlos Land Company. Eventually, the 173.2-acres was sold to the San Carlos Park Syndicate, who made a second attempt to establish a town around the new train

[6] The San Carlos Villagers, "A Short Walk Through San Carlos History", accessed June 12, 2021, http://www.harker.com/History/PDF/Booklets/AShortWalkThroughSanCarlosHistory-stdres.pdf. 1982.

[7] Russel Estep, "San Carlos/Belmont History" (Vol. 3), Enquirer Bulletin, 1984.

[8] CalTrain, "San Carlos", accessed June 19, 2021, https://www.caltrain.com.

[9] CalTrain, "San Carlos", accessed June 19, 2021, https://www.caltrain.com.

depot, promoting the area as "San Carlos Park".[10] The San Carlos Park Syndicate was a real estate development company run by William Woolsey, who advertised the qualities of the idyllic area with green-tinted photographs of parks, clearings, orchards, and large homes, marketing the ability to live in an area with "City Comforts Plus Country Delights", with and an easy commute to San Francisco without crossing the bay.[11] The company had a good start, laying out sidewalks and installing concrete urns along avenues to attract potential buyers to an area called "Oak Park" (Figure 5 and Figure 6). However, despite the San Carlos Park Syndicate efforts to establish a town, San Carlos remained a small community surrounded by agricultural land with no established commercial district and little residential housing.

In 1895, the community's first post office was established within the train depot, and in 1911 library service was provided to railroad customers while they waited for their train. On Sundays, church services were held in the depot. During this time, the agricultural flower industry was booming, and Chrysanthemum growers, mainly Japanese immigrants, were thriving. But for those living in the San Carlos area, to get their flowers to market, the growers would have to build a fire on the SP railroad tracks to stop the train at the rarely used San Carlos train station.[12] One of San Carlos' first flower growers was Jim Mock, a Chinese immigrant who was the first Chinese grower of sweet pears, asters, and chrysanthemums in the San Carlos area. Mock arrived in California in the 1880s, first finding work with the SP railroad worker supervising Chinese workers and later employed as a gardener on the Stanford University campus.[13] Mock learned flower cultivation from a Japanese gardener during the late 1890s before establishing his chrysanthemum business near San Carlos. Later, Mock taught his flower growing skills to Chinese immigrant Mo Yuqin (Yee Him Mock), who in 1908 became San Carlos' second chrysanthemum grower.[14]

In 1906, the Great San Francisco earthquake struck, and residents of the city moved to areas along the peninsula, which increased the populations and spurred development. However, the influx of new residents along the peninsula did not bolster the growth of the small community within present-day San Carlos. Throughout the early 1910s, the train depot remained the only public building, and as such, was the center of social activity for residents. In 1917, the San Carlos Park Syndicate filed for bankruptcy and the 173.2-acres land was purchased by the Mercantile Trust Company (later known as the American Trust Company), thus becoming the third land development company to attempt to establish a town in present-day San Carlos. After purchasing the land, the Mercantile Trust Company employed Fred Hugh Drake, a prominent real estate and business promoter, to oversee the development of the new city. Under Drakes' leadership, the third attempt was a success as Drake expanded existing infrastructure, established a chamber of commerce, and

[10] City of San Carlos, "San Carlos History", accessed June 12, 2021, https://www.cityofsancarlos.org/residents/about-san-carlos/san-carlos-history/-fsiteid-1

[11] Newspapers.com, Advertisement, "San Carlos Park", 1913.

[12] CalTrain, "San Carlos", accessed June 19, 2021, https://www.caltrain.com.

[13] Him Mark Lai, Chinese America History and Perspectives, Potato Kin and Film Producer, Flower Growers, *Professionals, and Activists*, Chinese Historical Society of America. 1998.

[14] Ibid.

encouraged housing development, giving the city the motto "The City of Good Living."[15] Under Drakes' management, streets were paved, the Sanitary District was formed, gas and electricity were installed, the water supply was improved and water was piped to houses. The construction of new housing also increased, and Drake pushed for the incorporation of San Carlos.[16]

During the later 1910s and 1920s, new housing developments and businesses were established along El Camino Road (aka as the Old County Road, and from approximately 1900 to 1915, it was known as Maple Street), including the C.C. Morse Seed Company purchasing 60-acres south of Pulgas Creek (by Arroyo) to use as a sweet peas farm, the San Carlos Feed and Fuel, and the James H. Martin's lumberyard. The new businesses and other commercial enterprises, including a butcher shop, restaurant, gas station, general store, a barber shop, a bank, and a theater, were all built around San Carlos Avenue and El Camino Real (Figure 7).[17] In 1916, the first school was established at the San Carlos. It was a one-room school, with 20 students in eight grades, taught by one teacher,[18] and in 1923, the city's first volunteer fire department was formed. During this time, the San Carlos Aviation field (aka the San Carlos airfield) was established and soon afterward, J. Paulding Edwards constructed runways of grass or packed dirt and built a five-bay hangar (extant) within the airfield near what is now Terminal Way, approximately 1.5 northeast of the Project Area.[19] Edwards operated the San Carlos Flying School from the hanger. During the 1930s, the Cooley Brothers, William, and Charles, ran a pilot training school from the hanger where they trained local pilots and Chinese student pilots who travel to San Carlos to attend the Cooley brother's flight training school (Figure 7). The Cooley brothers trained the Chinese student pilots, and once certified, the Chinese pilots returned to China.[20]

By the mid-1930s, the nation was emerging from the Great Depression (1929 – 1933), which had created a surge of bank closures, resulting in the decrease of available capital that impacted agriculture and led to reduced market prices. In 1933, five days after taking the oath of office, President Franklin Delano Roosevelt called a conference with the secretaries of Agriculture, Interior, and War and several others to discuss his ideas for recruiting 500,000 men to work in the nation's forests and eroded farmlands. Roosevelt's vision was to provide work opportunities, primarily for young men to repair the land from decades of poor management and over-use, which became known as the "New Deal". As part of the New Deal, on March 31, 1933, the Emergency Conservation Work (ECW) Act was established under Executive Order No. 6101 and created the

[15] City of San Carlos, "San Carlos History", accessed June 12, 2021, https://www.cityofsancarlos.org/residents/about-san-carlos/san-carlos-history/-fsiteid-1.

[16] Ibid.

[17] The San Carlos Villagers, "A Short Walk Through San Carlos History", accessed June 12, 2021, http://www.harker.com/History/PDF/Booklets/AShortWalkThroughSanCarlosHistory-stdres.pdf. 1982..

[18] Ibid. 8.

[19] Jonathan Hull, "History of Airports in San Carlos", accessed June 29, 2021, https://www.sancarlosairport.org/sql-history/ (June 7, 2017).

[20] Jonathan Hull, "History of Airports in San Carlos", accessed June 29, 2021, https://www.sancarlosairport.org/sql-history/ (June 7, 2017).

Civilian Conservation Corps (CCC) and the Workers Progress Administration (WPA). Both the Civilian Conservation Corps (CCC) and the Workers Progress Administration (WPA) were established to create work opportunities that would not interfere with regular employment, and as such, they were specifically directed toward the conservation of natural resources. The WPA was active in the 1930s in San Carlos. During this time, the city of San Carlos had a population of 1,132, and the city embarked on several community improvements projects. In 1938, the city purchased land for a city park, which was funded by the citizens of San Carlos, who passed a 20-year bond issue on buying the land with the provision that baseball games would be banned from the new park. However, Edward R. Burton, Sr., the president of the San Carlos Men's Athletic Club, arranged for the purchase of an additional 3.38 acres for a baseball field. In 1938, the WPA constructed the amphitheater and the adobe brick building within the city park. The city park was dedicated in 1940 and re-dedicated in June 1960 as "Burton Park" in honor of Edward Burton, Sr., who also served on the city council for 18 years, and as mayor for four of the 18 years. The 1930s also saw the formation of the Black Mountain Spring Water Company in 1937, and in 1947 the construction of the Black Mountain Spring Water bottling facility (no longer extant) within a portion of the Project Area.

By 1940, the population in San Carlos was 3,520, and the downtown continued to develop with new businesses (Figure 9). In 1941, when the U.S. entered WWII (1939-1945), many service men and women came to the area as military installations and government contracting businesses developed, revitalizing the local economy. At the end of WWII, many cities saw unprecedented growth, particularly in residential development, as former military personnel returned from overseas and needed housing. As such, significant postwar development and expansion in San Mateo County and areas including the city of San Carlos saw most of its growth after WWII. During this time, as more Black Americans moved from south of the San Francisco Bay along the peninsula to the East Bay to work in the shipyards and military stations in Richmond, Oakland, Vallejo, and San Francisco, some real estate companies in the San Mateo County urged designing the entire San Mateo County area as a "sundown area". Although the ordinance was not passed in the city of San Carlos, acts of violence and hate crimes against people of color in the area did keep many people of color from moving to cities along the peninsula.

By the 1950s, San Carlos' population had tripled, reaching 14,371, as the downtown commercial area developed further (Figure 10 and Figure 11) as new industries were established. During this time, there were a total of 89 industrial wholesalers, manufactures, and distributors of goods in San Carlos.[21] In 1947, the "Lenkurt Electric Company", a microwave and telecommunications company, moved from San Francisco to San Carlos and constructed a 20,000 square foot facility.[22] By the mid-1950s, it had outgrown its 20,000 square foot facility, and the owners engaged architects Frank Lloyd Wright and Aaron Green to build a new facility in San Carlos; however, before the construction of the new building, the company was purchased by General Telephone and Electronics Company (GTE) in 1959. By the 1960s, San Carlos, with approximately

[21] San Mateo County, "*San Mateo County Historic Resources Advisory Board 1984 San Mateo County: Its History and Heritage".* Second Edition. Division of Planning and Development Department of Environmental Management.

[22] The Bancroft Library of the University of California, Berkeley, "Kurt E. Appert: Electrical Engineering and the Lenkurt Electric Company", accessed June 28, 2021, https://digitalassets.lib.berkeley.edu.

21,370 residents, was a well-established town with thriving commercial and industrial businesses. By the 1970s, the population of San Carlos had increased to 25,924, and although growth slowed during this time, additional housing was developed, including apartment buildings and single-family houses.

Figure 4. ca. 1905 photo of the 1888 San Carlos train depot (courtesy of the City of San Carlos).

Figure 5. ca. 1907 photo of an advertisement board of the potential development area known as "Oak Park" (courtesy of the City of San Carlos).

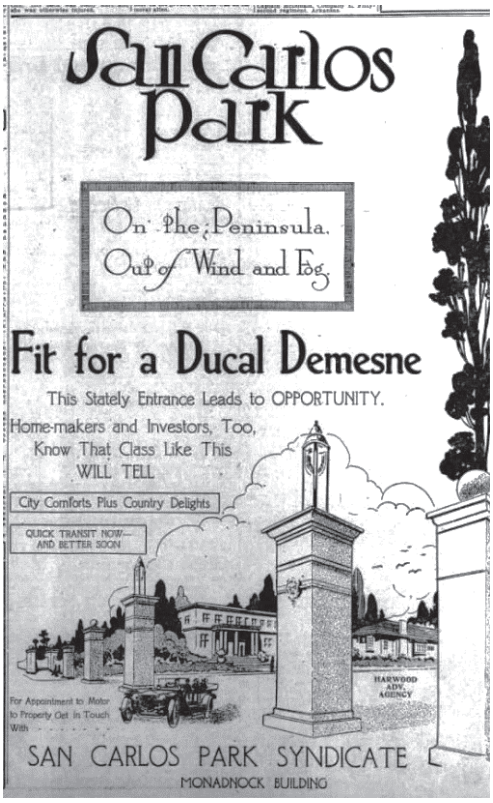

Figure 6. 1907 newspaper advertisement for "Oak Park" designed to attract potential buyers to an area (courtesy of the City of San Carlos).

Figure 7. ca. 1920 photo take along San Carlos Avenue with the 1888 train station in the background (courtesy of the City of San Carlos).

Figure 8. 1937 photo of Chinese pilots in San Carlos with Charles (back row, left) and William Cooley (back row, middle; https://www.sancarlosairport.org).

Figure 9. 1936 aerial photograph of San Carlos with the 1888 train station (lower center) at San Carlos Avenue and El Camino Real, facing west (Newspapers.com).[23]

[23] Newspapers.com, No Title, San Francisco Examiner, June 1, 1936.

Figure 10. ca. 1940s postcard of the intersection of San Carlos Avenue and Laurel Avenue (City of San Mateo).

Figure 11. ca. 1950 postcard of downtown San Carlos, on San Carlos Avenue (City of San Mateo).

PROJECT AREA HISTORY

In the late 1930s and the 1940s, George Washington Faulstich began acquiring land adjacent to and including the Project Area. The land contained a natural spring, which in 1937 George capitalized on when he established the **Black Mountain Spring Water Company** to serve the community drinking water, which he delivered by truck.

The Black Mountain Spring Water Company was established in 1937 by George Washington Faulstich. The company was named after the underground springs located in the Black Mountain. In the 1930s, George began acquiring parcels adjacent to and including the natural spring located on the Project Area. During this time, the Black Mountain Spring Water company was located at 719 B Street in the City of San Mateo.[24] In 1946, George constructed a bottling facility (no longer extant), which included buildings, structures, and associated infrastructure, within the easternmost portion of the Project Area within Parcel 1. In the 1950s, George built three houses (extant), including the ca. 1954 house and two ca. 1958 houses, within three separate parcels (Parcel 1 – 3) within the Project Area (Figure 15). A 1956 aerial photograph of the Project Area shows the Black Mountain Spring Water company bottling facility. In the 1963 San Carlos City Directory,[25] George is listed as the President, and George's wife, Altha, is listed as the Vice President of the company. By 1965, the company had expanded significantly, including additional buildings, and parking lots. Alameda de las Pulgas road was also pushed westward and realigned.

During the 1960s, George continued to run the company with Altha, his wife, and their grandson, Joseph "Joe" Bullock Jr. In 1967, George and Joe invented the world's first plastic, snap-on bottle cap, the "Cap Snap Seal", which was manufactured within the Project Area, prior to moving to a new location in 1969. In 1969, George Faulstich was given permission by the City of San Carlos, to build a new office building and warehouse for the Black Mountain Spring Water Company at 3605 Haven Avenue in San Carlos, where the bottle caps were manufactured.[26] During the time the company was in business it was the largest independently owned bottled water company in the U.S. In 1991, Joe took over the family business and in 2001 he sold the company to Nestle.

[24] Newspaper.com, No title, The Time, February 06, 1940.

[25] Ancestry.com, City of San Carlos Directory, 1963.

[26] Newspapers.com, No title, The Times, November 19, 1969

Figure 12. George Washington Faulstich, founder of the Black Mountain Spring Water Company (courtesy of the City of San Carlos).

Figure 13. The photo shows the former Black Mountain Spring Water bottling facility (no longer extant) within the Project Area. The address of the facility was 800 Alameda de Las Pulgas (photo courtesy of Images of America: San Carlos).[27]

[27] Nicholas A. Veronico, *Images of America: San Carlos*, Arcadia Publishing, 2007.

Figure 14. undated photo of a Black Mountain Spring Water deliveryman and delivery truck within the Project Area near ca. 1954 house at 808 Alameda de las Pulgas, facing (courtesy of Black Mountain Properties, LLC.).

The following section provides the ownership and occupancy history of the three parcels within the Project Area that contain the built environment resources including 804 Alameda De Las Pulgas (Parcel 1; APN) that contains a ca. 1958 house and associated landscape; 806 Alameda De Las Pulgas (Parcel 2; APN) that contains a ca. 1958 house, ca. 1960 octagonal structure, and associated landscape; and 808 Alameda De Las Pulgas (Parcel 3; APN) that contains a ca. 1954 house, ca. 1965 ancillary building, ca. 1954 in-ground pool, and associated landscape. The fourth parcel (APN 049-360-060; no street address) is vacant.

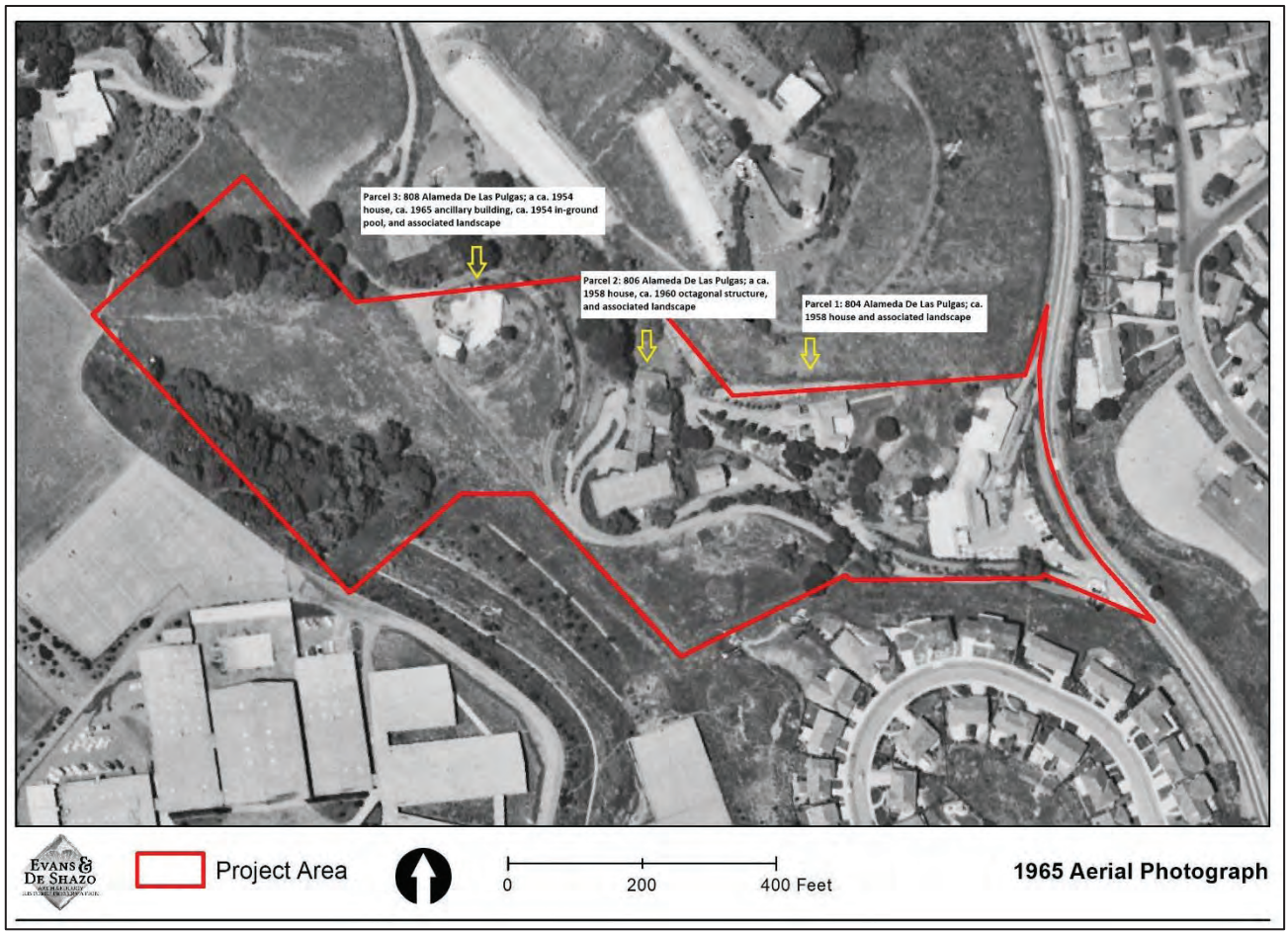

Figure 15. 1965 aerial photograph of the Project Area, showing the bottling facility (no longer extant) within the easternmost portion of the Project Area and the three houses (extant) (U.C. Santa Barbara Library).

Parcel 1: 804 Alameda de las Pulgas (APN 050-220-020)

Owners and Occupants: ca. 1958 house and associated landscape		
Year	**Owner/Occupants**	**Details**
ca. 1958-1988 **1988-2003**	Owners: George Washington Faulstich and Altha Etta Ashley Faulstich	• The owners the property at 804 Alameda de las Pulgas were George and Altha, and it appears that they constructed the ca. 1958 house as a rental property or investment property for their three daughters. • George and Altha were the owners of the Black Mountain Spring Water Company, established in 1937. George and Altha had three daughters, Darma Elaine, Carole, and Shirley Louise. • There is no evidence that George or Altha or their three daughters lived within the ca. 1958 house. • In the early 1990s, the property appears to have been put in various Faulstich family trusts, which appear to have been mainly held by the three daughters and later their children. • George died in 1981, and Altha died in 1988. • Shirley Louse died in 1992, and Darma Elaine died in 2002. After Darma's death, the trusts were held by the one remaining sister, Carole, and the children of Shirley Louise and Darma Elaine.
ca. 1963	Occupants: Merlin E. Ake Jr. and Mary Frances Bauer (Bear) Ake	• The 1963 San Carlos City Directory lists Merlin, Mary, and their son Merlin Jr. living in the ca. 1958 house. Merlin Jr. is listed as a student; however, Merlin and Mary's occupations are not listed.[28] • Merlin was born in 1915 in Ohio, and Mary was born in 1916 in Ohio. Merlin and Mary married in 1940 in Ohio and divorced in 1982.[29] [30] • No additional information was found.
1973 – 1976	Occupant: Joseph "Joe" Bullock Jr.	• In 1973, it appears that Joe Jr. lived in the ca. 1958 house; however, he did not own the house at this time.[31] • Joe was born in 1950 to Joseph Bullock and Carole Faulstich Bullock Scarioni. Joe was George and Altha's grandson. • Joe started working for the water company in his early twenties. In 1967, Joe and his grandfather George invented the world's first plastic, snap-on bottle cap, the "Cap Snap Seal". When George retired in the late 1970s, Joe ran the company.

[28] Ancestry.com. *U.S., City Directories, 1822-1995*

[29] Newspaper.com, "Socially Speaking…", The Akron Beacon Journal, October 14, 1940

[30] Ancestry.com. *Florida, U.S., Divorce Index, 1927-2001*

[31] Ancestry.com, *San Mateo, California, City Directory, 1973*

Owners and Occupants: ca. 1958 house and associated landscape		
Year	**Owner/Occupants**	**Details**
		• Joe married Paula A. Lewis in 1976, and the couple moved to Atherton.[32] [33] [34]
ca. 1977	Occupant: A.J. Baker	• A.J. is listed as living in the ca. 1958 house in 1977.[35] • No additional information about A.J. was found.
1977-2003	Occupant: unknown	• No information on any occupant(s) was found.
2003	Owners: Joseph "Joe" Bullock Jr. and Paula A. Lewis Bullock	• A 2003 deed shows Joseph Jr. and Paula as owners of the ca. 1958 house. However, Joe and Paula, did not live in the ca. 1958 house as they lived in Atherton at this time.

Parcel 2: 806 Alameda de las Pulgas (APN 050-220-170)

Owners and Occupants: ca. 1958 house, ca. 1960 octagonal structural and associated landscape		
Year	**Owner/Occupants**	**Details**
ca. 1958-1988 **1988 - 1994**	Owners: George Washington Faulstich and Altha Etta Ashley Faulstich Various Faulstich family trusts Occupants: Unknown	• The owners of the property at 806 Alameda de las Pulgas were George and Altha, and it appears that they constructed the ca. 1958 house as a rental property or investment property for their three daughters. • George and Altha were the owners of the Black Mountain Spring Water Company, established in 1937. George and Altha had three daughters, Darma Elaine, Carole, and Shirley Louise. • There is no evidence that George or Altha or their three daughters lived within the ca. 1958 house. • George died in 1981 and Altha died in 1988. • Shirley Louse died in 1992. • In 1994, the property was deeded to the "Three Sisters Ranch Enterprises, LLC."
1994	Owners: Three Sisters Ranch Enterprises, LLC.; "The Black Mountain Properties, Inc". Occupants: Unknown	• The 1994 Trust Deed shows the owners of the property at 806 Alameda de las Pulgas as the "Three Sisters Ranch Enterprise, LLC". The Three Sisters Ranch Enterprise was established by George and his grandson Joe Bullock Jr. and named for George and Altha's three daughters, Darma Elaine, Carol, and Shirley

[32] Ancestry.com, *California, U.S., Marriage Index, 1960-1985*

[33] Ancestry.com. *California Birth Index, 1905-1995*

[34] Ancestry.com. *California, U.S., Marriage Index, 1960-1985*

[35] Ancestry.com. *U.S., City Directories, 1822-1995*

Owners and Occupants: ca. 1958 house, ca. 1960 octagonal structural and associated landscape		
Year	**Owner/Occupants**	**Details**
		Louise. The company was formed to develop commercial, retail, and residential real estate throughout Northern California.[36] • Three Sisters Ranch Enterprises, LLC, was later changed to "Black Mountain Properties, LLC".
1994	Owners/Trusts: Darma Winder Trust; Stacey Doherty Trust; Stacey Elmore Trust; Terry L Phillips Trust; Carole J. Scarioni Trust; Joseph Bullock III	• In 1994 a deed of trust granted the property to various family trusts, including the remaining two sisters (Darma Winder, and Carole J. Scarioni) and their children. The various trusts included: o The Darma Winder Trust is associated with Darma Faulstich Winder, daughter of George Washington and Altha Faulstich. Darma died in 2002. o The Stacey Doherty Trust is associated with Stacey Lynn Doherty, who was the daughter of Shirley Louise Faulstich and James Daniel Doherty. After Shirley Louise died in 1992, the Stacey Doherty Trust was created. o Stacey was born in 1950 in San Mateo and died in 2006. o Information about the Stacey Elmore Trust was not found. o Information about the Terry L. Philips Trust was not found. • In 1994, the property was deeded to the Carol J. Scarioni Trust. • Carole was born at Sequoia Hospital in Redwood City in 1929. Carole, along with her two sisters, Dharma and Shirley Louise, were raised in Redwood City. Carole graduated from Sequoia High School in 1947. • Carole was first married to Joseph Bullock in 1948 but divorced in 1958.[37] Carole and Joseph had two children: Joseph Jr. and George. Carole married Russell Scarioni in 1960, but they divorced in 1976.[38] Carol and Russell had one child: Russell Jr. • Carol died in 2019.

[36] Black Mountain Properties, LLC. "The Founder", accessed June 28, 2021, https://blackmountainproperties.com/about/.

[37] Newspaper.com, "Couple Feted At Party", The Times, October 05, 1948

[38] Ancestry.com. *California, U.S., Divorce Index, 1966-1984*

Parcel 3: 808 Alameda De Las Pulgas (APN 050-220-160)

Owners and Occupants: ca. 1954 house, ca. 1965 ancillary building, ca. 1954 in-ground pool, and associated landscape		
Year	**Owner/Occupants**	**Details**
ca. 1954 - 1988 **1988-2002**	Owners: George Washington Faulstich and Altha Etta Ashley Faulstich Various Faulstich family trusts Occupants: Unknown	• The owners of the property at 808 Alameda de las Pulgas were George and Altha, and it appears that they constructed the ca. 1954 house as a rental property or investment property for their three daughters. • George and Altha were the owners of the Black Mountain Spring Water Company, established in 1937. George and Altha had three daughters, Darma Elaine, Carole, and Shirley Louise. • There is no evidence that George or Altha, or their three daughters ever lived within the ca. 1954 house. • George died in 1981, and Altha died in 1988. • In the 1990s, the property appears to have been put in various trusts that were held by each daughter and their children. • Shirley Louse died in 1992, and Darma Elaine died in 2002.
1977	Occupant Arthur Carl Hoffman Jr.	• Arthur is listed as living at this address in 1977.[39] • Arthur was born in 1907 and was previously married to Betty Gaddis. He was divorced when he lived in the house.[40] [41] Arthur and Betty had one daughter: Kimberly. It is unknown if Kimberly lived at the ca. 1954 house. [42]
1977-2002	Occupants: unknown	• The occupants of the ca. 1958 house during this time were not found.
ca. 2002	Owner: Carole J. Scaroni Carole J. Scaroni Trust	• During this time, the owner was Carole J. Scaroni and in the later 2000s, held by the Carole J Scaroni Trust. • Carol died in 2019.[43]

ARCHITECTURAL STYLES

The following section provides a brief understanding of the architecture styles associated with the built environment resources within the Project Area. The ca. 1958 house at 804 Alameda de las Pulgas is designed in the Ranch Architectural style; the ca. 1958 house at 806 Alameda de las Pulgas is designed in the Ranch architectural style with elements of Spanish Colonial Revival architecture; and the ca. 1954 house at 808

[39] Ancestry.com, *San Mateo, California, City Directory, 1977*

[40] Newspaper.com, "Mr. Hoffman Claims Betty Gaddis' Hand", The Times, August 31, 1964.

[41] Ancestry.com. *California, U.S., Divorce Index, 1966-1984*

[42] Ancestry.com. *California, U.S., Death Index, 1940-1997*

[43] Ibid.

Alameda de las Pulgas is designed in the Mid-Century Modern architectural style.

"RANCH" ARCHITECTURE (1930-1975)

The Ranch architectural style symbolizes a distinct historical period of unprecedented population growth, economic gains, and suburban and urban development at mid-century. It provided a wide range of new, affordable, and desirable housing for many post-war families and new design and change in usage of interior and exterior spaces that integrated landscape into floorplans and design of the new commercial buildings. Though not credited with inventing the style, noted twentieth-century Architect Cliff May was primarily responsible for popularizing the Ranch House style in America during the 1930s and 1940s, and he designed some of the most remarkable Ranch Houses in America. May worked closely with Sunset Magazine editors to publicize his ideas about the new Ranch House, and in collaboration with Sunset Magazine, he edited two popular publications about Ranch House design, which contained many of May's designs.

- One or two stories asymmetrical forms, some with one or more wings
- Gabled roof with wide eaves with exposed rafter tails
- Exposed post and beam construction
- Attached garages, often forming one wing; gable and wing form
- Brick or stone chimneys
- Setting in close relationship to the associated landscape; integral landscape design
- Dutch doors, French doors, and sliding glass doors
- Shutters on houses; and simple wood or metal hand-railing

SPANISH COLONIAL REVIVAL (1910 – 1940)

Following the immense success of Bertram W. Goodhue's and Carleton M. Winslow's designs for the 1915 Panama-California Exposition in San Diego, California, the popularity of the Spanish Colonial Revival style overwhelmed the earlier Mission Revival in many areas, principally California. Drawing from a broader spectrum of precedents than the earlier style, the Spanish Colonial Revival was employed for nearly all types of buildings—single and multi-family residential, commercial, and institutional—and therefore could range in height from one to multiple stories. Most Spanish Colonial Revival buildings were asymmetrical, although a popular bungalow subtype (often labeled a "Mission Revival bungalow") was markedly symmetrical. Almost all Spanish Colonial Revival buildings are recognizable by stucco-covered exterior walls and red clay tile roofs. Most roofs were gabled, or gabled and flat, although hipped roofs were also utilized.

The Spanish Colonial Revival style is often characterized by the following elements:

- Exterior walls of stucco
- Low-pitched gabled or hipped roof covered in Mission or Spanish red clay tiles or flat roof with parapet wall that may be edged with tile
- Shallow eaves

- Arched and flat-headed openings
- Wing walls
- Tile vents
- Can be combined with a wide range of decorative features and materials
- Garages, if present, were usually detached
- Focus on indoor and outdoor living

MID-CENTURY MODERN ARCHITECTURE

The "Modern Era" is broadly defined in the U.S. as the period from 1930 through the 1970s; however, many of the architectural designs that personify this category were spurred by the end of WWII, which brought sweeping changes to the American architectural landscape. During this time, new building materials became readily available and businesses, social, and civic buildings, and particularly tract-house suburbs were built in increasing numbers, and the architecture exhibited a much more modern appearance.

"Mid-century Modern" architecture developed around the middle decades of the twentieth century, post-WWII, and was the more "organic" response to the International Style characteristics of Modernism that developed earlier in the century. Mid-century Modern Architecture is generally characterized by a low profile, horizontal composition, the use of modern materials—particularly large expanses of plate glass—as well as other stylistic elements such as angular shapes, open floor plans, and stacked masonry veneer such as brick, Roman brick, or stone. The idea behind Mid-century Modern design was to create a new, fresh architecture, which, by its seemingly outlandish details, did not invoke the past. In these mid-century decades, owners of banks, shops, restaurants, theaters, and other commercial businesses throughout California built new buildings, or were inspired to update or modernize their existing buildings to give them a "modern" look to attract customers to retail during the post-war consumerism boom.

HISTORIC ARCHITECTURAL SURVEY

On November 30, 2020, EDS Principal Architectural Historian Stacey De Shazo, M.A., completed a historic architectural survey of the three properties with built environment resources, including the ca. 1958 house and associated landscape at 804 Alameda De Las Pulgas (APN 050-220-020; Parcel 1); the ca. 1958 house, ca. 1960 octagonal structure, and associated landscape at 806 Alameda De Las Pulgas (APN 050-220-170; Parcel 2), and the ca. 1954 house, ca. 1965 ancillary building, ca. 1954 in-ground pool, and associated landscape at 808 Alameda De Las Pulgas (APN 050-220-160; Parcel 3). The results of the survey are documented in the following section.

Figure 16. Aerial showing the built environment resources within parcels 1 – 3, in the Project Area

PARCEL 1: 804 ALAMEDA DE LAS PULGAS (APN 050-220-020)

ca. 1958 House

The ca. 1958 house is designed in the Ranch Architectural style. The single-story house has a rear-facing "U" form and rests on a concrete slab foundation. The house is clad in board and batten wood siding, and the roof is clad in composite shingles. The roof is low-pitched with a cross-gable and wide eave overhang with decorative rain gutters along the eaves. The roof gables have exposed beams along the peaks and eaves. There are two interior chimneys set within the roof slope, visible from the primary façade and constructed of stone with no courses. The second chimney is situated within a rear east-facing gable of the roof and is clad in wood in a board and batten design. There is a hipped roof breezeway that connects the house to a single-car garage.

West Elevation (Primary Façade)

The west elevation (primary façade) consists of a recessed and projecting (i.e., staggered) facade (Figure 17), with the main entrance located at the southernmost corner of a recessed primary facade. The main entry consists of an incorporated porch supported by a one square stone column at the southwest corner, reflecting the stonework of the chimney on the northern side of the porch (Figure 18). The porch has a slender, fixed window to the south, and there is a wood-paneled door with fanlight glazing. The middle section of the primary façade has an aluminum sliding window to the north of the stone chimney. The northernmost corner of the house has a sliding glass door situated adjacent to a wood door, both of which open onto the breezeway that leads to the garage (Figure 19). To the south of the wooden door is another aluminum sliding window. The garage is situated to the west of the house and is accessed from the breezeway. The western elevation of the garage building consists of a two-car garage door (Figure 20).

Figure 17. West elevation, facing east.

Figure 18. Photo showing the main front entry to the house, facing east.

Figure 19. Photo showing the breezeway along the west elevation, facing northeast.

Figure 20. Photo of the garage, facing northeast.

South Elevation

The south elevation consists of “two sections of the house”, at the garage (upper section) and main house

(lower section). The garage has an aluminum sliding window centered on the façade (see Figure 20). A breezeway separates the garage from the main house and includes a storage shed with a plywood door. The south elevation of the main house is void of fenestration (Figure 21). There is a utility meter at the western corner.

Figure 21. Photo of the south elevation, facing east.

East Elevation

The east elevation consists of two projecting gables on either side of a connected wing (Figure 22). The fenestration along this elevation includes a fixed window, continuous floor-to-ceiling windows, a sliding aluminum window, and a fixed picture window on either side of a sliding glass door, a sliding glass door centered on the northern most gable façade, and a single-entry wood door (Figure 23). An incorporated porch extends along the recessed eastern wing and is supported by two wooden columns.

Figure 22. East elevation, facing west.

Figure 23. East elevation, facing northwest.

North Elevation

The north elevation consists of three sections. The easternmost section has four high-place, side-sliding-sash windows. The middle section is a stucco-clad wall, enveloping a decorative concrete breezeway wall that connects the westernmost section and the eastern section. The westernmost section consists of the north attached garage wall with extending eaves and exposed rafters and is void of fenestration (Figure 24).

Figure 24. North elevation, facing west.

Associated Landscape

The associated landscape includes a long, paved, private driveway that is accessed via a "court" or "turn-around". A wood retaining wall is situated to the north of the driveway and runs the length of the paved driveway from the court to the house (Figure 25).

Figure 25. Photo showing the paved driveway west of the primary façade of the ca. 1958 house.

PARCEL 2: 806 ALAMEDA DE LAS PULGAS (APN 050-220-170)

ca. 1958 House

The ca. 1958 house is a designed in the Ranch style with elements of Spanish Colonial Revival architecture. The house consists of an "F" shaped floor plan and rests on a concrete slab foundation. The building is set along an east-facing hillside. There is a split-level garage built on top of the hill and is connected to the house with a breezeway, which has stamped red concrete and tile floors. The roof is a low-pitched, cross-gable roof clad in red mission-style clay tiles. The eaves of the house have exposed beams, which are partially covered by decorative rain gutters. The house has three brick chimneys: two exterior gable chimneys both set off-center and one interior chimney set within a portion of the roof. The house is clad in both painted brick and wooden clapboards.

West Elevation (Primary Façade)

The west elevation (primary façade) is predominantly clad with painted brick. There is a two-car garage located at the southernmost section of the house situated "above" the main portion of the house, which is built into the hillside, and appears to have been excavated to provide a level area to construct the house (Figure 26 and Figure 27). The northernmost gable of the house has a brick exterior chimney, situated off-center from the gable. To the south of the chimney is a fixed stained-glass window with a horizontal fixed window above it. This section of the primary façade is clad with wooden clapboards. There are semicircular stairs with a cast-iron railing set behind a brick retaining wall that leads to the main front entrance to the house (Figure 28). The front door is set within a recessed entry and consists of an eighteen-light double-door. To the south of the door is a large, fixed window. To the south of the recessed main entrance is a patio built

into the slope. This patio section “wall” has two ten-light doors that flank a wall fountain (Figure 29). The patio has brick pavers laid out in a herringbone pattern and a stone retaining wall. The southern section of the main house is clad with wooden clapboards and has a horizontal sliding wood aluminum window. To the south of this window is a wood-paneled door with one-over-one glazing. At the southernmost corner of the main house, south of the wood-paneled door, is an eight-light fixed window. It is at this section of the main house that the garage is connected via a breezeway.

Figure 26. West elevation, facing north.

Figure 27. Photo showing the two-car garage facing east.

Figure 28. Photo showing the semicircular stairs that lead to the main entrance to the house.

Figure 29. Photo showing the wall fountain facing north.

South Elevation

The south elevation consists of two eave facades and the walls of two projecting gables, which are primarily clad in wooden clapboards, with some areas covered in painted brick. The south elevation of the garage gable consists of exposed wood beams set under the roof eaves (Figure 30). This elevation is clad in painted brick and is void of fenestration. The south gable of the main house is connected to the garage by a breezeway and void of fenestration. The southern portion of the projecting winged gable of the main house has a wood-paneled door and a sliding aluminum window (Figure 31). A porch is incorporated under the roof, and the roof is supported by beams and square wooden columns. The south wall of the northernmost projecting gable has a wood-paneled door (Figure 32).

Figure 30. Photo showing the garage gable that consists of exposed wood beams set under the roof eaves, facing north.

Figure 31. Photo showing the southern portion of the projecting winged gabled form (right) of the main house, facing west.

Figure 32. Photo showing the south wall of the northern most projecting gabled form, facing north.

East Elevation

The east elevation consists of two projecting gable wings and the rear façade of the garage. The rear garage façade is clad in wooden clapboards and a central, wood-paneled door, which opens onto a partial-façade porch with wood balusters (Figure 33). There is a stairway that leads from the garage to an incorporated porch supported by beams connected to square, wood columns that run along the east elevation (see Figure 33). The fenestration of this wing includes two small, sliding aluminum windows followed by a larger sliding aluminum window. A section of the east elevation consists of a fixed, twelve-light window and a fixed, eight-light window. To the south of these windows is a three-light, fixed window. Between the two projecting gables is a brick-paved patio with a sliding glass door flanked by two floor-to-ceiling, fixed windows (Figure 34). The northernmost gable has a recessed sliding glass door to the south and a fixed, stained-glass window to the north. This gable has a wooden truss supporting the roof. The façade is clad in with wooden clapboards, but the south corner of the northern gable has painted brick, which extends along the southwest facade.

Figure 33. Photo showing the rear garage façade (left) and a portion of the main house, facing southwest.

Figure 34. Photo showing the brick-paved patio with a sliding glass door.

North Elevation

The north elevation consists of the north elevations of the northernmost façade, the north facades of two gabled wings, clad in wooden clapboard, and the north gable of the garage. The northernmost façade has a recessed entry on the north corner, consisting of a recessed side entry with glass double doors set between two floor-to-ceiling windows (Figure 35). There is an incorporated porch that is supported by two wooden posts at two corners. The northern side of this wing has a pair of one-over-one windows situated centrally

along the clapboard façade; and directly south of the windows is a built-in storage closet with wood-paneled accordion doors. A decorative gutter runs along the roof eave. The north wall of the southernmost wing consists of a pair of ten-light French doors centered along the clapboard section and brick cladding (Figure 36). This brick section includes a fixed, eight-light window. The eaves, which have exposed beams, provide a shallow porch supported by two wooden posts. The north elevation of the garage, adjacent to the breezeway, has a wood-paneled arched door set off-centered along a painted brick façade, topped with a curved band of soldier bricks (Figure 36). West of the door is a square, four-light fixed window.

Figure 35. Northermost façade of the north elevation, facing south.

Figure 36. Photo showing the north wall of the southernmost projecting wing, facing south.

Figure 37. Photo showing the north elevation of the garage, facing south.

ca. 1960 Octagonal Structure

The ca. 1960 octagonal structure appears to be a large birdhouse (Figure 38). The structure is clad with vertical wood siding with a wood shake roof. The structure has four narrow arched entries, with a perch under each opening. There is a latched door to access the interior of the structure. The structure rests upon a wooden pedestal situated on a stone foundation.

Figure 38. ca. 1960 octagonal structure, facing west.

Associated Landscape

The associated landscape includes a long, paved driveway that is accessed via iron gates attached to tall stone columns (Figure 39). Stone retaining walls on either side frame the driveway. There is a wood post and wire fence that encompasses the parcel.

Figure 39. Photo showing the large iron gates, facing northeast.

PARCEL 3: 808 ALAMEDA DE LAS PULGAS (APN 050-220-160)

ca. 1954 House

The ca. 1954 house is designed in the Mid-century Modern style. The house rests on a concrete slab foundation and has a multi-layer roof system of gable and slant roofs. The slanted roof extends over the main section of the house, from which an angled section extends and ends in a roof gable. The roof is low pitched with wide eave-overhangs and exposed beams. The roof is clad in a roofing membrane material. The attached garage has a slant roof and is connected along a corner that acts as a breezeway. The house has an exterior chimney, which is connected to an outdoor fireplace along the northwest façade. The ca. 1954 house is clad with both painted brick and vertically wooden clapboard.

Southeast Elevation (Primary Façade)

The southeast elevation is the primary façade and consist of several bays constructed of a mix of material and a layered roof. The main section of the house consists of a slanted roof with floor-to-ceiling windows to the south. Due to the pitch of the slanted roof, the wall is one-and-a-half-stories. A bay extends from this façade and has a flat roof with wide eave overhangs. The façade above the projecting flat roof has clerestory windows on which the slanted roof sits (Figure 40). There is an extended bay with a wood corner support. The bay is clad in painted brick and consists of double-glazed doors on one side and fixed corner windows set on a high "knee wall". To the north of this is a wood-paneled door with a single light surrounded by painted brick (Figure 41). Along this section, the brick meets vertical wooden clapboards that extend to an angled wing. The wing has a glass-sliding door on either side of two high-placed, horizontal fixed aluminum windows. The vertical clapboards continue throughout the façade of the angled wing. The southeast elevation of the garage has a

group of five, tall, twelve-light fixed windows with white wood paneling below and wooden muntins between each window (Figure 42). To the south of these windows is a Dutch door with wood paneling on the lower half and nine lights on the upper half. The façade has horizontal shiplap cladding.

Figure 40. Photo showing the primary façade, facing north.

Figure 41. Primary façade (southeast elevation) showing the multi-layer roof elements, facing northwest.

Figure 42. Photo showing the southeast elevation of the garage, facing northwest.

North/Northeast Elevations

The north/northeast elevations, combined due to the angular shape of the house, consists of the northernmost wall of the house and the northeastern-most wall of the house, as well as the northeast portion of the attached garage. The northernmost wall of the house consists of the gabled end with wide overhanging eaves. The northeastern-most wall of the house consists of two sliding glazed doors set under a recessed porch supported by square columns (Figure 43). Northeast of the northeast garage wall is an attached breezeway. The northeast garage wall has a series of three sliding aluminum windows with twelve faux lights (Figure 44 and Figure 45). The façade is clad in vertical wood panels.

Figure 43. Photo showing the northeastern-most wall of the house, facing north.

Figure 44. Photo showing the northeast section of the gargage set under the breezeway, facing south.

Figure 45. Photo showing the northeast wall of the garage, facing southwest.

Northwest Elevation

The northwest elevation consists of three sections or bays of the house that are clad in painted brick (Figure 46). The northernmost section has a floor-to-ceiling fixed window adjacent to a sliding glass aluminum door. To the south are two single doors, the northern of which is glass, while the southern is louvered wood. The middle section has floor-to-ceiling windows on either side of two glass-sliding doors. The southernmost section of this elevation has a tall wall clad in painted brick laid out in a running bond pattern topped with a band of soldier bricks. There are two square openings, which were at one-time built-in grills, but are currently being used as storage. This section of the northwest elevation also has an exterior outdoor fireplace set within the exterior wall, which is flanked by decorative spiral pilasters on either side (Figure 47). The hearth is raised, allowing for firewood storage. Additionally, the northwest elevation of the garage includes a one-car garage door clad in horizontal wood panel siding. The garage door is a trifold wood door with upper window glazing (Figure 48).

Figure 46. Northwest elevation, facing east.

Figure 47. Photo showing the exterior brick wall with an outdoor fireplace, facing southeast.

Figure 48. Photo showing the trifold garage doors, facing south.

Southwest Elevation

The southwest elevation consists of the wall of the main house connected to the garage by the breezeway and the southwest wall of the garage. The wall connected to the breezeway has three materials: painted brick, wood panels, and floor-to-ceiling glass windows (Figure 49). Unlike the rest of the house, the eaves on this elevation are closed. The southwest elevation consists of wide overhanging eaves and exposed rafters. The wall is clad in horizontal clapboard and void of fenestrations (Figure 50).

Figure 49. Photo showing the southwest wall of the house, facing southeast.

Figure 50. Photo showing the southwest elevation of the garage, facing northeast.

ca. 1965 Ancillary Building

The ca. 1965 ancillary building is not associated with any architectural style. The ca. 1965 ancillary building is a side-gabled building with the primary façade facing southwest. The western corner of the primary façade has an elaborate wood-paneled door with circular stained-glass glazing (Figure 51 and Figure 52). To the south of the door is a grouped window with three, nine-light wood windows with wood mullions. The southeast elevation is constructed of plywood. The northwest elevation consists of a three-step staircase leading to a side-entry door that is topped with an opening where a transom was likely located. The northeast elevation has a wood-paneled façade with a fixed twelve-light window at the center. There is a narrow porch that extends from the north elevation of the building, with a porch roof clad in corrugated plastic sheets (Figure 53). The northwest elevation has double-wood paneled doors centered beneath the gable.

Figure 51. Photo showing the southwest elevation of the ca. 1965 building, facing northeast.

Figure 52. Photo showing the elaborate door along the primary façade, facing northeast.

Figure 53. Photo showing the narrow porch along the rear façade, facing west.

ca. 1954 In-ground Pool

The ca. 1954 in-ground pool is not designed in any architectural style. The pool is kidney-shaped and is surrounded by square clay tiles that serve as the pool decking (Figure 54). There are semicircular concrete steps within the in-ground pool and two metal support bars along the northernmost section of the pool that previously supported a diving board that is no longer present.

Figure 54. Photo showing the kidney-shaped ca. 1954 in-ground pool, facing east.

Associated Landscape

The associated landscape includes a winding dirt and gravel private driveway that loops around the ca. 1954 house and provides access from either the eastern or western sides of the house to the main paved driveway within the Project Area (Figure 55). There is wood fencing along sections of the house and the private driveway.

Figure 55. Photo showing the dirt and gravel driveway and wood fencing, facing east.

EVALUATION OF HISTORICAL SIGNIFICANCE

The built environment resources within the Project Area were evaluated to determine individual eligibility for listing on the CRHR. The ca. 1958 house at 804 Alameda de las Pulgas (parcel 1) was evaluated for its association with the Ranch architecture within a period of significance of ca. 1958; the ca. 1958 house at 806 Alameda de las Pulgas (parcel 2) was evaluated for its association with Ranch architecture with elements of Spanish Colonial Revival design within a period of significance of ca. 1958; and the ca. 1954 house at 808 Alameda de las Pulgas (parcel 3) was evaluated for its association with the Mid-Century Modern architecture with a period of significance of ca. 1954.

The associated landscape at 804 Alameda De Las Pulgas (parcel 1); the ca. 1960 octagonal structure, and associated landscape at 806 Alameda De Las Pulgas (parcel 2); and the ca. 1965 ancillary building, ca. 1954 in-ground pool, and associated landscape at 808 Alameda de las Pulgas (parcel 3) are not associated within a known architectural style or architectural landscape design.

CALIFORNIA REGISTER OF HISTORICAL RESOURCES

The CRHR is an inventory of significant architectural, archaeological, and historical resources in the State of California. Resources can be listed in the CRHR through several methods. State Historical Landmarks and NRHP listed properties are automatically listed in the CRHR. Properties can also be nominated to the CRHR by local governments, private organizations, or citizens. The CRHR follows *similar* guidelines to those used for the NRHP. One difference is that the CRHR identifies the Criteria for Evaluation numerically instead of alphabetically. Another difference, according to the OHP is that "It is possible that historical resources may

not retain sufficient integrity to meet the criteria for listing in the NRHP, but they may still be eligible for listing in the California Register. A resource that has lost its historic character or appearance may still have sufficient integrity for the California Register if it maintains the potential to yield significant scientific or historical information or specific data".[44]

To qualify for listing in the CRHR, a property must possess significance under one of the four criteria and have historic integrity. The process of determining integrity consists of evaluating seven variables or aspects that include location, design, setting, materials, workmanship, feeling and association. According to the *National Register Bulletin: How to Apply the National Register Criteria for Evaluation*, these seven characteristics are defined as follows:

- **Location** is the place where the historic property was constructed.
- **Design** is the combination of elements that create the form, plans, space, structure, and style of the property.
- **Setting** addresses the physical environment of the historic property inclusive of the landscape and spatial relationships of the building(s).
- **Materials** refer to the physical elements that were combined or deposited during a particular period of time and in a particular pattern of configuration to form the historic property.
- **Workmanship** is the physical evidence of the crafts of a particular culture or people during any given period in history.
- **Feeling** is the property's expression of the aesthetic or historic sense of a particular period of time.
- **Association** is the direct link between an important historic event or person and a historic property.

The following section examines the eligibility of the built environment resources within the three parcels (parcel 1 – 3) for individual listing on the CRHR.

CRHR EVALUATION

1. **(Event): Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.**

   The built environment resources within 804 Alameda de las Pulgas (parcel 1); 806 Alameda de las Pulgas (parcel 2); and 808 Alameda de las Pulgas (parcel 3) are situated within the former Black Mountain Spring Water Company property established in 1937 by George Washington Faulstich. The Project Area consists of a natural spring where the water was extracted and bottled. In 1946, George had a bottling plant (no longer extant) constructed within the Project Area. When Black Mountain Spring Water Company was sold in 2001, it was the largest privately owned spring water company in the U.S. Although George Washington Faulstich had the built environment resources within parcels

[44] California Office of Historic Preservation Technical Assistance Series #6 California Register and National Register: A Comparison (for purposes of determining eligibility for the California Register).

1-3 constructed, they are not directly associated with the Black Mountain Spring Water Company. Instead, they were built as investment properties for the Faulstich family. As such, they were not found to be associated with any other event that made a significant contribution to the broad patterns of California's history and cultural heritage.

Therefore, the built environment resources within parcels 1 -3 are not individually eligible for listing in the CRHR under Criterion 1.

1. (Person): Is associated with the lives of persons important in our past.

The ownership and occupancy history of the built environment resources within parcels 1 - 3 was thoroughly researched. The three parcels are associated with George Washington Faulstich, who achieved importance as an entrepreneur in the early bottled water business, and along with his grandson Joe Bullock Jr., invented the world's first plastic, snap-on bottle cap - the "Cap Snap Seal". Although George owned the three parcels, there is no evidence that George lived within any of the houses within the three parcels, as they appear to have been built as rentals. In addition, although Joe Bullock Jr. appears to have lived within the ca. 1958 house at 804 Alameda de las Pulgas (parcel 1) from 1973 to 1976 and in 2003 inherited the property, Joe was not living within the property at the time he and George invented to "Cap Snap Seal," and he inherited the property after the Black Mountain Spring Water Company was sold to Nestle in 1999. In addition, the three houses within the three parcels appear to have been primarily utilized as rentals, which makes association with a person difficult as occupants change frequently. For these reasons, it does not appear that the built environment resources within parcels 1-3 are associated with any persons important to California history.

Therefore, parcels 1 – 3 within the Project Area do not appear individually eligible for listing in the CRHR under Criterion 2.

3. (Construction/Architecture): Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

Parcel 1: The ca. 1958 house is associated with Ranch architecture within a period of significance of ca. 1958. Although the house does consist of elements of Ranch architecture, including wing and gable forms, wide eaves, an attached garage, and a stone chimney, the ca. 1958 house was not determined to be a representative example of the Ranch Architecture and is not the first to be designed within this style, nor is it the work of a master or possess high artistic value.

Parcel 2: the ca. 1958 house is associated with Ranch architecture with elements of Spanish Colonial Revival design within a period of significance of ca. 1958. Although the house does consist of Ranch architectural design elements, including wing and gable forms and an attached garage, and Spanish Colonial Revival design elements, including a low-pitched, a cross-gable roof clad with red mission style clay tiles, and exposed wooden beams, the ca. 1958 house was not determined to be a representative example of the Ranch Architecture or Spanish Colonial Revival and is not the first to

be designed within either of these styles nor is it the work of a master or possess high artistic value.

Parcel 3: The ca. 1954 house is associated with Mid-Century Modern architecture with a period of significance of ca. 1954. Although the house consists of angular shapes, large plate glass windows, and stacked brick veneer, it was not found to be representative of the Mid-Century Modern architectural style, is not the first to be designed within this style, and is not the work of a master, nor does it possess high artistic values.

The associated landscape within parcel 1; the ca. 1960 octagonal structure and associated landscape within parcel 2; and the ca. 1965 ancillary building, ca. 1954 in-ground pool, and associated landscape within parcel 3 are not associated a known architectural style or architectural landscape design.

Therefore, the built environment resources within parcels 1 – 3 are not individually eligible for listing under Criterion 3.

4. **(Information potential): Has yielded, or may be likely to yield, information important in prehistory or history.**

Criterion 4 most commonly applies to resources that contain or are likely to contain information bearing on an important archaeological research question. While most often applied to archaeological sites, Criterion 4 can also apply to built environment resources that contain important information. For a building to be eligible under Criterion 4, it must be a principal source of important information, such as exhibiting a local variation on a standard design or construction technique can be eligible if a study can yield important information, such as how local availability of materials or construction expertise affected the evolution of local building development.

The built environment resources within parcels 1-3 do not appear to have the ability to convey information potential that is unique or unknown regarding an architectural style. Therefore, they do not appear individually eligible for listing under Criterion 4.

INTEGRITY

To qualify for listing in the CRHR, a property must possess significance under one or more of the above listed criteria and have historic integrity. There are seven variables, or aspects, that are used to judge historic integrity, including location, design, setting, materials, workmanship, feeling and association.[45] A resource must possess the aspects of integrity that relate to the historical theme(s) and period of significance identified for the built-environment resources. National Register Bulletin 15 explains, "only after significance is fully established can you proceed to the issue of integrity."

None of the built environment resources within parcels 1-3 located within the Project Area were found to be eligible under any of the CRHR criteria; therefore, an integrity analysis was not completed.

[45] National Park Service, *National Register Bulletin: How to Apply the National Register Criteria for Evaluation* (Washington, D.C.: United States Department of the Interior, 1997).

CONCLUSIONS AND RECOMMENDATIONS

In compliance with CEQA, EDS completed an HRE of the built environment resources within the Project Area that were evaluated to determine individual eligibility for listing on the CRHR and if the Project will impact any historical resources as defined in CCR § 15064.5. The HRE included extensive research, and a field survey conducted EDS Principal Architectural Historian Stacey De Shazo, M.A., who exceeds the Secretary of the Interior's Professional Qualification Standards in Architectural History and History.

The HRE determined that none of the built environment resources, at least 45 years in age, meet the definition of a historical resource under CEQA. As such, the proposed Project will not impact any built-environment historical resources.

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Appendix A:

DPR 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 _____

Page 1 **of** 10 ***Resource Name or #:** 804 Alameda de las Pulgas
P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted**
***a. County** San Mateo **and**
***b. USGS 7.5' Quad** Woodside **Date** 1991 **T** 5S; **R** 4W ; un **of Sec**; MD **B.M.**
c. Address 804 Alameda de las Pulgas City San Carlos Zip 94070
d. UTM: Zone 10, 564553 mE/ 4150207 mN
e. Other Locational Data: The resource is located within the 0.61-acre Assessor's Parcel Number (APN) 050-220-020, approximately 385 feet west of Alameda de las Pulgas within the City of San Carlos.

***P3a. Description:** The resource includes a ca. 1958 house and associated landscape. The ca. 1958 house is designed in the Ranch Architectural style. The single-story house has a rear-facing "U" form and rests on a concrete slab foundation. The house is clad in board and batten wood siding, and the roof is clad in composite shingles. The roof is low-pitched with a cross-gable and wide eave overhang with decorative rain gutters along the eaves. The roof gables have exposed beams along the peaks and eaves. There are two interior chimneys set within the roof slope, visible from the primary façade and constructed of stone with no courses. The second chimney is situated within a rear east-facing gable of the roof and is clad in wood in a board and batten design. There is a hipped roof breezeway that connects the house to a single-car garage. (Continued on Continuation Sheet, Page 2)

P5a.

***P3b. Resource Attributes:** HP2. Single family property

****P4. Resources Present:** ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other
P5b. Description of Photo: ca. 1958 house, facing east

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both Various sources

***P7. Owner and Address:** Name withheld by owner.

***P8. Recorded by:** Stacey De Shazo, M.A., Evans & De Shazo, Inc., 1141 Gravenstein Highway S, Sebastopol, CA 95472

***P9. Date Recorded:** 11/30/2020

***P11. Report Citation:** Stacey De Shazo, M.A. (2021) Historic Resource Evaluation for the Alameda de las Pulgas Townhomes Project at 804, 806 and 808 Alameda De Las Pulgas, San Carlos, San Mateo County, California.

***Attachments:** ☐NONE ☒Location 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): _____

(Continued from Primary Sheet, Page 1)

West Elevation (Primary Façade)

The west elevation (primary façade) consists of a recessed and projecting (i.e., staggered) facade (Figure 1), with the main entrance located at the southernmost corner of a recessed primary facade. The main entry consists of an incorporated porch supported by a one square stone column at the southwest corner, reflecting the stonework of the chimney on the northern side of the porch (Figure 2). The porch has a slender, fixed window to the south, and there is a wood-paneled door with fanlight glazing. The middle section of the primary façade has an aluminum sliding window to the north of the stone chimney. The northernmost corner of the house has a sliding glass door situated adjacent to a wood door, both of which open onto the breezeway that leads to the garage (Figure 3). To the south of the wooden door is another aluminum sliding window. The garage is situated to the west of the house and is accessed from the breezeway. The western elevation of the garage building consists of a two-car garage door (Figure 4).

Figure 1. West elevation, facing east.

Figure 2. Photo showing the main front entry to the house, facing east.

Figure 3. Photo showing the breezeway along the west elevation, facing northeast.

Figure 4. Photo of the garage, facing northeast.

South Elevation

The south elevation consists of two sections of the house, including a garage (upper section) and the main house (lower section). The garage has an aluminum sliding window centered on the façade (see Figure 4). A breezeway separates the garage from the main house and includes a storage shed with a plywood door. The south elevation of the main house is void of fenestration (Figure 5). There is a utility meter at the western corner.

Figure 5. Photo of the south elevation, facing east.

East Elevation

The east elevation consists of two projecting gables on either side of a connected wing (Figure 6). The fenestration along this elevation includes a fixed window, continuous floor-to-ceiling windows, a sliding aluminum window, a fixed picture window on either side of a sliding glass door, a sliding glass door centered on the northern most gable façade, and a single-entry wood door (Figure 7). An incorporated porch extends along the recessed eastern wing and is supported by two wooden columns.

Figure 6. East elevation, facing west.

Figure 7. East elevation, facing northwest.

North Elevation

The north elevation consists of three sections. The easternmost section has four high-place, side-sliding-sash windows. The middle section is a stucco-clad wall, enveloping a decorative concrete breezeway wall that connects the westernmost section and the eastern section. The westernmost section consists of the north attached garage wall with extending eaves and exposed rafters and is void of fenestration (Figure 8).

Figure 8. North elevation, facing west.

Associated Landscape

The associated landscape includes a long, paved, private driveway that is accessed via a "court" or "turn-around". A wood retaining wall is situated to the north of the driveway and runs the length of the paved driveway from the court to the house (Figure 9).

Figure 9. Photo showing the paved driveway west of the primary façade of the ca. 1958 house.

California Register of Historical Resources (CRHR) Evaluation

1. **(Event): Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.**

   The ca. 1958 house and associated landscape within the property is situated within the former Black Mountain Spring Water Company property established in 1937 by George Washington Faulstich and moved to the property in 1939. The property consists of a natural spring where the water was extracted and bottled. In 1946, George had a bottling plant (no longer extant) constructed within the property. When Black Mountain Spring Water Company was sold in 2001, it was the largest privately owned spring water company in the U.S. Although George Washington Faulstich had the ca. 1958 house constructed, it is not directly associated with the Black Mountain Spring Water Company. Instead, the house was built as an investment property for the Faulstich family. As such, it was not found to be associated with any event that made a significant contribution to the broad patterns of California's history and cultural heritage.

   Therefore, the property is not individually eligible for listing in the CRHR under Criterion 1.

1. **(Person): Is associated with the lives of persons important in our past.**

   The ownership and occupancy history of the ca. 1958 house and associated landscape within the property was thoroughly researched. The property is associated with George Washington Faulstich, who achieved importance as an entrepreneur in the early bottled water business, and along with his grandson Joe Bullock Jr., invented the world's first plastic, snap-on bottle cap - the "Cap Snap Seal". Although George owned the property there is no evidence that George lived within the ca. 1958 house,

as it appears that it was built as a rental. In addition, although Joe Bullock Jr. appears to have lived within the ca. 1958 house from 1973 to 1976, and inherited the property in 2003, Joe was not living within the property at the time he and George invented to "Cap Snap Seal," and he inherited the property after the Black Mountain Spring Water Company was sold to Nestle in 1999. In addition, the house appears to have been primarily utilized as a rental, which makes association with a person difficult as occupants change frequently. For these reasons, it does not appear that the property including the ca. 1958 house and associated landscape is associated with any persons important to California history.

Therefore, the property does not appear individually eligible for listing in the CRHR under Criterion 2.

3. **(Construction/Architecture): Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.**

   The ca. 1958 house is associated with Ranch architecture within a period of significance of ca. 1958. Although the house does consist of elements of Ranch architecture, including wing and gable forms, wide eaves, an attached garage, and a stone chimney, the ca. 1958 house was not determined to be a representative example of the Ranch Architecture and is not the first to be designed within this style, nor is it the work of a master or possess high artistic value.

   The associated landscape within the property is not associated a known architectural style or architectural landscape design.

   Therefore, the ca. 1958 house and associated landscape within property is not individually eligible for listing under Criterion 3.

4. **(Information potential): Has yielded, or may be likely to yield, information important in prehistory or history.**

   Criterion 4 most commonly applies to resources that contain or are likely to contain information bearing on an important archaeological research question. While most often applied to archaeological sites, Criterion 4 can also apply to built environment resources that contain important information. For a building to be eligible under Criterion 4, it must be a principal source of important information, such as exhibiting a local variation on a standard design or construction technique can be eligible if a study can yield important information, such as how local availability of materials or construction expertise affected the evolution of local building development.

   The ca. 1958 house and associated landscape within property do not appear to have the ability to convey information potential that is unique or unknown regarding an architectural style. Therefore, the property does not appear individually eligible for listing under Criterion 4.

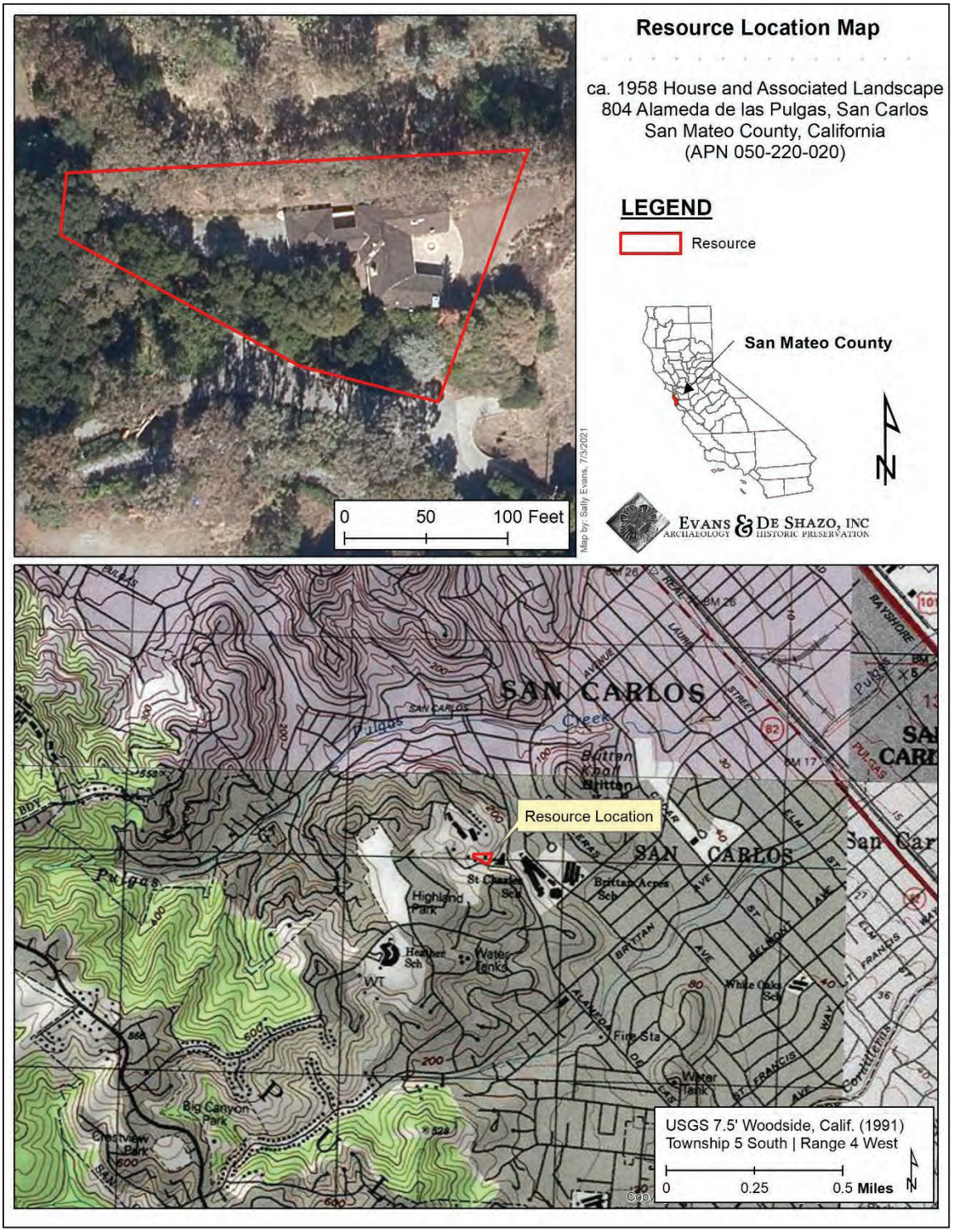
State of California ♁ Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI#
Trinomial

***Resource Name or #** 804 Alameda de las Pulgas

***Map Name:** USGS 7.5' Woodside Quadrangle ***Scale:** 1:24,000 ***Date of map:** 1991



* Required information

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 _____

Page 1 **of** 13 ***Resource Name or #:** 806 Alameda de las Pulgas
P1. Other Identifier:

P2. Location: ☐ **Not for Publication** ☒ **Unrestricted**
***a. County** San Mateo **and**
***b. USGS 7.5' Quad** Woodside **Date** 1991 **T** 5S; **R** 4W; un **of Sec**; MD **B.M.**
c. Address 806 Alameda de las Pulgas City San Carlos Zip 94070
d. UTM: Zone 10, 564468 mE/ 4150209 mN
e. Other Locational Data: The resource is located within the 5.86-acre Assessor's Parcel Number (APN) 050-220-170, approximately 650 feet west of Alameda de las Pulgas within the City of San Carlos.

***P3a. Description:** The resource includes the ca. 1958 house, ca. 1960 octagonal structure, and associated landscape. The ca. 1958 house is designed in the Ranch style with elements of Spanish Colonial Revival architecture. The house consists of an "F" shaped floor plan and rests on a concrete slab foundation. The building is set along an east-facing hillside. There is a split-level garage built on top of the hill and is connected to the house with a breezeway, which has stamped red concrete and tile floors. The roof is a low-pitched, cross-gable roof clad in red mission-style clay tiles. The eaves of the house have exposed beams, which are partially covered by decorative rain gutters. The house has three brick chimneys: two exterior gable chimneys both set off-center and one interior chimney set within a portion of the roof. The house is clad in both painted brick and wooden clapboards. (Continued on Continuation Sheet, Page 2)

P5a.

***P3b. Resource Attributes:** ca. 1958 house: HP2. Single family property; ca. 1960 octagonal structure; HP39. Other

****P4. Resources Present:** ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other

P5b. Description of Photo: ca. 1958 house, facing east.

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both Various construction dates; various sources

***P7. Owner and Address:** Name withheld by owner

***P8. Recorded by:** Stacey De Shazo, M.A., Evans & De Shazo, Inc., 1141 Gravenstein Highway S, Sebastopol, CA 95472

***P9. Date Recorded:** 11/30/2020

***P11. Report Citation**: Stacey De Shazo, M.A. (2021) Historic Resource Evaluation for the Alameda de las Pulgas Townhomes Project at 804, 806, and 808 Alameda De Las Pulgas, San Carlos, San Mateo County, California.

***Attachments:** ☐NONE ☒Location 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): _____

(Continued from Primary Sheet, Page 1)

West Elevation (Primary Façade)

The west elevation (primary façade) is predominantly clad with painted brick. There is a two-car garage located at the southernmost section of the house situated "above" the main portion of the house, which is built into the hillside, and appears to have been excavated to provide a level area to construct the house (Figure 1). The northernmost gable of the house has a brick exterior chimney, situated off-center from the gable. To the south of the chimney is a fixed stained-glass window with a horizontal fixed window above it. This section of the primary façade is clad with wooden clapboards. There are semicircular stairs with a cast-iron railing set behind a brick retaining wall that leads to the main front entrance to the house (Figure 2). The front door is set within a recessed entry and consists of an eighteen-light double-door. To the south of the door is a large, fixed window. To the south of the recessed main entrance is a patio built into the slope. This patio section "wall" has two ten-light doors that flank a wall fountain (Figure 3). The patio has brick pavers laid out in a herringbone pattern and a stone retaining wall. The southern section of the main house is clad with wooden clapboards and has a horizontal sliding wood aluminum window. To the south of this window is a wood-paneled door with one-over-one glazing. At the southernmost corner of the main house, south of the wood-paneled door, is an eight-light fixed window. It is at this section of the main house that the garage is connected via a breezeway.

Figure 1. Photo showing the two-car garage facing east.

Figure 2. Photo showing the semicircular stairs that lead to the main entrance to the house.

Figure 3. Photo showing the wall fountain facing north.

South Elevation

The south elevation consists of two eave facades and the walls of two projecting gables, which are primarily clad in wooden clapboards, with some areas covered in painted brick. The south elevation of the garage gable consists of exposed wood beams set under the roof eaves (Figure 4). This elevation is clad in painted brick and is void of fenestration. The south gable of the main house is connected to the garage by a breezeway and void of fenestration. The southern portion of the projecting winged gable of the main house has a wood-paneled door and a sliding aluminum window (Figure 5). A porch is incorporated under the roof, and the roof is supported by beams and square wooden columns. The south wall of the northernmost projecting gable has a wood-paneled door (Figure 6).

Figure 4. Photo showing the garage gable that consists of exposed wood beams set under the roof eaves, facing north.

Figure 5. Photo showing the southern portion of the projecting winged gabled form (right) of the main house, facing west.

Figure 6. Photo showing the south wall of the northern most projecting gabled form, facing north.

East Elevation

The east elevation consists of two projecting gable wings and the rear façade of the garage. The rear garage façade is clad in wooden clapboards and a central, wood-paneled door, which opens onto a partial-façade porch with wood balusters (Figure 7). There is a stairway that leads from the garage to an incorporated porch supported by beams connected to square, wood columns that run along the east elevation (see Figure 7). The fenestration of this wing includes two small, sliding aluminum windows followed by a larger sliding aluminum window. A section of the east elevation consists of a fixed, twelve-light window and a fixed, eight-light window. To the south of these windows is a three-light, fixed window. Between the two projecting gables is a brick-paved patio with a sliding glass door flanked by two floor-to-ceiling, fixed windows (Figure 8). The northernmost gable has a recessed sliding glass door to the south and a fixed, stained-glass window to the north. This gable has a wooden truss supporting the roof. The façade is clad in with wooden clapboards, but the south corner of the northern gable has painted brick, which extends along the southwest facade.

Figure 7. Photo showing the rear garage façade (left) and a portion of the main house, facing southwest.

Figure 8. Photo showing the brick-paved patio with a sliding glass door.

North Elevation

The north elevation consists of the north elevations of the northernmost façade, the north facades of two gabled wings, clad in wooden clapboard, and the north gable of the garage. The northernmost façade has a recessed entry on the north corner, consisting of a recessed side entry with glass double doors set between two floor-to-ceiling windows (Figure 9). There is an incorporated porch that is supported by two wooden posts at two corners. The northern side of this wing has a pair of one-over-one windows situated centrally along the clapboard façade; and directly south of the windows is a built-in storage closet with wood-paneled accordion doors. A decorative gutter runs along the roof eave. The north wall of the southernmost wing consists of a pair of ten-light French doors centered along the clapboard section and brick cladding (Figure 10). This brick section includes a fixed, eight-light window. The eaves, which have exposed beams, provide a shallow porch supported by two wooden posts. The north elevation of the garage, adjacent to the breezeway, has a wood-paneled arched door set off-centered along a painted brick façade, topped with a curved band of soldier bricks (Figure 10). West of the door is a square, four-light fixed window.

Figure 9. Northermost façade of the north elevation, facing south.

Figure 10. Photo showing the north wall of the southernmost projecting wing, facing south.

Figure 11. Photo showing the north elevation of the garage, facing south.

ca. 1960 Octagonal Structure

The ca. 1960 octagonal structure appears to be a large birdhouse (Figure 12). The structure is clad with vertical wood siding with a wood shake roof. The structure has four narrow arched entries, with a perch under each opening. There is a latched door to access the interior of the structure. The structure rests upon a wooden pedestal situated on a stone foundation.

Figure 12. ca. 1960 octagonal structure, facing west.

Associated Landscape

The associated landscape includes a long, paved driveway that is accessed via iron gates attached to tall stone columns (Figure 13). Stone retaining walls on either side frame the driveway. There is a wood post and wire fence that encompasses the parcel.

Figure 13. Photo showing the large iron gates, facing northeast.

California Register of Historical Resources (CRHR) Evaluation

1. **(Event): Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.**

   The ca. 1958 house, ca. 1960 octagonal structure, and associated landscape within the property is situated within the former Black Mountain Spring Water Company property established in 1937 by George Washington Faulstich and moved to the property in 1939. The property consists of a natural spring where the water was extracted and bottled. In 1946, George had a bottling plant (no longer extant) constructed within the property. When Black Mountain Spring Water Company was sold in 2001, it was the largest privately owned spring water company in the U.S. Although George Washington Faulstich had the ca. 1958 house constructed, it is not directly associated with the Black Mountain Spring Water Company. Instead, the house was built as investment properties for the Faulstich family. As such, it was not found to be associated with any event that made a significant contribution to the broad patterns of California's history and cultural heritage.

   Therefore, the property is not individually eligible for listing in the CRHR under Criterion 1.

2. **(Person): Is associated with the lives of persons important in our past.**

   The ownership and occupancy history of the ca. 1958 house, ca. 1960 octagonal structure, and associated landscape within the property was thoroughly researched. The property is associated with George Washington Faulstich, who achieved importance as an entrepreneur in the early bottled water business, and along with his grandson Joe Bullock Jr., invented the world's first plastic, snap-on bottle cap - the "Cap Snap Seal". Although George owned the property, there is no evidence that George lived

within the ca. 1958 house within the property, as it appears to have been built as a rental. In addition, as the house appears to have been primarily utilized as a rental, it makes association with a person difficult as occupants change frequently. For these reasons, it does not appear that the property including the ca. 1958 house, ca. 1960 octagonal structure, and associated landscape are associated with any persons important to California history.

Therefore, the property does not *appear individually eligible for listing in the CRHR under Criterion 2.*

3. **(Construction/Architecture): Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.**

The ca. 1958 house is associated with Ranch architecture with elements of Spanish Colonial Revival design within a period of significance of ca. 1958. Although the house does consist of Ranch architectural design elements, including wing and gable forms and an attached garage, and Spanish Colonial Revival design elements, including a low-pitched, a cross-gable roof clad with red mission style clay tiles, and exposed wooden beams, the ca. 1958 house was not determined to be a representative example of the Ranch Architecture or Spanish Colonial Revival and is not the first to be designed within either of these styles nor is it the work of a master or possess high artistic value.

The ca. 1960 octagonal structure, and associated landscape within the property is not associated a known architectural style or architectural landscape design.

Therefore, the ca. 1958 house, ca. 1960 octagonal structure, and associated landscape within property are not individually eligible for listing under Criterion 3.

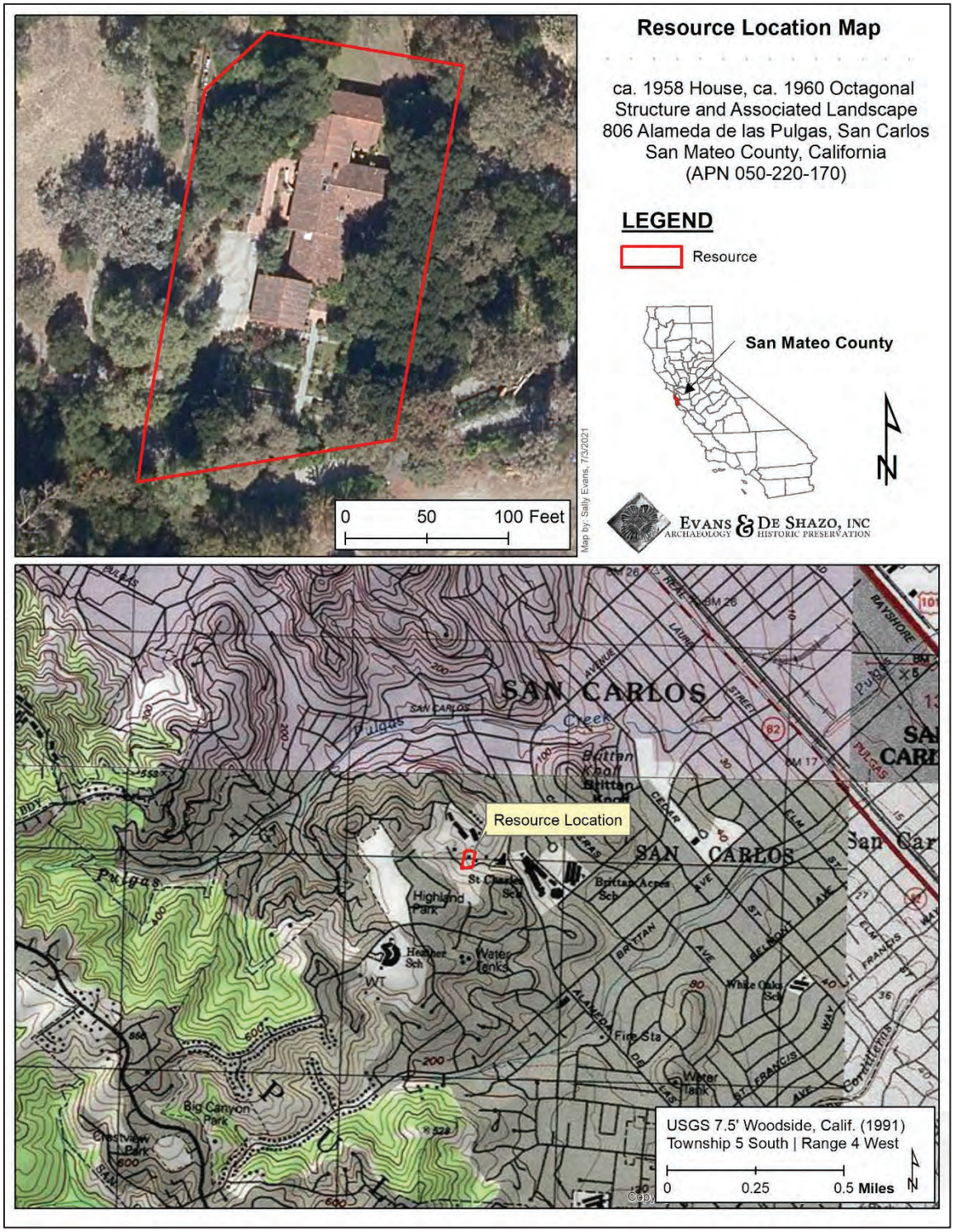
4. **(Information potential): Has yielded, or may be likely to yield, information important in prehistory or history.**

Criterion 4 most commonly applies to resources that contain or are likely to contain information bearing on an important archaeological research question. While most often applied to archaeological sites, Criterion 4 can also apply to built environment resources that contain important information. For a building to be eligible under Criterion 4, it must be a principal source of important information, such as exhibiting a local variation on a standard design or construction technique can be eligible if a study can yield important information, such as how local availability of materials or construction expertise affected the evolution of local building development.

The ca. 1958 house, ca. 1960 octagonal structure, and associated landscape within property do not appear to have the ability to convey information potential that is unique or unknown regarding an architectural style. Therefore, the property does not appear individually eligible for listing under Criterion 4.

Page 13 **of** 13 ***Resource Name or #** 806 Alameda de las Pulgas

***Map Name:** USGS 7.5' Woodside Quadrangle ***Scale:** 1:24,000 ***Date of map:** 1991



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 _____

Page 1 **of** 15 ***Resource Name or #:** 808 Alameda de las Pulgas
P1. Other Identifier:

P2. Location: ☐ **Not for Publication** ☒ **Unrestricted**
***a. County** San Mateo **and**
***b. USGS 7.5' Quad** Woodside **Date** 1991 **T** 5S ; **R** 4W; un **of Sec**; MD **B.M.**
c. Address 808 Alameda de las Pulgas City San Carlos Zip 94070
d. UTM: Zone 10, 564400 mE/ 4150241 mN
e. Other Locational Data: The resource is located within the 0.95-acre Assessor's Parcel Number (APN) 050-220-160, approximately 900 feet west of Alameda de las Pulgas within the City of San Carlos.

***P3a. Description:** The resource includes the ca. 1954 house, ca. 1965 ancillary building, ca. 1954 in-ground pool, and associated landscape. The ca. 1954 house is designed in the Mid-century Modern style. The house rests on a concrete slab foundation and has a multi-layer roof system of gable and slant roofs. The slanted roof extends over the main section of the house, from which an angled section extends and ends in a roof gable. The roof is low pitched with wide eave-overhangs and exposed beams. The roof is clad in a roofing membrane material. The attached garage has a slant roof and is connected along a corner that acts as a breezeway. The house has an exterior chimney, which is connected to an outdoor fireplace along the northwest façade. The ca. 1954 house is clad with both painted brick and vertically wooden clapboard (Continued on Continuation Sheet, Page 2)

P5a.

***P3b. Resource Attributes:** HP2. Single family property (ca. 1954 house and ca. 1965 ancillary building, ca. 1954 in-ground swimming pool and associated landscape); HP4. ca. 1965 ancillary building; HP39. Other (ca. 1954 in-ground swimming pool)
****P4. Resources Present:** ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other
P5b. Description of Photo: aerial photograph of the ca. 1954 house and ca. 1954 in-ground swimming pool (Google maps).
***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both ca. 1954, ca. 1954; various sources
***P7. Owner and Address:** Name withheld by owner
***P8. Recorded by:** Stacey De Shazo, M.A., Evans & De Shazo, Inc., 1141 Gravenstein Highway S, Sebastopol, CA 95472
***P9. Date Recorded:** 11/30/2020

***P11. Report Citation**: Stacey De Shazo, M.A. (2021) Historic Resource Evaluation for the Alameda de las Pulgas Townhomes Project at 804, 806, and 808 Alameda De Las Pulgas, San Carlos, San Mateo County, California.

***Attachments:** ☐NONE ☒Location 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): _____

(Continued from Primary Sheet, Page 1)

Southeast Elevation (Primary Façade)

The southeast elevation is the primary façade and consists of several bays constructed of a mix of material and a layered roof. The main section of the house consists of a slanted roof with floor-to-ceiling windows to the south. Due to the pitch of the slanted roof, the wall is one-and-a-half-stories. A bay extends from this façade and has a flat roof with wide eave overhangs. The façade above the projecting flat roof has clerestory windows on which the slanted roof sits (Figure 1). There is an extended bay with a wood corner support. The bay is clad in painted brick and consists of double-glazed doors on one side and fixed corner windows set on a high knee wall. To the north of this is a wood-paneled door with a single light surrounded by painted brick (Figure 2). Along this section, the brick meets vertical wooden clapboards that extend to an angled wing. The wing has a glass-sliding door on either side of two high-placed, horizontal fixed aluminum windows. The vertical clapboards continue throughout the façade of the angled wing. The southeast elevation of the garage has a group of five, tall, twelve-light fixed windows with white wood paneling below and wooden muntins between each window (Figure 3). To the south of these windows is a Dutch door with wood paneling on the lower half and nine lights on the upper half. The façade has horizontal shiplap cladding.

Figure 1. Photo showing the primary façade, facing north.

Figure 2. Primary façade (southeast elevation) showing the multi-layer roof elements, facing northwest.

Figure 3. Photo showing the southeast elevation of the garage, facing northwest.

North/Northeast Elevations

The north/northeast elevations, combined due to the angular shape of the house, consist of the northernmost wall of the house and the northeastern-most wall of the house, as well as the northeast portion of the attached garage. The northernmost wall of the house consists of the gabled end with wide overhanging eaves. The northeastern-most wall of the house consists of two sliding glazed doors set under a recessed porch supported by square columns (Figure 4). Northeast of the northeast garage wall is an attached breezeway. The northeast garage wall has a series of three sliding aluminum windows with twelve faux lights (Figure 5 and Figure 6). The façade is clad in vertical wood panels.

Figure 4. Photo showing the northeastern-most wall of the house, facing north.

Figure 5. Photo showing the northeast section of the garage set under the breezeway, facing south.

Figure 6. Photo showing the northeast wall of the garage, facing southwest.

Northwest Elevation

The northwest elevation consists of three sections or bays of the house that are clad in painted brick (Figure 7). The northernmost section has a floor-to-ceiling fixed window adjacent to a sliding glass aluminum door. To the south are two single doors, the northern of which is glass, while the southern is louvered wood. The middle section has floor-to-ceiling windows on either side of two glass-sliding doors. The southernmost section of this elevation has a tall wall clad in painted brick laid out in a running bond pattern topped with a band of soldier bricks. There are two square openings, which were at one-time built-in grills, but are currently being used as storage. This section of the northwest elevation also has an exterior outdoor fireplace set within the exterior wall, which is flanked by decorative spiral pilasters on either side (Figure 8). The hearth is raised, allowing for firewood storage. Additionally, the northwest elevation of the garage includes a one-car garage door clad in horizontal wood panel siding. The garage door is a trifold wood door with upper window glazing (Figure 9).

Figure 7. Northwest elevation, facing east.

Figure 8. Photo showing the exterior brick wall with an outdoor fireplace, facing southeast.

Figure 9. Photo showing the trifold garage doors, facing south.

Southwest Elevation

The southwest elevation consists of the wall of the main house connected to the garage by the breezeway and the southwest wall of the garage. The wall connected to the breezeway has three materials: painted brick, wood panels, and floor-to-ceiling glass windows (Figure 10). Unlike the rest of the house, the eaves on this elevation are closed. The southwest elevation consists of wide overhanging eaves and exposed rafters. The wall is clad in horizontal clapboard and void of fenestrations (Figure 11).

Figure 10. Photo showing the southwest wall of the house, facing southeast.

Figure 11. Photo showing the southwest elevation of the garage, facing northeast.

ca. 1965 Ancillary Building

The ca. 1965 ancillary building is not associated with any architectural style. The ca. 1965 ancillary building is a side-gabled building with the primary façade facing southwest. The western corner of the primary façade has an elaborate wood-paneled door with circular stained-glass glazing (Figure 12 and Figure 13). To the south of the door is a grouped window with three, nine-light wood windows with wood mullions. The southeast elevation is constructed of plywood. The northwest elevation consists of a three-step staircase leading to a side-entry door that is topped with an opening where a transom was likely located. The northeast elevation has a wood-paneled façade with a fixed twelve-light window at the center. There is a narrow porch that extends from the north elevation of the building, with a porch roof clad in corrugated plastic sheets (Figure 14). The northwest elevation has double-wood paneled doors centered beneath the gable.

Figure 12. Photo showing the southwest elevation of the ca. 1965 building, facing northeast.

Figure 13. Photo showing the elaborate door along the primary façade, facing northeast.

Figure 14. Photo showing the narrow porch along the rear façade, facing west.

ca. 1954 In-ground Pool

The ca. 1954 in-ground pool is not designed in any architectural style. The pool is kidney-shaped and is surrounded by square clay tiles that serve as the pool decking (Figure 15). There are semicircular concrete steps within the in-ground pool and two metal support bars along the northernmost section of the pool that previously supported a diving board that is no longer present.

Figure 15. Photo showing the kidney-shaped ca. 1954 in-ground pool, facing east.

Associated Landscape

The associated landscape includes a winding dirt and gravel private driveway that loops around the ca. 1954 house and provides access from either the eastern or western sides of the house to the main paved driveway within the property (Figure 16). There is wood fencing along sections of the house and the private driveway.

Figure 16. Photo showing the dirt and gravel driveway and wood fencing, facing east.

California Register of Historical Resources (CRHR) Evaluation

1. **(Event): Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.**

   The ca. 1954 house, ca. 1965 ancillary building, ca. 1954 in-ground pool, and associated landscape is situated within the former Black Mountain Spring Water Company property established in 1937 by George Washington Faulstich. The property consists of a natural spring where the water was extracted and bottled. In 1946, George had a bottling plant (no longer extant) constructed within the property. When Black Mountain Spring Water Company was sold in 2001, it was the largest privately-owned spring water company in the U.S. Although George Washington Faulstich had the ca. 1954 house constructed, it is not directly associated with the Black Mountain Spring Water Company. Instead, the house was built as an investment property for the Faulstich family. As such, it was not found to be associated with any event that made a significant contribution to the broad patterns of California's history and cultural heritage.

   Therefore, the property is not individually eligible for listing in the CRHR under Criterion 1.

2. **(Person): Is associated with the lives of persons important in our past.**

   The ownership and occupancy history of the ca. 1954 house, ca. 1965 ancillary building, ca. 1954 in-ground pool, and associated landscape within the property was thoroughly researched. The property is associated with George Washington Faulstich, who achieved importance as an entrepreneur in the

early bottled water business, and along with his grandson Joe Bullock Jr., invented the world's first plastic, snap-on bottle cap - the "Cap Snap Seal". Although George owned the property, there is no evidence that George lived within the ca. 1954 house within the property, as it appears to have been built as a rental. The use of the house as a rental, makes association with an important historical person difficult, as occupants change frequently. For these reasons, it does not appear that the property including the ca. 1954 house, ca. 1965 ancillary building, ca. 1954 in-ground pool, and associated landscape are associated with any persons important to California history.

Therefore, the property does not *appear individually eligible for listing in the CRHR under Criterion 2.*

3. **(Construction/Architecture): Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.**

The ca. 1954 house is associated with Mid-Century Modern architecture with a period of significance of ca. 1954. Although the house consists of angular shapes, large plate glass windows, and stacked brick veneer, it was not found to be representative of the Mid-Century Modern architectural style, is not the first to be designed within this style, and is not the work of a master, nor does it possess high artistic values.

The ca. 1965 ancillary building, ca. 1954 in-ground pool, and associated landscape within the property is not associated a known architectural style or architectural landscape design.

Therefore, the ca. 1954 house, ca. 1965 ancillary building, ca. 1954 in-ground pool, and associated landscape within property are not individually eligible for listing under Criterion 3.

4. **(Information potential): Has yielded, or may be likely to yield, information important in prehistory or history.**

Criterion 4 most commonly applies to resources that contain or are likely to contain information bearing on an important archaeological research question. While most often applied to archaeological sites, Criterion 4 can also apply to built environment resources that contain important information. For a building to be eligible under Criterion 4, it must be a principal source of important information, such as exhibiting a local variation on a standard design or construction technique can be eligible if a study can yield important information, such as how local availability of materials or construction expertise affected the evolution of local building development.

The ca. 1954 house, ca. 1965 ancillary building, ca. 1954 in-ground pool, and associated landscape within property do not appear to have the ability to convey information potential that is unique or unknown regarding an architectural style or construction techniques. Therefore, the property does not appear individually eligible for listing under Criterion 4.

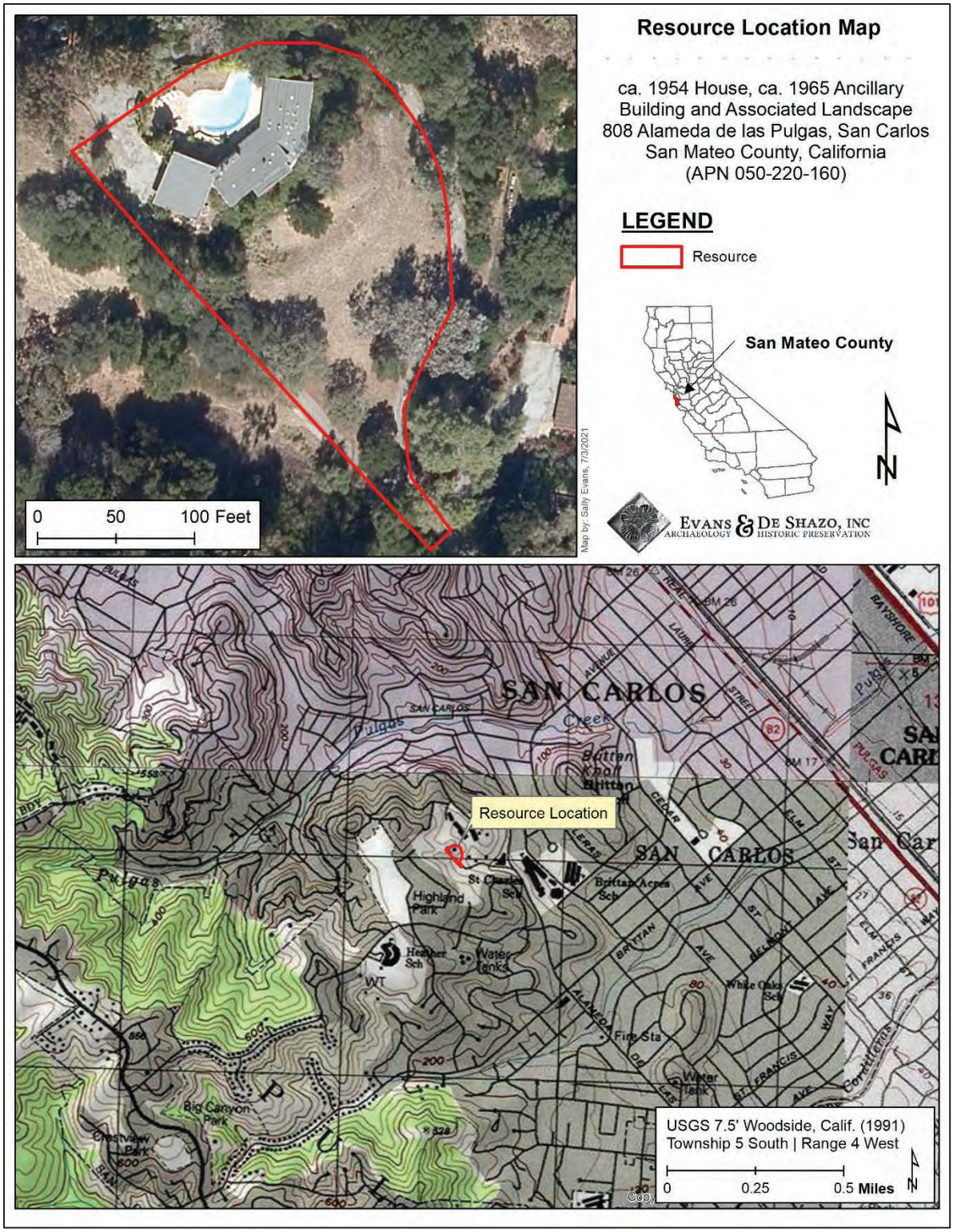
State of California ♦ Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI#
Trinomial

***Resource Name or #** 808 Alameda de las Pulgas

***Map Name:** USGS 7.5' Woodside Quadrangle ***Scale:** 1:24,000 ***Date of map:** 1991



* Required information