



**Regular Meeting Agenda
Planning Commission**

*JOSEPH MUELLER - CHAIR
WAYNE TANDA - VICE-CHAIR
LIAM DOWNEY - PLANNING COMMISSIONER
MOHAMMAD HABIB - PLANNING COMMISSIONER
PAUL LAKE - PLANNING COMMISSIONER
MALISHA KUMAR - PLANNING COMMISSIONER
JAMES WILSON PLANNING COMMISSIONER*

Tuesday, April 25, 2023 7:00 PM

**Council Chamber Building
17555 Peak Avenue, Morgan Hill, CA 95037**

Morgan Hill Planning Commission meetings are held in person with the option for the public to attend by teleconference/video conference. Information on how the public may observe and participate in the meeting is located below.

MEETING GUIDELINES AND PUBLIC COMMENT

Planning Commission meetings will be live-streamed on Channel 17, on the City's website, and on the City's Facebook page.

Those members of the community that would like to participate in the meetings remotely may do so by joining the virtual meeting at: <https://bit.ly/PlanningCommissionMtg> or by calling: (669) 900-9128, then enter the webinar ID#: 862 0324 6251#. Public comment may be provided in the following ways:

- Provide public comment in-person
- Join the Planning Commission meeting virtually via the link above. When public comment is opened, raise your virtual hand and be called upon to speak for up to 3 minutes (YOU MUST BE RUNNING THE MOST CURRENT VERSION OF ZOOM TO BE UNMUTED)
- Join virtually by calling the number above, dial *9 to raise your hand, and be called upon to speak for up to 3 minutes
- Send public comments in writing to the Minutes Clerk at

* Please note that comments made on Facebook are not considered public comment.

CALL TO ORDER

ROLL CALL ATTENDANCE

DECLARATION OF POSTING

Pursuant to Government Code Section 54954.2

PLEDGE OF ALLEGIANCE

PUBLIC COMMENT

Members of the public are entitled to address the Planning Commission concerning any item within the Morgan Hill Planning Commission's subject matter jurisdiction. Public comments are limited to no more than three minutes. Except for certain specific exceptions, the Commission is prohibited from discussing or taking action on any item not appearing on the posted agenda. (See additional noticing at the end of this agenda)

ORDERS OF THE DAY

MINUTES APPROVAL

1. MARCH 28, 2023 MEETING MINUTES

Recommendation:

1. Accept Minutes

PUBLIC HEARINGS

2. UP2021-0002/EA2021-0001: REQUEST FOR A CONDITIONAL USE PERMIT TO DEMOLISH AND REDEVELOP THE EXISTING GAS STATION AND CONVENIENCE STORE LOCATED AT 16720 MONTEREY ROAD (APN 817-01-002). PROPOSED CEQA ACTION IS THE ADOPTION OF THE INITIAL STUDY/MITIGATED NEGATIVE DECLARATION AND MITIGATION MONITORING AND REPORTING PROGRAM (WORLD OIL)

Recommendation:

1. Open/close public hearing; and

2. Adopt the Resolution approving a Mitigated Negative Declaration, adopting a mitigation and monitoring reporting program, and approving a Conditional Use Permit for a gas station remodel.

OTHER BUSINESS

DIRECTOR'S REPORT/ANNOUNCEMENTS

ADJOURNMENT

NOTICE

Any documents produced by the City and distributed to the majority of the Planning Commission less than 72 hours prior to an open meeting, will be made available for public inspection at the front counter at City Hall located at 17575 Peak Avenue, Morgan Hill, CA, 95037 and at the Morgan Hill Public Library located at 660 West Main Avenue, Morgan Hill, California, 95037 during normal business hours. (Pursuant to Government Code 54957.5)

PUBLIC COMMENT

Members of the Public are entitled to directly address the Planning Commission concerning any item that is described in the notice of this meeting, before or during consideration of that item. If you wish to address the Planning Commission on any issue that is on this agenda, please complete a speaker request card located in the foyer of the Council Chambers and deliver it to the Minutes Clerk prior to discussion of the item. You are not required to give your name on the speaker card in order to speak to the Planning Commission, but it is very helpful. When you are called, proceed to the podium and the Chair will recognize you. If you wish to address the Planning Commission on any other item of interest to the public, you may do so during the public comment portion of the meeting following the same procedure described above. Please limit your comments to three (3) minutes or less.

Please submit written correspondence to the Minutes Clerk, who will distribute correspondence to the Planning Commission.

Persons interested in proposing an item for the Planning Commission agenda should contact a member of the Commission who may plan an item on the agenda for a future Commission meeting. Should your comments require Planning's action, your request may be placed on the next appropriate agenda. Planning Commission discussion or action may not be taken until your item appears on an agenda. This procedure is in compliance with the California Public Meeting Law (Brown Act) Government Code §54950.

City Council Policies and Procedures (CP 03-01) outlines the procedure for the conduct of public hearings. Notice is given, pursuant to Government Code Section 65009, that any challenge of Public Hearing Agenda items in court, may be limited to raising only those issues raised by you or on your behalf at the Public Hearing described in this notice, or in written correspondence delivered to the Commission at, or prior to the Public Hearing on these matters.

The time within which judicial review must be sought of the action by the Commission, which acted upon any matter appearing on this agenda is governed by the provisions of Section 1094.6 of the California Code of Civil Procedure.

For a copy of Commission Policies and Procedures CP 97-01, please contact the City Clerk's office (408) 779-7259, (408) 779-3117 (fax) or by email cityclerk@morganhill.ca.gov.

AMERICANS WITH DISABILITIES ACT (ADA)

In compliance with the Americans with Disabilities Act, if you are a disabled person and you need a disability-related modification or accommodation to participate in this meeting, please contact the City Clerk's Office at (408)779-7259, (408)779-3117 (fax) or by email cityclerk@morganhill.ca.gov. Requests must be made as early as possible and at least two-full business days before the start of the meeting.



**Meeting Minutes
Planning Commission**

JOSEPH MUELLER - CHAIR
WAYNE TANDA - VICE-CHAIR
LIAM DOWNEY - PLANNING COMMISSIONER
MOHAMMAD HABIB - PLANNING COMMISSIONER
PAUL LAKE - PLANNING COMMISSIONER
MALISHA KUMAR - PLANNING COMMISSIONER
JAMES WILSON - PLANNING COMMISSIONER

Tuesday, March 28, 2023 7:00 PM

**Council Chamber Building
17555 Peak Avenue, Morgan Hill, CA 95037**

CALL TO ORDER

Chair Mueller called the meeting to order at 7:00 p.m.

ROLL CALL ATTENDANCE

Minutes Clerk Jenna Luna called the roll at 07:00 p.m.

STATUS	ATTENDEE
PRESENT	Joseph Mueller, Wayne Tanda, Mohammad Habib, Paul Lake, James Wilson
EXCUSED	Liam Downey, Malisha Kumar

DECLARATION OF POSTING

Minutes Clerk Luna Declared the posting of the Agenda at 7:00 p.m.

PLEDGE OF ALLEGIANCE

Planning Commissioner Wilson led the Pledge of Allegiance at 7:01 p.m. p.m.

PUBLIC COMMENT

Chair Mueller opened Public Comment Period at 7:02 p.m. Hearing no request to speak, the Public Comment Period was closed.

ORDERS OF THE DAY

There were no changes made.

MINUTES APPROVAL

1. MARCH 14, 2023 MEETING MINUTES

Recommendation:

1. Accept Minutes

MOTION:

Accept Minutes.

RESULT:	Passed
MOVER:	Planning Commissioner Habib
SECONDER:	Planning Commissioner Wilson
AYES:	Mueller, Tanda, Habib, Lake, Wilson
NAYS:	None
ABSTAIN:	None
EXCUSED:	Downey, Kumar

PUBLIC HEARINGS

2. UP2021-0002/EA2021-0001: REQUEST FOR A CONDITIONAL USE PERMIT TO DEMOLISH AND REDEVELOP THE EXISTING GAS STATION AND CONVENIENCE STORE LOCATED AT 16720 MONTEREY ROAD. PROPOSED CEQA ACTION IS THE ADOPTION OF A MITIGATED NEGATIVE DECLARATION AND MITIGATION MONITORING AND REPORTING PROGRAM. (World Oil)

Recommendation:

1. Open/close public hearing; and
2. Adopt the Resolution approving a mitigated negative declaration, adopting a mitigation and monitoring reporting program, and approving a Conditional Use Permit for a Gas Station Remodel.

Senior Planner Tiffany Brown presented the Staff Report at 7:05 p.m.

Chair Mueller opened the Public Hearing at 7:21 p.m. The following individuals were called to speak:

- John Hundley - Applicant
- Alex Irshaid - Ramcam Engineering Group
- Dough Muirhead
- CC (Zoom)
- Javier Vega
- Ray Lemos
- Will (Zoom)
- Maura Do (Zoom)
- Liz

Hearing no further requests to speak, the Public Hearing was closed at 7:51 p.m.

Chair Mueller re-opened the Public Hearing at 8:06 p.m. The following individuals were called to speak:

- John Hundley - Applicant
- Christopher Pham
- Will
- Ray Lemos

Chair Mueller closed the Public Hearing at 8:16 p.m.

MOTION:

Continue the item to the April 11, 2023 Planning Commission meeting.

RESULT:	Passed
MOVER:	Planning Commissioner Wilson
SECONDER:	Planning Commissioner Lake
AYES:	Mueller, Tanda, Habib, Lake, Wilson
NAYS:	None
ABSTAIN:	None
EXCUSED:	Downey, Kumar

The Planning Commission meeting recessed at 8:41 p.m.
The Planning Commission meeting reconvened at 8:46 p.m.

3. **AAE2019-0001/EA2019-0007: REQUEST FOR A CONDITIONAL USE PERMIT AMENDMENT TO ALLOW FOR THE DEMOLITION AND REDEVELOPMENT OF AN EXISTING GAS STATION WITH CONVENIENCE STORE LOCATED AT 810 EAST DUNNE AVENUE. PROPOSED CEQA ACTION IS THE ADOPTION OF A MITIGATED NEGATIVE DECLARATION AND MITIGATION MONITORING AND REPORTING PROGRAM. (AU Energy)**

Recommendation:

1. Open/close public hearing; and
2. Adopt the Resolution approving a mitigated negative declaration, adopting a mitigation and monitoring reporting program, and approving a Conditional Use Permit amendment for a Gas Station Remodel.

Senior Planner Tiffany Brown presented the Staff Report at 8:27 p.m.

Chair Mueller opened the Public Hearing at 8:55 p.m. The following individual was called to speak:

- Sunny Goyal - Applicant (Zoom)

Hearing no further requests to speak, the Public Hearing was closed at 9:04 p.m.

Chair Mueller re-opened the Public Hearing at 9:08 p.m. to allow the applicant to address the Planning Commissioners' questions.

- Sunny Goyal - Applicant (Zoom)

Hearing no further requests to speak, the Public Hearing was closed at 9:09 p.m.

MOTION:

Adopt a resolution approving the Mitigated Negative Declaration, the Mitigation Monitoring and Reporting Program, and the Conditional Use Permit with a modification to Section 3 of the resolution to rearrange the wording so that the environmental documents are adopted prior to the action on the Conditional Use Permit.

RESULT:	Passed
MOVER:	Planning Commissioner Lake
SECONDER:	Planning Commissioner Wilson
AYES:	Mueller, Tanda, Habib, Lake, Wilson
NAYS:	None
ABSTAIN:	None

EXCUSED:	Downey, Kumar
-----------------	---------------

OTHER BUSINESS

4. CITY COUNCIL POLICY CP18-04 - RULES FOR THE CONDUCT OF PLANNING COMMISSION MEETINGS

Recommendation:

Discuss and consider whether to change the Planning Commission's regular meetings start time to 6:00 p.m.

MOTION:

Continue item to the April 11, 2023 Planning Commission Meeting.

RESULT:	Passed
MOVER:	Planning Commissioner Habib
SECONDER:	Planning Commissioner Wilson
AYES:	Mueller, Tanda, Habib, Lake, Wilson
NAYS:	None
ABSTAIN:	None
EXCUSED:	Downey, Kumar

DIRECTOR'S REPORT/ANNOUNCEMENTS

Community Development Director Jennifer Carman made an announcement at 9:16 p.m.

ADJOURNMENT

There being no further business to discuss, Chair Mueller adjourned the meeting at 9:20 p.m.

MINUTES PREPARED BY:

Jenna Luna, Minutes Clerk

PLANNING COMMISSION STAFF REPORT

MEETING DATE: April 25, 2023

PREPARED BY:

Tiffany Brown, Associate Planner

APPROVED BY: Jennifer Carman

UP2021-0002/EA2021-0001: REQUEST FOR A CONDITIONAL USE PERMIT TO DEMOLISH AND REDEVELOP THE EXISTING GAS STATION AND CONVENIENCE STORE LOCATED AT 16720 MONTEREY ROAD (APN 817-01-002). PROPOSED CEQA ACTION IS THE ADOPTION OF THE INITIAL STUDY/MITIGATED NEGATIVE DECLARATION AND MITIGATION MONITORING AND REPORTING PROGRAM (WORLD OIL)

RECOMMENDATION(S)

1. Open/close public hearing; and
2. Adopt the Resolution approving a Mitigated Negative Declaration, adopting a mitigation and monitoring reporting program, and approving a Conditional Use Permit for a gas station remodel.

LOCATION MAP/PROJECT INFORMATION:

BACKGROUND:

The Planning Commission received the Staff Report with related materials and considered the request for a Conditional Use Permit (CUP) for the remodel of an existing gas station on March 28, 2023. After receipt of the report/presentation, and testimony received during the public hearing, the item was continued to further discuss the mitigation(s) within the Mitigation, Monitoring, and Reporting Program (MMRP) related to potential exposure to environmental contaminants during construction and ongoing operation, review of transportation analysis, and potential noise and lighting exposure for a 24-hour business operation.

PROJECT DESCRIPTION:

The project request includes the demolition of the existing four pump gas station with eight gas dispensers, a fuel canopy, and an 880 square foot convenience store to redevelop the .5-acre site with a new 6 pump station with 12 dispensers, a new fuel canopy, and a 2,115 square foot convenience store with associated off and on site improvements. There is access to the site off Monterey Road and San Pedro Avenue. The new site layout will reduce the access point along Monterey Road to 32 feet and introduce landscaping to limit and clarify vehicular access points. The project would include an air and water (A/W) dispenser, trash enclosure, and surface parking spaces on the northern portion of the site. The project would provide 11 parking spaces. One parking space would be compliant with the Americans with Disabilities Act (ADA), one parking space would include a charging station for electric vehicles, and one parking space would be dedicated for the use of the A/W dispenser. The fuel station and convenience store is proposed to be open seven days a week, 24-hours a day.

Site Description

The majority of the project site was developed in 1963 as a gas station with a convenience store and associated on-site improvements. The existing gas station contains four pump stations with eight gas dispensers and an 880 square foot convenience store. The eastern portion of the site

includes an undeveloped area covered by grass. After the establishment of the station and store, a Zoning Code Update was adopted that requires new gas stations and convenience stores to obtain a CUP, which rendered the site legal-non-conforming. While the full remodel with expansion of the use requires a CUP, the maintenance and repair of the existing facilities do not require a CUP. The current station needs to replace dispensers, piping, and tanks by end of this year or early next year to continue operations as required by County and State regulations. As the facilities are all outdated, the property owner/business owner would like to take the opportunity to invest and update the site at the same time to consolidate construction impacts and costs into one timeframe. The current hours of operation are from 6:00 a.m. to 10:00 p.m., seven days a week.

The site and adjacent properties are designated as mixed use. The project site is surrounded by commercial and retail uses to the north and west, with townhouses to the east, and a future senior housing apartment complex to the south. The surrounding General Plan and zoning designation is Mixed Use Flex.

PROJECT ANALYSIS AND FINDINGS:

REQUESTED ITEMS FOR DISCUSSION: The following are items from the March 28, 2023 Planning Commission Hearing that were requested to be further discussed.

1. Air Quality & Greenhouse Gas Assessment and Ongoing Operations

The Air Quality & Greenhouse Gas Assessment that was prepared by Illingworth & Rodkin, Inc. assesses the community health risk and greenhouse gas impacts associated with World Oil Gas Station remodel and operations (Attachment 7). Per the report dated August 11, 2021, the air quality impacts and greenhouse gas emissions analyzed are associated with the demolition, reconstruction, and ongoing operations of the gas station.

The broad class of air compounds listed and explained within the report are known as hazardous air pollutants that fall under the category of Toxic Air Contaminants (TACs), including particulate matter (PM_{2.5} and PM₁₀) and diesel emissions. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations. Sensitive Receptors are a group of people that are more affected by air pollution than others such as children, elderly people, and people with chronic respiratory diseases. There are State and Federal regulations that identify acceptable exposure thresholds to TACs that would have a less than significant effect on sensitive receptors. The following entities regulate the air quality standards: 1) The United States Environmental Protection Agency (EPA) sets nationwide emission standards for mobile sources; 2) The California Air Resources Board (CARB) developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from vehicles in addition to requiring more stringent emission standards for new on and off road mobile sources and stationary diesel-fueled engines; and 3.) The Bay Area Air Quality Management District (BAAQMD) is the lead agency for the Bay Area and in developing plans to address attainment and maintenance of the National Ambient Air Quality Standards and California Ambient Air Quality Standards. The Air Quality & Greenhouse Gas Assessment identifies all potential risks to adjacent residents/businesses, concludes consistency with state and federal standards, identifies the project to have a less than significant impact, and provides the standard mitigation measures that are required for fuel use. The MMRP (Attachment 6) explains when to review, how to comply, and who is responsible for checking compliance for each mitigation. The BAAQMD regulates potential exposures from the pump dispensers related to ongoing operations of the gas station. The ongoing operations and mitigations related to potential hazardous materials during construction are further summarized below.

The air quality study was prepared to address the City's CEQA review process, which is to identify significant impacts caused by the project, and where necessary, mitigation measures to reduce those impacts. The Bay Area Air Quality Management District (BAAQMD) provides guidance and

screening tools to address complicated issues dealing with air quality, including health risk impacts. The primary impact of this project is localized air quality impacts due to construction and, to a lesser extent, operation of the project.

Screening tools are available to address the operation of the project (i.e., 30 years of gas station operation). This tool predicts “worst-case” impacts based on distance. Because it is a screening tool, BAAQMD used conservative assumptions of dispersion modeling to ensure that the tool would over predict impacts. This allows lead agencies (e.g., the City) to confidently state that impacts are less than significant without having to conduct extensive refined analyses. If impacts are significant using the screening tool, then lead agencies are recommended to conduct the refined analysis to determine if impacts are truly significant and more accurately measure the impact.

In terms of construction, there are no tools available from BAAQMD to predict impacts. Therefore, a refined modeling analysis is conducted. This modeling analysis utilizes local meteorological information and impacts are greatly influenced by the wind patterns.

Further explain the red dot and why is it north of the project?

MEI (maximum exposed individuals) locations occurred because meteorological conditions (e.g., prevailing wind conditions used from the San Martin Airport) are used in the modeling. Wind flow in Morgan Hill is predominantly northwest or southeast in the direction of the valley. That is why the receptor most affected is to the northeast. The project’s cancer risk impact was calculated over a 30-year period, which is a lifetime exposure period per BAAQMD guidance. Note that the gas station operation contribution was predicted using the screening tool and a distance representative of the homes closest to the station. Please note that the data in Table 6 notes risk levels based on un-mitigated construction and operation. While un-mitigated, both levels are below the BAAQMD risk threshold, these levels will drop even further with the mitigations included in the CEQA analysis.

Although distance does make a difference, just as important are the meteorological data and prevailing wind conditions - this is why there are no red dots on the houses closest to the station.

Gas station operation results are based on the screening tool calculations for the residences closest to the site because refined modeling was not required based on the BAAQMD thresholds and modeling results. Refined modeling was not necessary because it would show that the MEI for the station would be near the MEI for construction but the risk results would likely be less.

The screening tool used to assess operational impacts used the closest distance to a sensitive receptor (i.e., residences in this case). Further refined analysis was not conducted because the low impacts that the screening tool predicted were well below significant thresholds. Emissions of TACs from a gas station are mostly associated with evaporation of reactive organic gases that include air toxic contaminants – with benzene being by far the most toxic. These emissions come from individuals pumping gas, spilling gas, trucks delivering gas, gas vapors escaping the tanks, gas vapors escaping vehicles being fueled. Therefore, emissions are not coming from a specific point source, but more of an area source from the entire project site. A wall would likely have some effects on reducing impacts but there are no approved regulatory methods for modeling those and therefore, this analysis did not account for that effect.

Further explain the orange dot and why is it in a different location than the red dot?

The orange dot refers to PM2.5 or particulate matter. Based on modeling, particulate matter does not travel as far as air vapor, reducing the distance of potential impact. It's important to note that the potential impact that is far below the BAAQMD threshold noted in Table 6 is only for construction - there is no impact for operational in the PM2.5 category.

Ongoing Operations

BAAQMD regulates potential risk of exposure for ongoing operation of gas stations. Prior to installation of a new fuel system or replacement of an existing fuel system, the owner is required to

obtain an Authority to Construct (ATC) permit from BAAQMD. That permit requires a fuel plan for all gas stations which controls and limits the amount of fuel throughput (fuel allowed to be pumped) per calendar year. Adjacent uses such as residential uses and/or schools influence the maximum allowed throughput per calendar year.

At the March 28, 2023 Planning Commission hearing, the Commission inquired whether the number of pumps would introduce additional exposure with ongoing operations. As explained above, BAAQMD allows a certain amount of throughput of fuel. The amount of fuel throughput allowed is the same whether there are more or fewer pumps, therefore the exposure is the same.

The Commission also asked about new equipment versus existing older equipment. If the project is approved, the equipment is required to meet current BAAQMD standards and therefore, one could conclude this will be an improvement from utilizing the existing pumps and dispensers.

Mitigation and Monitoring Report Program (MMRP) **Hazardous Materials**

The project would be required to implement mitigation measures, and summarized below, to prevent the release of contaminants that may be present in site soils. The complete mitigations can be found in the attached MMRP. The reports are attached as Appendix C to the Initial Study.

MM HAZ-2.1: Prior to grading permit issuance, a Site Management Plan is required to be reviewed and approved by the Santa Clara County Department of Environmental Health. That plan will address safety procedures for grading, removal, transporting and disposing of waste if any is encountered. The County approved Site Management Plan is required to be received and reviewed for compliance as part of the grading permit.

MM HAZ-2.2: A Health and Safety Plan is required to be implemented by the Site Safety and Health Officer. The plan covers procedures and provisions to protect and monitor exposure of known environmental conditions to the site. The plan will be reviewed and approved by the Santa Clara County Department of Environmental Health. The oversight and implementation is completed by the Santa Clara County Department of Environmental Health and their Site Safety and Health Officer. Copies of the Health and Safety Plan are provided to the City prior to issuance of a grading permit.

MM HAZ-2.3: Prior to issuance of the grading permit, additional soil sampling in compliance with the California Department of Toxic Substances Control processes is required. The oversight and implementation of this is the Santa Clara County Department of Environmental Health. The mitigation requires proper cleanup of any contaminated area consistent with California Department of Toxic Substances guidelines, that would require regulatory oversight and approval of a Removal Action Workplan (RAW) prior to any grading on site.

MM HAZ-2.4: Any removal work shall be completed by a California-licensed hazardous waste contractor under the supervision of a Professional Geologist or Engineer. Dust control and monitoring measures are required to be implemented during demolition, removal of current site structures, and excavation of impacted soils in accordance with the approved Removal Action Workplan (RAW).

MM HAZ-2.5: If soil sampling requires removal consistent with a Removal Action Workplan, post-remediation sampling will be required to confirm soil has been removed to meet the approved soil cleanup levels. The Santa Clara County Department of Environmental Health receives the report and clears the site for grading.

MM HAZ-2.6: Prior to demolition of structures, a certified Asbestos and/or Lead Risk Assessor is required to complete an asbestos and lead survey. This mitigation requires specific procedures to

demolish a structure if the survey results show Asbestos or Lead containing materials. If not, demolition may occur without further mitigation.

2. Transportation Analysis

Pursuant to Senate Bill (SB) 743, the California Environmental Quality Act 2019 Update Guidelines Section 15064.3, vehicle-miles traveled (VMT) will be the metric in analyzing transportation impacts for land use projects for CEQA. Hexagon Transportation Consultants, Inc. prepared a VMT assessment for the proposed development. The Office of Planning and Research provides screening threshold recommendations based on project size, maps, transit availability, and provision for affordable housing. The results of the transportation analysis show that the proposed gas station would generate net new daily trips equivalent to that of an approximately 7,578 square foot retail development. Per the Office of Planning and Research recommendations, since the daily trips and VMT estimated to be generated by the proposed gas station are equivalent to that generated by retail uses of less than 50,000 square feet in size, it may be presumed to be a local-serving facility and would therefore have a less-than significant impact on VMT. The OPR guidelines suggest that by adding retail opportunities into the urban fabric and thereby improving retail destination proximity, local-serving retail development tend to shorten trips and reduce VMT.

Consistent with our General Plan requirements, Hexagon Transportation Consultants, Inc. also prepared a Level of Service (LOS) analysis for the proposed development. The General Plan uses LOS as its primary metric for the evaluation of the projected operation of the City's roadway system. The report analyzes the existing conditions, existing plus project conditions, and year 2030 cumulative conditions. The trip generation estimates are established by the Institute of Transportation Engineers Trip Generation Manual standards.

Trip generation calculations for gas stations are typically adjusted to account for pass-by-trips. Pass-by-trips are trips that would already be on the adjacent roadways (and are therefore already counted in the existing traffic) but would turn into the site while passing by. The justification for applying the pass-by-trip reduction is founded on the observation that such gas station traffic is not actually generated by the gas station, but is already part of the ambient traffic levels, i.e. the vast majority of customers would stop at the gas station on their way to somewhere else, and very few would make a trip with the gas station as the specific destination, meaning most cars stopping at the gas station are already traveling on surrounding roads. Pass-by-trips are therefore excluded from the traffic projections to yield net new project trips generated by the project. However, at intersections providing direct access to the project like this one, all project-generated traffic is included, including pass-by trips.

The existing site-generated traffic was subtracted from the project traffic estimates to obtain the net increase in traffic associated with the implementation of the gas station remodel. After applying the ITE trip rates, pass-by reductions and existing site tip credit, it was estimated that the project would generate 23 net new vehicle trips (12 inbound and 11 outbound) during AM peak hours and 9 net new vehicle trips (5 inbound and 4 outbound) during the PM peak hour.

The report also analyzed the LOS conditions at Monterey Road/Spring Avenue and Monterey Road/San Pedro Avenue intersections. Other intersections in the project were not studied because the addition of the project trips would be minimal. Based on the results of the intersection level of service analysis, the project would not have an adverse effect on operations at the study intersections.

Congestion at the Monterey and San Pedro intersection was discussed at the March 28, 2023 Planning Commission hearing. The substandard level of service (LOS) for this intersection is due to long delays experienced by turn-movements from San Pedro Avenue that are caused by limited gaps in traffic flow on Monterey Road. Any changes to new development in this area will adversely affect LOS at this intersection. But with the approved Senior Housing development at 16685

Church Street, a raised median along Monterey Road will be constructed that would restrict left-turns out of San Pedro Avenue to southbound Monterey Road. With the left-turn restriction, only right-turns in and out at both San Pedro Avenue (east leg of the intersection) and the existing driveway (west leg of the intersection) as well as southbound left-turns would be allowed. The elimination of the left hand turn from San Pedro to Monterey significantly improves LOS in this area and eliminates the need for a traffic light. A u-turn at Spring (where there is a traffic light) will be required to traverse southwards on Monterey. The distance of less than 300-feet between Spring Avenue and San Pedro Avenue signal is too short and therefore not adequate for signal operations along a major arterial to allow for an additional traffic light to be installed at Monterey/San Pedro. Thus, the need to implement the median improvement along Monterey Road.

The Senior Project is currently under construction and required to build the median prior to final sign off or occupancy of the buildings. Both World Oil and the Senior Housing Development will pay their fair share of the median through Transportation Impact Fees. During the time of the Design Permit for World Oil, City Staff will review the timing of the Senior Project completion and determine if a condition of approval is needed to ensure the median is constructed by whichever project is completed first.

3. Lighting Exposure

The applicant prepared a lighting plan that shows the candlelight footprints for the proposed lighting without spillage onto the adjacent properties (Attachment 3.). The current station operations keep lights on to meet security and safety protocols. The new gas station, open or closed, will continue to do the same. The property owner understands the concern and is willing to plant large trees along the east property line to assist in screening the lighting from being seen over the existing masonry wall. This will be addressed during the Design permit process for this application and has been added to the resolution as a condition of approval.

4. Noise Exposure

With the request to extend the hours of operation from 6:00 a.m. to 10:00 p.m. to a 24-hour operation, the Commission had more questions about the potential noise that could occur between 10:00 p.m. and 6:00 a.m. The property owner explained at the March 28, 2023 Commission meeting that the store doors will not be open, there will be a walk-up window where people can purchase gas and items during the new hours. The owner further explained that this is more of a security measure than for profit, as business is very slow during the late night / early morning hours. During the hearing, a concern was raised about the water and air compressor going off between 10:00 p.m. and 7:00 a.m. and affecting the adjacent residents. As part of the environmental review, a noise analysis was completed by Illingworth & Rodkin, Inc. and confirmed that the new equipment and operations of the gas station would operate within the allowed noise decibel for use. However, understanding the concern of the air/water compressor turning on during hours past 10:00 p.m. and before 7:00 a.m. Per state law, air/water services are required to be available while a gas station is open. That means those services will need to remain open during operating hours.

Under the City of Morgan Hill's Noise Element and Municipal Code, noise levels produced by operational noise at the project site would be considered significant if noise levels substantially exceed existing ambient noise levels, exceed 60 dBA Leq at residential properties, or would permanently increase ambient noise levels by 3 dBA Ldn, under Policy SSI-8.5 of the City's General Plan. The study looked at long-term noise levels (LT) and short-term (ST) noise levels. The study shows the current use is operating within the allowable noise decibel based on the use.

The operational noise summary states that propagating the hourly average noise levels for the project based on the existing LT-1 measurement on the residential property line, ambient noise levels would range from 53 to 61 dBA Leq during daytime hours and from 40 to 60 dBA Leq during nighttime hours, assuming a 5 dBA reduction from the existing wall. The estimated day-night average noise level would be 63 dBA Ldn in the residential backyards. Both levels are within the

range of ambient noise levels and are therefore considered acceptable dBA.

An air/water dispenser would be located at the project site along the eastern portion of the parking area, setback approximately 10-feet from the eastern property line. While the existing gas station does include such equipment located along the northern property line, it is unknown if the ambient noise measurements included the operation of the existing air/water dispenser. Conservatively, it is assumed the ambient measurements did not include this noise source. This type of equipment typically generates noise levels up to 65 dBA at a distance of 5 feet and does not run continuously.

In a worst-case hour, it is assumed that this equipment would operate for a total of 20 minutes, which means the hourly average noise level would be 60 dBA Leq at 5 feet. If this worst-hour would occur each hour between 7:00 a.m. and 10:00 p.m., the day-night average noise level at 5 feet would be 58 dBA Ldn.

The nearest residential property line is 10 feet from the proposed air/water dispenser. At this distance, maximum noise levels would be 51 dBA, hourly average noise levels would be 46 dBA Leq, and day-night average noise levels would be 44 dBA Ldn. The air/water dispenser would not produce noise levels that would exceed 60 dBA Leq or ambient noise levels at the nearest residential land uses, and this would not result in a measurable noise level increase (i.e., 0 dBA Ldn increase).

The proposal meets the noise levels allowed within this landuse designation. However, understanding the concerns, the Commission could condition the applicant work with the City on an alternate location for the air and water pump as far away from the adjacent residential properties and/or additional sound reducing measures such as an enclosure or utilization of the quietest compressor available.

FINDINGS

Pursuant to Morgan Hill Municipal Code Section 18.108.030(E), the Planning Commission shall review the proposal and make all of the following findings for approval:

a. The proposed use is allowed in the applicable district.

A fuel service station and convenience market is a conditionally permitted use within the Mixed-Use Flex zoning designation.

b. The proposed use is consistent with the General Plan, Zoning Code, and any applicable specific plan or area plan adopted by the City Council.

The use is consistent with the General Plan, specifically, but not limited to, Policies CNF 8.1, CNF 8.7, CNF 8.9, CNF 15.5 and CNF 16.2 as described in section 1 (General Plan Land Use Consistency) above. The proposed project enhances the existing use by redeveloping the site, and if approved, will construct the facility to meet all the development standards within the zoning district.

c. The site is suitable and adequate for the proposed use.

The proposed use is a redevelopment of the existing use to utilize the whole property. The site plan demonstrates that the proposed fuel service station with convenience store can meet all the development standards of the City of Morgan Hill Municipal Code and aesthetically enhances the site layout and design, including the incorporation of additional landscaping.

d. The location, size, design, and operating characteristics of the proposed use will be compatible with the existing and future land uses in the vicinity of the property.

The proposed use is the redevelopment of an existing use at this location. The proposed site layout relocates the convenience store closer to Monterey Road and realigns the pump stations with a canopy to enhance on-site circulation and site access. The new plan will incorporate landscaping along the perimeter of the site, including a landscaped buffer in between the gas station parking

area and the adjacent residential neighborhood to the east.

e. The proposed use will not be detrimental to the public health, safety, and welfare.

The new construction will meet all current building codes, and County and State regulations, and therefore will not be detrimental to the public health, safety, and welfare. In addition, an environmental assessment was completed in compliance with the California Environmental Quality Act and concludes that the project will have a less than significant impact with the adoption of the listed mitigation measures.

f. The proposed use would not have a substantial adverse effect on traffic circulation and on the planned capacity of the street system.

The current site has rolled curbs along Monterey Road, creating an 84-foot wide driveway, and has a 32-foot wide driveway along San Pedro Avenue. The lengthy driveway along Monterey Road allows cars to enter and exit at any spot along the adjacent street which can cause circulation congestion with oncoming traffic from Monterey Road. The new site layout will reduce the access point along Monterey Road to 32 feet and introduce landscaping to limit and clarify vehicular access points. The planned median to prevent left and turns will also improve the traffic concerns as discussed above.

g. The proposed use is properly located within the city and adequately served by existing or planned services and infrastructure.

The proposed use is the redevelopment of an existing use at this location and, pursuant to the General Plan, there is sufficient services and infrastructure to support the remodeled gas station with convenience market.

CONCLUSION:

The proposed use is the redevelopment of an existing use that will not adversely impact the public health, safety, or general welfare of the project site or surrounding properties as described above. The remodeled facility will meet all development standards and enhances site circulation and access. The project is consistent with the General Plan and Zoning Ordinance.

CEQA (California Environmental Quality Act):

An Initial Study/Mitigated Negative Declaration (IS/MND) has been completed for the project in accordance with the requirements of the California Environmental Quality Act (CEQA). The IS/MND was circulated for a minimum of 30 days from February 3, 2023 through March 6, 2023. A copy of the IS/MND is attached and concludes that the project will have a less than significant impact with the adoption of the listed mitigation measures. The attached Mitigation Monitoring and Reporting Program (MMRP) has been prepared for the project which includes all mitigation measures required to reduce potentially significant environmental impacts to a less-than-significant level. In addition, the MMRP identifies the timing of implementation; the agency responsible for implementing the mitigation; and the agency responsible for monitoring the mitigation. The project results in no significant environmental impacts with the inclusion of Mitigation Measures.

COMMUNITY ENGAGEMENT:

The proposed project was publicly noticed (mailed to property owners within 300 feet of the project and newspaper legal notice) for the minimum 10-day period and a sign has been posted at the property location pursuant to the Planning Division requirements. The item was heard at the March 28, 2023 Planning Commission meeting and continued to April 11, 2023. The Commission opened public comment at the April 11, 2023 hearing and continued the item to the April 25, 2023 Planning Commission meeting.

ATTACHMENTS:

1. Planning Commission Resolution and Conditions (World Oil)
2. Renderings-A4.0
3. Site Plans Combined
4. World Oil Gas Station and Retail Project ISMND 01.27.23
5. World Oil_IS-MND_Erattum Final
6. MMRP World Oil Gas Station and Retail Project 1.24.23
7. Appendix A - Air Quality Analysis 08.18.21
8. Appendix F - VMT Assessment 06.04.21 and Trip Generation Analysis 12.5.22
9. Appendix E - Noise Analysis 07.11.22

RESOLUTION NO. 23-01

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF MORGAN HILL APPROVING A CONDITIONAL USE PERMIT (UP2021-0002), APPROVING A MITIGATED NEGATIVE DECLARATION, AND ADOPTING A MITIGATION MONITORING AND REPORTING PROGRAM (EA2021-0001) TO ALLOW FOR THE DEMOLITION AND RECONSTRUCTION OF THE EXISTING GAS STATION WITH CONVENIENCE STORE LOCATED AT 16720 MONTEREY ROAD. (APN 817-01-002)

WHEREAS, an application was submitted by John Hundley with World Oil Marketing Company, for the request of a conditional use permit to allow for the demolition and reconstruction of the existing gas (fuel service) station and convenience store (“Project”). The property, identified by Assessor Parcel Number 817-30-002, is located on the northeast corner of Monterey Road and San Pedro Avenue.(John Hundley, Property Owner); and

WHEREAS, such request was considered by the Planning Commission at its regular meeting of March 28, 2023; and

WHEREAS, testimony was received at the duly-noticed public hearing, along with exhibits and drawings and other materials and continued the item to a April 11, 2023.

WHEREAS, the Commission open and closed the public hearing for the item at the April 11, 2023 hearing and further continued the item to April 25, 2023 to allow additional time to coordinate available of the environmental consultants to attend the hearing; and

WHEREAS, such request was considered by the Planning Commission at its regular meeting of April 25, 2023; and

WHEREAS, testimony received at a duly-noticed public hearing, along with exhibits and drawings and other materials have been considered in the review process; and

WHEREAS, the City of Morgan Hill is the lead agency on the Project, and the Planning Commission is the decision-making body for the proposed Project; and

WHEREAS, prior to the adoption of this Resolution, the Planning Division of the City of Morgan Hill prepared an Initial Study (IS), a Mitigated Negative Declaration (MND), and the Mitigation Monitoring and Reporting Program (MMRP) for the Project in accordance with the requirements of the California Environmental Quality Act of 1970, as amended (“CEQA”), and state and local guidelines implementing CEQA; and

WHEREAS, the IS, MND, and MMRP prepared for the project is incorporated, by this reference, into this Resolution as if fully set forth herein; and

WHEREAS, the Planning Commission has reviewed and considered the IS/MND and MMRP for the Project; and

WHEREAS, although the proposed project could have a significant effect on the environment, all potentially significant effects have been (a) analyzed adequately in the IS/MND and (b) have been avoided or mitigated pursuant to the MMRP which includes measures that are imposed upon the Project and reduces potential impacts to a less than significant level and is consistent with Section 15070 of CEQA Guidelines.

NOW, THEREFORE, THE MORGAN HILL PLANNING COMMISSION DOES RESOLVE AS FOLLOWS:

SECTION 1. The Planning Commission does hereby make the following CEQA findings:

- (1) It has independently reviewed and analyzed the Initial Study/Mitigated Negative Declaration and other information in the record and has considered the information contained therein, prior to acting upon the Project;
- (2) The Initial Study/Mitigated Negative Declaration prepared for the Project has been completed in compliance with CEQA and consistent with state and local guidelines implementing CEQA;
- (3) The Initial Study/Mitigated Negative Declaration represents the independent judgment and analysis of the City as lead agency for the Project. The Development Services Director of the Development Services Department at 17575 Peak Avenue, Morgan Hill, California 95037, is the custodian of documents and records of proceedings on which this decision is based; and,
- (4) On the basis of the whole record before it (including the Initial Study and any comments received), there is no substantial evidence that the project will have a significant effect on the environment with the application of mitigation measures.

SECTION 2. The approved Conditional Use Permit has been found consistent with the Findings of approval contained in Section 18.108.030 of the Zoning Code and hereby adopted:

a. The proposed use is allowed in the applicable district.

A fuel service station and convenience market is a conditionally permitted use within the Mixed-Use Flex zoning designation.

- b. The proposed use is consistent with the General Plan, Zoning Code, and any applicable specific plan or area plan adopted by the City Council.**

The use is consistent with the General Plan, specifically, but not limited to, Policies CNF 8.1, CNF 8.7, CNF 8.9, CNF 15.5 and CNF 16.2 as described in the staff report. The proposed project enhances the existing use by redeveloping the site, and if approved, will construct the facility to meet all the development standards within the zoning district.

- c. The site is suitable and adequate for the proposed use.**

The proposed use is a redevelopment of the existing use to utilize the whole property. The site plan demonstrates that the proposed fuel service station with convenience store can meet all the development standards of the City of Morgan Hill Municipal Code and aesthetically enhances the site layout and design, including the incorporation of additional landscaping.

- d. The location, size, design, and operating characteristics of the proposed use will be compatible with the existing and future land uses in the vicinity of the property.**

The proposed use is the redevelopment of an existing use at this location. The proposed site layout relocates the convenience store closer to Monterey Road and realigns the pump stations with a canopy to enhance on-site circulation and site access. The new plan will incorporate landscaping along the perimeter of the site, including a landscaped buffer in between the gas station parking area and the adjacent residential neighborhood to the east.

- e. The proposed use will not be detrimental to the public health, safety, and welfare.**

The new construction will meet all current building codes and County and State regulations, and therefore will not be detrimental to the public health, safety, and welfare. In addition, an environmental assessment was completed in compliance with the California Environmental Quality Act and concludes that the project will have a less than significant impact with the adoption of the listed mitigation measures.

- f. The proposed use would not have a substantial adverse effect in traffic circulation and on the planned capacity of the street system.**

The current site has rolled curbs along Monterey Road, creating an 84-foot

wide driveway, and has a 32-foot wide driveway along San Pedro Avenue. The lengthy driveway along Monterey Road allows cars to enter and exit at any spot along the adjacent street which can cause circulation congestion with oncoming traffic from Monterey Road. The new site layout will reduce the access point along Monterey Road to 32 feet and introduce landscaping to limit and clarify vehicular access points. The planned median to prevent left hand turns will also improve the traffic concerns discussed within the staff report.

- g. **The proposed use is properly located within the city and adequately served by existing or planned services and infrastructure.**

The proposed use is the redevelopment of an existing use at this location and, pursuant to the General Plan, there is sufficient services and infrastructure to support the remodeled gas station with convenience market.

SECTION 4. The Planning Commission hereby adopts the IS/MND with MMRP and approves the Conditional Use Permit subject to the conditions set forth in Exhibit A attached hereto and incorporated herein this reference. Any expansion, intensification, or changes to the use approved under this conditional use permit deemed major by the Development Serviced Director shall be permitted only upon amendment of this Conditional Use Permit or approval of a separate Conditional Use Permit application.

PASSED AND ADOPTED THIS 25th DAY OF APRIL 2023, AT A REGULAR MEETING OF THE PLANNING COMMISSION BY THE FOLLOWING VOTE:

AYES: COMMISSIONERS:

NOES: COMMISSIONERS:

ABSTAIN: COMMISSIONERS:

ABSENT: COMMISSIONERS:

ATTEST:

APPROVED:

JENNA LUNA, Deputy City Clerk

JOSEPH MUELLER, Chair

EXHIBIT "A"

STANDARD CONDITIONS

APPLICATION NO: UP2021-0002/EA2021-0001

THE FOLLOWING APPROVAL REQUIREMENTS AND ANY SPECIAL CONDITIONS SHALL BE APPLIED THROUGH THE DEVELOPMENT APPROVAL PROCESS.

Legend

MHMC= Morgan Hill Municipal Code

MHARH= Morgan Hill Architectural Review Handbook

CMH= City of Morgan Hill

CFC= California Fire Code

I. PROJECT DESCRIPTION

The proposed project includes the removal of the existing pump stations with fuel canopy and convenience store and allows for the redevelopment of the entire site to include six pump stations with 12 gas dispensers, a new fuel canopy, and a 2,115 square foot convenience store with associated off- and on-site improvements. The facility is approved for a 24-hour operation seven days a week with the restriction that the store door will not be open to the public past 10:00pm or before 7:00am. Access to store purchases will be limited to the outside window access only.

II. PROJECT MITIGATION MEASURES

The applicant shall be subject to compliance with the mitigation measures of the project's adopted Mitigation Monitoring and Reporting Program. The following mitigation measures shall be included with all building permit, grading, or improvement plans.

- A. **MM BIO-1.1:** Construction shall be scheduled to avoid the nesting season to the extent feasible. If construction can be scheduled to occur between September 1st and January 31st (inclusive) to avoid the raptor nesting season, no impacts will be expected. If construction will take place between February 1st and August 31st, then pre-construction surveys for nesting birds shall be completed by a qualified ornithologist to ensure that no nests will be disturbed during project implementation. Surveys shall be completed within seven days of the on-set of site clearing or construction activities. During this survey, the ornithologist shall inspect all trees and other potential nesting habitats (e.g., trees, shrubs, buildings) onsite as well as within 250 feet of the site for nests of raptors and 100 feet for nests of non-raptors.
- B. **MM BIO-1.2:** If an active nest is found sufficiently close to work areas to be disturbed by these activities, the ornithologist shall determine the extent of a disturbance-free buffer zone to be established around the nest (typically 250 feet for raptors and 50-100 feet for other species) that shall remain off limits to

construction until the nesting season is over, to ensure that no nests of species protected by the Migratory Bird Treaty Act and California Fish and Wildlife Code will be disturbed during project implementation. A report indicating the result of the survey and any designated buffer zones shall be submitted to the satisfaction of the Development Services Director or Designee prior to issuance of a grading permit.

- C. **MM GEO-6.1:** If vertebrate fossils are discovered during construction, all work on the site shall stop immediately. The Development Services Director or the Director's designee shall be notified, and a qualified professional paleontologist shall assess the nature and importance of the find and recommend appropriate treatment. Treatment may include, but is not limited to, preparation and recovery of fossil materials so that they can be housed in an appropriate museum or university collection and may also include preparation of a report for publication describing the finds. The project applicant shall be responsible for implementing the recommendations of the qualified paleontologist. A report of all findings shall be submitted to the Development Services Director or the Director's designee prior to work beginning on the site following a discovery.
- D. **MM HAZ-2.1:** The project applicant shall prepare a Site Management Plan (SMP) prior to issuance of any grading permits to reduce or eliminate exposure risk to human health and the environment, specifically, potential risks associated with the presence of petroleum-based contaminants. The SMP shall include, but is not limited to, the following elements to mitigate potential risks associated with environmental conditions:
- Procedures for transporting and disposing the waste material generated during removal activities, if such transport and disposal is necessary;
 - Procedures for stockpiling soil on-site if such stockpiling is necessary;
 - Provisions for collecting soil samples to prior to grading activities;
 - Provisions for confirmation soil sampling as appropriate to obtain a "No Further Action" letter (or equivalent) from the state and/or local agency assuming oversight for the site;
 - Procedures to ensure that fill and cap materials are verified as clean truck routes;
 - Staging and loading procedures and record keeping requirement.

The SMP shall be submitted to the Santa Clara County Department of Environmental Health (SCCDEH) for review and approval. Copies of the approved SMP shall be provided to the City's Development Services Department prior to issuance of any grading permits.

- E. **MM HAZ-2.2:** All contractors and subcontractors at the project site shall develop a health and safety plan (HSP) specific to their scope of work and based upon the known environmental conditions for the site. The HSP shall be implemented under

the direction of a Site Safety and Health Officer. The HSP shall include, but not limited to, the following elements, as applicable:

- Provisions for personal protection and monitoring exposure to construction workers;
- Procedures to be undertaken in the event that contamination is identified above action levels or previously unknown contamination is discovered;
- Procedures for the safe storage, stockpiling, and disposal of contaminated soils;
- Provisions for the on-site management and/or treatment of contaminated groundwater during extraction or dewatering activities;
- Emergency procedures and responsible personnel.

The HSP shall be submitted to the SCCDEH. Copies of the approved HSP shall be provided to the City's Development Services Department prior to issuance of any grading permits.

- F. **MM HAZ-2.3:** Prior to issuance of a site grading permit, the project applicant shall collect additional soil samples (of organochlorine pesticides and related metals) from the upper zero to six inches of soil to ensure soil samples at the project site are collected in accordance with the California Department of Toxic Substance Control (DTSC) guidance. Soil samples shall be taken in areas where soil disturbances are anticipated as part of the proposed development.

If the concentrations of the analyzed pesticides and related metals in soil samples exceed the most current risk-based screening levels, prior to issuance of any grading permits, the project applicant shall enter into the SCCDEH's Voluntary Cleanup Program to obtain regulatory oversight to remediate the contaminated soil discovered. A Removal Action Workplan (RAW), or equivalent, shall be prepared for review and approval by SCCDEH that describes the process for the removal of all impacted soil to below established cleanup levels. The RAW shall include a HSP for construction worker safety and include measures to control dust and other potential exposure to neighboring properties during remediation. A copy of the SCCDEH-approved RAW shall be provided to the City's Development Services Department prior to issuance of any grading permits.

- G. **MM HAZ-2.4:** Removal work shall be completed by a California-licensed hazardous waste contractor under the supervision of a Professional Geologist or Engineer. Dust control measures and dust monitoring shall be implemented at the site during demolition, removal of current site structures, and excavation of impacted soil in accordance with the approved Removal Action Workplan (or the equivalent) and to the satisfaction of the City's Development Services Department.
- H. **MM HAZ-2.5:** After post-remediation sampling has confirmed that the soil has been removed to meet the approved soil cleanup levels, the project applicant shall prepare and submit a final report to SCCDEH and a "No Further Action" or

“Closure” letter shall be obtained. This closure letter shall be submitted to the City’s Development Services Department.

- I. **MM HAZ-2.6:** Prior to issuance of a demolition permit for on-site structures, the project applicant shall consult with certified Asbestos and/or Lead Risk Assessors to complete and submit for review to the Building Division an asbestos and lead survey. If asbestos-containing materials or lead-containing materials are not discovered during the survey, further mitigation related to asbestos-containing materials or lead-containing materials shall not be required. If asbestos-containing materials and/or lead-containing materials are discovered by the survey, the project applicant shall prepare a work plan to demonstrate how the on-site asbestos-containing materials and/or lead-containing materials shall be removed in accordance with current California Occupational Health and Safety (Cal/OSHA) Administration regulations and disposed of in accordance with all CalEPA regulations, prior to the demolition and/or removal of the on-site structures. The plan shall include the requirement that work shall be conducted by a Cal/OSHA registered asbestos and lead abatement contractor in accordance with Title 8 CCR1529 and Title 8 CCR 1532.1 regarding asbestos and lead training, engineering controls, and certifications. The applicant shall submit the work plan to the City for review and approval. The City has the right to defer the work plan to the Santa Clara County Department of Environmental Health for additional review. Materials containing more than one percent asbestos that is friable are also subject to BAAQMD regulations. Removal of materials containing more than one percent friable asbestos shall be completed in accordance with BAAQMD Section 11-2-303.

III. **PROJECT CONDITIONS OF APPROVAL**

It shall be the responsibility of the Owner to ensure that any changes or modifications to the Project are in compliance with the original City Conditions of Approval of the Project, which are hereby incorporated herein as set forth in full.

PLANNING DIVISION

- A. **Conditional Use Permit.** This Conditional Use Permit approval is limited to the Project Description above and the conceptual plan set on file (UP2021-0002) with the Development Services Department. The proposal will require approval of a Design Permit prior to submittal of a building permit. The approved building plans and landscape plans must be in substantial conformance with the approved Use Permit and future Design Permit plans as determined by the Development Services Director.
- B. **Design Permit.** The applicant shall submit for a Design Permit for the review of the future gas station with convenience market. The site design shall comply with all applicable development standards within the Mixed-Use Flex Zoning designation and applicable parking requirements.

- C. **Lighting.** The applicant shall work with the City on the incorporation of landscaping in the planter area between the gas station and the adjacent masonry wall located on the east side of the project site. Such landscaping shall include trees with a minimum of 25" box tree that will provide year round foliage to provide screening taller than the existing wall.
- D. **Convenience markets with fuel services stations.** Per Section 18.92.032 of the Municipal Code, convenience markets which also sell automotive fuels shall provide the following additional services without charge:
1. Restrooms available to customers and employees. If restroom entrances open directly to the outside of the building, the restroom entrances shall be screened from public view and shall comply with the lighting and crime prevention measure in the Section 18.92.032(D).
 2. Hoses conveying air and water for the service of automotive vehicles available for public uses in locations approved by the development services department.
- E. **Loiter Control.** Per Section 18.92.032 of the Municipal Code, convenience markets which also sell automotive fuels shall control loitering by incorporating the follow standards:
1. Public pay telephones on an exterior wall of the convenience market fuel and service stations or anywhere on the site shall not allow incoming calls. Public telephones allowing incoming calls are allowed within the building interior.
 2. Video games may not be installed or operated on the premises of the convenience market with fuel and service station.
- F. **Crime Prevention Measures.** Per Section 18.92.032 of the Municipal Code, the following measure shall be followed:
1. The exterior of the convenience market with fuel and service stations shall be illuminated during all hours of darkness during which the market is open for business. Exterior illumination shall allow law enforcement personnel to easily identify persons within front entry areas, adjacent public sidewalks, parking areas, throughways, and alleys under control by the convenience market. Illumination shall be located and designed to minimize interference with the quire enjoyment of nearby residential properties.
 2. Commercial alarm systems and video security cameras shall be installed and maintained within the building to the specifications of the police department as required by this conditional use permit.
 3. The police department may require additional crime prevention measures as part of this approval. In this case, the Police Department is requiring access to camera feed and camera recordings to be available to view in real time and recorded footage if/when required.
 4. Persons under the age of eighteen who are employed in a capacity which allows for selling of alcoholic beverage must be under the continual supervision of a person twenty-one years of age or older.

- G. **Concurrent Sale of Alcoholic Beverages and Automotive Fuels.** Per Section 18.92.032 of the Municipal Code, when the concurrent sale of alcoholic beverages and automotive fuels are proposed in conjunction with the convenience market, the following additional requirements shall apply:
1. No alcoholic beverages shall be displayed within ten feet of the cash register or front door unless located within a permanently affixed cooler.
 2. No display or sale of alcoholic beverages shall be made from an ice tub.
 3. No alcoholic beverages advertising shall be located on fuel pump islands and no self-illuminated advertising for alcoholic beverages shall be located on buildings or windows.
 4. Employees on duty between the hours of ten p.m. and two a.m. who sell beer or wine shall be at least twenty-one years of age.
- H. A liquor store with a fuel and service station is not permitted.
- I. **Time Limits:** The conditional use permit approval granted pursuant to this Resolution shall remain in effect for two years from approval date. Failure to obtain a design permit within this term shall result in termination of approval unless an extension of time is granted with a showing of just cause prior to expiration date. **(MHMC 18.108.040 and 18.104.210)**
- J. **UST Submittal Required:** Prior to the issuance of a grading permit, the project applicant shall submit an application for an Underground Storage Tank (UST) System Closure Permit to the Santa Clara County Hazardous Materials Compliance Division (HMCD) for review and approval, pursuant to the requirements set forth in Santa Clara County Code Section B11-325. As part of the UST System Closure Permit application, the project applicant shall also pay associated fees. At minimum, the UST Closure Permit application shall detail the following:
- The proposed schedule for collection and sampling of soils beneath the on-site USTs and along piping runs;
 - The California Department of Toxic Substances Control (DTSC) and U.S. Environmental Protection Agency (USEPA) standards against which collected on-site soils shall be tested;
 - Applicable work practice standards, in accordance with the Occupational Safety and Health Administration (OSHA) Technical Manual, that shall be implemented to ensure appropriate precautions are incorporated to protect construction workers and the surrounding community during removal of the on-site USTs and associated piping runs;
 - The proposed disposal methods for on-site soils associated with the existing USTs and piping runs;
 - The proposed date of UST closure inspection; and
 - The methods with which soils shall be remediated on-site, if contaminants in tested soils exceed applicable standards. If on-site remediation is not possible,

the methods and routes in which contaminated soils shall be hauled to an appropriate facility for disposal.

In accordance with California Code of Regulations (CCR) Title 22, Division 4.5, Chapter 32, the existing on-site USTs and primary piping shall be managed as hazardous waste upon removal, unless such facilities are cleaned on-site and certified by an HMCD representative as non-hazardous in accordance with DTSC hazardous waste regulations. The proposed UST and sump removal and sampling activities shall be witnessed by a HMCD representative.

- K. **Soil excavation:** If on-site soil excavation for UST removal and replacement will result in the need to export the excavated soil for disposal at an off-site location, the applicant shall retain a qualified environmental professional to characterize the excavated soil as a waste to determine an appropriate disposal facility and obtain their acceptance of the soil. The qualified environmental professional shall oversee the loading, transportation, and disposal of the soil including retaining copies of transportation and disposal documentation (i.e., waste manifests and landfill weigh tickets, respectively). The qualified environmental professional shall also prepare a report summarizing the methodology of soil waste characterization, results of the characterization, and describing the loading, transportation, and disposal of the soil. The report shall be submitted to the Santa Clara County Environmental Health Department for review and approval.
- L. **Defense and Indemnity.** As part of, and in connection, with this application to the City of Morgan Hill, Applicant agrees to defend, indemnify, and hold harmless the City of Morgan Hill, its officers, agents, employees, officials and representatives (Indemnitees) from and against any and all claims, actions, or proceedings arising from any suit for damages or for equitable or injunctive relief which is filed against City to attack, set aside, void or annul its approval of this application or any related decision, or the adoption of any environmental documents which relates to said approval. The City shall promptly notify the Applicant of any such claim, action or proceeding and the City shall cooperate fully in the defense thereof. In the event that Applicant is required to defend Indemnitees in connection with the proceeding, Indemnitees shall retain the right to approve (a) the counsel to so defend Indemnitees; (b) all significant decisions concerning the manner in which the defense is conducted; and (c) any and all settlements, which approval shall not be unreasonably withheld. This indemnification shall include, but is not limited to, (a) all pre-tender litigation costs incurred on behalf of the City, including City's attorney's fees and all other litigation costs and expenses, including expert witnesses, required to defend against any lawsuit brought as a result of City's approval or approvals; (b) reasonable internal City administrative costs, including but not limited to staff time and expense spent on the litigation, after tender is accepted; and (c) all damages, costs, expenses, attorney fees or expert witness fees that may be awarded to the prevailing party arising out of or in connection with the approval of the application or related decision. City may, in its sole discretion, participate in the defense of such action; but such participation shall not

relieve Applicant of its obligations under this condition. The undersigned hereby represents that they are the Applicant or are fully empowered by the Applicant as their agent to agree to provide the indemnification, defense and hold harmless obligations, and the signature below represents the unconditional agreement by Applicant to be bound by such conditions.

ENGINEERING DIVISION

- A. The Design Permit will be reviewed for compliance with the Municipal Code including but not limited to the on- and off-site improvements and storm water control plan.
- B. Project will be subject to impact fees prior to issuance of any future building permit.

ENVIRONMENTAL SERVICES

- A. The Design Permit landscaping shall comply with the Morgan Hill Municipal Code (MHMC) 18.148 – Water Conservation.

BUILDING DIVISION

- A. The following items need to be incorporated into the design and will be verified at Building Permit application plan review:
 - 1. Project shall be designed to comply with the current edition of the California Codes of Regulations as amended by the Morgan Hill Municipal Code Title 15.
 - 2. Project shall comply with the Morgan Hill Municipal Code (MHMC) including but not limited to:
 - a. MHMC 15.65 Sustainable Building Regulations.
https://library.municode.com/ca/morgan_hill/codes/code_of_ordinances?nodeId=TIT15BUCO_CH15.65SUBURE
 - b. MHMC 15.40 Building Security
https://library.municode.com/ca/morgan_hill/codes/code_of_ordinances?nodeId=TIT15BUCO_CH15.40BUSE
 - c. MHMC 15.38 Wage Theft Preventions
https://library.municode.com/ca/morgan_hill/codes/code_of_ordinances?nodeId=TIT15BUCO_CH15.38WATHPR
 - d. MHMC 18.148 Water Conservation
https://library.municode.com/ca/morgan_hill/codes/code_of_ordinances?nodeId=TIT18ZO_DIVIIDECO_CH18.148WACO
 - e. MHMC 15.63 Prohibition of Natural Gas Infrastructure in New Buildings
https://library.municode.com/ca/morgan_hill/codes/code_of_ordinances?nodeId=TIT15BUCO_CH15.38WATHPR

3. A separate Building Permit will be required for demolition of existing structures. Demolition of existing tank requires Santa Clara Environmental Health Hazardous Materials approval.

4. A separate submittal, fee and permit is required to Santa Clara County Environmental Health for installation of fuel tanks and food preparation.

FIRE DIVISION

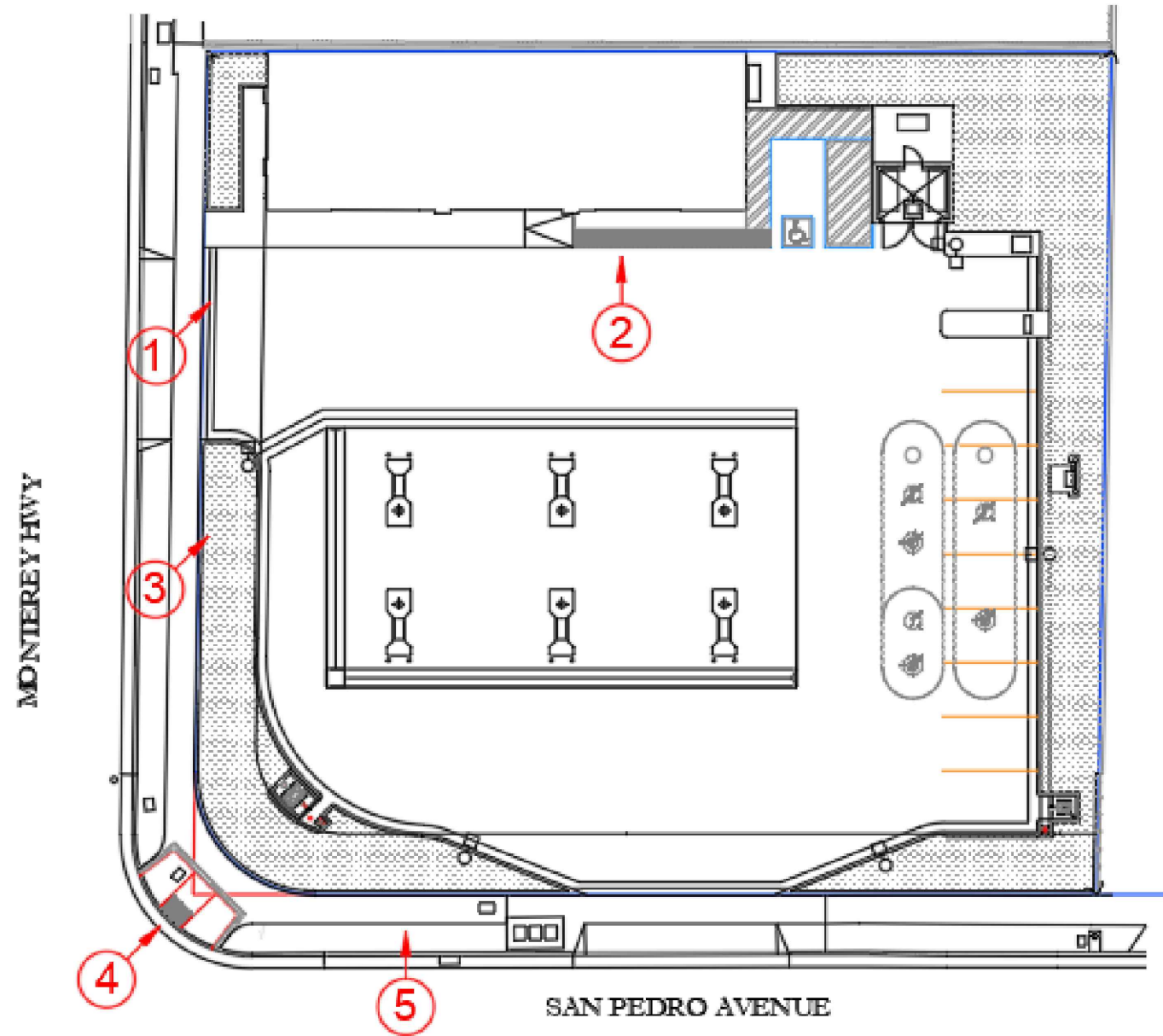
- A. **Preliminary Review Only:** The requirements and conditions stated in this review are preliminary and are intended to be used for the purposes of project planning. An official Fire Department review of the project will be conducted upon receipt of a complete plan submittal application that clearly shows all intended grading, demolition, construction or building modifications.

Prior to Design Permit submittal, provide Fire Apparatus turning template to show onsite access, turning, radius and if access exceeds 150-feet and approved fire apparatus turn around.

- B. **Fire Apparatus (Engine) Access Roads Required:** Prior to the commencement of combustible construction, an access roadway with a paved all weather surface and a minimum unobstructed width of 20 feet, vertical clearance of 13 feet, 6 inches shall be provided, with minimum circulating turning radius of 36 feet outside and 23 feet inside, and a maximum slope of 15%, unless otherwise approved in writing by the Fire Marshal. Installations shall conform to the City of Morgan Hill Standard Details and Specifications 11-B. **(CFC Section 503 as amended by MHMC 15.44.140)**
- C. Review of the conceptual plans does not release the developer, architect, or contractor of the responsibility for the corrections of mistakes, errors or omissions contained therein.

POLICE DEPARTMENT

- A. **Safety and Security Plan.** The Police Department shall review and approve a safety and security plan for the facility including a security camera plan prior to the issuance of a building permit or site development permit, whichever one is issued first.
- B. **Camera Access.** The Police department will require access to camera feed and camera recordings to be able to view real time and recorded footage if/when required.



A4.0- 01 BIRDS EYE VIEW AND KEY PLAN



A4.0- 02 IMAGE #1



A4.0- 03 IMAGE #2



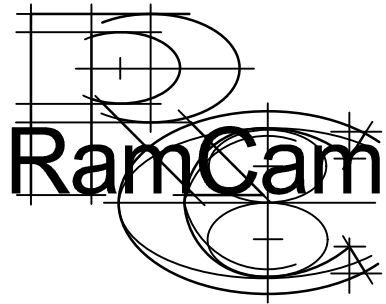
A4.0- 04 IMAGE #3



A4.0- 05 IMAGE #4



A4.0- 06 IMAGE #5



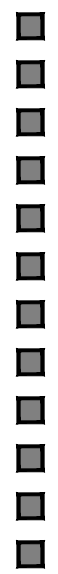
RAMCAM ENGINEERING
GROUP, INC.
PLANNING & ENGINEERING
670 E. PARKRIDGE AVENUE, SUITE 101
CORONA, CA 92819
951.734.6330

All ideas, designs and layouts shown on these drawings, including all documents on electronic media are the property of ramcam group, and are intended to be used in connection with this specific project only and shall not otherwise be used for any purpose whatsoever without the written consent, and may not be reproduced or used without the written permission of ramcam group. All rights reserved.

World Oil Marketing
Company
9302 GARFIELD AVENUE
SOUTH GATE, CA 90280
(562) 928-0100

WOF052
16720 MONTERREY HWY
MORGAN HILL, CA. 95037

09.23.2022



WOF052 GAS STATION
RENDERINGS

1
A4.0

PPA19-0006



All ideas, designs and layouts shown on these drawings, including all documents on electronic media are the property of ramcam group, and are intended to be used in connection with this specific project only and shall not otherwise be used for any purpose whatsoever without the written consent. and may not be reproduced or used without the written permission of ramcam group.

All rights reserved

A1.0- 01 **PROPOSED SITE PLAN**
SCALE: 1"=10'-0"





BUILDING AREAS

- NOTES:

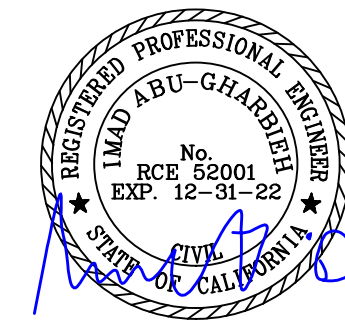
- 

DIGALERT
811  **TWO WORKING
DAYS BEFORE
YOU DIG**



PLANNING & ENGINEERING
670 E. PARKRIDGE AVENUE, SUITE 101
CORONA, CA 92819
951.734.6330

All ideas, designs and layouts shown on these drawings, including all documents on electronic media are the property of ramcam group, and are intended to be used in connection with this specific project only and shall not otherwise be used for any purpose whatsoever without the written consent. and may not be reproduced or used without the written permission of ramcam group.
All rights reserved



9302 GARFIELD AVENUE
SOUTH GATE, CA 90280
(562) 928-0100

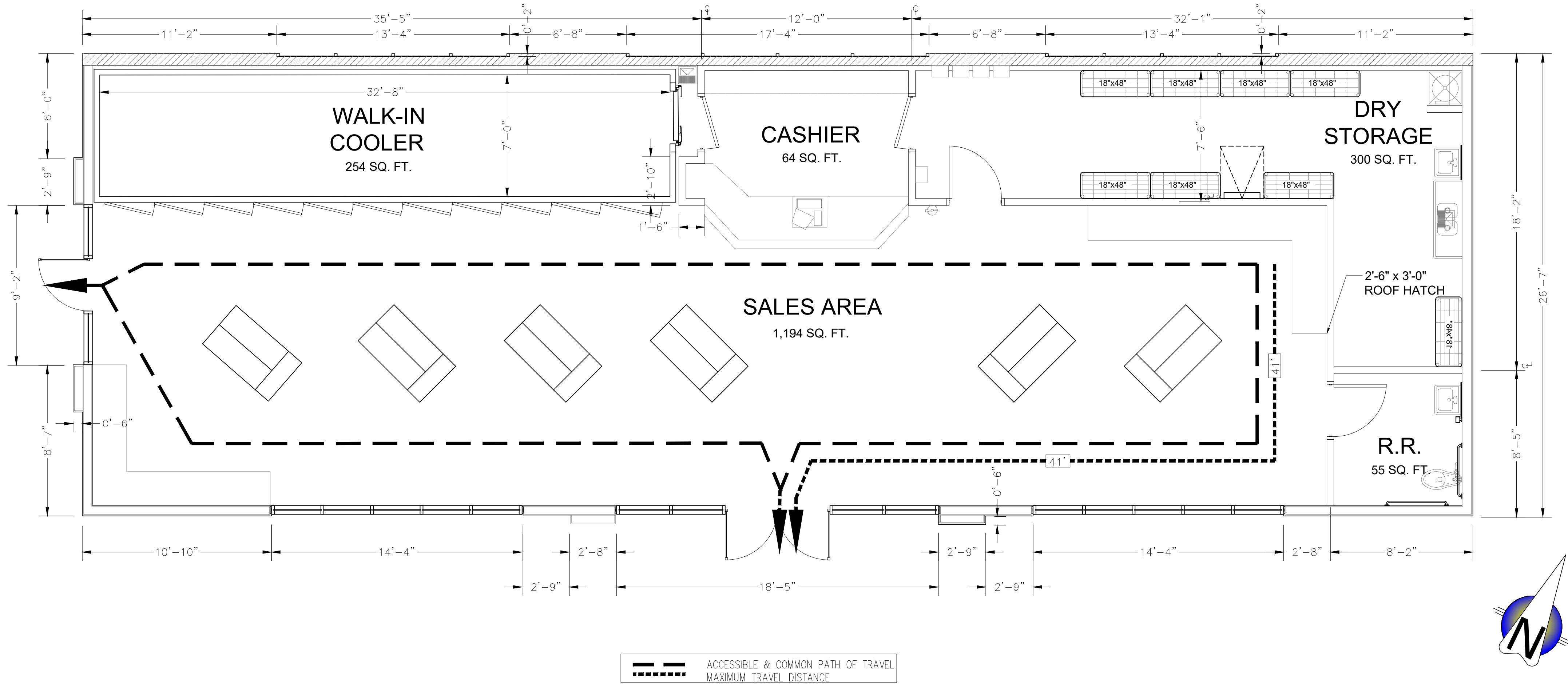
16720 MONTEREY HWY
MORGAN HILL, CA. 95037

09/23/2022

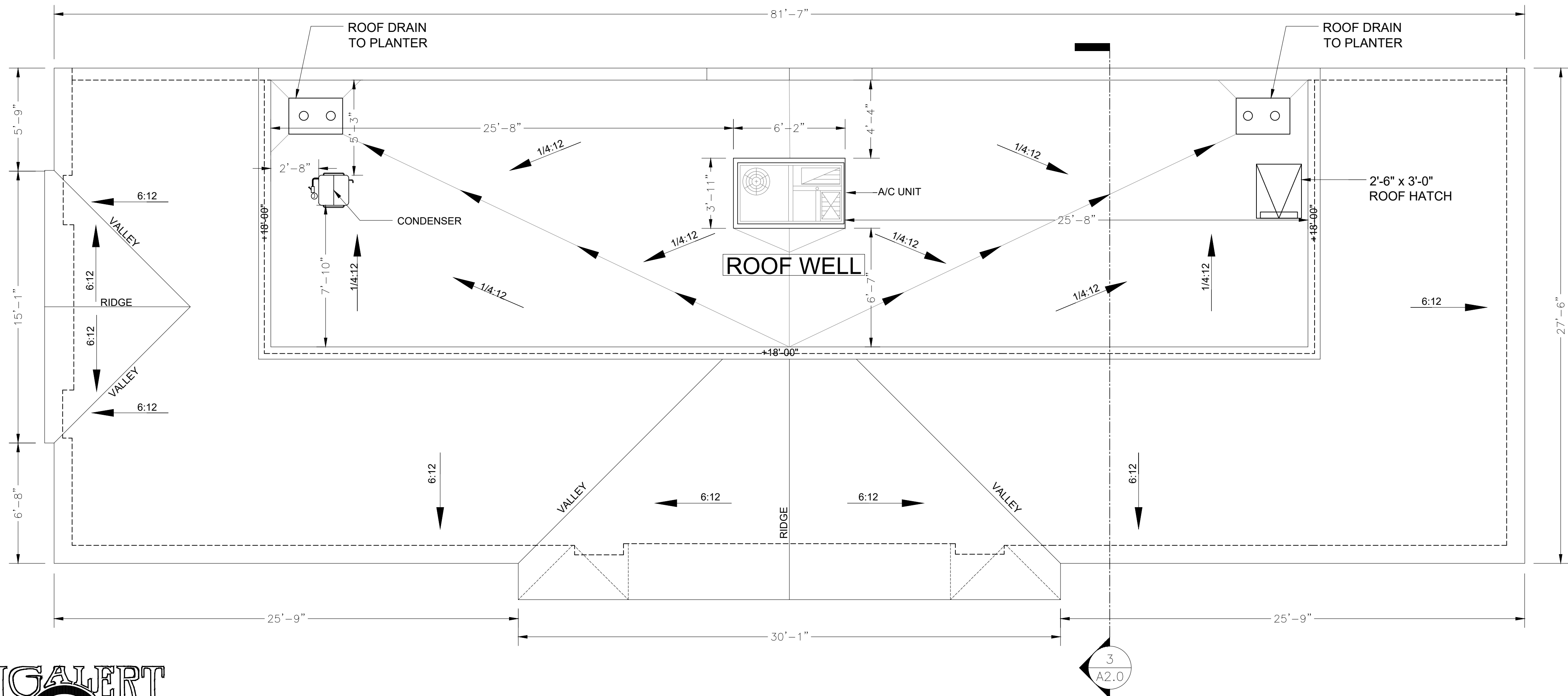
PRELIMINARY GRADING PLAN

C1.0

File: 2 ramcam engineering\3-weld_dwg_198105588-ar052-morgan_hill\engineering\04-planning\phase01-cup-design\review-environmental\assessments\02-2nd-submittal\01-architectural\198105588-ar052-202226019-2.dwg, Saved: 8/9/2022 10:00 AM (LNU) Plotted: 9/24/2022 2:58 PM

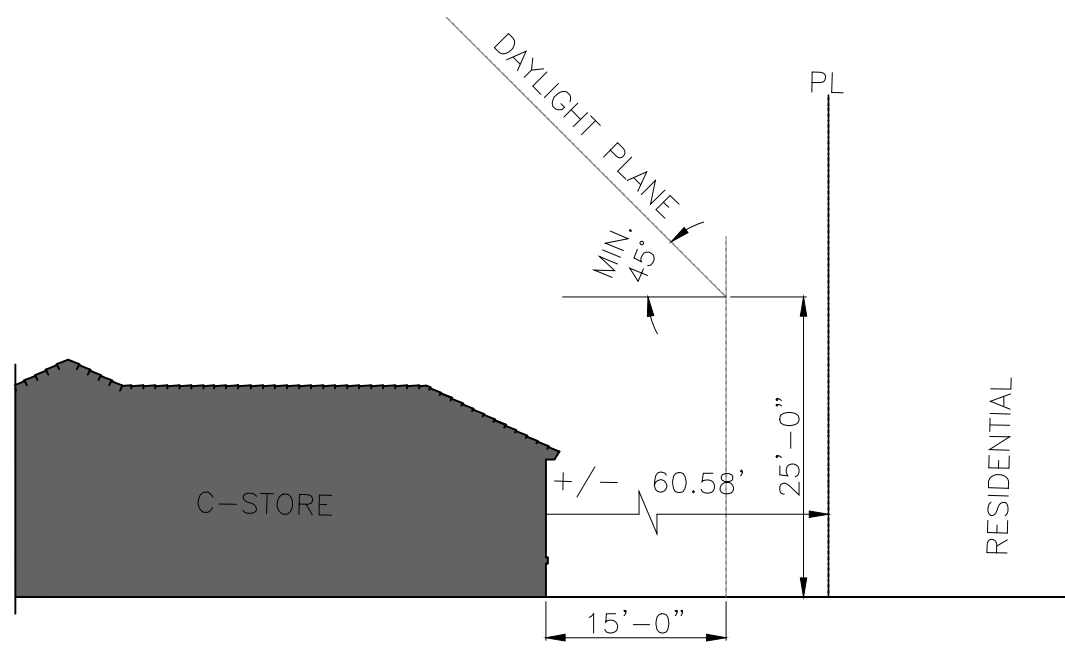


A2.0- 01 FLOOR PLAN
SCALE: 1/4"=1'-0"

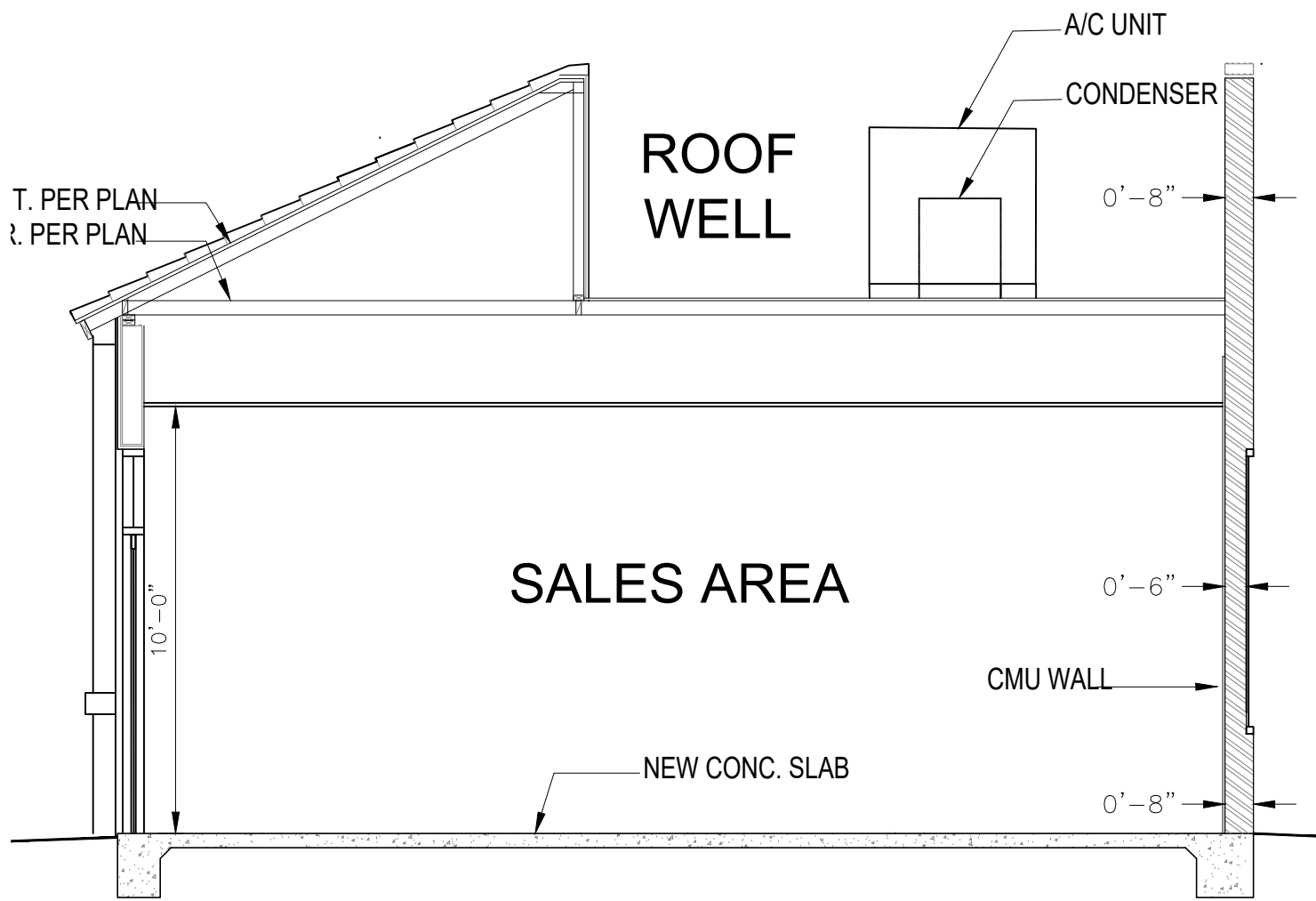


A2.0- 03 ROOF PLAN
SCALE: 1/4"=1'-0"

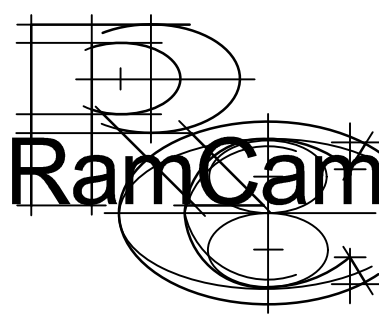
OCCUPANT LOAD							
C-STORE OCCUPANCY		AREA		LOAD FACTOR		OCCUPANT LOAD	
SALES		1,194 SQ. FT.		60.NET		20.00	
CASHIER		64 SQ. FT.		100.NET		64	
DRY STORAGE		300 SQ. FT.		300.NET		50	
W.I. COOLER		254 SQ. FT.		300.NET		1.00	
TOTAL OCCUPANCY LOAD						22.00	
MINIMUM PLUMBING FACILITIES PER CPC TABLE 422.1 * FIXTURES PER PERSON							
TYPE OF OCCUPANCY *	WATER CLOSETS *		URINALS *	MALE	FEMALE	FACILITIES *	OTHER
	MALE	FEMALE	MALE				
B/M	1:1-100	1:1-100	1:1-200	1:1-200	1:1-200	1: 1-250	1 SERVICE SINK
FIXTURES PROVIDED	1	1		1	1	1 @ SODA FOUNTAIN	1
NOTE: PER EXCEPTION 3 OF SECTION 422.2 OF CPC, FOR "M" OCCUPANCY WITH OCCUPANT LOAD 50 OR LESS, ONE UNISEX RESTROOM IS ALLOWED.							



A2.0- 02 DAYLIGHT PLANE (18.92.130)
SCALE: 1/16"=1'-0"



A2.0- 04 SECTION
SCALE: 1/4"=1'-0"



RAMCAM ENGINEERING
GROUP, INC.
PLANNING & ENGINEERING
670 E. PARKRIDGE AVENUE, SUITE 101
CORONA, CA 92819
951.734.6330

All ideas, designs and layouts shown on these drawings, including all documents on electronic media are the property of ramcam group, and are intended to be used in connection with this specific project only and shall not be reproduced or used without the written permission of ramcam group. All rights reserved.

World Oil Marketing
Company
9302 GARFIELD AVENUE
SOUTH GATE, CA 90280
(562) 928-0100

WOF052
16720 MONTERREY HWY
MORGAN HILL, CA. 95037

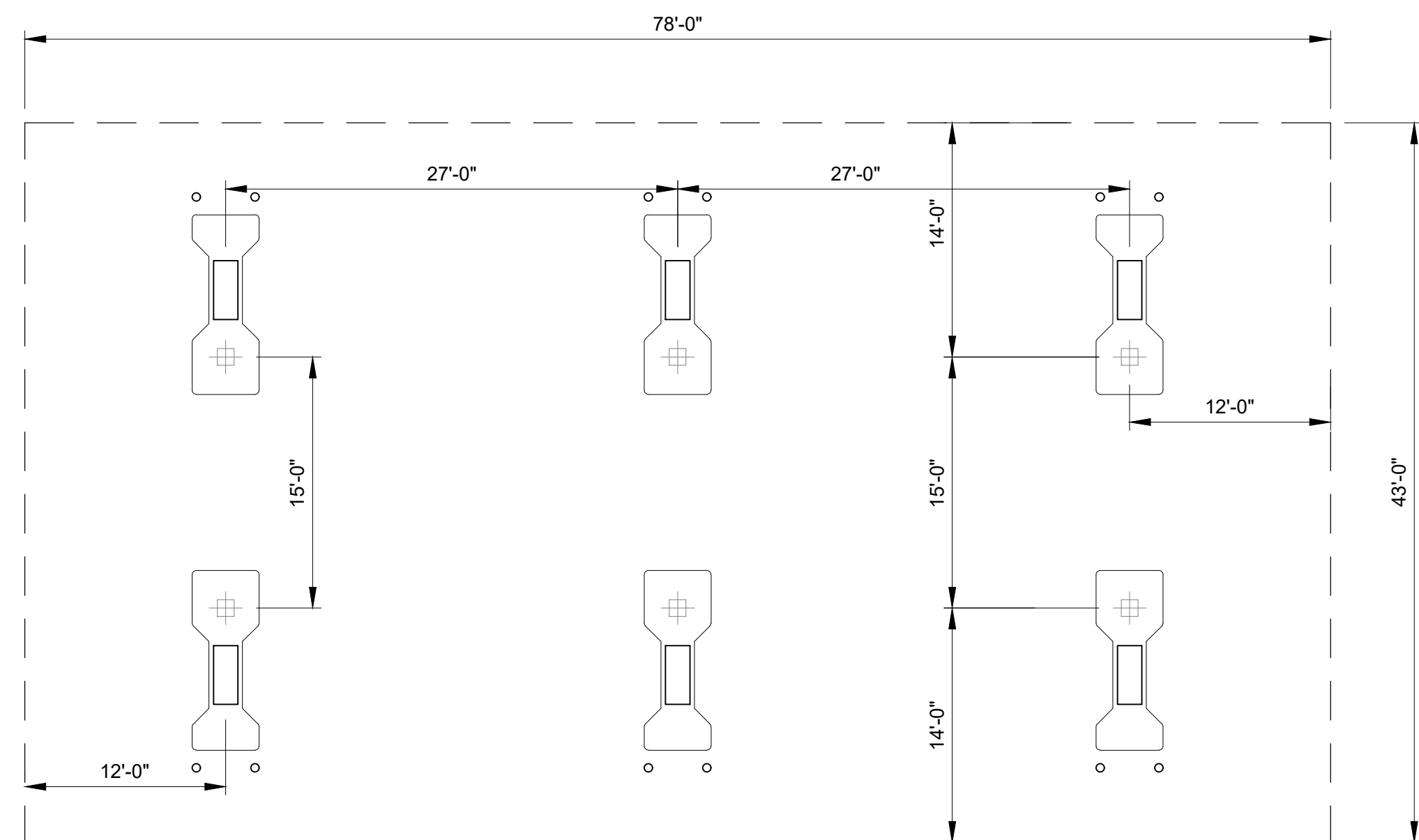
09.23.2022

FLOOR PLAN, ROOF PLAN
& NOTES

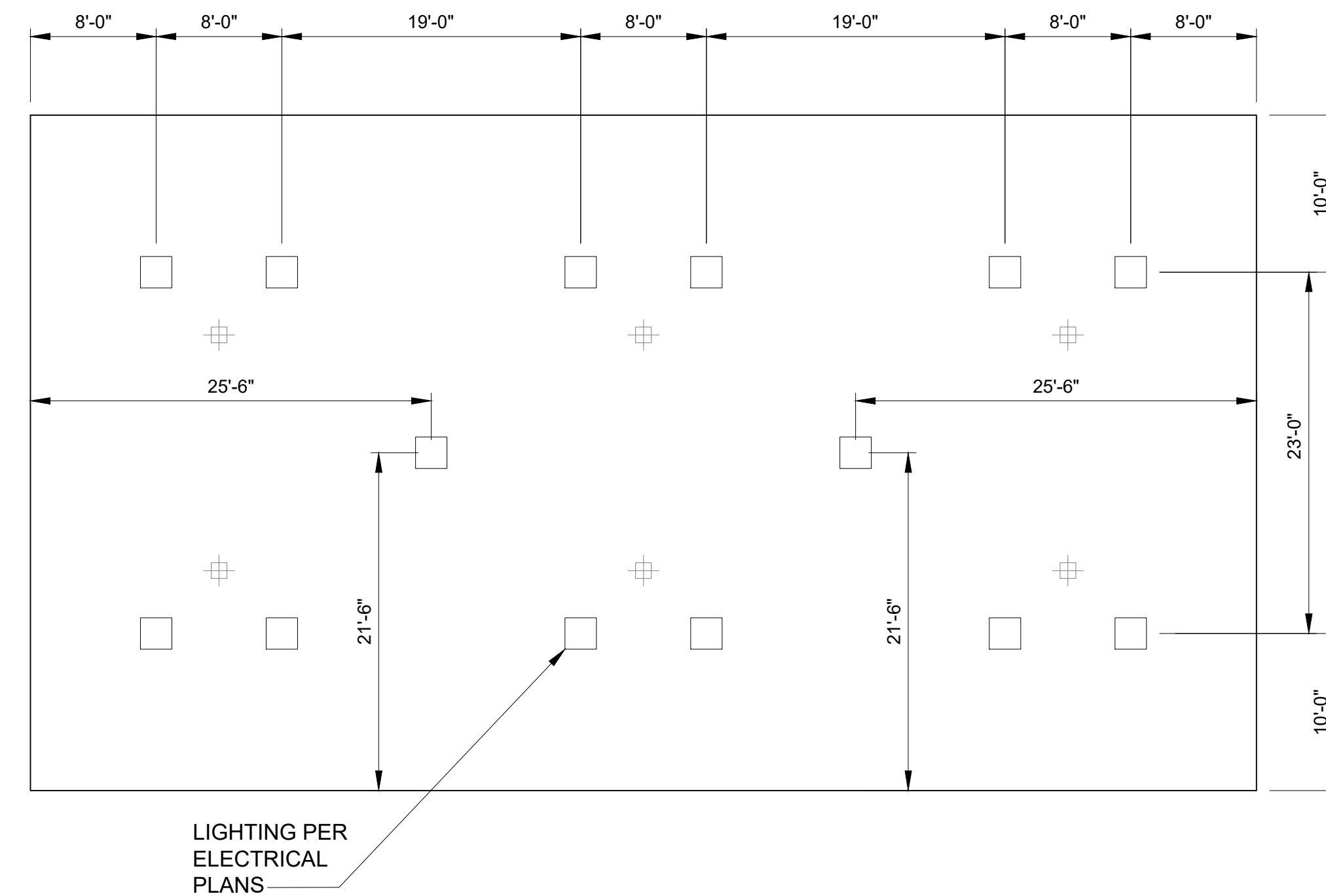
A2.0



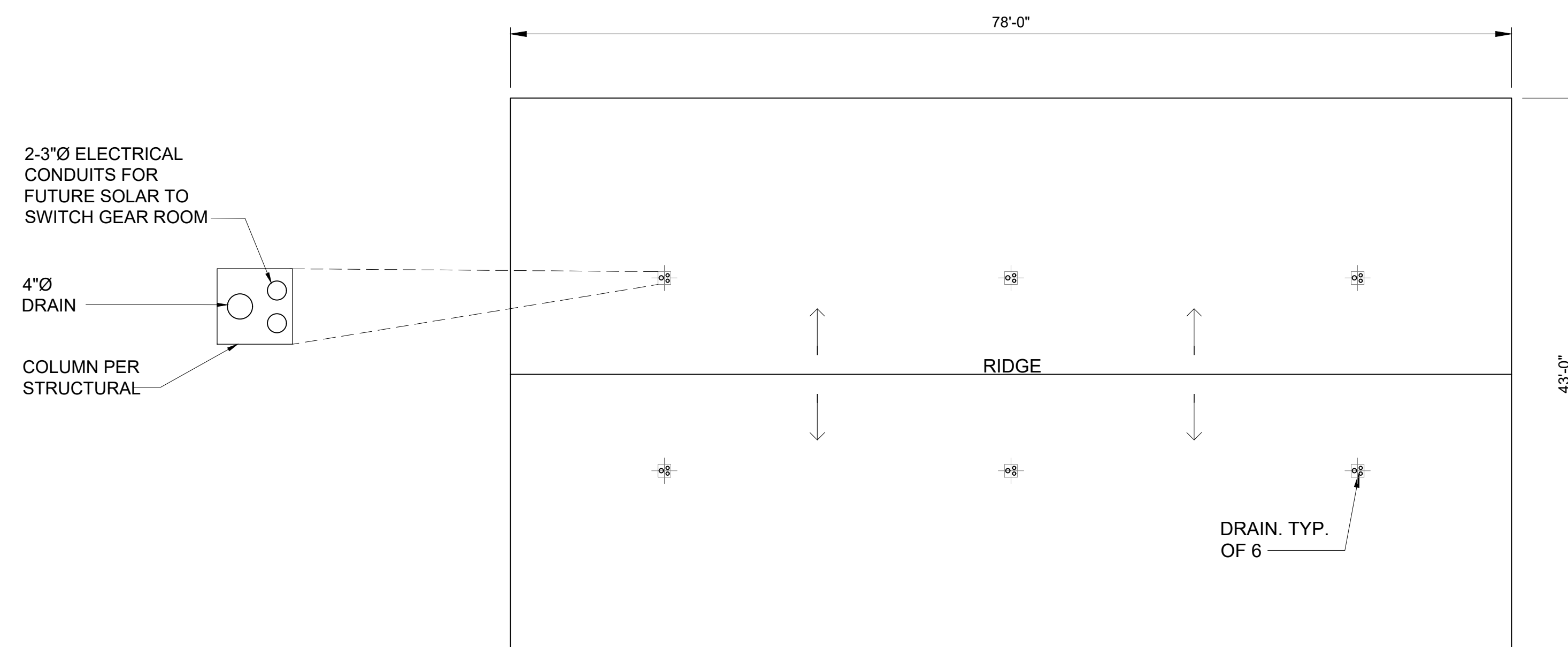
A3.0



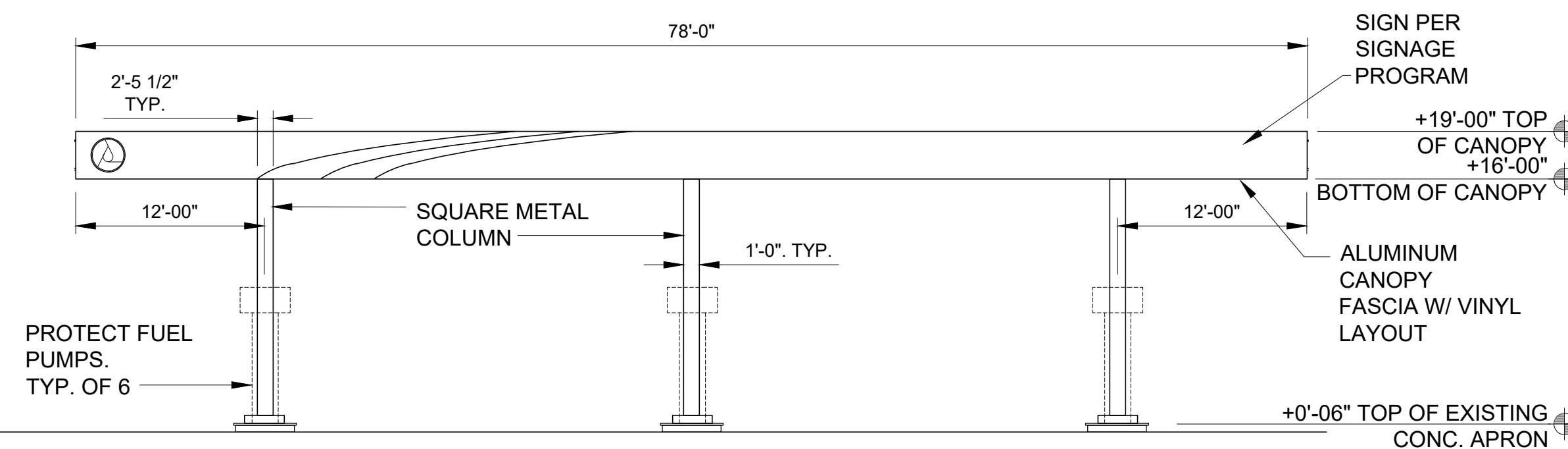
A5.0- 01 **FUEL CANOPY FLOOR PLAN**
SCALE: 1/8" = 1'-0"



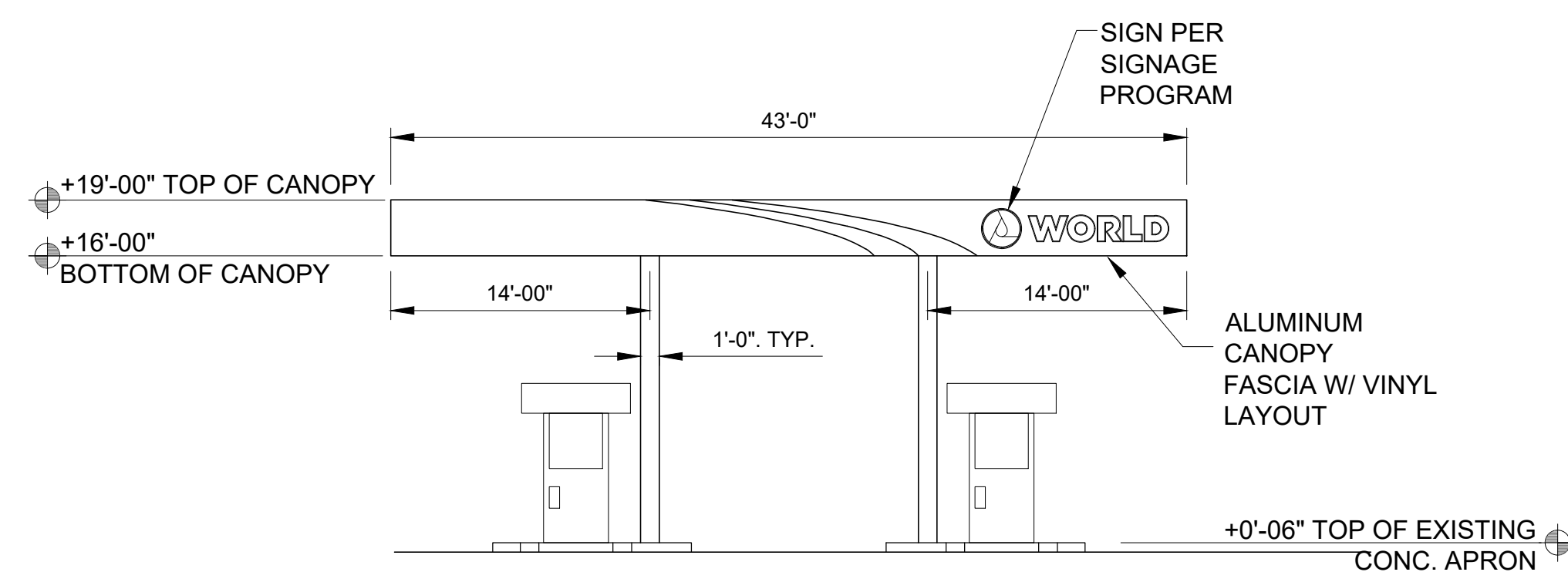
A5.0- 02 FUEL CANOPY REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"



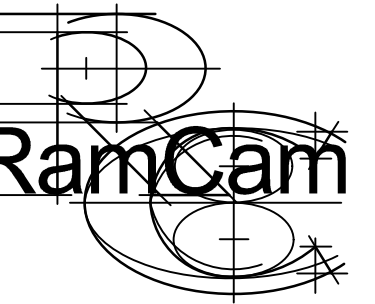
A5.0- 03 **FUEL CANOPY ROOF PLAN**
SCALE: 1/8" = 1'-0"



A5.0- 04 **FRONT ELEVATION**
SCALE: 1/8" = 1'-0"



A5.0- 05 **SIDE ELEVATION**
SCALE: 1/8" = 1'-0"



**RAMCAM ENGINEERING
GROUP, INC.**

PLANNING & ENGINEERING
670 E. PARKBRIDGE AVENUE, SUITE 101
CORONA, CA 92819
951.7734.6330

All ideas, designs and layouts shown on these drawings, including all documents on electronic media are the property of ramcam group, and are intended to be used in connection with this specific project only and shall not otherwise be used for any purpose whatsoever without the written consent, and may not be reproduced or used without the written permission of ramcam group.
All rights reserved

**World Oil Marketing
Company**
9302 GARFIELD AVENUE
SOUTH GATE, CA 90280
(562) 928-0100

NOF052

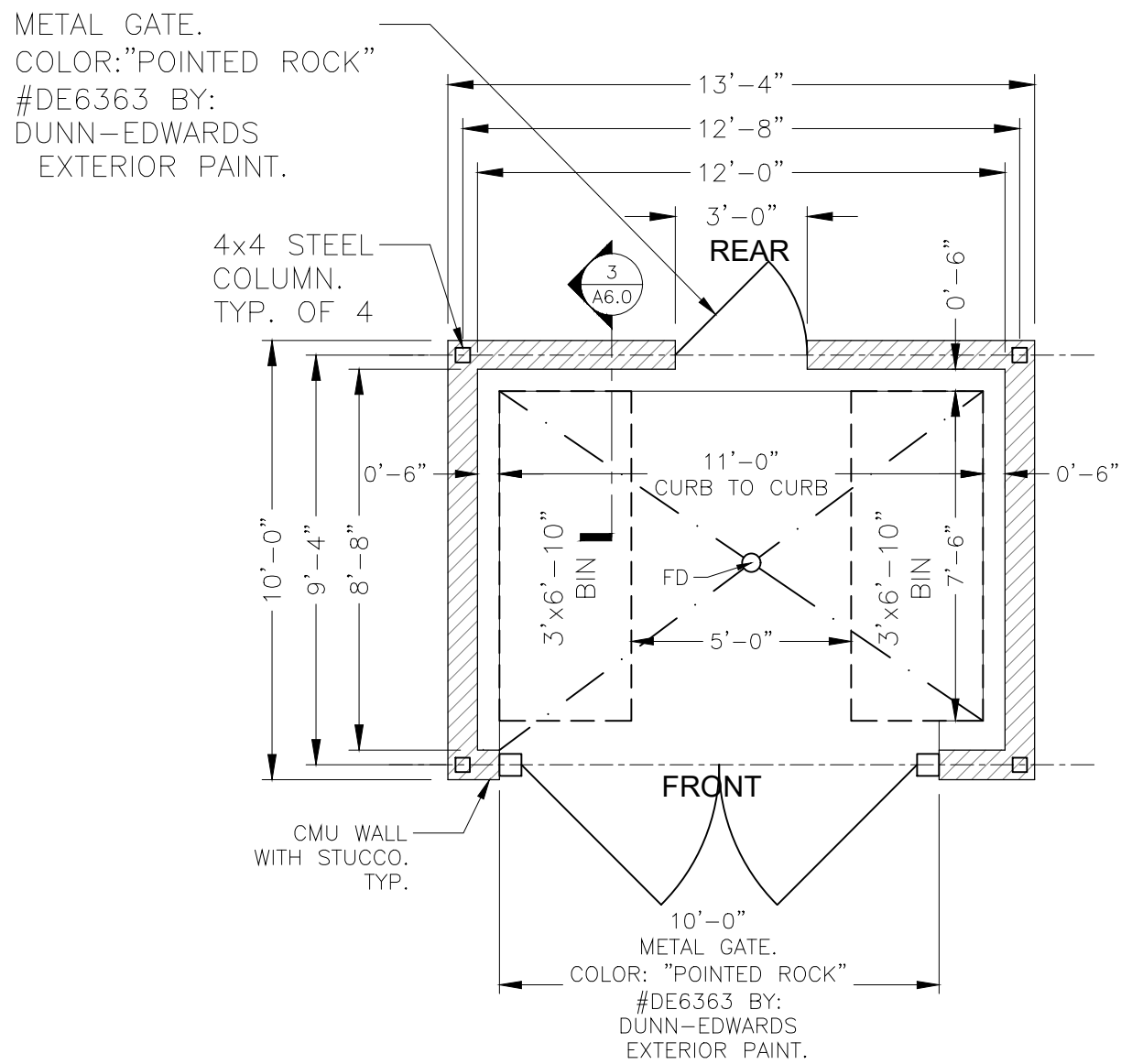
16720 MONTERREY HWY
MORGAN HILL, CA. 95037

0.23.2022

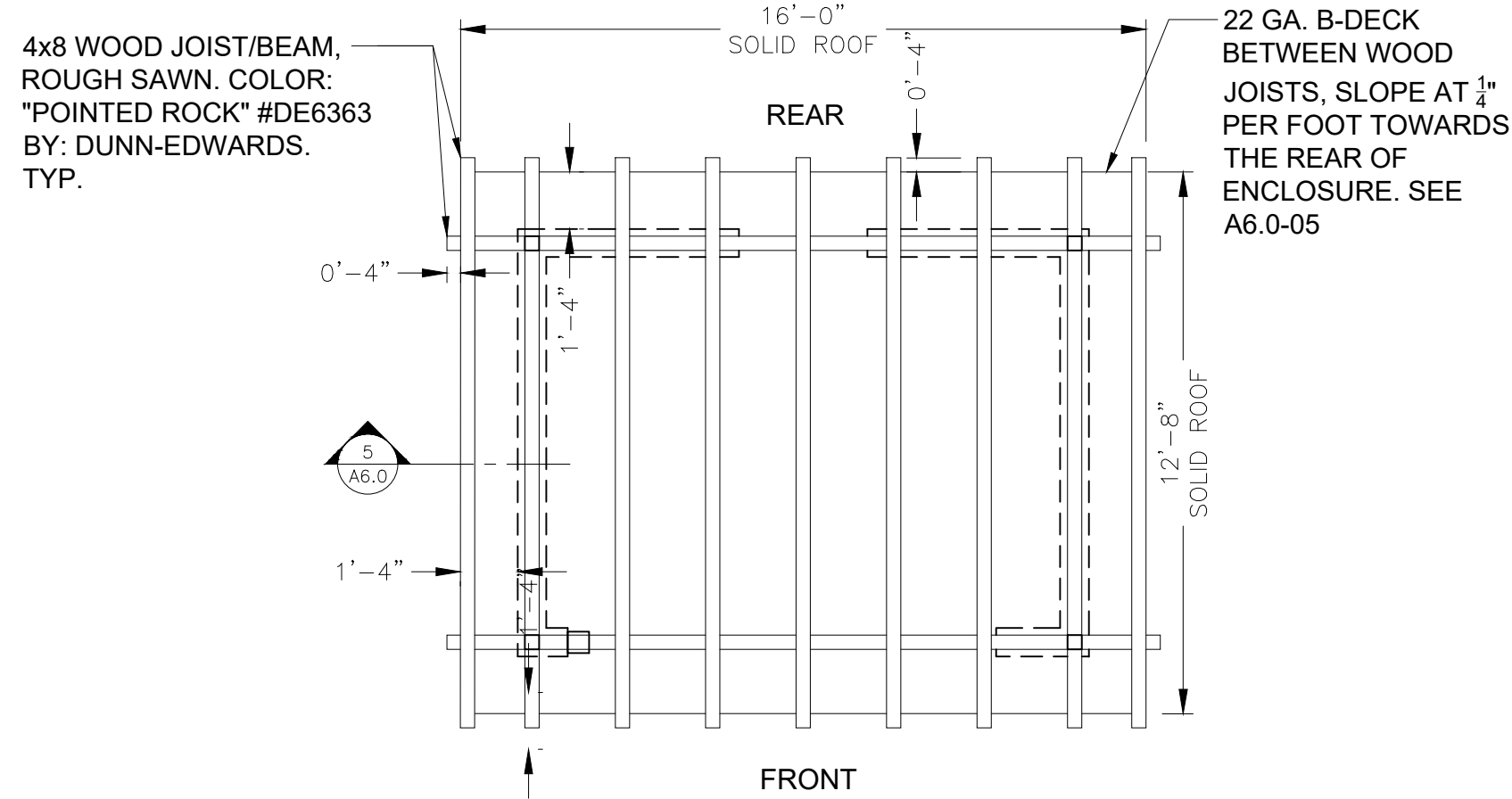
FUEL CANOPY PLANS & ELEVATIONS

A5.0

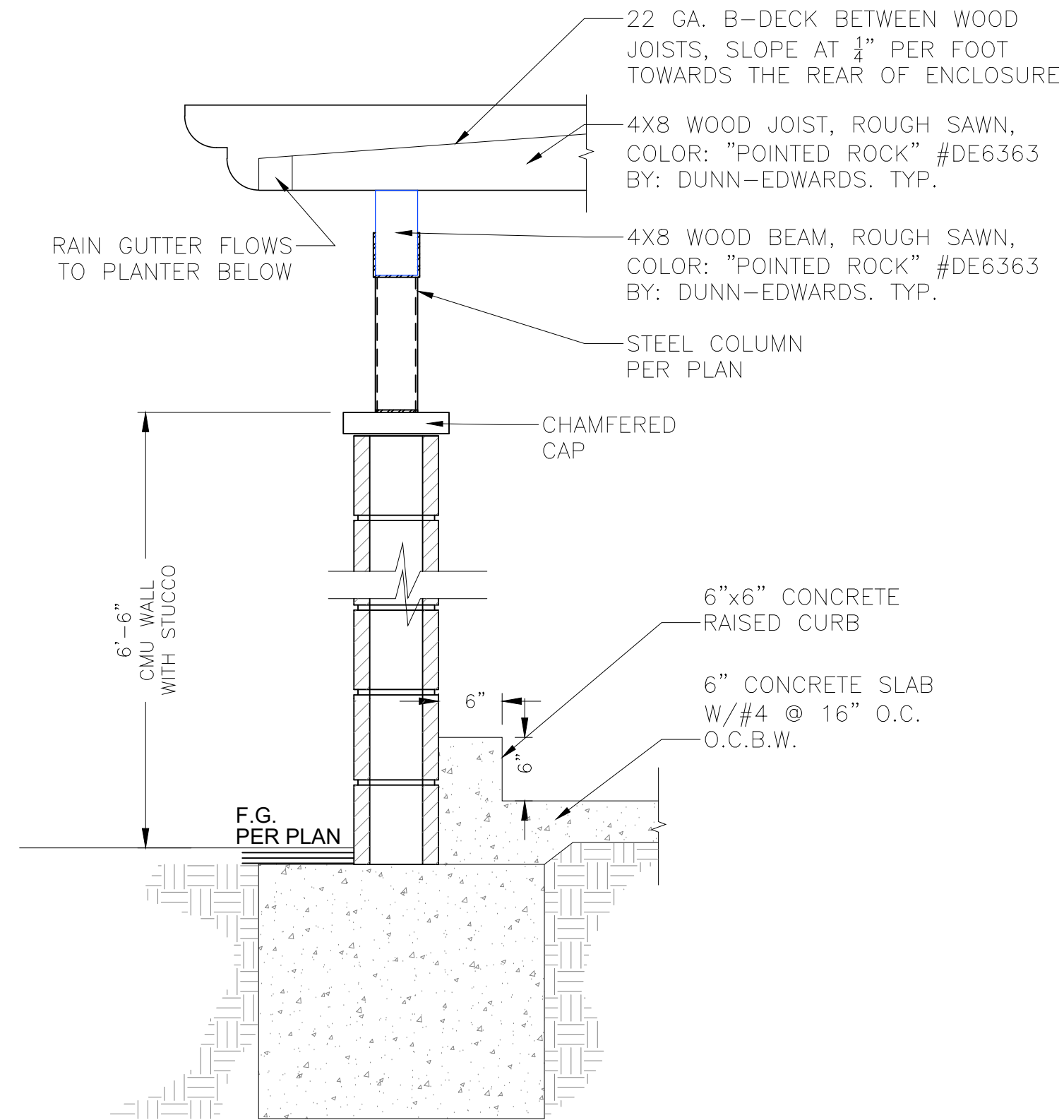
File: z:\ramcam\engineering\3-wrld\atc11581\0358a-wd53-morgan_hll\engineering\04-planning\plans\A6.0-1.dwg, Saved: 9/21/2022 3:20 PM (mjh) Plotted: 9/21/2022 3:48 PM



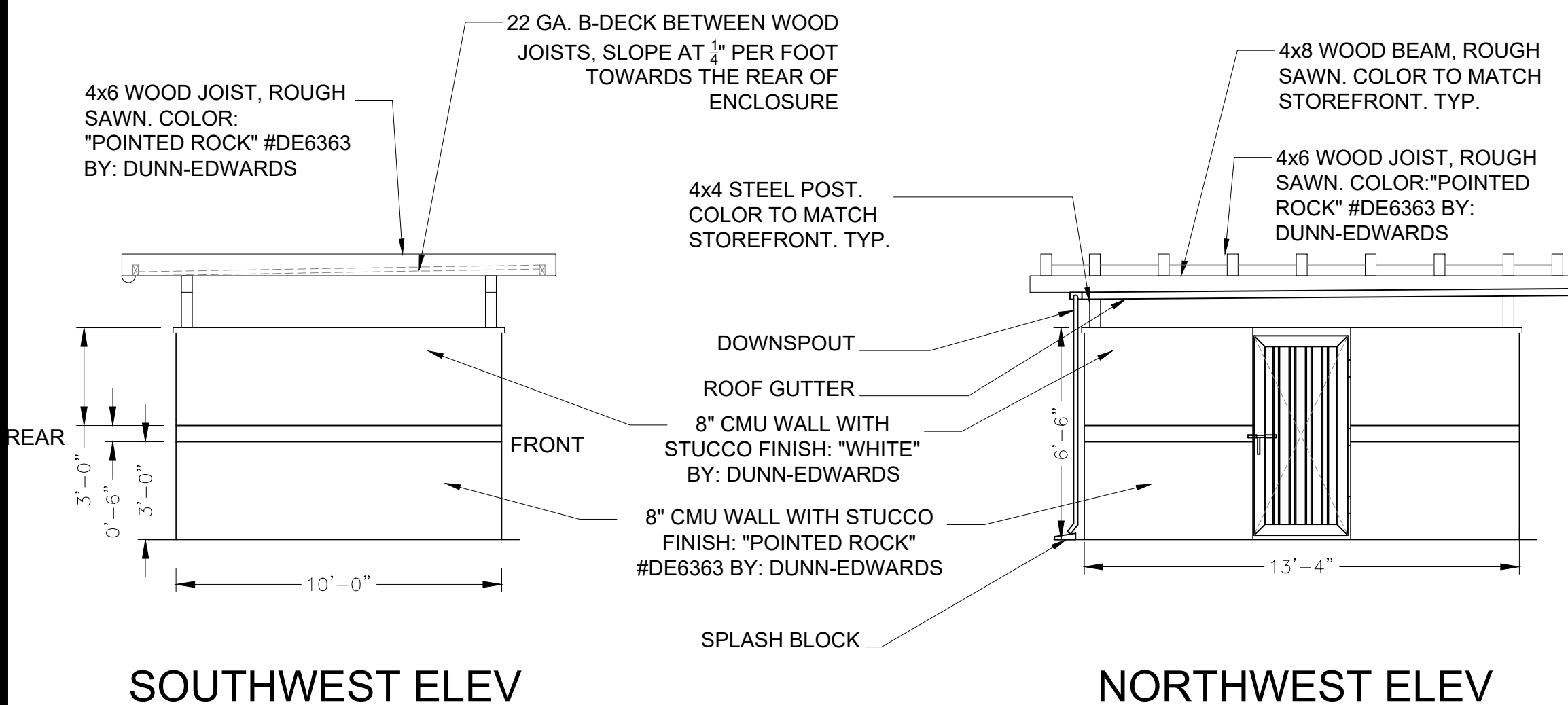
A6.0-01 TRASH ENCLOSURE FLOOR PLAN
SCALE: 1/4"=1'-0"



A6.0-02 TRASH ENCLOSURE ROOF PLAN
SCALE: 1/4"=1'-0"

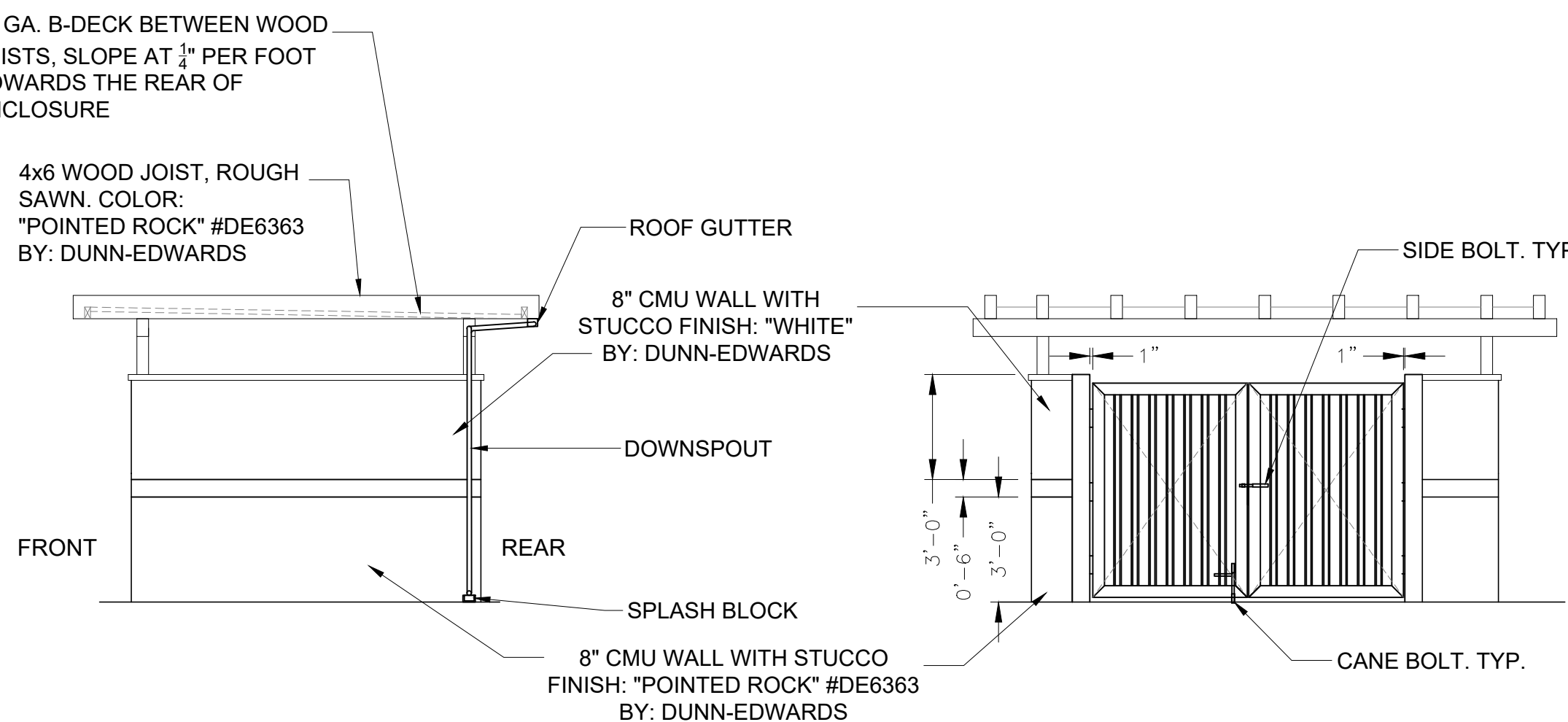


A6.0-03 TRASH ENCLOSURE WALL/ROOF SECTION
SCALE: 1/4"=1'-0"



SOUTHWEST ELEV

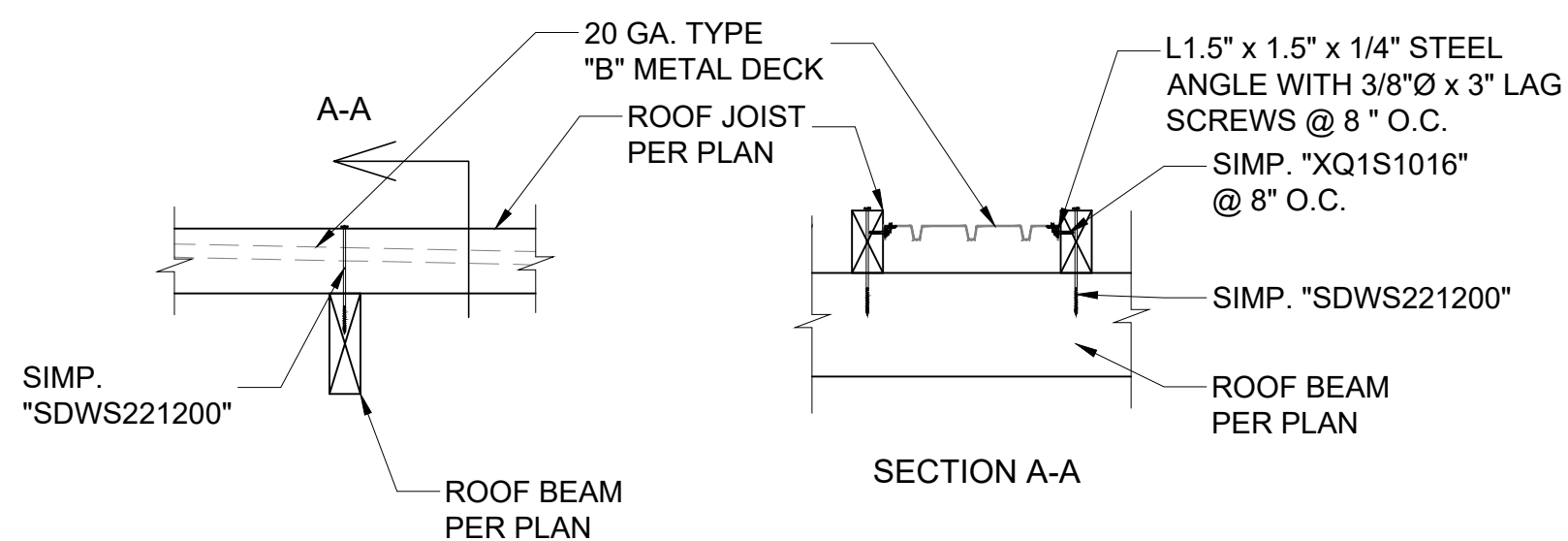
NORTHWEST ELEV



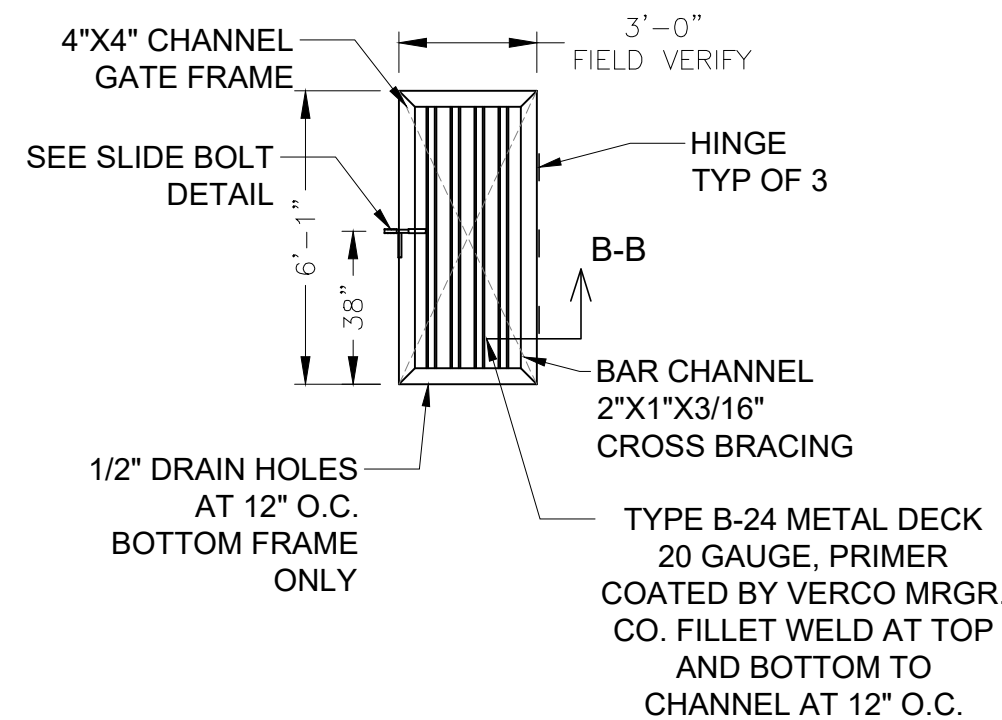
NORTHEAST ELEV

SOUTHEAST ELEV

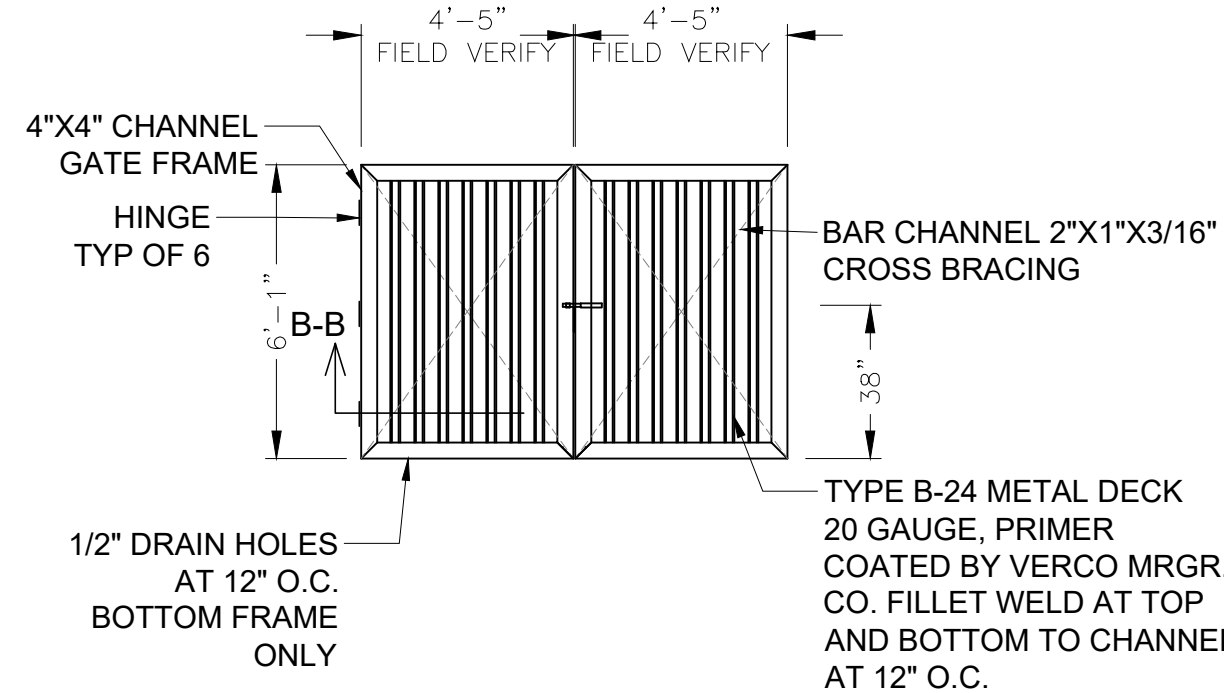
A6.0-04 TRASH ENCLOSURE ELEVATIONS
SCALE: 1/4"=1'-0"



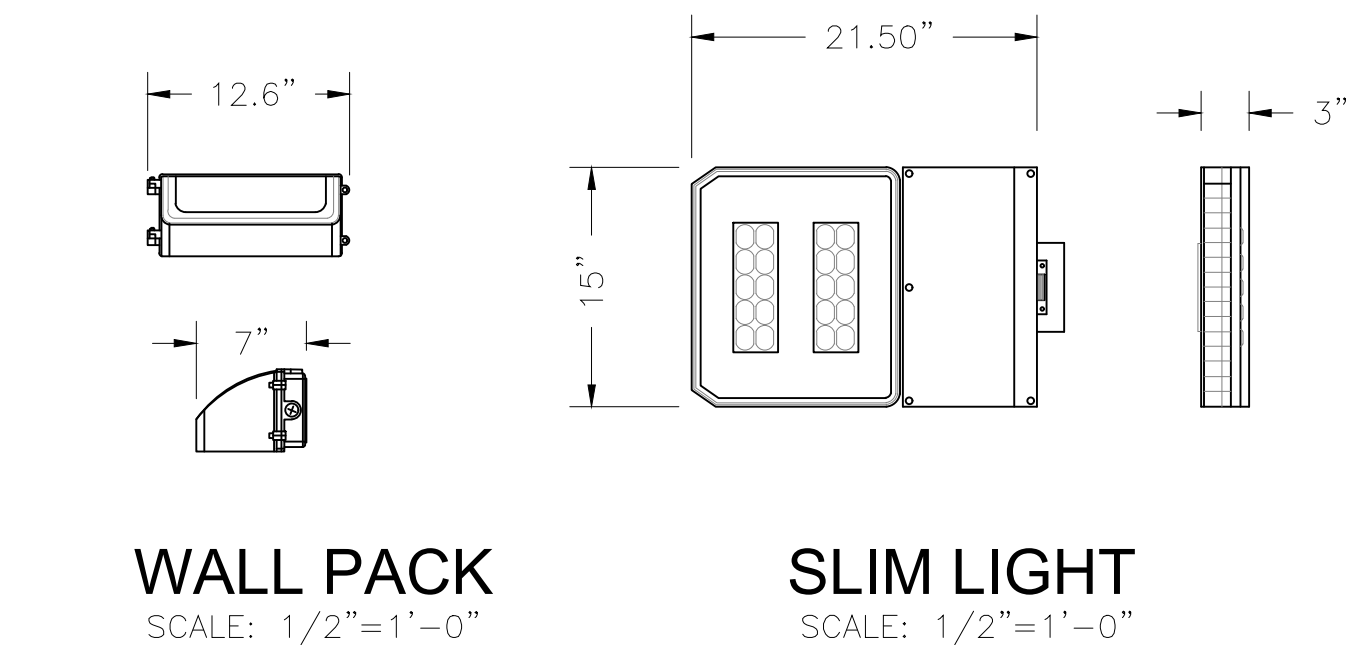
A6.0-05 METAL DECK DETAILS
SCALE: 1/2"=1'-0"



A6.0-06 DOOR DETAIL @ NW ELEVATION
SCALE: 1/4"=1'-0"



A6.0-07 GATE DETAIL @ SE ELEVATION
SCALE: 1/4"=1'-0"

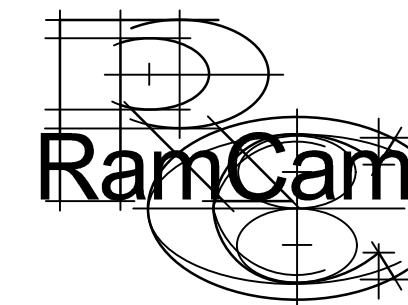


WALL PACK
SCALE: 1/2"=1'-0"

SLIM LIGHT
SCALE: 1/2"=1'-0"



A6.0-08 WALL PACK & POLE LIGHTS
SCALE: VARIES



RAMCAM ENGINEERING
GROUP, INC.
PLANNING & ENGINEERING
670 E. PARKRIDGE AVENUE, SUITE 101
CORONA, CA 92819
951.734.6330

All ideas, designs and layouts shown on these drawings, including all documents on electronic media are the property of ramcam group, and are intended to be used in connection with this specific project only and shall not otherwise be used for any purpose whatsoever without the written consent, and may not be reproduced or used without the written permission of ramcam group. All rights reserved

World Oil Marketing
Company
9302 GARFIELD AVENUE
SOUTH GATE, CA 90280
(562) 928-0100

WOF052
16720 MONTERREY HWY
MORGAN HILL, CA. 95037

09.23.2022

TRASH ENCLOSURE &
WALL PACK & AREA LIGHT POLE

A6.0

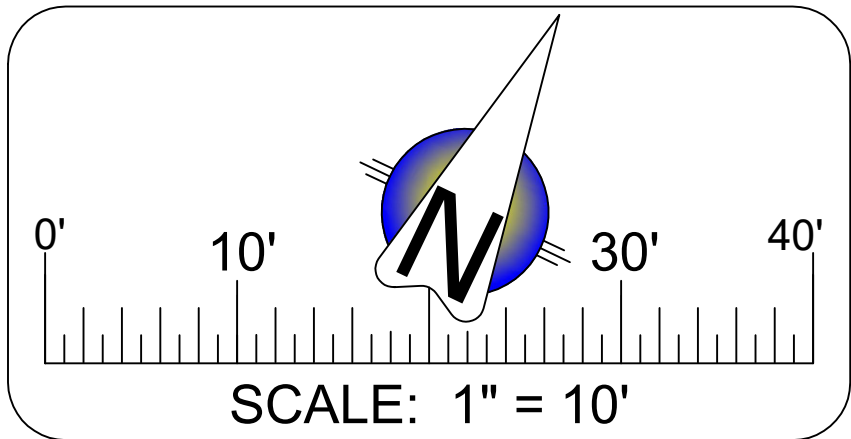
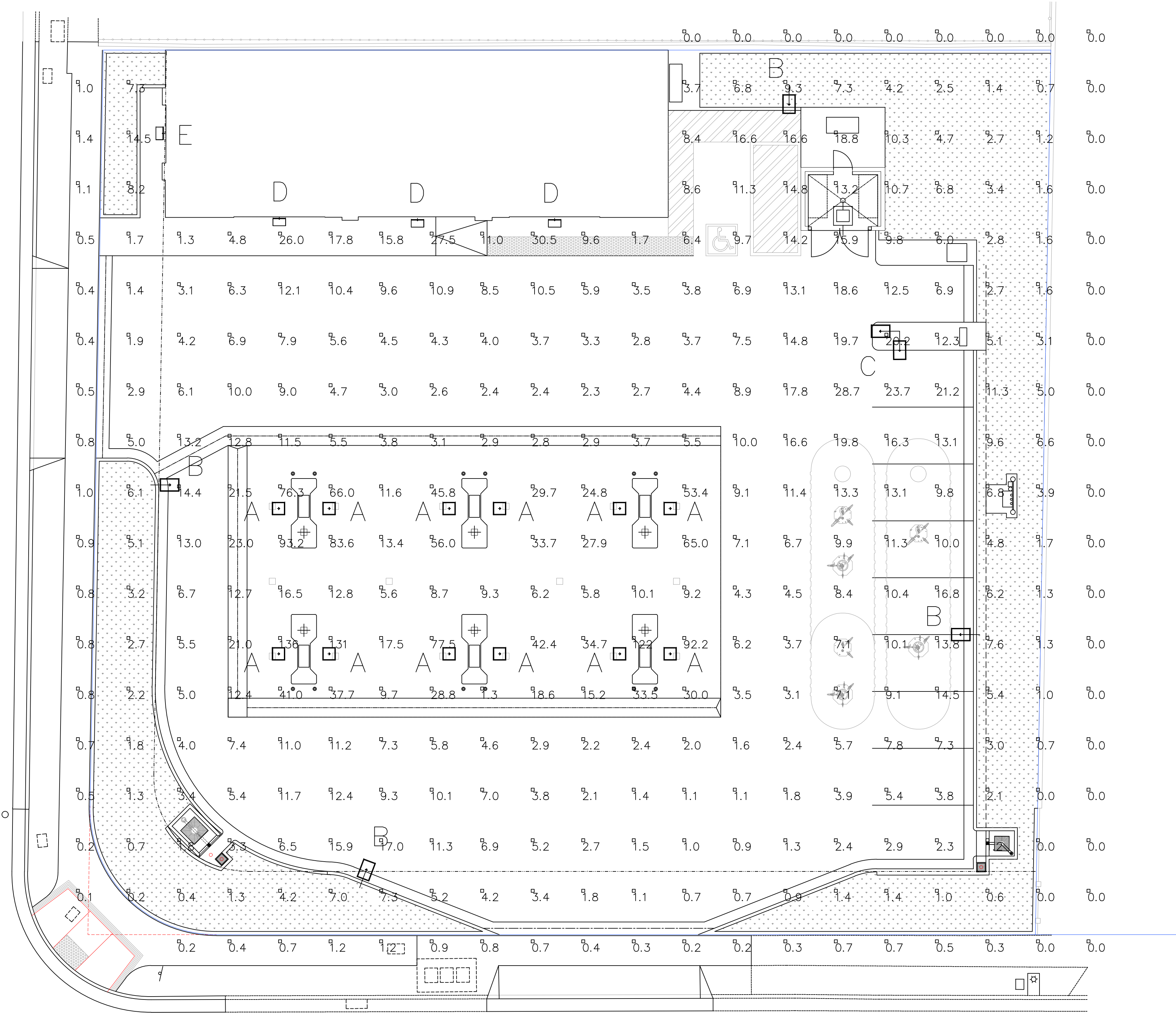
File: s:\ramcam\engineering\3-world\offices\1908100568-wof052-morgan\hilling\engineering\04-planning\phase01-cup-design\review\environmental\assessment\02-2nd\submit\01-architectural\01-0508-27.0 photometric-20220609v2.dwg, Saved: 08/20/2022 10:17 AM (Auto) Plotted: 9/24/2022 3:49 PM



Photometric data used is based on established IES procedures and published lamp ratings. Pt. x pt. values shown are horizontal illuminance at grade (single-plane), in footcandles. The Light Loss Factor (LLF) used is essentially industry standard. Field performance will depend on actual lamp, ballast, electrical, and site characteristics. Luminaire height shown is approximate overall mounting height above finished grade, unless noted otherwise.

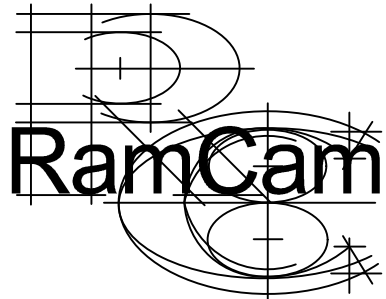
SAN PEDRO AVENUE

MONTEREY HWY



Luminaire Schedule						
Symbol	Qty.	Label	Arrangement	Lumens	L.L.F.	Description
	12	A	Single	-1	0.80	CAN-EDG-25-xx-06-E-UL-700-40K
	4	B	Single	-1	0.80	LED-FX-SAL-75-30K-DB-35
	1	C	2 @ 90 DEGREES	-1	0.80	(2) LED-FX-SAL-75-30K-DB-35
	3	D	Single	-1	0.80	AWP-6L-50K
	1	E	Single	-1	0.80	AWP-6L-50K

Numeric Summary							
Label	Calc. Type	Units	Avg.	Max.	Min.	Avg./Min.	Max./Min.
Calc. Points	Illuminance	Fc	9.78	136	0.0	N.A.	N.A.



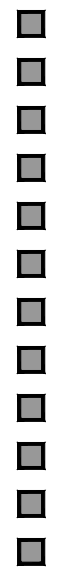
RAMCAM ENGINEERING
GROUP, INC.
PLANNING & ENGINEERING
670 E. PARKRIDGE AVENUE, SUITE 101
CORONA, CA 92819
951.734.6330

All ideas, designs and layouts shown on these drawings, including all documents on electronic media are the property of ramcam group, and are intended to be used in connection with this specific project only and shall not otherwise be used for any purpose whatsoever without the written consent, and may not be reproduced or used without the written permission of ramcam group. All rights reserved

World Oil Marketing
Company
9302 GARFIELD AVENUE
SOUTH GATE, CA 90280
(562) 928-0100

WOF052
16720 MONTERREY HWY
MORGAN HILL, CA. 95037

09.23.2022



SITE LIGHTING
PHOTOMETRIC

A7.0

Initial Study

World Oil Gas Station and Retail Project

Prepared by



CITY OF MORGAN HILL

In Consultation with
50 YEARS **DAVID J. POWERS**
EST. 1972 **& ASSOCIATES, INC.**
ENVIRONMENTAL CONSULTANTS & PLANNERS

December 2022

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

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

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

DETERMINATION

On the basis of this initial evaluation:

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

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

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

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

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

Signature



1/25/2023

Date

TABLE OF CONTENTS

Section 1.0	Introduction and Purpose	1
1.1	Purpose of the Initial Study	1
1.2	Public Review Period	1
1.3	Consideration of the Initial Study and Project	1
1.4	Notice of Determination.....	1
Section 2.0	Project Information.....	2
2.1	Project Title.....	2
2.2	Lead Agency Contact	2
2.3	Project Applicant	2
2.4	Project Location	2
2.5	Assessor’s Parcel Number.....	2
2.6	General Plan Designation and Zoning District.....	2
2.7	Habitat Plan Designation	2
2.8	Project-Related Approvals, Agreements, and Permits	2
Section 3.0	Project Description.....	4
3.1	Existing Site and Setting.....	4
3.2	Proposed Project	4
Section 4.0	Environmental Setting, Checklist, and Impact Discussion	12
4.1	Aesthetics	13
4.2	Agriculture and Forestry Resources	20
4.3	Air Quality	24
4.4	Biological Resources	38
4.5	Cultural Resources.....	45
4.6	Energy	56
4.7	Geology and Soils.....	63
4.8	Greenhouse Gas Emissions.....	72
4.9	Hazards and Hazardous Materials	78
4.10	Hydrology and Water Quality	92
4.11	Land Use and Planning.....	105
4.12	Mineral Resources	108
4.13	Noise	110
4.14	Population and Housing.....	124

4.15	Public Services	127
4.16	Recreation.....	133
4.17	Transportation	135
4.18	Tribal Cultural Resources	145
4.19	Utilities and Service Systems	148
4.20	Wildfire	156
4.21	Mandatory Findings of Significance.....	159
Section 5.0	References.....	167
Section 6.0	Lead Agency and Consultants	172
6.1	Lead Agency	172
6.2	Consultants	172
Section 7.0	Acronyms and Abbreviations	173

Figures

Figure 3.2-1: Regional	5
Figure 3.2-2: Vicinity	6
Figure 3.2-3: Aerial.....	7
Figure 3.2-4: Site Plan	8
Figure 3.2-5: Retail Building Elevations.....	10
Figure 3.2-6: Fuel Canopy Elevations.....	11
Figure 4.3-1: Location of Off-Site Sensitive Receptors and MEIs	36
Figure 4.13-1: Noise Measurement Locations.....	117
Figure 4.21-1: Cumulative TAC and PM2.5 Sources.....	163

Photos

Photo 1	15
Photo 2	15
Photo 3	16
Photo 4	16

Tables

Table 4.3-1: Health Effects of Air Pollutants	24
Table 4.3-2: BAAQMD Air Quality Significance Thresholds	30
Table 4.3-3: Summary of Project Construction Emissions	32
Table 4.3-4: Summary of Operational Period Emissions	33
Table 4.3-5: Construction and Operation Risk Impacts at the Off-Site Receptors	35
Table 4.6-1: Estimated Annual Energy Use of Proposed Development	61
Table 4.8-1: Annual Project GHG Emissions (CO ₂ e) in Metric Tons and Per Capita	77
Table 4.13-1: Groundborne Vibration Impact Criteria	111
Table 4.13-2: Municipal Code Maximum Noise Levels	115
Table 4.17-1: Trip Generation Summary.....	141
Table 4.17-2: Intersection Level of Service Summary.....	144
Table 4.21-1: Cumulative Community Risk Impacts from Combined TAC Sources at MEIs	161

Appendices

Appendix A: Air Quality Analysis	
Appendix B: Geotechnical Engineering Investigation	
Appendix C: Soil Sampling Memorandum and Peer Review Report	
Appendix D: Floodplain Impact Study	
Appendix E: Noise Analysis	
Appendix F: VMT Assessment and Trip Generation and Operations Analysis	
Appendix G: Stormwater Control Plan	

SECTION 1.0 INTRODUCTION AND PURPOSE

1.1 PURPOSE OF THE INITIAL STUDY

The City of Morgan Hill, as the Lead Agency, has prepared this Initial Study for the World Oil Gas Station and Retail Project in compliance with the California Environmental Quality Act (CEQA), the CEQA Guidelines (California Code of Regulations §15000 et. seq.) and the regulations and policies of the City of Morgan Hill, California.

The project proposes a Conditional Use Permit and Design Permit to redevelop an existing gas station and retail/convenience store with new pump stations, fuel canopy, underground storage tank (UST) system, and retail/convenience store. This Initial Study evaluates the environmental impacts that might reasonably be anticipated to result from implementation of the proposed project.

1.2 PUBLIC REVIEW PERIOD

Publication of this Initial Study marks the beginning of a 30-day public review and comment period. During this period, the Initial Study will be available to local, state, and federal agencies and to interested organizations and individuals for review. Written comments concerning the environmental review contained in this Initial Study during the 30-day public review period should be sent to:

Tiffany Brown
Senior Planner
Development Services Department
City of Morgan Hill
17575 Peak Avenue
Morgan Hill, CA
tiffany.brown@morganhill.ca.gov

1.3 CONSIDERATION OF THE INITIAL STUDY AND PROJECT

Following the conclusion of the public review period, the City of Morgan Hill will consider the adoption of the Initial Study/Mitigated Negative Declaration (MND) for the project at a regularly scheduled Planning Commission hearing. The City shall consider the Initial Study/MND together with any comments received during the public review process. Upon adoption of the MND, the City may proceed with project approval actions.

1.4 NOTICE OF DETERMINATION

If the project is approved, the City of Morgan Hill will file a Notice of Determination (NOD), which will be available for public inspection and posted within 24 hours of receipt at the County Clerk's Office for 30 days. The filing of the NOD starts a 30-day statute of limitations on court challenges to the approval under CEQA (CEQA Guidelines Section 15075(g)).

SECTION 2.0 PROJECT INFORMATION

2.1 PROJECT TITLE

World Oil Gas Station and Retail Remodel Project
(Conditional Use Permit UP2021-0002/EA2021-0001: Monterey – World Oil)

2.2 LEAD AGENCY CONTACT

Tiffany Brown
Senior Planner
Development Services Department
City of Morgan Hill
17575 Peak Avenue
Morgan Hill, CA
tiffany.brown@morganhill.ca.gov

2.3 PROJECT APPLICANT

John Hundley
Vice President of Special Projects and Environmental Remediation
World Oil Corporation
jhundley@worldoilcorp.com

2.4 PROJECT LOCATION

16720 Monterey Road, Morgan Hill, CA

2.5 ASSESSOR'S PARCEL NUMBER

817-01-002

2.6 GENERAL PLAN DESIGNATION AND ZONING DISTRICT

General Plan: Mixed-Use Flex
Zoning: Mixed-Use Flex (MU-F)

2.7 HABITAT PLAN DESIGNATION

Urban-Suburban Land

2.8 PROJECT-RELATED APPROVALS, AGREEMENTS, AND PERMITS

The proposed project would require City adoption of the IS/MND and Mitigation Monitoring and Reporting Program (MMRP). In addition, pursuant to Section 18.22.020 of the Morgan Hill

Municipal Code, the project would require approval of a Conditional Use Permit to re-develop the site with a fuel station and retail/convenience store within the MU-F zone district.

Subsequent to approval of the aforementioned entitlement, the applicant would be required to obtain a Design Permit for approval of a site plan, building elevations, and landscape plans.

Required Permits/Approvals:

- Conditional Use Permit
- Design Permit
- Grading Permit
- Building Permit
- UST Permit to Operate

SECTION 3.0 PROJECT DESCRIPTION

3.1 EXISTING SITE AND SETTING

The approximately 0.5-acre project site is located at 16720 Monterey Road (Assessor's Parcel Number [APN] 817-01-002). The project site is developed with paved surfaces and an existing gas station containing four pump stations (eight gas dispensers), an underground storage tank (UST) system, and an 880 square foot retail store. The eastern portion of the site includes an undeveloped area covered by grass. The site is accessed by an 84-foot-wide driveway from Monterey Road and a 32-foot-wide driveway from San Pedro Avenue. Regional and vicinity maps of the project site are shown on Figure 3.2-1 and Figure 3.2-2, respectively. Figure 3.2-3 shows an aerial photograph of the project site and surrounding land uses.

The project site is surrounded by commercial/retail uses to the north, Monterey Road and commercial/retail uses to the west, townhouses to the east, and San Pedro Avenue and a parcel to the south which will be developed as a 100 percent affordable Senior Housing development with 83 units.

The existing gas station operates 24 hours per day, seven days per week.

3.2 PROPOSED PROJECT

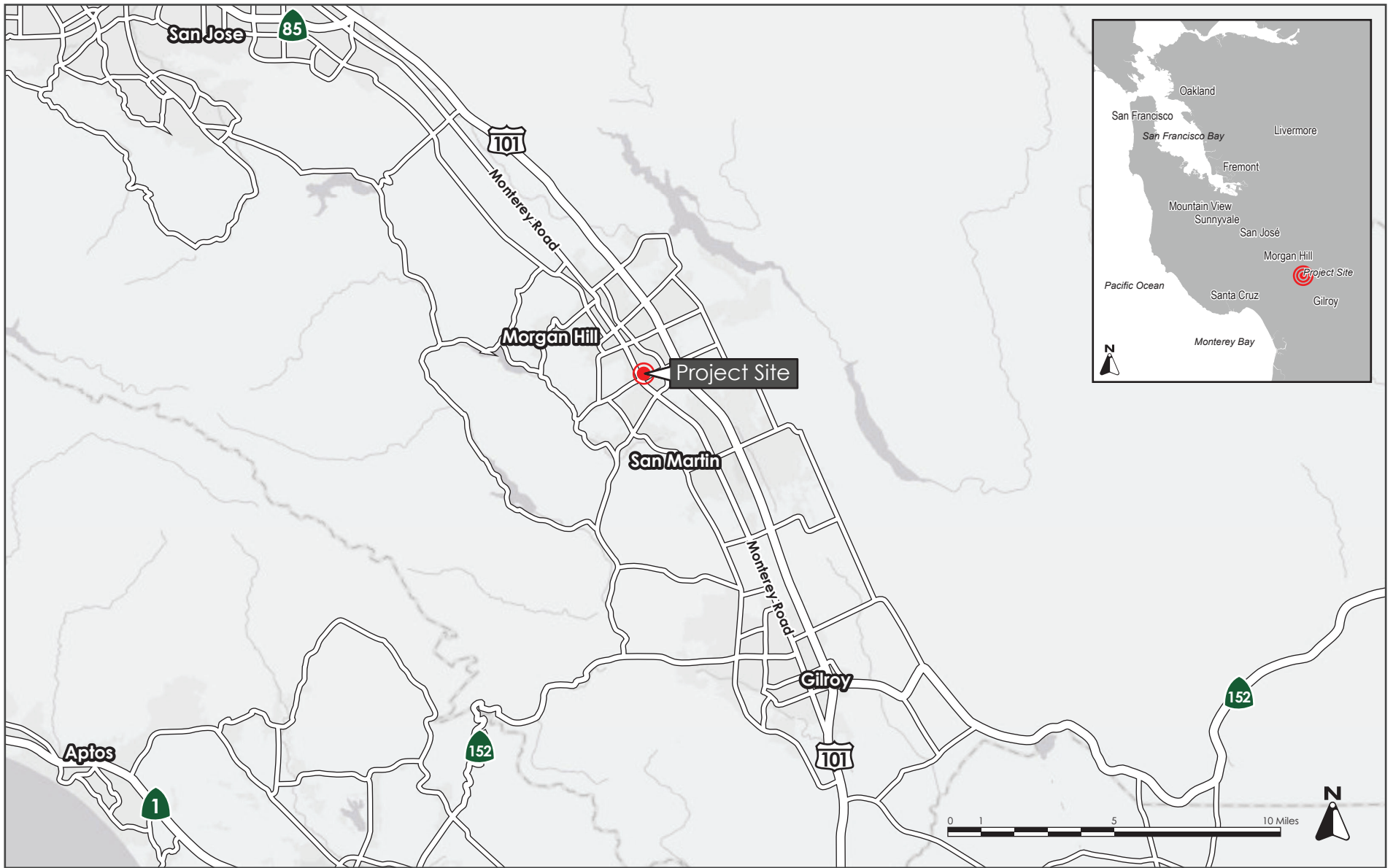
The proposed project would remove the existing pump stations, retail/convenience store, and fuel canopy to redevelop the site with six pump stations (12 gas pumps), a new UST system, a new canopy, and a 2,115 square foot retail/convenience store. The project would include an air and water (A/W) dispenser, trash enclosure, and surface parking spaces on the northern portion of the site. A heating, ventilation, and air conditioning (HVAC) unit would be located on the roof of the retail/convenience store. The proposed project would repave sidewalks along the project frontage on Monterey Road and San Pedro Avenue. The proposed site plan is shown on Figure 3.2-4.

The facility would continue to operate 24 hours per day, seven days per week.

3.2.1 Site Access and Parking

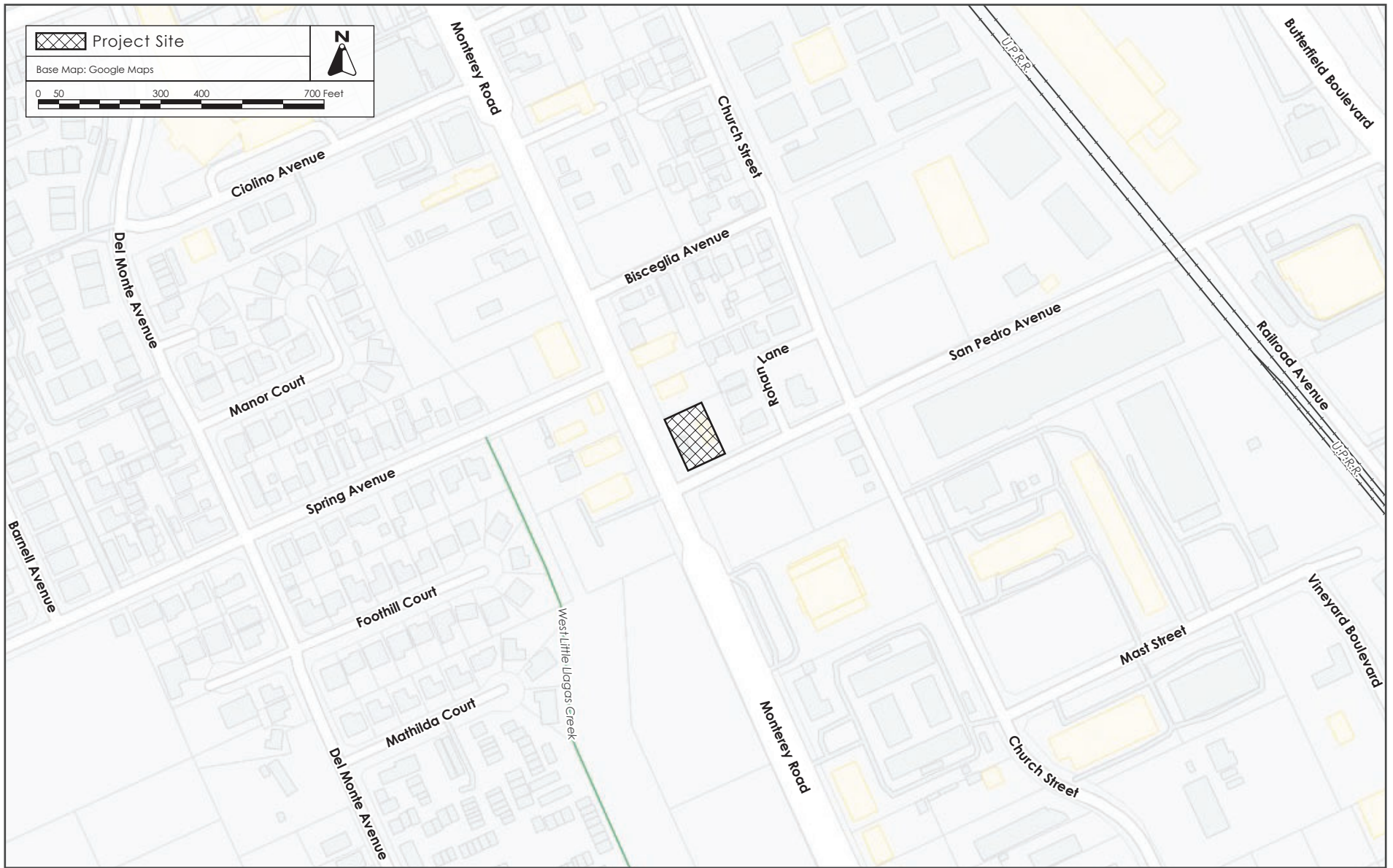
Access to the project site would be provided via two driveways, one at Monterey Road and one at San Pedro Avenue. The Monterey Road driveway would be modified from an 84-foot wide to a 32-foot-wide driveway. No improvements to the existing 32-foot-wide driveway on San Pedro Avenue are proposed.

The project would provide 11 parking spaces. One parking space would be compliant with the Americans with Disabilities Act (ADA), one parking space would include a charging station for electric vehicles, and one parking space would be dedicated for use of the A/W dispenser.



REGIONAL MAP

FIGURE 3.2-1



VICINITY MAP

FIGURE 3.2-2



AERIAL PHOTOGRAPH AND SURROUNDING LAND USES

FIGURE 3.2-3

3.2.2 Construction and Demolition

Overall project construction would take approximately eight months and would be constructed in one phase. The project would export 500 cubic yards of soil from the site during construction. The proposed project would be constructed 1.29 feet above the site's 100-year base flood elevation.

3.2.3 Lighting

The project proposes to add exterior lighting on the site perimeter. Lighting would also be added to the side of the retail/convenience building, facing the parking lot, and would remain on all night, as this is a 24-hour retail use.

3.2.4 Storm Drainage and Utilities

Stormwater runoff from the site would be directed to an underground infiltration system and bioretention basins located along the perimeter of the site. The underground infiltration system would be sized to retain and infiltrate the 95th percentile, 24-hour storm. Runoff would then be directed to the City's stormwater system.

The proposed project's water and sanitary sewer lines would connect to the City's existing 10-inch water main and sewer lines in Monterey Road. The project's storm drain lines would connect to the City's existing 24-inch storm drains in San Pedro Avenue. Gas and electric utilities would be provided by the Pacific Gas and Electric Company (PG&E).

3.2.5 Landscaping

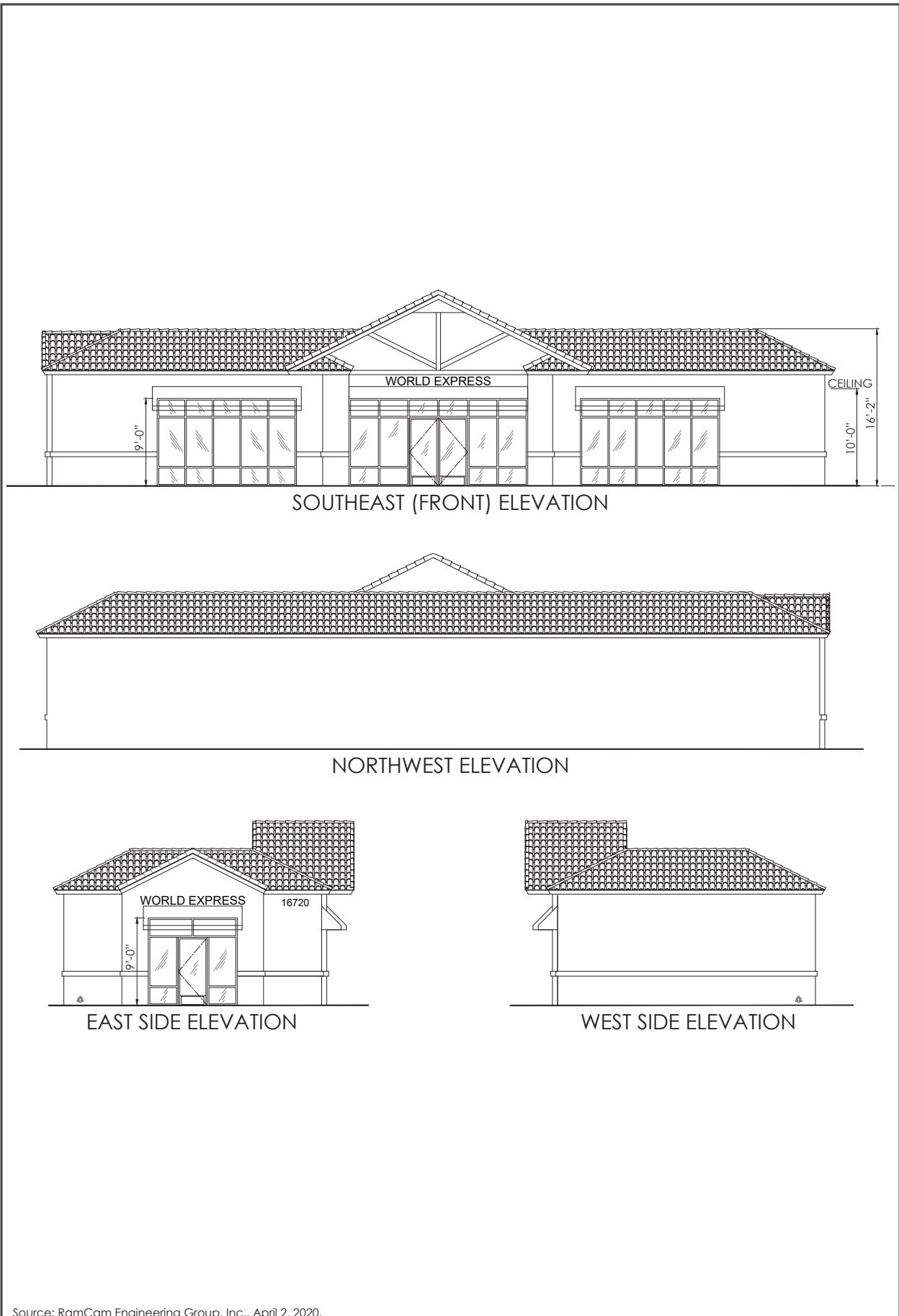
The proposed project would contain approximately 4,615 square feet of landscape area, including 3,840 square feet of shrub area and 775 square feet of mulch area. The project proposes to plant trees and shrubs along sidewalks and around the project perimeter.

3.2.6 Retail Building and Fuel Canopy Elevations

The proposed one-story retail building would reach a maximum height of approximately 17 feet. The proposed fuel canopy would reach a maximum height of 21.5 feet. The retail building elevations are shown on Figure 3.2-5 and fuel canopy elevations are shown on Figure 3.2-6.

3.2.7 General Plan and Zoning

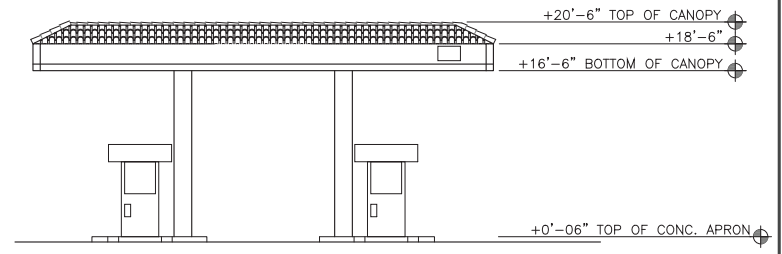
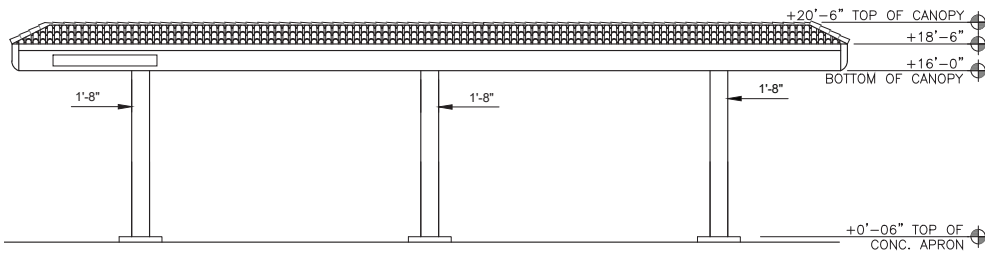
The project site is zoned Mixed-Use Flex (MU-F). The City's zoning code requires a Conditional Use Permit be obtained for fuel and service station uses and an Administrative Use Permit for convenience markets. The proposed project would be considered a fuel station, with a retail/convenience market and, thus would require a Conditional Use Permit. The project would be consistent with the General Plan designation of Mixed-Use Flex, which allows for a mix of residential, commercial, and office uses. The site would retain its existing zoning and General Plan designations.



Source: RamCam Engineering Group, Inc., April 2, 2020.

RETAIL BUILDING ELEVATIONS

FIGURE 3.2-5



Source: RamCam Engineering Group, Inc., April 2, 2020.

FUEL CANOPY ELEVATIONS

FIGURE 3.2-6

SECTION 4.0 ENVIRONMENTAL SETTING, CHECKLIST, AND IMPACT DISCUSSION

This section presents the discussion of impacts related to the following environmental subjects in their respective subsections:

4.1	Aesthetics	4.12	Mineral Resources
4.2	Agriculture and Forestry Resources	4.13	Noise
4.3	Air Quality	4.14	Population and Housing
4.4	Biological Resources	4.15	Public Services
4.5	Cultural Resources	4.16	Recreation
4.6	Energy	4.17	Transportation
4.7	Geology and Soils	4.18	Tribal Cultural Resources
4.8	Greenhouse Gas Emissions	4.19	Utilities and Service Systems
4.9	Hazards and Hazardous Materials	4.20	Wildfire
4.10	Hydrology and Water Quality	4.21	Mandatory Findings of Significance
4.11	Land Use and Planning		

The discussion for each environmental subject includes the following subsections:

- **Environmental Setting** – This subsection 1) provides a brief overview of relevant plans, policies, and regulations that compose the regulatory framework for the project and 2) describes the existing, physical environmental conditions at the project site and in the surrounding area, as relevant.
- **Impact Discussion** – This subsection 1) includes the recommended checklist questions from Appendix G of the CEQA Guidelines to assess impacts and 2) discusses the project’s impact on the environmental subject as related to the checklist questions. For significant impacts, feasible mitigation measures are identified. “Mitigation measures” are measures that will minimize, avoid, or eliminate a significant impact (CEQA Guidelines Section 15370). Each impact is numbered to correspond to the checklist question being answered. For example, Impact BIO-1 answers the first checklist question in the Biological Resources section. Mitigation measures are also numbered to correspond to the impact they address. For example, MM BIO-1.3 refers to the third mitigation measure for the first impact in the Biological Resources section.

4.1 AESTHETICS

4.1.1 Environmental Setting

4.1.1.1 *Regulatory Framework*

State

Streets and Highway Code Sections 260 through 263

The California Scenic Highway Program (Streets and Highway Code, Sections 260 through 263) is managed by the California Department of Transportation (Caltrans). The program is intended to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment.

Local

Morgan Hill 2035 General Plan

The Morgan Hill 2035 General Plan includes goals, policies, and actions to avoid significant impacts due to aesthetic and visual impacts. The following is a list of some policies that are applicable to the proposed project.

Morgan Hill 2035 General Plan Policies: Aesthetics

Policy	Description
CNF-8.1	High Quality Design. Require all development to feature high quality design that enhances the visual character of Morgan Hill.
CNF-8.2	Design Features. Encourage design features and amenities in new development and redevelopment, including but not limited to: • Highly connected street layouts, supporting multiple paths of travel for all modes. • Cluster buildings to create useable open space. • Abundant landscaping. • Attractive transitions between uses. • Comfortable pedestrian facilities that promote a high level of pedestrian activity. • Distinctiveness and variety in architectural design.
CNF-8.3	Changes in Building Scale. Discourage abrupt changes in building scale. A gradual transition between low-rise to mid-rise buildings should be achieved by using the low-rise buildings at the edge of the project site. Consider the relationship of buildings to the street, to one another and to adjacent structures and land uses.
CNF-8.7	Design Sensitivity. Ensure that new development is sensitive to the character of adjacent structures and the immediate neighborhood.
NRE-2.1	Hillside and Ridgeline Views. Protect views of hillsides, ridgelines, and prominent natural features surrounding the City. These features help define the City's historical rural character, sense of place, image, and identity.

4.1.1.2 *Existing Conditions*

Visual Character and Quality

The project site is partially developed with paved surfaces, an existing gas station with fuel canopy, and retail/convenience store. The one-story retail building is primarily made of concrete with exterior walls painted white with blue accents and stone trimming along the bottom (refer to Photo 1). The fuel canopy and retail building are designed with Mansard roofs. Signage for the business is blue and white with a logo. The undeveloped area is located on the eastern portion of the site, covered by grass, and surrounded by chain-linked and wooden fences and a concrete wall.

The surrounding area consists of one- to two-story commercial/retail uses and residences. The retail and restaurant uses located to the north and west (across Monterey Road) of the project site are one-story buildings primarily made of concrete and wood and have flat, gable, and Mansard roofs. The properties include paved surface parking lots with minimal landscaping.

The vacant parcel to the south of San Pedro Avenue consists of patches of grass, gravel, several trees, and is surrounded by a chain-linked fence. Building permits have been issued for the development of a three- story Senior Housing project. East of the project site are two-story residences made of stucco and stone. The residences have gable and hip roofs and have two car garages with concrete driveways. The residences include well-maintained landscaping along the front yards.

Scenic Vistas

A scenic vista is the view of an area that is visually or aesthetically pleasing. Aesthetic components of a scenic vista include scenic quality, sensitivity level, and view access. A scenic vista is a view of natural environmental, historic, and/or architectural features possessing visual and aesthetic qualities of value to the community. There are no scenic corridors, highways, or vistas in Morgan Hill that are designated by the state or the City. However, the General Plan EIR recognizes that undeveloped hillsides visible from the valley floor are scenic characteristics of the area, and that views of prominent hillsides should be preserved. The General Plan EIR identified El Toro Mountain as one of the most prominent visual landmarks in the City. El Toro Mountain is located to the west and is visible from the project area. Views of the Diablo Range to the east and Santa Cruz Mountains to the southwest are partially visible from the project area. Existing development and landscaping block views from the valley floor of these scenic areas.

Scenic Highways and Roadways

In Santa Clara County, the one state-designated scenic highway is SR 9 from the Santa Cruz County line to the Los Gatos City Limit. Eligible State Scenic Highways (not officially designated) include SR 17 from the Santa Cruz County line to SR 9, SR 35 from Santa Cruz County line to SR 9, Interstate 280 from the San Mateo County line to SR 17, and the entire length of SR 152 within the County.



Photo 1: View of the project site from Monterey Road, facing east.



Photo 2: View of the vacant parcel located directly east of the project site.

PHOTOS 1 & 2



Photo 3: View of the residences located east of the project site.



Photo 4: View of the commercial uses located west of the project site.

PHOTOS 3 & 4

There are no state-designated scenic highways in Morgan Hill.¹ The nearest state-designated highway is SR 9, approximately 20 miles northwest of the site.²

4.1.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
1) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
2) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
3) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? ³ If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
4) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐
Impact AES-1: The project would not have a substantial adverse effect on a scenic vista. (Less than Significant Impact)				

As noted in Section 4.1.1.2 Existing Conditions, there are no designated scenic vistas in the City of Morgan Hill. However, views of El Toro Mountain (a prominent visual landmark) and hillsides are visible from the project site. The Mixed-Use Flex zoning designation allows for development up to 35-feet in height or up to 45-feet with a minimum of 10-feet devoted to a roof element. The maximum height of the proposed retail/convenience store and canopy would be 20 feet above the ground surface, which is similar to the heights of the existing gas station structures. The proposed project would not substantially alter existing views from the project site because redevelopment of the site would result in similar conditions to the existing development. Therefore, the proposed project would not have a substantial adverse effect on a scenic vista. **(Less than Significant Impact)**

¹ California Department of Transportation. "California State Scenic Highways". Accessed May 11, 2022. <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>.

² Ibid.

³ Public views are those that are experienced from publicly accessible vantage points.

Impact AES-2:	The project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. (No Impact)
----------------------	--

There are no officially designated state scenic highways in Morgan Hill, and no portions of the site are within the viewshed of a state scenic highway. Therefore, the proposed project would not damage scenic resources within a state scenic highway. **(No Impact)**

Impact AES-3:	The project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Less than Significant Impact)
----------------------	--

The proposed project would include a one-story, 2,115 square foot, retail/convenience store and 20-foot canopy which would replace the existing 880 square foot retail/convenience store and canopy. The proposed retail building would consist of stucco and glass doors and windows with aluminum trim. The proposed roof would be gable-style and consist of tile. The proposed canopy would mostly consist of aluminum and vinyl. Landscaping, including trees and shrubs, would be planted along the borders of the site.

The visual character of the proposed gas station and retail/convenience store would have a modern architectural style compared to the existing gas station. The proposed development would be similar in scale and consist of similar materials as the existing commercial uses within the vicinity of the project. The project would not constitute a significant adverse change to the aesthetic environment. All development on the site would be subject to review and approval by the City of Morgan Hill through the Design Permit process to ensure the development meets local design and aesthetic standards. Architecture and landscape plans will be reviewed during the Design Permit process to ensure compatibility with the surrounding built environment. **(Less Than Significant Impact)**

Impact AES-4:	The project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. (Less than Significant Impact)
----------------------	--

The proposed project would replace an existing gas station that has four pump stations (eight gas dispensers) and an 880 square foot retail/convenience store with six-pump station (12 gas dispensers) and a 2,115 square foot retail/convenience store. The proposed project would have a larger retail/convenience store compared to the existing development and would incrementally increase light and glare in the project area because of reflective surfaces and outdoor lighting on the site. However, building design, glazing materials, and outdoor lighting would be subject to review by the City of Morgan Hill through the Design Permit process for conformance with City standards, which include requirements for cut-off shields to avoid spillover onto adjacent properties, and downward-directed lighting to avoid light/glare impacts. For these reasons, the

proposed project would not result in a new source of substantial light or glare that would affect day or nighttime views in the area. **(Less than Significant Impact)**

4.2 AGRICULTURE AND FORESTRY RESOURCES

4.2.1 Environmental Setting

4.2.1.1 *Regulatory Framework*

State

Farmland Mapping and Monitoring Program

The California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) assesses the location, quality, and quantity of agricultural land and conversion of these lands over time. Agricultural land is rated according to soil quality and irrigation status. The best quality land is identified as Prime Farmland. In CEQA analyses, the FMMP classifications and published county maps are used, in part, to identify whether agricultural resources that could be affected are present on-site or in the project area.⁴

The California Land Evaluation and Site Assessment (LESA) is a point-based approach for rating the relative importance of agricultural land resources based upon specific measurable features. The LESA Model was developed to provide lead agencies with an optional methodology to ensure that potentially significant impacts on the environment as a result of agricultural land conversions are quantitatively and consistently considered in the environmental review process (Public Resources Code Section 21095).⁵

California Land Conservation Act

The California Land Conservation Act (Williamson Act) enables local governments to enter into contracts with private landowners to restrict parcels of land to agricultural or related open space uses. In return, landowners receive lower property tax assessments. In CEQA analyses, identification of properties that are under a Williamson Act contract is used to also identify sites that may contain agricultural resources or are zoned for agricultural uses.⁶

Fire and Resource Assessment Program

The California Department of Forestry and Fire Protection (CAL FIRE) identifies forest land, timberland, and lands zoned for timberland production that can (or do) support forestry resources.⁷ Programs such as CAL FIRE's Fire and Resource Assessment Program and are used to identify

⁴ California Department of Conservation. "Farmland Mapping and Monitoring Program." Accessed August 8, 2022. <http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx>.

⁵ California Department of Conservation. "Land Evaluation & Site Assessment Model." Accessed August 8, 2022. http://www.conservation.ca.gov/dlrp/Pages/qh_les.aspx.

⁶ California Department of Conservation. "Williamson Act." <http://www.conservation.ca.gov/dlrp/lca>.

⁷ Forest Land is land that can support 10 percent native tree cover and allows for management of forest resources (California Public Resources Code Section 12220(g)); Timberland is land not owned by the federal government or designated as experimental forest land that is available for, and capable of, growing trees to produce lumber and other products, including Christmas trees (California Public Resources Code Section 4526); and Timberland Production is land used for growing and harvesting timber and compatible uses (Government Code Section 51104(g)).

whether forest land, timberland, or timberland production areas that could be affected are located on or adjacent to a project site.⁸

4.2.1.2 *Existing Conditions*

The project site is located within an existing urban-suburban area and is in a Mixed-Use Flex zoning district, which accommodates a mixture of residential and commercial uses along Monterey Road. The site currently operates as a gas station with retail/convenience store. The project site is defined as Urban and Built-Up Land under the FMMP.⁹ The site is not designated as farmland of any type and is not the subject of a Williamson Act contract. No properties adjacent to the site are used or zoned for agriculture, nor are any designated as forest land.

4.2.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
2) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
3) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
4) Result in a loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
5) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

⁸ California Department of Forestry and Fire Protection. "Fire and Resource Assessment Program." Accessed June 15, 2021. <http://frap.fire.ca.gov/>.

⁹ California Department of Conservation. "Farmland Mapping and Monitoring Program." Accessed June 15, 2021. <http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx>.

Impact AG-1:	The project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. (No Impact)
---------------------	---

As discussed in Section 4.2.1.2 Existing Conditions, the project site is designated by the California Department of Conservation as Urban and Built-Up Land. The project site and surrounding properties are not used, zoned, or designated for agricultural purposes. Therefore, implementation of the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. **(No Impact)**

Impact AG-2:	The project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. (No Impact)
---------------------	--

As discussed in Section 4.2.1.2 Existing Conditions, the project site is not used or zoned for agricultural uses, nor is it the subject of a Williamson Act contract. Therefore, implementation of the proposed project would not conflict with agricultural zoning or a Williamson Act contract. **(No Impact)**

Impact AG-3:	The project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. (No Impact)
---------------------	---

As discussed in Section 4.2.1.2 Existing Conditions, the project site is not used or zoned for forestry or timberland purposes. Therefore, the proposed project would not conflict with zoning or cause rezoning of forest land or timberland. **(No Impact)**

Impact AG-4:	The project would not result in a loss of forest land or conversion of forest land to non-forest use. (No Impact)
---------------------	--

As discussed in Section 4.2.1.2 Existing Conditions, the project site does not contain farmland or forest land and is not located within the vicinity of farmland or forest land. Implementation of the proposed project would not result in the conversion of farmland to non-agricultural use, or forest land to non-forest use. **(No Impact)**

Impact AG-5:	The project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use. (No Impact)
---------------------	--

The project proposes to redevelop an existing gas station and retail/convenience store to include additional gas pumps, increase the size of the store, construct a new fuel canopy, and implement a new UST system. Surrounding properties are not zoned or used for agricultural or forest uses and would not be affected by the proposed project. Therefore, the project would not involve changes

that could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. **(No Impact)**

4.3 AIR QUALITY

The following discussion is based, in part, on an Air Quality Analysis completed by Illingworth & Rodkin, Inc. on August 18, 2021. The report is attached as Appendix A.

4.3.1 Environmental Setting

4.3.1.1 Background Information

Criteria Pollutants

Air quality in the Bay Area is assessed related to six common air pollutants (referred to as criteria pollutants), including ground-level ozone (O₃), nitrogen oxides (NO_x), particulate matter (PM), carbon monoxide (CO), sulfur oxides (SO_x), and lead.¹⁰ Criteria pollutants are regulated because they result in health effects. An overview of the sources of criteria pollutants and their associated health are summarized in Table 4.3-1. The most commonly regulated criteria pollutants in the Bay Area are discussed further below.

Table 4.3-1: Health Effects of Air Pollutants		
Pollutants	Sources	Primary Effects
Ozone (O ₃)	Atmospheric reaction of organic gases with nitrogen oxides in sunlight	• Aggravation of respiratory and cardiovascular diseases • Irritation of eyes • Cardiopulmonary function impairment
Nitrogen Dioxide (NO ₂)	Motor vehicle exhaust, high temperature stationary combustion, atmospheric reactions	• Aggravation of respiratory illness • Reduced visibility
Fine Particulate Matter (PM _{2.5}) and Coarse Particulate Matter (PM ₁₀)	Stationary combustion of solid fuels, construction activities, industrial processes, atmospheric chemical reactions	• Reduced lung function, especially in children • Aggravation of respiratory and cardiorespiratory diseases • Increased cough and chest discomfort • Reduced visibility
Toxic Air Contaminants (TACs)	Cars and trucks, especially diesel-fueled; industrial sources, such as chrome platers; dry cleaners and service stations; building materials and products	• Cancer • Chronic eye, lung, or skin irritation • Neurological and reproductive disorders

High O₃ levels are caused by the cumulative emissions of reactive organic gases (ROG) and NO_x. These precursor pollutants react under certain meteorological conditions to form high O₃ levels.

¹⁰ The area has attained both state and federal ambient air quality standards for CO. The project does not include substantial new emissions of sulfur dioxide or lead. These criteria pollutants are not discussed further.

Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce O₃ levels. The highest O₃ levels in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources.

PM is a problematic air pollutant of the Bay Area. PM is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM₁₀) and fine particulate matter where particles have a diameter of 2.5 micrometers or less (PM_{2.5}). Elevated concentrations of PM₁₀ and PM_{2.5} are the result of both region-wide emissions and localized emissions.

Toxic Air Contaminants

TACs are a broad class of compounds known to have health effects. They include but are not limited to criteria pollutants. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, diesel fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway).

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs. Diesel exhaust is a complex mixture of gases, vapors, and fine particles. Medium- and heavy-duty diesel trucks represent the bulk of DPM emissions from California highways. The majority of DPM is small enough to be inhaled into the lungs. Most inhaled particles are subsequently exhaled, but some deposit on the lung surface or are deposited in the deepest regions of the lungs (most susceptible to injury).¹¹ Chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the California Air Resources Board (CARB).

Sensitive Receptors

Some groups of people are more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools.

¹¹ California Air Resources Board. "Overview: Diesel Exhaust and Health." Accessed February 18, 2021. <https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health>.

4.3.1.2 *Regulatory Framework*

Federal and State

Clean Air Act

At the federal level, the United States Environmental Protection Agency (EPA) is responsible for overseeing implementation of the Clean Air Act and its subsequent amendments. The federal Clean Air Act requires the EPA to set national ambient air quality standards for the six common criteria pollutants (discussed previously), including PM, O₃, CO, SO_x, NO_x, and lead.

California Air Resources Board

CARB is the state agency that regulates mobile sources throughout the state and oversees implementation of the state air quality laws and regulations, including the California Clean Air Act. The EPA and the CARB have adopted ambient air quality standards establishing permissible levels of these pollutants to protect public health and the climate. Violations of ambient air quality standards are based on air pollutant monitoring data and are determined for each air pollutant. Attainment status for a pollutant means that a given air district meets the standard set by the EPA and/or CARB.

Risk Reduction Plan

To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, the plan involves application of emission control strategies to existing diesel vehicles and equipment to reduce DPM (in addition to other pollutants). Implementation of this plan, in conjunction with stringent federal and CARB-adopted emission limits for diesel fueled vehicles and equipment (including off-road equipment), will significantly reduce emissions of DPM and NO_x.

Regional

2017 Clean Air Plan

The Bay Area Air Quality Management District (BAAQMD) is the agency primarily responsible for assuring that the federal and state ambient air quality standards are maintained in the San Francisco Bay Area. Regional air quality management districts, such as BAAQMD, must prepare air quality plans specifying how state and federal air quality standards will be met. BAAQMD's most recently adopted plan is the Bay Area 2017 Clean Air Plan (2017 CAP). The 2017 CAP focuses on two related BAAQMD goals: protecting public health and protecting the climate. To protect public health, the 2017 CAP describes how BAAQMD will continue its progress toward attaining state and federal air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities. To protect the climate, the 2017 CAP includes control measures designed to reduce emissions of methane and other super-greenhouse gases (GHGs) that are

potent climate pollutants in the near-term, and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.¹²

CEQA Air Quality Guidelines

The BAAQMD CEQA Air Quality Guidelines are intended to serve as a guide for those who prepare or evaluate air quality impact analyses for projects and plans in the San Francisco Bay Area. Jurisdictions in the San Francisco Bay Area Air Basin utilize the thresholds and methodology for assessing air quality impacts developed by BAAQMD within their CEQA Air Quality Guidelines. The guidelines include information on legal requirements, BAAQMD rules, methods of analyzing impacts, and recommended mitigation measures.

Local

Morgan Hill 2035 General Plan

The Morgan Hill 2035 General Plan includes goals, policies, and actions to avoid significant impacts to air quality. The following policies are applicable to the proposed project.

Morgan Hill 2035 General Plan Policies: Air Quality

Policy	Description
NRE-10.2	State and Federal Regulation. Encourage effective regulation of mobile and stationary sources of air pollution and support state and federal regulations to improve automobile emissions controls.
NRE-10.3	Automobile Emissions. Encourage the use of and infrastructure for alternative fuel, hybrid, and electric vehicles. Encourage new and existing public and private development to include electric vehicle charging stations.
NRE-11.1	TACs and Proposed Sensitive Uses. Require modeling for sensitive land uses, such as residential development, proposed near sources of pollution such as freeways and industrial uses. Require new residential development and projects categorized as sensitive receptors to incorporate effective mitigation measures into project designs or be located adequate distances from sources of toxic air contaminants (TACs) to avoid significant risk to health and safety.
BRE-11.3	Health Risks Assessments. For proposed development that emits toxic air contaminants, require project proponents to prepare health risk assessments in accordance with Bay Area Air Quality Management District procedures as part of environmental review and implement effective mitigation measures to reduce potential health risks to less-than-significant levels. Alternatively, require these projects to be located an adequate distance from residences and other sensitive receptors to avoid health risks. Consult with the Bay Area Air Quality Management District to identify stationary and mobile toxic air contaminant sources and determine the need for and requirements of a health risk assessment for proposed developments.

¹² BAAQMD. *Final 2017 Clean Air Plan*. April 19, 2017. <http://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans>.

Morgan Hill 2035 General Plan Policies: Air Quality

Policy	Description
NRE-11.6	Vegetation Buffers. Encourage the use of pollution-absorbing trees and vegetation in buffer areas between substantial sources of toxic air contaminants and sensitive receptors.
NRE-12.1	Best Practices. Require that development projects implement best management practices to reduce air quality emissions associated with construction and operation of the project.
NRE-12.2	Conditions of Approvals. Include dust, particulate matter, and construction equipment exhaust control measures as conditions of approval for subdivision maps, site development and planned development permits, grading permits, and demolition permits. At a minimum, conditions shall conform to construction mitigation measures recommended in the current Bay Area Air Quality Management District CEQA Guidelines.
NRE-12.3	Control Measures. Require construction and demolition projects that have the potential to disturb asbestos (from soil or building materials) to comply with all the requirements of the California Air Resources Board's air toxics control measures (ATCMs) for Construction, Grading, Quarrying, and Surface Mining Operations.
NRE-13.1	Building Materials. Promote the use of building materials that maintain healthful indoor air quality in an effort to reduce irritation and exposure to toxins and allergens for building occupants.
NRE-15.10	Green Building. Promote green building practices in new development.
NRE-16.7	Renewable Energy. Encourage new and existing development to incorporate renewable energy generating features, like solar panels and solar hot water heaters.

Morgan Hill Climate Action Plan

On December 15, 2021, the City Council adopted a Climate Action Plan that focuses on the adoption of electric vehicles in the Community and the process of decarbonizing existing buildings by reducing the use of fossil fuels. The Climate Action Plan goal is to transition 95 percent of existing buildings in Morgan Hill to all-electric by 2045 and to prohibit new gas stations. The project as proposed is a remodel and minor expansion of an existing gas station and does not qualify as a new gas station.

4.3.1.3 Existing Conditions

The Bay Area is considered a non-attainment area for ground-level O₃ and PM_{2.5} under both the federal Clean Air Act and state Clean Air Act. The area is also considered nonattainment for PM₁₀ under the state act, but not the federal act. The area has attained both state and federal ambient air quality standards for CO. As part of an effort to attain and maintain ambient air quality standards for O₃ and PM₁₀, BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for O₃ precursor pollutants (ROG and NO_x), PM₁₀, and PM_{2.5}, and apply to both construction period and operational period impacts.

Sensitive Receptors

The closest sensitive receptors to the project site are the residences adjacent to and approximately 40 feet east of the site. In addition, an 83-unit 100 percent affordable housing project is being developed (building permits issued) directly across from the project, along San Pedro Avenue.

Odors

Significant sources of offending odors are typically identified based on complaint histories received and compiled by BAAQMD. Common sources of odors and odor complaints include wastewater treatment plants, landfills including composting operations, transfer stations, painting/coating operations, food processing facilities, and chemical plants. Other sources, such as restaurants, paint or body shops, and coffee roasters typically result in localized sources of odors. There are no substantial sources of odor on the project site or in the vicinity of the project site.

4.3.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
2) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
3) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
4) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Note: Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the determinations.

4.3.2.1 Bay Area Air Quality Management

As discussed in CEQA Guidelines Section 15064(b), the determination of whether a project may have a significant effect on the environment calls for judgment on the part of the lead agency and must be based to the extent possible on scientific and factual data. The City of Morgan Hill has considered the air quality thresholds updated by BAAQMD in May 2017 and regards these thresholds to be based on the best information available for the San Francisco Bay Area Air Basin and conservative in terms of the assessment of health effects associated with TACs and PM_{2.5}. The BAAQMD CEQA Air Quality thresholds used in this analysis are identified in Table 4.3-2.

Table 4.3-2: BAAQMD Air Quality Significance Thresholds			
Pollutant	Construction Thresholds	Operation Thresholds	
	Average Daily Emissions (pounds/day)	Average Daily Emissions (pounds/day)	Annual Average Emissions (tons/year)
Criteria Air Pollutants			
ROG, NO _x	54	54	10
PM ₁₀	82 (exhaust)	82	15
PM _{2.5}	54 (exhaust)	54	10
CO	Not Applicable	9.0 ppm (eight-hour) or 20.0 ppm (one-hour)	
Fugitive Dust	Dust Control Measures/Best Management Practices	Not Applicable	
Health Risks and Hazards for New Sources (within a 1,000-foot Zone of Influence)			
Health Hazard	Single Source	Combined Cumulative Sources	
Excess Cancer Risk	10 per one million	100 per one million	
Hazard Index	1.0	10.0	
Incremental Annual PM _{2.5}	0.3 µg/m³	0.8 µg/m³ (average)	
Notes: ppm = parts per million. µg/m³ = micrograms per cubic meter.			

Friant Ranch Case

In a 2018 decision (*Sierra Club v. County of Fresno*), the Supreme Court of California determined that CEQA requires that the potential for the project's emissions to affect human health in the air basin must be disclosed when a project's criteria air pollutant emissions would exceed applicable thresholds and contribute considerably to a significant cumulative impact. State and federal ambient air quality standards are health-based standards and exceedances of those standards result in continued unhealthy levels of air pollutants. As stated in the BAAQMD CEQA Air Quality Guidelines, air pollution by its nature is largely a cumulative impact. No single project is sufficient in size to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project has a less than significant impact for criteria air pollutants, it is assumed not to have an adverse health effect with respect to those pollutants.

Impact AIR-1:	The project would not conflict with or obstruct implementation of the applicable air quality plan. (Less than Significant Impact)
----------------------	--

The BAAQMD CEQA Air Quality Guidelines set forth criteria for determining consistency with the 2017 CAP (see Table 4.3-2). In general, a project is considered consistent if it: a) supports the primary goals of the 2017 CAP; b) includes relevant control measures; and c) does not interfere with implementation of 2017 CAP control measures. The 2017 CAP includes control measures that are intended to reduce air pollutant emissions in the Bay Area. The proposed project would not conflict with the 2017 CAP because, as discussed below, the proposed project's emissions would be below the BAAQMD construction and operational criteria pollutant thresholds.

Regional Criteria Pollutants

As discussed previously in Section 4.3.1 Environmental Setting, the Bay Area is considered a non-attainment area for ground-level O₃ and PM_{2.5} under both the federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for PM₁₀ under the California Clean Air Act. As part of an effort to attain and maintain ambient air quality standards for O₃ and PM₁₀, BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for O₃ precursor pollutants (ROG and NO_x), PM₁₀, and PM_{2.5} and apply to both construction period and operational period impacts.

Construction-Related Criteria Pollutant Emissions

The California Emissions Estimator Model (CalEEMod) was used to estimate emissions from construction activities. As shown in Table 4.3-3 below, construction emissions would not exceed BAAQMD significance thresholds.

Table 4.3-3: Summary of Project Construction Emissions				
Year	ROG	NO _x	PM ₁₀ Exhaust	PM _{2.5} Exhaust
<i>Construction Emissions Per Year (tons)</i>				
2022	0.03	0.14	0.01	0.01
<i>Annualized Daily Construction Emissions (pounds per day)</i>				
2022 (165 construction workdays)	0.35	1.74	0.09	0.07
<i>BAAQMD Thresholds (pounds per day)</i>	54	54	82	54
Exceed Threshold?	No	No	No	No
Source: Illingworth & Rodkin, Inc. <i>World Oil Gas Station Air Quality Report</i> . August 18, 2021. Page 13.				

In addition, consistent with standard City practices, the project would be required to implement the following standard condition to control dust and exhaust at the project site.

Standard Condition: The following measures shall be implemented during all phases of construction to control dust and exhaust at the project site:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Replant vegetation in disturbed areas as soon as possible after completion of construction.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of the California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action

within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

With implementation of the standard conditions described above, the project's construction criteria pollutant emissions would be well below the BAAQMD single-source threshold of 54 pounds per day. **(Less than Significant Impact)**

Operational Period Emissions

Operational air emissions from the proposed project would be generated primarily from vehicles driven by future project users, as well as evaporative emissions (i.e., ROG) from architectural coatings and maintenance products (classified as consumer products). CalEEMod was used to estimate emissions from operation of the proposed project.

Additionally, the project would include a six-pump gasoline station with 12 fuel dispenser positions. As shown in Table 4.3-3 below, the air quality analysis includes a credit for the existing four-pump island and calculates the net emissions. The maximum throughput for the proposed gas station would be two million gallons per year.¹³ CalEEMod does not compute evaporative ROG emissions from gasoline dispensing facilities (GDF); therefore, these emissions were computed based on projected annual throughput of gasoline using emission factors developed by CARB. Computations are provided in Appendix A).

Table 4.3-3 below shows the computed average daily emissions of ROG, NO_x, PM₁₀, and PM_{2.5} during operation of the project, with the existing gas station emissions netted out as the environmental baseline.

Table 4.3-4: Summary of Operational Period Emissions				
Scenario	ROG	NO_x	PM₁₀	PM_{2.5}
2023 Project Operational Emissions (tons per year)				
Emissions from CalEEMod	0.67	0.68	0.99	0.25
GDF Evaporative Emissions	0.52	--	--	--
Project Total	1.19	0.68	0.99	0.25
2023 Existing Operational Emissions (tons per year)				
Emissions from CalEEMod	0.49	0.50	0.73	0.18
GDF Evaporative Emissions	0.33	--	--	--
Existing Total	0.82	0.50	0.73	0.18
Net Annual Emissions Total	0.37	0.18	0.26	0.07
<i>BAAQMD Thresholds</i>	<i>10</i>	<i>10</i>	<i>15</i>	<i>10</i>

¹³ Hundley, John. Vice President, World Oil Corp. Personal Communication. June 17, 2021.

Table 4.3-4: Summary of Operational Period Emissions				
Scenario	ROG	NO _x	PM ₁₀	PM _{2.5}
<i>Exceed Threshold?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
2023 Project Operational Emissions (pounds per day)				
Total Emissions	2.01	0.98	1.44	0.41
<i>BAAQMD Thresholds</i>	<i>54</i>	<i>54</i>	<i>82</i>	<i>54</i>
<i>Exceed Threshold?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
Source: Illingworth & Rodkin, Inc. <i>World Oil Gas Station Air Quality Report</i> . August 18, 2021. Page 17.				

As shown in Table 4.3-3 above, the operational period emissions would not exceed the BAAQMD significance thresholds. Since the project's construction and operational would be below the BAAQMD significance thresholds, the project would be consistent with the 2017 CAP. **(Less than Significant Impact)**

Impact AIR-2: The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. **(Less than Significant Impact)**

As discussed under Impact AIR-1, construction and operational criteria pollutant emissions associated with the project would not exceed the BAAQMD significance thresholds. Since the project would have a less than significant criteria pollutant impact, the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the region is in non-attainment. **(Less than Significant Impact)**

Impact AIR-3: The project would not expose sensitive receptors to substantial pollutant concentrations. **(Less than Significant Impact)**

Project impacts related to increased community health risk can occur either by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity or by significantly exacerbating existing cumulative TAC impacts. The project would introduce new sources of TACs during construction (i.e., on-site construction and truck hauling emissions) and operation (i.e., mobile sources).

Community Health Risks from Project Construction

Construction of the proposed project would generate dust and equipment exhaust that could affect nearby sensitive receptors. Construction equipment and associated heavy-duty truck traffic generate diesel exhaust, which is a known TAC. Construction exhaust emissions would not be considered to contribute substantially to air quality violations; however, these exhaust emissions could pose health risks for sensitive receptors. The primary community risk impact issues associated with construction emissions are cancer risk and exposure to PM_{2.5}. Diesel exhaust poses both a

potential health and nuisance impact to nearby receptors. A health risk assessment of the project construction activities was conducted that evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and PM_{2.5}.

The health risk assessment evaluated potential health effects to nearby receptors (within 1,000 feet of the project site) from construction emissions of DPM and PM_{2.5}. Receptors include locations where sensitive populations would be present for extended periods of time including all existing childcare facilities and residences surrounding the project site. The maximum modeled DPM and PM_{2.5} concentrations were identified at nearby sensitive receptors to find the maximally exposed individuals (MEI). Results of the construction MEIs were located in two places: the cancer risk MEI was located at a residence on the first floor to the north of the project site, and the PM_{2.5} concentration MEI was located at the adjacent residence on the first floor to the east of the project site (refer to Figure 4.3-1). The estimated cancer risks and annual PM_{2.5} concentrations are summarized in Table 4.3-4.

Community Health Risks from Project Operation

Operation of the proposed project would have long-term emissions from mobile sources (i.e., traffic). Per BAAQMD recommended risks and methodology, a road with less than 10,000 total vehicles per day is considered a low-impact source of TACs. The proposed project would generate 286 net daily trips, which is less than three percent of the 10,000 vehicle per day BAAQMD threshold. Therefore, emissions from project traffic are considered negligible, and were not included in the air quality analysis.

Community Health Risks from Project Construction and Operation

The sensitive receptors identified as the construction MEIs are also the project's operational MEIs. The cancer risks from construction and operation were summed together. The estimated cancer risks and annual PM_{2.5} concentrations are summarized in Table 4.3-5.

Table 4.3-5: Construction and Operation Risk Impacts at the Off-Site Receptors				
Source		Cancer Risk¹ (per million)	Annual PM_{2.5} (µg/m₃)^{1,2}	Hazard Index
Project Construction	Unmitigated	4.60 (infant)	0.07	0.01
Operational Gas Station ³	Unmitigated	1.74	--	0.01
Unmitigated Total/Maximum Project Risks		6.34 (infant)	0.07	0.01
<i>BAAQMD Single-Source Threshold</i>		>10.0	>0.3	>1.0
<i>Exceed Threshold?</i>		No	No	No
¹ Maximum cancer risk and maximum PM _{2.5} concentration occur at different locations. ² µg/m ₃ = microgram per cubic meter. ³ Based on 2 million gallons per year maximum throughput. Source: Illingworth & Rodkin, Inc. <i>World Oil Gas Station Air Quality Report</i> . August 18, 2021. Page 22.				



LOCATION OF OFF-SITE SENSITIVE RECEPTORS AND MEIS

FIGURE 4.3-1

As shown in Table 4.3-5, construction and operations of the project would result in a cancer risk of 6.34 in one million, an annual PM_{2.5} concentration of 0.07 µg/m₃ and a hazard index of 0.01 (which are below the BAAQMD thresholds) at the project's MEI. Therefore, the project's DPM and PM_{2.5} emissions during construction and operations would have a less than significant impact on nearby sensitive receptors. **(Less than Significant Impact)**

Impact AIR-4:	The project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. (Less than Significant Impact)
----------------------	--

BAAQMD has identified a variety of land uses and types of operations that would produce emissions that may lead to odors in their CEQA Air Quality Guidelines. Some of the identified land uses include wastewater treatment plants, sanitary landfills, food processing facilities, coffee roasters, composting facilities, and confined animal facility/feed lot/dairy facility. The proposed project would construct a gas station, which does not fall under any of the land uses BAAQMD has identified.

Consistent with the Morgan Hill Climate Action Plan, the new convenience store will be an all-electric structure which reduces fossil fuels and supports the goal to transition existing buildings to all-electric. The Morgan Hill Climate Action Plan also prohibits new gas stations. However, this is an expansion of an existing gas station, with a minor size increase for the retail portion of the business and the addition of two fuel pumps. Because the project will meet the all-electric goals, is not a new gas station, and meets the regional BAAQMD 2017 CAP, the proposal is consistent with the Morgan Hill CAP.

Future construction activities in the project area could result in odorous emissions from diesel exhaust associated with construction equipment. Because of the temporary nature of these emissions and the highly diffusive properties of diesel exhaust, exposure of sensitive receptors to these emissions would be limited. Odors from vehicles traveling to and from the site during operations would be localized and would not result in substantial odors. Therefore, the project is not expected to generate odors that could cause complaints and affect a substantial number of people. **(Less than Significant Impact)**

4.4 BIOLOGICAL RESOURCES

4.4.1 Environmental Setting

4.4.1.1 *Regulatory Framework*

Federal and State

Endangered Species Act

Individual plant and animal species listed as rare, threatened, or endangered under state and federal Endangered Species Acts are considered special-status species. Federal and state endangered species legislation has provided the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) with a mechanism for conserving and protecting plant and animal species of limited distribution and/or low or declining populations. Permits may be required from both the USFWS and CDFW if activities associated with a proposed project would result in the take of a species listed as threatened or endangered. To “take” a listed species, as defined by the State of California, is “to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill” these species. Take is more broadly defined by the federal Endangered Species Act to include harm of a listed species.

In addition to species listed under state and federal Endangered Species Acts, Sections 15380(b) and (c) of the CEQA Guidelines provide that all potential rare or sensitive species, or habitats capable of supporting rare species, must be considered as part of the environmental review process. These may include plant species listed by the California Native Plant Society and CDFW-listed Species of Special Concern.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) prohibits killing, capture, possession, or trade of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. Hunting and poaching are also prohibited. The taking and killing of birds resulting from an activity is not prohibited by the MBTA when the underlying purpose of that activity is not to take birds.¹⁴ Nesting birds are considered special-status species and are protected by the USFWS. The CDFW also protects migratory and nesting birds under California Fish and Game Code Sections 3503, 3503.5, and 3800. The CDFW defines taking as causing abandonment and/or loss of reproductive efforts through disturbance.

Sensitive Habitat Regulations

Wetland and riparian habitats are considered sensitive habitats under CEQA. They are also afforded protection under applicable federal, state, and local regulations, and are generally subject to regulation by the United States Army Corps of Engineers (USACE), Regional Water Quality Control

¹⁴ United States Department of the Interior. “Memorandum M-37050. The Migratory Bird Treaty Act Does Not Prohibit Incidental Take.” Accessed June 18, 2021. <https://www.doi.gov/sites/doi.gov/files/uploads/m-37050.pdf>.

Board (RWQCB), CDFW, and/or the USFWS under provisions of the federal Clean Water Act (e.g., Sections 303, 304, 404) and State of California Porter-Cologne Water Quality Control Act.

Fish and Game Code Section 1602

Streambeds and banks, as well as associated riparian habitat, are regulated by the CDFW per Section 1602 of the Fish and Game Code. Work within the bed or banks of a stream or the adjacent riparian habitat requires a Streambed Alteration Agreement from the CDFW.

City of Morgan Hill Burrowing Owl Habitat Mitigation Plan

Since 2003, the City of Morgan Hill has implemented a citywide program (Burrowing Owl Habitat Mitigation Plan) to evaluate and mitigate impacts to burrowing owls and potential burrowing owl habitat that could result from development activities within the City limits. Under the Burrowing Owl Habitat Mitigation Plan, the City requires pre-construction owl surveys to be completed in areas of potentially suitable habitat (generally any grassland and/or mixed herbaceous vegetation below 600 feet above mean sea level) within 30 days of the on-set of construction.

Morgan Hill 2035 General Plan

The Morgan Hill 2035 General Plan includes goals, policies, and actions to avoid significant impacts due to loss of biological resources. The following goal and policies are applicable to the proposed project:

Morgan Hill 2035 General Plan Policies: Biological Resources

Policy	Description
NRE-6.2	Habitat Conservation Plan. Support the implementation of the Santa Clara Valley Habitat Plan to protect wildlife, rare and endangered plants and animals, and sensitive habitats from loss and destruction.
NRE-6.4	Tree Preservation and Protection. Preserve and protect mature, healthy trees whenever feasible, particularly native trees, historically significant trees, and other trees which are of significant size or of significant aesthetic value to the immediate vicinity or to the community as a whole.

Regional and Local

Santa Clara Valley Habitat Plan/Natural Community Conservation Plan

The Santa Clara Valley Habitat Plan/Natural Community Conservation Plan (Habitat Plan) covers approximately 520,000 acres, or approximately 62 percent of Santa Clara County. It was developed and adopted through a partnership between Santa Clara County, the Cities of San José, Morgan Hill, and Gilroy, Valley Water, Santa Clara Valley Transportation Authority (VTA), USFWS, and CDFW. The Habitat Plan is intended to promote the recovery of endangered species and enhance ecological diversity and function, while accommodating planned growth in southern Santa Clara County. The Santa Clara Valley Habitat Agency is responsible for implementing the plan.

4.4.1.2 Existing Conditions

The project site is located in a developed area of Morgan Hill. The site is mostly developed with paved surfaces, a gas station and retail/convenience store; the eastern portion of the site is undeveloped and covered with grass. The site was previously occupied by residences and outbuildings on the western portion of the site and was used for agricultural purposes on the eastern portion of the site. There are no trees on-site. The site's grassland habitat is common in the project area. Limited locally occurring, common urban-adapted wildlife species may occur on the eastern portion of the project site.

There are no undisturbed areas or sensitive habitats on the site, and the site does not contain any trees, streams, waterways, or wetlands. Because the site is within an urban setting and is surrounded by development, the site provides limited value for wildlife. No rare, threatened, endangered, or special-status species of flora or fauna are known to inhabit the site. The project is covered under the Habitat Plan and is designated as Urban-Suburban land.¹⁵

4.4.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or United States Fish and Wildlife Service (USFWS)?	☐	☒	☐	☐

¹⁵ Santa Clara Valley Habitat Agency. "Habitat Agency Geobrowser." Accessed July 21, 2022.
<http://www.hcpmaps.com/habitat/>

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
2) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS?	☐	☐	☐	☒
3) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
4) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
5) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
6) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐

Impact BIO-1: The project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. **(Less Than Significant Impact with Mitigation Incorporated)**

As discussed in Section 4.4.1.2 Existing Conditions, the project site is mostly developed and occupied by a gas station, retail/convenience store, and surface parking lot. The eastern portion of the site is an undeveloped area covered with grasses. Given the history of disturbance from agricultural uses and grading, and surrounding urban development, no natural sensitive habitats which would support endangered, threatened or special status plant or wildlife species would occur on or adjacent to the site. Based on the information provided in Habitat Plan database, the project site is not located within a burrowing owl survey or fee zone.¹⁶ Therefore, the site is not considered burrowing owl habitat and pre-construction surveys for the owls are not required.

¹⁶ Santa Clara Valley Habitat Agency. Habitat Agency Geobrowser. Accessed August 19, 2022. <http://www.hcpmaps.com/habitat/>.

There are no trees located on the project site. There is one street tree located across the site, along the Monterey Road frontage. At the time of development, raptors and migratory birds could nest at this tree and vegetation on and adjacent to the project site. Migratory birds could potentially nest on the existing on-site structures as well. Construction during the nesting season could destroy nests or disturb occupied nests, resulting in the loss of the reproductive effort.

Mitigation Measures: The following mitigation measures will reduce impacts from construction at the project site nesting raptors and migratory birds to a less than significant level:

MM BIO-1.1: Construction shall be scheduled to avoid the nesting season to the extent feasible. If construction can be scheduled to occur between September 1st and January 31st (inclusive) to avoid the raptor nesting season, no impacts will be expected. If construction will take place between February 1st and August 31st, then pre-construction surveys for nesting birds shall be completed by a qualified ornithologist to ensure that no nests will be disturbed during project implementation. Surveys shall be completed within seven days of the on-set of site clearing or construction activities. During this survey, the ornithologist shall inspect all trees and other potential nesting habitats (e.g., trees, shrubs, buildings) onsite as well as within 250 feet of the site for nests of raptors and 100 feet for nests of non-raptors.

MM BIO-1.2: If an active nest is found sufficiently close to work areas to be disturbed by these activities, the ornithologist shall determine the extent of a disturbance-free buffer zone to be established around the nest (typically 250 feet for raptors and 50-100 feet for other species) that shall remain off limits to construction until the nesting season is over, to ensure that no nests of species protected by the Migratory Bird Treaty Act and California Fish and Wildlife Code will be disturbed during project implementation. A report indicating the result of the survey and any designated buffer zones shall be submitted to the satisfaction of the Development Services Director or Designee prior to issuance of a grading permit.

With the implementation of the above mitigation measures that would reduce impacts to nesting birds/raptors, the project would not result in a substantial adverse impact on sensitive species regulated by the CDFW or USFW. **(Less Than Significant Impact with Mitigation Incorporated)**

Impact BIO-2:	The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS. (No Impact)
----------------------	---

As discussed in Section 4.4.1.2 Existing Conditions, the project site is located within an urban area of the City. There are no riparian habitats located on the project site. There are no sensitive natural communities located on or adjacent to the project site. Therefore, the proposed project would not result in adverse effects to riparian habitat or other sensitive rural communities. **(No Impact)**

Impact BIO-3:	The project would not have a substantial adverse effect on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means. (No Impact)
----------------------	---

As discussed in Section 4.4.1.2 Existing Conditions, the project site does not contain any wetlands. Therefore, implementation of the project would not result in a substantial adverse effect on protected wetlands. **(No Impact)**

Impact BIO-4:	The project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. (No Impacts)
----------------------	---

As discussed in Section 4.4.1.2 Existing Conditions, the project is in an urban area bordered by roads and other developments. The project is not located within a connectivity area. Therefore, the project would not interfere with the movement of fish or wildlife species, nor interfere with established corridors or wildlife nursery sites. **(No Impact)**

Impact BIO-5:	The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (Less than Significant Impact)
----------------------	--

As discussed in Section 4.4.1.2 Existing Conditions, there are no trees located on the project site. The project does not include removal of the street tree adjacent to the site on Monterey Road. For the above reasons, the project would not conflict with any local tree preservation policies or ordinances. **(Less than Significant Impact)**

Impact BIO-6:	The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. (Less than Significant Impact)
----------------------	---

As discussed in Section 4.4.1.2 Existing Conditions, the proposed project site is designated as Urban-Suburban land under the Habitat Plan. Therefore, no land cover fees would be required for the project.

The Habitat Plan also considers covered activities to result in a certain number of indirect impacts from urban development mostly in the form of increased impervious surface and from the effects of nitrogen deposition. Development that increases the intensity of land use results in increased air pollutant emissions from vehicles. Emissions from these sources are known to increase airborne nitrogen, of which a certain amount is converted into forms that can fall to earth as depositional nitrogen. It has been shown that increased nitrogen in serpentine soils can favor the growth of nonnative annual grasses over native serpentine species and these nonnative species, if left

unmanaged, can overtake the native serpentine species, which are host plants for larval Bay Checkerspot butterfly. As such, covered projects within the Habitat Plan area are subject to paying a “Nitrogen Deposition Impact Fee” which is calculated based on the number of daily vehicle trips attributed to the activity and collected prior to the commencement of the use.

In addition, all covered activities in the Habitat Plan are subject to certain conditions (as identified in Chapter 6 of the Plan) based on the project’s location and type of project. To ensure that the project complies with conditions of the Habitat Plan, the conditions would be applied to each component as part of the entitlement approval conditions and/or other permits (i.e., grading permits, building permits, etc.).

The City of Morgan Hill has adopted the Habitat Plan and, as an ordinance¹⁷ implementing the measures and conditions set forth in the Habitat Plan, would levy applicable impact fees and incorporate relevant conditions on covered activities into the project. Therefore, the project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan. **(Less Than Significant Impact)**

¹⁷ Chapter 18.132 of the City of Morgan Hill Municipal Code.

4.5 CULTURAL RESOURCES

The following discussion is based, in part, on a Cultural Resources Assessment Memorandum completed for the project by PaleoWest dated September 30, 2021. A copy of this report is on file with the City of Morgan Hill.

4.5.1 Environmental Setting

4.5.1.1 *Regulatory Framework*

Federal and State

National Historic Preservation Act

Federal protection of cultural resources is legislated by the National Historic Preservation Act of 1966 (NHPA) and the Archaeological Resource Protection Act of 1979. These laws maintain processes for determination of the effects on historical properties eligible for listing in the National Register of Historic Places (NRHP). Section 106 of the NHPA and related regulations (36 Code of Federal Regulations [CFR] Part 800) constitute the primary federal regulatory framework guiding cultural resources investigations and require consideration of effects on properties that are listed or eligible for listing in the NRHP. Impacts to properties listed in the NRHP must be evaluated under CEQA.

The NRHP is the nation's master inventory of historic resources that are considered significant at the national, state, or local level. The minimum criteria for determining NRHP eligibility include:

- The property is at least 50 years old (properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the NRHP);
- It possesses at least one of the following characteristics:
 - **Criterion 1:** It is associated with events that have made a significant contribution to the broad patterns of history;
 - **Criterion 2:** It is associated with the lives of persons significant in the past;
 - **Criterion 3:** It embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master or possesses high artistic values, or represents a significant, distinguishable entity whose components may lack individual distinction); or
 - **Criterion 4:** It has yielded, or may yield, information important to prehistory or history.
- It retains integrity of location, design, setting, materials, workmanship, feeling, and associations.

California Register of Historical Resources

The California Register of Historical Resources (CRHR) is administered by the State Office of Historic Preservation and encourages protection of resources of architectural, historical, archeological, and cultural significance. The CRHR identifies historic resources for state and local planning purposes and affords protections under CEQA. Under Public Resources Code Section 5024.1(c), a resource may be eligible for listing in the CRHR if it meets any of the NRHP criteria.¹⁸

Historical resources eligible for listing in the CRHR must meet the significance criteria described previously and retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR if it maintains the potential to yield significant scientific or historical information or specific data.

The concept of integrity is essential to identifying the important physical characteristics of historical resources and, therefore, in evaluating adverse changes to them. Integrity is defined as “the authenticity of a historical resource’s physical identity evidenced by the survival of characteristics that existed during the resource’s period of significance.” The processes of determining integrity are similar for both the CRHR and NRHP and use the same seven variables or aspects to define integrity that are used to evaluate a resource’s eligibility for listing. These seven characteristics include 1) location, 2) design, 3) setting, 4) materials, 5) workmanship, 6) feeling, and 7) association.

In order for a resource to be determined eligible and considered a historical resource for the purpose of CEQA, the resource must be determined to be significant under the local, state, or national level under one of four criteria (Criteria 1 through 4 listed below) and retain historic integrity.

- **Criterion 1:** It is associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States;
- **Criterion 2:** It is associated with the lives of persons important to local, California or national history;
- **Criterion 3:** It embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values;
- **Criterion 4:** It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

¹⁸ California Office of Historic Preservation. “CEQA Guidelines Section 15064.5(a)(3) and California Office of Historic Preservation Technical Assistance Series #6.” Accessed August 31, 2020.
<http://www.ohp.parks.ca.gov/pages/1069/files/technical%20assistance%20bulletin%206%202011%20update.pdf>.

California Native American Historical, Cultural, and Sacred Sites Act

The California Native American Historical, Cultural, and Sacred Sites Act applies to both state and private lands. The act requires that upon discovery of human remains, construction or excavation activity must cease and the county coroner be notified.

Public Resources Code Sections 5097 and 5097.98

Section 15064.5 of the CEQA Guidelines specifies procedures to be used in the event of an unexpected discovery of Native American human remains on non-federal land. These procedures are outlined in Public Resources Code Sections 5097 and 5097.98. These codes protect such remains from disturbance, vandalism, and inadvertent destruction, establish procedures to be implemented if Native American skeletal remains are discovered during construction of a project, and establish the Native American Heritage Commission (NAHC) as the authority to resolve disputes regarding disposition of such remains.

Pursuant to Public Resources Code Section 5097.98, in the event of human remains discovery, no further disturbance is allowed until the county coroner has made the necessary findings regarding the origin and disposition of the remains. If the remains are of a Native American, the county coroner must notify the NAHC. The NAHC then notifies those persons most likely to be related to the Native American remains. The code section also stipulates the procedures that the descendants may follow for treating or disposing of the remains and associated grave goods.

Local

Morgan Hill 2035 General Plan

The Morgan Hill 2035 General Plan includes goals, policies, and actions to avoid significant impacts to cultural resources. The following policies are applicable to the proposed project.

Morgan Hill 2035 General Plan Policies: Cultural Resources

Policy	Description
HC-8.1	Identify and Protect Resources. Identify and protect heritage resources from loss and destruction. (South County Joint Area Plan 15.09)
HC-8.2	Historic Structures. Encourage the preservation and rehabilitation of the City's historic structures.
HC-8.3	Demolition. Prior to approving demolition or alteration of historically significant buildings, evaluate alternatives, including structural preservation, relocation, or other mitigation, and demonstrate that financing has been secured for replacement use.
HC-8.4	Tribal Consultation. Consult with Native American tribes that have ancestral ties to Morgan Hill regarding proposed new development projects and land use policy changes.
HC-8.5	Mitigation. Require that if cultural resources, including tribal, archaeological, or paleontological resources, are uncovered during grading or other on-site excavation activities, construction shall stop until appropriate mitigation is implemented.

Morgan Hill Historic Context Statement

The City's Historic Context Statement creates a framework against which to objectively qualify a property's significance in relation to larger historic themes and events. The Historic Context Statement includes a historical inventory and historical maps which recognize existing historic resources in the City. Historical evaluation of a subject property should use the context statement as a tool for understanding where a property's significance lies within the City's historical timeline. The City determines historical significance and eligibility for inclusion in the historical inventory based on the California Register criteria under Municipal Code Chapter 18.60.

Santa Clara County Heritage Resource Inventory

The Santa Clara County Heritage Resource Inventory compiles historical landmarks throughout the County and sets forth guidelines for their treatment and evaluation. Properties listed in the inventory are subject to a demolition review process by the Historical Heritage Commission (HHC) and the Board of Supervisors. The Heritage Resource Inventory was last updated in 2012.¹⁹

4.5.1.2 Existing Conditions

Archaeological Resources

Prehistoric Background

Cultural/archaeological resources are traces of human occupation and activity. The first documentation of human occupation in the southern Santa Clara Valley dates back from 12,000 to 150 years ago. Sites of occupation were mostly identified in the western region due to proximity and access to lakeside resources. The aboriginal inhabitants of the Santa Clara Valley include a group known as the Costanoans, who occupied the central California coast as far east as the Diablo Range. The descendants of these Native Americans are referred to as Ohlone. The project site appears to have been within the ethnographic territory of the Taymen Ohlone who settled in Morgan Hill roughly 12,000 to 6,000 years ago.

Prehistoric and Historic Archaeological Resources

A records search at the Northwest Information Center (NWIC) at Sonoma State University of the California Historical Resources Information System and a review of archival literature were completed to determine the potential presence of pre-historic or historic-era archaeological resources at the 0.5-acre project site and within 0.5-mile of the site. Based on a records search of the project site, two cultural resource investigations were completed within the project area, but no archaeological sites were identified within the project site. Within half a mile of the project area, 22 cultural resource investigations were completed with two sites (P-43-000469 and P-43-

¹⁹ County of Santa Clara Department of Planning and Development Planning Office. County of Santa Clara Historic Context Statement. Revised February 2012.

004018) recorded as prehistoric and historic. No subsurface indications of prehistoric or historic archaeological materials or culturally modified sediments were identified or discovered during a field survey completed on May 14, 2021. Additionally, the site has been previously disturbed when the existing gas station was constructed, including the installation of underground fuel tanks. For the reasons described above, the project site is considered to have low to moderate sensitivity for prehistoric resources.

Historic Resources

Historical Context – Project Area

In the 1790s, El Camino Real (known as Monterey Road in Morgan Hill), became the primary north-south travel route through the Santa Clara Valley. Towns of the lower Santa Clara Valley developed along El Camino Real, which was used for stagecoach travel. In 1926, El Camino Real/Monterey Road became part of the National Highway System and the route was renamed US 101. The original intent of the National Highway System was to utilize existing roads to connect downtown districts as part of an organized, and signed, route. In the 1930s, commercial development in downtown Morgan Hill increased as many businesses accommodated automobiles. Gas stations, restaurants, hotels and stores often incorporated car-friendly features such as drive-ins, drive-throughs, and parking. When a downtown by-pass of Monterey Road was completed in 1970, many of these businesses closed. Based on the project's cultural resources assessment the City's historic context statement, pre-1960 gas stations could be considered historical resources due to their association within the context of commercial development in Morgan Hill.

Historical Uses and Evaluation of the Project Site

The project site was a part of larger lot owned by Pietro Lepera, who emigrated from Italy in 1904 and lived in Morgan Hill in 1928. The site was occupied by an orchard, residences, and outbuildings until 1963. In 1963, World Oil Corporation (owned by Bernard Roth) purchased the project site and constructed a gas station with two gas pump islands. The canopy over the gas pump island was constructed between the years 1968 and 1971. The site has operated as a gas station since its construction.

In 1938, Bernard Roth opened his first gas station in Los Angeles, California. By the 1970s, he owned more than 30 gas stations throughout California and subsequently owned and operated more than 120 gas stations (80 of which were in Los Angeles County) up until his death in 2011. The nearest World Oil gas stations to the site are located in San José, California.

The retail/convenience store and canopy have Mansard roof styles (Oblong Box with Canopy) and were constructed with stone, brick, and/or stucco siding, large display windows, single entry door, and roll-up doors in service bays. The Mansard roof was a revival-style (common in the late 19th and early 20th centuries) that resurged in the 1940s and was used for both residential and commercial properties. The roof style has not been common for residential and commercial buildings since the mid-1980s.

Historic Evaluation

Resources greater than 50 years in age are considered potentially historic and require evaluation for their potential historical significance under the CRHR's eligibility criteria. The 0.5-acre existing gas station and associated infrastructure was constructed in 1963. As such, the properties were the subject of the historic evaluation. In order to be determined eligible and considered a historical resource under CEQA, each resource must be determined to be significant under one of four CRHR criteria (Criteria 1 through 4) and retain historic integrity. The CRHR criteria are consistent with the NRHP criteria.

Under CRHR Criterion 1, the site does not have associations with any events that have made a significant contribution to broad patterns of history at the local, state, or national level. The gas station is not important within the context of retail gas sales or the development of Morgan Hill, and there is no evidence that any historically important events occurred at this location that would merit significance under this criterion. Under CRHR Criterion 2, the site is not associated with the lives of persons important to history. There is no indication that any individuals related to the development and use of this property, made important contributions to history at the local, state, or national level.

Under CRHR Criterion 3, the retail building and canopy structure are not significant because they do not embody enough of the distinctive characteristics of a type, period, or method of construction to merit listing on the CRHR under this criterion. The Oblong Box with Canopy (Mansard Roof) is a common design implemented at gas stations throughout the United States. This gas station and canopy is a modest example of the style topped with Mansard roofs and does not merit significance under this criterion. While the retail building and canopy structure have the distinctive features of a Mansard Roof, they lack the high artistic value that would merit listing under CRHR Criterion 3.

Under CRHR Criterion 4, the retail building and canopy structure are not significant as a source of important information regarding history. The structures do not yield important information about historic construction materials or technologies.

While the on-site structures retain integrity of location, setting, design, materials, workmanship, feeling, and association to their original construction, they do not meet any of the significance criteria necessary for eligibility for listing in either the NRHP or CRHR.

The project site is not listed as a historic property in the General Plan EIR (Table 4.5-1). The historic properties list in the General Plan EIR includes Morgan Hill properties in the Santa Clara County Historic Properties Directory, the National Register, or the Morgan Hill Historic Resources Inventory. Given the gas station and the property does not meet the CRHR criterion, the site is not eligible to be listed on the City's local historic inventory.

Additionally, no known historic dwellings or other features have been identified in or adjacent to the project site. The closest historic property to the site is the Page House located at 17100 Monterey Road, 0.4 mile north of the site.

4.5.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?	☐	☐	☒	☐
2) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?	☐	☐	☒	☐
3) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☒	☐

Impact CUL-1: The project would not cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5. **(Less than Significant Impact)**

Pursuant to CEQA Guidelines Section 15064.5(b)(1), a “substantial adverse change” in the significance of a historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired. The proposed project is a gas station redevelopment project that would replace an existing four-pump gas station and 880 square foot retail store with a six-pump gas station and 2,115 square foot retail store.

The existing gas station and its associated structures on-site were evaluated for potential eligibility for listing on local, state, and national historical registers and were determined ineligible for these listings. The project site is also not listed on the NRHP, the CRHR, the Santa Clara County Historic Resources Inventory, or the Morgan Hill Historic Context Statement.²⁰ Therefore, the site’s on-site structures are not considered historic resources. Additionally, there are no historic resources in the vicinity of the project site that could be impacted directly or indirectly by the proposed project. As a result, the project would not result in an adverse change to a historic resource. **(Less than Significant Impact)**

Impact CUL-2: The project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5. **(Less than Significant Impact)**

As discussed in Section 4.5.1.2, Existing Conditions, the project site does not contain any known archaeological resources and has a low sensitivity for prehistoric and historic archaeological

²⁰ City of Morgan Hill. *Morgan Hill 2035 Final Environmental Impact Report*. May 2016.

resources based on the cultural resources record search. Nonetheless, ground-disturbing construction activities, specifically the excavation and installation of subsurface infrastructure, could result in significant impacts if any unknown subsurface archaeological resources are encountered. The City held an AB52 Tribal Consultation with the Tamien Nation regarding the project on October 11, 2021. Based upon this review, the project would be required to adhere to the standard conditions described below to reduce potential impacts to archaeological resources to less than significant levels.

Standard Conditions: A moderate potential exists for unrecorded historic-period archaeological resources to be within the project area. The developer shall enter into written contracts with an archaeologist and the Tamien Nation Tribe, and pay all fees associated with the activities required by this condition. The following policies and procedures for treatment and disposition of inadvertently discovered human remains or archaeological materials shall apply:

1. Prior to start of grading or earthmoving activity (includes demolition and moving of heavy equipment on site) on the “first day of construction”, the archaeologist and Tamien Nation Tribal Monitor shall hold a pre-construction meeting for the purposes of “cultural sensitivity training” with the general contractor and subcontractors.
2. A Tamien Nation Tribal Monitor shall be present on-site to monitor all ground-disturbing activities and an archaeologist shall be on-call. Where historical or archaeological artifacts are found, work in areas where remains or artifacts are found will be restricted or stopped until proper protocols are met, as described below:
 - a. Work at the location of the find shall halt immediately within 50 feet of the find. If an archaeologist is not present at the time of the discovery, the applicant shall contact an archaeologist for evaluation of the find to determine whether it qualifies as a unique archaeological resource as defined by this chapter;
 - b. If the find is determined not to be a Unique Archaeological Resource, construction can continue. The archaeologist shall prepare a brief informal memo/letter in collaboration with a tribal representative that describes and assesses the significance of the resource, including a discussion of the methods used to determine significance for the find;
 - c. If the find appears significant and to qualify as a unique archaeological resource, the archaeologist shall determine if the resource can be avoided and shall detail avoidance procedures in a formal memo/letter; and
 - d. If the resource cannot be avoided, the archaeologist in collaboration with a tribal representative shall develop within forty-eight hours an action plan to avoid or minimize impacts. The field crew shall not proceed until the action plan is approved by the Development Services Director. The action plan shall be in conformance with California Public Resources Code 21083.2. An archaeologist shall be on-call during ground disturbing activities. Where historical or archaeological artifacts are found,

work in areas where remains or artifacts are found will be restricted or stopped until proper protocols are met, as described below.

3. The following policies and procedures for treatment and disposition of inadvertently discovered human remains or archaeological materials shall apply. If human remains are discovered, it is probable they are the remains of Native Americans,
 - a. If human remains are encountered, they shall be treated with dignity and respect as due to them. Discovery of Native American remains is a very sensitive issue and serious concern. Information about such a discovery shall be held in confidence by all project personnel on a need-to-know basis. The rights of Native Americans to practice ceremonial observances on sites, in labs and around artifacts shall be upheld.
 - b. Remains should not be held by human hands. Surgical gloves should be worn if remains need to be handled.
 - c. Surgical mask should also be worn to prevent exposure to pathogens that may be associated with the remains.
4. In the event that known or suspected Native American remains are encountered, or significant historic or archaeological materials are discovered, ground-disturbing activities shall be immediately stopped. Examples of significant historic or archaeological materials include, but are not limited to, concentrations of historic artifacts (e.g., bottles, ceramics) or prehistoric artifacts (chipped chert or obsidian, arrow points, ground stone mortars and pestles), culturally altered ash stained midden soils associated with pre-contact Native American habitation sites, concentrations of fire-altered rock and/or burned or charred organic materials and historic structure remains such as stone lined building foundations, wells or privy pits. Ground-disturbing project activities may continue in other areas that are outside the exclusion zone as defined below.
5. An "exclusion zone" where unauthorized equipment and personnel are not permitted shall be established (e.g., taped off) around the discovery area plus a reasonable buffer zone by the contractor foreman or authorized representative, or party who made the discovery and initiated these protocols, or if on-site at the time of discovery, by the monitoring archaeologist and tribal representative (typically twenty-five to fifty feet for single burial or archaeological find).
6. The discovery locale shall be secured (e.g., 24-hour surveillance) as directed by the City or County if considered prudent to avoid further disturbances.
7. The contractor foreman or authorized representative, or party who made the discovery and initiated these protocols shall be responsible for immediately contacting by telephone the parties listed below to report the find and initiate the consultation process for treatment and disposition:
 - The City of Morgan Hill Development Services Director (408) 779-7247

- The Contractor's Point(s) of Contact
 - The Coroner of the County of Santa Clara (if human remains found) (408) 793-1900
 - The Native American Heritage Commission (NAHC) in Sacramento (916) 653-4082
 - The Amah Mutsun Tribal Band (916) 481-5785 (H) or (916) 743-5833 (C)
 - The Tamien Nation (707) 295-4011 (office) and (925) 336-5359 (THPO)
8. The Coroner has two working days to examine the remains after being notified of the discovery. If the remains are Native American, the Coroner has 24 hours to notify the NAHC.
 9. The NAHC is responsible for identifying and immediately notifying the Most Likely Descendant (MLD). (Note: NAHC policy holds that the Native American Monitor will not be designated the MLD.)
 10. Within 24 hours of their notification by the NAHC, the MLD will be granted permission to inspect the discovery site if they so choose.
 11. Within 24 hours of their notification by the NAHC, the MLD may recommend to the City's Development Services Director the recommended means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The recommendation may include the scientific removal and non-destructive or destructive analysis of human remains and items associated with Native American burials. Only those osteological analyses or DNA analyses recommended by the appropriate tribe may be considered and carried out.
 12. If the MLD recommendation is rejected by the City of Morgan Hill the parties will attempt to mediate the disagreement with the NAHC. If mediation fails, then the remains and all associated grave offerings shall be reburied with appropriate dignity on the property in a location not subject to further subsurface disturbance.

Implementation of the standard conditions listed above would ensure that contractors and their employees are alerted to the potential presence of subsurface archaeological resources and trained on how to respond to any potential discoveries, thus ensuring that any unknown subsurface archaeological resources present within the project site would be identified during construction. The standard conditions would ensure that any archaeological resources present within the project site are evaluated by a professional archaeologist and treated in accordance with California Public Resources Code Section 15064.5, as required by CEQA. Therefore, the project would not cause a substantial adverse change in the significance of an archaeological resource. **(Less than Significant Impact)**

Impact CUL-3:	The project would not disturb any human remains, including those interred outside of dedicated cemeteries. (Less than Significant Impact)
----------------------	--

Although it is not expected, human remains have the potential to be discovered during construction. If human remains were unearthed during project construction, damage to or

destruction of culturally significant human remains would be a potentially significant impact. The standard conditions described in Impact CUL-2 includes measures that would reduce impacts to human remains if they are discovered during project construction. Compliance with these standard conditions would ensure that if human remains are discovered during project construction, the human remains would be treated in compliance with applicable state laws and an appropriate process is followed prior to the commencement of construction. Therefore, the project would have a less than significant impact on human remains. **(Less than Significant Impact)**

4.6 ENERGY

The following discussion is based, in part, on an Air Quality Analysis completed by Illingworth & Rodkin, Inc. on August 18, 2021. The report is attached as Appendix A.

4.6.1 Environmental Setting

4.6.1.1 *Regulatory Framework*

Federal and State

Energy Star and Fuel Efficiency

At the federal level, energy standards set by the EPA apply to numerous consumer products and appliances (e.g., the EnergyStar™ program). The EPA also sets fuel efficiency standards for automobiles and other modes of transportation.

Renewables Portfolio Standard Program

In 2002, California established its Renewables Portfolio Standard Program, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent of retail sales by 2010. Governor Schwarzenegger issued Executive Order (EO) S-3-05, requiring statewide emissions reductions to 80 percent below 1990 levels by 2050. In 2008, EO S-14-08 was signed into law, requiring retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. In October 2015, Governor Brown signed SB 350 to codify California's climate and clean energy goals. A key provision of SB 350 requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from renewable sources by 2030. SB 100, passed in 2018, requires 100 percent of electricity in California to be provided by 100 percent renewable and carbon-free sources by 2045.

Executive Order B-55-18 To Achieve Carbon Neutrality

In September 2018, Governor Brown issued an executive order, EO-B-55-18 To Achieve Carbon Neutrality, setting a statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." The executive order requires CARB to "ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal." EO-B-55-18 supplements EO S-3-05 by requiring not only emissions reductions, but also that, by no later than 2045, the remaining emissions be offset by equivalent net removals of CO₂ from the atmosphere through sequestration.

California Building Standards Code

The Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in Title 24, Part 6 of the California Code of Regulations (Title 24), was established in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 is updated approximately

every three years.²¹ Compliance with Title 24 is mandatory at the time new building permits are issued by city and county governments.²²

California Green Building Standards Code

The California Green Building Standards Code (CALGreen) establishes mandatory green building standards for buildings in California. CALGreen was developed to reduce GHG emissions from buildings, promote environmentally responsible and healthier places to live and work, reduce energy and water consumption, and respond to state environmental directives. CALGreen covers five categories: planning and design, energy efficiency, water efficiency and conservation, material and resource efficiency, and indoor environmental quality.

Advanced Clean Cars Program

CARB adopted the Advanced Clean Cars program in 2012 in coordination with the EPA and National Highway Traffic Safety Administration. The program combines the control of smog-causing pollutants and GHG emissions into a single coordinated set of requirements for vehicle model years 2015 through 2025. The program promotes development of environmentally superior passenger cars and other vehicles, as well as saving the consumer money through fuel savings.²³

Regional and Local

Morgan Hill 2035 General Plan

The Morgan Hill 2035 General Plan includes goals, policies, and actions to conserve energy and mitigate energy impacts resulting from planned developments within the City. The following policies are applicable to the proposed project.

Morgan Hill 2035 General Plan Policies: Energy

Policy	Description
NRE-16.1	Energy Standards for New Development. New development, including public buildings, should be designed to exceed State standards for the use of energy.
NRE-16.2	Energy Conservation. Promote energy conservation techniques and energy efficiency in building design, orientation, and construction.
NRE-16.3	Energy Use Data and Analysis. Provide information to increase building owner, tenant, and operator knowledge about how, when, and where building energy is used.

²¹ California Building Standards Commission. "California Building Standards Code." Accessed May 13, 2022. <https://www.dgs.ca.gov/BSC/Codes#@ViewBag.JumpTo>.

²² California Energy Commission (CEC). "2019 Building Energy Efficiency Standards." Accessed May 13, 2022. <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency>.

²³ California Air Resources Board. "The Advanced Clean Cars Program." Accessed May 13, 2022. <https://www.arb.ca.gov/msprog/acc/acc.htm>.

Morgan Hill 2035 General Plan Policies: Energy

Policy	Description
NRE-16.5	Energy Efficiency. Encourage development project designs that protect and improve air quality and minimize direct and indirect air pollutant emissions by including components that promote energy efficiency.
NRE-16.6	Landscaping for Energy Conservation. Encourage landscaping plans for new development to address the planting of trees and shrubs that will provide shade to reduce the need for cooling systems and allow for winter daylighting.
NRE-16.7	Renewable Energy. Encourage new and existing development to incorporate renewable energy generation features, like solar panels and solar hot water heaters.

4.6.1.2 Existing Conditions

Total energy usage in California was approximately 7,875 trillion British thermal units (Btu) in the year 2018, the most recent year for which this data was available.²⁴ Out of the 50 states, California is ranked second in total energy consumption and 46th in energy consumption per capita. The breakdown by sector was approximately 18 percent (1,440 trillion Btu) for residential uses, 19 percent (1,510 trillion Btu) for commercial uses, 23 percent (1,847 trillion Btu) for industrial uses, and 39 percent (3,078 trillion Btu) for transportation.²⁵ This energy is primarily supplied in the form of natural gas, petroleum, nuclear electric power, and hydroelectric power.

Electricity

California's total system electric generation in 2020 was approximately 272,576 GWh (a decrease of 2 percent from 2019).²⁶ In Santa Clara County, a total of approximately 16,435 gigawatt hours (GWh) of electricity was consumed in 2020.²⁷ Electricity in Santa Clara County in 2020 was consumed primarily by the non-residential sector (73 percent), followed by the residential sector consuming 27 percent.

The community-owned Silicon Valley Clean Energy (SVCE) is the electricity provider for the City of Morgan Hill.²⁸ SVCE sources the electricity, and the Pacific Gas and Electric Company (PG&E) delivers it to customers over their existing utility lines. Customers are automatically enrolled in the

²⁴ United States Energy Information Administration. "State Profile and Energy Estimates, 2018." Accessed May 13, 2022. <https://www.eia.gov/state/?sid=CA#tabs-2>.

²⁵ United States Energy Information Administration. "State Profile and Energy Estimates, 2018." Accessed May 13, 2022. <https://www.eia.gov/state/?sid=CA#tabs-2>.

²⁶ California Energy Commission. "2020 Total System Electric Generation, Total System Electric Generation and Methodology." Accessed February 10, 2022. <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation#:~:text=Total%20generation%20for%20California%20was,to%2057%20percent%20in%202019>.

²⁷ California Energy Commission. Energy Consumption Data Management System. "Electricity Consumption by County." Accessed February 10. <http://ecdms.energy.ca.gov/elecbycounty.aspx>.

²⁸ Silicon Valley Clean Energy. "Frequently Asked Questions." Accessed May 13, 2022. <https://www.svcleanenergy.org/faqs>.

GreenStart plan and can upgrade to the GreenPrime plan. The GreenStart plan is considered 80 percent GHG-emission free and the GreenPrime Plan is considered 100 percent GHG-emission free.

Natural Gas

PG&E provides natural gas services within Morgan Hill. In 2019, approximately one percent of California's natural gas supply came from in-state production, while the remaining supply was imported from other western states and Canada.²⁹ In 2019 residential and commercial customers in California used 33 percent of the state's natural gas, power plants used 26 percent, the industrial sector used 35 percent, and other uses used six percent.³⁰ Transportation accounted for one percent of natural gas use in California. In 2020, Santa Clara County used approximately 418 million therms of natural gas.³¹

Fuel for Motor Vehicles

In 2019, 15.4 billion gallons of gasoline were sold in California.³² The average fuel economy for light-duty vehicles (autos, pickups, vans, and sport utility vehicles) in the United States has steadily increased from about 13.1 miles per gallon (mpg) in the mid-1970s to 25.4 mpg in 2020.³³ Federal fuel economy standards have changed substantially since the Energy Independence and Security Act was passed in 2007. That standard, which originally mandated a national fuel economy standard of 35 miles per gallon by the year 2020, was updated in March 2020 to require all cars and light duty trucks achieve an overall industry average fuel economy of 40.4 mpg by model year 2026.^{34,35}

²⁹ California Gas and Electric Utilities. 2020 *California Gas Report*. Accessed February 10, 2022.

[https://www.socalgas.com/sites/default/files/2020-10/2020 California Gas Report Joint Utility Biennial Comprehensive Filing.pdf](https://www.socalgas.com/sites/default/files/2020-10/2020%20California%20Gas%20Report%20Joint%20Utility%20Biennial%20Comprehensive%20Filing.pdf).

³⁰ United States Energy Information Administration. "State Profile and Energy Estimates, 2019." Accessed February 10, 2022. <https://www.eia.gov/state/?sid=CA#tabs-2>.

³¹ California Energy Commission. "Natural Gas Consumption by County." Accessed May 13, 2022. <http://ecdms.energy.ca.gov/gasbycounty.aspx>.

³² California Department of Tax and Fee Administration. "Net Taxable Gasoline Gallons." Accessed February 10, 2022. <https://www.cdtfa.ca.gov/dataportal/dataset.htm?url=VehicleTaxableFuelDist>.

³³ United States Environmental Protection Agency. "The 2021 EPA Automotive Trends Report: Greenhouse Gas Emissions, Fuel Economy, and Technology since 1975." November 2021. <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockkey=P1010U68.pdf>

³⁴ United States Department of Energy. *Energy Independence & Security Act of 2007*. Accessed February 10, 2022. <http://www.afdc.energy.gov/laws/eisa>.

³⁵ Public Law 110–140—December 19, 2007. *Energy Independence & Security Act of 2007*. Accessed February 10, 2022. <http://www.gpo.gov/fdsys/pkg/PLAW-110publ140/pdf/PLAW-110publ140.pdf>.

4.6.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
2) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐
Impact EN-1:	The project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. (Less than Significant Impact)			

The proposed project is a gas station redevelopment project that would replace an existing four-pump gas station and 880 square foot retail store with a six-pump gas station and 2,115 square foot retail store. The project also proposes to construct a new fuel canopy and UST system.

Construction

The proposed project would be constructed over a period of approximately eight months. Construction of the project would require energy for the manufacture and transportation of building materials, preparation of the site for grading, and construction of structures on-site. Petroleum-based fuels such as diesel fuel would be the primary sources of energy for these tasks. The overall construction schedule and process is already designed to be efficient to avoid excess monetary costs. That is, equipment and fuel would not be used wastefully on the site because of the added expense associated with renting the equipment, maintaining it, and fueling it. Therefore, the opportunities for future efficiency gains during construction are limited.

The proposed project, however, does include several measures that would improve the efficiency of the construction process. Implementation of the identified Standard Conditions outlined in Section 4.3 Air Quality would restrict equipment idling times to five minutes or less and would require the applicant to post signs on the project site reminding workers to shut off idle equipment. Implementation of applicable General Plan policies and existing regulations and programs would also reduce energy waste from construction and demolition. Therefore, the proposed project would not consume energy in a manner that is wasteful, inefficient, or unnecessary. **(Less than Significant Impact)**

Operation

Implementation of the proposed development would consume energy (in the form of electricity) during operation, primarily from building heating and cooling, lighting, and water heating. The project would use minimal energy since electricity is provided by SVCE. Table 3.6-1 below summarizes the estimated energy use of the proposed project compared to the existing development.

Table 4.6-1: Estimated Annual Energy Use of Proposed Development			
Land Use	Electricity (kWh)	Natural Gas (Btu)	Gasoline (gallons)
Existing Development			
Convenience Market with Gas Pumps	6,970	9,336	83,683
Total Existing	6,970	9,336	83,683
Proposed Development			
Convenience Market with Gas Pumps	16,743	22,430	113,677
Parking Lot	5,207	0	0
Total Proposed	21,950	22,430	113,677
Net (Proposed – Existing)	14,980	13,094	29,994
Source: Illingworth & Rodkin, Inc. <i>World Oil Gas Station Air Quality Analysis, Morgan Hill, California</i> . August 19, 2021.			

Compared to existing conditions, the proposed project would increase on-site electricity use by approximately 14,980 kWh per year. However, the project would be built in accordance with the current CALGreen requirements and Title 24 energy efficiency standards, which would improve the efficiency of the overall project and reduce impacts. Based on the CalEEMod results, the total annual VMT for the project would be approximately 2,887,403 (7,900 VMT per day) associated with customers, employees, and vendors coming to and leaving from the proposed project site. Using the U.S. EPA fuel economy estimates (25.4 mpg) the proposed project would result in consumption of approximately 113,677 gallons of gasoline per year, an increase of 29,994 gallons compared to existing conditions. For the above reasons, implementation of the proposed project would not result in a wasteful, inefficient, or unnecessary consumption of energy resources during operation. **(Less than Significant Impact)**

Impact EN-2:	The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. (Less than Significant Impact)
---------------------	--

The proposed development would be completed in compliance with the current energy efficiency standards set forth in Title 24, CALGreen, and the City's Municipal Code. The project would implement measures to reduce energy during construction (see discussion regarding Impact EN-1).

The project would utilize SVCE as an electricity provider, which would provide at least 80 percent renewable electricity. For these reasons, the project would not conflict with or obstruct state or local plans for renewable energy or energy efficiency. **(Less than Significant Impact)**

4.7 GEOLOGY AND SOILS

The following discussion is based, in part, on a Geotechnical Engineering Investigation completed for the project by SALEM Engineering Group, Inc., dated August 7, 2020. A copy of this report is included in Appendix B.

4.7.1 Environmental Setting

4.7.1.1 *Regulatory Framework*

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed following the 1971 San Fernando earthquake. The act regulates development in California near known active faults due to hazards associated with surface fault ruptures. Alquist-Priolo maps are distributed to affected cities, counties, and state agencies for their use in planning and controlling new construction. Areas within an Alquist-Priolo Earthquake Fault Zone require special studies to evaluate the potential for surface rupture to ensure that no structures intended for human occupancy are constructed across an active fault.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (SHMA) was passed in 1990 following the 1989 Loma Prieta earthquake. The SHMA directs the California Geological Survey (CGS) to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. CGS has completed seismic hazard mapping for the portions of California most susceptible to liquefaction, landslides, and ground shaking, including the central San Francisco Bay Area. The SHMA requires that agencies only approve projects in seismic hazard zones following site-specific geotechnical investigations to determine if the seismic hazard is present and identify measures to reduce earthquake-related hazards.

California Building Standards Code

The California Building Code (CBC) prescribes standards for constructing safe buildings. The CBC contains provisions for earthquake safety based on factors including occupancy type, soil and rock profile, ground strength, and distance to seismic sources. The CBC requires that a site-specific geotechnical investigation report be prepared for most development projects to evaluate seismic and geologic conditions such as surface fault ruptures, ground shaking, liquefaction, differential settlement, lateral spreading, expansive soils, and slope stability. The CBC is updated every three years, most recently in 2019. The 2022 CBC was published July 1, 2022, with an effective date of January 1, 2023. The City of Morgan Hill has adopted the 2022 CBC.

California Division of Occupational Safety and Health Regulations

Excavation, shoring, and trenching activities during construction are subject to occupational safety standards for stabilization by the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) under Title 8 of the California Code of Regulations and Excavation Rules. These regulations minimize the potential for instability and collapse that could injure construction workers on the site.

Public Resources Code Section 5097.5

Paleontological resources are the fossilized remains of organisms from prehistoric environments found in geologic strata. They range from mammoth and dinosaur bones to impressions of ancient animals and plants, trace remains, and microfossils. These materials are valued for the information they yield about the history of the earth and its past ecological settings. California Public Resources Code Section 5097.5 specifies that unauthorized removal of a paleontological resource is a misdemeanor. Under the CEQA Guidelines, a project would have a significant impact on paleontological resources if it would disturb or destroy a unique paleontological resource or site or unique geologic feature.

4.7.1.2 *Existing Conditions*

Regional Geologic Conditions

The project site is located within the seismically active San Francisco Bay Area. The San Francisco Bay Area contains several faults that are capable of generating earthquakes of magnitude 7.0 or higher which regionally trend in a northwesterly direction. The closest faults to the project site are the Calaveras (4.2 miles northeast), North San Andreas (9.8 miles north), and Monte Vista-Shannon (12.2 miles northwest). Vicinity faults and their distances from the project site are listed below in Table 4.7-1.

Table 4.7-1: Faults Near Project Site		
Fault Name	Approximate Distance (mi)	Orientation from Site
Calaveras	4.2	Northeast
North San Andreas	9.8	Northwest
Monte Vista-Shannon	12.2	Northwest
Zayante-Vergeles	13.2	Southwest
Calaveras	13.4	Northeast
North San Andreas	20.1	Northwest
Quien Sabe	20.6	Northwest
San Andreas fault – creeping segment	22.0	Northwest
Ortigalita	22.6	Southeast
Calaveras	24.0	Northeast

The project site is located within the Santa Clara Valley, a broad alluvial basin underlain by sedimentary and metamorphic rocks of the Franciscan Complex. The Santa Clara Valley is bounded by the Diablo Range to the east and the Santa Cruz Mountains to the west. The Valley was formed when sediments derived from both mountain ranges were exposed by tectonic uplift and regression of the inland sea which previously inundated this area. The closest foothills to Morgan Hill reach an approximate elevation of over 1,200 feet to the east and west of the City. The project is situated in the Coast Ranges Geomorphic Province, comprised of a series of north-west trending mountains and valleys (2,000 to 4,000 feet above mean sea level) that trend sub-parallel to the San Andreas Fault.³⁶

The City of Morgan Hill is susceptible to the effects of regional seismic activity that produces ground shaking intensity levels of 8.0 (severe shaking) and 9.0 (violent shaking) according to the Modified Mercalli Intensity (MMI) Scale.³⁷ In the event of a moderate to large earthquake occurring because of one of the faults mentioned above, strong seismic ground shaking is likely to occur on-site.

On-Site Geologic Conditions

Seismicity and Seismic-Related Hazards

As described above, the project site is located in an area of high seismic activity and will be subjected to at least one earthquake with a magnitude greater than 7.0. The project site will likely be exposed to periodic small to moderate magnitude earthquakes throughout their operational lifespan.

The project site is generally level and is not at risk of landslides.³⁸ The project site is not located within a state-designated Earthquake Fault Zone as delineated on the most recent Alquist-Priolo Fault Zone with the nearest segment located approximately 4.2 miles to the northeast as listed in Table 4.7-1.

Topography and Soils

The project site area is relatively flat with the site elevation approximately 337 feet above mean sea level.³⁹ Based on an on-site subsurface geotechnical field investigation completed in July 2020, soil beneath the site includes clayey sand with gravel and clayey sand to the maximum depth explored of 24 feet below grade. The developed portion of the site includes approximately 3.5 inches of asphalt concrete over 3.5 inches of aggregate base at the surface. The site is underlain by

³⁶ Salem Engineering Group, Inc. *Geotechnical Engineering Investigation: Proposed Petroleum Station, 16720 Monterey Highway, Morgan Hill, California 95037*. Page 4. August 7, 2020.

³⁷ Metropolitan Transportation Commission/Association of Bay Area Governments. Hazard Viewer Map, "Probabilistic Earthquake Shaking Hazard". Map. Accessed June 1, 2022. Available at: <https://www.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8>

³⁸ California Department of Conservation, California Geological Survey. *Earthquake Zones of Required Investigation, Landslides*. GIS Map. Accessed June 1, 2022. Available at: <https://maps.conservation.ca.gov/cgs/EQZApp/app/>

³⁹ SALEM Engineering Group, Inc. *Geotechnical Engineering Investigation Proposed Petroleum Station 16720 Monterey Highway Morgan Hill, California 95037*. Page 2. August 7, 2020.

Quaternary alluvial deposits.⁴⁰ Soils on-site have a low risk of shrink swell potential and are, therefore, have low expansive potential.

Groundwater

Groundwater was encountered at approximately 15 feet below site grade. Based on available water well data, historic groundwater depths are reported to be around six feet below site grade. Fluctuations in the groundwater level may occur due to seasonal changes, variations in rainfall and underground drainage patterns, and other factors.

Soil Liquefaction and Related Hazards

Liquefaction occurs when water-saturated soils lose structural integrity due to seismic activity. Soils that are most susceptible to liquefaction are loose to moderately dense, saturated granular soils with poor drainage. The site is identified as an area of low earthquake liquefaction susceptibility based on the Metropolitan Transportation Commission/Association of Bay Area Governments (MTC/ABAG)'s Hazard Viewer Map.⁴¹

Lateral spreading is a type of ground failure related to liquefaction. It consists of the horizontal displacement of flat-lying alluvial material toward an open area, such as the steep bank of a stream channel. The project site is relatively flat and the potential for lateral spreading is low. The site is at a minor risk of lateral spreading and related ground failure since the site is located in an area with low susceptibility of liquefaction.

Paleontological Resources

Paleontological resources or fossils are the remains of prehistoric plant and animal life. Paleontological resources do not include human remains or artifacts. Fossil remains such as bones, teeth, shells, and wood are found in geologic formations. Paleontological resources are limited, non-renewable, sensitive scientific and educational resources. The potential for fossil remains at a location can be predicted based on whether or not previous fossil finds have been made in the vicinity, as well as based on the age of the geologic formations. Based on the findings in the General Plan EIR, no paleontological resources have been identified in the City of Morgan Hill.

⁴⁰ SALEM Engineering Group, Inc. *Geotechnical Engineering Investigation Proposed Petroleum Station 16720 Monterey Highway Morgan Hill, California 95037*. Page 5. August 7, 2020.

⁴¹ MTC/ABAG. "Hazard Viewer Map." Accessed June 1, 2022. Available at: <https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8>

4.7.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
– Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42)?	☐	☐	☒	☐
– Strong seismic ground shaking?	☐	☐	☒	☐
– Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
– Landslides?	☐	☐	☒	☐
2) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
3) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
4) Be located on expansive soil, as defined in the current California Building Code, creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
5) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
6) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	☐	☐	☒	☐

Impact GEO-1:	The project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides. (Less than Significant Impact)
----------------------	---

As shown in Table 4.7-1, the project site is located approximately four miles southwest of the Calaveras fault in the Diablo Range. The project site is also not within an Alquist-Priolo Earthquake Fault Zone. The project site is within an area of high seismicity based on the MMI projected ground shaking intensity; however, the site is in an area of low susceptibility to liquefaction as identified in the MTC/ABAG Hazards Map Viewer. The risk of lateral spreading is low due to the flat topography of the site. In addition, there is no potential for a landslide to be a hazard to the project because the site is not located in a landslide zone nor a liquification landslide overlap zone.⁴² The proposed project structures could be subject to a severe earthquake (magnitude 7.0 or greater) that could cause significant ground shaking at the project site.⁴³ Major damage could occur to buildings not designed to resist the ground acceleration forces generated by earthquakes.

Impacts from seismic and seismic-related hazards would be reduced by implementing standard engineering and seismic safety design techniques pursuant with the City's Building Division and the CBC. In accordance with the City of Morgan Hill standards, the project shall implement the following standard condition to reduce and/or avoid soil hazards.

Standard Condition: The project shall implement the following measures to reduce and/or avoid soil hazards.

- To avoid or minimize potential damage from seismic shaking, the proposed project shall be built using standard engineering and seismic safety design techniques. Prior to issuance of building permits, building design and construction at the site shall be completed in conformance with the recommendations of a design-level geotechnical investigation, which shall be included in a report to the City. The structural designs for the proposed development will account for repeatable horizontal ground accelerations. The report shall be reviewed and approved by the City of Morgan Hill Building Division prior to issuance of a building permit. The buildings shall be required to meet the requirements of applicable Building and Fire Codes, including the 2022 California Building Code Chapter 16, Section 1613, as adopted or updated by the City. The project shall be designed to withstand soil hazards identified on the site and the project shall be designed to reduce the risk to life or property to the extent feasible and in compliance with the Building Code.

⁴² California Department of Conservation, California Geological Survey. *Earthquake Zones of Required Investigation, Landslides*. GIS Map. Accessed June 1, 2022. Available at: <https://maps.conservation.ca.gov/cgs/EQZApp/app/>

⁴³ City of Morgan Hill. *Morgan Hill 2035 General Plan Final Environmental Impact Report*. Page 4.6-10. January 2016.

With implementation of the standard condition described above, the proposed development would be designed to withstand soil hazards and to reduce the risk to life or property to the extent feasible and in compliance with the CBC. Implementation of the above standard condition would ensure that impacts to the project from soil conditions and seismic hazards would be less than significant. **(Less Than Significant Impact)**

Impact GEO-2:	The project would not result in substantial soil erosion or the loss of topsoil. (Less than Significant Impact)
----------------------	---

Ground disturbance would be required during grading, trenching, and construction of the proposed project. Ground disturbance would expose soils and increase the potential for wind or water related erosion and sedimentation at the site until construction is complete.

The City developed standard conditions to avoid significant soil erosion impacts during construction. The following conditions would be included as part of the project:

Standard Condition: The project shall implement the following standard conditions to ensure soil erosion impacts remain at less than significant levels.

- As required by the State Water Resources Control Board (SWRCB) Order No. 2009-0009-DWQ, construction activity resulting in a land disturbance of one acre or more of soil, or whose projects are part of a larger common plan of development that in total disturbs more than one acre, are required to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002 for Discharges of Storm Water Associated with Construction Activity (General Permit). To be permitted with the SWRCB under the General Permit, owners must file a complete Notice of Intent (NOI) online at <http://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp> and develop a Storm Water Pollution Prevention Plan (SWPPP) Manual in accordance with the General Permit. The SWPPP Manual shall follow the CASQA SWPPP template/format at <https://www.casqa.org/store/products/tabid/154/p-167-construction-handbookportal-initial-subscription.aspx> and shall be approved by Public Works Engineering. A Waste Discharger Identification (WDID) number to be issued to the construction site after the SWRCB receives and verifies the submitted Online NOI information. The WDID number and approved SWPPP Manual shall be provided to Public Works and the Building Department prior to any approval of grading activities. In addition, the project shall adhere with the following for NPDES General Permit SWPPP inspections and compliance:
 - All project onsite and offsite construction activity shall have the site inspected by a qualified third party SWPPP inspector (i.e., QSD, QSP, or RCE).
 - SWPPP inspections shall occur weekly during the rainy season (September 15 through May 1).
 - SWPPP inspections shall occur bi-weekly during the non-rainy season.
 - 48 hours prior to and following a forecasted rain event, SWPPP inspections shall occur in addition to items two or three above.

- Per each of the inspection conditions 2, 3, or 4, the NPDES SWPPP inspector shall certify in writing to the Building and Public Works Department if the site is in compliance or non-compliance with the NPDES General Permit for Stormwater, site SWPPP Manual, and Water Pollution Control Drawings (per the CMH-SWPPP Inspection Check List to be provided by Public Works. QSD/QSP inspectors shall forward onsite and offsite information/certification to the building (on-site private property issues) and Public Works (public right-of-way issues) inspectors respectively.
- Prior to rain events, BMPs not in compliance shall be corrected immediately.
- Illicit discharges per the NPDES General Permit, non-compliance of tracking control, and inlet protection within the public right of way shall be addressed immediately.
- Other non-compliance issues shall be addressed within a 24-hour period.
- Non-compliance issues which have been corrected shall be verified by NPDES SWPPP Inspector by a follow up inspection.
- BMPs maintenance/inspections shall include tree protection if applicable.

With implementation of the standard condition described above, the proposed project would result in a less than significant soil erosion impact. **(Less than Significant Impact)**

Impact GEO-3:	The project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. (Less than Significant Impact)
----------------------	--

The project site is located in an area of low expansion potential, low potential for liquefaction, and low potential for lateral ground failure. However, the area has potential for very strong ground shaking during an earthquake. As discussed under Impact GEO-1, the proposed project would be constructed in compliance with the CBC and Morgan Hill Building Code. Therefore, development of the site would not substantially change or exacerbate the geologic conditions of the project area. **(Less than Significant Impact)**

Impact GEO-4:	The project would not be located on expansive soil, as defined in the current California Building Code, creating substantial direct or indirect risks to life or property. (Less than Significant Impact)
----------------------	--

Based on the geotechnical investigation report, the soils on-site have a low expansion potential. Therefore, substantial direct or indirect risks related to expansive soils is unlikely. Furthermore, adherence to the standard condition described in Impact GEO-1 would ensure that impacts to the project from soil conditions and seismic hazards would be less than significant. **(Less than Significant Impact)**

Impact GEO-5:	The project would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. (No Impact)
----------------------	--

The proposed project would be connected to a City sewer system for wastewater disposal and would not require septic tanks or alternative wastewater disposal systems. Therefore, the project would not have a significant impact due to inadequate wastewater disposal resulting from incapable soils. **(No Impact)**

Impact GEO-6:	The project would not directly or indirectly destroy a unique paleontological resource or site or unique geological feature. (Less than Significant Impact with Mitigation Incorporated)
----------------------	---

As described in Section 4.7.1.2, Existing Conditions, no paleontological resources have been identified in the City of Morgan Hill. The proposed project would require excavation to a maximum depth of approximately 10 feet to install the underground storage tanks. Although paleontological resources would not likely be encountered during construction (given no other paleontological resources have been discovered in the area), the project would implement the following mitigation measure in the event undiscovered paleontological resources are encountered.

Mitigation Measures: The following mitigation measure would be implemented to reduce impacts to paleontological resources to a less than significant level.

MM GEO-6.1:	If vertebrate fossils are discovered during construction, all work on the site shall stop immediately. The Development Services Director or the Director's designee shall be notified, and a qualified professional paleontologist shall assess the nature and importance of the find and recommend appropriate treatment. Treatment may include, but is not limited to, preparation and recovery of fossil materials so that they can be housed in an appropriate museum or university collection and may also include preparation of a report for publication describing the finds. The project applicant shall be responsible for implementing the recommendations of the qualified paleontologist. A report of all findings shall be submitted to the Development Services Director or the Director's designee prior to work beginning on the site following a discovery.
--------------------	---

With the implementation of the Mitigation Measures GEO-1, the impacts related to paleontological resources would be less than significant. **(Less than Significant Impact with Mitigation Incorporated)**

4.8 GREENHOUSE GAS EMISSIONS

The following discussion is based, in part, on an Air Quality Analysis completed by Illingworth & Rodkin, Inc. on August 18, 2021. The report is attached as Appendix A.

4.8.1 Environmental Setting

4.8.1.1 *Background Information*

Gases that trap heat in the atmosphere, GHGs, regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. In GHG emission inventories, the weight of each gas is multiplied by its global warming potential (GWP) and is measured in units of CO₂ equivalents (CO₂e). The most common GHGs are carbon dioxide (CO₂) and water vapor but there are also several others, most importantly methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO₂ and N₂O are byproducts of fossil fuel combustion.
- N₂O is associated with agricultural operations such as fertilization of crops.
- CH₄ is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents, but their production has been stopped by international treaty.
- HFCs are now used as a substitute for CFCs in refrigeration and cooling.
- PFCs and SF₆ emissions are commonly created by industries such as aluminum production and semiconductor manufacturing.

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

4.8.1.2 Regulatory Framework

State

Assembly Bill 32

Under the California Global Warming Solutions Act, also known as AB 32, CARB established a statewide GHG emissions cap for 2020, adopted mandatory reporting rules for significant sources of GHGs, and adopted a comprehensive plan, known as the Climate Change Scoping Plan, identifying how emission reductions would be achieved from significant GHG sources.

In 2016, SB 32 was signed into law, amending the California Global Warming Solution Act. SB 32, and accompanying Executive Order B-30-15, require CARB to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. CARB updated its Climate Change Scoping Plan in December of 2017 to express the 2030 statewide target in terms of million metric tons of CO₂e (MMTCO₂e). Based on the emissions reductions directed by SB 32, the annual 2030 statewide target emissions level for California is 260 MMTCO₂e.

Senate Bill 375

SB 375, known as the Sustainable Communities Strategy and Climate Protection Act, was signed into law in September 2008. SB 375 builds upon AB 32 by requiring CARB to develop regional GHG reduction targets for automobile and light truck sectors for 2020 and 2035. The per capita GHG emissions reduction targets for passenger vehicles in the San Francisco Bay Area include a seven percent reduction by 2020 and a 15 percent reduction by 2035.

Consistent with the requirements of SB 375, the Metropolitan Transportation Commission (MTC) partnered with the Association of Bay Area Governments (ABAG), BAAQMD, and the Bay Conservation and Development Commission to prepare the region's Sustainable Communities Strategy (SCS) as part of the Regional Transportation Plan process. The SCS is referred to as Plan Bay Area 2040. Plan Bay Area 2040 establishes a course for reducing per capita GHG emissions through the promotion of compact, high-density, mixed-use neighborhoods near transit, particularly within identified Priority Development Areas (PDAs).

Regional and Local

2017 Clean Air Plan

To protect the climate, the 2017 CAP (prepared by BAAQMD) includes control measures designed to reduce emissions of methane and other super-GHGs that are potent climate pollutants in the near-term, and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

CEQA Air Quality Guidelines

The BAAQMD CEQA Air Quality Guidelines are intended to serve as a guide for those who prepare or evaluate air quality impact analyses for projects and plans in the San Francisco Bay Area. The

jurisdictions in the San Francisco Bay Area Air Basin utilize the thresholds and methodology for assessing GHG impacts developed by BAAQMD within the CEQA Air Quality Guidelines. The guidelines include information on legal requirements, BAAQMD rules, methods of analyzing impacts, and recommended mitigation measures.

Morgan Hill 2035 General Plan

The Morgan Hill 2035 General Plan includes goals, policies, and actions to avoid significant impacts due to greenhouse gases. The following policies are applicable to the proposed project.

Morgan Hill 2035 General Plan Policies: Greenhouse Gases	
Policy	Description
NRE-15.1	Greenhouse Gas Emission Reduction Targets. Maintain a greenhouse gas reduction trajectory that is consistent with the greenhouse gas reduction targets of Executive Order B-30-15 (40 percent below 1990 levels by 2030) and S-03-05 (80 percent below 1990 levels by 2050) to ensure the City is consistent with statewide efforts to reduce greenhouse gas emissions.
NRE-15.7	Mix of Uses in Employment Centers. Encourage employment areas to include a mix of support services to minimize the number of employee trips.
NRE-15.11	Green Building. Promote green building practices in new development.
NRE-16.1	Energy Standards for New Development. New development, including public buildings, should be designed to exceed State standards for the use of energy.
NRE-16.2	Energy Conservation. Promote energy conservation techniques and energy efficiency in building design, orientation, and construction.
NRE-16.5	Energy Efficiency. Encourage development project designs that protect and improve air quality and minimize direct and indirect air pollutant emissions by including components that promote energy efficiency.
NRE-16.6	Landscaping for Energy Conservation. Encourage landscaping plans for new development to address the planting of trees and shrubs that will provide shade to reduce the need for cooling systems and allow for winter daylighting.
NRE-16.7	Renewable Energy. Encourage new and existing development to incorporate renewable energy generating features, like solar panels and solar hot water heaters.

4.8.1.3 Existing Conditions

Unlike emissions of criteria and toxic air pollutants, which have regional and local impacts, emissions of GHGs have a broader, global impact. Global warming is a process whereby GHGs accumulating in the upper atmosphere contribute to an increase in the temperature of the earth and changes in weather patterns. GHG emissions from existing operations of the gas station on-site primarily result from vehicles traveling to and from the project site. The estimated emissions from

existing site operations are approximately 706 metric tons of carbon dioxide equivalent (MT/CO₂e) per year.

4.8.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
2) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?	☐	☐	☒	☐
Impact GHG-1: The project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. (Less than Significant Impact)				

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

Construction Emissions

GHG emissions associated with construction were computed to be 30 metric tons (MT) of carbon dioxide equivalent (CO₂e) for the total construction period. These are the emissions from on-site operation of construction equipment, vendor and hauling truck trips, and worker trips. Neither the City nor BAAQMD have an adopted threshold of significance for construction related GHG emissions, though BAAQMD recommends quantifying emissions and disclosing that GHG emissions would occur during construction. BAAQMD also encourages the incorporation of best management practices to reduce GHG emissions during construction where feasible and applicable.

Operational Emissions

The CalEEMod model, along with the project vehicle trip generation rates, was used to estimate daily emissions associated with operation of the fully developed site under the proposed project. As shown in Table 4.8-1 below, the net annual emissions resulting from operation of the proposed project, after deducting existing baseline gas station emissions, is predicted to be 252 MT of CO₂e in 2030.

Table 4.8-1: Annual Project GHG Emissions (CO ₂ e) in Metric Tons and Per Capita		
Source Category	Existing Land Use	Proposed Project
	2030	
Area	0	0
Energy Consumption	1	1
Mobile	705	957
Solid Waste Generation	0	0
Water Usage	0	0
Total (MT CO ₂ e/year)	706	958
Net Emissions (MT CO ₂ e/year)	--	252
<i>Significance Threshold (MT CO₂e/year)</i>		660
<i>Exceeds threshold?</i>		No
Source: Illingworth & Rodkin, Inc. <i>World Oil Gas Station Air Quality Report</i> . August 18, 2021. Page 35.		

To be considered an exceedance, the project must have emissions above the GHG significance threshold in metric tons per year in year of 2030. As shown in Table 4.8-1 above, the project's net annual emissions would not exceed the annual emissions bright-line threshold of 660 MT CO₂e per year in 2030. Therefore, the project would not exceed thresholds for GHG emissions. **(Less than Significant Impact)**

Impact GHG-2:	The project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. (Less than Significant Impact)
----------------------	--

As discussed under Impact GHG-1, the proposed project's operational GHG emissions would fall below the bright-line threshold of 660 MT CO₂e per year in 2030, which is based on the statewide GHG emissions reduction targets established by SB 32 and Executive Order B-30-15. Thus, the proposed project would not conflict or otherwise interfere with the statewide GHG reduction measures identified in CARB's Scoping Plan nor would the project conflict with SB 100 goals (discussed in Section 4.8.1.2). Therefore, the project would be consistent with state and local plans and policies pertaining to GHG emission reductions. **(Less than Significant Impact)**

4.9 HAZARDS AND HAZARDOUS MATERIALS

The following discussion is based, in part, on an Environmental Document Review completed by Cornerstone Earth Group on June 1, 2021, Soil Sampling Memorandum completed by Apex Companies, LLC on December 6, 2021, and a Peer Review Report of the Memorandum completed by Cornerstone Earth Group on June 14, 2022. These reports are attached as Appendix C.

4.9.1 Environmental Setting

4.9.1.1 *Regulatory Framework*

Overview

The storage, use, generation, transport, and disposal of hazardous materials and waste are highly regulated under federal and state laws. In California, the EPA has granted most enforcement authority over federal hazardous materials regulations to the California Environmental Protection Agency (CalEPA). In turn, local agencies have been granted responsibility for implementation and enforcement of many hazardous materials regulations under the Certified Unified Program Agency (CUPA) program.

Worker health and safety and public safety are key issues when dealing with hazardous materials. Proper handling and disposal of hazardous material is vital if it is disturbed during project construction. Cal/OSHA enforces state worker health and safety regulations related to construction activities. Regulations include exposure limits, requirements for protective clothing, and training requirements to prevent exposure to hazardous materials. Cal/OSHA also enforces occupational health and safety regulations specific to lead and asbestos investigations and abatement.

Federal and State

Federal Aviation Regulations Part 77

Federal Aviation Regulations, Part 77 Objects Affecting Navigable Airspace (FAR Part 77) sets forth standards and review requirements for protecting the airspace for safe aircraft operation, particularly by restricting the height of potential structures and minimizing other potential hazards (such as reflective surfaces, flashing lights, and electronic interference) to aircraft in flight. These regulations require that the Federal Aviation Administration (FAA) be notified of certain proposed construction projects located within an extended zone defined by an imaginary slope radiating outward for several miles from an airport's runways, or which would otherwise stand at least 200 feet in height above the ground.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law created a tax on the chemical and petroleum industries and provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the

environment. Over five years, \$1.6 billion was collected and the tax went to a trust fund for cleaning up abandoned or uncontrolled hazardous waste sites. CERCLA accomplished the following objectives:

- Established prohibitions and requirements concerning closed and abandoned hazardous waste sites;
- Provided for liability of persons responsible for releases of hazardous waste at these sites; and
- Established a trust fund to provide for cleanup when no responsible party could be identified.

The law authorizes two kinds of response actions:

- Short-term removals, where actions may be taken to address releases or threatened releases requiring prompt response; and
- Long-term remedial response actions that permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious, but not immediately life-threatening. These actions can be completed only at sites listed on the EPA's National Priorities List.

CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also established the National Priorities List. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.⁴⁴

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA), enacted in 1976, is the principal federal law in the United States governing the disposal of solid waste and hazardous waste. RCRA gives the EPA the authority to control hazardous waste from the "cradle to the grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also sets forth a framework for the management of non-hazardous solid wastes.

The Federal Hazardous and Solid Waste Amendments (HSWA) are the 1984 amendments to RCRA that focused on waste minimization, phasing out land disposal of hazardous waste, and corrective action for releases. Some of the other mandates of this law include increased enforcement

⁴⁴ United States Environmental Protection Agency. "Superfund: CERCLA Overview." Accessed May 11, 2020. <https://www.epa.gov/superfund/superfund-cercla-overview>.

authority for the EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program.⁴⁵

Government Code Section 65962.5

Section 65962.5 of the Government Code requires CalEPA to develop and update a list of hazardous waste and substances sites, known as the Cortese List. The Cortese List is used by state and local agencies and developers to comply with CEQA requirements. The Cortese List includes hazardous substance release sites identified by the Department of Toxic Substances Control (DTSC) and SWRCB.⁴⁶

Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) of 1976 provides the EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from TSCA, including, among others, food, drugs, cosmetics, and pesticides. The TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon, and lead-based paint.

California Accidental Release Prevention Program

The California Accidental Release Prevention (CalARP) Program aims to prevent accidental releases of regulated hazardous materials that represent a potential hazard beyond the boundaries of a property. Facilities that are required to participate in the CalARP Program use or store specified quantities of toxic and flammable substances (hazardous materials) that can have off-site consequences if accidentally released. The Santa Clara County Department of Environmental Health reviews CalARP risk management plans as the CUPA.

Asbestos-Containing Materials

Friable asbestos is any asbestos-containing material (ACM) that, when dry, can easily be crumbled or pulverized to a powder by hand, allowing the asbestos particles to become airborne. Common examples of products that have been found to contain friable asbestos include acoustical ceilings, plaster, wallboard, and thermal insulation for water heaters and pipes. Common examples of non-friable ACMs are asphalt roofing shingles, vinyl floor tiles, and transite siding made with cement. The EPA phased out use of friable asbestos products between 1973 and 1978. National Emission Standards for Hazardous Air Pollutants (NESHAP) guidelines require that potentially friable ACMs be removed prior to building demolition or remodeling that may disturb the ACMs.

⁴⁵ United States Environmental Protection Agency. "Summary of the Resource Conservation and Recovery Act." Accessed May 11, 2020. <https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act>.

⁴⁶ California Environmental Protection Agency. "Cortese List Data Resources." Accessed May 28, 2020. <https://calepa.ca.gov/sitecleanup/corteselist/>.

CCR Title 8, Section 1532.1

The United States Consumer Product Safety Commission banned the use of lead-based paint in 1978. Removal of older structures with lead-based paint is subject to requirements outlined by the Cal/OSHA Lead in Construction Standard, CCR Title 8, Section 1532.1 during demolition activities. Requirements include employee training, employee air monitoring, and dust control. If lead-based paint is peeling, flaking, or blistered, it is required to be removed prior to demolition.

Fire Hazard Severity Zones

CAL FIRE is required by law to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. Referred to as Fire Hazard Severity Zones (FHSZs), these maps influence how people construct buildings and protect property to reduce risk associated with wildland fires. FHSZs are divided into areas where the state has financial responsibility for wildland fire protection, known as state responsibility areas (SRAs), and areas where local governments have financial responsibility for wildland fire protection, known as local responsibility areas (LRAs). Homeowners living in an SRA are responsible for ensuring that their property is in compliance with California's building and fire codes. Only lands zoned for very high fire hazard are identified within LRAs.

Local

Morgan Hill 2035 General Plan

The Morgan Hill 2035 General Plan includes goals, policies, and actions to avoid significant impacts due to hazards and hazardous materials. The following policies are applicable to the proposed project.

Morgan Hill 2035 General Plan Policies: Hazards and Hazardous Materials

Policy	Description
NRE-12.3	Control Measures. Require construction and demolition projects that have the potential to disturb asbestos (from soil or building material) to comply with all the requirements of the California Air Resource Board's air toxics control measures (ATCMs) for Construction, Grading, Quarrying, and Surface Mining Operations.
SSI-4.3	Use and Handling Requirements. Continue a program of regular inspections and monitoring to ensure compliance with local, State, and federal regulations, in order to reduce the risks associated with the use and handling of hazardous materials and wastes.
SSI-4.5	Storage and Usage. Regularly inspect activities that store and/or use hazardous materials, including above-ground and underground storage tanks and related equipment, to ensure compliance with the City's Hazardous Materials Storage Ordinance (HMSO).
SSI-4.16	Contaminated Soil Mitigation. Require new or expanding development projects in areas contaminated from previous discharges to mitigate their environmental effects.

4.9.1.2 Existing Conditions

Historic and Current Uses of the Site

From 1917 to 1950, the western portion of the site was occupied by residences and associated outbuildings. The eastern portion of the project site was historically used for agricultural purposes, particularly orchards from the 1920s until 1963. The existing gas station was constructed on the site by 1963 and the uses of the site have not changed since this period.

On-site Environmental Conditions

Regulatory Database Review and Previous Environmental Studies

The existing on-site gas station is listed as a closed leaking underground storage tank (LUST) case on the State Water Resources Control Board Geotracker database, which is a part of the Cortese List. A fuel leak was discovered on-site in February of 1986 and a Cleanup and Abatement Order was issued by the Regional Water Quality Control Board in March of 1986. Since 1986, a number of studies were completed at the site to evaluate soil, soil gas, and groundwater quality. Remediation has included the replacement of five former USTs that contained gasoline and waste oil with the existing double-walled gasoline UST, the installation of groundwater extraction and treatment (GWET) systems, and the installation of air/oxygen sparging and ozone sparging systems. These remedial measures reduced contaminant (e.g., total petroleum hydrocarbons, and petroleum constituents such as benzene, toluene, ethylbenzene, methyl ter-butyl ether (MTBE), and xylenes) concentrations at the site to levels that meet the applicable State Water Resources Control Board's (SWRCB) Low-Threat Underground Storage Tank Policy criteria.

The Low-Treat Underground Storage Tank Case Closure Policy became effective in August 2012. The policy established statewide guidelines for UST release sites that pose a low threat to human health and the environment. The general criteria that must be met by UST cases under this policy include requirements that the unauthorized release is located within the service area of a public water system, the unauthorized release consists only of petroleum, the unauthorized (primary) release from the UST system has been stopped, that soil or groundwater have been tested for MTBE and results have been report to the Regional Water Quality Control Board. The policy requires oversight agencies to review all cases against the criteria set forth in the policy for potential case closure and to close all cases that are determined to meet all the criteria listed in the policy. In 2013 the Santa Clara County Department of Environmental Health (SCCDEH) completed a review of the LUST case. The SCCDEH confirmed that the completion of the investigation and cleanup of the reported release in accordance with the SWRCB requirements. Based on SCCDEH's review of the case compared to the SWRCB's Low-Threat Underground Storage Tank Case Closure Policy, the residual contamination at the site meets the criteria established by the SWRCB and, therefore, the fuel leak case was closed.

On September 10, 2015, SCCDEH issued a case closure letter. Since residual contamination remained at the site, the closure letter and associated case closure summary states that SCCDEH and the appropriate planning department shall be notified that residual contamination exists on the

property and list any necessary mitigation (i.e., preparation of a Site Management Plan and Health and Safety Plan), to ensure compliance with SCCDEH's site management requirements.

Asbestos-Containing Materials and Lead-Based Paint

The buildings on-site were constructed prior to 1978 and are likely to have materials that contain asbestos-containing materials (ACMs) and/or lead-based paints (LBPs).

On-site Soil Sampling for Agricultural Chemicals and Related Metals

Given the site was previously used for agricultural operations and assumed to possibly contain residual pesticides and no previous sampling for pesticides has been completed at the site, it was recommended that soil sampling at the site for the presence of agricultural chemicals (i.e., organochlorine pesticides and associated metals including lead and arsenic) be completed prior to start of earthwork activities. In addition, given the age of the existing on-site structures and due to the previous residences and associated outbuildings that were located on the western portion of the site, sampling for lead and pesticides (used for controlling termites) was recommended next to the existing on-site structures (which may contain lead-based paint) and near the locations of the previous residences and outbuildings (for possible residual lead and pesticides).⁴⁷

As a result of the above recommendations, in November 2021, 10 soil samples were collected, to analyze organochlorine pesticides, mercury, and lead, from a depth of two feet below ground surface. The sample results showed lead, arsenic, and mercury concentrations were below natural background levels.⁴⁸ Organochlorine pesticides, DDE and DDT, were detected in one of the 10 samples. However, the concentrations of these pesticides were below environmental screening levels for commercial and residential properties. Concentrations were also below the screening levels established for the protection of construction workers.

A peer review of the site's organochlorine pesticide and related metal November 2021 soil sample results was completed in June 2022. Since the greatest pesticide concentrations are typically present in near-surface soil, it was recommended that additional samples be collected from the surface to six inches below the ground surface based on DTSC's guidance for sampling agricultural properties.

Surrounding Uses

The site was surrounded by orchards to the east, residential and commercial uses to the north and west (of Monterey Road), and an orchard and then vacant land to the south from at least the 1930s to the 1950s. In 1960s and 1970s, the site was surrounded by vacant land to the north, east, and south, and commercial uses to the west of Monterey Road. By the 1980s, commercial uses were

⁴⁷ No additional sampling was completed for petroleum or its constituents given the UST meets the Low-Threat UST Case Closure Policy criteria established by the SWRCB and that a closure letter was issued by SCCDEH in September 2015.

⁴⁸ Apex. *Technical Memo of Findings from Shallow Soil Sampling on November 3, 2021 at World Oil #52, 16720 Monterey Road, Morgan Hill, California*. December 6, 2021. Page 3.

developed to the north of the site and by 2018, residences were developed to the east of the site. The site is surrounded by commercial (restaurant) uses to the north, Monterey Road and commercial (retail and restaurant) uses to the west, San Pedro Avenue and vacant land to the south, and townhomes to the east.

Based on information in the Geotracker, there is a closed LUST listed under the former Redtree Properties at 140 San Pedro Avenue (located approximately 340 feet southeast of the site). The release of petroleum hydrocarbons was reported in October 1991, after a 550-gallon UST was removed from the site. Soil sampling and groundwater monitoring for total petroleum hydrocarbons and other petroleum and diesel-based chemicals were completed in May 1992. No contaminants of concern were detected in the soil and low levels of total petroleum hydrocarbons as diesel were detected. In March 1994, the City of Morgan Hill Fire Department issued a case closure letter to Redtree Properties (previous property owner) and no further action was required.

Another closed LUST case is listed and located at 16873 Monterey Road, approximately 785 feet northwest of the site. The release of contaminants was reported in 2006. Soil and groundwater remediation and monitoring were completed at the property. Although residual contamination was found in groundwater and soil, based on an August 2011 case closure letter from SCCDEH, the contaminants would not result in a continuing, significant threat to groundwater resources, human health, or the environment.

Airport Hazards

The project site is located approximately four miles northwest of the San Martin Airport. The project is not located within an Airport Influence Area (AIA) or FAA Height Restriction Area.

Schools

The closest school to the project site is Oakwood Preparatory School, located approximately 1.5 miles south of the project site.

Wildland Fires

The project site is not located within a CAL FIRE FHSZ and is located approximately 1,900 feet east of a SRA.⁴⁹ According to the City's Wildland Urban Interface, the project site is not located within a very high FHSZ. The nearest very high FHSZ to the site located approximately 350 feet west.⁵⁰ The project site is separated from the very high FHSZ by Monterey Road and commercial development.

⁴⁹ California Board of Forestry and Fire Protection. "Fire Hazard Severity Zones Maps." Accessed June 23, 2022. http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones.

⁵⁰ City of Morgan Hill. "Fire Hazard Severity Zones." Accessed June 23, 2022. <https://www.morganhill.ca.gov/DocumentCenter/View/3037/Fire-Hazard-Severity-Zones-Adopted3-18-09?bidId=>

4.9.2 Impact Discussion

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

Impact HAZ-1: The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. **(Less than Significant Impact)**

The proposed project is a gas station redevelopment project that would replace an existing gas station with four pumping stations (eight gas dispensers) and an 880 square foot retail store with a gas station that would have six pump stations (12 dispensers) and a 2,115 square foot retail store. The project also proposes to construct a new fuel canopy and UST system. Hazardous substances

such as fuels, oils, and detergents would continue to be present, similar to the current uses at the site. Materials such as solvents, paints, and fuels could also be utilized during project construction. Compliance with applicable federal, state, and local handling, storage, and disposal requirements would ensure that no significant hazards to the public or the environment are created by the routine transport, use, or disposal of these substances. Therefore, the project would not create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials. **(Less than Significant Impact)**

Impact HAZ-2:	The project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. (Less than Significant Impact with Mitigation Incorporated)
----------------------	---

Petroleum-Based Contamination

As discussed in Section 4.9.1.2 Existing Conditions above, the existing gas station is listed as a closed case on the LUST database. Based on the summary in the 2015 case closure letter, there was residual petroleum-related chemicals in soil and groundwater on-site. As a result, areas of impacted soil, groundwater, or soil vapor may be encountered during construction. Based on the requirements stated in the case closure letter, the proposed project would implement mitigation measures MM HAZ-2.1 and MM HAZ-2.2 listed below in order to ensure appropriate management practices for handling impacted soil, soil vapor, and groundwater are followed during project construction.

Mitigation Measures: The project shall implement the following mitigation measures to reduce potential impacts resulting from the closed LUST case on the project site.

MM HAZ-2.1: The project applicant shall prepare a Site Management Plan (SMP) prior to issuance of any grading permits to reduce or eliminate exposure risk to human health and the environment, specifically, potential risks associated with the presence of petroleum-based contaminants. The SMP shall include, but is not limited to, the following elements to mitigate potential risks associated with environmental conditions:

- Procedures for transporting and disposing the waste material generated during removal activities, if such transport and disposal is necessary;
- Procedures for stockpiling soil on-site if such stockpiling is necessary;
- Provisions for collecting soil samples to prior to grading activities;
- Provisions for confirmation soil sampling as appropriate to obtain a "No Further Action" letter (or equivalent) from the state and/or local agency assuming oversight for the site;
- Procedures to ensure that fill and cap materials are verified as clean truck routes;

- Staging and loading procedures and record keeping requirement.

The SMP shall be submitted to the Santa Clara County Department of Environmental Health (SCCDEH) for review and approval. Copies of the approved SMP shall be provided to the City's Development Services Department prior to issuance of any grading permits.

MM HAZ-2.2:

All contractors and subcontractors at the project site shall develop a health and safety plan (HSP) specific to their scope of work and based upon the known environmental conditions for the site. The HSP shall be implemented under the direction of a Site Safety and Health Officer. The HSP shall include, but not limited to, the following elements, as applicable:

- Provisions for personal protection and monitoring exposure to construction workers;
- Procedures to be undertaken in the event that contamination is identified above action levels or previously unknown contamination is discovered;
- Procedures for the safe storage, stockpiling, and disposal of contaminated soils;
- Provisions for the on-site management and/or treatment of contaminated groundwater during extraction or dewatering activities;
- Emergency procedures and responsible personnel.

The HSP shall be submitted to the Santa Clara County Department of Environmental Health (SCCDEH). Copies of the approved HSP shall be provided to the City's Development Services Department prior to issuance of any grading permits.

Implementation of mitigation measures MM HAZ-2.1 and MM HAZ-2.2 would ensure that hazardous conditions related to residual LUST contaminants on-site would not create a significant hazard to the public or to the environment. **(Less than Significant Impact with Mitigation Incorporated)**

Agricultural Chemicals and Related Metals

Based on the soil samples collected at two feet below the ground surface in November 2021, the concentrations of organochlorine pesticides were below environmental screening levels and pesticide-related metals and lead from LBP were below background levels. However, DTSC guidance recommends that soil samples at agricultural properties be collected from the upper zero to six inches of soil because the greatest pesticide concentrations are typically present in surficial soil. As a result, mitigation measures MM HAZ-2.3 through MM HAZ-2.5 will be required to ensure that the

impacts from agricultural chemicals and related metals would be reduced to less than significant levels.

Mitigation Measures: The project shall implement the following mitigation measures to reduce potential impacts resulting from the agricultural chemicals and related metals.

MM HAZ-2.3: Prior to issuance of a site grading permit, the project applicant shall collect additional soil samples (of organochlorine pesticides and related metals) from the upper zero to six inches of soil to ensure soil samples at the project site are collected in accordance with the California Department of Toxic Substance Control (DTSC) guidance. Soil samples shall be taken in areas where soil disturbances are anticipated as part of the proposed development.

If the concentrations of the analyzed pesticides and related metals in soil samples exceed the most current risk-based screening levels, prior to issuance of any grading permits, the project applicant shall enter into the Santa Clara County Department of Environmental Health's (SCCDEH's) Voluntary Cleanup Program to obtain regulatory oversight to remediate the contaminated soil discovered. A Removal Action Workplan (RAW), or equivalent, shall be prepared for review and approval by SCCDEH that describes the process for the removal of all impacted soil to below established cleanup levels. The RAW shall include a Health and Safety Plan (HSP) for construction worker safety and include measures to control dust and other potential exposure to neighboring properties during remediation. A copy of the SCCDEH-approved RAW shall be provided to the City's Development Services Department prior to issuance of any grading permits.

MM HAZ-2.4: Removal work shall be completed by a California-licensed hazardous waste contractor under the supervision of a Professional Geologist or Engineer. Dust control measures and dust monitoring shall be implemented at the site during demolition, removal of current site structures, and excavation of impacted soil in accordance with the approved Removal Action Workplan (or the equivalent) and to the satisfaction of the City's Development Services Department.

MM HAZ-2.5: After post-remediation sampling has confirmed that the soil has been removed to meet the approved soil cleanup levels, the project applicant shall prepare and submit a final report to SCCDEH and a "No Further Action" or "Closure" letter shall be obtained. This closure letter shall be submitted to the City's Development Services Department.

Implementation of mitigation measures MM HAZ-2.3 through MM HAZ-2.5 would ensure that hazardous conditions related to agricultural chemicals and related metals (as well as lead in soil

from LBP) on-site would not create a significant hazard to the public or to the environment. **(Less than Significant Impact with Mitigation Incorporated)**

Asbestos-Containing Materials and Lead-Based Paint

As discussed in Section 4.9.1.2 Existing Conditions, the project site was historically used for agricultural purposes and contained structures that were constructed prior to 1978 that likely contained ACMs or LBPs. Soil adjacent to structures that were painted with LCPs can become impacted with lead as a result of weathering and/or peeling of the painted surfaces. Soil near wood frame structures could also be impacted by pesticides historically used to control termites.

The project would demolish the existing buildings, which could release asbestos particles and expose construction workers and nearby residents to harmful levels of asbestos, which would constitute a significant impact. The project would conform with the following regulatory programs and mitigation measures to reduce impacts due to potential ACMs and LBPs to less than significant levels.

Mitigation Measures: The project shall implement the following mitigation measure to reduce impacts resulting from disturbance of lead-based paint or ACMs.

MM HAZ-2.6: Prior to issuance of a demolition permit for on-site structures, the project applicant shall consult with certified Asbestos and/or Lead Risk Assessors to complete and submit for review to the Building Division an asbestos and lead survey. If asbestos-containing materials or lead-containing materials are not discovered during the survey, further mitigation related to asbestos-containing materials or lead-containing materials shall not be required. If asbestos-containing materials and/or lead-containing materials are discovered by the survey, the project applicant shall prepare a work plan to demonstrate how the on-site asbestos-containing materials and/or lead-containing materials shall be removed in accordance with current California Occupational Health and Safety (Cal/OSHA) Administration regulations and disposed of in accordance with all CalEPA regulations, prior to the demolition and/or removal of the on-site structures. The plan shall include the requirement that work shall be conducted by a Cal/OSHA registered asbestos and lead abatement contractor in accordance with Title 8 CCR1529 and Title 8 CCR 1532.1 regarding asbestos and lead training, engineering controls, and certifications. The applicant shall submit the work plan to the City for review and approval. The City has the right to defer the work plan to the Santa Clara County Department of Environmental Health for additional review. Materials containing more than one percent asbestos that is friable are also subject to BAAQMD regulations. Removal of materials containing more than one percent friable asbestos shall be completed in accordance with BAAQMD Section 11-2-303.

Compliance with regulatory requirements and implementation of mitigation measure MM HAZ-2.6 would ensure that ACMs and LBPs on-site would not create a significant hazard to the public or to the environment. Therefore, impacts would be less than significant. **(Less than Significant with Mitigation Incorporated)**

Impact HAZ-3:	The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. (No Impact)
----------------------	---

The closest school to the project site is Oakwood Preparatory School, located approximately 1.5 miles south of the project site. Therefore, the project would not emit hazardous emissions or handle hazardous materials/substances within one-quarter mile of a school. **(No Impact)**

Impact HAZ-4:	The project would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment. (Less than Significant Impact with Mitigation Incorporated)
----------------------	---

As discussed in Section 4.9.1.2 Existing Conditions, the project site is on a list of hazardous materials sites pursuant to Government Code Section 65962.5 (i.e., the Cortese List of Data Resources). The site is listed on Geotracker as a closed LUST case. As discussed in the response to Impact HAZ-2, the impacts of contaminants from the former release would be reduced to less than significant with the implementation of mitigation measures MM HAZ-2.1 and MM HAZ-2.2. Therefore, the project would not create a significant hazard (related to the listed closed LUST case) to the public or environment. **(Less than Significant Impact with Mitigation Incorporated)**

Impact HAZ-5:	The project would not be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport. The project would not result in a safety hazard or excessive noise for people residing or working in the project area. (No Impact)
----------------------	--

As discussed in Section 4.9.1.2 Existing Conditions, the project site is located approximately four miles northwest of the San Martin Airport. Due to its distance from the airport, the project is not located within an AIA or FAA Height Restriction Area. Therefore, the project would not result in an airport safety hazard. **(No Impact)**

Impact HAZ-6:	The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (Less than Significant Impact)
----------------------	--

The proposed project would be constructed in accordance with current building and fire codes to ensure structural stability and safety. The site development plans would be reviewed by CAL FIRE to ensure fire protection design features are incorporated and adequate emergency access is

provided. For these reasons, operations of the proposed project would not interfere with the City-adopted Emergency Operations Plan, or any adopted statewide emergency response or evacuation plans. **(Less than Significant Impact)**

Impact HAZ-7:	The project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. (No Impact)
----------------------	---

As discussed in Section 4.9.1.2 Existing Conditions, the project site is not located within a designated high or very high FHSZ. The project site is located approximately 350 feet east of the edge a very high FHSZ. The site separated from this area by Monterey Road and commercial development. The project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires. **(No Impact)**

4.10 HYDROLOGY AND WATER QUALITY

The following discussion is based, in part, on a Hydraulic Impact Study completed by Schaaf & Wheeler, Inc. on July 21, 2022. The report is attached as Appendix D.

4.10.1 Environmental Setting

4.10.1.1 *Regulatory Framework*

Federal and State

The federal Clean Water Act and California's Porter-Cologne Water Quality Control Act are the primary laws related to water quality in California. Regulations set forth by the EPA and the SWRCB have been developed to fulfill the requirements of this legislation. EPA regulations include the National Pollutant Discharge Elimination System (NPDES) permit program, which controls sources that discharge pollutants into the waters of the United States (e.g., streams, lakes, bays, etc.). These regulations are implemented at the regional level by the RWQCBs. The project site is within the jurisdiction of the Central Coast RWQCB.

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) established the National Flood Insurance Program (NFIP) to reduce impacts of flooding on private and public properties. The program provides subsidized flood insurance to communities that comply with FEMA regulations protecting development in floodplains. As part of the program, FEMA publishes Flood Insurance Rate Maps (FIRMs) that identify Special Flood Hazard Areas (SFHAs). An SFHA is an area that would be inundated by the one-percent annual chance flood, which is also referred to as the base flood or 100-year flood.

Statewide Construction General Permit

The SWRCB has implemented an NPDES General Construction Permit for the State of California (Construction General Permit). For projects disturbing one acre or more of soil, a Notice of Intent (NOI) must be filed with the RWQCB by the project sponsor, and a Storm Water Pollution Prevention Plan (SWPPP) must be prepared by a qualified professional prior to commencement of construction and filed with the RWQCB by the project sponsor. The Construction General Permit includes requirements for training, inspections, record keeping, and, for projects of certain risk levels, monitoring. The general purpose of the requirements is to minimize the discharge of pollutants and to protect beneficial uses and receiving waters from the adverse effects of construction-related storm water discharges.

Regional and Local

Phase II Small MS4 General Permit

Gilroy, Morgan Hill, and the portion of Santa Clara County that drains to the Pajaro River-Monterey Bay watershed, which includes the project site, are traditional permittees under the state's Phase II

Small MS4 General Permit. Since these regions are located in RWQCB Region 3 (Central Coast Region), they are subject to the Central Coast Post-Construction Requirements per Provision E.12.k of the Phase II Permit. The Central Coast Post-Construction Requirements became effective in 2014 and are specific to the Central Coast Region. Post-construction controls are permanent features of a new development or redevelopment project designed to reduce pollutants in stormwater and/or erosive flows during the life of the project. Types of post-construction controls include LID site design, pollutant source control, stormwater treatment, and hydromodification management measures. The LID approach reduces stormwater runoff impacts by minimizing disturbed areas and impervious surfaces, maximizing opportunities for infiltration and evapotranspiration, and using stormwater as a resource (e.g., rainwater harvesting for non-potable uses).⁵¹

Water Resources Protection Ordinance and District Well Ordinance

Valley Water operates as the flood control agency for Santa Clara County. Their stewardship also includes creek restoration, pollution prevention efforts, and groundwater recharge. Permits for well construction and destruction work, most exploratory boring for groundwater exploration, and projects within Valley Water property or easements are required under Valley Water's Water Resources Protection Ordinance and District Well Ordinance.

2021 Groundwater Management Plan

This 2021 Groundwater Management Plan (GWMP) describes the Valley Water's comprehensive groundwater management framework, including existing and potential actions to achieve basin sustainability goals and ensure continued sustainable groundwater management. The GWMP covers the Santa Clara and Llagas subbasins, which are located entirely in Santa Clara County. Valley Water manages a diverse water supply portfolio, with sources including groundwater, local surface water, imported water, and recycled water. About half of the county's water supply comes from local sources and the other half comes from imported sources. Imported water includes the District's State Water Project and Central Valley contract supplies and supplies delivered by the San Francisco Public Utilities Commission (SFPUC) to cities in northern Santa Clara County. Local sources include natural groundwater recharge and surface water supplies. A small portion of the county's water supply is recycled water.

Local groundwater resources make up the foundation of the county's water supply, but they need to be augmented by the District's comprehensive water supply management activities to reliably meet the county's needs. These include the managed recharge of imported and local surface water and in-lieu recharge through the provision of treated surface water, acquisition of supplemental water supplies, and water conservation and recycling.⁵²

⁵¹ City of Gilroy, City of Morgan Hill, and County of Santa Clara. *Stormwater Management Guidance Manual for Low Impact Development & Post-Construction Requirements*. June 2015.

⁵² Valley Water. *2021 Groundwater Management Plan, Santa Clara and Llagas Subbasins*. 2021.

Dam Safety

Since August 14, 1929, the State of California has regulated dams to prevent failure, safeguard life, and protect property. The California Water Code entrusts dam safety regulatory power to California Department of Water Resources, Division of Safety of Dams (DSOD). The DSOD provide oversight to the design, construction, and maintenance of over 1,200 jurisdictional sized dams in California.⁵³

As part of its comprehensive dam safety program, Valley Water routinely monitors and studies the condition of each of its 10 dams. Valley Water also has its own Emergency Operations Center and a response team that inspects dams after significant earthquakes. These regulatory inspection programs reduce the potential for dam failure.

Construction Dewatering Waste Discharge Requirements

Each of the RWQCBs regulate construction dewatering discharges to storm drains or surface waters within its Region under the NPDES program and Waste Discharge Requirements.

Local

Morgan Hill 2035 General Plan

The Morgan Hill 2035 General Plan includes goals, policies, and actions to avoid significant impacts to hydrology and water quality. The following policies are applicable to the proposed project.

Morgan Hill 2035 General Plan Policies: Hydrology and Water Quality

Policy	Description
SSI-16.2	Drainage System Capacity. Ensure that the level of detention or retention provided on the site of any new development is compatible with the capacity of the regional storm drainage system.
SSI-16.3	Stormwater Management Plans. Require a stormwater management plan for each proposed development, to be presented early in the development process and describe the design, implementation, and maintenance of the local drainage.

Morgan Hill Municipal Code

Section 15.80.160 of the Morgan Hill Municipal Code requires, for projects located in a flood zone, a flood study to demonstrate that implementation of any new construction would not increase the base flood elevation by more than one foot.

⁵³ California Department of Water Resources, Division of Safety of Dams. [https://water.ca.gov/Programs/All-Programs/Division-of-Safety-of-Dams#:~:text=Since%20August%2014%2C%201929%2C%20the,Safety%20of%20Dams%20\(DSOD\).](https://water.ca.gov/Programs/All-Programs/Division-of-Safety-of-Dams#:~:text=Since%20August%2014%2C%201929%2C%20the,Safety%20of%20Dams%20(DSOD).) Accessed June 9, 2020.

4.10.1.2 Existing Conditions

Hydrology

The City of Morgan Hill is divided into several hydrologically distinct drainage areas, with each having a system of conveyance facilities, pumps, and detention basins to collect and dispose the runoff. The stormwater runoff from these areas is collected and ultimately discharged into creeks that flow through the city and are tributary to either of the Monterey Bay or San Francisco Bay.⁵⁴

Existing On-Site Drainage

The project site has 15,017 square feet of impervious surfaces and 5,186 square feet of pervious surfaces (at the eastern undeveloped portion of the site). The City of Morgan Hill is divided into several hydrologically distinct drainage areas. Each of these areas consist of conveyance facilities, pumps, and detention basins to collect and dispose of the runoff. The storm runoff from these areas is discharged into creeks or ponds that flow through the City and that are tributaries to Monterey Bay or San Francisco Bay. The project site is located in the Little Llagas Creek storm water drainage basin and drains to Monterey Bay.⁵⁵ The project site does not contain retention or detention facilities. The project site has stormwater collection facilities that convey stormwater to the City's stormwater system.

Groundwater

The site is located in the Santa Clara Valley Subbasin of the Santa Clara Valley Groundwater Basin. The site is within the Coyote Valley Recharge Area designated by Valley Water.⁵⁶ According to the geotechnical investigation completed for the site, groundwater was encountered at a depth of 15 feet below the ground surface in 2020. Historic groundwater depths were reported to be approximately six feet below the ground surface.

Flood Hazard Zones

The project site is located approximately 400 feet east of West Little Llagas Creek. The site is located within FEMA flood hazard Zone AE. Zone AE is a special flood hazard area subject to inundation by the one percent annual chance flood with base flood elevation determined. Base flood elevations (BFEs) at the site range from approximately 330 to 343 feet above mean sea level.

A seiche is an oscillation of the surface of a lake or landlocked sea varying in period from a few minutes to several hours. There are no landlocked bodies of water near the project site that in the event of a seiche would affect the site. A tsunami is a series of water waves caused by the displacement of a body of water, such as an ocean or a large lake. Due to the immense volumes of

⁵⁴ City of Morgan Hill. 2018 Storm Drainage System Master Plan. September 2018.

⁵⁵ City of Morgan Hill. 2018 Storm Drainage System Master Plan. September 2018.

⁵⁶ Santa Clara Valley Water District. *Groundwater Management Plan*. November 22, 2016. Accessed July 5, 2022. <https://www.valleywater.org/your-water/where-your-water-comes-from/groundwater>.

water and energy involved, tsunamis can devastate coastal regions. The project site does not lie within a tsunami inundation hazard area.⁵⁷

4.10.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
2) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
3) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☒	☐
– result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
– substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	☒	☐
– create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
– impede or redirect flood flows?	☐	☐	☒	☐
4) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
5) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

⁵⁷ California Emergency Management Agency. California Official Tsunami Inundation Map. Accessed July 5, 2022. <https://www.conservation.ca.gov/cgs/tsunami/maps>.

Impact HYD-1:	The project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. (Less than Significant Impact)
----------------------	---

Construction Water Quality Impacts

As discussed in Section 4.10.1.1 above, the City of Morgan Hill is located within the jurisdiction of the Central Coast RWQCB, which is subjected to the Central Coast Post Construction Requirements under the State's Phase II Permit. New development projects are required to implement source control measures to reduce pollutants in stormwater.

There is the potential for water quality impacts to occur during project construction. In addition to generating dust, litter, oil, and other pollutants that could contaminate runoff from the site, construction activities would increase the potential for erosion and sedimentation to occur by disturbing and exposing underlying soil to the erosive forces of water and wind.

In accordance with the City of Morgan Hill's standard conditions described below would be included in the project to reduce construction-related water quality impacts to a less than significant level.

Standard Condition: In accordance with the City of Morgan Hill Standard Conditions of Approval and the Construction General Permit, the following condition shall be included in the project to reduce construction-related water quality impacts.

The following BMPs shall be implemented during project construction:

- Burlap bags filled with drain rock will be installed around storm drains to route sediment and other debris away from the drains.
- Earthmoving or other dust-producing activities will be suspended during periods of high winds.
- All exposed or disturbed soil surfaces will be watered at least twice daily to control dust.
- Stockpiles of soil or other materials that can be blown by the wind will be watered or covered.
- All trucks hauling soil, sand, and other loose materials will be covered and all trucks will be required to maintain at least two feet of freeboard.
- All paved access roads, parking areas, staging areas and residential streets adjacent to the construction site will be swept daily (with water sweepers).
- Vegetation in disturbed areas will be replanted as quickly as possible.

Standard Condition: In accordance with the City of Morgan Hill Standard Conditions of Approval and the Construction General Permit, the following condition shall be included in the project to reduce construction-related water quality impacts.

- As required by the State Water Resources Control Board (SWRCB) Order No. 2009-0009-DWQ, construction activity resulting in a land disturbance of one acre or more of soil, or whose projects are part of a larger common plan of development that in total disturbs more than one acre, are required to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002 for Discharges of Storm Water Associated with Construction Activity (General Permit). To be permitted with the SWRCB under the General Permit, owners must file a complete Notice of Intent (NOI) online at <http://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp> and develop a Storm Water Pollution Prevention Plan (SWPPP) Manual in accordance with the General Permit. The SWPPP Manual shall follow the CASQA SWPPP template/format at <https://www.casqa.org/store/products/tabid/154/p-167-construction-handbookportal-initial-subscription.aspx> and shall be approved by Public Works Engineering. A Waste Discharger Identification (WDID) number to be issued to the construction site after the SWRCB receives and verifies the submitted ONLINE NOI information. The WDID number and approved SWPPP Manual shall be provided to Public Works and the Building Department prior to any approval of grading activities. In addition, the project shall adhere with the following for NPDES General Permit SWPPP inspections and compliance:
 - All project onsite and offsite construction activity shall have the site inspected by a qualified third party SWPPP inspector (i.e., QSD, QSP, or RCE).
 - SWPPP inspections shall occur weekly during the rainy season (September 15 through May 1).
 - SWPPP inspections shall occur bi-weekly during the non-rainy season.
 - 48 hours prior to and following a forecasted rain event, SWPPP inspections shall occur in addition to items two or three above.
 - Per each of the inspection conditions 2, 3, or 4, the NPDES SWPPP inspector shall certify in writing to the Building and Public Works Department if the site is in compliance or non-compliance with the NPDES General Permit for Stormwater, site SWPPP Manual, and Water Pollution Control Drawings (per the CMH-SWPPP Inspection Check List to be provided by Public Works. QSD/QSP inspectors shall forward onsite and offsite information/certification to the building (on-site private property issues) and Public Works (public right-of-way issues) inspectors respectively.
 - Prior to rain events, BMPs not in compliance shall be corrected immediately.
 - Illicit discharges per the NPDES General Permit, non-compliance of tracking control, and inlet protection within the public right of way shall be addressed immediately.
 - Other non-compliance issues shall be addressed within a 24-hour period.
 - Non-compliance issues which have been corrected shall be verified by NPDES SWPPP Inspector by a follow up inspection.
 - BMPs maintenance/inspections shall include tree protection if applicable.

Furthermore, the project could require groundwater pumping and dewatering during construction. As discussed in Section 4.10.1.2 Existing Conditions, groundwater is encountered at the project site at a depth of approximately six to 15 feet. As discussed in Section 4.9 Hazards and Hazardous Materials, areas of impacted groundwater (due to residual petroleum-related chemicals) could be

encountered during construction. Compliance with MM HAZ-2.2 would ensure that the HSP developed for the project would include provisions for the on-site management and/or treatment of contaminated groundwater during dewatering activities. Additionally, dewatering would be required to follow all NPDES and LID site design, identified in Section 4.10.1.1 Regulatory Framework, in order to minimize the discharge of pollutants into waterways.

With the implementation of the above standard conditions, the project would not violate any water quality standards during construction and would reduce potential impacts to less-than-significant levels. **(Less than Significant Impact)**

Post-Construction Water Quality

Stormwater runoff from urban uses such as the proposed project contains metals, pesticides, herbicides, and other contaminants such as oil, grease, lead, and animal waste. The project would replace 15,017 square feet of impervious surface and add 1,975 square feet of new impervious area for a total of 16,992 square feet of impervious surface area. The project would result in a net increase of approximately 1,975 square feet of impervious surface area. The project would conform to the City's Stormwater Management Guidance Manual for LID and Post-Construction Requirements, which would ensure that increases in stormwater runoff pollutant loads, rates and volumes generated by the project's increase in impervious surface area on the site would be controlled through the implementation of pollutant source controls and LID-based treatment controls.⁵⁸ Additionally, the project would incorporate the following standard conditions to ensure proper storage of outdoor materials.

Standard Conditions: The project's post-construction treatment control BMPs shall incorporate, at a minimum, either a volumetric or flow-based treatment control design standard, or both, as identified below to mitigate (infiltrate, filter or treat) stormwater runoff.

- Volumetric Treatment Control BMP
 - The 85th percentile 24-hour runoff event determined as the maximized capture stormwater volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87; or
 - The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in California Stormwater Best Management Practices Handbook – Industrial/Commercial; or
- The volume of runoff produced from a historical-record based reference 24-hour rainfall criterion for “treatment” that achieves approximately the same reduction in pollutant loads achieved by the 85th percentile 24-hour runoff event. Flow-Based Treatment Control BMP

⁵⁸ City of Gilroy, City of Morgan Hill and County of Santa Clara. *Stormwater Management Guidance Manual for Low Impact Development and Post-Construction Requirements*. June 2015.

- The flow of runoff produced from a rain event equal to at least two times the 85th percentile hourly rainfall intensity for the area; or
- The flow of runoff produced from a rain event that will result in treatment of the same portion of runoff as treated using volumetric standards above.

Standard Conditions: In accordance with the City of Morgan Hill Standard Conditions of Approval and the Construction General Permit, the following condition shall be included in the project to manage stormwater runoff.

- A Stormwater Runoff Management Plan (SWRMP) would be included. The SWRMP shall include sufficient information to evaluate the environmental characteristics of affected areas, the potential impacts of the proposed development on water resources, and the effectiveness and acceptability of measures (post-construction BMPs) proposed for managing stormwater runoff.
 - The SWRMP shall be prepared under the direction of a professional civil engineer registered in the State of California. The responsible professional civil engineer shall stamp and then the approved SWRMP.
 - The project applicant shall provide a signed certification from the civil engineer responsible for preparing the SWRMP that all the stormwater BMPs have been designed to meet the requirements of this chapter.
 - Each certifying civil engineer shall establish to the City's satisfaction that such person has been trained on the design of stormwater quality BMPs not more than three years prior to the certification signature date.
 - Qualifying training shall be conducted by an organization with stormwater quality management expertise, such as a university, the Bay Area Stormwater Management Agencies Association, the American Society of Civil Engineers, the American Public Works Association, or the California Water Environment Association.
- On or before April 15 and September 15 of each year, the party responsible for the operation and maintenance of on-site stormwater management facilities under the BMP Operation and Maintenance Agreement shall provide the City Engineer or designee with records of all inspections, maintenance, and repairs.
- On or before September 30 of each year, a Registered Civil Engineer shall provide written certification that the project's stormwater quality design standards are properly maintained and functioning as required by the SWRMP.

The proposed project would include an underground infiltration system and bioretention basins along the perimeter of the site. The project would be designed to direct flows from roof, canopy, and other impervious areas onto landscaped areas for treatment prior to entering the storm drain system.

Conformance with the City's Stormwater Management Guidance Manual for LID and Post-Construction Requirements for implementing pollutant source controls and LID-based treatment controls would reduce impacts to post-construction water quality to a less than significant level.

(Less than Significant Impact)

Impact HYD-2:	The project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. (Less than Significant Impact)
----------------------	--

The maximum depth of excavation proposed by the project is 10 feet below the ground surface. Groundwater was encountered at 15 feet below the ground surface in 2020 and historical groundwater levels have reached up to six feet below the ground surface. As discussed under Impact HYD-1 above, the project could require groundwater pumping and dewatering during construction, which would result in a temporary reduction in groundwater levels at the project site. Due to its temporary nature, dewatering during construction is not considered a substantial decrease in groundwater supplies. In addition, the project site is not an aquifer recharge facility (i.e., streams or ponds). For these reasons, the project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge. **(Less than Significant Impact)**

Impact HYD-3:	The project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows. (Less than Significant Impact)
----------------------	--

Stormwater Runoff Impacts

As discussed under Impact HYD-1 above, the proposed project would incrementally increase impervious surfaces on-site compared to existing conditions by less than 2,000 square feet, which could impact the existing drainage pattern of the site by increasing the amount of runoff generated from the site. However, the proposed project would include bioretention basins that would capture and treat runoff through an underground treatment system. No such features are present on the site currently, as the site development predates modern stormwater requirements. Through the incorporation of drainage features and grading including in the proposed project, the flow rate of runoff would remain similar to existing conditions. Pursuant to the implementation of the SWPPP and other drainage standards implemented by the City, the project would not significantly increase stormwater flows into the existing system during routine rainfall events. Runoff reduction measures proposed by the project include landscape areas and an underground infiltration structure sized to retain and infiltrate the 95th percentile, 24-hr storm event.

The underground filtration structure would establish a stormwater capture system primarily used to manage water quantity by temporarily storing stormwater runoff from impervious surfaces to prevent flooding, slow down the rate at which stormwater leaves the site, and reduce receiving

stream erosion. In addition, the underground filtration system would be used to capture stormwater runoff for water quality treatment. The project's storm drains would connect to existing 24-inch storm drains on San Pedro Avenue. Therefore, the proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river through the addition of impervious surfaces, in a manner that would result in flooding. The proposed project also would not contribute runoff water which would exceed the capacity of the City's stormwater system, because it would be designed to direct excess runoff from roof, canopy, and other impervious areas onto landscaped areas for treatment prior to entering the storm drain system. For these reasons, the project would have a less than significant impact. **(Less than Significant Impact)**

Flooding Impacts

As stated in Section 4.10.1.2, the project site is located within the FEMA flood hazard Zone AE (i.e., a 100-year flood zone). Hydraulic modeling was completed for the site to determine if construction of the proposed retail store would significantly raise, i.e., by more than one foot, BFEs at the site and project area. The portion of the site that the proposed retail store would be located has a base flood elevation of 335.63 above mean sea level. Based on the results of the modeling, construction of the proposed building would minimally displace floodwaters from the site, and result in a maximum increase of 0.2 feet compared to BFEs at the site and surrounding developments between San Pedro Avenue and Spring Avenue. This increase in flood elevations is less than one foot and, therefore, meets the City's threshold for proposed developments' effect on water surface elevations (i.e., BFEs).

In addition, the City's Resolution No. 20-071 requires proposed developments in the Flood Zone AE to elevate the lowest floor of proposed buildings a minimum of one foot above the BFE. Based on the results of the hydraulic modeling, the proposed project combined with pending/approved projects in the area (refer to Section 4.21 Mandatory Findings of Significance for pending/approved projects), the BFE would increase by 0.06 feet at the proposed retail store location. Therefore, in compliance with the City's resolution, the proposed retail store would have a finished floor elevation of 1.06 feet above the existing BFE.

The project would result in a minimal increase in BFEs in the project area and would comply with the City's floodproofing requirements for developments within Flood Zone AE; therefore, the project would not substantially alter the existing drainage pattern in a manner that would impede or redirect flood flows. **(Less than Significant Impact)**

Impact HYD-4:	The project would not risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones. (Less than Significant Impact)
----------------------	---

The proposed project is a gas station redevelopment project. Pollutants that could result from an operating gas station include petroleum products such as gasoline, diesel, kerosene, oil, and grease. As discussed under Section 4.10.1.2 Existing Conditions, the project site is in a FEMA Zone AE flood

hazard area. In the event that the project site is inundated by a flood, these pollutants could be released from the site.

The project would increase the finished floor of the proposed structure and mechanical units to 1.29 feet above the BFE. The Hydraulic Impact Study prepared for the project found that implementation of the proposed project would result in a 0.2-foot impact to the West Little Llagas Creek water surface elevations, which would be a minimal impact. Accordingly, the proposed project would have a less than significant increase in flood risk during a 100-year event. Additionally, the project would incorporate the following standard conditions to ensure proper storage of outdoor materials.

Standard Conditions: Improper storage of materials outdoors may provide an opportunity for toxic compounds, oil and grease, heavy metals, nutrients, suspended solids, and other pollutants to enter the storm water conveyance system. Where proposed project plans include outdoor areas for storage of materials that may contribute pollutants to the stormwater conveyance system, the following BMPs shall be implemented:

- Materials with the potential to contaminate stormwater must be (1) placed in an enclosure such as, but not limited to, a cabinet, shed, or similar structure that prevents contact with runoff or spillage to the stormwater conveyance system; or (2) protected by secondary containment structures such as berms, dikes, or curbs.
- The storage area must be paved and sufficiently impervious to contain leaks and spills.
- The storage area must have a roof or awning to minimize collection of storm water within the secondary containment area.

Standard Conditions: The project shall implement the following BMPs to ensure fueling areas are designed in accordance with NPDES Water Quality Stormwater Management Development Standards for retail gasoline outlets.

- The fuel dispensing area shall be covered with an overhanging roof structure or canopy. The canopy's minimum dimensions shall be equal to or greater than the area within the grade break. The canopy shall have a minimum overhang of five feet measured from the perimeter of the fuel dispensing area. The canopy shall not drain onto the fuel dispensing area, and the canopy downspouts shall be routed to a landscaped area to prevent drainage across the fueling area.
- The fuel dispensing area shall be paved with Portland cement concrete (or equivalent smooth impervious surface) and the use of asphalt concrete shall be prohibited.
- The fuel dispensing area shall have a two to four percent slope to prevent ponding and shall be separated from the rest of the site by a grade break that prevents run-on of stormwater to the extent practicable.
- At a minimum, the concrete fuel dispensing area must extend 6.5 feet from the corner of each fuel dispenser, or the length at which the hose and nozzle assembly may be operated plus one foot, whichever is less.

Furthermore, the proposed project would implement the BMPs listed under Impact HYD-1, which would ensure the project would not violate any water quality standards during construction. Chemicals stored on-site would be properly contained in accordance with state and federal regulation. Furthermore, as shown on Figure 3.2-4, the proposed new fuel canopy would extend beyond the edge of the fuel pumps, thereby minimizing the risk of gas and petroleum products being released onto the site during rainfall events. As discussed under Impact HYD-1 and HYD-3, the project would result in a small increase of impervious surfaces compared to existing conditions. The project also proposes to construct retention basins and an underground filtration system that would remove pollutants, reducing the risk of pollutant release during floods. The project site is not located in a tsunami or seiche zone. Therefore, the proposed project would not risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones. **(Less than Significant Impact)**

Impact HYD-5:	The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. (Less than Significant Impact)
----------------------	--

Fertilizer and organic compounds are the likely pollutants of concern which can be found at the project site as the land was formerly used for agriculture. During construction of the project, short term impacts to water quality can occur when soils are disturbed, making it susceptible to water erosion and sedimentation. Other pollutants found during construction are petroleum products (gasoline, diesel, kerosene, oil, and grease), hydrocarbons from asphalt paving, paints, and solvents, detergents, nutrients (fertilizers), pesticides (insecticides, fungicides, herbicides, rodenticides), and trash. After construction, typical urban runoff contaminants may include the above constituents, as well as trace petroleum products and landscape maintenance debris.

Potential construction and post-construction pollutant impacts can be mitigated through preparation and implementation of an erosion control plan, a SWPPP and a SWMP consistent with recommended design criteria. The erosion control plan in the SWPPP would include components for erosion control, such as phasing of grading, limiting areas of disturbance, designation of restricted-entry zones, diversion of runoff away from disturbed areas, protective measures for sensitive areas, outlet protection, and provision for re-vegetation or mulching. The plan can also impose treatment measures to trap sediment per each catchment. The SWMP can implement postconstruction water quality BMPs that control pollutant levels to pre-development levels.

The project would comply with the City's Stormwater Management Guidance Manual for Low Impact Development and Post-Construction Requirements. For the reasons described above, the project would not impact groundwater recharge, interfere with groundwater supplies, and would not conflict with the Valley Water's 2021 Groundwater Management Plan. Therefore, the project would not conflict with implementation of a water quality or groundwater management plan. **(Less than Significant Impact)**

4.11 LAND USE AND PLANNING

4.11.1 Environmental Setting

South County Airport Comprehensive Land Use Plan

A small portion of Morgan Hill extends into the Airport Influence Area (AIA) of the South County Airport, which is located in the unincorporated community of San Martin between Morgan Hill and Gilroy. The airport is operated by Santa Clara County and is used for general aviation, which includes all aviation activities other than commercial passenger flights, commuter/air taxi, and military uses.

The AIA includes all areas surrounding the airport that are affected by noise, height, and safety considerations. All development projects within the AIA must be reviewed by the Santa Clara County Airport Land Use Commission (ALUC) to ensure consistency with the Comprehensive Land Use Plan (CLUP). A small portion of the Morgan Hill City limits near Llagas Creek is located within the AIA. The Morgan Hill City limits are located outside of the airport's noise contours and safety zones.

The CLUP also establishes height restrictions for structures, and the area subject to these height restrictions is slightly greater than the AIA. Per Figure 6, FAR Part 77 Surfaces, of the CLUP, structures in the southern portion of the Morgan Hill City limits should not exceed the height limits of between 481 feet and 631 feet above mean sea level depending on the location of the structure.

The proposed project site is not located within an AIA of the CLUP and is not located within an FAA height restriction area for new structures.

4.11.1.1 *Existing Conditions*

The project site is located in an urbanized area of Morgan Hill and is surrounded by commercial/restaurant uses to the north, Monterey Road and commercial (retail and restaurant) uses to the west, San Pedro Avenue and a vacant parcel to the south, and townhouses to the east.

The project site is zoned as Mixed-Use Flex and has a General Plan designation of Mixed-Use Flex, which allows for a mix of residential, commercial, and office uses.

4.11.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Physically divide an established community?	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
2) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Impact LU-1: The project would not physically divide an established community. **(No Impact)**

Examples of projects that have the potential to physically divide an established community are new freeways and highways, major arterial streets, and railroad lines. The proposed project would redevelop an existing gas station with 12 gas pumps, a 2,115 square foot retail store (to replace the existing 880 square store), and an improved UST system. The project would not introduce incompatible uses to the site, as the overall use of the site would remain the same as the existing uses. The proposed project would not include the construction of dividing infrastructure. Therefore, the project would not physically divide an established community. **(No Impact)**

Impact LU-2: The project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. **(Less than Significant Impact)**

Land use conflicts can arise from a new development or land use that would cause impacts to persons or the physical environment in the vicinity of the project site or elsewhere. Potential incompatibility may arise from placing a particular development or land use at an inappropriate location, or from some aspect of the project's design or scope. Depending on the nature of the impact and its severity, land use compatibility conflicts can range from minor irritations and nuisance to potentially significant effects on human health and safety.

The project site is zoned as MU-F. The City's zoning code requires a Conditional Use Permit be obtained for fuel and service station uses and an Administrative Use Permit for convenience markets. The proposed project would be considered a fuel station, with a retail/convenience market and, thus would require a Conditional Use Permit. The project would be consistent with the General Plan designation of Mixed-Use Flex, which allows for a mix of residential, commercial, and office uses. The proposed project is a gas station redevelopment project that would retain the same uses as existing conditions. The project's conformance with various City policies adopted for the purpose of avoiding or mitigating an environmental effect, standard conditions, and mitigation is discussed in various other sections of this Initial Study (e.g., Air Quality, Biological Resources, Noise, Hazards and Hazardous Materials). There are no additional policies pertaining specifically to land use and planning that were adopted for the purpose of avoiding or mitigating an environmental

effect, therefore, the project would not create a significant environmental impact or create a conflict with any plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. **(Less than Significant Impact)**

4.12 MINERAL RESOURCES

4.12.1 Environmental Setting

4.12.1.1 *Regulatory Framework*

State

Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act (SMARA) was enacted by the California legislature in 1975 to address the need for a continuing supply of mineral resources, and to prevent or minimize the negative impacts of surface mining to public health, property, and the environment. As mandated under SMARA, the State Geologist has designated mineral land classifications in order to help identify and protect mineral resources in areas within the state subject to urban expansion or other irreversible land uses which would preclude mineral extraction. SMARA also allowed the State Mining and Geology Board (SMGB), after receiving classification information from the State Geologist, to designate lands containing mineral deposits of regional or statewide significance.

4.12.1.2 *Existing Conditions*

The project site is located in an urban area within the City of Morgan Hill. Mineral resource recovery activities do not occur on or near the project site, nor does the site contain any known mineral resources.

4.12.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
2) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

Impact MIN-1:	The project would not result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state. (No Impact)
----------------------	--

Based on the United States Geological Survey (USGS) map of mines and mineral resources, the project site is not comprised of known mineral resources or mineral resource production areas.⁵⁹ The General Plan does not identify the project site or area as a mineral resource recovery site. Therefore, the proposed project would not result in the loss of availability of a known mineral resource that would be of value to the residents in the state or region. **(No Impact)**

Impact MIN-2:	The project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. (No Impact)
----------------------	--

As stated in the response to Impact MIN-1, the project would not result in the loss of availability of a locally important mineral resource recovery site. **(No Impact)**

⁵⁹ United States Geological Survey. *Mineral Resources Online Spatial Data: Interactive maps and downloadable data for regional and global Geology, Geochemistry, Geophysics, and Mineral Resources*. Available at <https://mrdata.usgs.gov/general/map-us.html#home>. Accessed April 16, 2021.

4.13 NOISE

The following discussion is based, in part, on a Noise Analysis completed by Illingworth & Rodkin, Inc. on July 11, 2022. The report is attached as Appendix E.

4.13.1 Environmental Setting

4.13.1.1 *Background Information*

Noise

Factors that influence sound as it is perceived by the human ear, include the actual level of sound, period of exposure, frequencies involved, and fluctuation in the noise level during exposure. Noise is measured on a decibel scale, which serves as an index of loudness. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness. Because the human ear cannot hear all pitches or frequencies, sound levels are frequently adjusted or weighted to correspond to human hearing. This adjusted unit is known as the A-weighted decibel, or dBA.

Since excessive noise levels can adversely affect human activities and human health, federal, state, and local governmental agencies have set forth criteria or planning goals to minimize or avoid these effects. Noise guidelines are generally expressed using one of several noise averaging methods, including L_{eq} , DNL, or CNEL.⁶⁰ These descriptors are used to measure a location's overall noise exposure, given that there are times when noise levels are higher (e.g., when a jet is taking off from an airport or when a leaf blower is operating) and times when noise levels are lower (e.g., during lulls in traffic flows on freeways or in the middle of the night). L_{max} is the maximum A-weighted noise level during a measurement period.

Vibration

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Vibration amplitude can be quantified using Peak Particle Velocity (PPV), which is defined as the maximum instantaneous positive or negative peak of the vibration wave. PPV has been routinely used to measure and assess ground-borne construction vibration. Studies have shown that the threshold of perception for average persons is in the range of 0.008 to 0.012 inches/second (in/sec) PPV.

⁶⁰ L_{eq} is a measurement of average energy level intensity of noise over a given period of time. Day-Night Level (DNL) is a 24-hour average of noise levels, with a 10 dB penalty applied to noise occurring between 10:00 PM and 7:00 AM. Community Noise Equivalent Level (CNEL) includes an additional five dB applied to noise occurring between 7:00 PM and 10:00 PM. Where traffic noise predominates, the CNEL and DNL are typically within two dBA of the peak-hour L_{eq} .

4.13.1.2 Regulatory Framework

Federal

Federal Transit Administration Vibration Limits

The Federal Transit Administration (FTA) has developed vibration impact assessment criteria for evaluating vibration impacts associated with transit projects. The FTA has proposed vibration impact criteria based on maximum overall levels for a single event. The impact criteria for groundborne vibration are shown in Table 4.13-1 below. These criteria can be applied to development projects in jurisdictions that lack vibration impact standards.

Table 4.13-1: Groundborne Vibration Impact Criteria			
Land Use Category	Groundborne Vibration Impact Levels (VdB inch/sec)		
	Frequent Event	Occasional Events	Infrequent Events
Category 1: Buildings where vibration would interfere with interior operations	65	65	65
Category 2: Residences and buildings where people normally sleep	72	75	80
Category 3: Institutional land uses with primarily daytime use	75	78	83
Source: Federal Transit Administration. <i>Transit Noise and Vibration Assessment Manual</i> . September 2018.			

State and Local

California Green Building Standards Code

For commercial uses, CALGreen (Section 5.507.4.1 and 5.507.4.2) requires that wall and roof-ceiling assemblies exposed to the adjacent roadways have a composite STC rating of at least 50 or a composite Outdoor/Indoor Transmission Class (OITC) rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 when the commercial property falls within the 65 dBA L_{dn} or greater noise contour for a freeway or expressway, railroad, or industrial or stationary noise source. The state requires interior noise levels to be maintained at 50 dBA $L_{eq(1-hr)}$ or less during hours of operation at a proposed commercial use.

Morgan Hill 2035 General Plan

The Morgan Hill 2035 General Plan includes goals, policies, and actions to avoid significant impacts due to noise and vibration. The following policies are applicable to the proposed project.

Morgan Hill 2035 General Plan Policies: Noise and Vibration

Policy	Description
SSI-8.1	Exterior Noise Level Standards. Require new development projects to be designed and constructed to meet acceptable exterior noise level standards (as shown in Table SSI-1) as follows: • Apply a maximum exterior noise level of 60 dBA L_{dn} in residential areas where outdoor use is a major consideration (e.g., backyards in single-family housing developments and recreation areas in multi-family housing projects). Where the City determines that providing a L_{dn} of 60 dBA or lower cannot be achieved after the application of reasonable and feasible mitigation, a L_{dn} of 65 dBA may be permitted.
SSI-8.2	Impact Evaluation. The impact of proposed development projects on existing land uses should be evaluated in terms of the potential for adverse community response based on significant increase in existing noise levels, regardless of compatibility guidelines.
SSI-8.5	Traffic Noise Level Standards. Consider noise level increases resulting from traffic associated with new projects significant if: a) the noise level increase is 5 dBA L_{dn} or greater, with a future noise level of less than 60 dBA L_{dn}, or b) the noise level increase is 3 dBA L_{dn} or greater, with a future noise level of 60 dBA L_{dn} or greater.
SSI-8.6	Stationary Noise Level Standards. Consider noise levels produced by stationary noise sources associated with new projects significant if they substantially exceed existing ambient noise levels.
SSI-8.7	Other Noise Sources. Consider noise levels produced by other noise sources (such as ballfields) significant if an acoustical study demonstrates they would substantially exceed ambient noise levels.
SSI-8.9	Site Planning and Design. Require attention so site planning and design techniques other than sound walls to reduce noise impacts, including: a) installing earth berms; b) increasing the distance between the noise source and the receiver; c) using non-sensitive structures such as parking lots, utility areas, and garages to shield noise-sensitive areas; d) orienting buildings to shield outdoor spaces from the noise source; and e) minimizing the noise at its source.
SSI-9.1	Techniques to Reduce Traffic. Use roadway design, traffic signalization, and other traffic planning techniques (such as limiting truck traffic in residential areas) to reduce noise caused by speed or acceleration of vehicles.
SSI-9.3	Sound Wall Design. The maximum height of sound walls shall be eight feet. Residential projects adjacent to the freeway shall be designed to minimize sound wall height through location of a frontage road, use of two sound walls or other applicable measures. Sound wall design and location shall be coordinated for an entire project area and shall meet Caltrans noise attenuation criteria for a projected eight-lane freeway condition. If two sound walls are used, the first shall be located immediately adjacent to the freeway right-of-way and the second shall be located as necessary to meet Caltrans noise requirements for primary outdoor areas. The minimum rear yard setback to the second wall shall be 20 feet.

Morgan Hill 2035 General Plan Policies: Noise and Vibration

Policy	Description
SSI-9.5	Noise Studies for Private Development. In order to prevent significant noise impacts on neighborhood residents which are related to roadway extensions or construction of new roadways, require completion of a detailed noise study during project-level design to quantify noise levels generated by projects such as the Murphy Avenue extension to Mission View Drive and the Walnut Grove Extension to Diana Avenue. The study limits should include noise sensitive land uses adjacent to the project alignment as well as those along existing segments that would be connected to new segments. A significant impact would be identified where traffic noise levels would exceed the “normally acceptable” noise level standard for residential land uses and/or where ambient noise levels would be substantially increased with the project. Project specific mitigation measures could include, but not be limited to, considering the location of the planned roadway alignment relative to existing receivers in the vicinity, evaluating the use of noise barriers to attenuate project-generated traffic noise, and/or evaluating the use of “quiet pavement” to minimize traffic noise levels at the source. Mitigation should be designed to reduce noise levels into compliance with “normally acceptable” levels for residential noise and land use compatibility.
SSI-9.6	Earth Berms. Allow and encourage earth berms in new development projects as an alternative to sound walls if adequate space is available.
SSI-9.7	Sound Barrier Design. Require non-earthen sound barriers to be landscaped, vegetated, or otherwise designed and/or obscured to improve aesthetics and discourage graffiti and other vandalism.

City of Morgan Hill Municipal Code

The City of Morgan Hill’s Municipal Code Chapter 8.28 states that “It is unlawful for any person to make or continue, or cause to be made or continued, any loud, disturbing, unnecessary or unusual noise or any noise which annoys, disturbs, injures or endangers the comfort, health, repose, peace or safety of another person within the city.” The following sections of the code would be applicable to the project:

1. "Construction activities" are defined as including but not limited to excavation, grading, paving, demolition, construction, alteration or repair of any building, site, street or highway, delivery or removal of construction material to a site, or movement of construction materials on a site. Construction activities are prohibited other than between the hours of seven AM and eight PM, Monday through Friday and between the hours of nine AM to six PM on Saturday. Construction activities may not occur on Sundays or federal holidays. No third person, including, but not limited to landowners, construction company owners, contractors, subcontractors, or employers, shall permit or allow any person working on construction activities which are under their ownership, control or direction to violate this provision. Construction activities may occur in the following cases without violation of this provision:

- a. In the event of urgent necessity in the interests of the public health and safety, and then only with a permit from the chief building official, which permit may be granted for a period of not to exceed three days or less while the emergency continues and which permit may be renewed for periods of three days or less while the emergency continues.
 - b. If the chief building official determines that the public health and safety will not be impaired by the construction activities between the hours of eight PM and seven AM, and that loss or inconvenience would result to any party in interest, the chief building official may grant permission for such work to be done between the hours of eight PM and seven AM upon an application being made at the time the permit for the work is issued or during the progress of the work.
 - c. The city council finds that construction by the resident of a single residence does not have the same magnitude or frequency of noise impacts as a larger construction project. Therefore, the resident of a single residence may perform construction activities on that home during the hours in this subsection, as well as on Sundays and federal holidays from nine AM to six PM, provided that such activities are limited to the improvement or maintenance undertaken by the resident on a personal basis.
 - d. Public work projects are exempt from this section and the public works director shall determine the hours of construction for public works projects.
2. If it is determined necessary in order to ensure compliance with this section, the chief building official may require fences, gates or other barriers prohibiting access to a construction site by construction crews during hours in which construction is prohibited by this subsection. The project manager of each project shall be responsible for ensuring the fences, gates or barriers are locked and/or in place during hours in which no construction is allowed. This subsection shall apply to construction sites other than public works projects or single dwelling units which are not a part of larger projects.

Chapter 18.76 establishes quantitative noise performance standards:

1. No land use or activity may produce a noise level in excess of the standards in Table 4.13-2.

Table 4.13-2: Municipal Code Maximum Noise Levels	
Receiving Land Use	Maximum Noise Level at Lot Line of Receiving Use
Industrial and Wholesale	70 dBA
Commercial	65 dBA
Residential or Public/Quasi-Public	60 dBA
Notes: The planning commission may allow an additional five dBA noise level at the lot line if the maximum noise level shown cannot be achieved with reasonable and feasible mitigation.	

2. Noise standards in Table 4.13-2 do not apply to noise generated by vehicle traffic in the public right-of-way or from temporary construction, demolition, and vehicles that enter and leave the site of the noise-generating use (e.g., construction equipment, trains, trucks).
3. All uses and activities shall comply with Municipal Code Chapter 8.28 (Noise).

4.13.1.3 Existing Conditions

Existing Noise Environment

The noise environment at the project site and in the surrounding area consists primarily of vehicular traffic along Monterey Road, San Pedro Avenue, and other roadways in the vicinity. Occasional aircraft flyovers associated with the San Martin Airport and San José International Airport contribute to the noise environment intermittently.

A noise monitoring survey consisting of one long-term (LT-1) and one short-term (ST-1) noise measurement was made at the site between Monday, July 26, 2021, and Thursday, July 29, 2021. Results of the survey are discussed below, and noise monitoring locations are shown on Figure 4.13-1.

Long-term measurement LT-1 was collected approximately 55 feet east of the centerline of Monterey Road. Hourly average noise levels typically ranged from 66 to 74 dBA L_{eq} during daytime hours (7:00 AM and 10:00 PM) and from 53 to 72 dBA L_{eq} during nighttime hours (10:00 PM and 7:00 AM). The day-night average noise level on Tuesday, July 27, 2021, and on Wednesday, July 28, 2021, was 73 dBA L_{dn} .

Short-term measurement ST-1 was collected along the eastern boundary of the project site on Monday, July 26, 2021, at 10:00 AM. This measurement was collected in a 10-minute interval. Typical traffic noise levels along Monterey Road ranged from 50 to 69 dBA. The 10-minute L_{eq} measured at ST-1 was 57 dBA.

Sensitive Receptors

The nearest noise-sensitive receptors are residences located approximately 40 feet east of the site. There is an existing concrete soundwall located between the project site and adjacent residences.



NOISE MEASUREMENT LOCATIONS

FIGURE 4.13-1

4.13.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in:				
1) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
2) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
3) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐
Impact NOI-1: The project would not result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (Less than Significant Impact)				

Construction

Noise sensitive receptors (residences) are located immediately adjacent and to the east of the site. Construction of the proposed project would include temporary noise impacts from demolition, site preparation, grading, excavation, trenching, building exterior and interior, and paving. The types of construction equipment to be used for the project would include graders, rubber-tired dozers, excavators, cranes, forklifts, and tractors. Noise impacts resulting from construction depend upon the noise generated by various pieces of equipment, the timing and duration of noise-generating activities, and the distance between construction noise sources and noise-sensitive areas. Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (e.g., early morning, evening, or nighttime hours) when construction lasts over extended periods of time, e.g., more than one year. The project would have a construction duration of approximately eight months (165 construction workdays), which is not considered an extensive construction period.

Construction activities would be conducted in accordance with the provisions of the City's General Plan and the Municipal Code, which limits temporary construction work to between the hours of 7:00 AM and 8:00 PM Monday through Friday and between 9:00 AM to 6:00 PM on Saturday.

Construction is prohibited on Sundays and federal holidays. Additionally, the project would be required to implement the following construction best management practices (BMPs) as a standard condition.

Standard Condition: The project applicant shall develop a noise construction control plan, which shall be submitted to the Development Services Director or Director's designee for review and approval prior to issuance of a demolition, grading or building permit. The noise construction control plan shall include but not be limited to the following construction best management controls:

- Equipment and trucks used for construction shall use the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds);
- Impact tools (e.g., jackhammers, pavement breakers, and rock drills) used for construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools; and
- Stationary noise sources shall be located as far from noise-sensitive receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or include other measures.
- Construct temporary noise barriers, where feasible, to screen stationary noise-generating equipment. Temporary noise barrier fences would provide a five dBA noise reduction if the noise barrier interrupts the line-of-sight between the noise source and receptor and if the barrier is constructed in a manner that eliminates any cracks or gaps.
- Unnecessary idling of internal combustion engines shall be strictly prohibited.
- Construction staging areas shall be established at locations that will create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction. Locate material stockpiles, as well as maintenance/equipment staging and parking areas, as far as feasible from residential receptors.
- Control noise from construction workers' radios to a point where they are not audible at existing residences bordering the project site.
- Where feasible, temporary power service from local utility companies should be used instead of portable generators.
- Locate cranes as far from noise-sensitive receptors as possible.
- During final grading, substitute graders for bulldozers, where feasible. Wheeled heavy equipment are quieter than track equipment and should be used where feasible.
- Substitute nail guns for manual hammering, where feasible.
- Avoid the use of circular saws, miter/chop saws, and radial arm saws near the adjoining noise-sensitive receptors. Where feasible, shield saws with a solid screen with material having a minimum surface density of two pounds per square foot (e.g., such as 0.75-inch plywood).

- Maintain smooth vehicle pathways for trucks and equipment accessing the site and avoid local residential neighborhoods as much as possible.
- During interior construction, the exterior windows facing noise-sensitive receptors should be closed.
- During interior construction, locate noise-generating equipment within the building to break the line-of-sight to the adjoining receptors.
- The contractor shall prepare a detailed construction schedule for major noise-generating construction activities. The construction plan shall identify a procedure for coordination with adjacent residential land uses so that construction activities can be scheduled to minimize noise disturbance.
- Designate a "disturbance coordinator" who would be responsible for responding to any complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint (e.g., bad muffler, etc.) and will require that reasonable measures be implemented to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include it in the notice sent to neighbors regarding the construction schedule.

With implementation of the above standard condition as well as the Municipal Code limits on allowable construction hours, the project would not generate a substantial temporary increase in ambient noise levels due to project construction at noise-sensitive receptors in the project area, in excess of the City's noise standards. **(Less than Significant Impact)**

Operation

The City's Noise Element and Municipal Code stipulates that noise levels produced by operational noise at the project site would be considered significant if noise levels substantially exceed existing ambient noise levels, exceed 60 dBA L_{eq} at residential properties, or permanently increase ambient noise levels by three dBA L_{dn} under Policy SSI-8.5 of the General Plan.

Mechanical Equipment

An HVAC unit is proposed at the retail store and would be located at the center of the rooftop. The selected HVAC unit would generate noise levels up to 66 dBA at a distance of five feet. While the building façade would provide partial shielding, no attenuation was assumed in the noise assessment to conservatively represent worst-case scenario. The nearest noise-sensitive receptors would be approximately 100 feet east of the center of the proposed HVAC unit. Conservatively, the existing six-foot sound wall along the residential property line would provide a minimum five dBA of noise attenuation. Noise levels due to the HVAC unit would be about 35 dBA at the residential property line. The day-night average noise level is estimated to be 41 dBA L_{dn} . The proposed HVAC unit would not exceed 60 dBA L_{eq} or ambient noise levels at the nearest residential land uses.

Additionally, an A/W dispenser is proposed along the northern portion of the parking lot. While the existing gas station includes an A/W dispenser, it is unknown if the ambient noise measurements

included the operation of the existing A/W dispenser. Conservatively, the noise analysis assumed the ambient measurements did not include this noise source. This type of equipment does not run continuously and typically generates noise levels up to 65 dBA at a distance of five feet. In a worst-case scenario, it is assumed the equipment would operate for a total of 20 minutes per hour, which means the hourly average noise level would be 60 dBA L_{eq} at five feet. The nearest residential property line is approximately 40 feet from the proposed A/W dispenser. At this distance, maximum noise levels would be 51 dBA, hourly average noise levels would be 46 dBA L_{eq} , and day-night average noise levels would be 44 dBA L_{dn} . The A/W dispenser would not generate noise levels that exceed 60 dBA L_{eq} or ambient noise levels at the nearest residential land uses. **(Less than Significant Impact)**

Parking Lot and Gas Station Activities

The project would include 11 parking spaces which would be located along the eastern boundary of the gas station area, nearest to the residences. Additionally, the proposed six fuel pump stations (12 gas dispensers) would also include similar noise sources as the parking area, which would include vehicular circulation, louder engines, car alarms, door slams, and human voices, all of which are currently occurring at the site in connection with the existing gas station. These sources typically generate noise levels ranging from 53 to 63 dBA L_{max} at a distance of 50 feet.

The isolated, maximum instantaneous noise sources generated by vehicular circulation at parking lots and gas stations would occur during both daytime and nighttime hours. Based on the trip generation analysis completed for the project, the number of net daily trips would increase by 286 trips, with net peak hour increases of 23 trips in the AM and nine trips in the PM. The noise level increase, which accounted for vehicular circulation at the existing gas station, from existing ambient conditions in the project area would be approximately one dBA L_{dn} . Since this noise level increase would be less than three dBA L_{dn} , it would not be considered a substantial increase in noise in excess of the City's standards in General Plan Policy SSI-8.5. **(Less than Significant Impact)**

Truck Deliveries

Gas stations typically require heavy truck deliveries for fuel deposits. The proposed project estimated approximately 5,500 gallons of fuel to be sold daily. The typical fuel truck carries about 9,000 gallons, which would result in about one truck delivery per day. Additionally, smaller vendor truck deliveries would occur at the retail store. The noise analysis conservatively assumed a worst-case scenario of one heavy fuel truck delivery and one vendor truck delivery per day. Depositing the fuel into the tanks (which would be located underground along the eastern portion of the site) would not generate measurable noise levels. However, noise due to low-speed trucks maneuvering results in a combination of engine, exhaust, and tire noise. Trucks would also be associated with intermittent sounds of back-up alarms and releases of compressed air, all of which are currently occurring at the site in connection with the existing gas station.

At a distance of 50 feet, noise levels would range from 70 to 75 dBA L_{max} for heavy fuel trucks, and 60 to 65 dBA L_{max} for smaller vendor trucks. While the length of time to dispense the fuel in the

tanks or unload supplies could take as long as one hour or so, typically, delivery trucks are stationary during this time with the engine off. These maximum noise levels would occur for approximately three minutes in any one hour. Assuming worst-case conditions, this analysis assumes both truck deliveries would occur in the same hour, which would result in an hourly average noise level of 58 dBA L_{eq} at the nearest residential property line, assuming a five dBA reduction due to the existing sound wall, and a day-night average noise level of 47 dBA L_{dn} . Operational truck deliveries would not generate noise levels that exceed 60 dBA L_{eq} or ambient noise levels at the nearest residential land uses. **(Less than Significant Impact)**

Combined Operational Noise

The combined noise sources (i.e., mechanical equipment, parking circulation, and truck deliveries) at the nearest residential property line would result in a noise level of 65 dBA L_{dn} , which would result in a two dBA L_{dn} increase over ambient levels. Therefore, the noise levels from the combined operational sources would not generate noise levels that exceed ambient noise levels at the nearest residential land uses. **(Less than Significant Impact)**

Impact NOI-2:	The project would not result in generation of excessive groundborne vibration or groundborne noise levels. (Less than Significant Impact)
----------------------	--

The construction of the project may generate vibration when heavy equipment or impact tools are used. Construction activities would include demolition, site preparation work, foundation work, and new building framing and finishing. Pile driving, which can cause excessive vibration, is not proposed.

The California Department of Transportation recommends a vibration limit of 0.5 in/sec PPV for buildings structurally sound and designed to modern engineering standards in order to reduce the potential for cosmetic damage to structures. Cosmetic damage includes cracked plaster, the opening of old cracks, and the loosening of paint or the dislodging of loose objects. A vibration limit of 0.3 in/sec PPV has been used for buildings that are found to be structurally sound but where structural damage is a major concern. Groundborne vibration levels exceeding 0.3 in/sec PPV at nearby buildings would have the potential to result in a significant vibration impact because such levels would be capable of cosmetically damaging adjacent buildings.

Because construction would be temporary and the proposed project would comply with the standard conditions listed under Impact NOI-1 above, the project would not result in generation of excessive groundborne vibration or groundborne noise levels. **(Less than Significant Impact)**

Impact NOI-3:	The project would not be located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport. The project would not expose people residing or working in the project area to excessive noise levels. (Less than Significant Impact)
----------------------	---

As discussed in Section 4.9 Hazards and Hazardous Materials, the project site is located approximately four miles northwest of the San Martin Airport. Due to its distance from the airport, the project is not located within an AIA and lies outside the 55 dBA CNEL noise contours for the San Martin Airport. As a result, the project would not expose people residing or working in the project area to excessive noise levels from aircraft noise. **(Less than Significant Impact)**

4.14 POPULATION AND HOUSING

4.14.1 Environmental Setting

4.14.1.1 *Regulatory Framework*

State

Housing-Element Law

State requirements mandating that housing be included as an element of each jurisdiction's general plan is known as housing-element law. The Regional Housing Needs Allocation (RHNA) is the state-mandated process to identify the total number of housing units (by affordability level) that each jurisdiction must accommodate in its housing element. California housing-element law requires cities to: 1) zone adequate lands to accommodate its RHNA; 2) produce an inventory of sites that can accommodate its share of the RHNA; 3) identify governmental and non-governmental constraints to residential development; 4) develop strategies and a work plan to mitigate or eliminate those constraints; and 5) adopt a housing element and update it on a regular basis.⁶¹

Regional and Local

Plan Bay Area 2040

Plan Bay Area 2040 is a long-range transportation, land-use, and housing plan intended support a growing economy, provide more housing and transportation choices, and reduce transportation-related pollution and GHG emissions in the Bay Area. Plan Bay Area 2040 promotes compact, mixed-use residential and commercial neighborhoods near transit, particularly within identified Priority Development Areas (PDAs).⁶²

ABAG allocates regional housing needs to each city and county within the nine-county San Francisco Bay Area, based on statewide goals. ABAG also develops forecasts for population, households, and economic activity in the Bay Area. ABAG, MTC, and local jurisdiction planning staff created the Regional Forecast of Jobs, Population, and Housing, which is an integrated land use and transportation plan through the year 2040 (upon which Plan Bay Area 2040 is based).

Morgan Hill 2035 General Plan

The Morgan Hill 2035 General Plan includes goals, policies, and actions to avoid significant impacts related to population and housing. The following policies are applicable to the proposed project.

⁶¹ California Department of Housing and Community Development. "Regional Housing Needs Allocation and Housing Elements" Accessed June 16, 2021. <http://hcd.ca.gov/community-development/housing-element/index.shtml>.

⁶² Association of Bay Area Governments and Metropolitan Transportation Commission. "Project Mapper." <http://projectmapper.planbayarea.org/>. Accessed June 16, 2021.

Morgan Hill 2035 General Plan Policies: Population and Housing

Policy	Description
CNF-3.4	Population Limit. Plan for a January 1, 2035 population of 58,200 residents.
CNF-3.5	Rate of Growth. Maintain steady and predictable annual growth consistent with the population limit.
CNF-3.6	Adequate Services and Infrastructure. Allow residential growth only if it is within the ability for the City to provide adequate public services and infrastructure for new development and community at large.

4.14.1.2 Existing Conditions

The population of Morgan Hill was estimated to be approximately 46,451 in January of 2022 and the average persons per household was an estimated 2.93.^{63, 64} The project site does not contain housing.

4.14.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
2) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

⁶³ California Department of Finance. *E-1: City/County Population Estimates with Annual Percent Change – January 1, 2018 and 2019*. May 2019. Accessed November 5, 2020.

<http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-1/>.

⁶⁴ California Department of Finance. *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2020 with 2010 Census Benchmark. Table 2: E-5 City/County Population and Housing Estimates, 1/1/2020*. May 2020. Accessed November 5, 2020. <http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/>.

Impact POP-1:	The project would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). (No Impact)
----------------------	---

A project can induce substantial population growth by: 1) proposing new housing beyond projected or planned development levels, 2) generating demand for housing as a result of new businesses, 3) extending roads or other infrastructure to previously undeveloped areas, or 4) removing obstacles to population growth (i.e., expanding capacity of a wastewater treatment plant beyond that necessary to serve planned growth).

The proposed project is the redevelopment of a gas station and retail store and would not introduce new housing or generate new housing demand. The project would include three employees at the proposed gas station and retail store, which is the same as the number of existing employees. The proposed project would not result in the extension of roads or other infrastructure. The project's utility lines would connect to the City's existing utility systems (refer to Section 4.19, Utilities and Service Systems). Therefore, the project would not induce substantial unplanned population growth. **(No Impact)**

Impact POP-2:	The project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. (No Impact)
----------------------	---

The proposed project is the redevelopment of a gas station and retail store. The project does not propose new housing and would not displace existing housing. Therefore, the project would not displace substantial numbers of existing people or housing. **(No Impact)**

4.15 PUBLIC SERVICES

4.15.1 Environmental Setting

4.15.1.1 *Regulatory Framework*

State

Government Code Section 66477

The Quimby Act (included within Government Code Section 66477) requires local governments to set aside parkland and open space for recreational purposes. It provides provisions for the dedication of parkland and/or payment of fees in lieu of parkland dedication to help mitigate the impacts from new residential developments. The Quimby Act authorizes local governments to establish ordinances requiring developers of new residential subdivisions to dedicate parks, pay a fee in lieu of parkland dedication, or perform a combination of the two.

Government Code Section 65995 through 65998

California Government Code Section 65996 specifies that an acceptable method of offsetting a project's effect on the adequacy of school facilities is the payment of a school impact fee prior to the issuance of a building permit. Government Code Sections 65995 through 65998 set forth provisions for the payment of school impact fees by new development by "mitigating impacts on school facilities that occur (as a result of the planning, use, or development of real property" (Section 65996[a]). The legislation states that the payment of school impact fees "are hereby deemed to provide full and complete school facilities mitigation" under CEQA (Section 65996[b]).

Developers are required to pay a school impact fee to the school district to offset the increased demands on school facilities caused by the proposed residential development project. The school district is responsible for implementing the specific methods for mitigating school impacts under the Government Code.

Regional and Local

Countywide Trails Master Plan

The Santa Clara County Trails Master Plan Update is a regional trails plan approved by the Santa Clara County Board of Supervisors. It provides a framework for implementing the County's vision of providing a contiguous trail network that connects cities to one another, cities to the county's regional open space resources, County parks to other County parks, and the northern and southern urbanized regions of the County. The plan identifies regional trail routes, sub-regional trail routes, connector trail routes, and historic trails.

Morgan Hill 2035 General Plan

The Morgan Hill 2035 General Plan includes goals, policies, and actions to avoid significant impacts related to public services. The following policies are applicable to the proposed project.

Morgan Hill 2035 General Plan Policies: Public Services

Policy	Description
SSI-11.2	Prevention through Design. Promote police and fire security considerations in all structures by ensuring that crime and fire prevention concepts are considered in development and design.
SSI-12.4	Maintenance of Emergency Access Routes. Require that emergency access routes be kept free of traffic impediments.

4.15.1.2 Existing Conditions

Fire Protection

The City of Morgan Hill contracts with CAL FIRE for fire and emergency medical services. The City is served by three stations at the following locations: 1) El Toro Fire Station, located at 18300 Old Monterey Road (approximately 1.1 miles north of the project site), 2) Dunne Hill Fire Station, located at 2100 East Dunne Avenue (approximately 2.0 miles southeast of the project site), and 3) 15670 Monterey Street (approximately 2.8 miles south of the project site). The City has not adopted response time standards or goals related to fire suppression. In general, more than 90 percent of the calls handled by CalFire within Morgan Hill result in a travel time of six minutes or less.⁶⁵ Based on estimated driving times provided by Google Maps, the project site is located within seven minutes driving distance of the 18300 Old Monterey Road Fire Station.

Police Protection

Police service is provided to the project site by the City of Morgan Hill Police Department (MHPD). The MHPD facility is located at 16200 Vineyard Boulevard, approximately 0.7 mile south of the project site. The department employs 42 sworn officers. The Police Department's goal is to respond to Priority One calls within five minutes and Priority Two calls within eight minutes.⁶⁶ Priority One calls are reports of a crime in progress or where an injury has occurred, and Priority Two calls are reports of felonies and other major calls.

Schools

The project site is located within the Morgan Hill Unified School District (MHUSD). The MHUSD has eight elementary schools, two middle schools, two comprehensive high schools, one continuation high school, and a community adult school, as well as a home-schooling program. The project site is located within the enrollment areas of Barrett Elementary School (located one mile east of the site),

⁶⁵ Center for Public Safety Management. Fire Operational and Administrative Analysis: Morgan Hill Fire Dept. and South Santa Clara County Fire District, California. Final Report. January 2017.

⁶⁶ Morgan Hill Police Department. "2021 Annual Report." <https://www.morgan-hill.ca.gov/ArchiveCenter/ViewFile/Item/1798>.

Murphy Middle School (located 10 miles north of the site), and Sobrato High School (located four miles north of the site).⁶⁷

Parks

The City owns 70 acres of developed park land (including the Civic Center, assessment district parks and city owned trails) and 59 acres of recreation facilities. Included within this inventory, the City maintains two community parks, five neighborhood parks, two neighborhood/school parks, and 15 mini-parks, in addition to its public trail system and open space. In addition to publicly owned park land, there is also a significant amount of recreational land and open space in the City that is privately owned and maintained.

The City also owns and operates special use facilities for recreational purposes. These facilities include the Morgan Hill Aquatics Center, Community and Cultural Center, the Centennial Recreation Center, the 38-acre Outdoor Sports Center, and Skateboard/BMX park. Many sports leagues and teams use Morgan Hill School District facilities after school hours and on weekends. These facilities include 12 baseball/softball fields, two football fields, two tracks, and four swimming pools.

The General Plan includes policies that support the City's park land and recreational goal to provide useful, accessible, and high-quality parks, recreation, and trail facilities. To achieve this goal, the City has adopted General Plan Policies and a park land dedication/park land in-lieu fee ordinance (Municipal Code Chapter 17.28) that requires park land dedication or in-lieu fees for residential developments.

In accordance with General Plan Policies HC-3.3 and HC-3.29, park land dedication or in-lieu fees are required by new developments to meet the recreation and open space needs of residents in Morgan Hill. The nearest parks and recreational facilities to the site include the Madrone Channel Trail, approximately 0.2 mile west of the site (and 125 feet east of US 101), Coyote Creek Trail (a regional trail, approximately one mile northeast of the site), and Diana Park, located on 555 Diana Avenue, approximately one mile southwest of the site. The Madrone Channel and Coyote Creek Trails are pedestrian and bicycle trails. Diana Park includes open lawn and children's play areas.

Libraries

The Morgan Hill Library is a member of the Santa Clara County Library District. The Santa Clara County Library District (SCCLD) governs and administers seven community libraries, one branch library, two bookmobiles, the Home Service Library, and the 24-7 online library for all library users. The SCCLD serves all unincorporated communities of Santa Clara County, as well as nine Santa Clara County cities, including Campbell, Cupertino, Gilroy, Los Altos, Los Altos Hills, Milpitas, Monte Sereno, Morgan Hill, and Saratoga. As one of the SCCLD's member cities, Morgan Hill has a community library located on 680 West Main Avenue, approximately two miles northwest of the project site.

⁶⁷ Morgan Hill Unified School District. *Find your school*. Accessed May 12, 2022. <https://www.mhusd.org/about/find-your-school>.

4.15.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
1) Fire Protection?	☐	☐	☒	☐
2) Police Protection?	☐	☐	☒	☐
3) Schools?	☐	☐	☐	☒
4) Parks?	☐	☐	☐	☒
5) Other Public Facilities?	☐	☐	☐	☒

Impact PS-1: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection services. **(Less than Significant Impact)**

The proposed project is a redevelopment of the existing gas station and retail/convenience store. The project would increase the number of pump stations from four to six and the number of gas dispensers from eight to 12. The incremental increase in persons that would be served by the gas station and retail store would not affect the response time goals for fire protection services. The development would be reviewed by Morgan Hill Fire Department/CalFIRE to ensure appropriate safety features to reduce fire hazards are included in the project. Given that the proposed project is located at a site and area that is currently served by Morgan Hill Fire Department/CalFIRE, the proposed gas station and retail store would not substantially increase the demand for fire protection, or otherwise require construction or expansion of fire facilities. **(Less than Significant Impact)**

Impact PS-2:	The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection services. (Less than Significant Impact)
---------------------	---

The existing gas station and retail store is served by the Morgan Hill Police Department. The project proposes a new gas station that would result in no net new employees. The incremental increase in persons that would be served by the gas station and retail store would not substantially increase the demand for police services. For the proposed project, the Morgan Hill Police Department will review the development plans to ensure safety features, such as appropriate lighting, to reduce the risk of criminal activity are incorporated into the project design. Given that the proposed project is located at a site and area that is currently served by Morgan Hill Police Department, the proposed gas station and retail store would not substantially increase the demand for fire protection, or otherwise require construction or expansion of police facilities. **(Less than Significant Impact)**

Impact PS-3:	The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools. (No Impact)
---------------------	---

The proposed project would redevelop the site with a new gas station and retail store and would not increase the resident population of Morgan Hill. The development of the project site would not result in a demand for schools or require the expansion of school facilities. Therefore, the proposed project would not increase the need for new or physically altered schools. **(No Impact)**

Impact PS-4:	The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for parks. (No Impact)
---------------------	---

The proposed project is a gas station and retail project would not result in a net increase in employees or an increase in the resident population of Morgan Hill. The development of the project site would not result in an increase in demand for parks or require the expansion of park facilities. Therefore, the proposed project would not increase the need for new or physically altered park facilities. **(No Impact)**

Impact PS-5: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for other public facilities. **(No Impact)**

The proposed project would not increase the resident population of Morgan Hill. The development of the project site would not result in a demand for library services or require the expansion of library facilities. Therefore, the proposed project would not increase the need for new or physically altered library facilities. **(No Impact)**

4.16 RECREATION

4.16.1 Environmental Setting

4.16.1.1 *Regulatory Framework*

State

Government Code Section 66477

The Quimby Act (included within Government Code Section 66477) requires local governments to set aside parkland and open space for recreational purposes. It provides provisions for the dedication of parkland and/or payment of fees in lieu of parkland dedication to help mitigate the impacts from new residential developments. The Quimby Act authorizes local governments to establish ordinances requiring developers of new residential subdivisions to dedicate parks, pay a fee in lieu of parkland dedication, or perform a combination of the two.

4.16.1.2 *Existing Conditions*

The City owns 70 acres of developed park land and 59 acres of recreation facilities. The City maintains two community parks, five neighborhood parks, two neighborhood/school parks, and 15 mini-parks, in addition to its public trail system and open space. In addition to publicly owned park land, there is also a substantial amount of recreational land and open space in the City that is privately owned and maintained. The nearest park to the project site is the Morgan Hill Community Park, located approximately 1,600 feet southwest of the site.

The City also owns and operates special use facilities for recreational purposes. These facilities include the Morgan Hill Aquatics Center, Community and Cultural Center, the Centennial Recreation Center, the 38-acre Outdoor Sports Center, and Skateboard/BMX park. Many sports leagues and teams use Morgan Hill School District facilities after school hours and on weekends. These facilities include 12 baseball/softball fields, two football fields, two tracks, and four swimming pools. There is no recreational land on site.

4.16.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
1) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
2) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Impact REC-1: The project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. **(No Impact)**

The proposed project is a gas station and retail project would not result in a net increase in employees or an increase in the resident population of Morgan Hill. Therefore, the project would not increase the use of existing neighborhood parks, regional parks, or other recreational facilities that would result in the physical deterioration of these facilities. **(No Impact)**

Impact REC-2: The project does not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. **(No Impact)**

The proposed gas station and retail store project would not include recreational facilities, nor would it require the construction or expansion of recreational facilities. Therefore, the project would have no impact on new or expanded recreational facilities that would result in a physical effect on the environment. **(No Impact)**

4.17 TRANSPORTATION

The following discussion is based, in part, on a VMT Assessment and a Trip Generation and Operations Analysis, prepared by Hexagon Traffic Consultants on June 4, 2021 and December 5, 2022, respectively. Both reports are attached as Appendix F.

4.17.1 Environmental Setting

4.17.1.1 *Regulatory Framework*

State

Regional Transportation Plan

MTC is the transportation planning, coordinating, and financing agency for the nine-county San Francisco Bay Area, including Santa Clara County. MTC is charged with regularly updating the Regional Transportation Plan, a comprehensive blueprint for the development of mass transit, highway, airport, seaport, railroad, bicycle, and pedestrian facilities in the region. MTC and ABAG adopted Plan Bay Area 2040 in July 2017, which includes a Regional Transportation Plan to guide regional transportation investment for revenues from federal, state, regional and local sources through 2040.

Senate Bill 743

SB 743 establishes criteria for determining the significance of transportation impacts using a vehicle miles traveled (VMT) metric intended to promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses. Specifically, SB 743 requires analysis of VMT in determining the significance of transportation impacts. Local jurisdictions were required by Governor's Office of Planning and Research (OPR) to implement a VMT policy by July 1, 2020.

SB 743 did not authorize OPR to set specific VMT impact thresholds, but it did direct OPR to develop guidelines for jurisdictions to utilize. CEQA Guidelines Section 15064.3(b)(1) describes factors that might indicate whether a development project's VMT may be significant. Notably, projects located within 0.50 mile of transit should be considered to have a less than significant transportation impact based on OPR guidance.

Regional and Local

Congestion Management Program

VTA oversees the Congestion Management Program (CMP), which is aimed at reducing regional traffic congestion. The relevant state legislation requires that urbanized counties in California prepare a CMP in order to obtain each county's share of gas tax revenues. State legislation requires that each CMP define traffic LOS standards, transit service standards, a trip reduction and transportation demand management plan, a land use impact analysis program, and a capital

improvement element. VTA has review responsibility for proposed development projects that are expected to affect CMP-designated intersections.

Morgan Hill 2035 General Plan

The Morgan Hill 2035 General Plan includes goals, policies, and actions to avoid significant impacts related to transportation. The following policies are applicable to the proposed project.

Morgan Hill 2035 General Plan Policies: Transportation

Policy	Description
TR-3.2	Safe and Complete Improvements. Avoid creating incomplete public improvements that create public safety hazards.
TR-3.4	Level of Service Standards. As the Level of Service (LOS) policy and design criteria for roadway improvements, use a Tiered LOS Standard as follows: • LOS F in the Downtown at Main/Monterey, along Monterey Road between Main and Fifth Street, and along Depot Street at First through Fifth Streets. This LOS standard in the Downtown recognizes the unique nature of and goals for Downtown Morgan Hill as the transit hub of the City and as a center for shopping, business, entertainment, civic and cultural events, and higher-density, mixed-use living opportunities. This standard does not preclude the City, developers, and property owners from voluntarily implementing improvements and employing operational strategies to improve level of service, especially at the Main/Monterey intersection, if and when land uses redevelop. • LOS D for intersections and segments elsewhere; except: ○ Allow LOS E for identified freeway ramps/zones, road segments and intersections that (1) provide a transition to and are located on the periphery of downtown; (2) are freeway zone intersections; and/or (3) where achieving LOS D could result in interim intersection improvements which would be “over-built” once the City’s circulation network has been completed, and/or would involve unacceptable impacts on existing buildings or existing or planned transportation facilities, including roads, sidewalks, bicycle and transit facilities; and/or would involve extraordinary costs to acquire land and existing buildings, and build the improvement in relation to benefits achieved; and/or the facility would be widened beyond requirements to serve local traffic, in that the facility accommodates a significant component of peak-hour sub-regional and regional through-traffic. • In order to reduce the incentive for regional travel to be drawn off the freeway and onto local neighborhood streets, protect neighborhoods, avoid overbuilding intersections, and to create an incentive for using alternate modes of travel, LOS E during peak hours of travel is acceptable for the following identified freeway ramps, road segments, and intersections: ○ Main Avenue and Del Monte Avenue ○ Main Avenue and Depot Street ○ Dunne Avenue and Del Monte Avenue ○ Dunne Avenue and Monterey Avenue

Morgan Hill 2035 General Plan Policies: Transportation

Policy	Description
	○ Dunne Avenue and Church Street; also, until closed: Dunne Avenue and Depot Street ○ Cochrane Road and Monterey Road ○ Tennant Avenue and Monterey Road ○ Tennant Avenue and Butterfield Boulevard ○ Cochrane Road Freeway Zone: from ○ Madrone Parkway/Cochrane Plaza to ○ Cochrane/DePaul Drive ○ Dunne Avenue Freeway Zone: from Walnut ○ Grove/East Dunne to Condit/East Dunne ○ Tennant Avenue Freeway Zone: from ○ Butterfield/Tennant to Condit/Tennant ○ Freeway Ramps Projects shall pay the City's standard traffic impact fees imposed on new developments in accordance with the adopted impact fee schedule.
TR-9.10	Sidewalk Connectivity. Improve sidewalk connectivity by installing new sidewalks where they do not exist, consistent with the Trails and Natural Resources Master Plan.

4.17.1.2 *Existing Conditions*

Roadway Network

Regional Access

US 101 is a north-south freeway extending northward to San Francisco and southward through Gilroy. US 101 is an eight-lane freeway (consisting of three mixed-flow lanes and one high-occupancy vehicle (HOV) lane in each direction) north of Cochrane Road. South of Cochrane Road, it is a six-lane freeway with no HOV lanes. Access to and from the project site is provided via its interchanges at Dunne Avenue and Tennant Avenue.

Local Access

Monterey Road is classified in the City of Morgan Hill General Plan as a four-lane major arterial that runs directly through Morgan Hill. It extends from Market Street, in downtown San Jose, to US 101 south of the City of Gilroy. Monterey Road has a posted speed limit of 35 miles per hour (mph) in the vicinity of the project site.

Existing Bicycle, Pedestrian and Transit Facilities

The project site is served by VTA bus routes that run along Monterey Road. Frequent Route 68 (Gilroy Transit Center to San José Diridon Transit Center) serves bus stops at the intersection of Monterey Avenue and Spring Avenue, located approximately 400 feet northwest from the site.

There are continuous sidewalks along most roadways and crosswalks provided at signalized intersections within the vicinity of the project site. A future crosswalk is planned to be installed across the Monterey Road/San Pedro Avenue intersection. Additionally, sidewalks along eastbound San Pedro Avenue between Monterey Road and Church Street are planned to be constructed.

There are bike lanes located on Monterey Road, Tennant Avenue, Butterfield Boulevard, and Dunne Avenue. A trailhead providing access to the West Little Llagas Creek Trail is located approximately 400 feet west of the site. The trail runs southward between Spring Avenue and La Cross Drive, parallel with Monterey Road.

4.17.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian facilities?	☐	☐	☒	☐
2) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	☐	☐	☒	☐
3) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
4) Result in inadequate emergency access?	☐	☐	☒	☐
Impact TRN-1:	The project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian facilities. (Less than Significant Impact)			

The project is consistent with the policies of the City's General Plan to improve sidewalk connectivity and expand pedestrian opportunities. The City's Bikeways, Trails, Parks and Recreation Master Plan, adopted in July 2017, establishes goals, policies, and actions to facilitate bicycling and designates bicycle lanes along many City streets. The project's consistency with these plans and the is described below.

Transit Facilities

As discussed in Section 4.17.1.2 Existing Conditions, the project site is served by VTA bus routes that run along Monterey Road. Frequent Route 68 serves bus stops at the intersection of Monterey Avenue and Spring Avenue, located approximately 400 feet from the project site. Given the project would not result in a net increase in employees, the project would not result in an increase in demand on transit facilities. The project does not propose to remove or result in a physical effect on

transit facilities (such as a bus stop). Therefore, the project would not conflict with programs or policies addressing transit facilities. **(Less than Significant Impact)**

Bicycle Facilities

As discussed in Section 4.17.1.2 Existing Conditions, there are bicycle lanes in the vicinity of the project site, located on Monterey Road, Tennant Avenue, Butterfield Boulevard, and Dunne Avenue. A trailhead providing access to West Little Llagas Creek Trail is located approximately 400 feet west of the project site. The proposed project would not generate new bicycle trips and would not conflict with programs or policies addressing bicycle facilities. **(Less than Significant Impact)**

Pedestrian Facilities

As discussed in Section 4.17.1.2 Existing Conditions, there are continuous sidewalks along most roadways and crosswalks provided at signalized intersections in the vicinity of the project site. Based on the General Plan, a future crosswalk is planned to be installed across the Monterey Road/San Pedro Avenue intersection. Additionally, sidewalks along eastbound San Pedro Avenue between Monterey Road and Church Street are planned to be constructed. The project proposes to replace the existing sidewalk along the Monterey Road and San Pedro Avenue with new sidewalks. The project would not conflict with programs or policies addressing pedestrian facilities. **(Less than Significant Impact)**

Impact TRN-2:	The project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). (Less than Significant Impact)
----------------------	--

This assessment relies on the California Office of Planning and Research (OPR) guidelines in analyzing the project's effects on vehicle miles traveled (VMT). The number and origination/destination of daily trips and resulting VMT generated by the proposed gas station would be similar to that of local-serving retail since the gas station will be centrally located within the City and not adjacent to a major regional freeway. For the purpose of the VMT assessment, the uses proposed by the project were converted to equivalent amount of retail/commercial use, since the OPR screening criteria does not include a specific land use category for proposed gas station uses. The use is already present on the site, and the purpose of the project is to increase the amount of retail space and provide additional pump stations and gas dispensers to serve additional customers.

OPR guidelines state that future local-serving retail developments less than 50,000 square feet (s.f.) may be assumed to cause a less than significant impact on VMT. The results of the conversion indicate that the proposed gas station and retail store would generate net new daily trips equivalent to that of an approximately 7,578 square foot retail development. If no credit for the existing gas station use on site were applied, the proposed gas station would generate daily trips equivalent to that of an approximately 28,715 square foot retail development. Since the daily trips and resulting VMT estimated to be generated by the proposed project would be equivalent to that generated by retail uses of less than 50,000 square feet in size, the project is considered to be a

local-serving facility. Therefore, the project's VMT impacts would be less than significant, and the project would not conflict with CEQA Guidelines Section 15064.3(b). **(Less than Significant Impact)**

Impact TRN-3:	The project would not substantially increase hazards due to a design feature or incompatible use. (Less than Significant Impact)
----------------------	---

The proposed project would be designed in accordance with the City of Morgan Hill design standards. The project design does not include sharp curves or dangerous intersections that could result in safety hazards, or does the project propose incompatible uses, such as farm equipment. The project will shorten the width of the driveway on Monterey Road, which will serve to reduce the potential for conflicts between cars entering and exiting the site as there will be fewer opportunities for car to enter and leave the site. During the architectural and site plan review, the project's design will be reviewed to ensure that all applicable design standards are met. For these reasons, the project would not substantially increase hazards due to a design feature or incompatible use. **(Less than Significant Impact)**

Impact TRN-4:	The project would not result in inadequate emergency access. (Less than Significant Impact)
----------------------	--

The project proposes a new 32-foot-wide driveway on Monterey Road and the existing 32-foot wide driveway on San Pedro Avenue would remain. Emergency vehicles would access the site via these driveways. The driveway widths would comply with the City of Morgan Hill's Design Standards, which specify a minimum driveway width of 20 feet for emergency vehicle access. Therefore, the project would not result in inadequate emergency access. **(Less than Significant Impact)**

4.17.3 Non-CEQA Effects

While the evaluation of project CEQA impacts on the transportation system is based on vehicle miles traveled (VMT), the following discussion is included for informational purposes in accordance with the City's Level of Service General Plan Policy TR-3.4. The physical roadway improvements discussed below are physical changes to the environment, related to the project, that are also discussed where relevant in this IS for their potential to result in impacts.

4.17.3.1 *Project Trip Generation*

Trip generation estimates are based on trip generation rates from the Institute of Transportation Engineers' (ITE's) Trip Generation Manual, 10th Edition. Based on the trip generation rates and the project size, it is estimated the proposed gas station would generate 150 new vehicle trips during the AM peak hour and 168 vehicle trips during the PM peak hour, prior to any trip reductions. Trip generation for gas stations are typically adjusted to account for pass-by trips. Pass-by trips are trips that are already accounted for in the existing traffic but would turn into the site while passing by. The pass-by trip reduction is applied because gas station traffic is not generated by the gas station but is already part of ambient traffic levels. Pass-by trips are therefore excluded from the traffic projections to yield net new project trips. However, at intersections providing direct access to the

site (i.e., project driveways), all project-generated traffic is included, including pass-by reductions. Total estimated project trips are shown in Table 4.17-1 below.

Table 4.17-1: Trip Generation Summary								
Land Use ¹	Size	Daily	AM Peak Hour Trips			PM Peak Hour Trips		
		Trip	In	Out	Total	In	Out	Total
Proposed Land Use								
Gasoline/Service Station with Convenience Market	12 fueling positions	2,464	77	73	150	86	82	168
Pass-by Reduction ²		-1,380	-48	-45	-93	-48	-46	-94
Sub-Total		1,084	29	28	57	23	36	74
Existing Land Use Credit								
Gasoline/Service Station	8 fueling positions	-1,386	-41	-41	-82	-57	-56	-113
Pass-by Reduction ²		578	24	24	48	24	24	48
Sub-Total		-798	-17	-17	-34	-33	-32	-65
Total Project Trips		286	12	11	23	5	4	9
¹ Source: ITE Trip Generation Manual, 10 th Edition. 2017.								
² AM and PM Peak-hour pass-by reduction rates obtained from ITE Trip Generation Handbook, 3 rd Edition. Daily peak-hour pass-by reductions are assumed to be the same as their PM peak-hour pass-by rate.								

4.17.3.2 *Intersection Level of Service Analysis*

Based on the VTA's Congestion Management Program Guidelines and the City's traffic impact analysis (TIA) Guidelines, preparation of a comprehensive TIA for a particular development is based on its estimated trip generation and its effects on surrounding transportation facilities. Based on the City's TIA Guidelines, the City requires the completion of a comprehensive TIA if the following criteria are met:

- Project generates 100 or more net new peak hour trips,(projects located in the 14-block Downtown Core area are exempt from this requirement).
- Project adds 50 to 99 net new peak hour trips to the roadway systems where nearby intersections are currently operating at or below the City's LOS standard, or projected to operate at or below the City's LOS standard with traffic added by approved developments (projects located in the 14-block Downtown Core area are exempt from this requirement).
- Creates a transportation issue that City staff request to have analyzed.

The proposed project would result in the addition of 23 net new AM peak-hour trips and 9 net new PM peak-hour trips to the roadway system under existing plus project conditions. Therefore, a comprehensive TIA is not required. However, a trip generation and operations analysis was prepared for the project.

Traffic conditions at the Monterey Road/Spring Avenue and Monterey Road/San Pedro Avenue intersections were analyzed for weekday AM and PM peak hours. Other intersections in the project area were not studied because the project would have minimal (less than 10) peak hour trips.

Signalized Intersection Analysis

Signalized study intersections are subject to the City of Morgan Hill's LOS standards. The City's LOS methodology is TRAFFIX, which evaluates signalized intersections operations based on average delay time for all vehicles at the intersection. All intersections within the City of Morgan Hill are required to meet the City's LOS standard of LOS D, except the following:

- LOS F for Downtown intersections and segments including at Main/Monterey, along Monterey Road between Main and Fifth Street, and along Depot at First through Fifth Street;
- LOS E for the following intersections and freeway zones:
 - Main Avenue and Del Monte Avenue
 - Main Avenue and Depot Street
 - Dunne Avenue and Del Monte Avenue
 - Dunne Avenue and Monterey Avenue
 - Dunne Avenue and Church Street
 - Dunne Avenue and Depot Street
 - Cochrane Road and Monterey Road
 - Tennant Avenue and Monterey Road
 - Tennant Avenue and Butterfield Boulevard
 - Cochrane Road Freeway Zone: from Madrone Parkway/Cochrane Plaza to Cochrane Road/DePaul Drive
 - Dunne Avenue Freeway Zone: from Walnut Grove Drive/East Dunne Avenue to Condit Road/East Dunne Avenue
 - Tennant Avenue Freeway Zone: from Butterfield Boulevard/Tennant Avenue to Condit Road/Tennant Avenue

According to the City of Morgan Hill LOS guidelines, a development is said to create an adverse impact on traffic conditions at a signalized intersection for either peak hour, if 1) the LOS at the intersection degrades from an acceptable level (LOS D or LOS E) under no project conditions to an unacceptable level (LOS E or LOS F) under project conditions, or 2) the LOS at the intersection is an unacceptable level (LOS E or F) under no project conditions and the addition of project trips causes the average critical delay to increase by four or more seconds and the volume-to-capacity ratio (V/C) to increase by 0.01.

Unsignalized Intersections

Signal Warrants

The LOS analysis at unsignalized intersections is supplemented with an assessment of the need for signalization of the intersection. The need for signalization of unsignalized intersections is assessed based on the Peak Hour Volume Warrant (Warrant 3) described in the California Manual on Uniform Traffic Control Devices for Streets and Highways, Part 4, Highway Traffic Signals, 2014. This method provides an indication whether vehicular peak hour traffic are, or would be, sufficient to justify installation of a traffic signal.

LOS Results

The results of the LOS analysis show that under existing conditions, the intersection of Monterey Road and San Pedro Avenue currently operates at a LOS F during the PM peak hour, which is below the City standard. The addition of project traffic would increase delays by 64.6 seconds during the PM peak hour and would degrade AM peak hour operations to an unacceptable LOS E. Since the Monterey Road and San Pedro Avenue is a one-way-stop-controlled unsignalized intersection, the approach to the reported delay is the worst-case approach delay (and not the average delay that is used for signalized and all-way stop controlled intersections). At this intersection, San Pedro Avenue is considered the worst-case approach. The addition of a single trip to the worst-case approach can result in a disproportional increase in reported delay. This 64.6 second delay accounts for trips generated by the project and does not include the pass-by trips shown in Table 4.17-1.⁶⁸

However, there is a planned improvement to construct a raised median along Monterey Road that would restrict left-turns out of San Pedro Avenue to southbound Monterey Avenue which would address the adverse operational effects that would result from the delays at this intersection. The approved Senior Housing development at 16685 Church Street is conditioned to implement this improvement during construction. With this intersection improvement in place, the Monterey Road and San Pedro Avenue intersection would operate at an acceptable level of service under Year 2025 cumulative conditions. The improvement would occur within an existing right-of-way and would not result in significant environmental impacts (e.g., such as removal or a sidewalk, bicycle lane, or significant number of trees).

Furthermore, the results of the LOS analysis show that the intersection of Monterey Road and Spring Avenue currently operates and is projected to continue operating at an acceptable LOS B or better under Year 2025 cumulative conditions. The addition of project traffic would not result in the degradation of the study intersection's LOS during AM and PM peak hours. Therefore, the proposed project would not have an adverse effect on operations at the Monterey Road and Spring Avenue intersection and would not require physical improvements. Results of the LOS analysis are shown in Table 4.17-2 below.

⁶⁸ Del Rio, Robert. Principal, Hexagon Transportation Consultants. Personal Communication. August 30, 2022.

Table 4.17-2: Intersection Level of Service Summary

Intersection	LOS Standard	Peak Hr.	Existing			Existing Plus Project					Year 2025 Cumulative		Year 2025 Cumulative with Project			
			Warrant Met?	Delay	LOS	Warrant Met?	Delay	LOS	Inc. in Critical Delay	Inc. in Critical V/C	Delay	LOS	Delay	LOS	Inc. in Critical Delay	Inc. in Critical V/C
Monterey Road and Spring Avenue (Signal)	D	AM PM	-- --	5.1 11.3	A B	-- --	5.2 11.4	A B	0.1 0.0	0.002 0.002	4.7 12.0	A B	4.7 12.1	A B	0.1 0.0	0.002 0.001
Monterey Road and San Pedro Avenue (OWSC ¹)	D	AM PM	No Yes	26.7 71.1	D F	No Yes	37.3 135.7	E F	N/A N/A	N/A N/A	14.3 15.3	B C	14.5 15.3	B C	N/A N/A	N/A N/A

1 OWSC = One-Way Stop-Controlled

2 The reported delay and corresponding LOS for signalized intersections represent the average delay for all approaches at the intersection. The reported delay and corresponding LOS for one- and two-way stop-controlled intersections are based on the stop-controlled approach with the highest delay.

Bold indicates unacceptable LOS or signal warrant met. Bold and boxed indicate significant impact.

4.18 TRIBAL CULTURAL RESOURCES

4.18.1 Environmental Setting

4.18.1.1 *Regulatory Framework*

State

Assembly Bill 52

AB 52, effective July 2015, established a new category of resources for consideration by public agencies called Tribal Cultural Resources (TCRs). AB 52 requires lead agencies to provide notice of projects to tribes that are traditionally and culturally affiliated with the geographic area if they have requested to be notified. Where a project may have a significant impact on a tribal cultural resource, consultation is required until the parties agree to measures to mitigate or avoid a significant effect on a TCR or until it is concluded that mutual agreement cannot be reached.

Under AB 52, TCRs are defined as follows:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are also either:
 - Included or determined to be eligible for inclusion in the California Register of Historic Resources, or
 - Included in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).
- A resource determined by the lead agency to be a TCR.

4.18.1.2 *Existing Conditions*

The City of Morgan Hill prepared and emailed a notification letter to the Tamien Nation tribe on August 23, 2021, pursuant with AB 52 requirements. Tamien Nation responded with a request for formal consultation in a response dated September 16, 2021. Tamien Nation requested the proposed project include standard conditions to reduce potential impacts to tribal cultural resources. The consultation process was concluded in October 2021.

4.18.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
1) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?	☐	☐	☒	☐
2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐
Impact TCR-1:	The project would not cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k). (Less than Significant Impact)			

Based on consultation with Native American individuals/groups, including Tamien Nation, regarding development at the site, no known tribal cultural resources are present on-site or adjacent to the site. As a result of Tamien Nation's and the City's consultation, the tribe requested that the City include measures for reducing impacts to archaeological/tribal cultural resources, including human remains, during construction. These measures included requiring a tribal monitor on-site during ground disturbance and are presented in Section 4.5.2 Cultural Resources (standard permit conditions listed under Impact CUL-1). For this reason, the project would not cause an adverse change in the significance of tribal cultural resources. In the event that any tribal cultural resources are unexpectedly unearthed during construction, the standard permit conditions listed under Impact CUL-1 (if the resource is human remains) would be implemented. Implementation of the above mitigation measure would reduce the project's impact to tribal cultural resources to less than significant. **(Less than Significant Impact)**

Impact TCR-2:	The project would not cause a substantial adverse change in the significance of a tribal cultural resource that is determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. (Less than Significant Impact)
----------------------	---

As discussed in Impact TCR-1, there are no known tribal cultural resources on-site; however, if any subsurface tribal cultural resources are unexpectedly found, the project would implement the standard permit conditions listed under Impact CUL-1. Therefore, the project would not cause a substantial adverse change in the significance of a tribal cultural resource. **(Less than Significant Impact)**

4.19 UTILITIES AND SERVICE SYSTEMS

The following discussion is based, in part, on a Stormwater Control Plan prepared for the project by RAMCAM Engineering Group, Inc. on September 1, 2020. This report is attached as Appendix G.

4.19.1 Environmental Setting

4.19.1.1 *Regulatory Framework*

State

State Water Code

Pursuant to the State Water Code, water suppliers providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet (approximately 980 million gallons) of water annually must prepare and adopt an urban water management plan (UWMP) and update it every five years. As part of a UWMP, water agencies are required to evaluate and describe their water resource supplies and projected needs over a 20-year planning horizon, water conservation, water service reliability, water recycling, opportunities for water transfers, and contingency plans for drought events. The City of Morgan Hill adopted its most recent UWMP in October 2021.

Assembly Bill 939

The California Integrated Waste Management Act of 1989, or AB 939, established the Integrated Waste Management Board, required the implementation of integrated waste management plans, and mandated that local jurisdictions divert at least 50 percent of solid waste generated (from 1990 levels), beginning January 1, 2000, and divert at least 75 percent by 2010. Projects that would have an adverse effect on waste diversion goals are required to include waste diversion mitigation measures.

Assembly Bill 341

AB 341 sets forth the requirements of the statewide mandatory commercial recycling program. Businesses that generate four or more cubic yards of garbage per week and multi-family dwellings with five or more units in California are required to recycle. AB 341 sets a statewide goal for 75 percent disposal reduction by the year 2020.

Senate Bill 1383

SB 1383 establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025. The bill grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that at least 20 percent of currently disposed edible food is recovered for human consumption by 2025.

California Green Building Standards Code

In January 2010, the State of California adopted the California Green Building Standards Code, establishing mandatory green building standards for all buildings in California. The code covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resources efficiency, and indoor environmental quality. These standards include the following mandatory set of measures, as well as more rigorous voluntary guidelines, for new construction projects to achieve specific green building performance levels:

Reducing indoor water use by 20 percent;

Reducing wastewater by 20 percent;

Recycling and/or salvaging 50 percent of nonhazardous construction and demolition debris; and

Providing readily accessible areas for recycling by occupants.

Local

Morgan Hill 2035 General Plan

The Morgan Hill 2035 General Plan includes goals, policies, and actions to avoid significant impacts related to transportation. The following policies are applicable to the proposed project.

Morgan Hill 2035 General Plan Policies: Utilities and Service Systems

Policy	Description
SSI-14.5	Water Supply. Routinely evaluate the impact of new development proposals in Morgan Hill and require appropriate measures (fees, water supply assessments, etc.) to ensure long-term water supplies are available.
SSI-14.8	Sufficient Supply. Ensure that new development does not exceed the water supply.
SSI-16.2	Drainage System Capacity. Ensure that the level of detention or retention provided on the site of any new development is compatible with the capacity of the regional storm drainage system.

4.19.1.2 Existing Conditions

Water Service

The City of Morgan Hill provides potable water service to its residential, commercial, industrial, and institutional customers within the City limits. The City's water system facilities include 17 groundwater wells, 12 potable water storage tanks, 10 booster stations, and over 180 miles of pressured pipes ranging from two to 14 inches in diameter. The City's water distribution system meets the needs of existing customers. In anticipation of future growth, the City has planned and constructed water projects in conjunction with new street construction.

The City relies on groundwater as its sole source of supply. The City relies on water imports from the State Water Project and the federal Central Valley Project for the purpose of groundwater recharge of the sub-basins that supply water to the City (Coyote Valley sub-area of the Santa Clara

sub-basin and the Llagas sub-basin). The City's 2020 UWMP (adopted in 2021) determined that there is sufficient supply to meet water demands within the service area through 2045.⁶⁹ The UWMP identified potential shortages which may occur during prolonged years of drought; however, upon implementation of water shortage contingency actions, these shortages can be mitigated in dry-year and multiple dry-year scenarios.

Under existing conditions, the gas station uses approximately 115 gallons per day (gpd) for indoor use and 70 gpd for outdoor use, for a total of 185 gpd.⁷⁰

Wastewater

The City of Morgan Hill's sewer collection system consists of approximately 160 miles of four-inch through 30-inch diameter sewers, three miles of force mains, and 14 sewage lift stations. The "backbone" of the system consists of the trunk sewers, generally 12-inches in diameter and larger, that convey the collected wastewater flows south to the South County Regional Wastewater Authority (SCRWA) Wastewater Treatment Plant.^{71,72} The treatment plant provides service to the cities of Morgan Hill and Gilroy. The treatment plant has capacity to treat an average dry weather flow (ADWF) of 8.5 million gallons per day (mgd) and is currently permitted by the Central Coast RWQCB to treat up to 8.5 mgd.⁷³ Currently, Morgan Hill is allocated 42 percent of the treatment plant's 8.5 mgd capacity, amounting to 3.6 mgd. In 2016, the ADFW in the City was 2.8 mgd, leaving approximately 0.8 mgd of allowable growth within the City's General Plan before capacity at the plant is reached.⁷⁴ Existing sewer utilities in the project area consist of 10-inch lines along Monterey Road.⁷⁵ The existing site generates approximately 92 gallons of water per day.⁷⁶

The SCRWA estimated in 2017 that the Wastewater Treatment Plant (WWTP) will reach capacity in 2025. The SCRWA is currently undergoing a WWTP Facility Expansion Project that will expand the existing WWTP capacity from 8.5 mgd to 11 mgd.⁷⁷ The project is estimated for completion by 2024. Project-level CEQA review for the project was completed by SCRWA in August 2020.

⁶⁹ City of Morgan Hill. *2020 Urban Water Management Plan*. October 2021. Page 7-4.

⁷⁰ Illingworth & Rodkin, Inc. *World Oil Gas Station Air Quality Report*. August 11, 2021.

⁷¹ City of Morgan Hill. *Sewer System Master Plan*. October 2017.

⁷² City of Morgan Hill. *City Council State Report 2163: Accept Report Regarding Wastewater System Needs and Rate Study Schedule*. May 18, 2019.

⁷³ Santa Clara Valley Water District. *US Bureau of Reclamation WaterSMART Title XVI Water Reclamation and Reuse Program Funding FY 2017, FOA BOR-DO-17-F002. South Santa Clara County Recycled Water Project (Phases 1B and 2A)*. December 15, 2016. Accessed April 19, 2021.

<https://www.usbr.gov/watersmart/title/docs/applications/authorized/2017/F002-007santaclara.pdf>

⁷⁴ City of Morgan Hill. *Sewer System Management Plan*. Page 53. February 2018.

⁷⁵ City of Morgan Hill. *Sewer System Master Plan*. Figure ES.3. October 2017.

⁷⁶ The wastewater generation is based on the assumption that it is equivalent to approximately 80 percent of indoor water use.

⁷⁷ City of Gilroy. South County Regional Wastewater Authority (SCRWA). Accessed April 23, 2021.

<http://www.ci.gilroy.ca.us/561/South-County-Regional-Wastewater-Authori>

Storm Drainage

The City of Morgan Hill is divided into several hydrologically distinct drainage areas. Each drainage area has a system of curb and gutter facilities, inlets, conveyance facilities, pumps, and detention basins to collect and dispose of runoff. The stormwater runoff from these areas is ultimately discharged into creeks that flow through the City and are tributary to either Monterey Bay or San Francisco Bay. The drainage areas include Coyote Creek, Fisher Creek, Tennant Creek, Madrone Channel, Butterfield Channel, West Little Llagas Creek, and Llagas Creek. The project site is located in the Little Llagas Creek drainage basin, which eventually discharges to Monterey Bay.

Solid Waste

Recology South Valley provides solid waste and recycling services to the residents and businesses of the City. The City is contracted with Waste Solutions Group of San Benito, LLC. Effective March 2022, the City's waste is hauled to Kirby Canyon landfill in San José or the Monterey Peninsula landfill in Marina. There is a negligible amount of solid waste currently generated at the project site. The existing gas station generates approximately 0.004 tons of solid waste per day.⁷⁸

Other Utilities

The community-owned SVCE is the electricity provider for the City of Morgan Hill.⁷⁹ SVCE sources the electricity, and PG&E delivers it to customers over their existing utility lines. PG&E provides natural gas services within Morgan Hill. The existing gas station is connected to existing utility lines and is served by SVCE and PG&E. Refer to Section 4.6 Energy for further discussion of electricity and natural gas use of the proposed project.

4.19.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐

⁷⁸ CalRecycle. Estimated Solid Waste Generation Rates. Accessed August 19, 2022.

<https://www2.calrecycle.ca.gov/wastecharacterization/general/rates>. Solid waste generation 0.9 lbs/100 s.f.

⁷⁹ Silicon Valley Clean Energy. "Frequently Asked Questions." Accessed May 13, 2022.

<https://www.svcleanenergy.org/faqs>.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
2) Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
3) Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
4) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
5) Be noncompliant with federal, state, or local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Impact UTL-1: The project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. **(Less than Significant Impact)**

The proposed project would utilize existing connections and would not install new water lines, storm drains, and sanitary sewer lines.

Water Facilities

The proposed project would connect to the existing 10-inch water mains in Monterey Road. As discussed under Impact UTL-2 below, the City has sufficient water supply to meet the demands of the proposed project. Thus, the proposed project would not result in significant environmental impacts due to the construction of additional facilities to meet project demand. **(Less than Significant Impact)**

Storm Drainage

The proposed project would include an underground infiltration structure with a pretreatment and trash capture unit that would reduce stormwater runoff from the project site. Storm drains from the project site would connect to 24-inch storm drains in San Pedro Avenue. The project would be consistent with the City's Stormwater Management Guidance Manual for Low Impact Development

and Post-Construction Requirements and Storm Drainage Master Plan. The proposed project would only incrementally increase (by less than 2,000 sq.ft.) the amount of impervious surface area on the site, and not require expansion of the City's existing storm drainage system. The final drainage system design for the project would be subject to review and approval by the City's Engineering Division, who would confirm that the proposed project would not result in an exceedance of existing capacity. For these reasons, the proposed project would not result in significant environmental impacts due to the construction of additional facilities. **(Less Than Significant Impact)**

Sanitary Sewer and Wastewater Treatment

The proposed project would connect to the existing 10-inch sanitary sewer mains in Monterey Road. The design of the utility system serving the project would be reviewed by the City's Engineering Division to ensure that all sewer lines have adequate capacity to meet the demands of the various project components. The SCWRA Wastewater Treatment Plant would not need to be expanded solely to accommodate the increase in wastewater created by the proposed development (discussed under Impact UTL-3). Thus, the project would have a less than significant impact related to the relocation or construction of new wastewater treatment facilities. **(Less than Significant Impact)**

Electric Power, Natural Gas, and Telecommunications

The proposed project would connect to existing electric power and telecommunication lines in the project area. The project would not require the construction or relocation of these facilities. **(Less than Significant Impact)**

Impact UTL-2:	The project would not have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. (Less than Significant Impact)
----------------------	--

As discussed in Section 4.19.1.2 Existing Conditions, the existing gas station uses approximately 115 gallons per day (gpd) for indoor use and 70 gpd for outdoor use, for a total of 185 gpd. The proposed project would result in approximately 172 gpd of indoor water use and 105 gpd of outdoor water use, for a total of approximately 277 gpd of water, or a net increase in demand of 92 gpd.⁸⁰ The UWMP projects a water supply of 24,800 AF in 2025 and anticipates an approximately 700 AF increase in supply every five years.⁸¹ Total water use in the City of Morgan Hill is expected to increase to 9,155 acre-feet per year (AFY) in 2025, 9,760 AFY in 2030, and 10,366 AFY in 2035. Estimates of water use increases are based on expected population growth in the City. The proposed project is a gas station redevelopment project that would not introduce new residences or increase population growth in the City. Therefore, the project is consistent with UWMP projections and there would be sufficient water supplies available to serve the project during normal, dry, and multiple years. **(Less than Significant Impact)**

⁸⁰ Illingworth & Rodkin, Inc. *World Oil Gas Station Air Quality Report*. August 11, 2021.

⁸¹ City of Morgan Hill. *2020 Urban Water Management Plan*. October 2021. Page 6-17.

Impact UTL-3:	The project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. (Less than Significant Impact)
----------------------	--

The proposed project would generate approximately 140 gpd of wastewater.⁸² As discussed in Section 4.19.1.2 Existing Conditions, the SCRWA Wastewater Treatment Plant, which serves the Cities of Morgan Hill and Gilroy, has approximately 0.8 mgd of remaining capacity allocated for the City of Morgan Hill. The project's wastewater flows alone would not cause the Plant to exceed capacity. The proposed project would not increase demand beyond what is expected in the General Plan and Sanitary Sewer System Master Plan. Therefore, the project would not result in a determination by the SCRWA that it does not have adequate capacity to serve the wastewater treatment demands of the project. **(Less than Significant Impact)**

Impact UTL-4:	The project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. (Less than Significant Impact)
----------------------	--

As discussed in Section 4.19.1.2 Existing Conditions, the City's waste is hauled to the Monterey Peninsula landfill in Marina or to the Kirby Canyon landfill in San José. The Monterey Peninsula landfill has a projected permitted capacity of approximately 48,560,000 cubic yards (13,111,200 tons) and is expected to remain open through 2106.^{83,84} The Kirby Canyon landfill has a projected permitted capacity of approximately 36,400,000 cubic yards (9,828,000 tons) and is expected to remain open through 2059.⁸⁵ The project would generate approximately 0.01 tons of solid waste per day (which is approximately a 0.006 ton increase over existing solid waste generation) and would not result in an exceedance of the capacity of local infrastructure. Additionally, the project would be required to direct and recycle waste consistent with federal, state, and local requirements. For these reasons, the project would not generate solid waste in excess of state or local standards, in excess of the capacity of local infrastructure, or impair the attainment of solid waste reduction goals. **(Less than Significant Impact)**

⁸² Based on the assumption that wastewater accounts for approximately 80% of indoor water use.

⁸³ CalRecycle. *SWIS Facility Detail: Monterey Peninsula Landfill (27-AA-0010)*. Accessed August 29, 2022. <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2642?siteID=1976>

⁸⁴ 1 cubic yard = 0.27 tons.

⁸⁵ CalRecycle. *SWIS Facility Detail: Kirby Canyon Landfill (43-AN-0008)*. Accessed August 26, 2022. <https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/3393>

Impact UTL-5: The project would not be noncompliant with federal, state, or local management and reduction statutes and regulations related to solid waste.
(Less than Significant Impact)

As discussed under Impact UTL-4, the project would comply with local, state, and federal regulations related to solid waste, the City of Morgan Hill's standard for projects to divert 50 percent of its waste away from landfills. Therefore, the project would have a less than significant impact related to solid waste. **(Less than Significant Impact)**

4.20 WILDFIRE

4.20.1 Environmental Setting

State

Fire Hazard Severity Zones

CAL FIRE is required by law to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. Referred to as Fire Hazard Severity Zones (FHSZs), these maps influence how people construct buildings and protect property to reduce risk associated with wildland fires. FHSZs are divided into areas where the state has financial responsibility for wildland fire protection, known as state responsibility areas (SRAs), and areas where local governments have financial responsibility for wildland fire protection, known as local responsibility areas (LRAs). Homeowners living in an SRA are responsible for ensuring that their property is in compliance with California's building and fire codes. Only lands zoned for very high fire hazard are identified within LRAs.

California Fire Code Chapter 47

Chapter 47 of the California Fire Code sets requirements for wildland-urban interface fire areas that increase the ability of buildings to resist the intrusion of flame or burning embers being projected by a vegetation fire, in addition to systematically reducing conflagration losses through the use of performance and prescriptive requirements.

California Public Resources Code Section 4442 through 4431

The California Public Resources Code includes fire safety regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment that uses an internal combustion engine; specify requirements for the safe use of gasoline-powered tools on forest-covered land, brush-covered land, or grass-covered land; and specify fire suppression equipment that must be provided onsite for various types of work in fire-prone areas. These regulations include the following:

- Earthmoving and portable equipment with internal combustion engines would be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (Public Resources Code Section 4442);
- Appropriate fire suppression equipment would be maintained during the highest fire danger period, from April 1 to December 1 (Public Resources Code Section 4428);
- On days when a burning permit is required, flammable materials would be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and the construction contractor would maintain appropriate fire suppression equipment (Public Resources Code Section 4427); and
- On days when a burning permit is required, portable tools powered by gasoline-fueled internal combustion engines would not be used within 25 feet of any flammable materials (Public Resources Code Section 4431).

California Code of Regulations Title 14

The California Board of Forestry and Fire Protection has adopted regulations, known as SRA Fire Safe Regulations, which apply basic wildland fire protection standards for building, construction, and development occurring in a SRA. The future design and construction of structures, subdivisions and developments in SRAs are required to provide for the basic emergency access and perimeter wildfire protection measures discussed in Title 14.

Fire Management Plans

CAL FIRE has developed an individual Unit Fire Management Plan for each of its 21 units and six contract counties. CAL FIRE has developed a strategic fire management plan for the Santa Clara County Unit, which covers the project area and addresses citizen and firefighter safety, watersheds and water, timber, wildlife and habitat (including rare and endangered species), unique areas (scenic, cultural, and historic), recreation, range, structures, and air quality. The plan includes stakeholder contributions and priorities and identifies strategic areas for pre-fire planning and fuel treatment as defined by the people who live and work with the local fire issues.

Local

Morgan Hill 2035 General Plan

The Morgan Hill 2035 General Plan includes goals, policies, and actions to avoid significant impacts due to hazards and hazardous materials. The following policies are applicable to the proposed project.

Morgan Hill 2035 General Plan Policies: Wildfire

Policy	Description
SSI-3.1	Development in Fire Hazard Areas. Minimize development in fire hazard areas and plan and construct permitted development so as to reduce exposure to fire hazards and to facilitate fire suppression efforts in the event of a wildfire.
SSI-3.2	Wildfire Risks. Avoid actions which increase fire risk, such as increasing public access roads in fire hazard areas, because of the great environmental damage and economic loss associated with a large wildfire.

City of Morgan Hill Wildland Urban Interface

The City of Morgan Hill adopted its Wildland Urban Interface map on March 18, 2009. The map shows high FHSZs and very high FHSZs within City limits.

4.20.1.1 Existing Conditions

The project site is not located within a CAL FIRE FHSZ and is located approximately 1,900 feet east of a SRA.⁸⁶ According to the City's Wildland Urban Interface, the project site is not located within a very high FHSZ. The nearest very high FHSZ to the site located approximately 350 feet west.⁸⁷ The project site is separated from the very high FHSZ by Monterey Road and commercial development.

4.20.2 Impact Discussion

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

As discussed in Section 4.9.1.2 Existing Conditions, the project site is not located within a designated high or very high FHSZ. The project site is located approximately 350 feet east of the edge a very high FHSZ. The site is separated from this area by Monterey Road and commercial development. The project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires. **(No Impact)**

⁸⁶ California Board of Forestry and Fire Protection. "Fire Hazard Severity Zones Maps." Accessed June 23, 2022. http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones.

⁸⁷ City of Morgan Hill. "Fire Hazard Severity Zones." Accessed June 23, 2022. <https://www.morganhill.ca.gov/DocumentCenter/View/3037/Fire-Hazard-Severity-Zones-Adopted3-18-09?bidId=>

4.21

MANDATORY FINDINGS OF SIGNIFICANCE

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

Impact MFS-1: The project does not have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. **(Less than Significant Impact with Mitigation Incorporated)**

As discussed in the previous sections of this Initial Study, the proposed gas station redevelopment project would not degrade the quality of the environment through implementation of identified standard conditions and mitigation measures. The proposed project would not substantially alter the existing condition of operation of the site because it would continue operating as a gas station with retail store. As discussed in Section 4.4 Biological Resources, the project site does not contain wildlife habitat or endangered species and the proposed project would not significantly impact sensitive habitat or species. As discussed in Section 4.5 Cultural Resources and Section 4.18 Tribal Cultural Resources, the project would implement standard conditions that would result in a less than significant impact to archaeological resources or tribal cultural resources, in the unlikely event

any are discovered during construction of the project. Therefore, with the implementation of standard conditions and mitigation measures, the project would not substantially degrade the quality of biological, cultural, or tribal cultural resources. **(Less than Significant Impact with Mitigation Incorporated)**

Impact MFS-2:	The project does not have impacts that are individually limited, but cumulatively considerable. (Less than Significant Impact with Mitigation Incorporated)
----------------------	--

Under Section 15065(a)(3) of the CEQA Guidelines, a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has potential environmental effects “that are individually limited, but cumulatively considerable.” As defined in Section 15065(a)(3) of the CEQA Guidelines, cumulatively considerable means “that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.” This Initial Study evaluates the environmental impacts of the proposed gas station redevelopment project. This Initial Study also takes into account other past, pending, and probable future projects whose impacts could combine to produce cumulative impacts.

The nearest project to the site is the approved 82-unit Morgan Hill Senior Housing project located at 16685 Church Street, approximately 100 feet southeast of the proposed project, across San Pedro Avenue. The approved Myrtle-Frank Residential project (proposed for 12 single-family houses) is located at the corner of Myrtle Avenue and Monterey Road, approximately 920 feet north of the project site.

Resource Topics not Impacted by the Project

As described in the respective sections throughout this Initial Study, the proposed gas station project would have no impact on agricultural resources, historic resources, mineral resources, and recreational facilities. Therefore, the project has no potential to combine with other projects to result in cumulative impacts to those resources. **(No Cumulative Impact)**

Cumulative Air Quality Impacts

By its very nature, air pollution is largely a cumulative impact. The geographic area for cumulative air quality impacts is the San Francisco Bay Area Air Basin. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project’s individuals emissions contribute to existing cumulatively significant adverse air quality impacts. The proposed project would emit criteria air pollutants and contribute to the overall regional emissions of these pollutants. The project-level thresholds identified by BAAQMD (which the project’s impacts were compared to in Section 4.3 Air Quality) are the basis for determining whether a project has a cumulatively considerable contribution to the existing cumulatively significant air quality impact. As discussed in Section 4.3 Air Quality, the project’s construction and operational criteria air pollutant emissions would be below BAAQMD screening criteria and thresholds for these pollutants.

Therefore, the project would result in a less than significant cumulatively considerable contribution to significant regional air quality impact.

As a part of the community health risk assessment, all substantial sources of TACs that could affect sensitive receptors that are located within 1,000 feet of the project site (i.e., influence area). These sources include rail lines, freeways or highways, busy surface streets, and stationary sources identified by BAAQMD.

A review of the project area and provided traffic information indicates that traffic on Monterey Road has an ADT of over 10,000 vehicles. All other roadways within the area are assumed to have an ADT that is less than 10,000 vehicles. Two stationary sources were identified within the 1,000-foot influence area using the BAAQMD's stationary source geographic information systems (GIS) map tool. Figure 4.21-1 shows the sources that would affect the MEIs. Community risk impacts from these sources on the MEIs are shown in Table 4.21-1.

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's Permitted Stationary Sources 2018 GIS website, which identifies the location of nearby stationary sources and their estimated risk and hazard impacts. Two sources, a gas dispensing facility and an industrial facility, were identified using this tool. A Stationary Source Information Form (SSIF) containing the identified sources was prepared and submitted to BAAQMD. The gas dispensing facility identified was the existing site's gas station.

Table 4.21-1 shows both the project and cumulative community risk impacts at the sensitive receptors most affected by the project (i.e., MEIs). The project's community risk from project construction activities would not exceed the single-source maximum increased cancer risk, PM_{2.5} concentration, or HI thresholds. In addition, the combined cancer risk, PM_{2.5} concentration, and HI values would not exceed their respective cumulative thresholds.

Table 4.21-1: Cumulative Community Risk Impacts from Combined TAC Sources at MEIs			
Source	Cancer Risk* (per million)	Annual PM_{2.5}* (µg/m³)	Hazard Index
Project Impacts			
Proposed Project (Construction and Operation) Unmitigated	6.34 (infant)	0.07	0.01
<i>BAAQMD Single-Source Threshold</i>	<i>>10.0</i>	<i>>0.3</i>	<i>>1.0</i>
<i>Exceed Threshold?</i> Unmitigated	<i>No</i>	<i>No</i>	<i>No</i>
Cumulative Sources			
Monterey Road, ADT 21,965	2.05 (infant)	0.14	<0.01

Table 4.21-1: Cumulative Community Risk Impacts from Combined TAC Sources at MEIs				
Source		Cancer Risk* (per million)	Annual PM_{2.5}* (µg/m³)	Hazard Index
Airtronics Metal Products (Facility ID #23026, Spray booths, Ovens), MEIs at 650 feet		<0.01	0.01	-
<i>Combined Sources</i>	<i>Unmitigated</i>	<8.40 (infant)	0.22	<0.02
BAAQMD Cumulative Source Threshold		>100	>0.8	>10.0
Exceed Threshold?	Unmitigated	No	No	No

Given the distance of the approved Myrtle Frank residential project from the site, this approved project would have a different MEI than the proposed project. In addition, both approved residential projects would be required to comply with the same standard conditions to reduce fugitive dust emissions as the proposed project. With the implementation of these standard conditions, the cumulative TAC sources would result in a less than significant cumulative impact on the nearby sensitive receptors. **(Less than Significant Cumulative Impact)**

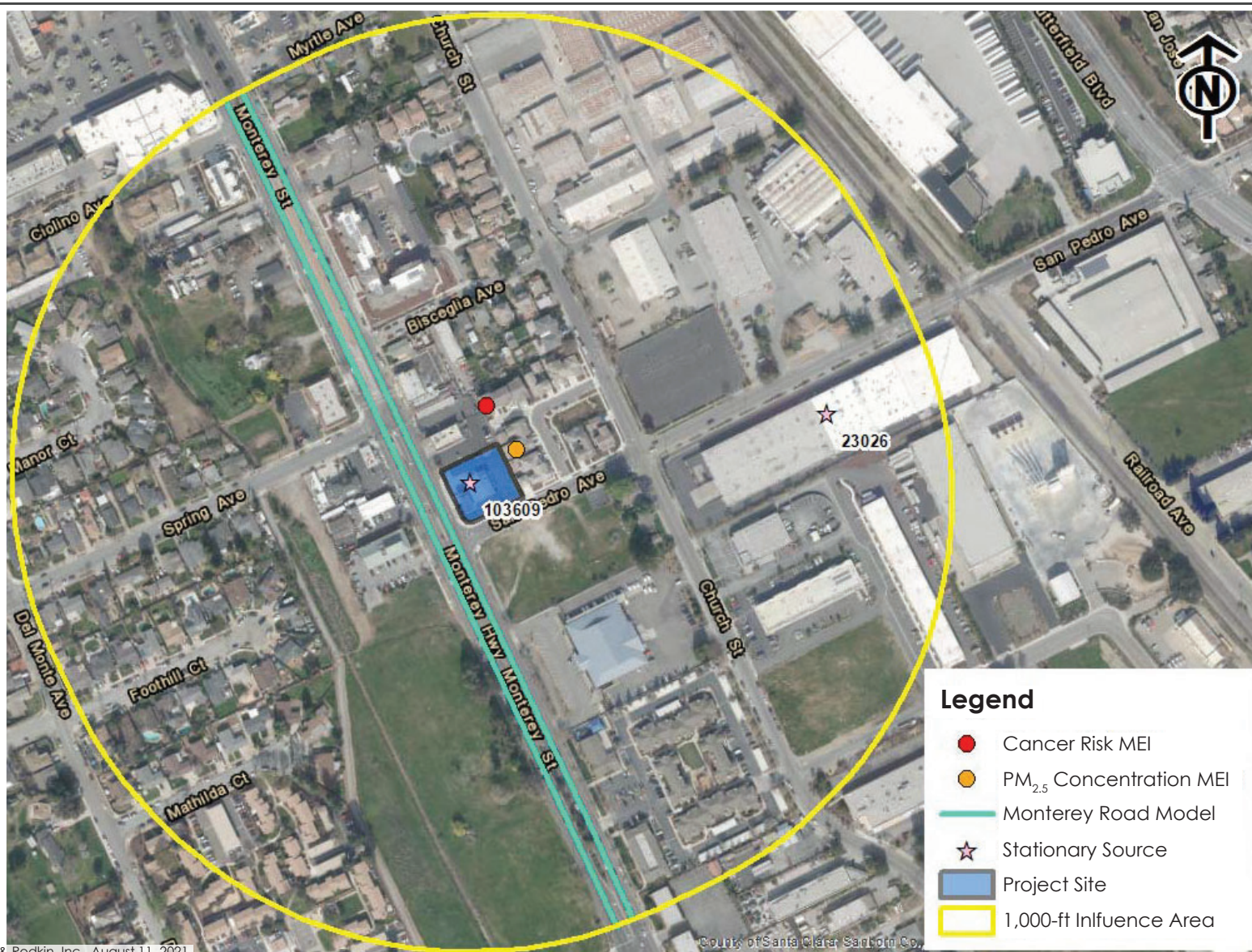
Cumulative Greenhouse Gas Impacts

The proposed project and past, present, present and future development projects worldwide contribute to global climate change. No single project is sufficient in size to, by itself, change the global average temperature. Therefore, due to the nature of GHG impacts, a significant project impact is a significant cumulative impact. As discussed in Section 4.8 Greenhouse Gas Emissions, the project's operational emissions would be below applicable thresholds for 2030. Therefore, the project would not result in significant GHG impact. For these reasons, the project would not result in a cumulatively considerable contribution to a significant cumulative GHG impact. **(Less Than Significant Impact)**

Cumulative Cultural Resources, Tribal Cultural Resources, and Geologic Impacts

The geographic area for cumulative archaeological resources and tribal cultural resources would be locations adjacent to the site. There are no other current or future projects immediately adjacent to the project site. The project would, therefore, have no cumulative impact on archaeological resources and tribal cultural resources. **(No Cumulative Impact)**

The geographic area for cumulative geologic impacts would be locations adjacent to the site since geological impacts are limited to the project site and adjacent properties. There are no other current or future projects immediately adjacent to the project site. Therefore, the project has no



CUMULATIVE TAC AND PM_{2.5} SOURCES

FIGURE 4.21-1

potential to combine impacts to geological resources or soils with other projects. **(No Cumulative Impact)**

Cumulative Hydrology and Utilities Impacts

The geographic area for cumulative hydrology and water quality impacts is the Upper Llagas Creek watershed. Cumulative developments near the project would be subject to similar hydrological and urban runoff conditions.

As discussed in Section 4.10 Hydrology and Water Quality, the project site is within a FEMA Flood Zone AE and the existing BFEs in the project area range from 330 to 343 feet above mean sea level. Based on hydraulic modeling that accounted for the proposed project and other pending/approved projects in the area (including those discussed in this section), the cumulative projects would result in a maximum 0.71-foot increase in BFEs in the project area. The cumulative impacts are within the City's requirement of less than one foot increase in the base flood elevation; thus, the cumulative projects would result in a less than significant cumulative impact to the City's drainage system due to effects on flood flows.

Furthermore, all projects occurring within Morgan Hill would be required to implement the same standard conditions and measures related to construction water quality as the proposed project (including preparation of a SWPPP if disturbance is greater than one acre). In addition, all current and probable future projects that would disturb more than one acre of soil or replace/add more at least 2,500 square feet of impervious surfaces would be required to meet applicable site design and runoff reduction measures where feasible and the City's Storm Drainage Manual requirements on a project-specific basis. For these reasons, the cumulative projects, including the proposed project, would not result in significant cumulative hydrology or water quality impacts. **(Less than Significant Cumulative Impact)**

The geographic area for cumulative utility and service systems is the City boundaries. The project would incrementally contribute to cumulative demands on utilities and service systems (water, sewer, solid waste, storm drainage).

Future projects accounted for in the General Plan were included in the UWMP water demand projections. In addition, the City's share of the South County Regional Wastewater Authority Wastewater Treatment Plant's treatment capacity is 3.6 mgd. As discussed in Section 4.19 Utilities and Service Systems, the ADFW in the City in 2016 was approximately 2.8 mgd, leaving approximately 0.8 mgd of allowable growth within the City before capacity at the plant is reached. Implementation of the proposed project and pending/approved projects consistent with the General Plan would not cause the City to exceed water demand projections, which are primarily based on population and employment growth disclosed in the City's most recent UWMP, or cause the City to exceed its allocation for wastewater treatment. **(Less than Significant Cumulative Impact)**

As discussed in the Section 4.19, Utilities and Service Systems, the Monterey Peninsula landfill have remaining capacity to serve the region through 2107. Projects, including the proposed project, that are consistent with the General Plan would not exceed the City's solid waste generation projections. Based on the above reasons, the combined projects would not result in significant cumulative impacts to the City's water, sewer, solid waste, and storm drainage facilities. **(Less than Significant Cumulative Impact)**

The project would not relocate natural gas, electricity, or telecommunications lines. The project would not combine impacts to these utility lines with other projects, therefore, no cumulative impacts to these utilities would result from the combined projects. **(No Cumulative Impact)**

Cumulative Hazards and Hazardous Materials and Impacts

The geographic area for cumulative hazardous materials impacts is locations within approximately 1,000 feet of the project site. There is a recently approved school project that will be constructed at the northwest corner of Cosmo Avenue and Monterey Highway (APN 767-17-047), approximately 800 feet from the project site. The use, storage, transportation, and disposal of fuel, and maintenance chemicals would be managed in accordance with existing laws and regulations that ensure storage, and transportation to and from the cumulative sites would not result in a significant cumulative impact related to hazardous materials. In addition, the cumulative projects would be required to implement mitigation measures such as a Site Management Plan to and standard conditions to reduce exposure to ACMs and LBP, to reduce the impacts of contaminants on the public and environment. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

The project would not result in an aircraft hazard given the project site is not located within an AIA of a Comprehensive Land Use Plan and is not located within an FAA height restriction area for new structures. The project would, therefore, not result in cumulative impacts due to aircraft hazards when combined with the impacts of other projects. **(No Cumulative Impact)**

Cumulative Noise Impacts

The geographic area for cumulative noise impacts is approximately a 1,000 feet radius from the site.

Construction

While the three proposed cumulative projects within 1,000 feet of the site would result in a temporary construction noise increase while they are each under construction, the project and other development projects would comply with standard conditions discussed in Section 4.13 Noise and Vibration. Construction of the proposed project would be approximately eight months. Therefore, the project would have a less than significant cumulative construction noise impact on noise sensitive receptors on the site. **(Less than Significant Cumulative Impact)**

Operation

As discussed in Section 4.13 Noise, project vehicles traveling on surrounding roadways would not, in combination with other growth in the area, lead to substantial increases in roadway noise. Roadway volumes on Monterey Road and San Pedro Avenue would not double as a result of cumulative development, the amount of increased vehicular traffic necessary to cause a noticeable three dBA increase in roadway noise. **(Less than Significant Cumulative Impact)**

Cumulative Traffic Impacts

The geographic area for cumulative transportation resource impacts includes the project site and its surrounding area. The proposed project would be consistent with applicable General Plan policies regarding circulation and, therefore, would not result in a cumulative conflict with those policies. The cumulative projects would comply with current building and fire codes and be reviewed by the Fire Department to ensure adequate emergency access. For these reasons, the cumulative projects would not result in a significant cumulative impact to emergency access. In addition, the project is considered local-serving retail with less than 50,000 square feet of retail space and would not result in a cumulatively considerable contribution to a regional VMT impact. **(Less than Significant Cumulative Impact)**

Impact MFS-3:	The project does not have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly. (Less than Significant Impact with Mitigation)
----------------------	--

Consistent with Section 15065(a)(4) of the CEQA Guidelines, a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to cause substantial adverse effects on human beings, either directly or indirectly. Pursuant to this standard, a change to the physical environment that might otherwise be minor must be treated as significant if people would be significantly affected. This factor relates to adverse changes to the environment of human beings generally, and not to effects on particular individuals. While changes to the environment that could indirectly affect human beings would be represented by all of the designated CEQA issue areas, those that could directly affect human beings include air quality, hazardous materials, and noise. Implementation of the mitigation measures MM HAZ-2.1 through MM HAZ-2.6 along with best management practices, standard conditions, and adherence to General Plan, City Code, and state and federal regulations described in these sections of the report, would avoid significant impacts. No other direct or indirect adverse effects on human beings have been identified. **(Less Than Significant Impact with Mitigation)**

SECTION 5.0 REFERENCES

The analysis in this Initial Study is based on the professional judgement and expertise of the environmental specialists preparing this document, based upon review of the site, surrounding conditions, site plans, and the following references:

Apex. *Technical Memo of Findings from Shallow Soil Sampling on November 3, 2021 at World Oil #52, 16720 Monterey Road, Morgan Hill, California*. December 6, 2021. Page 3.

BAAQMD. *Final 2017 Clean Air Plan*. April 19, 2017. <http://www.baaqmd.gov/plans-andclimate/air-quality-plans/current-plans>.

California Air Resources Board. "Overview: Diesel Exhaust and Health." Accessed February 18, 2021. <https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health>.

---. "The Advanced Clean Cars Program." Accessed May 13, 2022. <https://www.arb.ca.gov/msprog/acc/acc.htm>.

California Board of Forestry and Fire Protection. "Fire Hazard Severity Zones Maps." Accessed June 23, 2022. http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones.

California Building Standards Commission. "California Building Standards Code." Accessed May 13, 2022. <https://www.dgs.ca.gov/BSC/Codes#@ViewBag.JumpTo>.

California Department of Transportation. "California State Scenic Highways". Accessed May 11, 2022. <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>.

California Department of Conservation, California Geological Survey.

California Department of Conservation. "Farmland Mapping and Monitoring Program." Accessed June 15, 2021. <http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx>.

---. "Land Evaluation & Site Assessment Model." Accessed June 15, 2021. http://www.conservation.ca.gov/dlrp/Pages/qh_lesa.aspx.

--- "Williamson Act." <http://www.conservation.ca.gov/dlrp/lca>.

---. "Earthquake Zones of Required Investigation, Landslides." Accessed June 1, 2022. Available at: <https://maps.conservation.ca.gov/cgs/EQZApp/app/>

California Department of Finance. *E-1: City/County Population Estimates with Annual Percent Change – January 1, 2018 and 2019*. May 2019. Accessed November 5, 2020. <http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-1/>.

---. *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2020 with 2010 Census Benchmark. Table 2: E-5 City/County Population and Housing Estimates, 1/1/2020*. May

2020. Accessed November 5, 2020. <http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/>.

California Department of Forestry and Fire Protection. "Fire and Resource Assessment Program." Accessed June 15, 2021. <http://frap.fire.ca.gov/>.

California Department of Housing and Community Development. "Regional Housing Needs Allocation and Housing Elements" Accessed June 16, 2021. <http://hcd.ca.gov/community-development/housing-element/index.shtml>.

California Department of Tax and Fee Administration. "Net Taxable Gasoline Gallons." Accessed February 10, 2022. <https://www.cdtfa.ca.gov/dataportal/dataset.htm?url=VehicleTaxableFuelDist>.

California Department of Water Resources, Division of Safety of Dams. Accessed June 9, 2020. [https://water.ca.gov/Programs/All-Programs/Division-of-Safety-of-Dams#:~:text=Since%20August%2014%2C%201929%2C%20the,Safety%20of%20Dams%20\(DSOD\)](https://water.ca.gov/Programs/All-Programs/Division-of-Safety-of-Dams#:~:text=Since%20August%2014%2C%201929%2C%20the,Safety%20of%20Dams%20(DSOD)).

California Emergency Management Agency. California Official Tsunami Inundation Map. Accessed July 5, 2022. <https://www.conservation.ca.gov/cgs/tsunami/maps>.

California Energy Commission (CEC). "2019 Building Energy Efficiency Standards." Accessed May 13, 2022. <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency>.

---. "2020 Total System Electric Generation, Total System Electric Generation and Methodology." Accessed February 10, 2022. <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation#:~:text=Total%20generation%20for%20California%20was,to%2057%20percent%20in%202019>.

---. Energy Consumption Data Management System. "Electricity Consumption by County." Accessed February 10, 2022. <http://ecdms.energy.ca.gov/elecbycounty.aspx>.

---. "Natural Gas Consumption by County." Accessed May 13, 2022. <http://ecdms.energy.ca.gov/gasbycounty.aspx>.

California Environmental Protection Agency. "Cortese List Data Resources." Accessed May 28, 2020. <https://calepa.ca.gov/sitecleanup/corteselist/>.

California Gas and Electric Utilities. 2020 *California Gas Report*. Accessed February 10, 2022. [https://www.socalgas.com/sites/default/files/2020-10/2020 California Gas Report Joint Utility Biennial Comprehensive Filing.pdf](https://www.socalgas.com/sites/default/files/2020-10/2020%20California%20Gas%20Report%20Joint%20Utility%20Biennial%20Comprehensive%20Filing.pdf).

California Office of Historic Preservation. "CEQA Guidelines Section 15064.5(a)(3) and California Office of Historic Preservation Technical Assistance Series #6." Accessed August 31, 2020. <http://www.ohp.parks.ca.gov/pages/1069/files/technical%20assistance%20bulletin%206%202011%20update.pdf>.

CalRecycle. "Kirby Canyon Recycling and Disposal Facility." Accessed July 18, 2022.
<https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1370?siteID=3393>

---. "Monterey Peninsula Landfill." Accessed July 18, 2022.
<https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2642?siteID=1976>

City of Gilroy, City of Morgan Hill, and County of Santa Clara. *Stormwater Management Guidance Manual for Low Impact Development & Post-Construction Requirements*. June 2015.

City of Morgan Hill. 2018 Storm Drainage System Master Plan. September 2018.

---. *2020 Urban Water Management Plan*. October 2021. Page 7-4.

---. *City Council State Report 2163: Accept Report Regarding Wastewater System Needs and Rate Study Schedule*. May 18, 2019.

---. "Fire Hazard Severity Zones." Accessed June 23, 2022.
<https://www.morganhill.ca.gov/DocumentCenter/View/3037/Fire-Hazard-Severity-Zones-Adopted3-18-09?bidId=>

---. *Fire Operational and Administrative Analysis: Morgan Hill Fire Department and South County Fire District. Final Report*. January 2017. Cover Letter (February 10, 2017).

---. *Morgan Hill General Plan: City of Morgan Hill Housing Element*. Adopted February 2015.

---. Police Department. "2021 Annual Report." <https://www.morganhill.ca.gov/ArchiveCenter/ViewFile/Item/1798>.

---. *Sewer System Master Plan*. October 2017.

---. *Sewer System Management Plan*. February 2018.

---. *Morgan Hill 2035 Final Environmental Impact Report*. May 2016.

---. *Morgan Hill 2035 General Plan Final Environmental Impact Report*. 4.5-17.

---. *Morgan Hill 2035 General Plan Final Environmental Impact Report*. Page 4.6-10.

County of Santa Clara Department of Planning and Development Planning Office. County of Santa Clara Historic Context Statement. Revised February 2012.

Del Rio, Robert. Principal, Hexagon Transportation Consultants. Personal Communication. August 30, 2022.

Hundley, John. Vice President, World Oil Corp. Personal Communication. June 17, 2021.

Illingworth & Rodkin, Inc. *World Oil Gas Station Air Quality Report*. August 11, 2021.

Metropolitan Transportation Commission/Association of Bay Area Governments. Hazard Viewer Map, “Probabilistic Earthquake Shaking Hazard”. Map. Accessed June 1, 2022. Available at: <https://www.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8>

Morgan Hill Unified School District. *Find your school*. Accessed May 12, 2022. <https://www.mhusd.org/about/find-your-school>

Public Law 110–140—December 19, 2007. *Energy Independence & Security Act of 2007*. Accessed February 10, 2022. <http://www.gpo.gov/fdsys/pkg/PLAW-110publ140/pdf/PLAW-110publ140.pdf>.

SALEM Engineering Group, Inc. *Geotechnical Engineering Investigation Proposed Petroleum Station 16720 Monterey Highway Morgan Hill, California 95037*. Page 2. August 7, 2020.

---. *Geotechnical Engineering Investigation Proposed Petroleum Station 16720 Monterey Highway Morgan Hill, California 95037*. Page 4. August 7, 2020.

---. *Geotechnical Engineering Investigation Proposed Petroleum Station 16720 Monterey Highway Morgan Hill, California 95037*. Page 5. August 7, 2020.

San Francisco Bay Regional Water Quality Control Board. *Municipal Regional Stormwater Permit, Provision C.12*. November 19, 2015.

Santa Clara Valley Habitat Agency. “Habitat Agency Geobrowser.” Accessed July 21, 2022. <http://www.hcpmaps.com/habitat/>

Santa Clara Valley Water District. *Groundwater Management Plan*. November 22, 2016. Accessed July 5, 2022. <https://www.valleywater.org/your-water/where-your-water-comes-from/groundwater>.

---. *2016 Groundwater Management Plan, Santa Clara and Llagas Subbasins*. November 2016.

---. *US Bureau of Reclamation WaterSMART Title XVI Water Reclamation and Reuse Program Funding FY 2017, FOA BOR-DO-17-F002. South Santa Clara County Recycled Water Project (Phases 1B and 2A)*. December 15, 2016. Accessed April 19, 2021. <https://www.usbr.gov/watersmart/title/docs/applications/authorized/2017/F002-007santaclara.pdf>

Silicon Valley Clean Energy. “Frequently Asked Questions.” Accessed May 13, 2022. <https://www.svcleanenergy.org/faqs>.

United States Department of Energy. *Energy Independence & Security Act of 2007*. Accessed February 10, 2022. <http://www.afdc.energy.gov/laws/eisa>.

United States Department of the Interior. “Memorandum M-37050. The Migratory Bird Treaty Act Does Not Prohibit Incidental Take.” Accessed June 18, 2021. <https://www.doi.gov/sites/doi.gov/files/uploads/m-37050.pdf>.

United States Energy Information Administration. "State Profile and Energy Estimates, 2018." Accessed May 13, 2022. <https://www.eia.gov/state/?sid=CA#tabs-2>.

United States Energy Information Administration. "State Profile and Energy Estimates, 2019." Accessed February 10, 2022. <https://www.eia.gov/state/?sid=CA#tabs-2>.

United States Environmental Protection Agency. "The 2021 EPA Automotive Trends Report: Greenhouse Gas Emissions, Fuel Economy, and Technology since 1975." November 2021. <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockkey=P1010U68.pdf>

---. "Summary of the Resource Conservation and Recovery Act." Accessed May 11, 2020. <https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act>

---. "Superfund: CERCLA Overview." Accessed May 11, 2020. <https://www.epa.gov/superfund/superfund-cercla-overview>. .

United States Geological Survey. *Mineral Resources Online Spatial Data: Interactive maps and downloadable data for regional and global Geology, Geochemistry, Geophysics, and Mineral Resources*. Available at <https://mrdata.usgs.gov/general/map-us.html#home>. Accessed February 6, 2020.

SECTION 6.0 LEAD AGENCY AND CONSULTANTS

6.1 LEAD AGENCY

City of Morgan Hill

Development Services Department, Planning Division

Tiffany Brown, Senior Planner

6.2 CONSULTANTS

David J. Powers & Associates, Inc.

Environmental Consultants and Planners

Akoni Danielsen, President/Principal Project Manager

Amber Sharpe, Project Manager

Maria Kisyova, Associate Project Manager

Mimi McNamara, Associate Project Manager

Cornerstone Earth Group

Geotechnical Consultants

Kurt Soenen, Senior Principal Engineer

Michael Chang, Project Engineer

Hexagon Transportation Consultants

Transportation Consultants

Robert Del Rio, Vice President/Principal Associate

Illingworth & Rodkin, Inc.

Acoustical and Air Quality Consultants

Michael Thill, Principal

James Reyff, Principal

Casey Divine, Staff Consultant

Steve Deines, Staff Consultant

SECTION 7.0**ACRONYMS AND ABBREVIATIONS**

AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACMs	Asbestos-containing Materials
ADA	Americans with Disabilities Act
AIA	Airport Influence Area
ALUC	Airport Land Use Commission
BAAQMD	Bay Area Air Quality Management District
bsg	Below site grade
Btu	British Thermal Units
CAL FIRE	California Department of Forestry and Fire Protection
CalARP	California Accidental Release Prevention
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
Cal/OSHA	California Department of Industrial Relations, Division of Occupational Safety and Health
CAP	Clean Air Plan
CARB	California Air Resources Board
CBC	California Building Code
CDFW	California Department of Fish and Wildlife
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH ₄	Methane
CHRIS	California Historical Resource Information System
CLUP	Comprehensive Land Use Plan
CMP	Congestion Management Program
CO	Carbon Monoxide

CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalents
CRHR	California Register of Historical Resources
CUPA	Certified Unified Program Agency
DPM	Diesel Particulate Matter
DSOD	California Department of Water Resources, Division of Safety of Dams
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
EO	Executive Order
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FAR Part 77	Federal Aviation Regulations, Part 77 Objects Affecting Navigable Airspace
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration
gpd	Gallons per day
GIS	Geographic Information Systems
GWh	Gigawatt Hours
GWMP	Groundwater Management Plan
GWP	Global Warming Potential
Habitat Plan	Santa Clara Valley Habitat Plan/Natural Community Conservation Plan
HHC	Historical Heritage Commission
HFCs	Hydrofluorocarbons
HWSA	Federal Hazardous and Solid Waste Amendments
HVAC	Heating, Ventilation, and Air Conditioning
kWh	Kilowatt Hours
LBP	Lead-based Paints
LESA	Land Evaluation and Site Assessment
LID	Low Impact Development

LOS	Level of Service
LRA	Local Responsibility Area
LUST	Leaking Underground Storage Tank
MBTA	Migratory Bird Treaty Act
MEI	Maximally Exposed Individuals
MHPD	Morgan Hill Police Department
MHUSD	Morgan Hill Unified School District
MLD	Most Likely Descendant
MMI	Modified Mercalli Intensity
MMTCO ₂ e	Million Metric Tons of Carbon Dioxide Equivalent
MND	Mitigated Negative Declaration
mpg	Miles per gallon
MRP	Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit
MT	Metric tons
MTC/ABAG	Metropolitan Transportation Commission/Association of Bay Area Governments
N ₂ O	Nitrous Oxide
NAHC	Native American Heritage Commission
NCP	National Contingency Plan
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act of 1966
NO ₂	Nitrogen Dioxide
NOD	Notice of Determination
NOI	Notice of Intent
NO _x	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O ₃	Ozone
OITC	Outdoor/Indoor Transmission Class
PCBs	Polychlorinated biphenyls
PDA	Priority Development Area

PFCs	Perfluorocarbons
PG&E	Pacific Gas and Electric Company
PM _{2.5}	Fine Particulate Matter
PM ₁₀	Coarse Particulate Matter
PPV	Peak Particle Velocity
RCRA	Resource Conservation and Recovery Act
RHNA	Regional Housing Needs Allocation
ROG	Reactive Organic Gases
RWQCB	Regional Water Quality Control Board
SCCDEH	Santa Clara County Department of Environmental Health
SCCLD	Santa Clara County Library District
SCS	Sustainable Communities Strategy
SF ₆	Sulfur Hexafluoride
SFHA	Special Flood Hazard Area
SFPUC	San Francisco Public Utilities Commission
SHMA	Seismic Hazards Mapping Act
SMARA	Surface Mining and Reclamation Act
SMGB	State Mining and Geology Board
SO _x	Sulfur Oxides
SR	State Route
SRA	State Responsibility Area
SVCE	Silicon Valley Clean Energy
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	Toxic Air Contaminants
TCR	Tribal Cultural Resource
TSCA	Toxic Substances Control Act
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	Underground Storage Tank

UWMP	Urban Water Management Plan
V/C	Volume-to-capacity
VMT	Vehicle Miles Traveled
VTA	Santa Clara Valley Transportation Authority

World Oil Project Initial Study/Mitigated Negative Declaration

Erratum Sheet April 21, 2023

This erratum sheet presents, in ~~strike-through~~ and double-underline format, the revisions to the Initial Study/Mitigated Negative Declaration (IS/MND) for the World Oil Gas Station and Retail Project (proposed project). The revisions to the IS/MND reflected in this erratum sheet do not affect the adequacy of the previous environmental analysis contained in the IS/MND. Because the changes presented below are for purposes of clarification and would not result in any new significant impacts not previously identified in the IS/MND, recirculation of the IS/MND is not required, pursuant to CEQA Guidelines Section 15073.5.

Project Description Revisions

The City Development Services Department noted that the existing gas station's operational hours are inaccurately reflected in the IS/MND. The existing gas station is open from 6 AM to 10 PM and the proposed project would operate 24 hours per day. As a result, page 4 of the IS/MND is revised as follows:

4. The existing gas station operates from 6 AM to 10 PM ~~24 hours per day~~, seven days per week.

The IS/MND's cover page and Figures 3.2-2 and 3.2-3 have been revised to include the parcel (refer to the revised figures shown on pages five through seven).

Air Quality Revisions

Consistent with the revision made to include the undeveloped portion of the parcel to the east of the developed portion of the site as part of the project site, the sensitive receptor descriptions on page 29 of the IS/MND is revised as follows:

29. The closest sensitive receptors to the project site are the residences adjacent to the ~~and approximately 40 feet east of the site.~~

This revision does not affect the conclusions of the IS/MND because the IS/MND and Air Quality Report prepared for the IS/MND analyze the proposed development's impact on the adjacent residences. Impacts of the proposed project to the senior housing project under construction 40 feet south of the project site were not specifically modeled. However, the City has policies to ensure future residents are not exposed to unhealthy level of air pollution, and so the City consulted with the air quality consultants who evaluated the project regarding the health risk the seniors would face from the gas station. The air quality consultants clarified seniors are not as sensitive to cancer-causing toxic air contaminants (TACs) as typical residential receptors because of seniors' lower sensitivity to toxicity, their comparatively lower breathing rate, and

shorter exposure duration (in the case of operation) compared to typical residential exposure, where residents are assumed to live for 30 years. Additionally, the majority of impacts are during construction, and it is anticipated that much of the construction on the World Oil project will occur concurrently with the Senior Housing project and will probably be completed prior to occupancy of the Senior Housing Project, therefore impacts minimal. Furthermore, new construction (such as the senior housing to the south) that meets 2019 and newer building code requirements for multi-family housing would require mechanical ventilation systems that include enhanced filtration that reduces PM_{2.5} exposure, thereby limiting the amount of pollution that reaches the interior of the senior units. The senior housing construction will meet the latest building codes specifically but not limited to STC rated windows and HVAC air circulation, the TAC risk to senior residents would be less than significant, and less than predicted for the existing residences to the east, which is also predicted to be less than significant, i.e., below the levels of exposure the Bay Area Air Quality Management District considers appropriate. Therefore, cancer risk to the future senior residents from project construction and operation would be less than was predicted in the Air Quality Report for the existing residents to the east of the site, which are assumed to include infants and children.

Hydrology/Water Quality Revisions

Valley Water provided a comment letter (March 6, 2023) on the IS/MND. In its letter, Valley Water states that the existing and future Base Flood Elevations (BFEs) are inaccurately reflected in the IS/MND. As a result, Valley Water recommends the statement on pages 95, 102, 103, and 164 of the IS/MND be revised as follows:

95. The project site is located approximately 400 feet east of West Little Llagas Creek. The site is located within FEMA flood hazard Zone AE. Zone AE is a special flood hazard area subject to inundation by the one percent annual chance flood with base flood elevation determined. Base flood elevations (BFEs) at the site range from approximately 334 and 335~~330 to 343~~ feet above mean sea level.
102. As stated in Section 4.10.1.2, the project site is located within the FEMA flood hazard Zone AE (i.e., a 100-year flood zone). Hydraulic modeling was completed for the site to determine if construction of the proposed retail store would significantly raise, i.e., by more than one foot, BFEs at the site and project area. The portion of the site that the proposed retail store would be located has a ~~BFE base flood elevation of 334 to 335~~base flood elevation of 334 to 335.63 above mean sea level. Based on the results of the modeling, construction of the proposed building would minimally displace floodwaters from the site, and result in a maximum increase of 0.29 feet compared to BFEs at the site and surrounding developments between San Pedro Avenue and Spring Avenue. This increase in flood elevations is less than one foot and, therefore, meets the City's threshold for proposed developments' effect on water surface elevations (i.e., BFEs).

In addition, the City's Resolution No. 20-071 requires proposed

developments in the Flood Zone AE to elevate the lowest floor of proposed buildings a minimum of one foot above the BFE. Based on the results of the hydraulic modeling, the proposed project combined with pending/approved projects in the area (refer to Section 4.21 Mandatory Findings of Significance for pending/approved projects), the BFE would increase by 0.06 to 0.29 feet at the proposed retail store location. Therefore, in compliance with the City's resolution, the proposed retail store would have a finished floor elevation of 1.06 to 1.29 feet above the existing BFE.

103. The project would increase the finished floor of the proposed structure and mechanical units to 1.06 to 1.29 feet above the BFE. The Hydraulic Impact Study prepared for the project found that implementation of the proposed project would result in a 0.2-foot impact to the West Little Llagas Creek water surface elevations, which would be a minimal impact. Accordingly, the proposed project would have a less than significant increase in flood risk during a 100-year event.
164. As discussed in Section 4.10 Hydrology and Water Quality, the project site is within a FEMA Flood Zone AE and the existing BFEs in the project area range from 334 and 335~~330 to 343~~ feet above mean sea level. Based on hydraulic modeling that accounted for the proposed project and other pending/approved projects in the area (including those discussed in this section), the cumulative projects would result in a maximum 0.71-foot increase in BFEs in the project area. The cumulative impacts are within the City's requirement of less than one foot increase in the base flood elevation; thus, the cumulative projects would result in a less than significant cumulative impact to the City's drainage system due to effects on flood flows.

Noise Revisions

As mentioned under Project Description Revisions above, the existing gas station is operational from 6 AM to 10 PM, and the proposed project would extend operations to 24 hours a day. The noise report prepared for the project analyzed the operation of an air/water (A/W) dispenser along the eastern property line. Public comments were received during the Planning Commission meeting on March 28, 2023 regarding concerns about the A/W dispenser noise causing a nuisance if it would be available for operation 24 hours a day. The project would relocate the A/W dispenser from the northern property line to approximately 10 feet west of the eastern property line, where there is an existing concrete wall. The noise report assumed the A/W dispenser would be operational from 7 AM to 10 PM with a maximum usage of 20 minutes during any given hour. The results showed an hourly average noise level of 46 dBA Leq (hourly average noise levels) and 44 dBA Ldn (24-hour average noise levels) at the adjoining residences. These results fell within the range of ambient noise levels of 53 to 61 dBA Leq during daytime hours and 40 to 60 dBA Leq during nighttime hours. With these operating assumptions of 7 AM to 10 PM, the A/W dispenser would not exceed ambient day-night average noise levels of 63 dBA Ldn. Additionally, the analysis did not account for any noise attenuation.

As noted above, the project proposes to allow gas fueling and use of the A/W dispenser 24 hours per day. Assuming the same hourly A/W usage (up to 20 minutes in a given hour) in a 24-hour period would result in 46 dBA Leq and 52 dBA Ldn, which would be below ambient conditions for hourly average noise levels and 24-hour average noise levels. Assuming constant usage (i.e., 60 minutes per hour, throughout every hour in a 24-hour period would result in 51 dBA Leq and 57 dBA Ldn. This scenario, which is highly unrealistic, would still not exceed ambient conditions. Thus, 24-hour operation of the A/W dispenser would not generate noise levels that exceed ambient noise levels. The noise from the A/W dispenser would be attenuated by the existing concrete wall along the eastern property line, as well as the enclosure included as part of the project to shield the A/W dispenser.

Furthermore, consistent with the revision made to include the undeveloped portion of the parcel to the east of the developed portion of the site as part of the project site, the sensitive receptor descriptions on page 116 of the IS/MND is revised as follows:

116. The nearest noise-sensitive receptors are residences located adjacent to the ~~approximately 40 feet~~ east of the site. There is an existing concrete wall located between the project site and adjacent residences.

The City agrees and hereby implements these changes to the IS/MND. The aforementioned revisions are for clarification purposes only and do not affect the conclusions of the IS/MND related to air quality, flooding, or noise, which remain less than significant.

Initial Study

World Oil Gas Station and Retail Project

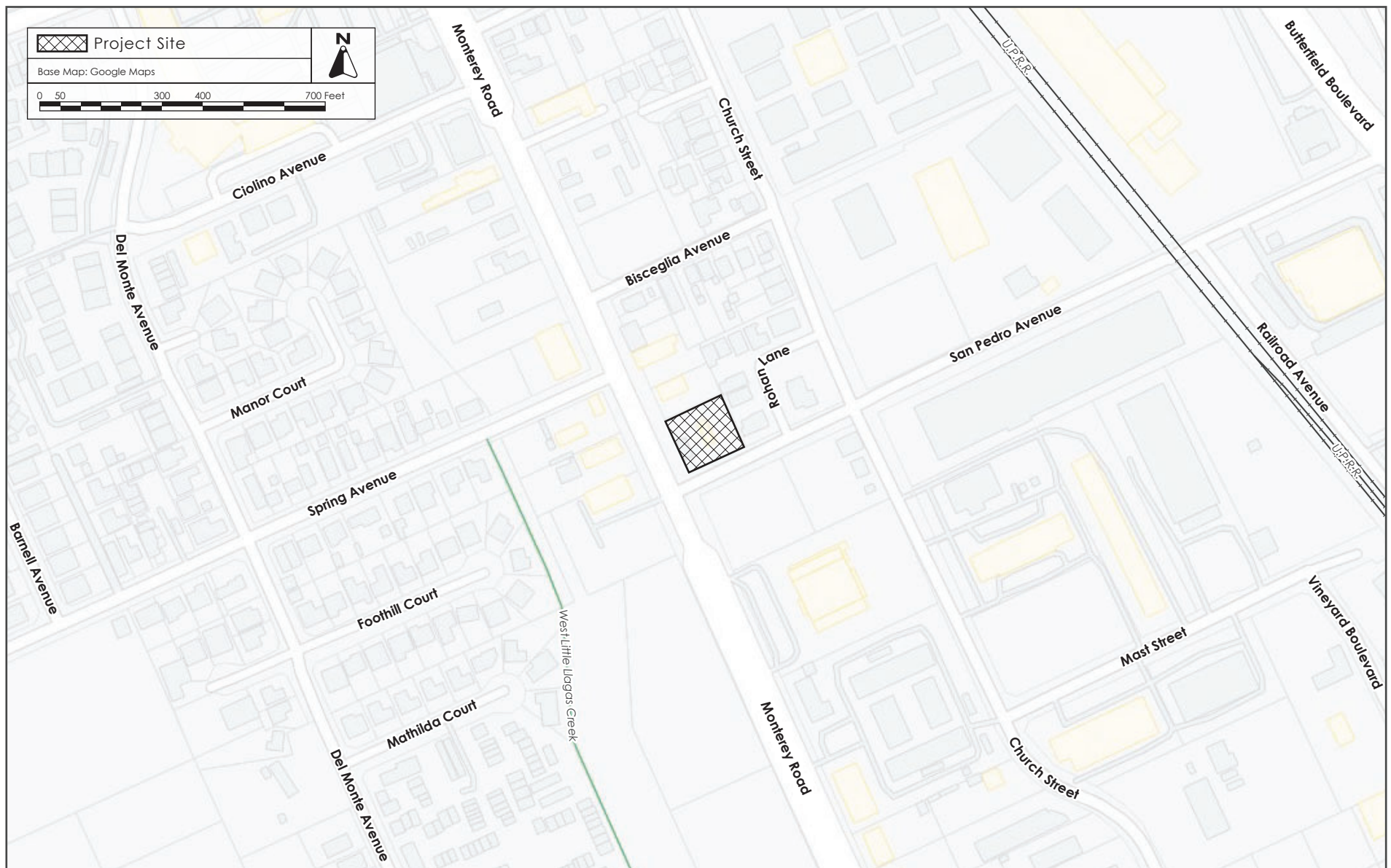
Prepared by



CITY OF MORGAN HILL



December 2022



VICINITY MAP

FIGURE 3.2-2



AERIAL PHOTOGRAPH AND SURROUNDING LAND USES

FIGURE 3.2-3

MITIGATION MONITORING AND REPORTING PROGRAM

World Oil Gas Station and Retail Project

File Numbers: UP2021-0002/EA2021-0001

January 2023



PREFACE

Section 21081.6 of the California Environmental Quality Act (CEQA) requires a Lead Agency to adopt a Mitigation Monitoring and Reporting Program (MMRP) whenever it approves a project for which measures have been required to mitigate or avoid significant effects on the environment. The purpose of the monitoring and reporting program is to ensure compliance with the mitigation measures during project implementation.

The Initial Study (IS) prepared for the World Oil Gas Station and Retail Project concluded that the implementation of the project could result in significant effects on the environment and mitigation measures were incorporated into the proposed project or are required as a condition of project approval. This MMRP addresses those measures in terms of how and when they will be implemented.

This document does *not* discuss those subjects for which the IS concluded that the impacts from implementation of the project would be less than significant.

I, _____, the applicant, on the behalf of _____, hereby agree to fully implement the Mitigation Measures described below which have been developed in conjunction with the preparation of an IS for my proposed project. I understand that these mitigation measures or substantially similar measures will be adopted as conditions of approval with my development permit request to avoid or significantly reduce potential environmental impacts to a less than significant level, where feasible.

Project Applicant's Signature _____

Date _____

MITIGATIONS	MONITORING AND REPORTING PROGRAM		
	Timeframe and Responsibility for Implementation	Method of Compliance	Oversight of Implementation
BIOLOGICAL RESOURCES			
Impact BIO-1: The project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. (Less than Significant Impact with Mitigation Incorporated)			
MM BIO-1.1: Construction shall be scheduled to avoid the nesting season to the extent feasible. If construction can be scheduled to occur between September 1st and January 31st (inclusive) to avoid the raptor nesting season, no impacts will be expected. If construction will take place between February 1st and August 31st, then pre-construction surveys for nesting birds shall be completed by a qualified ornithologist to ensure that no nests will be disturbed during project implementation. Surveys shall be completed within seven days of the on-set of site clearing or construction activities. During this survey, the ornithologist shall inspect all trees and other potential nesting habitats (e.g., trees, shrubs, buildings) onsite as well as within 250 feet of the site for nests of raptors and 100 feet for nests of non-raptors.	To be implemented, if construction will take place between February 1st and August 31 st , by qualified biologist prior to any tree removal or issuance of any grading and/or building permit.	All measures will be required as part of the development permit. All measures will be printed on all construction documents, contracts, and project plans. The survey results shall be provided to the Director of Development Services Department prior to issuance of any grading and/or building permits.	Director of Development Services Department.
MM BIO-1.2: If an active nest is found sufficiently close to work areas to be disturbed by these activities, the ornithologist shall determine the extent of a disturbance-free buffer zone to be established around the nest (typically 250 feet for	To be implemented by qualified biologist prior to issuance of any grading and/or building permit.	All measures will be required as part of the development permit. All measures will be printed on all construction documents, contracts, and project plans	Director of Development Services Department.

MITIGATIONS	MONITORING AND REPORTING PROGRAM		
	Timeframe and Responsibility for Implementation	Method of Compliance	Oversight of Implementation
raptors and 50-100 feet for other species) that shall remain off limits to construction until the nesting season is over, to ensure that no nests of species protected by the Migratory Bird Treaty Act and California Fish and Wildlife Code will be disturbed during project implementation. A report indicating the result of the survey and any designated buffer zones shall be submitted to the satisfaction of the Development Services Director or Designee prior to issuance of a grading permit.		prior to issuance of any grading and/or building permits. A report indicating the result of the survey and any designated buffer zones shall be submitted to the satisfaction of the Development Services Director or Designee prior to tree removal or issuance of a grading permit.	
GEOLOGY AND SOILS			
Impact GEO-6: The project would not directly or indirectly destroy a unique paleontological resource or site or unique geological feature. (Less than Significant Impact with Mitigation Incorporated)			
MM GEO-6.1: If vertebrate fossils are discovered during construction, all work on the site shall stop immediately. The Development Services Director or the Director's designee shall be notified, and a qualified professional paleontologist shall assess the nature and importance of the find and recommend appropriate treatment. Treatment may include, but is not limited to, preparation and recovery of fossil materials so that they can be housed in an appropriate museum or university collection and may also include preparation of a report for publication describing the finds. The project applicant shall be responsible for implementing the recommendations of the qualified paleontologist. A report of all findings shall be submitted to the Development Services Director	To be implemented during construction by the contractor hired by project applicant.	A report of all findings shall be submitted to the Development Services Director or the Director's designee prior to work beginning on the site following a discovery.	Development Services Director or Designee

MITIGATIONS	MONITORING AND REPORTING PROGRAM		
	Timeframe and Responsibility for Implementation	Method of Compliance	Oversight of Implementation
or the Director's designee prior to work beginning on the site following a discovery.			
HAZARDS AND HAZARDOUS MATERIALS			
Impact HAZ-2: The project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. (Less than Significant Impact with Mitigation Incorporated)			
MM HAZ-2.1: The project applicant shall prepare a Site Management Plan (SMP) prior to issuance of any grading permits to reduce or eliminate exposure risk to human health and the environment, specifically, potential risks associated with the presence of petroleum-based contaminants. The SMP shall include, but is not limited to, the following elements to mitigate potential risks associated with environmental conditions: • Procedures for transporting and disposing the waste material generated during removal activities, if such transport and disposal is necessary; • Procedures for stockpiling soil on-site if such stockpiling is necessary; • Provisions for collecting soil samples to prior to grading activities; • Provisions for confirmation soil sampling as appropriate to obtain a "No Further Action" letter (or equivalent) from the state and/or local agency assuming oversight for the site; • Procedures to ensure that fill and cap materials are verified as clean truck routes; • Staging and loading procedures and record keeping requirement.	To be implemented by the project applicant prior to issuance of any grading permit.	Preparation of a Site Management Plan that is approved by the Santa Clara County Department of Environmental Health .	Santa Clara County Department of Environmental Health and Director of the Development Services Department

MITIGATIONS	MONITORING AND REPORTING PROGRAM		
	Timeframe and Responsibility for Implementation	Method of Compliance	Oversight of Implementation
The SMP shall be submitted to the Santa Clara County Department of Environmental Health (SCCDEH) for review and approval. Copies of the approved SMP shall be provided to the City's Development Services Department prior to issuance of any grading permits.			
MM HAZ-2.2: All contractors and subcontractors at the project site shall develop a health and safety plan (HSP) specific to their scope of work and based upon the known environmental conditions for the site. The HSP shall be implemented under the direction of a Site Safety and Health Officer. The HSP shall include, but not limited to, the following elements, as applicable: • Provisions for personal protection and monitoring exposure to construction workers; • Procedures to be undertaken in the event that contamination is identified above action levels or previously unknown contamination is discovered; • Procedures for the safe storage, stockpiling, and disposal of contaminated soils; • Provisions for the on-site management and/or treatment of contaminated groundwater during extraction or dewatering activities; • Emergency procedures and responsible personnel. The HSP shall be submitted to the SCCDEH. Copies of the approved HSP shall be provided to	To be implemented by the project applicant prior to issuance of any grading permit.	The HSP shall be approved by the SCCDEH prior to issuance of grading permits.	Santa Clara County Department of Environmental Health and Director of the Development Services Department

MITIGATIONS	MONITORING AND REPORTING PROGRAM		
	Timeframe and Responsibility for Implementation	Method of Compliance	Oversight of Implementation
the City's Development Services Department prior to issuance of any grading permits.			
MM HAZ-2.3: Prior to issuance of a site grading permit, the project applicant shall collect additional soil samples (of organochlorine pesticides and related metals) from the upper zero to six inches of soil to ensure soil samples at the project site are collected in accordance with the California Department of Toxic Substance Control (DTSC) guidance. Soil samples shall be taken in areas where soil disturbances are anticipated as part of the proposed development. If the concentrations of the analyzed pesticides and related metals in soil samples exceed the most current risk-based screening levels, prior to issuance of any grading permits, the project applicant shall enter into the SCCDEH's Voluntary Cleanup Program to obtain regulatory oversight to remediate the contaminated soil discovered. A Removal Action Workplan (RAW), or equivalent, shall be prepared for review and approval by SCCDEH that describes the process for the removal of all impacted soil to below established cleanup levels. The RAW shall include a HSP for construction worker safety and include measures to control dust and other potential exposure to neighboring properties during remediation. A copy of the SCCDEH-approved RAW shall be provided to the City's Development Services Department prior to issuance of any grading permits.	To be implemented by the project applicant prior to issuance of any grading permit.	The project applicant shall collect additional soil samples of organochlorine pesticides and related metals, and if they exceed the most current risk-based screening levels, the project applicant shall enter into the SCCDEH's Voluntary Cleanup Program to obtain regulatory oversight and approval of a Removal Action Workplan (RAW), prior to issuance of grading permits.	Santa Clara County Department of Environmental Health and Director of the Development Services Department
MM HAZ-2.4: Removal work shall be completed by a California-licensed hazardous waste contractor under the supervision of a Professional	To be implemented by the project applicant during demolition,	All measures will be required as part of the development permit. All RAW measures will be	Director of the Development Services Department

MITIGATIONS	MONITORING AND REPORTING PROGRAM		
	Timeframe and Responsibility for Implementation	Method of Compliance	Oversight of Implementation
Geologist or Engineer. Dust control measures and dust monitoring shall be implemented at the site during demolition, removal of current site structures, and excavation of impacted soil in accordance with the approved Removal Action Workplan (or the equivalent) and to the satisfaction of the City's Development Services Department.	removal of current site structures, and excavation of impacted soil.	printed on all construction documents, contracts, and project plans prior to issuance of grading permits.	
MM HAZ-2.5: After post-remediation sampling has confirmed that the soil has been removed to meet the approved soil cleanup levels, the project applicant shall prepare and submit a final report to SCCDEH and a "No Further Action" or "Closure" letter shall be obtained. This closure letter shall be submitted to the City's Development Services Department.	To be implemented by the project applicant post-remediation sampling and prior to building permit.	All measures will be required as part of the development permit. The project applicant shall submit a final report to SCCDEH and obtain a "No Further Action" or "Closure" letter prior to issuance of building permit.	Santa Clara County Department of Environmental Health and Director of the Development Services Department
MM HAZ-2.6: Prior to issuance of a demolition permit for on-site structures, the project applicant shall consult with certified Asbestos and/or Lead Risk Assessors to complete and submit for review to the Building Division an asbestos and lead survey. If asbestos-containing materials or lead-containing materials are not discovered during the survey, further mitigation related to asbestos-containing materials or lead-containing materials shall not be required. If asbestos-containing materials and/or lead-containing materials are discovered by the survey, the project applicant shall prepare a work plan to demonstrate how the on-site asbestos-containing materials and/or lead-containing materials shall be removed in accordance with current California Occupational Health and Safety (Cal/OSHA) Administration regulations and disposed of in accordance with all CalEPA regulations, prior to the demolition	To be implemented by the project applicant prior to issuance of demolition permit.	All measures will be required as part of the development permit. All measures will be printed on all construction documents, contracts, and project plans, and an asbestos and lead survey, and if applicable, a work plan, submitted prior to issuance of demolition permits.	Santa Clara County Department of Environmental Health and Building Division

MITIGATIONS	MONITORING AND REPORTING PROGRAM		
	Timeframe and Responsibility for Implementation	Method of Compliance	Oversight of Implementation
and/or removal of the on-site structures. The plan shall include the requirement that work shall be conducted by a Cal/OSHA registered asbestos and lead abatement contractor in accordance with Title 8 CCR1529 and Title 8 CCR 1532.1 regarding asbestos and lead training, engineering controls, and certifications. The applicant shall submit the work plan to the City for review and approval. The City has the right to defer the work plan to the Santa Clara County Department of Environmental Health for additional review. Materials containing more than one percent asbestos that is friable are also subject to BAAQMD regulations. Removal of materials containing more than one percent friable asbestos shall be completed in accordance with BAAQMD Section 11-2-303.			

Source: City of Morgan Hill. *World Oil Initial Study*. December 2022.

APPENDIX A

Air Quality Analysis

WORLD OIL GAS STATION AIR QUALITY & GREENHOUSE GAS ASSESSMENT

Morgan Hill, California

August 11, 2021

Prepared for:

**Maria Kisyova
Associate Project Manager
David J. Powers & Associates, Inc.
1871 The Alameda, Suite 200
San José, CA 95126**

Prepared by:

**Casey Divine
James A. Reyff**

ILLINGWORTH & RODKIN, INC.
//// Acoustics • Air Quality ///
**429 East Cotati Avenue
Cotati, CA 94931
(707) 794-0400**

I&R Project#: 21-067

Introduction

The purpose of this report is to address air quality, community health risk, and greenhouse gas (GHG) impacts associated with the World Oil Gas Station project located at 16720 Monterey Road in Morgan Hill, California. The air quality impacts and GHG emissions would be associated with the demolition of the existing land uses at the site, construction of new gas station and infrastructure, and operation of the project. Air pollutant and GHG emissions associated with the construction and operation of the project were predicted using appropriate computer models. In addition, the potential project health risk impact (includes construction and operation) and the impacts of existing toxic air contaminant (TAC) sources affecting the nearby sensitive receptors were evaluated. This analysis addresses those issues following the guidance provided by the Bay Area Air Quality Management District (BAAQMD).¹

Project Description

The 0.48-acre project site is developed with paved surfaces and an existing gas station with four pump stations (eight gas dispensers), an underground storage tank (UST) system, a fuel canopy, and an 880 square foot (sf) retail/convenience store. The project proposes demolish the existing uses and develop the site with six pump stations (12 gas dispensers), a new UST system, a new canopy, a 2,114-sf retail store, and 11 parking spaces. The proposed gas station and store would operate 24 hours per day, seven days per week.

Setting

The project is located in Santa Clara County, which is in the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the State and federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM₁₀), and fine particulate matter (PM_{2.5}).

Air Pollutants of Concern

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

Particulate matter is another problematic air pollutant of the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM₁₀) and fine particulate matter where particles have a diameter of 2.5 micrometers or less (PM_{2.5}). Elevated concentrations of PM₁₀ and PM_{2.5} are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels

¹ Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, May 2017.

aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Toxic Air Contaminants

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

Diesel Particulate Matter (DPM)

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs. The most recent Office of Environmental Health Hazard Assessment (OEHHA) risk assessment guidelines were published in February of 2015.² See *Attachment 1* for a detailed description of the community risk modeling methodology used in this assessment.

Non-Diesel Total Organic Gases

Gasoline-powered vehicles, particularly light-duty autos and trucks, emit TACs mostly in the form of total organic gases (TOG). TOG emissions associated with these types of vehicles occur primarily in two forms: running exhaust and evaporative running losses. Additional TOG emissions occur when starting a vehicle, especially cold vehicles. Mobile source TOG includes TACs such as benzene, 1,3-Butadiene, and formaldehyde. Emissions of these TACs are controlled through requirements of motor vehicle exhaust systems and the formulation of gasoline by the U.S. EPA and CARB

Benzene

Benzene is a fundamental component of gasoline and diesel fuel as well as vehicle exhaust. Benzene is emitted through the evaporation of gasoline vapors. Since it is known to cause cancer in humans, benzene was classified as a TAC in 1984 by CARB. Benzene emissions from fuel use are regulated in numerous ways that include standards for the formulation of gasoline, vehicle

² OEHHA, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. Office of Environmental Health Hazard Assessment. February.

emission standards, and vapor control systems for storage, fuel dispensing facilities and vehicle on-board fuel systems.

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools. For cancer risk assessments, infants and children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Residential locations are assumed to include infants and small children.

The closest sensitive receptors to the project site are the residents in the adjacent townhouses to the east of the site. There are also single- and multi-family residences to the north, west, and south of the site at further distances. This project would also introduce new sensitive receptors (residents).

Regulatory Setting

Federal Regulations

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

In the past decade the EPA has established a number of emission standards for on- and non-road heavy-duty diesel engines used in trucks and other equipment. This was done in part because diesel engines are a significant source of nitrogen oxides, or NO_x, and particulate matter (PM₁₀ and PM_{2.5}) and because the EPA has identified diesel particulate matter as a probable carcinogen. Implementation of the heavy-duty diesel on-road vehicle standards and the non-road diesel engine standards are estimated to reduce PM and NO_x emissions from diesel engines up to 95 percent in 2030 when the heavy-duty vehicle fleet is completely replaced with newer heavy-duty vehicles that comply with these emission standards.³

In concert with the diesel engine emission standards, the EPA has also substantially reduced the amount of sulfur allowed in diesel fuels. The sulfur contained in diesel fuel is a significant contributor to the formation of particulate matter in diesel-fueled engine exhaust. The new standards reduced the amount of sulfur allowed by 97 percent for highway diesel fuel (from 500

³ USEPA, 2000. *Regulatory Announcement, Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements*. EPA420-F-00-057. December.

parts per million by weight [ppmw] to 15 ppmw), and by 99 percent for off-highway diesel fuel (from about 3,000 ppmw to 15 ppmw). The low sulfur highway fuel (15 ppmw sulfur), also called ultra-low sulfur diesel (ULSD) is currently required for use by all vehicles in the U.S.

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

State Regulations

To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles⁴. In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, a significant component of the plan involves application of emission control strategies to existing diesel vehicles and equipment. Many of the measures of the Diesel Risk Reduction Plan have been approved and adopted, including the Federal on-road and non-road diesel engine emission standards for new engines, as well as adoption of regulations for low sulfur fuel in California.

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy-duty diesel trucks that represent the bulk of DPM emissions from California highways. CARB regulations require on-road diesel trucks to be retrofitted with particulate matter controls or replaced to meet 2010 or later engine standards that have much lower DPM and PM_{2.5} emissions. This regulation will substantially reduce these emissions between 2013 and 2023. While new trucks and buses will meet strict federal standards, this measure is intended to accelerate the rate at which the fleet either turns over so there are more cleaner vehicles on the road or is retrofitted to meet similar standards. With this regulation, older, more polluting trucks would be removed from the roads sooner.

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

⁴ California Air Resources Board, 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October.

Bay Area Air Quality Management District (BAAQMD)

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

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

BAAQMD's Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposures to outdoor TACs in the Bay Area.⁵ The program examines TAC emissions from point sources, area sources, and on-road and off-road mobile sources with an emphasis on diesel exhaust, which is a major contributor to airborne health risk in California. The CARE program is an on-going program that encourages community involvement and input. The technical analysis portion of the CARE program is being implemented in three phases that includes an assessment of the sources of TAC emissions, modeling, and measurement programs to estimate concentrations of TAC, and an assessment of exposures and health risks. Throughout the program, information derived from the technical analyses will be used to focus emission reduction measures in areas with high TAC exposures and high density of sensitive populations. Risk reduction activities associated with the CARE program are focused on the most at-risk communities in the Bay Area. The BAAQMD has identified six communities as impacted: Concord, Richmond/San Pablo, Western Alameda County, San José, Redwood City/East Palo Alto, and Eastern San Francisco. The project site is not within an at-risk community area.

BAAQMD regulates the emissions of organic compounds (i.e., ROG) from gasoline dispensing stations through Regulation 8, Rule 7. This rule requires the facility to install enhanced vapor recovery (EVR systems. Since the facility would emit more than 10 pounds of ROG (i.e., volatile organic compounds or VOCs) in a single day, the Best Available Control Technology (BACT) requirement of Regulation 2-2-301 would be triggered. BACT for Gasoline Dispensing Facilities is considered the use of CARB-certified Phase-I and Phase-II vapor recovery equipment. A Health Risk Assessment (HRA) would be required by BAAQMD since the annual benzene emissions, a TAC, exceed the toxic air contaminant risk triggering level specified in Regulation 2-5.

The BAAQMD *California Environmental Quality Act (CEQA) Air Quality Guidelines*⁶ were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process consistent with CEQA requirements including thresholds

⁵ See BAAQMD: <https://www.baaqmd.gov/community-health/community-health-protection-program/community-air-risk-evaluation-care-program>, accessed 2/18/2021.

⁶ Bay Area Air Quality Management District, 2011. *CEQA Air Quality Guidelines*. May. (Updated May 2017)

of significance, mitigation measures, and background air quality information. They also include assessment methodologies for air toxics, odors, and greenhouse gas emissions. *Attachment 1* includes detailed community risk modeling methodology.

Morgan Hill 2035 General Plan

Adopted July 27, 2016, the *Morgan Hill 2035 General Plan* includes goals, policies, and actions to improve air quality issues facing the City of Morgan Hill.⁷ The following goals, policies, and actions are applicable to the proposed project:

Goal NRE-10: Reduced air pollution emissions.

Policy NRE-10.1 **Regional and Subregional Cooperation.** Cooperate with regional agencies in developing and implementing air quality management plans. Support subregional coordination with other cities, counties, and agencies in the Santa Clara Valley and adjacent areas to address land use, jobs/housing balance, and transportation planning issues as a means of improving air quality.

Policy NRE-10.2 **State and Federal Regulation.** Encourage effective regulation of mobile and stationary sources of air pollution and support State and federal regulations to improve automobile emission controls.

Policy NRE-10.3 **Automobile Emissions.** Encourage the use of and infrastructure for alternative fuel, hybrid, and electric vehicles. Encourage new and existing public and private development to include electric vehicle charging stations.

Policy NRE-10.4 **Reduced Automobile Use.** To reduce air pollution the frequency and length of automobile trips and the amount of traffic congestion by controlling sprawl, promoting infill development, and encouraging mixed uses and higher density development near transit. Support the expansion and improvement of alternative modes of transportation. Encourage development project designs that protect and improve air quality and minimize direct and indirect air pollutant emissions by including components that reduce vehicle trips.

Goal NRE-11: *Minimized exposure of people to toxic air contaminants such as ozone, carbon monoxide, lead, and particulate matter.*

Policy NRE-11.1 **TACs and Proposed Sensitive Uses.** Require modeling for sensitive land uses, such as residential development, proposed near sources of pollution such as freeways and industrial uses. Require new residential development

⁷ City of Morgan Hill, California (2016). "Chapter 8 Natural Resources and Environment". *City of Morgan Hill General Plan 2035*. <https://www.morgan-hill.ca.gov/DocumentCenter/View/22839/MH2035-General-Plan---December-2017?bidId=>

and projects categorized as sensitive receptors to incorporate effective mitigation measures into project designs or be located adequate distances from sources of toxic air contaminants (TACs) to avoid significant risk to health and safety.

- Policy NRE-11.2 **TACs and Existing Sensitive Uses.** Encourage the installation of appropriate air filtration mechanisms at existing schools, residences, and other sensitive receptors adversely affected by existing or proposed pollution sources.
- Policy NRE-11.3 **Health Risk Assessments.** For proposed development that emits toxic air contaminants, require project proponents to prepare health risk assessments in accordance with Bay Area Air Quality Management District procedures as part of environmental review and implement effective mitigation measures to reduce potential health risks to less-than-significant levels. Alternatively, require these projects to be located an adequate distance from residences and other sensitive receptors to avoid health risks. Consult with the Bay Area Air Quality Management District to identify stationary and mobile toxic air contaminant sources and determine the need for and requirements of a health risk assessment for proposed developments
- Policy NRE-11.4 **Truck Routes.** For development projects generating significant heavy-duty truck traffic, designate truck routes that minimize exposure of sensitive receptors to toxic air contaminants and particulate matter.
- Policy NRE-11.5 **Truck Idling.** For development projects generating significant truck traffic, require signage to remind drivers that the State truck idling law limits truck idling to five (5) minutes.
- Policy NRE-11.6 **Vegetation Buffers.** Encourage the use of pollution-absorbing trees and vegetation in buffer areas between substantial sources of toxic air contaminants and sensitive receptors.
- Goal NRE-12: *Minimized air pollutant emissions from demolition and construction activities.*
- Policy NRE-12.1: **Best Practices.** Requirement that development projects implement best management practices to reduce air pollutant emissions associated with construction and operation of the project.
- Policy NRE-12.2 **Conditions of Approvals.** Include dust, particulate matter, and construction equipment exhaust control measures as conditions of approval for subdivision maps, site development and planned development permits, grading permits, and demolition permits. At a minimum, conditions shall conform to construction mitigation measures recommended in the current Bay Area Air Quality Management District CEQA Guidelines.

- Policy NRE-12.3 **Control Measures.** Require construction and demolition projects that have the potential to disturb asbestos (from soil or building material) to comply with all the requirements of the California Air Resource Board's air toxics control measures (ATCMs) for Construction, Grading, Quarrying, and Surface Mining Operations.
- Policy NRE-12.4 **Grading.** Require subdivision designs and site planning to minimize grading and use landform grading in hillside areas.
- Action NRE-12.A Standard Measures for Demolition and Grading. Adopt and periodically update dust, particulate matter, and exhaust control standard measures for demolition, grading, and construction activities to include on project plans mitigation measures as conditions of approval based Bay Area Air Quality Management District CEQA Guidelines. Include measures to prevent silt loading on roadways that generates particulate matter air pollution by prohibiting unpaved or unprotected access to public roadways from construction sites.
 - Action NRE-12.B Grading Ordinance. Revise the grading ordinance and condition grading permits to require that graded areas be stabilized from the completion of grading to commencement and construction.

Significance Thresholds

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA and these significance thresholds were contained in the District's 2011 *CEQA Air Quality Guidelines*. These thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA. The thresholds were challenged through a series of court challenges and were mostly upheld. BAAQMD updated the *CEQA Air Quality Guidelines* in 2017 to include the latest significance thresholds that were used in this analysis are summarized in Table 1. Community risks are considered significant if they exceed these levels.

Table 1. BAAQMD CEQA Significance Thresholds

Criteria Air Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs./day)	Average Daily Emissions (lbs./day)	Annual Average Emissions (tons/year)
ROG	54	54	10
NO _x	54	54	10
PM ₁₀	82 (Exhaust)	82	15
PM _{2.5}	54 (Exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	None	
Health Risks and Hazards	Single Sources Within 1,000-foot Zone of Influence	Combined Sources (Cumulative from all sources within 1000-foot zone of influence)	
Excess Cancer Risk	10 per one million	100 per one million	
Hazard Index	1.0	10.0	
Incremental annual PM _{2.5}	0.3 µg/m ³	0.8 µg/m ³	
Greenhouse Gas Emissions			
Land Use Projects – direct and indirect emissions	Compliance with a Qualified GHG Reduction Strategy OR 1,100 metric tons annually or 4.6 metric tons per capita (for 2020) *		
Note: ROG = reactive organic gases, NO _x = nitrogen oxides, PM ₁₀ = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, PM _{2.5} = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less. GHG = greenhouse gases.			
*BAAQMD does not have a recommended post-2020 GHG threshold.			

Source: Bay Area Air Quality Management District, 2017

AIR QUALITY IMPACTS AND MITIGATION MEASURES

Impact AIR-1: Conflict with or obstruct implementation of the applicable air quality plan?

BAAQMD is the regional agency responsible for overseeing compliance with State and Federal laws, regulations, and programs within the San Francisco Bay Area Air Basin (SFBAAB). BAAQMD, with assistance from the Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC), prepares and implements specific plans to meet the applicable laws, regulations, and programs. The most recent and comprehensive of which is the *Bay Area 2017 Clean Air Plan*.⁸ The primary goals of the Clean Air Plan are to attain air quality standards, reduce population exposure and protect public health, and reduce GHG emissions and protect the climate. The BAAQMD has also developed CEQA guidelines to assist lead agencies in evaluating the significance of air quality and GHG impacts. In formulating compliance strategies, BAAQMD relies on planned land uses established by local general plans. Land use planning affects vehicle travel, which, in turn, affects region-wide emissions of air pollutants and GHGs.

The 2017 Clean Air Plan, adopted by BAAQMD in April 2017, includes control measures that are intended to reduce air pollutant emissions in the Bay Area either directly or indirectly. Plans must show consistency with the control measures listed within the Clean Air Plan. At the project-level, there are no consistency measures or thresholds. The proposed project would not conflict with the latest Clean Air planning efforts since 1) project would have emissions below the BAAQMD thresholds (see Impact below) and 2) the project would be considered urban infill.

Impact AIR-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

The Bay Area is considered a non-attainment area for ground-level O₃ and PM_{2.5} under both the Federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for PM₁₀ under the California Clean Air Act, but not the federal act. The area has attained both State and Federal ambient air quality standards for carbon monoxide. As part of an effort to attain and maintain ambient air quality standards for O₃, PM_{2.5} and PM₁₀, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for O₃ precursor pollutants (ROG and NO_x), PM₁₀, and PM_{2.5} and apply to both construction period and operational period impacts.

Construction Period Emissions

The California Emissions Estimator Model (CalEEMod) Version 2020.4.0 was used to estimate emissions from on-site construction activity, construction vehicle trips, and evaporative emissions. The project land use types and size, and anticipated construction schedule were input to CalEEMod. The CARB Emission FACTors 2021 (EMFAC2021) model was used to predict emissions from construction traffic, which includes worker travel, vendor trucks, and haul trucks.⁹

⁸ Bay Area Air Quality Management District (BAAQMD), 2017. *Final 2017 Clean Air Plan*.

⁹ See CARB's EMFAC2021 Emissions Inventory at <https://arb.ca.gov/emfac/emissions-inventory>

The CalEEMod model output along with construction inputs are included in *Attachment 2* and EMFAC2021 vehicle emissions modeling outputs are included in *Attachment 3*.

CalEEMod Inputs

Land Use Inputs

The proposed project land uses were entered into CalEEMod as described in Table 2.

Table 1. Summary of Project Land Use Inputs

Project Land Uses	Size	Units	Square Feet (sf)	Acreage
Convenience Market with Gas Pumps*	6	Pumps	2,114	0.48
Parking Lot	11	Parking Spaces	14,878	

* Proposed gas station would include 6 pump stations with 12 dispenser positions.

Construction Inputs

CalEEMod computes annual emissions for construction that are based on the project type, size, and acreage. The model provides emission estimates for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. The construction build-out scenario, including equipment list and schedule, were based on construction information provided by the project applicant.

The CalEEMod construction equipment worksheet provided by the applicant included the schedule for each phase. Within each phase, the quantity of equipment to be used along with the average hours per day and total number of workdays was provided. Since different equipment would have different estimates of the working days per phase, the hours per day for each phase was computed by dividing the total number of hours that the equipment would be used by the total number of days in that phase. The construction schedule assumed that the earliest possible start date would be January 2022 and the project would be built out over a period of 8 months, or 165 construction workdays. The first year of full operation was assumed to be 2023.

Construction Truck Traffic Emissions

Construction would produce traffic in the form of worker trips and truck traffic. The traffic-related emissions are based on worker and vendor trip estimates produced by CalEEMod and haul trips that were computed based on the estimate of demolition material to be exported, soil material imported and/or exported to the site, and the estimate of cement and asphalt truck trips. CalEEMod provides daily estimates of worker and vendor trips for each applicable phase. The total trips for those were computed by multiplying the daily trip rate by the number of days in that phase. Haul trips for demolition and grading were estimated from the provided demolition and grading volumes by assuming each truck could carry 10 tons per load. The number of cement and asphalt total round haul trips were provided for the project and converted to total one-way trips, assuming two trips per round-trip delivery.

The latest version of the CalEEMod model is based on the older version of the CARB EMFAC2017 motor vehicle emission factor model. This model has been superseded by the EMFAC2021 model; however, CalEEMod has not been updated to include EMFAC2021. The construction traffic information was combined with EMFAC2021 motor vehicle emissions factors. EMFAC2021 provides aggregate emission rates in grams per mile for each vehicle type. The vehicle mix for this study was based on CalEEMod default assumptions, where worker trips are assumed to be comprised of light-duty autos (EMFAC category LDA) and light duty trucks (EMFAC category LDT1 and LDT2). Vendor trips are comprised of delivery and large trucks (EMFAC category MHDT and HHDT) and haul trips, including cement trucks, are comprised of large trucks (EMFAC category HHDT). Travel distances are based on CalEEMod default lengths, which are 10.8 miles for worker travel, 7.3 miles for vendor trips, and 20 miles for hauling (demolition material export and soil import/export). Since CalEEMod does not address cement or asphalt trucks, these were treated as vendor travel distances. Each trip was assumed to include an idle time of 5 minutes. Emissions associated with vehicle starts were also included. On-road emission rates in Santa Clara County for the year 2022 were used. Table 3 provides the traffic inputs that were combined with the EMFAC2021 emission factors to compute vehicle emissions.

Table 3. Construction Traffic Data Used for EMFAC2021 Model Runs

CalEEMod Run/Land Uses and Construction Phase	Trips by Trip Type			Notes
	Total Worker Trips ¹	Total Vendor Trips ¹	Total Haul Trips ²	
Vehicle mix ¹	50% LDA 25% LDT1 25% LDT2	50% MHDT 50% HHDT	100% HHDT	
Trip Length (miles)	10.8	7.3	20.0 (Demo/Soil) 7.3 (Cement/Asphalt)	CalEEMod default distance with 5-min truck idle time.
Demolition	30	-	34	880-sf existing building demolition. CalEEMod default worker trips.
Site Preparation	16	-	-	CalEEMod default worker trips.
Grading	24	-	62	500-cy soil export. CalEEMod default worker trips.
Trenching	9	-	-	CalEEMod default worker trips.
Building Construction	973	417	24	12 cement truck round trips. CalEEMod default worker and vendor trips.
Architectural Coating	15	-	-	CalEEMod default worker trips.
Paving	24	-	23	95-cy of asphalt. CalEEMod default worker trips.
Notes: ¹ Based on 2022 EMFAC2021 light-duty vehicle fleet mix for Santa Clara County. ² Includes demolition and grading trips estimated by CalEEMod based on amount of material to be removed. Cement and asphalt trips estimated based on estimated building and pavement areas.				

Summary of Computed Construction Period Emissions

Average daily emissions were annualized for each year of construction by dividing the annual construction emissions by the number of active workdays during that year. Table 4 shows the annualized average daily construction emissions of ROG, NO_x, PM₁₀ exhaust, and PM_{2.5} exhaust

during construction of the project. As indicated in Table 4, predicted annualized project construction emissions would not exceed the BAAQMD significance thresholds during any year of construction.

Table 4. Construction Period Emissions

Year	ROG	NOx	PM ₁₀ Exhaust	PM _{2.5} Exhaust
<i>Construction Emissions Per Year (Tons)</i>				
2022	0.03	0.14	0.01	0.01
<i>Annualized Daily Construction Emissions (pounds/day)</i>				
2022 (165 construction workdays)	0.35	1.74	0.09	0.07
<i>BAAQMD Thresholds (pounds per day)</i>	54 lbs./day	54 lbs./day	82 lbs./day	54 lbs./day
Exceed Threshold?	No	No	No	No

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM₁₀ and PM_{2.5}. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less-than-significant if best management practices are implemented to reduce these emissions. *Mitigation Measure AQ-1 would implement BAAQMD-recommended best management practices.*

Mitigation Measure AQ-1: Include measures to control dust and exhaust during construction.

During any construction period ground disturbance, the applicant shall ensure that the project contractor implement measures to control dust and exhaust. Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less-than-significant level. Additional measures are identified to reduce construction equipment exhaust emissions. The contractor shall implement the following best management practices that are required of all projects:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Effectiveness of Mitigation Measure AQ-1

The measures above are consistent with BAAQMD-recommended basic control measures for reducing fugitive particulate matter that are contained in the BAAQMD CEQA Air Quality Guidelines.

Operational Period Emissions

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

CalEEMod Inputs

Land Uses

The project land uses were input to CalEEMod as described above for the construction period modeling.

Model Year

Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CalEEMod. The earliest year of full operation would be 2023 if construction begins in 2022. Emissions associated with build-out later than 2023 would be lower.

Traffic Information

CalEEMod allows the user to enter specific vehicle trip generation rates. Therefore, the project-

specific daily trip generation rate provided by the traffic consultant was entered into the model.¹⁰ The Saturday and Sunday trip rates were adjusted by multiplying the ratio of the CalEEMod default rates for Saturday and Sunday trips to the default weekday rate with the project-specific daily weekday trip rate. The project would produce 286 net daily trips. Since the traffic analysis considered passby trips, CalEEMod's trip type was changed to 100 percent primary trips. The default trip lengths specified by CalEEMod were used.

EMFAC2021 Adjustment to CalEEMod

The vehicle emission factors and fleet mix used in CalEEMod are based on EMFAC2017, which is an older CARB emission inventory for on road and off road mobile sources. Since the release of CalEEMod Version 2020.4.0, new emission factors have been produced by CARB. EMFAC2021 became available for use in January 2021. It includes the latest data on California's car and truck fleets and travel activity. The CalEEMod vehicle emission factors and fleet mix were updated with the emission rates and fleet mix from EMFAC2021, which were adjusted with the CARB EMFAC off-model adjustment factors. On road emission rates from 2022 Sonoma County were used (See *Attachment 3*). More details about the updates in emissions calculation methodologies and data are available in the EMFAC2021 Technical Support Document.¹¹

Energy

CalEEMod defaults for energy use were used, which include the 2019 Title 24 Building Standards. GHG emissions modeling includes those indirect emissions from electricity consumption. The model has a default rate of 2 pounds of CO₂ per megawatt of electricity produced, which is based on Silicon Valley Clean Energy (SVCE) 2019 emissions rate. SVCE is the official electricity provider for Morgan Hill. SVCE purchases carbon-free electricity and partners with PG&E to deliver this electricity over existing power lines that they maintain. SVCE provides 100-percent carbon-free energy and customers in the City of Morgan Hill are automatically enrolled in the SVCE GreenStart default program, which offers electricity that is carbon-free and with 50 percent of the power from renewable sources.¹²

Other Inputs

Default model assumptions for emissions associated with solid waste generation use were applied to the project. Water/wastewater use were changed to 100% aerobic conditions to represent wastewater treatment plant conditions since the project site would not send wastewater to septic tanks or facultative lagoons.

Existing Uses

The site is currently developed with an existing gas station with four pump stations (eight gas

¹⁰ Email correspondence with Maria Kisyoova, Associate Project Manager, David J. Powers & Associates, Inc., May 26, 2021, Attachment: *World Oil Gas Trip Gen and Volumes 05-26-21.xlsx*.

¹¹ See CARB 2021: <https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-modeling-tools-emfac>

¹² See: <https://www.svcleanenergy.org/choices/>

pumps) and an 880-sf retail/convenience store. Therefore, a CalEEMod model run was developed to compute emissions from the existing land uses as if they were operating in 2023. Existing land uses were input as 4 pumps and 880-sf of “Convenience Market with Gas Pumps.” The existing trip generation rates provided by the traffic consultant and other inputs were applied to the existing modeling in the same manner described for the proposed project. Historical energy data for this land use was used.

Gasoline Dispensing Facility

The project would include a six-pump gasoline station with 12 dispenser positions. According to the project applicant, the maximum throughput for this gas station would be 2,000,000 gallons per year. The applicant also provided the maximum throughput of the existing four-pump, eight dispenser gas station of 1,280,982 gallons in 2020. CalEEMod does not compute evaporative ROG emissions from gasoline dispensing facilities (GDF). Therefore, these emissions were computed outside the model. The transfer and storage of gasoline results in emissions of organic compounds, considered in this assessment as ROG. Emissions of ROG and benzene, which is a TAC, were computed based on projected annual throughput of gasoline using emission factors developed by CARB.¹³ The emission factors are based on annual gasoline throughput and account for emissions from fuel storage tank loading and pressure driven (breathing) losses, motor vehicle refueling, spillage while refueling, and minor emissions from vapor permeation through gasoline dispensing hoses. The fueling emission factors include the effects of vehicles equipped with onboard refueling vapor recovery (ORVR) systems. ORVR systems were phased in beginning with 1998 model year passenger vehicles, and are now installed on all passenger, light-duty, and medium-duty vehicles manufactured since the 2006 model year. Emissions of benzene were computed assuming that benzene makes up 0.3% of gasoline vapor and 1% of liquid gasoline.¹⁴ These computations are provided in Attachment 2.

Summary of Computed Operational Period Emissions

Annual emissions were predicted using CalEEMod and daily emissions were calculated assuming 365 days of operation. Table 5 shows average daily emissions of ROG, NO_x, total PM₁₀, and total PM_{2.5} during operation of the project. The operational period emissions would not exceed the BAAQMD significance thresholds.

¹³ CARB. 2013. *Revised Emissions Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities*. December 23, 2013.

¹⁴ CAPCOA. 1997. *Air Toxics "Hot Spots" Program, Gasoline Service Station Industrywide Risk Assessment Guidelines*, November 1997

Table 5. Operational Period Emissions

Scenario	ROG	NO_x	PM₁₀	PM_{2.5}
2023 Project Operational Emissions (tons/year)				
Emissions from CalEEMod (tons/year)	0.67	0.68	0.99	0.25
GDF Evaporative Emissions (tons/year)	0.52	--	--	--
Project Total (tons/year)	1.19	0.68	0.99	0.25
2023 Existing Site Operational Emissions (tons/year)				
Emissions from CalEEMod (tons/year)	0.49	0.50	0.73	0.18
GDF Evaporative Emissions (tons/year)	0.33	--	--	--
Existing Total (tons/year)	0.82	0.50	0.73	0.18
Net Annual Emissions Total (tons/year)	0.37	0.18	0.26	0.07
BAAQMD Thresholds (tons /year)	10 tons	10 tons	15 tons	10 tons
Exceed Threshold?	No	No	No	No
2023 Project Operational Emissions (lbs./day) ¹	2.01	0.98	1.44	0.41
BAAQMD Thresholds (lbs./day)	54 lbs.	54 lbs.	82 lbs.	54 lbs.
Exceed Threshold?	No	No	No	No

Notes: ¹ Assumes 365-day operation.

Impact AIR-3: Expose sensitive receptors to substantial pollutant concentrations?

Project impacts related to increased community risk can occur either by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity or by significantly exacerbating existing cumulative TAC impacts. This project would introduce new sources of TACs during construction (i.e., on-site construction and truck hauling emissions) and operation (i.e., mobile sources and stationary sources).

Project construction activity would generate dust and equipment exhaust that would affect nearby sensitive receptors. The project would site a new gas station within 1,000 feet of sensitive receptors. The project would not include the installation of any emergency generators powered by a diesel engine but would generate some traffic consisting of mostly light-duty gasoline-powered vehicles, which would produce TAC and air pollutant emissions.

Project impacts to existing sensitive receptors were addressed for temporary construction activities and long-term operational conditions. There are also several sources of existing TACs and localized air pollutants in the vicinity of the project. The impact of the existing sources of TAC was also assessed in terms of the cumulative risk that includes the project contribution.

Community Risk Methodology for Construction and Operation

Community risk impacts were addressed by predicting increased cancer risk, the increase in annual PM_{2.5} concentrations and computing the Hazard Index (HI) for non-cancer health risks. The risk impacts from the project are the combination of risks from construction and operation sources. These sources include on-site construction activity, construction truck hauling, and increased traffic from the project. To evaluate the increased cancer risks from the project, a 30-year exposure

period was used, per BAAQMD guidance,¹⁵ with the sensitive receptors being exposed to both project construction and operation emissions during this timeframe.

The project increased cancer risk is computed by summing the project construction cancer risk and operation cancer risk contributions. Unlike, the increased maximum cancer risk, the annual PM_{2.5} concentration and HI values are not additive but based on the annual maximum values for the entirety of the project. The project maximally exposed individual (MEI) is identified as the sensitive receptor that is most impacted by the project's construction and operation.

The methodology for computing community risks impacts is contained in *Attachment 1*. This involved the calculation of TAC and PM_{2.5} emissions, dispersion modeling of these emissions, and computations of cancer risk and non-cancer health effects.

Modeled Sensitive Receptors

Receptors for this assessment included locations where sensitive populations would be present for extended periods of time (i.e., chronic exposures). This includes the existing adjacent residences to the east of the site and other residences at further distances, as shown in Figure 1. Residential receptors and receptors at the health center were assumed to include all receptor groups (i.e., third trimester, infants, children, and adults) with almost continuous exposure to project emissions.

Community Health Risk from Project Construction

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These exhaust air pollutant emissions would not be considered to contribute substantially to existing or projected air quality violations. Construction exhaust emissions may still pose health risks for sensitive receptors such as surrounding residents. The primary community risk impact issue associated with construction emissions are cancer risk and exposure to PM_{2.5}. Diesel exhaust poses both a potential health and nuisance impact to nearby receptors. A health risk assessment of the project construction activities was conducted that evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and PM_{2.5}.¹⁶ This assessment included dispersion modeling to predict the offsite and onsite concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

Construction Emissions

The CalEEMod and EMFAC2021 models provided total annual PM₁₀ exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles, with total emissions from all construction stages as 0.01 tons (12 pounds). The on-road emissions are a result of haul truck travel during demolition and grading activities, worker travel, and vendor deliveries during construction. A trip length of half a mile was used to represent vehicle travel while at or near the construction site. It was assumed that these emissions from on-road

¹⁵ BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

¹⁶ DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.

vehicles traveling at or near the site would occur at the construction site. Fugitive PM_{2.5} dust emissions were calculated by CalEEMod and EMFAC2021 as 0.01 tons (14 pounds) for the overall construction period.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict concentrations of DPM and PM_{2.5} concentrations at sensitive receptors (residences, daycare, and high school) in the vicinity of the project construction area. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.¹⁷ Emission sources for the construction site were grouped into two categories: exhaust emissions of DPM and fugitive PM_{2.5} dust emissions.

Construction Sources

To represent the construction equipment exhaust emissions, an area source emission release height of 20 feet (6 meters) was used for the area sources.¹⁸ The release height incorporates both the physical release height from the construction equipment (i.e., the height of the exhaust pipe) and plume rise after it leaves the exhaust pipe. Plume rise is due to both the high temperature of the exhaust and the high velocity of the exhaust gas. It should be noted that when modeling an area source, plume rise is not calculated by the AERMOD dispersion model as it would do for a point source (exhaust stack). Therefore, the release height from an area source used to represent emissions from sources with plume rise, such as construction equipment, should be based on the height the exhaust plume is expected to achieve, not just the height of the top of the exhaust pipe.

For modeling fugitive PM_{2.5} emissions, a near-ground level release height of 7 feet (2 meters) was used for the area source. Fugitive dust emissions at construction sites come from a variety of sources, including truck and equipment travel, grading activities, truck loading (with loaders) and unloading (rear or bottom dumping), loaders and excavators moving and transferring soil and other materials, etc. All of these activities result in fugitive dust emissions at various heights at the point(s) of generation. Once generated, the dust plume will tend to rise as it moves downwind across the site and exit the site at a higher elevation than when it was generated. For all these reasons, a 7-foot release height was used as the average release height across the construction site. Emissions from the construction equipment and on-road vehicle travel were distributed throughout the modeled area sources.

AERMOD Inputs and Meteorological Data

The modeling used a five-year data set (2013-2017) of hourly meteorological data from the San Martin Airport that was prepared for use with the AERMOD model by BAAQMD. Construction emissions computed by CalEEMod were modeled as occurring daily between 7:00 a.m. to 4:00 p.m. This is when most of the construction activity would occur, according to the project applicant.

¹⁷ Bay Area Air Quality Management District (BAAQMD), 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0*. May.

¹⁸ California Air Resource Board, 2007. *Proposed Regulation for In-Use Off-Road Diesel Vehicles, Appendix D: Health Risk Methodology*. April. Web: <https://ww3.arb.ca.gov/regact/2007/ordiesl07/ordiesl07.htm>

Annual DPM and PM_{2.5} concentrations from construction activities during the 2022 period were calculated using the model. DPM and PM_{2.5} concentrations were calculated at nearby sensitive receptors. Receptor heights of 5 feet (1.5 meters) and 15 feet (4.5 meters) were used to represent the breathing heights on the first and second floors of nearby single- and multi-family residences.¹⁹

Summary of Construction Community Risk Impacts

The increased cancer risk calculations were based on applying the BAAQMD recommended age sensitivity factors to the TAC concentrations, as described in *Attachment 1*. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. The range of infant through adult exposures were assumed to occur at all residences. Infant exposure at residences was used as a worst-case assumption, while child and adult exposures would be less.

The maximum modeled annual PM_{2.5} concentration was calculated based on combined exhaust and fugitive concentrations. The maximum computed HI values was based on the ratio of the maximum DPM concentration modeled and the chronic inhalation reference exposure level of 5 µg/m³.

The maximum modeled annual DPM and PM_{2.5} concentrations, which include both the DPM and fugitive PM_{2.5} concentrations, were identified at nearby sensitive receptors to find the MEI. Results of this assessment indicated that the construction MEIs were located in two places. The cancer risk MEI was located at a residence on the first floor (5 feet above ground) to the north of the project site. The PM_{2.5} concentration MEI was located at the adjacent residence on the first floor (5 feet above ground) to the east of the project site. The locations of the MEIs and nearby sensitive receptors are shown in Figure 1. Table 6 summarizes the maximum cancer risks, PM_{2.5} concentrations, and health hazard indexes for project related construction activities. *Attachment 4* to this report includes the emission calculations used for the construction modeling and the cancer risk calculations.

¹⁹ Bay Area Air Quality Management District, 2012, Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0. May. Web: <https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en>

Figure 1. Project Construction Site, Locations of Off-Site Sensitive Receptors and Maximum TAC Impact Locations (MEI)



Community Risks from Project Operation – Traffic and Gasoline Transfer and Storage

Operation of the project would have long-term emissions from mobile sources (i.e., traffic). Per BAAQMD recommended risks and methodology, a road with less than 10,000 total vehicles per day is considered a low-impact source of TACs.²⁰ This project would generate 286 net daily trips²¹ dispersed on the roadway systems with a majority of the trips being from light-duty vehicles (i.e., passenger automobiles), which is a fraction of 10,000 daily vehicles. Therefore, emissions from project traffic are considered negligible and not included within this analysis.

As described above in the project description, the project would expand a GDF from four to six pumps or 12 fueling positions that would operate 24-hours per day. According to the project applicant, the maximum throughput for the proposed gas station would be 2,000,000 gallons per

²⁰ Bay Area Air Quality Management District, 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards*, Version 3.0. May. Web: <https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en>

²¹ Email correspondence with Maria Kisyova, Associate Project Manager, David J. Powers & Associates, Inc., May 26, 2021, Attachment: *World Oil Gas Trip Gen and Volumes 05-26-21.xlsx*.

year. The existing throughput of the existing four-pump, eight dispenser gas station was reported at 1,280,982 gallons in 2020.

Annual TAC emissions (benzene, ethylbenzene, hexane, toluene, and xylene) from the proposed and existing gas stations were computed following methods recommended by CARB, as described under *Impact AIR-2*.²² The pounds per day emission rates were then put into the *BAAQMD Health Risk Calculator* to screen the risks and hazards from the gas station. The BAAQMD's *Gasoline Dispensing Facility Distance Multiplier Tool* was used with the project MEIs being approximately 30 feet (5 meters) away from the source. The net increase to community risks caused by the proposed gas station was calculated and combined with the project's construction risks. This provides the increase in risk caused by the proposed station over the existing conditions. Note that use of the *BAAQMD Health Risk Calculator* provides conservative estimates of cancer risks since it does not consider third trimester fetus and infant exposure, while those exposures were considered for construction cancer risk computations. In other words, this is a conservative calculation of cancer risks caused by the project. The community risks from the proposed gas station would likely be less had a refined health risk assessment been conducted. The results are provided in Table 6. The emissions and health risk calculations for the proposed GDF are included in *Attachment 4*.

Summary of Project-Related Community Risks at the Off-site Project MEI

For this project, the sensitive receptors identified in Figure 1 as the construction MEIs are also the project MEIs. The cancer risks from construction and operation of the project were summed together. The annual PM_{2.5} concentration and HI values are based on an annual maximum risk for the entirety of the project, so they were not summed. As shown in Table 6, the unmitigated maximum cancer risks, PM_{2.5} concentration, and HI from construction activities at the MEI locations would not exceed the BAAQMD single-source significance thresholds.

Table 6. Construction and Operation Risk Impacts at the Off-Site Receptors

Source	Cancer Risk* (per million)	Annual PM _{2.5} * (µg/m ³)	Hazard Index
Project Construction Unmitigated	4.60 (infant)	0.07	0.01
Operational Gas Station (2,000,000 gallon/year maximum throughput)	1.74	-	0.01
Unmitigated Total/Maximum Project Risks	6.34 (infant)	0.07	0.01
BAAQMD Single-Source Threshold	>10.0	>0.3	>1.0
Exceed Threshold? Unmitigated	No	No	No

* Maximum cancer risk and maximum PM_{2.5} concentration occur at different locations.

²² CARB. 2013. *Revised Emissions Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities*. December 23, 2013.

Combined Impact of All TAC Sources on the Off-Site Construction MEIs

Community health risk assessments typically look at all substantial sources of TACs that can affect sensitive receptors that are located within 1,000 feet of the project site (i.e., influence area). These sources include rail lines, freeways or highways, busy surface streets, and stationary sources identified by BAAQMD.

A review of the project area and provided traffic information indicates that traffic on Monterey Road has an average daily traffic (ADT) of over 10,000 vehicles. All other roadways within the area are assumed to have an ADT that is less than 10,000 vehicles. Two stationary sources were identified within the 1,000-foot influence area using the BAAQMD's stationary source geographic information systems (GIS) map tool.²³ Figure 2 shows the sources affecting the MEIs. Community risk impacts from these sources upon the MEIs are reported in Table 7. Details of the modeling and community risk calculations are included in *Attachment 5*.

Figure 2. Project Site, MEIs, and Nearby TAC and PM_{2.5} Sources



²³ BAAQMD, <https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65>

Local Roadways – Monterey Road

A refined analysis of potential health impacts from vehicle traffic on Monterey Road was conducted. The refined analysis involved predicting emissions for the traffic volume and mix of vehicle types on the roadway near the project site and using an atmospheric dispersion model to predict exposure to TACs. The associated cancer risks are then computed based on the modeled exposures. *Attachment 1* includes a description of how community risk impacts, including cancer risk are computed.

Emission Rates

This analysis involved the development of DPM, organic TACs, and PM_{2.5} emissions for traffic on both roadways using the Caltrans version of the EMFAC2017 emissions model, known as CT-EMFAC2017. CT-EMFAC2017 provides emission factors for mobile source criteria pollutants and TACs, including DPM. Emission processes modeled include running exhaust for DPM, PM_{2.5} and total organic compounds (e.g., TOG), running evaporative losses for TOG, and tire and brake wear and fugitive road dust for PM_{2.5}. All PM_{2.5} emissions from all vehicles were used, rather than just the PM_{2.5} fraction from diesel powered vehicles, because all vehicle types (i.e., gasoline and diesel powered) produce PM_{2.5}. Additionally, PM_{2.5} emissions from vehicle tire and brake wear and from re-entrained roadway dust were included in these emissions. DPM emissions are projected to decrease in the future and are reflected in the CT-EMFAC2017 emissions data. Inputs to the model include region (i.e., Santa Clara County), type of road (i.e., major/collector), truck percentage for non-state highways in Santa Clara County (3.51 percent),²⁴ traffic mix assigned by CT-EMFAC2017 for the county, year of analysis (2022 – construction start year), and season (annual).

The average daily traffic (ADT) for Monterey Road based on AM and PM peak-hour cumulative plus project traffic volumes for the nearby roadways provided by the project's traffic consultant.²⁵ The calculated ADT on Monterey Road was 21,965 vehicles. Average hourly traffic distributions for Santa Clara County roadways were developed using the EMFAC model,²⁶ which were then applied to the ADT volumes to obtain estimated hourly traffic volumes and emissions for the roadway. An average travel speed of 35 miles per hour (mph) on Monterey Road was used for all hours of the day based on posted speed limit signs on the roadway.

In order to estimate TAC and PM_{2.5} emissions over the 30-year exposure period used for calculating the increased cancer risks for sensitive receptors at the MEI and project site, the CT-EMFAC2017 model was used to develop vehicle emission factors for the year 2022 (project construction year). Year 2022 emissions were conservatively assumed as being representative of future conditions over the time period that cancer risks are evaluated.

²⁴ Bay Area Air Quality Management District, 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0*. May. Web: <https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en>

²⁵ Email correspondence with Maria Kisyova, Associate Project Manager, David J. Powers & Associates, Inc., May 26, 2021, Attachment: *World Oil Gas Trip Gen and Volumes 05-26-21.xlsx*.

²⁶ The Burden output from EMFAC2007, a previous version of CARB's EMFAC model, was used for this since the current web-based version of EMFAC2021 does not include Burden type output with hour by hour traffic volume information.

Dispersion Modeling

Dispersion modeling of TAC and PM_{2.5} emissions was conducted using the EPA AERMOD air quality dispersion model, which is recommended by the BAAQMD for this type of analysis.²⁷ TAC and PM_{2.5} emissions from traffic on Monterey Road within 1,000 feet of the project site were evaluated. Vehicle traffic on the roadway was modeled using line-area sources (a series of adjacent area sources along a line), with line segments used for the northbound and southbound travel directions on Monterey Road. The same meteorological data and off-site MEI sensitive receptors used in the previous dispersion modeling were used in the roadway modeling. Other inputs to the model included road geometry, hourly traffic emissions, and receptor locations. Annual TAC and PM_{2.5} concentrations for 2022 from traffic on Monterey Road were calculated using the model. Concentrations were calculated at the project MEIs with receptor heights of 5 feet (1.5 meters) to represent the breathing heights of residents in the adjacent townhomes.

Figure 2 shows the roadway segments modeled and residential receptor locations used in the modeling. Table 7 lists the risks and hazards from the roadway. The emission rates and roadway calculations used in the analysis are shown in *Attachment 5*.

BAAQMD Permitted Stationary Sources

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Permitted Stationary Sources 2018* GIS website,²⁸ which identifies the location of nearby stationary sources and their estimated risk and hazard impacts, including emissions and adjustments to account for new OEHHA guidance. Two sources, a gas dispensing facility and generic equipment, were identified using this tool. A Stationary Source Information Form (SSIF) containing the identified sources was prepared and submitted to BAAQMD. BAAQMD provided input and clarification about the stationary sources.²⁹ After further review, source #103609 is the project gas station, so it was removed from the cumulative analysis as its net risk impacts were included in the project's impacts.

The screening level risks and hazards provided by BAAQMD for the stationary source was adjusted for distance using BAAQMD's *Distance Adjustment Multiplier Tool for Generic Equipment*. Community risk impacts from the stationary sources upon the MEIs are reported in Table 7.

Summary of Cumulative Risks at Off-Site Project MEIs

Table 7 reports both the project and cumulative community risk impacts at the sensitive receptors most affected by the project (i.e., MEIs). The project's community risk from project construction activities would not exceed the single-source maximum increased cancer risk, PM_{2.5} concentration,

²⁷ BAAQMD. *Recommended Methods for Screening and Modeling Local Risks and Hazards*. May 2012

²⁸ BAAQMD,

<https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65>

²⁹ Correspondence with Matthew Hanson, Environmental Planner, BAAQMD, July 13, 2021.

or HI thresholds. In addition, the combined cancer risk, PM_{2.5} concentration, and HI values would not exceed their respective cumulative thresholds.

Table 7. Cumulative Community Risk Impacts from Combined TAC Sources at MEIs

Source		Cancer Risk* (per million)	Annual PM _{2.5} * (µg/m ³)	Hazard Index
Project Impacts				
Proposed Project (Construction and Operation)	Unmitigated	6.34 (infant)	0.07	0.01
BAAQMD Single-Source Threshold		>10.0	>0.3	>1.0
<i>Exceed Threshold?</i>	Unmitigated	No	No	No
Cumulative Sources				
Monterey Road, ADT 21,965		2.05 (infant)	0.14	<0.01
Airtronics Metal Products (Facility ID #23026, Spray booths, Ovens), MEIs at 650 feet		<0.01	0.01	-
<i>Combined Sources</i>	<i>Unmitigated</i>	<8.40 (infant)	0.22	<0.02
BAAQMD Cumulative Source Threshold		>100	>0.8	>10.0
<i>Exceed Threshold?</i>	Unmitigated	No	No	No

Greenhouse Gas Emissions

Setting

Gases that trap heat in the atmosphere, GHGs, regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. The most common GHGs are carbon dioxide (CO₂) and water vapor but there are also several others, most importantly methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO₂, CH₄, and N₂O are byproducts of fossil fuel combustion.
- N₂O is associated with agricultural operations such as fertilization of crops.
- CH₄ is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents but their production has been stopped by international treaty.
- HFCs are now used as a substitute for CFCs in refrigeration and cooling.
- PFCs and sulfur hexafluoride emissions are commonly created by industries such as aluminum production and semi-conductor manufacturing.

Each GHG has its own potency and effect upon the earth's energy balance. This is expressed in terms of a global warming potential (GWP), with CO₂ being assigned a value of 1 and sulfur hexafluoride being several orders of magnitude stronger. In GHG emission inventories, the weight of each gas is multiplied by its GWP and is measured in units of CO₂ equivalents (CO₂e).

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

Recent Regulatory Actions for California GHG Emissions

Executive Order S-3-05 – California GHG Reduction Targets

Executive Order (EO) S-3-05 was signed by Governor Arnold Schwarzenegger in 2005 to set GHG emission reduction targets for California. The three targets established by this EO are as follows: (1) reduce California's GHG emissions to 2000 levels by 2010, (2) reduce California's GHG emissions to 1990 levels by 2020, and (3) reduce California's GHG emissions by 80 percent below 1990 levels by 2050.

Assembly Bill 32 (AB 32), California Global Warming Solutions Act (2006)

AB 32, the Global Warming Solutions Act of 2006, codified the State's GHG emissions target by directing CARB to reduce the State's global warming emissions to 1990 levels by 2020. AB 32 was signed and passed into law by Governor Schwarzenegger on September 27, 2006. Since that time, the CARB, CEC, California Public Utilities Commission (CPUC), and Building Standards Commission have all been developing regulations that will help meet the goals of AB 32 and Executive Order S-3-05.

A Scoping Plan for AB 32 was adopted by CARB in December 2008. It contains the State's main strategies to reduce GHGs from business-as-usual emissions projected in 2020 back down to 1990 levels. Business-as-usual (BAU) is the projected emissions in 2020, including increases in emissions caused by growth, without any GHG reduction measures. The Scoping Plan has a range of GHG reduction actions, including direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system.

As directed by AB 32, CARB has also approved a statewide GHG emissions limit. On December 6, 2007, CARB staff resolved an amount of 427 million metric tons (MMT) of CO₂e as the total statewide GHG 1990 emissions level and 2020 emissions limit. The limit is a cumulative statewide limit, not a sector- or facility-specific limit. CARB updated the future 2020 BAU annual emissions forecast, in light of the economic downturn, to 545 MMT of CO₂e. Two GHG emissions reduction measures currently enacted that were not previously included in the 2008 Scoping Plan baseline inventory were included, further reducing the baseline inventory to 507 MMT of CO₂e. Thus, an estimated reduction of 80 MMT of CO₂e is necessary to reduce statewide emissions to meet the AB 32 target by 2020.

Executive Order B-30-15 & Senate Bill 32 GHG Reduction Targets – 2030 GHG Reduction Target

In April 2015, Governor Brown signed Executive Order which extended the goals of AB 32, setting a greenhouse gas emissions target at 40 percent of 1990 levels by 2030. On September 8, 2016, Governor Brown signed SB 32, which legislatively established the GHG reduction target of 40 percent of 1990 levels by 2030. In November 2017, CARB issued *California's 2017 Climate Change Scoping Plan*. While the State is on track to exceed the AB 32 scoping plan 2020 targets, this plan is an update to reflect the enacted SB 32 reduction target.

SB 32 was passed in 2016, which codified a 2030 GHG emissions reduction target of 40 percent below 1990 levels. CARB is currently working on a second update to the Scoping Plan to reflect the 2030 target set by Executive Order B-30-15 and codified by SB 32. The proposed Scoping Plan Update was published on January 20, 2017 as directed by SB 32 companion legislation AB 197. The mid-term 2030 target is considered critical by CARB on the path to obtaining an even deeper GHG emissions target of 80 percent below 1990 levels by 2050, as directed in Executive Order S-3-05. The Scoping Plan outlines the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure, providing a blueprint to continue driving down GHG emissions and obtain the statewide goals.

The new Scoping Plan establishes a strategy that will reduce GHG emissions in California to meet the 2030 target (note that the AB 32 Scoping Plan only addressed 2020 targets and a long-term goal). Key features of this plan are:

- Cap and Trade program places a firm limit on 80 percent of the State's emissions;
- Achieving a 50-percent Renewable Portfolio Standard by 2030 (currently at about 29 percent statewide);
- Increase energy efficiency in existing buildings;
- Develop fuels with an 18-percent reduction in carbon intensity;
- Develop more high-density, transit-oriented housing;
- Develop walkable and bikeable communities;
- Increase the number of electric vehicles on the road and reduce oil demand in half;
- Increase zero-emissions transit so that 100 percent of new buses are zero emissions;
- Reduce freight-related emissions by transitioning to zero emissions where feasible and near-zero emissions with renewable fuels everywhere else; and
- Reduce "super pollutants" by reducing methane and HFCs by 40 percent.

In the updated Scoping Plan, CARB recommends statewide targets of no more than 6 metric tons CO₂e per capita (statewide) by 2030 and no more than 2 metric tons CO₂e per capita by 2050. The statewide per capita targets account for all emissions sectors, statewide population forecasts, and the statewide reductions necessary to achieve the 2030 statewide target under SB 32 and the longer-term State emissions reduction goal of 80 percent below 1990 levels by 2050.

Executive Order B-55-18 – Carbon Neutrality

In 2018, a new statewide goal was established to achieve carbon neutrality as soon as possible, but no later than 2045, and to maintain net negative emissions thereafter. CARB and other relevant state agencies are tasked with establishing sequestration targets and create policies/programs that would meet this goal.

Senate Bill 375, California's Regional Transportation and Land Use Planning Efforts (2008)

California enacted legislation (SB 375) to expand the efforts of AB 32 by controlling indirect GHG emissions caused by urban sprawl. SB 375 provides incentives for local governments and applicants to implement new conscientiously planned growth patterns. This includes incentives for creating attractive, walkable, and sustainable communities and revitalizing existing communities. The legislation also allows applicants to bypass certain environmental reviews under CEQA if they build projects consistent with the new sustainable community strategies. Development of more alternative transportation options that would reduce vehicle trips and miles traveled, along with traffic congestion, would be encouraged. SB 375 enhances CARB's ability to reach the AB 32 goals by directing the agency in developing regional GHG emission reduction targets to be achieved from the transportation sector for 2020 and 2035. CARB works with the metropolitan planning organizations (e.g. Association of Bay Area Governments [ABAG] and Metropolitan Transportation Commission [MTC]) to align their regional transportation, housing, and land use plans to reduce vehicle miles traveled and demonstrate the region's ability to attain its GHG

reduction targets. A similar process is used to reduce transportation emissions of ozone precursor pollutants in the Bay Area.

SB 350 Renewable Portfolio Standards

In September 2015, the California Legislature passed SB 350, which increases the states Renewables Portfolio Standard (RPS) for content of electrical generation from the 33 percent target for 2020 to a 50 percent renewables target by 2030.

Senate Bill 100 – Current Renewable Portfolio Standards

In September 2018, SB 100 was signed by Governor Brown to revise California’s RPS program goals, furthering California’s focus on using renewable energy and carbon-free power sources for its energy needs. The bill would require all California utilities to supply a specific percentage of their retail sales from renewable resources by certain target years. By December 31, 2024, 44 percent of the retail sales would need to be from renewable energy sources, by December 31, 2026 the target would be 40 percent, by December 31, 2017 the target would be 52 percent, and by December 31, 2030 the target would be 60 percent. By December 31, 2045, all California utilities would be required to supply retail electricity that is 100 percent carbon-free and sourced from eligible renewable energy resource to all California end-use customers.

California Building Standards Code – Title 24 Part 11 & Part 6

The California Green Building Standards Code (CALGreen Code) is part of the California Building Standards Code under Title 24, Part 11.³⁰ The CALGreen Code encourages sustainable construction standards that involve planning/design, energy efficiency, water efficiency resource efficiency, and environmental quality. These green building standard codes are mandatory statewide and are applicable to residential and non-residential developments. The most recent CALGreen Code (2019 California Building Standard Code) was effective as of January 1, 2020.

The California Building Energy Efficiency Standards (California Energy Code) is under Title 24, Part 6 and is overseen by the California Energy Commission (CEC). This code includes design requirements to conserve energy in new residential and non-residential developments, while being cost effective for homeowners. This Energy Code is enforced and verified by cities during the planning and building permit process. The current energy efficiency standards (2019 Energy Code) replaced the 2016 Energy Code as of January 1, 2020. Under the 2019 standards, single-family homes are predicted to be 53 percent more efficient than homes built under the 2016 standard due more stringent energy-efficiency standards and mandatory installation of solar photovoltaic systems. For nonresidential developments, it is predicted that these buildings will use 30 percent less energy due to lightening upgrades.³¹

³⁰ See: <https://www.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-Commission-Resources-List-Folder/CALGreen#:~:text=CALGreen%20is%20the%20first%20Din.to%201990%20levels%20by%202020.>

³¹ See: https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf

Federal and Statewide GHG Emissions

The U.S. EPA reported that in 2018, total gross nationwide GHG emissions were 6,676.6 million metric tons (MMT) carbon dioxide equivalent (CO₂e).³² These emissions were lower than peak levels of 7,416 MMT that were emitted in 2007. CARB updates the statewide GHG emission inventory on an annual basis where the latest inventory includes 2000 through 2017 emissions.³³ In 2017, GHG emissions from statewide emitting activities were 424 MMT. The 2017 emissions have decreased by 14 percent since peak levels in 2004 and are 7 MMT below the 1990 emissions level and the State's 2020 GHG limit. Per capita GHG emissions in California have dropped from a 2001 peak of 14.1 MT per person to 10.7 MT per person in 2017. The most recent Bay Area emission inventory was computed for the year 2011.³⁴ The Bay Area GHG emissions were 87 MMT. As a point of comparison, statewide emissions were about 444 MMT in 2011

Morgan Hill 2035 General Plan

The Climate Change section of the Natural Resources and Environment chapter of the Morgan Hill 2035 General Plan contains goals, policies and implementing actions that pertain to GHG emissions. Applicable General Plan policies are listed below:

Goal NRE-15 An adaptive and resilient community that responds to climate change.

- | | |
|-----------------|---|
| Policy NRE-15.1 | Greenhouse Gas Emission Reduction Targets. Maintain a greenhouse gas reduction trajectory that is consistent with the greenhouse gas reduction targets of Executive Orders B-30-15 (40 percent below 1990 levels by 2030) and S-03-05 (80 percent below 1990 levels by 2050) to ensure the City is consistent with statewide efforts to reduce greenhouse gas emissions. |
| Policy NRE-15.2 | Linking Land Use and Transportation. Encourage land use and transportation patterns that reduce dependence on automobiles. |
| Policy NRE-15.3 | Climate Action Plan. Utilize policies in this General Plan denoted with the green leaf symbol as the City's greenhouse gas emissions reduction strategy. |
| Policy NRE-15.4 | Sustainable Land Use. Promote land use patterns that reduce the number and length of motor vehicle trips. |
| Policy NRE-15.5 | Jobs Housing Balance. To the extent feasible, encourage a balance and match between jobs and housing. |

³² United States Environmental Protection Agency, 2020. *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2018*. April. Web: <https://www.epa.gov/sites/production/files/2020-04/documents/us-ghg-inventory-2020-main-text.pdf>.

³³ CARB. 2019. *2019 Edition, California Greenhouse Gas Emission Inventory: 2000 – 2017*. Web: https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf.

³⁴ BAAQMD. 2015. *Bay Area Emissions Inventory Summary Report: Greenhouse Gases Base Year 2011*. January. Web: http://www.baaqmd.gov/~media/files/planning-and-research/emission-inventory/by2011_ghgsummary.pdf.

- Policy NRE-15.6 **Residential Near Transit.** Encourage higher density residential and mixed-use development adjacent to commercial centers and transit corridors – the land along or within walking distance of a street served by transit.
- Policy NRE-15.7 **Mix of Uses in Employment Centers.** Encourage employment areas to include a mix of support services to minimize the number of employee trips.
- Policy NRE-15.8 **Walkable City.** Encourage retail and office areas to be located within walking and biking distance of existing and proposed residential developments.
- Policy NRE-15.9 **Urban Forest.** Support development and maintenance of a healthy, vibrant urban forest through outreach, incentives, and strategic leadership.
- Policy NRE-15.10 **VMT Reduction.** Continue to work with the Santa Clara Valley Transportation Authority on regional transportation solutions that will reduce vehicle miles traveled and greenhouse gas emissions.
- Policy NRE-15.11 **Green Building.** Promote green building practices in new development.

The General Plan's Energy Efficiency section contains policies that indirectly reduce GHG emissions:

Goal NRE-16 Conservation of energy resources.

- Policy NRE-16.1 **Energy Standards for New Development.** New development, including public buildings, should be designed to exceed State standards for the use of energy.
- Policy NRE-16.2 **Energy Conservation.** Promote energy conservation techniques and energy efficiency in building design, orientation, and construction.
- Policy NRE-16.3 **Energy Use Data and Analysis.** Provide information to increase building owner, tenant, and operator knowledge about how, when, and where building energy is used.
- Policy NRE-16.5 **Energy Efficiency.** Encourage development project designs that protect and improve air quality and minimize direct and indirect air pollutant emissions by including components that promote energy efficiency.
- Policy NRE-16.6 **Landscaping for Energy Conservation.** Encourage landscaping plans for new development to address the planting of trees and shrubs that will provide shade to reduce the need for cooling systems and allow for winter daylighting.

- Policy NRE-16.7 **Renewable Energy.** Encourage new and existing development to incorporate renewable energy generating features, like solar panels and solar hot water heaters.
- Policy NRE-16.8 **Residential Development Code.** Emphasize energy conservation building techniques for new residential construction through the implementation of Chapter 18.78 of the Municipal Code.
- Policy NRE-16.9 **Subdivision Design.** In compliance with Section 66473.1 of the State Subdivision Map Act, promote subdivision design that provides for passive solar heating and natural cooling through the Development Review Committee subdivision review procedures.

However, the City does not have a CAP, a CAP Compliance Checklist, or a specific metric ton GHG threshold for project-level construction or operation. Therefore, the BAAQMD's CEQA Air Quality Guideline's thresholds are used.

BAAQMD GHG Significance Thresholds

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

Although BAAQMD has not published a quantified threshold for 2030 yet, this assessment uses a "Substantial Progress" efficiency metric of 2.8 MT CO₂e/year/service population and a bright-line threshold of 660 MT CO₂e/year based on the GHG reduction goals of EO B-30-15. The service population metric of 2.8 is calculated for 2030 based on the 1990 inventory and the projected 2030 statewide population and employment levels.³⁵ The 2030 bright-line threshold is a 40 percent reduction of the 2020 1,100 MT CO₂e/year threshold. Evidence published by the State indicates the AB 32 goal of reducing statewide GHG emissions to 1990 levels was met prior to 2020. Current State plans are to further reduce emissions to 40% below 1990 levels by 2030. Assuming statewide emissions are at 1990 levels or lower in 2020, it would be logical to reduce the BAAQMD-recommended threshold for meeting the AB 32 threshold by 40% to develop a threshold for 2030.

Impact GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

GHG emissions associated with development of the proposed project would occur over the short-term from construction activities, consisting primarily of emissions from equipment exhaust and worker and vendor trips. There would also be long-term operational emissions associated with

³⁵ Bay Area Air Quality Management District, 2016. *CLE International 12th Annual Super-Conference CEQA Guidelines, Case Law and Policy Update*. December.

vehicular traffic within the project vicinity, energy and water usage, and solid waste disposal. Emissions for the proposed project are discussed below and were analyzed using the methodology recommended in the BAAQMD CEQA Air Quality Guidelines.

CalEEMod Modeling

CalEEMod was used to predict GHG emissions from operation of the site assuming full build-out of the project. The project land use types and size and other project-specific information were input to the model, as described above within the operational period emissions. CalEEMod output is included in *Attachment 2*.

Service Population Emissions

The project service population efficiency rate is based on the number of future employees. According to the project applicant, there would be three full time employees working at the proposed gas station. This total service population was used to calculate the per capita emissions.

Construction Emissions

GHG emissions associated with construction were computed to be 30 MT of CO₂e for the total construction period. These are the emissions from on-site operation of construction equipment, vendor and hauling truck trips, and worker trips. Neither the City nor BAAQMD have an adopted threshold of significance for construction-related GHG emissions, though BAAQMD recommends quantifying emissions and disclosing that GHG emissions would occur during construction. BAAQMD also encourages the incorporation of best management practices to reduce GHG emissions during construction where feasible and applicable.

Operational Emissions

The CalEEMod model, along with the project vehicle trip generation rates, was used to estimate daily emissions associated with operation of the fully developed site under the proposed project. As shown in Table 8, the net annual emissions resulting from operation of the proposed project are predicted to be 289 MT of CO₂e in 2023 and 252 MT of CO₂e in 2030. The service population emission for the year 2023 and 2030 are predicted to be 365.4 and 319.5 MT/CO₂e/year/service population, respectively.

To be considered an exceedance, the project must have emissions above both the GHG significance threshold in metric tons per year and the service population significance threshold in the future year of 2030. As shown in Table 8, the project would not exceed the annual emissions bright-line threshold of 660 MT CO₂e/year in 2030. Therefore, the project would not exceed thresholds for GHG emissions.

Table 8. Annual Project GHG Emissions (CO₂e) in Metric Tons and Per Capita

Source Category	Existing Land Use		Proposed Project	
	2023	2030	2023	2030
Area	0	0	0	0
Energy Consumption	1	1	1	1
Mobile	806	705	1,095	957
Solid Waste Generation	0	0	0	0
Water Usage	0	0	0	0
Total (MT CO ₂ e/year)	807	706	1,096	958
Net Emissions			289 MT CO ₂ e/year	252 MT CO ₂ e/year
Significance Threshold				660 MT CO₂e/year
Service Population Emissions (MT CO ₂ e/year/service population)			365.4	319.5
Significance Threshold				2.8 in 2030
Exceeds both thresholds?				<i>No</i>

Supporting Documentation

Attachment 1 is the methodology used to compute community risk impacts, including the methods to compute lifetime cancer risk from exposure to project emissions.

Attachment 2 includes the CalEEMod output for project construction and operational criteria air pollutant and GHG emissions. The operational outputs for existing and 2030 uses are also included in this attachment. Also included are any modeling assumptions.

Attachment 3 includes the EMFAC2021 emissions modeling. The input files for these calculations are voluminous and are available upon request in digital format.

Attachment 4 is the construction health risk assessment. AERMOD dispersion modeling files for these assessments, which are quite voluminous, are available upon request and would be provided in digital format.

Attachment 5 includes the cumulative community risk calculations, modeling results, and health risk calculations from sources affecting the construction MEIs.

Attachment 1: Health Risk Calculation Methodology

A health risk assessment (HRA) for exposure to Toxic Air Contaminates (TACs) requires the application of a risk characterization model to the results from the air dispersion model to estimate potential health risk at each sensitive receptor location. The State of California Office of Environmental Health Hazard Assessment (OEHHA) and California Air Resources Board (CARB) develop recommended methods for conducting health risk assessments. The most recent OEHHA risk assessment guidelines were published in February of 2015.³⁶ These guidelines incorporate substantial changes designed to provide for enhanced protection of children, as required by State law, compared to previous published risk assessment guidelines. CARB has provided additional guidance on implementing OEHHA's recommended methods.³⁷ This HRA used the 2015 OEHHA risk assessment guidelines and CARB guidance. The BAAQMD has adopted recommended procedures for applying the newest OEHHA guidelines as part of Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants.³⁸ Exposure parameters from the OEHHA guidelines and the recent BAAQMD HRA Guidelines were used in this evaluation.

Cancer Risk

Potential increased cancer risk from inhalation of TACs is calculated based on the TAC concentration over the period of exposure, inhalation dose, the TAC cancer potency factor, and an age sensitivity factor to reflect the greater sensitivity of infants and children to cancer causing TACs. The inhalation dose depends on a person's breathing rate, exposure time and frequency and duration of exposure. These parameters vary depending on the age, or age range, of the persons being exposed and whether the exposure is considered to occur at a residential location or other sensitive receptor location.

The current OEHHA guidance recommends that cancer risk be calculated by age groups to account for different breathing rates and sensitivity to TACs. Specifically, they recommend evaluating risks for the third trimester of pregnancy to age zero, ages zero to less than two (infant exposure), ages two to less than 16 (child exposure), and ages 16 to 70 (adult exposure). Age sensitivity factors (ASFs) associated with the different types of exposure are an ASF of 10 for the third trimester and infant exposures, an ASF of 3 for a child exposure, and an ASF of 1 for an adult exposure. Also associated with each exposure type are different breathing rates, expressed as liters per kilogram of body weight per day (L/kg-day) or liters per kilogram of body weight per 8-hour period for the case of worker or school child exposures. As recommended by the BAAQMD for residential exposures, 95th percentile breathing rates are used for the third trimester and infant exposures, and 80th percentile breathing rates for child and adult exposures. For children at schools and daycare facilities, BAAQMD recommends using the 95th percentile 8-hour breathing rates. Additionally, CARB and the BAAQMD recommend the use of a residential exposure duration of

³⁶ OEHHA, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. Office of Environmental Health Hazard Assessment. February.

³⁷ CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.

³⁸ BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

30 years for sources with long-term emissions (e.g., roadways). For workers, assumed to be adults, a 25-year exposure period is recommended by the BAAQMD. For school children a 9-year exposure period is recommended by the BAAQMD.

Under previous OEHHA and BAAQMD HRA guidance, residential receptors are assumed to be at their home 24 hours a day, or 100 percent of the time. In the 2015 Risk Assessment Guidance, OEHHA includes adjustments to exposure duration to account for the fraction of time at home (FAH), which can be less than 100 percent of the time, based on updated population and activity statistics. The FAH factors are age-specific and are: 0.85 for third trimester of pregnancy to less than 2 years old, 0.72 for ages 2 to less than 16 years, and 0.73 for ages 16 to 70 years. Use of the FAH factors is allowed by the BAAQMD if there are no schools in the project vicinity have a cancer risk of one in a million or greater assuming 100 percent exposure (FAH = 1.0).

Functionally, cancer risk is calculated using the following parameters and formulas:

$$\text{Cancer Risk (per million)} = \text{CPF} \times \text{Inhalation Dose} \times \text{ASF} \times \text{ED/AT} \times \text{FAH} \times 10^6$$

Where:

CPF = Cancer potency factor (mg/kg-day)⁻¹

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

$$\text{Inhalation Dose} = C_{\text{air}} \times \text{DBR}^* \times A \times (\text{EF}/365) \times 10^{-6}$$

Where:

C_{air} = concentration in air (µg/m³)

DBR = daily breathing rate (L/kg body weight-day)

8HrBR = 8-hour breathing rate (L/kg body weight-8 hours)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10⁻⁶ = Conversion factor

* An 8-hour breathing rate (8HrBR) is used for worker and school child exposures.

The health risk parameters used in this evaluation are summarized as follows:

Parameter	Exposure Type →	Infant		Child	Adult
	Age Range →	3 rd Trimester	0<2	2 < 16	16 - 30
DPM Cancer Potency Factor (mg/kg-day) ⁻¹		1.10E+00	1.10E+00	1.10E+00	1.10E+00
Daily Breathing Rate (L/kg-day) 80 th Percentile Rate		273	758	572	261
Daily Breathing Rate (L/kg-day) 95 th Percentile Rate		361	1,090	745	335
8-hour Breathing Rate (L/kg-8 hours) 95 th Percentile Rate		-	1,200	520	240
Inhalation Absorption Factor		1	1	1	1
Averaging Time (years)		70	70	70	70
Exposure Duration (years)		0.25	2	14	14*
Exposure Frequency (days/year)		350	350	350	350*
Age Sensitivity Factor		10	10	3	1
Fraction of Time at Home (FAH)		0.85-1.0	0.85-1.0	0.72-1.0	0.73*

Non-Cancer Hazards

Non-cancer health risk is usually determined by comparing the predicted level of exposure to a chemical to the level of exposure that is not expected to cause any adverse effects (reference exposure level), even to the most susceptible people. Potential non-cancer health hazards from TAC exposure are expressed in terms of a hazard index (HI), which is the ratio of the TAC concentration to a reference exposure level (REL). OEHHA has defined acceptable concentration levels for contaminants that pose non-cancer health hazards. TAC concentrations below the REL are not expected to cause adverse health impacts, even for sensitive individuals. The total HI is calculated as the sum of the HIs for each TAC evaluated and the total HI is compared to the BAAQMD significance thresholds to determine whether a significant non-cancer health impact from a project would occur.

Typically, for residential projects located near roadways with substantial TAC emissions, the primary TAC of concern with non-cancer health effects is diesel particulate matter (DPM). For DPM, the chronic inhalation REL is 5 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

Annual PM_{2.5} Concentrations

While not a TAC, fine particulate matter (PM_{2.5}) has been identified by the BAAQMD as a pollutant with potential non-cancer health effects that should be included when evaluating potential community health impacts under the California Environmental Quality Act (CEQA). The thresholds of significance for PM_{2.5} (project level and cumulative) are in terms of an increase in the annual average concentration. When considering PM_{2.5} impacts, the contribution from all sources of PM_{2.5} emissions should be included. For projects with potential impacts from nearby local roadways, the PM_{2.5} impacts should include those from vehicle exhaust emissions, PM_{2.5} generated from vehicle tire and brake wear, and fugitive emissions from re-suspended dust on the roads.

Attachment 2: CalEEMod Modeling Inputs and Outputs

Project Name:							WOF052-Morgan Hill					
See Equipment Type TAB for type, horsepower and load factor												
Project Size Dwelling Units21,003 SF (0.48 AC) total project acres disturbed s.f. residential s.f. retail s.f. office/commercial 2,114 s.f. other, specify: Gasoline Station building s.f. parking garage spaces 14,878 s.f. parking lot11 spaces												
Construction Hours7:00 am to4:00 pm												
							Complete ALL Portions in Yellow					
							Pile Driving? Y/N? (N)					
							Project include OPERATIONAL GENERATOR OR FIRE PUMP on-site? Y/N? (N) IF YES (if BOTH separate values) --> Kilowatts/Horsepower: _____ Fuel Type: _____ Location in project (Plans Desired if Available):					
							DO NOT MULTIPLY EQUIPMENT HOURS/DAY BY THE QUANTITY OF EQUIPMENT					
Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	Annual Hours	Comments				
	Demolition	Start Date: End Date:	1/3/2022 1/5/2022	Total phase:	3			Overall Import/Export Volumes				
1	Concrete/Industrial Saws	81	0.73	6	2	4	12	Demolition Volume				
1	Excavators	158	0.38	8	2	5.333333333	16	Square footage of buildings to be demolished (or total tons to be hauled)				
1	Rubber-Tired Dozers	247	0.4	8	3	8	24	880 square feet or				
1	Tractors/Loaders/Backhoes	97	0.37	8	3	8	24	2 Hauling volume (tons) Any pavement demolished and hauled? 150 tons				
	Site Preparation	Start Date: End Date:	1/6/2022 1/7/2022	Total phase:	2							
1	Graders	187	0.41	8	2	8	16					
1	Rubber Tired Dozers	247	0.4	8	2	8	16					
1	Tractors/Loaders/Backhoes	97	0.37	8	2	8	16					
	Grading / Excavation	Start Date: End Date:	1/10/2022 1/12/2022	Total phase:	3			Soil Hauling Volume				
0	Excavators	158	0.38	0	0	0	0	Export volume = 500 cubic yards?				
1	Graders	187	0.41	8	2	5.333333333	16	Import volume = 0 cubic yards?				
1	Rubber Tired Dozers	247	0.4	8	2	5.333333333	16					
0	Concrete/Industrial Saws	81	0.73	0	0	0	0					
1	Tractors/Loaders/Backhoes	97	0.37	8	2	5.333333333	16					
	Trenching/Foundation	Start Date: End Date:	1/13/2022 1/17/2022	Total phase:	3							
1	Tractor/Loader/Backhoe	97	0.37	8	2	5.333333333	16					
0	Excavators	158	0.38	0	0	0	0					
	Building - Exterior	Start Date: End Date:	1/18/2022 7/30/2022	Total phase:	139			Cement Trucks? 12 Total Round-Trips				
1	Cranes	231	0.29	8	14	0.805755396	112	Electric? (Y/N) Y Otherwise assumed diesel				
1	Forklifts	89	0.2	8	21	1.208633094	168	Liquid Propane (LPG)? (Y/N) N Otherwise Assumed diesel				
	Generator Sets	84	0.74			0	0	Or temporary line power? (Y/N) Y				
1	Tractors/Loaders/Backhoes	97	0.37	8	14	0.805755396	112					
	Welders	46	0.45			0	0					
	Other Equipment?					0						
	Building - Interior/Architectural Coating	Start Date: End Date:	8/1/2022 8/15/2022	Total phase:	15							
2	Air Compressors	78	0.48	8	7	3.733333333	112					
2	Aerial Lift	62	0.31	8	7	3.733333333	112					
	Paving	Start Date: Start Date:	8/16/2022 8/18/2022	Total phase:	3			Asphalt? _95_ cubic yards or ____ round trips?				
	Cement and Mortar Mixers	9	0.56			0	0					
	Pavers	130	0.42			0	0					
1	Paving Equipment	132	0.36	8	2	5.333333333	16					
1	Rollers	80	0.38	8	2	5.333333333	16					
1	Tractors/Loaders/Backhoes	97	0.37	8	2	5.333333333	16					
	Additional Phases	Start Date: Start Date:	Total phase:									
Equipment types listed in "Equipment Types" worksheet tab.												
Equipment listed in this sheet is to provide an example of inputs It is assumed that water trucks would be used during grading Add or subtract phases and equipment, as appropriate Modify horsepower or load factor, as appropriate							Complete one sheet for each project component					

Traffic Consultant Trip Gen						CalEEMod Default		
Land Use		Size	Daily Trips	New Trips	Weekday Trip Gen	Weekday	Sat	Sun
Gasoline/Service Station with Convenience Market	Pumps	6	2464	1084	180.67	322.5	322.5	322.5
Pass-by Reduction	56%		-1380			Rev	180.67	180.67
Existing								
Gasoline/Service Station	Pumps	4	1376	798	199.50	322.5	322.5	322.5
Pass-by Reduction	42%		-578			Rev	199.50	199.50

World Oil Trip Generation Estimates

Land Use	ITE Land Use Code ¹	Size	Daily		AM Peak Hour			PM Peak Hour		
			Rate	Trip	Pk-Hr Rate	Trip		Pk-Hr Rate	Trip	
						In	Out		In	Out
Proposed Land Use										
Gasoline/Service Station with Convenience Market	945	12 Vehicle Fueling Positions	205.36	2,464	12.47	77	73	150	13.99	86
Pass-by Reduction ²			56%	-1,380	62%	-48	-45	-93	56%	-48
Sub-Total				1,084		29	28	57		38
Existing Land Use Credit										
Gasoline/Service Station	944	8 Vehicle Fueling Positions	172.01	-1,376	10.28	-41	-41	-82	14.03	-57
Pass-by Reduction ²			42%	578	58%	24	24	48	42%	24
Sub-Total				-798		-17	-17	-34		-33
Total Net Project Trips				286		12	11	23		5
Notes:										
¹ Source: ITE Trip Generation Manual, 10th Edition 2017.										
² AM and PM peak-hour passerby reduction rates obtained from the ITE Trip Generation Handbook, Third Edition.										
Daily peak-hour pass-by reductions are assumed to be the same as their PM peak-hour pass-by rate.										

Construction Criteria Air Pollutants						
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	CO2e	
Year	Tons				MT	
Construction Equipment						
2022	0.03	0.13	0.01	0.01	17.03	
EMFAC						
2022	0.003	0.02	0.001	0.0004	12.65	
Total Construction Emissions by Year						
2022	0.03	0.14	0.01	0.01	29.68	
	Total Construction Emissions					
Tons	0.03	0.14	0.01	0.01	29.68	
Pounds/Workdays	Average Daily Emissions				Workdays	
2022	0.35	1.74	0.09	0.07		165
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Operational Criteria Air Pollutants						
Unmitigated	ROG	NOX	Total PM10	Total PM2.5		
Year	Tons					
CalEEMod Total	0.67	0.68	0.99	0.25		
GDF Evap Total	0.52	0.00	0.00	0.00		
Total	1.19	0.68	0.99	0.25		
	Existing Use Emissions					
CalEEMod Total	0.49	0.50	0.73	0.18		
GDF Evap Total	0.33	0.00	0.00	0.00		
Total	0.82	0.50	0.73	0.18		
	Net Annual Operational Emissions					
Tons/year	0.37	0.18	0.26	0.07		
Threshold - Tons/year	10.0	10.0	15.0	10.0		
	Average Daily Emissions					
Pounds Per Day	2.01	0.98	1.44	0.41		
Threshold - lbs/day	54.0	54.0	82.0	54.0		
Category	CO2e					
	Project	Existing	Project 2030	Existing		
Area	0.0003	0.0001	0.0003	0.0001		
Energy	1.22	1.15	1.22	1.15		
Mobile	1095.05	806.12	957.28	704.70		
Waste	0.00	0.00	0.00	0.00		
Water	0.04	0.09	0.04	0.09		
TOTAL	1096.31	807.36	958.54	705.94		
Net GHG Emissions		288.95		252.60		
Service Population	3.00					
Per Capita Emissions		365.44		319.51		
0 units						
CA DOF 1920 = 0 pphh						

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**World Oil Gas Station, 16720 Monterey Rd, Morgan Hill
Santa Clara County, Annual****1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Convenience Market with Gas Pumps	6.00	Pump	0.48	2,114.00	0
Parking Lot	11.00	Space	0.00	14,878.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	3			Operational Year	2023
Utility Company	Silicon Valley Clean Energy				
CO2 Intensity (lb/MW hr)	2	CH4 Intensity (lb/MW hr)	0	N2O Intensity (lb/MW hr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CalEEMod SVCE

Land Use - Provided land uses - construction worksheet

Construction Phase - Provided construction schedule

Off-road Equipment - Provided equip amount & use

Off-road Equipment - Provided equip amount & use

Off-road Equipment - Provided equip amount & use

Off-road Equipment - Provided equip amount & use

Off-road Equipment - Provided equip amount & use

Off-road Equipment - Provided equip amount & use

Off-road Equipment - Provided equip amount & use

Grading - grading = 500cy export

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Demolition - existing building demo = 880-sf

Trips and VMT - EMFAC2021 0 Trips in CalEEMod, pavement demo = 150 tons, building const = 12 cement truck round trips, paving = 98-cy asphalt

Vehicle Trips - Trip gen provided by traffic and adjusted for different land uses, 100% primary to capture traffic passby reduction

Vehicle Emission Factors - EMFAC2021 Santa Clara County Vehicle Emissions Factors 2023

Fleet Mix - EMFAC2021 Santa Clara County Fleet Mix 2023

Water And Wastewater - Wastewater Treatment 100% Aerobic, no septic tanks of lagoons

Construction Off-road Equipment Mitigation - BMPs, Teri 4 interim mitigation

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	5.00	15.00
tblConstructionPhase	NumDays	100.00	139.00
tblConstructionPhase	NumDays	10.00	3.00
tblConstructionPhase	NumDays	2.00	3.00
tblConstructionPhase	NumDays	5.00	3.00
tblConstructionPhase	NumDays	1.00	2.00
tblConstructionPhase	PhaseEndDate	6/22/2022	8/19/2022
tblConstructionPhase	PhaseEndDate	6/8/2022	7/29/2022
tblConstructionPhase	PhaseEndDate	1/14/2022	1/5/2022
tblConstructionPhase	PhaseEndDate	1/19/2022	1/12/2022
tblConstructionPhase	PhaseEndDate	6/15/2022	8/18/2022
tblConstructionPhase	PhaseEndDate	1/17/2022	1/7/2022
tblConstructionPhase	PhaseStartDate	6/16/2022	8/1/2022
tblConstructionPhase	PhaseStartDate	1/20/2022	1/18/2022
tblConstructionPhase	PhaseStartDate	1/18/2022	1/10/2022
tblConstructionPhase	PhaseStartDate	6/9/2022	8/16/2022
tblConstructionPhase	PhaseStartDate	1/15/2022	1/6/2022
tblFleetMix	HHD	6.3620e-003	0.02
tblFleetMix	HHD	6.3620e-003	0.02
tblFleetMix	LDA	0.57	0.55
tblFleetMix	LDA	0.57	0.55
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT2	0.19	0.22

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblFleetMix	LDT2	0.19	0.22
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.0410e-003	5.7850e-003
tblFleetMix	LHD2	5.0410e-003	5.7850e-003
tblFleetMix	MCY	0.02	3.5660e-003
tblFleetMix	MCY	0.02	3.5660e-003
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MH	2.8380e-003	6.9000e-004
tblFleetMix	MH	2.8380e-003	6.9000e-004
tblFleetMix	MHD	7.8170e-003	0.01
tblFleetMix	MHD	7.8170e-003	0.01
tblFleetMix	OBUS	9.1200e-004	1.7920e-003
tblFleetMix	OBUS	9.1200e-004	1.7920e-003
tblFleetMix	SBUS	9.2700e-004	5.2500e-004
tblFleetMix	SBUS	9.2700e-004	5.2500e-004
tblFleetMix	UBUS	3.8900e-004	1.2680e-003
tblFleetMix	UBUS	3.8900e-004	1.2680e-003
tblGrading	MaterialExported	0.00	500.00
tblLandUse	LandUseSquareFeet	847.05	2,114.00
tblLandUse	LandUseSquareFeet	4,400.00	14,878.00
tblLandUse	LotAcreage	0.02	0.48
tblLandUse	LotAcreage	0.10	0.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.31	0.31
tblOffRoadEquipment	LoadFactor	0.37	0.37

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Dozers
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	6.00	3.70
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	4.00	0.80
tblOffRoadEquipment	UsageHours	6.00	1.20
tblOffRoadEquipment	UsageHours	6.00	5.30
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	7.00	5.30
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	6.00	5.30
tblOffRoadEquipment	UsageHours	8.00	0.80
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	5.30
tblOffRoadEquipment	UsageHours	7.00	5.30
tblTripsAndVMT	HaulingTripNumber	4.00	0.00
tblTripsAndVMT	HaulingTripNumber	63.00	0.00
tblTripsAndVMT	VendorTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	7.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	1.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblVehicleEF	HHD	0.02	0.24
tblVehicleEF	HHD	0.05	0.13
tblVehicleEF	HHD	6.34	5.21
tblVehicleEF	HHD	0.40	0.79
tblVehicleEF	HHD	5.9190e-003	5.5500e-004
tblVehicleEF	HHD	1,065.38	850.51
tblVehicleEF	HHD	1,436.68	1,643.05
tblVehicleEF	HHD	0.05	0.03
tblVehicleEF	HHD	0.17	0.14
tblVehicleEF	HHD	0.23	0.26
tblVehicleEF	HHD	9.0000e-006	2.5000e-005
tblVehicleEF	HHD	5.44	4.16
tblVehicleEF	HHD	2.68	1.93
tblVehicleEF	HHD	2.32	2.69
tblVehicleEF	HHD	2.6700e-003	2.2830e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.02	0.03
tblVehicleEF	HHD	2.5550e-003	2.1790e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8780e-003	8.7810e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	3.0000e-006	2.8800e-004

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	HHD	1.1600e-004	8.6000e-005
tblVehicleEF	HHD	0.43	0.33
tblVehicleEF	HHD	1.0000e-006	2.8800e-004
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	5.1000e-005	7.7100e-004
tblVehicleEF	HHD	3.0000e-006	1.0000e-006
tblVehicleEF	HHD	9.9140e-003	7.4610e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	3.0000e-006	2.8800e-004
tblVehicleEF	HHD	1.1600e-004	8.6000e-005
tblVehicleEF	HHD	0.49	0.60
tblVehicleEF	HHD	1.0000e-006	2.8800e-004
tblVehicleEF	HHD	0.08	0.15
tblVehicleEF	HHD	5.1000e-005	7.7100e-004
tblVehicleEF	HHD	3.0000e-006	1.0000e-006
tblVehicleEF	LDA	1.9580e-003	2.3090e-003
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.56	0.70
tblVehicleEF	LDA	2.16	3.09
tblVehicleEF	LDA	245.26	253.36
tblVehicleEF	LDA	52.02	65.50
tblVehicleEF	LDA	4.2270e-003	4.4990e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.18	0.24
tblVehicleEF	LDA	0.04	7.2000e-003
tblVehicleEF	LDA	1.3550e-003	1.2280e-003
tblVehicleEF	LDA	1.7500e-003	1.9820e-003
tblVehicleEF	LDA	0.02	2.5200e-003

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LDA	1.2480e-003	1.1310e-003
tblVehicleEF	LDA	1.6090e-003	1.8220e-003
tblVehicleEF	LDA	0.04	0.29
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.29
tblVehicleEF	LDA	7.4590e-003	9.0570e-003
tblVehicleEF	LDA	0.03	0.22
tblVehicleEF	LDA	0.21	0.32
tblVehicleEF	LDA	2.3960e-003	2.5050e-003
tblVehicleEF	LDA	5.0800e-004	6.4800e-004
tblVehicleEF	LDA	0.04	0.29
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.29
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.03	0.22
tblVehicleEF	LDA	0.23	0.35
tblVehicleEF	LDT1	4.1630e-003	6.9520e-003
tblVehicleEF	LDT1	0.06	0.11
tblVehicleEF	LDT1	0.95	1.55
tblVehicleEF	LDT1	2.35	5.63
tblVehicleEF	LDT1	292.91	332.08
tblVehicleEF	LDT1	62.87	88.11
tblVehicleEF	LDT1	6.4270e-003	0.01
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.08	0.14
tblVehicleEF	LDT1	0.23	0.40
tblVehicleEF	LDT1	0.04	9.2280e-003
tblVehicleEF	LDT1	1.7660e-003	2.0570e-003
tblVehicleEF	LDT1	2.2510e-003	3.0710e-003

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LDT1	0.02	3.2300e-003
tblVehicleEF	LDT1	1.6250e-003	1.8940e-003
tblVehicleEF	LDT1	2.0700e-003	2.8240e-003
tblVehicleEF	LDT1	0.08	0.63
tblVehicleEF	LDT1	0.16	0.17
tblVehicleEF	LDT1	0.07	0.63
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.08	0.50
tblVehicleEF	LDT1	0.31	0.58
tblVehicleEF	LDT1	2.8620e-003	3.2830e-003
tblVehicleEF	LDT1	6.1400e-004	8.7100e-004
tblVehicleEF	LDT1	0.08	0.63
tblVehicleEF	LDT1	0.16	0.17
tblVehicleEF	LDT1	0.07	0.63
tblVehicleEF	LDT1	0.03	0.05
tblVehicleEF	LDT1	0.08	0.50
tblVehicleEF	LDT1	0.34	0.64
tblVehicleEF	LDT2	3.2450e-003	3.0800e-003
tblVehicleEF	LDT2	0.07	0.09
tblVehicleEF	LDT2	0.79	0.89
tblVehicleEF	LDT2	2.79	3.85
tblVehicleEF	LDT2	316.74	348.05
tblVehicleEF	LDT2	68.58	89.31
tblVehicleEF	LDT2	6.1340e-003	6.4690e-003
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.07	0.08
tblVehicleEF	LDT2	0.27	0.35
tblVehicleEF	LDT2	0.04	8.8740e-003
tblVehicleEF	LDT2	1.3890e-003	1.3790e-003

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LDT2	1.7510e-003	2.1600e-003
tblVehicleEF	LDT2	0.02	3.1060e-003
tblVehicleEF	LDT2	1.2790e-003	1.2690e-003
tblVehicleEF	LDT2	1.6100e-003	1.9860e-003
tblVehicleEF	LDT2	0.06	0.30
tblVehicleEF	LDT2	0.12	0.08
tblVehicleEF	LDT2	0.06	0.30
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.22
tblVehicleEF	LDT2	0.31	0.41
tblVehicleEF	LDT2	3.0950e-003	3.4400e-003
tblVehicleEF	LDT2	6.7000e-004	8.8300e-004
tblVehicleEF	LDT2	0.06	0.30
tblVehicleEF	LDT2	0.12	0.08
tblVehicleEF	LDT2	0.06	0.30
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.22
tblVehicleEF	LDT2	0.34	0.44
tblVehicleEF	LHD1	5.1620e-003	5.5430e-003
tblVehicleEF	LHD1	8.5450e-003	9.1830e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.19	0.20
tblVehicleEF	LHD1	0.77	0.98
tblVehicleEF	LHD1	1.08	2.15
tblVehicleEF	LHD1	8.94	8.82
tblVehicleEF	LHD1	794.16	800.55
tblVehicleEF	LHD1	11.83	18.05
tblVehicleEF	LHD1	7.4000e-004	6.4300e-004
tblVehicleEF	LHD1	0.04	0.04

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	0.06	0.05
tblVehicleEF	LHD1	0.73	0.75
tblVehicleEF	LHD1	0.32	0.46
tblVehicleEF	LHD1	8.2500e-004	6.7600e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	9.7470e-003	9.4030e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	2.5800e-004	2.4900e-004
tblVehicleEF	LHD1	7.9000e-004	6.4700e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4370e-003	2.3510e-003
tblVehicleEF	LHD1	9.7200e-003	0.01
tblVehicleEF	LHD1	2.3700e-004	2.2900e-004
tblVehicleEF	LHD1	2.0240e-003	0.14
tblVehicleEF	LHD1	0.08	0.04
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.0320e-003	0.14
tblVehicleEF	LHD1	0.09	0.10
tblVehicleEF	LHD1	0.20	0.19
tblVehicleEF	LHD1	0.08	0.12
tblVehicleEF	LHD1	8.7000e-005	8.6000e-005
tblVehicleEF	LHD1	7.7550e-003	7.8230e-003
tblVehicleEF	LHD1	1.1700e-004	1.7800e-004
tblVehicleEF	LHD1	2.0240e-003	0.14
tblVehicleEF	LHD1	0.08	0.04
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.0320e-003	0.14
tblVehicleEF	LHD1	0.11	0.12

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LHD1	0.20	0.19
tblVehicleEF	LHD1	0.08	0.13
tblVehicleEF	LHD2	3.1550e-003	3.3000e-003
tblVehicleEF	LHD2	7.0600e-003	7.5700e-003
tblVehicleEF	LHD2	8.4310e-003	0.01
tblVehicleEF	LHD2	0.14	0.14
tblVehicleEF	LHD2	0.62	0.62
tblVehicleEF	LHD2	0.63	1.24
tblVehicleEF	LHD2	14.00	13.86
tblVehicleEF	LHD2	768.73	843.53
tblVehicleEF	LHD2	7.83	10.22
tblVehicleEF	LHD2	1.7410e-003	1.6800e-003
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	0.88	1.00
tblVehicleEF	LHD2	0.18	0.26
tblVehicleEF	LHD2	1.4230e-003	1.3530e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.3300e-004	1.1300e-004
tblVehicleEF	LHD2	1.3610e-003	1.2950e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.6880e-003	2.6610e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.2300e-004	1.0300e-004
tblVehicleEF	LHD2	1.0700e-003	0.07
tblVehicleEF	LHD2	0.04	0.02

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	5.4700e-004	0.07
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	0.04	0.07
tblVehicleEF	LHD2	1.3400e-004	1.3300e-004
tblVehicleEF	LHD2	7.4240e-003	8.1320e-003
tblVehicleEF	LHD2	7.8000e-005	1.0100e-004
tblVehicleEF	LHD2	1.0700e-003	0.07
tblVehicleEF	LHD2	0.04	0.02
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	5.4700e-004	0.07
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	0.05	0.07
tblVehicleEF	MCY	0.33	0.17
tblVehicleEF	MCY	0.26	0.19
tblVehicleEF	MCY	18.87	13.09
tblVehicleEF	MCY	9.03	8.05
tblVehicleEF	MCY	210.17	188.31
tblVehicleEF	MCY	61.04	49.60
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	8.3790e-003
tblVehicleEF	MCY	1.15	0.59
tblVehicleEF	MCY	0.27	0.14
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	1.9690e-003	1.8990e-003
tblVehicleEF	MCY	3.0390e-003	3.6260e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	MCY	1.8400e-003	1.7780e-003
tblVehicleEF	MCY	2.8590e-003	3.4130e-003
tblVehicleEF	MCY	0.90	3.95
tblVehicleEF	MCY	0.69	3.56
tblVehicleEF	MCY	0.49	3.95
tblVehicleEF	MCY	2.21	1.11
tblVehicleEF	MCY	0.55	3.75
tblVehicleEF	MCY	1.94	1.39
tblVehicleEF	MCY	2.0800e-003	1.8620e-003
tblVehicleEF	MCY	6.0400e-004	4.9000e-004
tblVehicleEF	MCY	0.90	0.09
tblVehicleEF	MCY	0.69	3.56
tblVehicleEF	MCY	0.49	0.09
tblVehicleEF	MCY	2.74	1.32
tblVehicleEF	MCY	0.55	3.75
tblVehicleEF	MCY	2.11	1.51
tblVehicleEF	MDV	3.9100e-003	4.2830e-003
tblVehicleEF	MDV	0.08	0.11
tblVehicleEF	MDV	0.87	1.04
tblVehicleEF	MDV	3.13	4.22
tblVehicleEF	MDV	383.28	420.63
tblVehicleEF	MDV	82.02	107.09
tblVehicleEF	MDV	8.3160e-003	9.2480e-003
tblVehicleEF	MDV	0.03	0.04
tblVehicleEF	MDV	0.08	0.11
tblVehicleEF	MDV	0.32	0.46
tblVehicleEF	MDV	0.04	9.0320e-003
tblVehicleEF	MDV	1.5100e-003	1.4490e-003
tblVehicleEF	MDV	1.9150e-003	2.2770e-003

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	MDV	0.02	3.1610e-003
tblVehicleEF	MDV	1.3930e-003	1.3360e-003
tblVehicleEF	MDV	1.7610e-003	2.0940e-003
tblVehicleEF	MDV	0.07	0.36
tblVehicleEF	MDV	0.14	0.10
tblVehicleEF	MDV	0.07	0.36
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.06	0.28
tblVehicleEF	MDV	0.38	0.54
tblVehicleEF	MDV	3.7430e-003	4.1560e-003
tblVehicleEF	MDV	8.0200e-004	1.0590e-003
tblVehicleEF	MDV	0.07	0.36
tblVehicleEF	MDV	0.14	0.10
tblVehicleEF	MDV	0.07	0.36
tblVehicleEF	MDV	0.02	0.03
tblVehicleEF	MDV	0.06	0.28
tblVehicleEF	MDV	0.42	0.60
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	1.11	1.61
tblVehicleEF	MH	2.13	2.63
tblVehicleEF	MH	1,532.75	1,694.25
tblVehicleEF	MH	18.68	23.10
tblVehicleEF	MH	0.06	0.07
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.36	1.59
tblVehicleEF	MH	0.25	0.30
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.7400e-004	3.3700e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2750e-003	3.2930e-003
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.5200e-004	3.1000e-004
tblVehicleEF	MH	0.71	34.58
tblVehicleEF	MH	0.06	9.45
tblVehicleEF	MH	0.25	34.58
tblVehicleEF	MH	0.07	0.09
tblVehicleEF	MH	0.02	0.22
tblVehicleEF	MH	0.10	0.12
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.8500e-004	2.2800e-004
tblVehicleEF	MH	0.71	34.58
tblVehicleEF	MH	0.06	9.45
tblVehicleEF	MH	0.25	34.58
tblVehicleEF	MH	0.09	0.13
tblVehicleEF	MH	0.02	0.22
tblVehicleEF	MH	0.11	0.13
tblVehicleEF	MHD	3.5450e-003	0.01
tblVehicleEF	MHD	1.9320e-003	9.9070e-003
tblVehicleEF	MHD	9.4870e-003	9.2450e-003
tblVehicleEF	MHD	0.39	0.67
tblVehicleEF	MHD	0.26	0.40
tblVehicleEF	MHD	1.14	1.15
tblVehicleEF	MHD	73.35	161.34
tblVehicleEF	MHD	1,095.06	1,239.60
tblVehicleEF	MHD	9.38	8.84

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	MHD	0.01	0.02
tblVehicleEF	MHD	0.14	0.16
tblVehicleEF	MHD	7.2170e-003	6.0970e-003
tblVehicleEF	MHD	0.43	0.92
tblVehicleEF	MHD	1.44	1.22
tblVehicleEF	MHD	1.70	1.40
tblVehicleEF	MHD	4.2700e-004	2.5420e-003
tblVehicleEF	MHD	0.13	0.05
tblVehicleEF	MHD	6.9550e-003	0.01
tblVehicleEF	MHD	1.1900e-004	1.1300e-004
tblVehicleEF	MHD	4.0900e-004	2.4310e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	6.6480e-003	0.01
tblVehicleEF	MHD	1.1000e-004	1.0400e-004
tblVehicleEF	MHD	4.1700e-004	0.03
tblVehicleEF	MHD	0.02	6.9620e-003
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	2.1100e-004	0.03
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.02	0.06
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	6.9600e-004	1.5020e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	9.3000e-005	8.7000e-005
tblVehicleEF	MHD	4.1700e-004	0.03
tblVehicleEF	MHD	0.02	6.9620e-003
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	2.1100e-004	0.03
tblVehicleEF	MHD	0.02	0.06

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	MHD	0.02	0.06
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	OBUS	7.0630e-003	7.4000e-003
tblVehicleEF	OBUS	4.0130e-003	9.2780e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.57	0.51
tblVehicleEF	OBUS	0.47	0.57
tblVehicleEF	OBUS	1.90	2.06
tblVehicleEF	OBUS	91.93	84.55
tblVehicleEF	OBUS	1,341.74	1,407.27
tblVehicleEF	OBUS	15.48	16.14
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.13	0.16
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.37	0.36
tblVehicleEF	OBUS	1.44	1.03
tblVehicleEF	OBUS	1.09	0.96
tblVehicleEF	OBUS	1.2000e-004	4.3400e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	7.0290e-003	0.02
tblVehicleEF	OBUS	1.4200e-004	1.4500e-004
tblVehicleEF	OBUS	1.1500e-004	4.1500e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	6.7120e-003	0.02
tblVehicleEF	OBUS	1.3000e-004	1.3300e-004
tblVehicleEF	OBUS	1.0840e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	4.8000e-004	0.07

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.09	0.10
tblVehicleEF	OBUS	8.7300e-004	8.0100e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.5300e-004	1.6000e-004
tblVehicleEF	OBUS	1.0840e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	4.8000e-004	0.07
tblVehicleEF	OBUS	0.03	0.07
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.10	0.11
tblVehicleEF	SBUS	0.05	0.07
tblVehicleEF	SBUS	6.3560e-003	0.09
tblVehicleEF	SBUS	4.7830e-003	4.6890e-003
tblVehicleEF	SBUS	2.18	1.62
tblVehicleEF	SBUS	0.52	0.91
tblVehicleEF	SBUS	0.70	0.66
tblVehicleEF	SBUS	347.39	189.53
tblVehicleEF	SBUS	1,060.99	1,037.35
tblVehicleEF	SBUS	3.98	3.67
tblVehicleEF	SBUS	0.05	0.03
tblVehicleEF	SBUS	0.14	0.13
tblVehicleEF	SBUS	4.4930e-003	4.0620e-003
tblVehicleEF	SBUS	3.53	1.43
tblVehicleEF	SBUS	4.87	2.74
tblVehicleEF	SBUS	0.81	0.47
tblVehicleEF	SBUS	3.9050e-003	1.4150e-003

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	4.6000e-005	3.8000e-005
tblVehicleEF	SBUS	3.7360e-003	1.3530e-003
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.7270e-003	2.6580e-003
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	4.2000e-005	3.5000e-005
tblVehicleEF	SBUS	5.3700e-004	0.02
tblVehicleEF	SBUS	5.2210e-003	7.0230e-003
tblVehicleEF	SBUS	0.24	0.18
tblVehicleEF	SBUS	2.2700e-004	0.02
tblVehicleEF	SBUS	0.09	0.06
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	3.3060e-003	1.7270e-003
tblVehicleEF	SBUS	0.01	9.6440e-003
tblVehicleEF	SBUS	3.9000e-005	3.6000e-005
tblVehicleEF	SBUS	5.3700e-004	0.02
tblVehicleEF	SBUS	5.2210e-003	7.0230e-003
tblVehicleEF	SBUS	0.35	0.29
tblVehicleEF	SBUS	2.2700e-004	0.02
tblVehicleEF	SBUS	0.10	0.16
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	UBUS	1.35	0.35
tblVehicleEF	UBUS	1.4170e-003	3.6170e-003
tblVehicleEF	UBUS	10.12	4.15

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	UBUS	0.14	0.53
tblVehicleEF	UBUS	1,597.13	1,099.26
tblVehicleEF	UBUS	1.39	3.19
tblVehicleEF	UBUS	0.26	0.17
tblVehicleEF	UBUS	1.0490e-003	6.0820e-003
tblVehicleEF	UBUS	0.73	0.33
tblVehicleEF	UBUS	0.01	0.04
tblVehicleEF	UBUS	0.07	0.11
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	5.3280e-003	6.2360e-003
tblVehicleEF	UBUS	1.5000e-005	1.2000e-005
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	8.3320e-003	8.1180e-003
tblVehicleEF	UBUS	5.0960e-003	5.9630e-003
tblVehicleEF	UBUS	1.4000e-005	1.1000e-005
tblVehicleEF	UBUS	1.9000e-005	9.9020e-003
tblVehicleEF	UBUS	1.3300e-004	3.3070e-003
tblVehicleEF	UBUS	8.0000e-006	9.9020e-003
tblVehicleEF	UBUS	0.02	0.06
tblVehicleEF	UBUS	2.1000e-005	7.9870e-003
tblVehicleEF	UBUS	5.8830e-003	0.01
tblVehicleEF	UBUS	0.01	9.4340e-003
tblVehicleEF	UBUS	1.4000e-005	3.2000e-005
tblVehicleEF	UBUS	1.9000e-005	9.9020e-003
tblVehicleEF	UBUS	1.3300e-004	3.3070e-003
tblVehicleEF	UBUS	8.0000e-006	9.9020e-003
tblVehicleEF	UBUS	1.38	0.42
tblVehicleEF	UBUS	2.1000e-005	7.9870e-003
tblVehicleEF	UBUS	6.4410e-003	0.01

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	PB_TP	65.00	0.00
tblVehicleTrips	PR_TP	14.00	100.00
tblVehicleTrips	ST_TR	322.50	180.67
tblVehicleTrips	SU_TR	322.50	180.67
tblVehicleTrips	WD_TR	322.50	180.67
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary**2.1 Overall Construction****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0266	0.1262	0.1036	1.9000e-004	0.0146	6.0500e-003	0.0206	6.9000e-003	5.6400e-003	0.0125	0.0000	16.9072	16.9072	4.7500e-003	0.0000	17.0260
Maximum	0.0266	0.1262	0.1036	1.9000e-004	0.0146	6.0500e-003	0.0206	6.9000e-003	5.6400e-003	0.0125	0.0000	16.9072	16.9072	4.7500e-003	0.0000	17.0260

Mitigated Construction

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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
Year	tons/yr										MT/yr					
2022	0.0178	0.0689	0.1229	1.9000e-004	6.5600e-003	5.5000e-004	7.1200e-003	3.1000e-003	5.5000e-004	3.6600e-003	0.0000	16.9072	16.9072	4.7500e-003	0.0000	17.0259
Maximum	0.0178	0.0689	0.1229	1.9000e-004	6.5600e-003	5.5000e-004	7.1200e-003	3.1000e-003	5.5000e-004	3.6600e-003	0.0000	16.9072	16.9072	4.7500e-003	0.0000	17.0259

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	33.33	45.40	-18.68	0.00	55.01	90.91	65.49	55.07	90.25	70.79	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-3-2022	4-2-2022	0.0637	0.0277
2	4-3-2022	7-2-2022	0.0265	0.0133
3	7-3-2022	9-30-2022	0.0419	0.0354
		Highest	0.0637	0.0354

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0107	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Energy	1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.2168	1.2168	2.0000e-005	2.0000e-005	1.2240
Mobile	0.6610	0.6763	4.2858	0.0116	0.9837	9.0100e-003	0.9927	0.2457	8.4500e-003	0.2542	0.0000	1,076.2830	1,076.2830	0.0525	0.0586	1,095.0499
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0222	4.3000e-004	0.0226	8.0000e-005	5.0000e-005	0.0389
Total	0.6717	0.6774	4.2868	0.0116	0.9837	9.0900e-003	0.9928	0.2457	8.5300e-003	0.2542	0.0222	1,077.5006	1,077.5228	0.0526	0.0586	1,096.3131

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0107	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004
Energy	1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.2168	1.2168	2.0000e-005	2.0000e-005	1.2240
Mobile	0.6610	0.6763	4.2858	0.0116	0.9837	9.0100e-003	0.9927	0.2457	8.4500e-003	0.2542	0.0000	1,076.2830	1,076.2830	0.0525	0.0586	1,095.0499
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0222	4.3000e-004	0.0226	8.0000e-005	5.0000e-005	0.0389
Total	0.6717	0.6774	4.2868	0.0116	0.9837	9.0900e-003	0.9928	0.2457	8.5300e-003	0.2542	0.0222	1,077.5006	1,077.5228	0.0526	0.0586	1,096.3131

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.0 Construction Detail****Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/3/2022	1/5/2022	5	3	
2	Site Preparation	Site Preparation	1/6/2022	1/7/2022	5	2	
3	Grading	Grading	1/10/2022	1/12/2022	5	3	
4	Building Construction	Building Construction	1/18/2022	7/29/2022	5	139	
5	Paving	Paving	8/16/2022	8/18/2022	5	3	
6	Architectural Coating	Architectural Coating	8/1/2022	8/19/2022	5	15	
7	Trenching	Trenching	1/13/2022	1/17/2022	5	3	

Acres of Grading (Site Preparation Phase): 2**Acres of Grading (Grading Phase): 1.99****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,171; Non-Residential Outdoor: 1,057; Striped Parking Area: 893 (Architectural****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	2	3.70	78	0.48
Paving	Cement and Mortar Mixers	0	0.00	9	0.56
Demolition	Concrete/Industrial Saws	1	4.00	81	0.73
Building Construction	Cranes	1	0.80	231	0.29
Building Construction	Forklifts	1	1.20	89	0.20
Grading	Graders	1	5.30	187	0.41
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	0	0.00	130	0.42

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Rollers	1	5.30	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	5.30	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	0.80	97	0.37
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	5.30	97	0.37
Paving	Tractors/Loaders/Backhoes	1	5.30	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition	Excavators	1	5.30	158	0.38
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Paving	Paving Equipment	1	5.30	132	0.36
Architectural Coating	Aerial Lifts	2	3.70	63	0.31
Trenching	Tractors/Loaders/Backhoes	1	5.30	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	4	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.3000e-004	0.0000	4.3000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9700e-003	0.0196	0.0147	3.0000e-005		9.6000e-004	9.6000e-004		8.9000e-004	8.9000e-004	0.0000	2.3916	2.3916	6.7000e-004	0.0000	2.4082
Total	1.9700e-003	0.0196	0.0147	3.0000e-005	4.3000e-004	9.6000e-004	1.3900e-003	7.0000e-005	8.9000e-004	9.6000e-004	0.0000	2.3916	2.3916	6.7000e-004	0.0000	2.4082

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					1.9000e-004	0.0000	1.9000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6000e-004	9.3500e-003	0.0171	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.3916	2.3916	6.7000e-004	0.0000	2.4082
Total	4.6000e-004	9.3500e-003	0.0171	3.0000e-005	1.9000e-004	4.0000e-005	2.3000e-004	3.0000e-005	4.0000e-005	7.0000e-005	0.0000	2.3916	2.3916	6.7000e-004	0.0000	2.4082

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.3 Site Preparation - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.0800e-003	0.0000	7.0800e-003	3.4200e-003	0.0000	3.4200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4100e-003	0.0156	7.5000e-003	2.0000e-005		6.7000e-004	6.7000e-004		6.2000e-004	6.2000e-004	0.0000	1.5965	1.5965	5.2000e-004	0.0000	1.6094
Total	1.4100e-003	0.0156	7.5000e-003	2.0000e-005	7.0800e-003	6.7000e-004	7.7500e-003	3.4200e-003	6.2000e-004	4.0400e-003	0.0000	1.5965	1.5965	5.2000e-004	0.0000	1.6094

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					3.1900e-003	0.0000	3.1900e-003	1.5400e-003	0.0000	1.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2000e-004	5.3200e-003	0.0103	2.0000e-005		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	1.5965	1.5965	5.2000e-004	0.0000	1.6094
Total	3.2000e-004	5.3200e-003	0.0103	2.0000e-005	3.1900e-003	3.0000e-005	3.2200e-003	1.5400e-003	3.0000e-005	1.5700e-003	0.0000	1.5965	1.5965	5.2000e-004	0.0000	1.6094

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.4 Grading - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.0700e-003	0.0000	7.0700e-003	3.4100e-003	0.0000	3.4100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4100e-003	0.0156	7.4900e-003	2.0000e-005		6.7000e-004	6.7000e-004		6.2000e-004	6.2000e-004	0.0000	1.5953	1.5953	5.2000e-004	0.0000	1.6082
Total	1.4100e-003	0.0156	7.4900e-003	2.0000e-005	7.0700e-003	6.7000e-004	7.7400e-003	3.4100e-003	6.2000e-004	4.0300e-003	0.0000	1.5953	1.5953	5.2000e-004	0.0000	1.6082

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					3.1800e-003	0.0000	3.1800e-003	1.5300e-003	0.0000	1.5300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2000e-004	5.3100e-003	0.0103	2.0000e-005		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	1.5953	1.5953	5.2000e-004	0.0000	1.6082
Total	3.2000e-004	5.3100e-003	0.0103	2.0000e-005	3.1800e-003	3.0000e-005	3.2100e-003	1.5300e-003	3.0000e-005	1.5600e-003	0.0000	1.5953	1.5953	5.2000e-004	0.0000	1.6082

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.5 Building Construction - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.9200e-003	0.0517	0.0407	8.0000e-005		2.5600e-003	2.5600e-003		2.3600e-003	2.3600e-003	0.0000	6.8227	6.8227	2.2100e-003	0.0000	6.8778
Total	4.9200e-003	0.0517	0.0407	8.0000e-005		2.5600e-003	2.5600e-003		2.3600e-003	2.3600e-003	0.0000	6.8227	6.8227	2.2100e-003	0.0000	6.8778

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.5000e-003	0.0270	0.0497	8.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	6.8227	6.8227	2.2100e-003	0.0000	6.8778
Total	1.5000e-003	0.0270	0.0497	8.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	6.8227	6.8227	2.2100e-003	0.0000	6.8778

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

3.6 Paving - 2022**Unmitigated Construction On-Site**

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Off-Road	5.0000e-004	5.0800e-003	6.5700e-003	1.0000e-005		2.7000e-004	2.7000e-004		2.5000e-004	2.5000e-004	0.0000	0.8514	0.8514	2.8000e-004	0.0000	0.8583
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	5.0000e-004	5.0800e-003	6.5700e-003	1.0000e-005		2.7000e-004	2.7000e-004		2.5000e-004	2.5000e-004	0.0000	0.8514	0.8514	2.8000e-004	0.0000	0.8583

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction On-Site

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Off-Road	1.8000e-004	4.2500e-003	7.3400e-003	1.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.8514	0.8514	2.8000e-004	0.0000	0.8583
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.8000e-004	4.2500e-003	7.3400e-003	1.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.8514	0.8514	2.8000e-004	0.0000	0.8583

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

3.7 Architectural Coating - 2022**Unmitigated Construction On-Site**

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Archit. Coating	0.0141					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1400e-003	0.0169	0.0243	4.0000e-005		8.3000e-004	8.3000e-004		8.2000e-004	8.2000e-004	0.0000	3.3793	3.3793	4.8000e-004	0.0000	3.3914
Total	0.0163	0.0169	0.0243	4.0000e-005		8.3000e-004	8.3000e-004		8.2000e-004	8.2000e-004	0.0000	3.3793	3.3793	4.8000e-004	0.0000	3.3914

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction On-Site

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Archit. Coating	0.0141					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.9000e-004	0.0163	0.0257	4.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	3.3793	3.3793	4.8000e-004	0.0000	3.3914
Total	0.0149	0.0163	0.0257	4.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	3.3793	3.3793	4.8000e-004	0.0000	3.3914

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

3.8 Trenching - 2022**Unmitigated Construction On-Site**

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Off-Road	1.6000e-004	1.6600e-003	2.2100e-003	0.0000		9.0000e-005	9.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.2705	0.2705	9.0000e-005	0.0000	0.2727
Total	1.6000e-004	1.6600e-003	2.2100e-003	0.0000		9.0000e-005	9.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.2705	0.2705	9.0000e-005	0.0000	0.2727

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction On-Site

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Off-Road	7.0000e-005	1.3400e-003	2.3200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.2705	0.2705	9.0000e-005	0.0000	0.2727
Total	7.0000e-005	1.3400e-003	2.3200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.2705	0.2705	9.0000e-005	0.0000	0.2727

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Mitigated	0.6610	0.6763	4.2858	0.0116	0.9837	9.0100e-003	0.9927	0.2457	8.4500e-003	0.2542	0.0000	1,076.2830	1,076.2830	0.0525	0.0586	1,095.0499
Unmitigated	0.6610	0.6763	4.2858	0.0116	0.9837	9.0100e-003	0.9927	0.2457	8.4500e-003	0.2542	0.0000	1,076.2830	1,076.2830	0.0525	0.0586	1,095.0499

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market with Gas Pumps	1,084.02	1,084.02	1084.02	2,887,403	2,887,403
Parking Lot	0.00	0.00	0.00		
Total	1,084.02	1,084.02	1,084.02	2,887,403	2,887,403

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Convenience Market with Gas Pumps	9.50	7.30	7.30	0.80	80.20	19.00	100	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
Convenience Market with Gas Pumps	0.549120	0.037926	0.222589	0.119508	0.023681	0.005785	0.010952	0.022598	0.001792	0.001268	0.003566	0.000525	0.000690
Parking Lot	0.549120	0.037926	0.222589	0.119508	0.023681	0.005785	0.010952	0.022598	0.001792	0.001268	0.003566	0.000525	0.000690

5.0 Energy Detail

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0199	0.0199	0.0000	0.0000	0.0199
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0199	0.0199	0.0000	0.0000	0.0199
NaturalGas Mitigated	1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1969	1.1969	2.0000e-005	2.0000e-005	1.2040
NaturalGas Unmitigated	1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1969	1.1969	2.0000e-005	2.0000e-005	1.2040

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					
Convenience Market with Gas	22429.5	1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1969	1.1969	2.0000e-005	2.0000e-005	1.2040
Summer 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

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total		1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1969	1.1969	2.0000e-005	2.0000e-005	1.2040
-------	--	-------------	-------------	-------------	-------------	--	-------------	-------------	--	-------------	-------------	--------	--------	--------	-------------	-------------	--------

Mitigated

	Natural Gas 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					
Convenience Market with Gas	22429.5	1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1969	1.1969	2.0000e-005	2.0000e-005	1.2040
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		1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1969	1.1969	2.0000e-005	2.0000e-005	1.2040

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market with Gas	16742.9	0.0152	0.0000	0.0000	0.0152
Parking Lot	5207.3	4.7200e-003	0.0000	0.0000	4.7200e-003
Total		0.0199	0.0000	0.0000	0.0199

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market with Gas	16742.9	0.0152	0.0000	0.0000	0.0152
Parking Lot	5207.3	4.7200e-003	0.0000	0.0000	4.7200e-003
Total		0.0199	0.0000	0.0000	0.0199

6.0 Area Detail**6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0107	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004
Unmitigated	0.0107	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara 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	1.4100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.2200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004
Total	0.0106	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004

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	1.4100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.2200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	0.0106	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004
-------	--------	--------	-------------	--------	--	--------	--------	--	--------	--------	--------	-------------	-------------	--------	--------	-------------

7.0 Water Detail**7.1 Mitigation Measures Water**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0226	8.0000e-005	5.0000e-005	0.0389
Unmitigated	0.0226	8.0000e-005	5.0000e-005	0.0389

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience	0.0627431	0.0226	8.0000e-005	5.0000e-005	0.0389
Market with Gas	/				
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	0.0226	8.0000e-005	5.0000e-005	0.0389
--------------	---------------	--------------------	--------------------	---------------

Mitigated

Indoor/Outdoor Use		Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market with Gas	0.0627431 / 0.0004554	0.0226	8.0000e-005	5.0000e-005	0.0389
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0226	8.0000e-005	5.0000e-005	0.0389

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated	0.0000	0.0000	0.0000	0.0000
-------------	--------	--------	--------	--------

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing
Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Convenience Market with Gas Pumps	4.00	Pump	0.48	880.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	3			Operational Year	2023
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MW hr)	203.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - Provided land uses - project description
- Construction Phase - Existing Use - No Construction
- Off-road Equipment - Provided equip amount & use
- Off-road Equipment - Existing Use - No Construction
- Grading - Existing Use - No Construction
- Demolition -
- Trips and VMT -
- Vehicle Trips - Trip gen provided by traffic and adjusted for different land uses, 100% primary to capture traffic passby reduction
- Vehicle Emission Factors - EMFAC2021 Santa Clara County Vehicle Emissions Factors 2023
- Fleet Mix - EMFAC2021 Santa Clara County Fleet Mix 2023
- Water And Wastewater -

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Construction Off-road Equipment Mitigation -

Energy Use - Historical energy data

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblEnergyUse	LightingElect	4.53	3.71
tblEnergyUse	T24E	2.77	1.91
tblEnergyUse	T24NG	10.42	8.53
tblFleetMix	HHD	6.3620e-003	0.02
tblFleetMix	LDA	0.57	0.55
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT2	0.19	0.22
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.0410e-003	5.7850e-003
tblFleetMix	MCY	0.02	3.5660e-003
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MH	2.8380e-003	6.9000e-004
tblFleetMix	MHD	7.8170e-003	0.01
tblFleetMix	OBUS	9.1200e-004	1.7920e-003
tblFleetMix	SBUS	9.2700e-004	5.2500e-004
tblFleetMix	UBUS	3.8900e-004	1.2680e-003
tblLandUse	LandUseSquareFeet	564.70	880.00
tblLandUse	LotAcreage	0.01	0.48
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblVehicleEF	HHD	0.02	0.24
tblVehicleEF	HHD	0.05	0.13

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	HHD	6.34	5.21
tblVehicleEF	HHD	0.40	0.79
tblVehicleEF	HHD	5.9190e-003	5.5500e-004
tblVehicleEF	HHD	1,065.38	850.51
tblVehicleEF	HHD	1,436.68	1,643.05
tblVehicleEF	HHD	0.05	0.03
tblVehicleEF	HHD	0.17	0.14
tblVehicleEF	HHD	0.23	0.26
tblVehicleEF	HHD	9.0000e-006	2.5000e-005
tblVehicleEF	HHD	5.44	4.16
tblVehicleEF	HHD	2.68	1.93
tblVehicleEF	HHD	2.32	2.69
tblVehicleEF	HHD	2.6700e-003	2.2830e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.02	0.03
tblVehicleEF	HHD	2.5550e-003	2.1790e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8780e-003	8.7810e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	3.0000e-006	2.8800e-004
tblVehicleEF	HHD	1.1600e-004	8.6000e-005
tblVehicleEF	HHD	0.43	0.33
tblVehicleEF	HHD	1.0000e-006	2.8800e-004
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	5.1000e-005	7.7100e-004
tblVehicleEF	HHD	3.0000e-006	1.0000e-006
tblVehicleEF	HHD	9.9140e-003	7.4610e-003
tblVehicleEF	HHD	0.01	0.01

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	HHD	3.0000e-006	2.8800e-004
tblVehicleEF	HHD	1.1600e-004	8.6000e-005
tblVehicleEF	HHD	0.49	0.60
tblVehicleEF	HHD	1.0000e-006	2.8800e-004
tblVehicleEF	HHD	0.08	0.15
tblVehicleEF	HHD	5.1000e-005	7.7100e-004
tblVehicleEF	HHD	3.0000e-006	1.0000e-006
tblVehicleEF	LDA	1.9580e-003	2.3090e-003
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.56	0.70
tblVehicleEF	LDA	2.16	3.09
tblVehicleEF	LDA	245.26	253.36
tblVehicleEF	LDA	52.02	65.50
tblVehicleEF	LDA	4.2270e-003	4.4990e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.18	0.24
tblVehicleEF	LDA	0.04	7.2000e-003
tblVehicleEF	LDA	1.3550e-003	1.2280e-003
tblVehicleEF	LDA	1.7500e-003	1.9820e-003
tblVehicleEF	LDA	0.02	2.5200e-003
tblVehicleEF	LDA	1.2480e-003	1.1310e-003
tblVehicleEF	LDA	1.6090e-003	1.8220e-003
tblVehicleEF	LDA	0.04	0.29
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.29
tblVehicleEF	LDA	7.4590e-003	9.0570e-003
tblVehicleEF	LDA	0.03	0.22
tblVehicleEF	LDA	0.21	0.32

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LDA	2.3960e-003	2.5050e-003
tblVehicleEF	LDA	5.0800e-004	6.4800e-004
tblVehicleEF	LDA	0.04	0.29
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.29
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.03	0.22
tblVehicleEF	LDA	0.23	0.35
tblVehicleEF	LDT1	4.1630e-003	6.9520e-003
tblVehicleEF	LDT1	0.06	0.11
tblVehicleEF	LDT1	0.95	1.55
tblVehicleEF	LDT1	2.35	5.63
tblVehicleEF	LDT1	292.91	332.08
tblVehicleEF	LDT1	62.87	88.11
tblVehicleEF	LDT1	6.4270e-003	0.01
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.08	0.14
tblVehicleEF	LDT1	0.23	0.40
tblVehicleEF	LDT1	0.04	9.2280e-003
tblVehicleEF	LDT1	1.7660e-003	2.0570e-003
tblVehicleEF	LDT1	2.2510e-003	3.0710e-003
tblVehicleEF	LDT1	0.02	3.2300e-003
tblVehicleEF	LDT1	1.6250e-003	1.8940e-003
tblVehicleEF	LDT1	2.0700e-003	2.8240e-003
tblVehicleEF	LDT1	0.08	0.63
tblVehicleEF	LDT1	0.16	0.17
tblVehicleEF	LDT1	0.07	0.63
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.08	0.50

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LDT1	0.31	0.58
tblVehicleEF	LDT1	2.8620e-003	3.2830e-003
tblVehicleEF	LDT1	6.1400e-004	8.7100e-004
tblVehicleEF	LDT1	0.08	0.63
tblVehicleEF	LDT1	0.16	0.17
tblVehicleEF	LDT1	0.07	0.63
tblVehicleEF	LDT1	0.03	0.05
tblVehicleEF	LDT1	0.08	0.50
tblVehicleEF	LDT1	0.34	0.64
tblVehicleEF	LDT2	3.2450e-003	3.0800e-003
tblVehicleEF	LDT2	0.07	0.09
tblVehicleEF	LDT2	0.79	0.89
tblVehicleEF	LDT2	2.79	3.85
tblVehicleEF	LDT2	316.74	348.05
tblVehicleEF	LDT2	68.58	89.31
tblVehicleEF	LDT2	6.1340e-003	6.4690e-003
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.07	0.08
tblVehicleEF	LDT2	0.27	0.35
tblVehicleEF	LDT2	0.04	8.8740e-003
tblVehicleEF	LDT2	1.3890e-003	1.3790e-003
tblVehicleEF	LDT2	1.7510e-003	2.1600e-003
tblVehicleEF	LDT2	0.02	3.1060e-003
tblVehicleEF	LDT2	1.2790e-003	1.2690e-003
tblVehicleEF	LDT2	1.6100e-003	1.9860e-003
tblVehicleEF	LDT2	0.06	0.30
tblVehicleEF	LDT2	0.12	0.08
tblVehicleEF	LDT2	0.06	0.30
tblVehicleEF	LDT2	0.01	0.01

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LDT2	0.06	0.22
tblVehicleEF	LDT2	0.31	0.41
tblVehicleEF	LDT2	3.0950e-003	3.4400e-003
tblVehicleEF	LDT2	6.7000e-004	8.8300e-004
tblVehicleEF	LDT2	0.06	0.30
tblVehicleEF	LDT2	0.12	0.08
tblVehicleEF	LDT2	0.06	0.30
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.22
tblVehicleEF	LDT2	0.34	0.44
tblVehicleEF	LHD1	5.1620e-003	5.5430e-003
tblVehicleEF	LHD1	8.5450e-003	9.1830e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.19	0.20
tblVehicleEF	LHD1	0.77	0.98
tblVehicleEF	LHD1	1.08	2.15
tblVehicleEF	LHD1	8.94	8.82
tblVehicleEF	LHD1	794.16	800.55
tblVehicleEF	LHD1	11.83	18.05
tblVehicleEF	LHD1	7.4000e-004	6.4300e-004
tblVehicleEF	LHD1	0.04	0.04
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	0.06	0.05
tblVehicleEF	LHD1	0.73	0.75
tblVehicleEF	LHD1	0.32	0.46
tblVehicleEF	LHD1	8.2500e-004	6.7600e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	9.7470e-003	9.4030e-003
tblVehicleEF	LHD1	0.01	0.02

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LHD1	2.5800e-004	2.4900e-004
tblVehicleEF	LHD1	7.9000e-004	6.4700e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4370e-003	2.3510e-003
tblVehicleEF	LHD1	9.7200e-003	0.01
tblVehicleEF	LHD1	2.3700e-004	2.2900e-004
tblVehicleEF	LHD1	2.0240e-003	0.14
tblVehicleEF	LHD1	0.08	0.04
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.0320e-003	0.14
tblVehicleEF	LHD1	0.09	0.10
tblVehicleEF	LHD1	0.20	0.19
tblVehicleEF	LHD1	0.08	0.12
tblVehicleEF	LHD1	8.7000e-005	8.6000e-005
tblVehicleEF	LHD1	7.7550e-003	7.8230e-003
tblVehicleEF	LHD1	1.1700e-004	1.7800e-004
tblVehicleEF	LHD1	2.0240e-003	0.14
tblVehicleEF	LHD1	0.08	0.04
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.0320e-003	0.14
tblVehicleEF	LHD1	0.11	0.12
tblVehicleEF	LHD1	0.20	0.19
tblVehicleEF	LHD1	0.08	0.13
tblVehicleEF	LHD2	3.1550e-003	3.3000e-003
tblVehicleEF	LHD2	7.0600e-003	7.5700e-003
tblVehicleEF	LHD2	8.4310e-003	0.01
tblVehicleEF	LHD2	0.14	0.14
tblVehicleEF	LHD2	0.62	0.62
tblVehicleEF	LHD2	0.63	1.24

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LHD2	14.00	13.86
tblVehicleEF	LHD2	768.73	843.53
tblVehicleEF	LHD2	7.83	10.22
tblVehicleEF	LHD2	1.7410e-003	1.6800e-003
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	0.88	1.00
tblVehicleEF	LHD2	0.18	0.26
tblVehicleEF	LHD2	1.4230e-003	1.3530e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.3300e-004	1.1300e-004
tblVehicleEF	LHD2	1.3610e-003	1.2950e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.6880e-003	2.6610e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.2300e-004	1.0300e-004
tblVehicleEF	LHD2	1.0700e-003	0.07
tblVehicleEF	LHD2	0.04	0.02
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	5.4700e-004	0.07
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	0.04	0.07
tblVehicleEF	LHD2	1.3400e-004	1.3300e-004
tblVehicleEF	LHD2	7.4240e-003	8.1320e-003
tblVehicleEF	LHD2	7.8000e-005	1.0100e-004

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LHD2	1.0700e-003	0.07
tblVehicleEF	LHD2	0.04	0.02
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	5.4700e-004	0.07
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	0.05	0.07
tblVehicleEF	MCY	0.33	0.17
tblVehicleEF	MCY	0.26	0.19
tblVehicleEF	MCY	18.87	13.09
tblVehicleEF	MCY	9.03	8.05
tblVehicleEF	MCY	210.17	188.31
tblVehicleEF	MCY	61.04	49.60
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	8.3790e-003
tblVehicleEF	MCY	1.15	0.59
tblVehicleEF	MCY	0.27	0.14
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	1.9690e-003	1.8990e-003
tblVehicleEF	MCY	3.0390e-003	3.6260e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.8400e-003	1.7780e-003
tblVehicleEF	MCY	2.8590e-003	3.4130e-003
tblVehicleEF	MCY	0.90	3.95
tblVehicleEF	MCY	0.69	3.56
tblVehicleEF	MCY	0.49	3.95
tblVehicleEF	MCY	2.21	1.11
tblVehicleEF	MCY	0.55	3.75
tblVehicleEF	MCY	1.94	1.39

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	MCY	2.0800e-003	1.8620e-003
tblVehicleEF	MCY	6.0400e-004	4.9000e-004
tblVehicleEF	MCY	0.90	0.09
tblVehicleEF	MCY	0.69	3.56
tblVehicleEF	MCY	0.49	0.09
tblVehicleEF	MCY	2.74	1.32
tblVehicleEF	MCY	0.55	3.75
tblVehicleEF	MCY	2.11	1.51
tblVehicleEF	MDV	3.9100e-003	4.2830e-003
tblVehicleEF	MDV	0.08	0.11
tblVehicleEF	MDV	0.87	1.04
tblVehicleEF	MDV	3.13	4.22
tblVehicleEF	MDV	383.28	420.63
tblVehicleEF	MDV	82.02	107.09
tblVehicleEF	MDV	8.3160e-003	9.2480e-003
tblVehicleEF	MDV	0.03	0.04
tblVehicleEF	MDV	0.08	0.11
tblVehicleEF	MDV	0.32	0.46
tblVehicleEF	MDV	0.04	9.0320e-003
tblVehicleEF	MDV	1.5100e-003	1.4490e-003
tblVehicleEF	MDV	1.9150e-003	2.2770e-003
tblVehicleEF	MDV	0.02	3.1610e-003
tblVehicleEF	MDV	1.3930e-003	1.3360e-003
tblVehicleEF	MDV	1.7610e-003	2.0940e-003
tblVehicleEF	MDV	0.07	0.36
tblVehicleEF	MDV	0.14	0.10
tblVehicleEF	MDV	0.07	0.36
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.06	0.28

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	MDV	0.38	0.54
tblVehicleEF	MDV	3.7430e-003	4.1560e-003
tblVehicleEF	MDV	8.0200e-004	1.0590e-003
tblVehicleEF	MDV	0.07	0.36
tblVehicleEF	MDV	0.14	0.10
tblVehicleEF	MDV	0.07	0.36
tblVehicleEF	MDV	0.02	0.03
tblVehicleEF	MDV	0.06	0.28
tblVehicleEF	MDV	0.42	0.60
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	1.11	1.61
tblVehicleEF	MH	2.13	2.63
tblVehicleEF	MH	1,532.75	1,694.25
tblVehicleEF	MH	18.68	23.10
tblVehicleEF	MH	0.06	0.07
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.36	1.59
tblVehicleEF	MH	0.25	0.30
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.7400e-004	3.3700e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2750e-003	3.2930e-003
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.5200e-004	3.1000e-004
tblVehicleEF	MH	0.71	34.58
tblVehicleEF	MH	0.06	9.45

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	MH	0.25	34.58
tblVehicleEF	MH	0.07	0.09
tblVehicleEF	MH	0.02	0.22
tblVehicleEF	MH	0.10	0.12
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.8500e-004	2.2800e-004
tblVehicleEF	MH	0.71	34.58
tblVehicleEF	MH	0.06	9.45
tblVehicleEF	MH	0.25	34.58
tblVehicleEF	MH	0.09	0.13
tblVehicleEF	MH	0.02	0.22
tblVehicleEF	MH	0.11	0.13
tblVehicleEF	MHD	3.5450e-003	0.01
tblVehicleEF	MHD	1.9320e-003	9.9070e-003
tblVehicleEF	MHD	9.4870e-003	9.2450e-003
tblVehicleEF	MHD	0.39	0.67
tblVehicleEF	MHD	0.26	0.40
tblVehicleEF	MHD	1.14	1.15
tblVehicleEF	MHD	73.35	161.34
tblVehicleEF	MHD	1,095.06	1,239.60
tblVehicleEF	MHD	9.38	8.84
tblVehicleEF	MHD	0.01	0.02
tblVehicleEF	MHD	0.14	0.16
tblVehicleEF	MHD	7.2170e-003	6.0970e-003
tblVehicleEF	MHD	0.43	0.92
tblVehicleEF	MHD	1.44	1.22
tblVehicleEF	MHD	1.70	1.40
tblVehicleEF	MHD	4.2700e-004	2.5420e-003
tblVehicleEF	MHD	0.13	0.05

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	MHD	6.9550e-003	0.01
tblVehicleEF	MHD	1.1900e-004	1.1300e-004
tblVehicleEF	MHD	4.0900e-004	2.4310e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	6.6480e-003	0.01
tblVehicleEF	MHD	1.1000e-004	1.0400e-004
tblVehicleEF	MHD	4.1700e-004	0.03
tblVehicleEF	MHD	0.02	6.9620e-003
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	2.1100e-004	0.03
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.02	0.06
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	6.9600e-004	1.5020e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	9.3000e-005	8.7000e-005
tblVehicleEF	MHD	4.1700e-004	0.03
tblVehicleEF	MHD	0.02	6.9620e-003
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	2.1100e-004	0.03
tblVehicleEF	MHD	0.02	0.06
tblVehicleEF	MHD	0.02	0.06
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	OBUS	7.0630e-003	7.4000e-003
tblVehicleEF	OBUS	4.0130e-003	9.2780e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.57	0.51
tblVehicleEF	OBUS	0.47	0.57
tblVehicleEF	OBUS	1.90	2.06

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	OBUS	91.93	84.55
tblVehicleEF	OBUS	1,341.74	1,407.27
tblVehicleEF	OBUS	15.48	16.14
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.13	0.16
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.37	0.36
tblVehicleEF	OBUS	1.44	1.03
tblVehicleEF	OBUS	1.09	0.96
tblVehicleEF	OBUS	1.2000e-004	4.3400e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	7.0290e-003	0.02
tblVehicleEF	OBUS	1.4200e-004	1.4500e-004
tblVehicleEF	OBUS	1.1500e-004	4.1500e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	6.7120e-003	0.02
tblVehicleEF	OBUS	1.3000e-004	1.3300e-004
tblVehicleEF	OBUS	1.0840e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	4.8000e-004	0.07
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.09	0.10
tblVehicleEF	OBUS	8.7300e-004	8.0100e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.5300e-004	1.6000e-004
tblVehicleEF	OBUS	1.0840e-003	0.07
tblVehicleEF	OBUS	0.02	0.02

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	4.8000e-004	0.07
tblVehicleEF	OBUS	0.03	0.07
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.10	0.11
tblVehicleEF	SBUS	0.05	0.07
tblVehicleEF	SBUS	6.3560e-003	0.09
tblVehicleEF	SBUS	4.7830e-003	4.6890e-003
tblVehicleEF	SBUS	2.18	1.62
tblVehicleEF	SBUS	0.52	0.91
tblVehicleEF	SBUS	0.70	0.66
tblVehicleEF	SBUS	347.39	189.53
tblVehicleEF	SBUS	1,060.99	1,037.35
tblVehicleEF	SBUS	3.98	3.67
tblVehicleEF	SBUS	0.05	0.03
tblVehicleEF	SBUS	0.14	0.13
tblVehicleEF	SBUS	4.4930e-003	4.0620e-003
tblVehicleEF	SBUS	3.53	1.43
tblVehicleEF	SBUS	4.87	2.74
tblVehicleEF	SBUS	0.81	0.47
tblVehicleEF	SBUS	3.9050e-003	1.4150e-003
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	4.6000e-005	3.8000e-005
tblVehicleEF	SBUS	3.7360e-003	1.3530e-003
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.7270e-003	2.6580e-003
tblVehicleEF	SBUS	0.03	0.01

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	SBUS	4.2000e-005	3.5000e-005
tblVehicleEF	SBUS	5.3700e-004	0.02
tblVehicleEF	SBUS	5.2210e-003	7.0230e-003
tblVehicleEF	SBUS	0.24	0.18
tblVehicleEF	SBUS	2.2700e-004	0.02
tblVehicleEF	SBUS	0.09	0.06
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	3.3060e-003	1.7270e-003
tblVehicleEF	SBUS	0.01	9.6440e-003
tblVehicleEF	SBUS	3.9000e-005	3.6000e-005
tblVehicleEF	SBUS	5.3700e-004	0.02
tblVehicleEF	SBUS	5.2210e-003	7.0230e-003
tblVehicleEF	SBUS	0.35	0.29
tblVehicleEF	SBUS	2.2700e-004	0.02
tblVehicleEF	SBUS	0.10	0.16
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	UBUS	1.35	0.35
tblVehicleEF	UBUS	1.4170e-003	3.6170e-003
tblVehicleEF	UBUS	10.12	4.15
tblVehicleEF	UBUS	0.14	0.53
tblVehicleEF	UBUS	1,597.13	1,099.26
tblVehicleEF	UBUS	1.39	3.19
tblVehicleEF	UBUS	0.26	0.17
tblVehicleEF	UBUS	1.0490e-003	6.0820e-003
tblVehicleEF	UBUS	0.73	0.33
tblVehicleEF	UBUS	0.01	0.04
tblVehicleEF	UBUS	0.07	0.11

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	5.3280e-003	6.2360e-003
tblVehicleEF	UBUS	1.5000e-005	1.2000e-005
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	8.3320e-003	8.1180e-003
tblVehicleEF	UBUS	5.0960e-003	5.9630e-003
tblVehicleEF	UBUS	1.4000e-005	1.1000e-005
tblVehicleEF	UBUS	1.9000e-005	9.9020e-003
tblVehicleEF	UBUS	1.3300e-004	3.3070e-003
tblVehicleEF	UBUS	8.0000e-006	9.9020e-003
tblVehicleEF	UBUS	0.02	0.06
tblVehicleEF	UBUS	2.1000e-005	7.9870e-003
tblVehicleEF	UBUS	5.8830e-003	0.01
tblVehicleEF	UBUS	0.01	9.4340e-003
tblVehicleEF	UBUS	1.4000e-005	3.2000e-005
tblVehicleEF	UBUS	1.9000e-005	9.9020e-003
tblVehicleEF	UBUS	1.3300e-004	3.3070e-003
tblVehicleEF	UBUS	8.0000e-006	9.9020e-003
tblVehicleEF	UBUS	1.38	0.42
tblVehicleEF	UBUS	2.1000e-005	7.9870e-003
tblVehicleEF	UBUS	6.4410e-003	0.01
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	PB_TP	65.00	0.00
tblVehicleTrips	PR_TP	14.00	100.00
tblVehicleTrips	ST_TR	322.50	199.50
tblVehicleTrips	SU_TR	322.50	199.50
tblVehicleTrips	WD_TR	322.50	199.50

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara 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	3.9000e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Energy	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	1.1431	1.1431	1.1000e-004	2.0000e-005	1.1524
Mobile	0.4866	0.4978	3.1550	8.5300e-003	0.7242	6.6400e-003	0.7308	0.1809	6.2200e-003	0.1871	0.0000	792.3044	792.3044	0.0386	0.0431	806.1196
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0133	0.0292	0.0425	1.3700e-003	3.0000e-005	0.0865
Total	0.4905	0.4983	3.1554	8.5300e-003	0.7242	6.6700e-003	0.7308	0.1809	6.2500e-003	0.1871	0.0133	793.4768	793.4901	0.0401	0.0432	807.3586

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	3.9000e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Energy	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	1.1431	1.1431	1.1000e-004	2.0000e-005	1.1524
Mobile	0.4866	0.4978	3.1550	8.5300e-003	0.7242	6.6400e-003	0.7308	0.1809	6.2200e-003	0.1871	0.0000	792.3044	792.3044	0.0386	0.0431	806.1196

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0133	0.0292	0.0425	1.3700e-003	3.0000e-005	0.0865
Total	0.4905	0.4983	3.1554	8.5300e-003	0.7242	6.6700e-003	0.7308	0.1809	6.2500e-003	0.1871	0.0133	793.4768	793.4901	0.0401	0.0432	807.3586

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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	0.4866	0.4978	3.1550	8.5300e-003	0.7242	6.6400e-003	0.7308	0.1809	6.2200e-003	0.1871	0.0000	792.3044	792.3044	0.0386	0.0431	806.1196
Unmitigated	0.4866	0.4978	3.1550	8.5300e-003	0.7242	6.6400e-003	0.7308	0.1809	6.2200e-003	0.1871	0.0000	792.3044	792.3044	0.0386	0.0431	806.1196

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Convenience Market with Gas Pumps	798.00	798.00	798.00	2,125,558	2,125,558
Total	798.00	798.00	798.00	2,125,558	2,125,558

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
Convenience Market with Gas	9.50	7.30	7.30	0.80	80.20	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market with Gas Pumps	0.549120	0.037926	0.222589	0.119508	0.023681	0.005785	0.010952	0.022598	0.001792	0.001268	0.003566	0.000525	0.000690

5.0 Energy Detail

Historical Energy Use: Y

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	0.6449	0.6449	1.0000e-004	1.0000e-005	0.6512
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.6449	0.6449	1.0000e-004	1.0000e-005	0.6512
NaturalGas Mitigated	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4983	0.4983	1.0000e-005	1.0000e-005	0.5012
NaturalGas Unmitigated	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4983	0.4983	1.0000e-005	1.0000e-005	0.5012

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**5.2 Energy by Land Use - Natural Gas****Unmitigated**

	Natural Gas 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					
Convenience Market with Gas	9336.8	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4983	0.4983	1.0000e-005	1.0000e-005	0.5012
Total		5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4983	0.4983	1.0000e-005	1.0000e-005	0.5012

Mitigated

	Natural Gas 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					
Convenience Market with Gas	9336.8	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4983	0.4983	1.0000e-005	1.0000e-005	0.5012
Total		5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4983	0.4983	1.0000e-005	1.0000e-005	0.5012

5.3 Energy by Land Use - Electricity**Unmitigated**

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara 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			
Convenience Market with Gas	6969.6	0.6449	1.0000e-004	1.0000e-005	0.6512
Total		0.6449	1.0000e-004	1.0000e-005	0.6512

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market with Gas	6969.6	0.6449	1.0000e-004	1.0000e-005	0.6512
Total		0.6449	1.0000e-004	1.0000e-005	0.6512

6.0 Area Detail**6.1 Mitigation Measures Area**

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Mitigated	3.9000e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Unmitigated	3.9000e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005

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	4.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.4400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Total	3.9000e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005

Mitigated

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.4400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Total	3.9000e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005

7.0 Water Detail**7.1 Mitigation Measures Water**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0425	1.3700e-003	3.0000e-005	0.0865
Unmitigated	0.0425	1.3700e-003	3.0000e-005	0.0865

7.2 Water by Land Use

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**Unmitigated**

Indoor/Outdoor Use		Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market with Gas	0.0418287 / 0.025637	0.0425	1.3700e-003	3.0000e-005	0.0865
Total		0.0425	1.3700e-003	3.0000e-005	0.0865

Mitigated

Indoor/Outdoor Use		Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market with Gas	0.0418287 / 0.025637	0.0425	1.3700e-003	3.0000e-005	0.0865
Total		0.0425	1.3700e-003	3.0000e-005	0.0865

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
--	----------------	-----------	-----	-----	------

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	tons	MT/yr			
	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - 2030**

Santa Clara County, Annual

1.0 Project Characteristics**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Convenience Market with Gas Pumps	6.00	Pump	0.48	2,114.00	0
Parking Lot	11.00	Space	0.00	14,878.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	3			Operational Year	2030
Utility Company	Silicon Valley Clean Energy				
CO2 Intensity (lb/MW hr)	2	CH4 Intensity (lb/MW hr)	0	N2O Intensity (lb/MW hr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CalEEMod SVCE

Land Use - Provided land uses - construction worksheet

Construction Phase - Provided construction schedule

Off-road Equipment - Provided equip amount & use

Off-road Equipment - Provided equip amount & use

Off-road Equipment - Provided equip amount & use

Off-road Equipment - Provided equip amount & use

Off-road Equipment - Provided equip amount & use

Off-road Equipment - Provided equip amount & use

Off-road Equipment - Provided equip amount & use

Grading - grading = 500cy export

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Demolition - existing building demo = 880-sf

Trips and VMT - EMFAC2021 0 Trips in CalEEMod, pavement demo = 150 tons, building const = 12 cement truck round trips, paving = 98-cy asphalt

Vehicle Trips - Trip gen provided by traffic and adjusted for different land uses, 100% primary to capture traffic passby reduction

Vehicle Emission Factors - EMFAC2021 Santa Clara County Vehicle Emissions Factors 2030

Fleet Mix - EMFAC2021 Santa Clara County Fleet Mix 2030

Water And Wastewater - Wastewater Treatment 100% Aerobic, no septic tanks of lagoons

Construction Off-road Equipment Mitigation - BMPs, Teri 4 interim mitigation

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	5.00	15.00
tblConstructionPhase	NumDays	100.00	139.00
tblConstructionPhase	NumDays	10.00	3.00
tblConstructionPhase	NumDays	2.00	3.00
tblConstructionPhase	NumDays	5.00	3.00
tblConstructionPhase	NumDays	1.00	2.00
tblConstructionPhase	PhaseEndDate	6/22/2022	8/19/2022
tblConstructionPhase	PhaseEndDate	6/8/2022	7/29/2022
tblConstructionPhase	PhaseEndDate	1/14/2022	1/5/2022
tblConstructionPhase	PhaseEndDate	1/19/2022	1/12/2022
tblConstructionPhase	PhaseEndDate	6/15/2022	8/18/2022
tblConstructionPhase	PhaseEndDate	1/17/2022	1/7/2022
tblConstructionPhase	PhaseStartDate	6/16/2022	8/1/2022
tblConstructionPhase	PhaseStartDate	1/20/2022	1/18/2022
tblConstructionPhase	PhaseStartDate	1/18/2022	1/10/2022
tblConstructionPhase	PhaseStartDate	6/9/2022	8/16/2022
tblConstructionPhase	PhaseStartDate	1/15/2022	1/6/2022
tblFleetMix	HHD	6.1320e-003	0.02
tblFleetMix	HHD	6.1320e-003	0.02
tblFleetMix	LDA	0.58	0.53
tblFleetMix	LDA	0.58	0.53
tblFleetMix	LDT1	0.06	0.03
tblFleetMix	LDT1	0.06	0.03
tblFleetMix	LDT2	0.18	0.23

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblFleetMix	LDT2	0.18	0.23
tblFleetMix	LHD1	0.02	0.03
tblFleetMix	LHD1	0.02	0.03
tblFleetMix	LHD2	5.3980e-003	6.4490e-003
tblFleetMix	LHD2	5.3980e-003	6.4490e-003
tblFleetMix	MCY	0.02	3.4770e-003
tblFleetMix	MCY	0.02	3.4770e-003
tblFleetMix	MDV	0.12	0.13
tblFleetMix	MDV	0.12	0.13
tblFleetMix	MH	2.5260e-003	6.1500e-004
tblFleetMix	MH	2.5260e-003	6.1500e-004
tblFleetMix	MHD	8.2190e-003	0.01
tblFleetMix	MHD	8.2190e-003	0.01
tblFleetMix	OBUS	8.5200e-004	1.6730e-003
tblFleetMix	OBUS	8.5200e-004	1.6730e-003
tblFleetMix	SBUS	8.3700e-004	5.3600e-004
tblFleetMix	SBUS	8.3700e-004	5.3600e-004
tblFleetMix	UBUS	3.3500e-004	1.2240e-003
tblFleetMix	UBUS	3.3500e-004	1.2240e-003
tblGrading	MaterialExported	0.00	500.00
tblLandUse	LandUseSquareFeet	847.05	2,114.00
tblLandUse	LandUseSquareFeet	4,400.00	14,878.00
tblLandUse	LotAcreage	0.02	0.48
tblLandUse	LotAcreage	0.10	0.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.31	0.31
tblOffRoadEquipment	LoadFactor	0.37	0.37

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Dozers
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	6.00	3.70
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	4.00	0.80
tblOffRoadEquipment	UsageHours	6.00	1.20
tblOffRoadEquipment	UsageHours	6.00	5.30
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	7.00	5.30
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	6.00	5.30
tblOffRoadEquipment	UsageHours	8.00	0.80
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	5.30
tblOffRoadEquipment	UsageHours	7.00	5.30
tblTripsAndVMT	HaulingTripNumber	4.00	0.00
tblTripsAndVMT	HaulingTripNumber	63.00	0.00
tblTripsAndVMT	VendorTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	7.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	1.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblVehicleEF	HHD	0.02	0.20
tblVehicleEF	HHD	0.05	0.09
tblVehicleEF	HHD	6.28	5.00
tblVehicleEF	HHD	0.41	0.63
tblVehicleEF	HHD	6.6850e-003	8.7300e-004
tblVehicleEF	HHD	930.05	719.71
tblVehicleEF	HHD	1,226.35	1,395.93
tblVehicleEF	HHD	0.05	9.4370e-003
tblVehicleEF	HHD	0.15	0.12
tblVehicleEF	HHD	0.19	0.22
tblVehicleEF	HHD	2.0000e-006	4.0000e-006
tblVehicleEF	HHD	5.20	3.81
tblVehicleEF	HHD	2.52	1.45
tblVehicleEF	HHD	2.31	2.60
tblVehicleEF	HHD	2.1460e-003	1.7380e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	2.0530e-003	1.6560e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.9050e-003	8.7860e-003
tblVehicleEF	HHD	0.02	0.02

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	1.0000e-006	4.0000e-005
tblVehicleEF	HHD	5.8000e-005	1.3000e-005
tblVehicleEF	HHD	0.42	0.31
tblVehicleEF	HHD	1.0000e-006	4.0000e-005
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	2.5000e-005	1.1400e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	8.6530e-003	6.2150e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	1.0000e-006	4.0000e-005
tblVehicleEF	HHD	5.8000e-005	1.3000e-005
tblVehicleEF	HHD	0.49	0.54
tblVehicleEF	HHD	1.0000e-006	4.0000e-005
tblVehicleEF	HHD	0.07	0.10
tblVehicleEF	HHD	2.5000e-005	1.1400e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	LDA	9.5900e-004	1.2510e-003
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.41	0.48
tblVehicleEF	LDA	1.72	2.09
tblVehicleEF	LDA	213.76	218.64
tblVehicleEF	LDA	45.13	55.99
tblVehicleEF	LDA	3.1760e-003	3.1650e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.13	0.18
tblVehicleEF	LDA	0.04	7.0780e-003

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LDA	9.2900e-004	8.3800e-004
tblVehicleEF	LDA	1.2930e-003	1.4820e-003
tblVehicleEF	LDA	0.02	2.4770e-003
tblVehicleEF	LDA	8.5500e-004	7.7100e-004
tblVehicleEF	LDA	1.1890e-003	1.3620e-003
tblVehicleEF	LDA	0.02	0.23
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	0.02	0.23
tblVehicleEF	LDA	3.2460e-003	4.3400e-003
tblVehicleEF	LDA	0.02	0.17
tblVehicleEF	LDA	0.12	0.20
tblVehicleEF	LDA	1.9770e-003	2.1610e-003
tblVehicleEF	LDA	4.1700e-004	5.5400e-004
tblVehicleEF	LDA	0.02	0.23
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	0.02	0.23
tblVehicleEF	LDA	4.7160e-003	6.3290e-003
tblVehicleEF	LDA	0.02	0.17
tblVehicleEF	LDA	0.13	0.22
tblVehicleEF	LDT1	1.6710e-003	3.2730e-003
tblVehicleEF	LDT1	0.04	0.07
tblVehicleEF	LDT1	0.54	0.90
tblVehicleEF	LDT1	1.85	3.41
tblVehicleEF	LDT1	258.40	296.02
tblVehicleEF	LDT1	55.17	76.24
tblVehicleEF	LDT1	3.7700e-003	5.8700e-003
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.03	0.07
tblVehicleEF	LDT1	0.15	0.27

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LDT1	0.04	9.1380e-003
tblVehicleEF	LDT1	1.0700e-003	1.2600e-003
tblVehicleEF	LDT1	1.4820e-003	2.0740e-003
tblVehicleEF	LDT1	0.02	3.1980e-003
tblVehicleEF	LDT1	9.8400e-004	1.1590e-003
tblVehicleEF	LDT1	1.3630e-003	1.9070e-003
tblVehicleEF	LDT1	0.05	0.47
tblVehicleEF	LDT1	0.09	0.12
tblVehicleEF	LDT1	0.04	0.47
tblVehicleEF	LDT1	6.5000e-003	0.01
tblVehicleEF	LDT1	0.06	0.36
tblVehicleEF	LDT1	0.15	0.34
tblVehicleEF	LDT1	2.3890e-003	2.9260e-003
tblVehicleEF	LDT1	5.1000e-004	7.5400e-004
tblVehicleEF	LDT1	0.05	0.47
tblVehicleEF	LDT1	0.09	0.12
tblVehicleEF	LDT1	0.04	0.47
tblVehicleEF	LDT1	9.4830e-003	0.02
tblVehicleEF	LDT1	0.06	0.36
tblVehicleEF	LDT1	0.17	0.37
tblVehicleEF	LDT2	1.7260e-003	1.8780e-003
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.56	0.64
tblVehicleEF	LDT2	2.29	2.73
tblVehicleEF	LDT2	267.19	304.99
tblVehicleEF	LDT2	57.57	77.16
tblVehicleEF	LDT2	4.0490e-003	4.5010e-003
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.03	0.04

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LDT2	0.17	0.25
tblVehicleEF	LDT2	0.04	8.8380e-003
tblVehicleEF	LDT2	1.0240e-003	9.8900e-004
tblVehicleEF	LDT2	1.3590e-003	1.6580e-003
tblVehicleEF	LDT2	0.02	3.0930e-003
tblVehicleEF	LDT2	9.4300e-004	9.1000e-004
tblVehicleEF	LDT2	1.2500e-003	1.5240e-003
tblVehicleEF	LDT2	0.05	0.25
tblVehicleEF	LDT2	0.09	0.06
tblVehicleEF	LDT2	0.05	0.25
tblVehicleEF	LDT2	6.5530e-003	6.8650e-003
tblVehicleEF	LDT2	0.05	0.19
tblVehicleEF	LDT2	0.18	0.27
tblVehicleEF	LDT2	2.4710e-003	3.0150e-003
tblVehicleEF	LDT2	5.3200e-004	7.6300e-004
tblVehicleEF	LDT2	0.05	0.25
tblVehicleEF	LDT2	0.09	0.06
tblVehicleEF	LDT2	0.05	0.25
tblVehicleEF	LDT2	9.5240e-003	0.01
tblVehicleEF	LDT2	0.05	0.19
tblVehicleEF	LDT2	0.20	0.29
tblVehicleEF	LHD1	4.1480e-003	4.3350e-003
tblVehicleEF	LHD1	5.1950e-003	4.0280e-003
tblVehicleEF	LHD1	9.0230e-003	0.02
tblVehicleEF	LHD1	0.18	0.18
tblVehicleEF	LHD1	0.47	0.54
tblVehicleEF	LHD1	0.89	2.05
tblVehicleEF	LHD1	8.25	7.81
tblVehicleEF	LHD1	698.55	665.93

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LHD1	10.09	15.88
tblVehicleEF	LHD1	7.2900e-004	5.8900e-004
tblVehicleEF	LHD1	0.04	0.04
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.05	0.04
tblVehicleEF	LHD1	0.30	0.31
tblVehicleEF	LHD1	0.23	0.33
tblVehicleEF	LHD1	9.1500e-004	6.6600e-004
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	9.9010e-003	9.3430e-003
tblVehicleEF	LHD1	7.0190e-003	9.1890e-003
tblVehicleEF	LHD1	2.1000e-004	1.3400e-004
tblVehicleEF	LHD1	8.7500e-004	6.3700e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4750e-003	2.3360e-003
tblVehicleEF	LHD1	6.6710e-003	8.7610e-003
tblVehicleEF	LHD1	1.9300e-004	1.2300e-004
tblVehicleEF	LHD1	1.4030e-003	0.09
tblVehicleEF	LHD1	0.05	0.02
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	7.7200e-004	0.09
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.18	0.12
tblVehicleEF	LHD1	0.04	0.08
tblVehicleEF	LHD1	8.0000e-005	7.6000e-005
tblVehicleEF	LHD1	6.8120e-003	6.4980e-003
tblVehicleEF	LHD1	1.0000e-004	1.5700e-004
tblVehicleEF	LHD1	1.4030e-003	0.09
tblVehicleEF	LHD1	0.05	0.02

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	7.7200e-004	0.09
tblVehicleEF	LHD1	0.09	0.06
tblVehicleEF	LHD1	0.18	0.12
tblVehicleEF	LHD1	0.05	0.09
tblVehicleEF	LHD2	2.5050e-003	2.5080e-003
tblVehicleEF	LHD2	5.3390e-003	4.4570e-003
tblVehicleEF	LHD2	4.8110e-003	8.7200e-003
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.49	0.38
tblVehicleEF	LHD2	0.48	1.11
tblVehicleEF	LHD2	13.00	13.36
tblVehicleEF	LHD2	679.81	713.03
tblVehicleEF	LHD2	6.44	8.54
tblVehicleEF	LHD2	1.6660e-003	1.6800e-003
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.38	0.50
tblVehicleEF	LHD2	0.12	0.18
tblVehicleEF	LHD2	1.5020e-003	1.4560e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.0600e-004	5.7000e-005
tblVehicleEF	LHD2	1.4370e-003	1.3930e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.7110e-003	2.6340e-003
tblVehicleEF	LHD2	0.01	0.02

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LHD2	9.8000e-005	5.2000e-005
tblVehicleEF	LHD2	6.4200e-004	0.05
tblVehicleEF	LHD2	0.02	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.7400e-004	0.05
tblVehicleEF	LHD2	0.10	0.08
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	1.2400e-004	1.2800e-004
tblVehicleEF	LHD2	6.5570e-003	6.8600e-003
tblVehicleEF	LHD2	6.4000e-005	8.4000e-005
tblVehicleEF	LHD2	6.4200e-004	0.05
tblVehicleEF	LHD2	0.02	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	3.7400e-004	0.05
tblVehicleEF	LHD2	0.11	0.10
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.02	0.05
tblVehicleEF	MCY	0.32	0.14
tblVehicleEF	MCY	0.25	0.16
tblVehicleEF	MCY	17.61	11.05
tblVehicleEF	MCY	9.20	7.83
tblVehicleEF	MCY	209.76	185.58
tblVehicleEF	MCY	59.23	42.83
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	6.3410e-003
tblVehicleEF	MCY	1.14	0.51
tblVehicleEF	MCY	0.27	0.10
tblVehicleEF	MCY	0.01	0.01

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	MCY	2.1380e-003	1.9970e-003
tblVehicleEF	MCY	2.8620e-003	3.4160e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.9940e-003	1.8640e-003
tblVehicleEF	MCY	2.6760e-003	3.1970e-003
tblVehicleEF	MCY	0.89	3.68
tblVehicleEF	MCY	0.63	3.56
tblVehicleEF	MCY	0.47	3.68
tblVehicleEF	MCY	2.13	0.89
tblVehicleEF	MCY	0.46	3.78
tblVehicleEF	MCY	1.88	1.13
tblVehicleEF	MCY	2.0760e-003	1.8350e-003
tblVehicleEF	MCY	5.8600e-004	4.2300e-004
tblVehicleEF	MCY	0.89	0.08
tblVehicleEF	MCY	0.63	3.56
tblVehicleEF	MCY	0.47	0.08
tblVehicleEF	MCY	2.67	1.09
tblVehicleEF	MCY	0.46	3.78
tblVehicleEF	MCY	2.04	1.23
tblVehicleEF	MDV	1.7720e-003	2.0970e-003
tblVehicleEF	MDV	0.04	0.07
tblVehicleEF	MDV	0.55	0.66
tblVehicleEF	MDV	2.32	2.78
tblVehicleEF	MDV	321.60	364.04
tblVehicleEF	MDV	67.92	91.48
tblVehicleEF	MDV	5.2660e-003	5.4050e-003
tblVehicleEF	MDV	0.02	0.03
tblVehicleEF	MDV	0.04	0.05
tblVehicleEF	MDV	0.18	0.27

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	MDV	0.04	8.8920e-003
tblVehicleEF	MDV	1.0330e-003	9.7100e-004
tblVehicleEF	MDV	1.3630e-003	1.6080e-003
tblVehicleEF	MDV	0.02	3.1120e-003
tblVehicleEF	MDV	9.5300e-004	8.9400e-004
tblVehicleEF	MDV	1.2530e-003	1.4780e-003
tblVehicleEF	MDV	0.06	0.28
tblVehicleEF	MDV	0.10	0.07
tblVehicleEF	MDV	0.06	0.28
tblVehicleEF	MDV	6.8860e-003	8.0910e-003
tblVehicleEF	MDV	0.05	0.21
tblVehicleEF	MDV	0.20	0.30
tblVehicleEF	MDV	2.9760e-003	3.5970e-003
tblVehicleEF	MDV	6.2800e-004	9.0400e-004
tblVehicleEF	MDV	0.06	0.28
tblVehicleEF	MDV	0.10	0.07
tblVehicleEF	MDV	0.06	0.28
tblVehicleEF	MDV	9.9820e-003	0.01
tblVehicleEF	MDV	0.05	0.21
tblVehicleEF	MDV	0.22	0.33
tblVehicleEF	MH	5.0270e-003	6.0740e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.31	0.37
tblVehicleEF	MH	1.64	1.92
tblVehicleEF	MH	1,350.27	1,656.25
tblVehicleEF	MH	15.54	20.13
tblVehicleEF	MH	0.05	0.07
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.06	1.28

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	MH	0.24	0.30
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.1200e-004	2.3300e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2970e-003	3.3360e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.9500e-004	2.1400e-004
tblVehicleEF	MH	0.35	20.30
tblVehicleEF	MH	0.03	4.90
tblVehicleEF	MH	0.14	20.30
tblVehicleEF	MH	0.04	0.05
tblVehicleEF	MH	5.8500e-003	0.12
tblVehicleEF	MH	0.07	0.09
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.5400e-004	1.9900e-004
tblVehicleEF	MH	0.35	20.30
tblVehicleEF	MH	0.03	4.90
tblVehicleEF	MH	0.14	20.30
tblVehicleEF	MH	0.05	0.06
tblVehicleEF	MH	5.8500e-003	0.12
tblVehicleEF	MH	0.08	0.10
tblVehicleEF	MHD	3.8320e-003	0.02
tblVehicleEF	MHD	1.0340e-003	9.4650e-003
tblVehicleEF	MHD	8.3830e-003	6.5780e-003
tblVehicleEF	MHD	0.41	0.63
tblVehicleEF	MHD	0.15	0.16
tblVehicleEF	MHD	0.87	0.72

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	MHD	65.10	143.38
tblVehicleEF	MHD	993.45	1,074.54
tblVehicleEF	MHD	8.55	6.79
tblVehicleEF	MHD	9.3710e-003	0.02
tblVehicleEF	MHD	0.12	0.14
tblVehicleEF	MHD	7.7400e-003	4.7600e-003
tblVehicleEF	MHD	0.34	0.73
tblVehicleEF	MHD	1.43	0.58
tblVehicleEF	MHD	1.69	1.22
tblVehicleEF	MHD	1.6200e-004	6.5500e-004
tblVehicleEF	MHD	0.13	0.04
tblVehicleEF	MHD	7.0060e-003	5.4200e-003
tblVehicleEF	MHD	1.1200e-004	8.2000e-005
tblVehicleEF	MHD	1.5500e-004	6.2600e-004
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	6.6960e-003	5.1780e-003
tblVehicleEF	MHD	1.0300e-004	7.6000e-005
tblVehicleEF	MHD	2.8900e-004	0.01
tblVehicleEF	MHD	0.01	3.4200e-003
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.6800e-004	0.01
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	6.1800e-004	1.3200e-003
tblVehicleEF	MHD	9.4800e-003	0.01
tblVehicleEF	MHD	8.5000e-005	6.7000e-005
tblVehicleEF	MHD	2.8900e-004	0.01
tblVehicleEF	MHD	0.01	3.4200e-003

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	MHD	0.03	0.04
tblVehicleEF	MHD	1.6800e-004	0.01
tblVehicleEF	MHD	0.01	0.03
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	OBUS	7.0980e-003	7.5210e-003
tblVehicleEF	OBUS	2.1970e-003	0.01
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.64	0.55
tblVehicleEF	OBUS	0.26	0.29
tblVehicleEF	OBUS	1.58	1.46
tblVehicleEF	OBUS	97.36	89.81
tblVehicleEF	OBUS	1,210.85	1,245.37
tblVehicleEF	OBUS	13.46	12.02
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.12	0.15
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.43	0.33
tblVehicleEF	OBUS	1.45	0.83
tblVehicleEF	OBUS	1.13	0.93
tblVehicleEF	OBUS	1.4200e-004	3.1100e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	7.8820e-003	0.01
tblVehicleEF	OBUS	1.5600e-004	1.1800e-004
tblVehicleEF	OBUS	1.3600e-004	2.9700e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	7.5260e-003	0.01
tblVehicleEF	OBUS	1.4400e-004	1.0900e-004
tblVehicleEF	OBUS	1.0620e-003	0.07

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	4.8700e-004	0.07
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.08
tblVehicleEF	OBUS	0.08	0.07
tblVehicleEF	OBUS	9.2400e-004	8.4600e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.3300e-004	1.1900e-004
tblVehicleEF	OBUS	1.0620e-003	0.07
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	4.8700e-004	0.07
tblVehicleEF	OBUS	0.02	0.05
tblVehicleEF	OBUS	0.05	0.08
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	SBUS	0.07	0.08
tblVehicleEF	SBUS	4.4040e-003	0.09
tblVehicleEF	SBUS	6.3380e-003	5.2160e-003
tblVehicleEF	SBUS	2.93	1.82
tblVehicleEF	SBUS	0.37	0.72
tblVehicleEF	SBUS	0.86	0.67
tblVehicleEF	SBUS	337.48	181.81
tblVehicleEF	SBUS	970.50	941.81
tblVehicleEF	SBUS	5.06	3.93
tblVehicleEF	SBUS	0.04	0.02
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	6.4910e-003	4.8480e-003
tblVehicleEF	SBUS	2.71	1.09

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	SBUS	3.09	1.57
tblVehicleEF	SBUS	1.18	0.52
tblVehicleEF	SBUS	2.0480e-003	7.4600e-004
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	8.5750e-003
tblVehicleEF	SBUS	6.8000e-005	4.6000e-005
tblVehicleEF	SBUS	1.9600e-003	7.1300e-004
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.6690e-003	2.6100e-003
tblVehicleEF	SBUS	0.02	8.1870e-003
tblVehicleEF	SBUS	6.2000e-005	4.2000e-005
tblVehicleEF	SBUS	8.7000e-004	0.04
tblVehicleEF	SBUS	8.3040e-003	9.3350e-003
tblVehicleEF	SBUS	0.32	0.20
tblVehicleEF	SBUS	4.1400e-004	0.04
tblVehicleEF	SBUS	0.06	0.04
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.04	0.03
tblVehicleEF	SBUS	3.2190e-003	1.6390e-003
tblVehicleEF	SBUS	9.2880e-003	8.7390e-003
tblVehicleEF	SBUS	5.0000e-005	3.9000e-005
tblVehicleEF	SBUS	8.7000e-004	0.04
tblVehicleEF	SBUS	8.3040e-003	9.3350e-003
tblVehicleEF	SBUS	0.46	0.32
tblVehicleEF	SBUS	4.1400e-004	0.04
tblVehicleEF	SBUS	0.07	0.13
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.04	0.03

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	UBUS	1.86	0.63
tblVehicleEF	UBUS	2.1860e-003	2.5020e-003
tblVehicleEF	UBUS	14.11	7.38
tblVehicleEF	UBUS	0.14	0.53
tblVehicleEF	UBUS	1,668.67	969.99
tblVehicleEF	UBUS	1.40	3.03
tblVehicleEF	UBUS	0.28	0.15
tblVehicleEF	UBUS	1.2560e-003	4.5820e-003
tblVehicleEF	UBUS	0.71	0.26
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	0.07	0.15
tblVehicleEF	UBUS	0.03	0.06
tblVehicleEF	UBUS	5.1160e-003	4.8220e-003
tblVehicleEF	UBUS	1.5000e-005	1.3000e-005
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	8.3320e-003	0.01
tblVehicleEF	UBUS	4.8930e-003	4.6090e-003
tblVehicleEF	UBUS	1.4000e-005	1.2000e-005
tblVehicleEF	UBUS	6.1000e-005	7.0380e-003
tblVehicleEF	UBUS	8.1400e-004	2.0980e-003
tblVehicleEF	UBUS	3.6000e-005	7.0380e-003
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.7600e-004	7.8780e-003
tblVehicleEF	UBUS	9.2610e-003	8.3780e-003
tblVehicleEF	UBUS	0.01	7.3890e-003
tblVehicleEF	UBUS	1.4000e-005	3.0000e-005
tblVehicleEF	UBUS	6.1000e-005	7.0380e-003
tblVehicleEF	UBUS	8.1400e-004	2.0980e-003
tblVehicleEF	UBUS	3.6000e-005	7.0380e-003

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	UBUS	1.90	0.69
tblVehicleEF	UBUS	1.7600e-004	7.8780e-003
tblVehicleEF	UBUS	0.01	9.1730e-003
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	PB_TP	65.00	0.00
tblVehicleTrips	PR_TP	14.00	100.00
tblVehicleTrips	ST_TR	322.50	180.67
tblVehicleTrips	SU_TR	322.50	180.67
tblVehicleTrips	WD_TR	322.50	180.67
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0106	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004
Energy	1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.2168	1.2168	2.0000e-005	2.0000e-005	1.2240
Mobile	0.4751	0.4418	2.9761	0.0101	0.9842	6.5400e-003	0.9908	0.2459	6.1300e-003	0.2520	0.0000	942.1815	942.1815	0.0365	0.0476	957.2765

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0222	4.3000e-004	0.0226	8.0000e-005	5.0000e-005	0.0389
Total	0.4859	0.4429	2.9771	0.0101	0.9842	6.6200e-003	0.9908	0.2459	6.2100e-003	0.2521	0.0222	943.3991	943.4213	0.0366	0.0477	958.5397

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0106	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004
Energy	1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.2168	1.2168	2.0000e-005	2.0000e-005	1.2240
Mobile	0.4751	0.4418	2.9761	0.0101	0.9842	6.5400e-003	0.9908	0.2459	6.1300e-003	0.2520	0.0000	942.1815	942.1815	0.0365	0.0476	957.2765
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0222	4.3000e-004	0.0226	8.0000e-005	5.0000e-005	0.0389
Total	0.4859	0.4429	2.9771	0.0101	0.9842	6.6200e-003	0.9908	0.2459	6.2100e-003	0.2521	0.0222	943.3991	943.4213	0.0366	0.0477	958.5397

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4.0 Operational Detail - Mobile

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.4751	0.4418	2.9761	0.0101	0.9842	6.5400e-003	0.9908	0.2459	6.1300e-003	0.2520	0.0000	942.1815	942.1815	0.0365	0.0476	957.2765
Unmitigated	0.4751	0.4418	2.9761	0.0101	0.9842	6.5400e-003	0.9908	0.2459	6.1300e-003	0.2520	0.0000	942.1815	942.1815	0.0365	0.0476	957.2765

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market with Gas Pumps	1,084.02	1,084.02	1,084.02	2,887,403	2,887,403
Parking Lot	0.00	0.00	0.00		
Total	1,084.02	1,084.02	1,084.02	2,887,403	2,887,403

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Convenience Market with Gas	9.50	7.30	7.30	0.80	80.20	19.00	100	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
Convenience Market with Gas	0.531238	0.031583	0.233465	0.129376	0.026017	0.006449	0.011093	0.023253	0.001673	0.001224	0.003477	0.000536	0.000615
Parking Lot	0.531238	0.031583	0.233465	0.129376	0.026017	0.006449	0.011093	0.023253	0.001673	0.001224	0.003477	0.000536	0.000615

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara 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	0.0199	0.0199	0.0000	0.0000	0.0199
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0199	0.0199	0.0000	0.0000	0.0199
NaturalGas Mitigated	1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1969	1.1969	2.0000e-005	2.0000e-005	1.2040
NaturalGas Unmitigated	1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1969	1.1969	2.0000e-005	2.0000e-005	1.2040

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					
Convenience Market with Gas	22429.5	1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1969	1.1969	2.0000e-005	2.0000e-005	1.2040

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	
Total		1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1969	1.1969	2.0000e-005	2.0000e-005	1.2040

Mitigated

	Natural Gas 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					
Convenience Market with Gas	22429.5	1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1969	1.1969	2.0000e-005	2.0000e-005	1.2040
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		1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1969	1.1969	2.0000e-005	2.0000e-005	1.2040

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market with Gas	16742.9	0.0152	0.0000	0.0000	0.0152
Parking Lot	5207.3	4.7200e-003	0.0000	0.0000	4.7200e-003

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total		0.0199	0.0000	0.0000	0.0199
-------	--	--------	--------	--------	--------

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market with Gas	16742.9	0.0152	0.0000	0.0000	0.0152
Parking Lot	5207.3	4.7200e-003	0.0000	0.0000	4.7200e-003
Total		0.0199	0.0000	0.0000	0.0199

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0106	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated	0.0106	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004
-------------	--------	--------	-------------	--------	--	--------	--------	--	--------	--------	--------	-------------	-------------	--------	--------	-------------

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	1.4100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.2200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004
Total	0.0106	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004

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	1.4100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.2200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Landscaping	1.0000e-005	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004
Total	0.0106	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004

7.0 Water Detail**7.1 Mitigation Measures Water**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0226	8.0000e-005	5.0000e-005	0.0389
Unmitigated	0.0226	8.0000e-005	5.0000e-005	0.0389

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market with Gas	0.0627431 /	0.0226	8.0000e-005	5.0000e-005	0.0389

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0226	8.0000e-005	5.0000e-005	0.0389

Mitigated

Indoor/Outdoor Use		Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market with Gas	0.0627431 /	0.0226	8.0000e-005	5.0000e-005	0.0389
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0226	8.0000e-005	5.0000e-005	0.0389

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing 2030
Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Convenience Market with Gas Pumps	4.00	Pump	0.48	880.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	3			Operational Year	2030
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MW hr)	203.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - Provided land uses - project description
- Construction Phase - Existing Use - No Construction
- Off-road Equipment - Provided equip amount & use
- Off-road Equipment - Existing Use - No Construction
- Grading - Existing Use - No Construction
- Demolition -
- Trips and VMT -
- Vehicle Trips - Trip gen provided by traffic and adjusted for different land uses, 100% primary to capture traffic passby reduction
- Vehicle Emission Factors - EMFAC2021 Santa Clara County Vehicle Emissions Factors 2030
- Fleet Mix - EMFAC2021 Santa Clara County Fleet Mix 2030
- Water And Wastewater -

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Construction Off-road Equipment Mitigation -

Energy Use - Historical energy data

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblEnergyUse	LightingElect	4.53	3.71
tblEnergyUse	T24E	2.77	1.91
tblEnergyUse	T24NG	10.42	8.53
tblFleetMix	HHD	6.1320e-003	0.02
tblFleetMix	LDA	0.58	0.53
tblFleetMix	LDT1	0.06	0.03
tblFleetMix	LDT2	0.18	0.23
tblFleetMix	LHD1	0.02	0.03
tblFleetMix	LHD2	5.3980e-003	6.4488e-003
tblFleetMix	MCY	0.02	3.4772e-003
tblFleetMix	MDV	0.12	0.13
tblFleetMix	MH	2.5260e-003	6.1470e-004
tblFleetMix	MHD	8.2190e-003	0.01
tblFleetMix	OBUS	8.5200e-004	1.6732e-003
tblFleetMix	SBUS	8.3700e-004	5.3567e-004
tblFleetMix	UBUS	3.3500e-004	1.2242e-003
tblLandUse	LandUseSquareFeet	564.70	880.00
tblLandUse	LotAcreage	0.01	0.48
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblVehicleEF	HHD	0.02	0.20
tblVehicleEF	HHD	0.05	0.09

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	HHD	0.00	4.4009e-008
tblVehicleEF	HHD	6.28	5.00
tblVehicleEF	HHD	0.41	0.63
tblVehicleEF	HHD	6.6850e-003	8.7263e-004
tblVehicleEF	HHD	930.05	719.71
tblVehicleEF	HHD	1,226.35	1,395.93
tblVehicleEF	HHD	0.05	9.4375e-003
tblVehicleEF	HHD	0.15	0.12
tblVehicleEF	HHD	0.19	0.22
tblVehicleEF	HHD	2.0000e-006	3.7716e-006
tblVehicleEF	HHD	5.20	3.81
tblVehicleEF	HHD	2.52	1.45
tblVehicleEF	HHD	2.31	2.60
tblVehicleEF	HHD	2.1460e-003	1.7376e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	1.4395e-007
tblVehicleEF	HHD	2.0530e-003	1.6556e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.9050e-003	8.7863e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	1.3236e-007
tblVehicleEF	HHD	1.0000e-006	4.0228e-005
tblVehicleEF	HHD	5.8000e-005	1.2695e-005
tblVehicleEF	HHD	0.42	0.31
tblVehicleEF	HHD	1.0000e-006	4.0228e-005
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	2.5000e-005	1.1399e-004

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	HHD	2.0000e-006	2.3855e-007
tblVehicleEF	HHD	8.6530e-003	6.2147e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.0000e-006	9.3299e-008
tblVehicleEF	HHD	1.0000e-006	4.0228e-005
tblVehicleEF	HHD	5.8000e-005	1.2695e-005
tblVehicleEF	HHD	0.49	0.54
tblVehicleEF	HHD	1.0000e-006	4.0228e-005
tblVehicleEF	HHD	0.07	0.10
tblVehicleEF	HHD	2.5000e-005	1.1399e-004
tblVehicleEF	HHD	2.0000e-006	2.6119e-007
tblVehicleEF	LDA	9.5900e-004	1.2508e-003
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.41	0.48
tblVehicleEF	LDA	1.72	2.09
tblVehicleEF	LDA	213.76	218.64
tblVehicleEF	LDA	45.13	55.99
tblVehicleEF	LDA	3.1760e-003	3.1649e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.13	0.18
tblVehicleEF	LDA	0.04	7.0779e-003
tblVehicleEF	LDA	8.0000e-003	8.0000e-003
tblVehicleEF	LDA	9.2900e-004	8.3824e-004
tblVehicleEF	LDA	1.2930e-003	1.4817e-003
tblVehicleEF	LDA	0.02	2.4773e-003
tblVehicleEF	LDA	2.0000e-003	2.0000e-003
tblVehicleEF	LDA	8.5500e-004	7.7101e-004
tblVehicleEF	LDA	1.1890e-003	1.3623e-003

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LDA	0.02	0.23
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	0.02	0.23
tblVehicleEF	LDA	3.2460e-003	4.3404e-003
tblVehicleEF	LDA	0.02	0.17
tblVehicleEF	LDA	0.12	0.20
tblVehicleEF	LDA	1.9770e-003	2.1614e-003
tblVehicleEF	LDA	4.1700e-004	5.5354e-004
tblVehicleEF	LDA	0.02	0.23
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	0.02	0.23
tblVehicleEF	LDA	4.7160e-003	6.3287e-003
tblVehicleEF	LDA	0.02	0.17
tblVehicleEF	LDA	0.13	0.22
tblVehicleEF	LDT1	1.6710e-003	3.2732e-003
tblVehicleEF	LDT1	0.04	0.07
tblVehicleEF	LDT1	0.54	0.90
tblVehicleEF	LDT1	1.85	3.41
tblVehicleEF	LDT1	258.40	296.02
tblVehicleEF	LDT1	55.17	76.24
tblVehicleEF	LDT1	3.7700e-003	5.8697e-003
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.03	0.07
tblVehicleEF	LDT1	0.15	0.27
tblVehicleEF	LDT1	0.04	9.1380e-003
tblVehicleEF	LDT1	8.0000e-003	8.0000e-003
tblVehicleEF	LDT1	1.0700e-003	1.2601e-003
tblVehicleEF	LDT1	1.4820e-003	2.0739e-003
tblVehicleEF	LDT1	0.02	3.1983e-003

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LDT1	2.0000e-003	2.0000e-003
tblVehicleEF	LDT1	9.8400e-004	1.1586e-003
tblVehicleEF	LDT1	1.3630e-003	1.9069e-003
tblVehicleEF	LDT1	0.05	0.47
tblVehicleEF	LDT1	0.09	0.12
tblVehicleEF	LDT1	0.04	0.47
tblVehicleEF	LDT1	6.5000e-003	0.01
tblVehicleEF	LDT1	0.06	0.36
tblVehicleEF	LDT1	0.15	0.34
tblVehicleEF	LDT1	2.3890e-003	2.9265e-003
tblVehicleEF	LDT1	5.1000e-004	7.5371e-004
tblVehicleEF	LDT1	0.05	0.47
tblVehicleEF	LDT1	0.09	0.12
tblVehicleEF	LDT1	0.04	0.47
tblVehicleEF	LDT1	9.4830e-003	0.02
tblVehicleEF	LDT1	0.06	0.36
tblVehicleEF	LDT1	0.17	0.37
tblVehicleEF	LDT2	1.7260e-003	1.8780e-003
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.56	0.64
tblVehicleEF	LDT2	2.29	2.73
tblVehicleEF	LDT2	267.19	304.99
tblVehicleEF	LDT2	57.57	77.16
tblVehicleEF	LDT2	4.0490e-003	4.5006e-003
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.17	0.25
tblVehicleEF	LDT2	0.04	8.8377e-003
tblVehicleEF	LDT2	8.0000e-003	8.0000e-003

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LDT2	1.0240e-003	9.8896e-004
tblVehicleEF	LDT2	1.3590e-003	1.6579e-003
tblVehicleEF	LDT2	0.02	3.0932e-003
tblVehicleEF	LDT2	2.0000e-003	2.0000e-003
tblVehicleEF	LDT2	9.4300e-004	9.0987e-004
tblVehicleEF	LDT2	1.2500e-003	1.5244e-003
tblVehicleEF	LDT2	0.05	0.25
tblVehicleEF	LDT2	0.09	0.06
tblVehicleEF	LDT2	0.05	0.25
tblVehicleEF	LDT2	6.5530e-003	6.8652e-003
tblVehicleEF	LDT2	0.05	0.19
tblVehicleEF	LDT2	0.18	0.27
tblVehicleEF	LDT2	2.4710e-003	3.0147e-003
tblVehicleEF	LDT2	5.3200e-004	7.6281e-004
tblVehicleEF	LDT2	0.05	0.25
tblVehicleEF	LDT2	0.09	0.06
tblVehicleEF	LDT2	0.05	0.25
tblVehicleEF	LDT2	9.5240e-003	0.01
tblVehicleEF	LDT2	0.05	0.19
tblVehicleEF	LDT2	0.20	0.29
tblVehicleEF	LHD1	4.1480e-003	4.3354e-003
tblVehicleEF	LHD1	5.1950e-003	4.0282e-003
tblVehicleEF	LHD1	9.0230e-003	0.02
tblVehicleEF	LHD1	0.18	0.18
tblVehicleEF	LHD1	0.47	0.54
tblVehicleEF	LHD1	0.89	2.05
tblVehicleEF	LHD1	8.25	7.81
tblVehicleEF	LHD1	698.55	665.93
tblVehicleEF	LHD1	10.09	15.88

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LHD1	7.2900e-004	5.8852e-004
tblVehicleEF	LHD1	0.04	0.04
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.05	0.04
tblVehicleEF	LHD1	0.30	0.31
tblVehicleEF	LHD1	0.23	0.33
tblVehicleEF	LHD1	9.1500e-004	6.6564e-004
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	9.9010e-003	9.3434e-003
tblVehicleEF	LHD1	7.0190e-003	9.1889e-003
tblVehicleEF	LHD1	2.1000e-004	1.3386e-004
tblVehicleEF	LHD1	8.7500e-004	6.3684e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4750e-003	2.3359e-003
tblVehicleEF	LHD1	6.6710e-003	8.7606e-003
tblVehicleEF	LHD1	1.9300e-004	1.2308e-004
tblVehicleEF	LHD1	1.4030e-003	0.09
tblVehicleEF	LHD1	0.05	0.02
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	7.7200e-004	0.09
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.18	0.12
tblVehicleEF	LHD1	0.04	0.08
tblVehicleEF	LHD1	8.0000e-005	7.5971e-005
tblVehicleEF	LHD1	6.8120e-003	6.4983e-003
tblVehicleEF	LHD1	1.0000e-004	1.5704e-004
tblVehicleEF	LHD1	1.4030e-003	0.09
tblVehicleEF	LHD1	0.05	0.02
tblVehicleEF	LHD1	0.02	0.02

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LHD1	7.7200e-004	0.09
tblVehicleEF	LHD1	0.09	0.06
tblVehicleEF	LHD1	0.18	0.12
tblVehicleEF	LHD1	0.05	0.09
tblVehicleEF	LHD2	2.5050e-003	2.5083e-003
tblVehicleEF	LHD2	5.3390e-003	4.4567e-003
tblVehicleEF	LHD2	4.8110e-003	8.7205e-003
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.49	0.38
tblVehicleEF	LHD2	0.48	1.11
tblVehicleEF	LHD2	13.00	13.36
tblVehicleEF	LHD2	679.81	713.03
tblVehicleEF	LHD2	6.44	8.54
tblVehicleEF	LHD2	1.6660e-003	1.6805e-003
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.38	0.50
tblVehicleEF	LHD2	0.12	0.18
tblVehicleEF	LHD2	1.5020e-003	1.4561e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.0600e-004	5.6720e-005
tblVehicleEF	LHD2	1.4370e-003	1.3932e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.7110e-003	2.6336e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	9.8000e-005	5.2152e-005

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LHD2	6.4200e-004	0.05
tblVehicleEF	LHD2	0.02	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.7400e-004	0.05
tblVehicleEF	LHD2	0.10	0.08
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	1.2400e-004	1.2789e-004
tblVehicleEF	LHD2	6.5570e-003	6.8595e-003
tblVehicleEF	LHD2	6.4000e-005	8.4474e-005
tblVehicleEF	LHD2	6.4200e-004	0.05
tblVehicleEF	LHD2	0.02	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	3.7400e-004	0.05
tblVehicleEF	LHD2	0.11	0.10
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.02	0.05
tblVehicleEF	MCY	0.32	0.14
tblVehicleEF	MCY	0.25	0.16
tblVehicleEF	MCY	17.61	11.05
tblVehicleEF	MCY	9.20	7.83
tblVehicleEF	MCY	209.76	185.58
tblVehicleEF	MCY	59.23	42.83
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	6.3407e-003
tblVehicleEF	MCY	1.14	0.51
tblVehicleEF	MCY	0.27	0.10
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	4.0000e-003	4.0000e-003

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	MCY	2.1380e-003	1.9967e-003
tblVehicleEF	MCY	2.8620e-003	3.4163e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.9940e-003	1.8635e-003
tblVehicleEF	MCY	2.6760e-003	3.1969e-003
tblVehicleEF	MCY	0.89	3.68
tblVehicleEF	MCY	0.63	3.56
tblVehicleEF	MCY	0.47	3.68
tblVehicleEF	MCY	2.13	0.89
tblVehicleEF	MCY	0.46	3.78
tblVehicleEF	MCY	1.88	1.13
tblVehicleEF	MCY	2.0760e-003	1.8346e-003
tblVehicleEF	MCY	5.8600e-004	4.2344e-004
tblVehicleEF	MCY	0.89	0.08
tblVehicleEF	MCY	0.63	3.56
tblVehicleEF	MCY	0.47	0.08
tblVehicleEF	MCY	2.67	1.09
tblVehicleEF	MCY	0.46	3.78
tblVehicleEF	MCY	2.04	1.23
tblVehicleEF	MDV	1.7720e-003	2.0971e-003
tblVehicleEF	MDV	0.04	0.07
tblVehicleEF	MDV	0.55	0.66
tblVehicleEF	MDV	2.32	2.78
tblVehicleEF	MDV	321.60	364.04
tblVehicleEF	MDV	67.92	91.48
tblVehicleEF	MDV	5.2660e-003	5.4054e-003
tblVehicleEF	MDV	0.02	0.03
tblVehicleEF	MDV	0.04	0.05
tblVehicleEF	MDV	0.18	0.27

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	MDV	0.04	8.8924e-003
tblVehicleEF	MDV	8.0000e-003	8.0000e-003
tblVehicleEF	MDV	1.0330e-003	9.7072e-004
tblVehicleEF	MDV	1.3630e-003	1.6079e-003
tblVehicleEF	MDV	0.02	3.1123e-003
tblVehicleEF	MDV	2.0000e-003	2.0000e-003
tblVehicleEF	MDV	9.5300e-004	8.9404e-004
tblVehicleEF	MDV	1.2530e-003	1.4784e-003
tblVehicleEF	MDV	0.06	0.28
tblVehicleEF	MDV	0.10	0.07
tblVehicleEF	MDV	0.06	0.28
tblVehicleEF	MDV	6.8860e-003	8.0915e-003
tblVehicleEF	MDV	0.05	0.21
tblVehicleEF	MDV	0.20	0.30
tblVehicleEF	MDV	2.9760e-003	3.5970e-003
tblVehicleEF	MDV	6.2800e-004	9.0434e-004
tblVehicleEF	MDV	0.06	0.28
tblVehicleEF	MDV	0.10	0.07
tblVehicleEF	MDV	0.06	0.28
tblVehicleEF	MDV	9.9820e-003	0.01
tblVehicleEF	MDV	0.05	0.21
tblVehicleEF	MDV	0.22	0.33
tblVehicleEF	MH	5.0270e-003	6.0741e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.31	0.37
tblVehicleEF	MH	1.64	1.92
tblVehicleEF	MH	1,350.27	1,656.25
tblVehicleEF	MH	15.54	20.13
tblVehicleEF	MH	0.05	0.07

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.06	1.28
tblVehicleEF	MH	0.24	0.30
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.1200e-004	2.3307e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2970e-003	3.3357e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.9500e-004	2.1430e-004
tblVehicleEF	MH	0.35	20.30
tblVehicleEF	MH	0.03	4.90
tblVehicleEF	MH	0.14	20.30
tblVehicleEF	MH	0.04	0.05
tblVehicleEF	MH	5.8500e-003	0.12
tblVehicleEF	MH	0.07	0.09
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.5400e-004	1.9899e-004
tblVehicleEF	MH	0.35	20.30
tblVehicleEF	MH	0.03	4.90
tblVehicleEF	MH	0.14	20.30
tblVehicleEF	MH	0.05	0.06
tblVehicleEF	MH	5.8500e-003	0.12
tblVehicleEF	MH	0.08	0.10
tblVehicleEF	MHD	3.8320e-003	0.02
tblVehicleEF	MHD	1.0340e-003	9.4648e-003
tblVehicleEF	MHD	8.3830e-003	6.5780e-003
tblVehicleEF	MHD	0.41	0.63

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	MHD	0.15	0.16
tblVehicleEF	MHD	0.87	0.72
tblVehicleEF	MHD	65.10	143.38
tblVehicleEF	MHD	993.45	1,074.54
tblVehicleEF	MHD	8.55	6.79
tblVehicleEF	MHD	9.3710e-003	0.02
tblVehicleEF	MHD	0.12	0.14
tblVehicleEF	MHD	7.7400e-003	4.7598e-003
tblVehicleEF	MHD	0.34	0.73
tblVehicleEF	MHD	1.43	0.58
tblVehicleEF	MHD	1.69	1.22
tblVehicleEF	MHD	1.6200e-004	6.5479e-004
tblVehicleEF	MHD	0.13	0.04
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.0060e-003	5.4200e-003
tblVehicleEF	MHD	1.1200e-004	8.2251e-005
tblVehicleEF	MHD	1.5500e-004	6.2582e-004
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	3.0000e-003	3.0000e-003
tblVehicleEF	MHD	6.6960e-003	5.1779e-003
tblVehicleEF	MHD	1.0300e-004	7.5627e-005
tblVehicleEF	MHD	2.8900e-004	0.01
tblVehicleEF	MHD	0.01	3.4196e-003
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.6800e-004	0.01
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	6.1800e-004	1.3196e-003

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	MHD	9.4800e-003	0.01
tblVehicleEF	MHD	8.5000e-005	6.7097e-005
tblVehicleEF	MHD	2.8900e-004	0.01
tblVehicleEF	MHD	0.01	3.4196e-003
tblVehicleEF	MHD	0.03	0.04
tblVehicleEF	MHD	1.6800e-004	0.01
tblVehicleEF	MHD	0.01	0.03
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	OBUS	7.0980e-003	7.5210e-003
tblVehicleEF	OBUS	2.1970e-003	0.01
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.64	0.55
tblVehicleEF	OBUS	0.26	0.29
tblVehicleEF	OBUS	1.58	1.46
tblVehicleEF	OBUS	97.36	89.81
tblVehicleEF	OBUS	1,210.85	1,245.37
tblVehicleEF	OBUS	13.46	12.02
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.12	0.15
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.43	0.33
tblVehicleEF	OBUS	1.45	0.83
tblVehicleEF	OBUS	1.13	0.93
tblVehicleEF	OBUS	1.4200e-004	3.1074e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.8820e-003	0.01
tblVehicleEF	OBUS	1.5600e-004	1.1806e-004

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	OBUS	1.3600e-004	2.9717e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	3.0000e-003	3.0000e-003
tblVehicleEF	OBUS	7.5260e-003	0.01
tblVehicleEF	OBUS	1.4400e-004	1.0855e-004
tblVehicleEF	OBUS	1.0620e-003	0.07
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	4.8700e-004	0.07
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.08
tblVehicleEF	OBUS	0.08	0.07
tblVehicleEF	OBUS	9.2400e-004	8.4613e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.3300e-004	1.1882e-004
tblVehicleEF	OBUS	1.0620e-003	0.07
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	4.8700e-004	0.07
tblVehicleEF	OBUS	0.02	0.05
tblVehicleEF	OBUS	0.05	0.08
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	SBUS	0.07	0.08
tblVehicleEF	SBUS	4.4040e-003	0.09
tblVehicleEF	SBUS	6.3380e-003	5.2156e-003
tblVehicleEF	SBUS	2.93	1.82
tblVehicleEF	SBUS	0.37	0.72
tblVehicleEF	SBUS	0.86	0.67
tblVehicleEF	SBUS	337.48	181.81

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	SBUS	970.50	941.81
tblVehicleEF	SBUS	5.06	3.93
tblVehicleEF	SBUS	0.04	0.02
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	6.4910e-003	4.8476e-003
tblVehicleEF	SBUS	2.71	1.09
tblVehicleEF	SBUS	3.09	1.57
tblVehicleEF	SBUS	1.18	0.52
tblVehicleEF	SBUS	2.0480e-003	7.4627e-004
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	8.5750e-003
tblVehicleEF	SBUS	6.8000e-005	4.5792e-005
tblVehicleEF	SBUS	1.9600e-003	7.1267e-004
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.6690e-003	2.6104e-003
tblVehicleEF	SBUS	0.02	8.1872e-003
tblVehicleEF	SBUS	6.2000e-005	4.2104e-005
tblVehicleEF	SBUS	8.7000e-004	0.04
tblVehicleEF	SBUS	8.3040e-003	9.3352e-003
tblVehicleEF	SBUS	0.32	0.20
tblVehicleEF	SBUS	4.1400e-004	0.04
tblVehicleEF	SBUS	0.06	0.04
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.04	0.03
tblVehicleEF	SBUS	3.2190e-003	1.6395e-003
tblVehicleEF	SBUS	9.2880e-003	8.7391e-003
tblVehicleEF	SBUS	5.0000e-005	3.8847e-005
tblVehicleEF	SBUS	8.7000e-004	0.04

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	SBUS	8.3040e-003	9.3352e-003
tblVehicleEF	SBUS	0.46	0.32
tblVehicleEF	SBUS	4.1400e-004	0.04
tblVehicleEF	SBUS	0.07	0.13
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.04	0.03
tblVehicleEF	UBUS	1.86	0.63
tblVehicleEF	UBUS	2.1860e-003	2.5024e-003
tblVehicleEF	UBUS	14.11	7.38
tblVehicleEF	UBUS	0.14	0.53
tblVehicleEF	UBUS	1,668.67	969.99
tblVehicleEF	UBUS	1.40	3.03
tblVehicleEF	UBUS	0.28	0.15
tblVehicleEF	UBUS	1.2560e-003	4.5820e-003
tblVehicleEF	UBUS	0.71	0.26
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	0.07	0.15
tblVehicleEF	UBUS	0.03	0.06
tblVehicleEF	UBUS	5.1160e-003	4.8221e-003
tblVehicleEF	UBUS	1.5000e-005	1.2612e-005
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	8.3320e-003	0.01
tblVehicleEF	UBUS	4.8930e-003	4.6095e-003
tblVehicleEF	UBUS	1.4000e-005	1.1596e-005
tblVehicleEF	UBUS	6.1000e-005	7.0381e-003
tblVehicleEF	UBUS	8.1400e-004	2.0980e-003
tblVehicleEF	UBUS	3.6000e-005	7.0381e-003
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.7600e-004	7.8778e-003

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	UBUS	9.2610e-003	8.3785e-003
tblVehicleEF	UBUS	0.01	7.3894e-003
tblVehicleEF	UBUS	1.4000e-005	2.9915e-005
tblVehicleEF	UBUS	6.1000e-005	7.0381e-003
tblVehicleEF	UBUS	8.1400e-004	2.0980e-003
tblVehicleEF	UBUS	3.6000e-005	7.0381e-003
tblVehicleEF	UBUS	1.90	0.69
tblVehicleEF	UBUS	1.7600e-004	7.8778e-003
tblVehicleEF	UBUS	0.01	9.1734e-003
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	PB_TP	65.00	0.00
tblVehicleTrips	PR_TP	14.00	100.00
tblVehicleTrips	ST_TR	322.50	199.50
tblVehicleTrips	SU_TR	322.50	199.50
tblVehicleTrips	WD_TR	322.50	199.50

2.0 Emissions Summary**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.9000e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Energy	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	1.1431	1.1431	1.1000e-004	2.0000e-005	1.1524
Mobile	0.3498	0.3252	2.1908	7.4500e-003	0.7245	4.8100e-003	0.7293	0.1810	4.5100e-003	0.1855	0.0000	693.5862	693.5862	0.0268	0.0350	704.6983

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0133	0.0292	0.0425	1.3700e-003	3.0000e-005	0.0865
Total	0.3537	0.3257	2.1913	7.4500e-003	0.7245	4.8400e-003	0.7294	0.1810	4.5400e-003	0.1855	0.0133	694.7586	694.7719	0.0283	0.0351	705.9373

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	3.9000e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Energy	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	1.1431	1.1431	1.1000e-004	2.0000e-005	1.1524
Mobile	0.3498	0.3252	2.1908	7.4500e-003	0.7245	4.8100e-003	0.7293	0.1810	4.5100e-003	0.1855	0.0000	693.5862	693.5862	0.0268	0.0350	704.6983
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0133	0.0292	0.0425	1.3700e-003	3.0000e-005	0.0865
Total	0.3537	0.3257	2.1913	7.4500e-003	0.7245	4.8400e-003	0.7294	0.1810	4.5400e-003	0.1855	0.0133	694.7586	694.7719	0.0283	0.0351	705.9373

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4.0 Operational Detail - Mobile

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**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	0.3498	0.3252	2.1908	7.4500e-003	0.7245	4.8100e-003	0.7293	0.1810	4.5100e-003	0.1855	0.0000	693.5862	693.5862	0.0268	0.0350	704.6983
Unmitigated	0.3498	0.3252	2.1908	7.4500e-003	0.7245	4.8100e-003	0.7293	0.1810	4.5100e-003	0.1855	0.0000	693.5862	693.5862	0.0268	0.0350	704.6983

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market with Gas Pumps	798.00	798.00	798.00	2,125,558	2,125,558
Total	798.00	798.00	798.00	2,125,558	2,125,558

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Convenience Market with Gas	9.50	7.30	7.30	0.80	80.20	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market with Gas Pumps	0.531238	0.031583	0.233465	0.129376	0.026017	0.006449	0.011093	0.023253	0.001673	0.001224	0.003477	0.000536	0.000615

5.0 Energy Detail

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Historical Energy Use: Y

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	0.6449	0.6449	1.0000e-004	1.0000e-005	0.6512
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.6449	0.6449	1.0000e-004	1.0000e-005	0.6512
NaturalGas Mitigated	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4983	0.4983	1.0000e-005	1.0000e-005	0.5012
NaturalGas Unmitigated	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4983	0.4983	1.0000e-005	1.0000e-005	0.5012

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					
Convenience Market with Gas	9336.8	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4983	0.4983	1.0000e-005	1.0000e-005	0.5012
Total		5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4983	0.4983	1.0000e-005	1.0000e-005	0.5012

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**Mitigated**

	Natural Gas 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					
Convenience Market with Gas	9336.8	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4983	0.4983	1.0000e-005	1.0000e-005	0.5012
Total		5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4983	0.4983	1.0000e-005	1.0000e-005	0.5012

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market with Gas	6969.6	0.6449	1.0000e-004	1.0000e-005	0.6512
Total		0.6449	1.0000e-004	1.0000e-005	0.6512

Mitigated

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara 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			
Convenience Market with Gas	6969.6	0.6449	1.0000e-004	1.0000e-005	0.6512
Total		0.6449	1.0000e-004	1.0000e-005	0.6512

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	3.9000e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Unmitigated	3.9000e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005

6.2 Area by SubCategory**Unmitigated**

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.4400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Total	3.9000e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005

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	4.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.4400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Total	3.9000e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005

7.0 Water Detail

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**7.1 Mitigation Measures Water**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0425	1.3700e-003	3.0000e-005	0.0865
Unmitigated	0.0425	1.3700e-003	3.0000e-005	0.0865

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market with Gas	0.0418287 / 0.025637	0.0425	1.3700e-003	3.0000e-005	0.0865
Total		0.0425	1.3700e-003	3.0000e-005	0.0865

Mitigated

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Indoor/Outdoor Use		Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market with Gas	0.0418287 / 0.025637	0.0425	1.3700e-003	3.0000e-005	0.0865
Total		0.0425	1.3700e-003	3.0000e-005	0.0865

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use**Unmitigated**

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Attachment 3: EMFAC2021 Calculations

CalEEMod Construction Inputs

Phase	CalEEMod WORKER TRIPS	CalEEMod VENDOR TRIPS	Total Worker Trips	Total Vendor Trips	CalEEMod HAULING TRIPS	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class	Worker VMT	Vendor VMT	Hauling VMT
Demolition	10	0	30	0	34	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	324	0	680
Site Preparation	8	0	16	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	172.8	0	0
Grading	8	0	24	0	62	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	259.2	0	1240
Trenching	3	0	9	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	97.2	0	0
Building Construction	7	3	973	417	24	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	10508.4	3044.1	175.2
Architectural Coating	1	0	15	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	162	0	0
Paving	8	0	24	0	23	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	259.2	0	167.9

Number of Days Per Year

2022	1/3/22	8/19/22	229	165
			229	165 Total Workdays

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	1/3/2022	1/5/2022	5	3
Site Preparation	1/6/2022	1/7/2022	5	2
Grading	1/10/2022	1/12/2022	5	3
Trenching	1/13/2022	1/17/2022	5	3
Building Construction	1/18/2022	7/29/2022	5	139
Architectural Coating	8/1/2022	8/19/2022	5	15
Paving	8/16/2022	8/18/2022	5	3

Summary of Construction Traffic Emissions (EMFAC2021)

Pollutants YEAR	ROG	NOx	CO	SO2	Fugitive PM10 <i>Tons</i>	Exhaust PM10 <i>Tons</i>	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2	CH4 <i>Metric Tons</i>	N2O	CO2e
Criteria Pollutants														
2022	0.0026	0.0174	0.0251	0.0001	0.0056	0.0010	0.0066	0.0008	0.0004	0.0013	12.2096	0.0007	0.0014	12.6535
Toxic Air Contaminants (0.5 Mile Trip Length)														
2022	0.0022	0.0043	0.0083	0.00001	0.0003	0.0001	0.0003	0.00004	0.00002	0.0001	1.0200	0.0002	0.0002	1.0736

CalEEMod EMFAC2021 Emission Factors Input													Year	2023
Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.005543	0.0033	0.012943	0.235880982	0.0074	0	0	0.072953	0
A	CH4_RUNEX	0.002309	0.006952	0.00308	0.004283	0.009183	0.00757	0.009907	0.125647179	0.009278	0.352428219	0.167622	0.09139	0.014501
A	CH4_STREX	0.069078	0.112042	0.086838	0.107347	0.024108	0.013298	0.009245	9.74075E-08	0.018357	0.003616871	0.187482	0.004689	0.027555
A	CO_IDLEX	0	0	0	0	0.197776	0.143864	0.673566	5.211988223	0.508403	0	0	1.616318	0
A	CO_RUNEX	0.700599	1.545577	0.885507	1.03953	0.977428	0.617452	0.40377	0.794814833	0.568279	4.150838581	13.08956	0.909279	1.613326
A	CO_STREX	3.093262	5.633529	3.848359	4.215799	2.151466	1.239679	1.152494	0.000554916	2.060102	0.526628834	8.051197	0.661172	2.629883
A	CO2_NBIO_IDLEX	0	0	0	0	8.8243	13.864	161.3373	850.5103942	84.54536	0	0	189.5327	0
A	CO2_NBIO_RUNEX	253.3603	332.0777	348.0532	420.6276	800.552	843.5283	1239.598	1643.047907	1407.274	1099.257347	188.3093	1037.354	1694.252
A	CO2_NBIO_STREX	65.49895	88.11332	89.31449	107.0911	18.04818	10.22295	8.835974	0.026904766	16.13719	3.194751579	49.59811	3.671843	23.09757
A	NOX_IDLEX	0	0	0	0	0.050397	0.096708	0.924044	4.162978677	0.357592	0	0	1.426205	0
A	NOX_RUNEX	0.042384	0.142891	0.076248	0.114857	0.752921	0.999586	1.219275	1.930480649	1.034947	0.328578112	0.586927	2.743347	1.589794
A	NOX_STREX	0.244924	0.402457	0.354278	0.457198	0.460153	0.255168	1.396113	2.692504026	0.9621	0.03844891	0.142374	0.466956	0.298917
A	PM10_IDLEX	0	0	0	0	0.000676	0.001353	0.002542	0.002283218	0.000434	0	0	0.001415	0
A	PM10_PMBW	0.0072	0.009228	0.008874	0.009032	0.078	0.091	0.045469	0.081444361	0.049774	0.110338825	0.012	0.044914	0.044949
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009403	0.010643	0.012	0.03512271	0.012	0.032470639	0.004	0.010632	0.013172
A	PM10_RUNEX	0.001228	0.002057	0.001379	0.001449	0.015148	0.024134	0.014931	0.02583284	0.016048	0.006236291	0.001899	0.014252	0.031355
A	PM10_STREX	0.001982	0.003071	0.00216	0.002277	0.000249	0.000113	0.000113	9.98684E-07	0.000145	1.21051E-05	0.003626	3.81E-05	0.000337
A	PM25_IDLEX	0	0	0	0	0.000647	0.001295	0.002431	0.002178658	0.000415	0	0	0.001353	0
A	PM25_PMBW	0.00252	0.00323	0.003106	0.003161	0.0273	0.03185	0.015914	0.028505526	0.017421	0.038618589	0.0042	0.01572	0.015732
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002351	0.002661	0.003	0.008780678	0.003	0.00811766	0.001	0.002658	0.003293
A	PM25_RUNEX	0.001131	0.001894	0.001269	0.001336	0.014451	0.02307	0.014277	0.024711634	0.015344	0.005962722	0.001778	0.013621	0.029948
A	PM25_STREX	0.001822	0.002824	0.001986	0.002094	0.000229	0.000103	0.000104	9.18253E-07	0.000133	1.11302E-05	0.003413	3.5E-05	0.00031
A	ROG_DIURN	0.286612	0.62671	0.296555	0.362629	0.136604	0.071391	0.028425	0.000287604	0.069952	0.009901795	3.947874	0.0249	34.57635
A	ROG_HTSK	0.085368	0.173317	0.084146	0.099202	0.035317	0.018676	0.006962	8.55424E-05	0.01756	0.003307263	3.5601	0.007023	9.448812
A	ROG_IDLEX	0	0	0	0	0.022704	0.016516	0.02753	0.332404817	0.040107	0	0	0.177673	0
A	ROG_RESTL	0.286612	0.62671	0.296555	0.362629	0.136604	0.071391	0.028425	0.000287604	0.069952	0.009901795	3.947874	0.0249	34.57635
A	ROG_RUNEX	0.009057	0.031121	0.012293	0.01844	0.096052	0.122502	0.04435	0.019533335	0.051561	0.063067216	1.105923	0.05844	0.094137
A	ROG_RUNLS	0.215368	0.500663	0.22139	0.277716	0.193896	0.099741	0.056608	0.00077057	0.077935	0.007987303	3.745685	0.016228	0.219535
A	ROG_STREX	0.319184	0.580507	0.40628	0.544102	0.1203	0.065816	0.052337	5.28839E-07	0.097296	0.012818632	1.392636	0.026728	0.118676
A	SO2_IDLEX	0	0	0	0	8.59E-05	0.000133	0.001502	0.007460827	0.000801	0	0	0.001727	0
A	SO2_RUNEX	0.002505	0.003283	0.00344	0.004156	0.007823	0.008132	0.011768	0.01488345	0.013465	0.009433556	0.001862	0.009644	0.016619
A	SO2_STREX	0.000648	0.000871	0.000883	0.001059	0.000178	0.000101	8.74E-05	2.65981E-07	0.00016	3.15834E-05	0.00049	3.63E-05	0.000228
A	TOG_DIURN	0.286612	0.62671	0.296555	0.362629	0.136604	0.071391	0.028425	0.000287604	0.069952	0.009901795	0.087365	0.0249	34.57635
A	TOG_HTSK	0.085368	0.173317	0.084146	0.099202	0.035317	0.018676	0.006962	8.55424E-05	0.01756	0.003307263	3.5601	0.007023	9.448812
A	TOG_IDLEX	0	0	0	0	0.032285	0.022413	0.044141	0.599966232	0.053194	0	0	0.289688	0
A	TOG_RESTL	0.286612	0.62671	0.296555	0.362629	0.136604	0.071391	0.028425	0.000287604	0.069952	0.009901795	0.087365	0.0249	34.57635
A	TOG_RUNEX	0.013192	0.045377	0.017921	0.026821	0.119274	0.143057	0.060502	0.147692373	0.068837	0.423036462	1.324135	0.158821	0.125821
A	TOG_RUNLS	0.215368	0.500663	0.22139	0.277716	0.193896	0.099741	0.056608	0.00077057	0.077935	0.007987303	3.745685	0.016228	0.219535
A	TOG_STREX	0.349466	0.63558	0.444825	0.59572	0.131713	0.07206	0.057303	5.79012E-07	0.106527	0.014034789	1.513873	0.029263	0.129936
A	N2O_IDLEX	0	0	0	0	0.000643	0.00168	0.024829	0.136898066	0.01195	0	0	0.02521	0
A	N2O_RUNEX	0.004499	0.010217	0.006469	0.009248	0.042305	0.083298	0.159885	0.262148415	0.157888	0.166548434	0.040223	0.130452	0.069784
A	N2O_STREX	0.030882	0.039656	0.038251	0.041954	0.036245	0.020051	0.006097	2.46823E-05	0.015566	0.006082261	0.008379	0.004062	0.030902

CalEEMod EMFAC2021 Fleet Mix Input

Year 2023

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market with	0.54912	0.037926	0.222589	0.119508	0.023681	0.005785	0.010952	0.022598	0.001792	0.001268	0.003566	0.000525	0.00069
Parking Lot	0.54912	0.037926	0.222589	0.119508	0.023681	0.005785	0.010952	0.022598	0.001792	0.001268	0.003566	0.000525	0.00069

CalEEMod EMFAC2021 Fleet Mix Input												Existing Year	2023
FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market with	0.54912	0.037926	0.222589	0.119508	0.023681	0.005785	0.010952	0.022598	0.001792	0.001268	0.003566	0.000525467	0.00069

CalEEMod EMFAC2021 Emission Factors Input													Year	2030
Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.004335	0.002508	0.015544	0.200689575	0.007521	0	0	0.081907	0
A	CH4_RUNEX	0.001251	0.003273	0.001878	0.002097	0.004028	0.004457	0.009465	0.087739612	0.010745	0.633168094	0.142987	0.08726	0.006074
A	CH4_STREX	0.045719	0.070684	0.060357	0.065129	0.016442	0.00872	0.006578	4.40093E-08	0.013432	0.002502449	0.157242	0.005216	0.022777
A	CO_IDLEX	0	0	0	0	0.182077	0.135546	0.628457	4.997868655	0.549826	0	0	1.823721	0
A	CO_RUNEX	0.484447	0.895501	0.639473	0.660784	0.544761	0.383737	0.155266	0.628349624	0.288528	7.378159276	11.04655	0.716417	0.371762
A	CO_STREX	2.08878	3.413929	2.729559	2.781248	2.051418	1.109837	0.71851	0.00087263	1.464305	0.531636543	7.830862	0.671301	1.918466
A	CO2_NBIO_IDLEX	0	0	0	0	7.808851	13.36322	143.3801	719.710734	89.80588	0	0	181.8136	0
A	CO2_NBIO_RUNEX	218.6415	296.0222	304.9904	364.0422	665.9344	713.025	1074.538	1395.928332	1245.372	969.9926525	185.5769	941.807	1656.25
A	CO2_NBIO_STREX	55.99265	76.24029	77.1602	91.4769	15.88489	8.544837	6.787068	0.009437452	12.01881	3.025945099	42.83228	3.929487	20.12804
A	NOX_IDLEX	0	0	0	0	0.036306	0.076255	0.72827	3.806064714	0.333548	0	0	1.088868	0
A	NOX_RUNEX	0.023158	0.066035	0.041164	0.048222	0.312391	0.495733	0.584719	1.446947564	0.825827	0.255958394	0.509869	1.567888	1.278466
A	NOX_STREX	0.178975	0.272625	0.247045	0.271696	0.32724	0.178285	1.220957	2.603954429	0.931305	0.025581732	0.103081	0.520702	0.298107
A	PM10_IDLEX	0	0	0	0	0.000666	0.001456	0.000655	0.001737607	0.000311	0	0	0.000746	0
A	PM10_PMBW	0.007078	0.009138	0.008838	0.008892	0.0744	0.086908	0.04333	0.082108579	0.049981	0.147119217	0.012	0.043749	0.04494
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009343	0.010534	0.012	0.035145225	0.012	0.05700071	0.004	0.010442	0.013343
A	PM10_RUNEX	0.000838	0.00126	0.000989	0.000971	0.009189	0.01687	0.00542	0.023402177	0.012621	0.004822062	0.001997	0.008575	0.022807
A	PM10_STREX	0.001482	0.002074	0.001658	0.001608	0.000134	5.67E-05	8.23E-05	1.43954E-07	0.000118	1.26121E-05	0.003416	4.58E-05	0.000233
A	PM25_IDLEX	0	0	0	0	0.000637	0.001393	0.000626	0.001655588	0.000297	0	0	0.000713	0
A	PM25_PMBW	0.002477	0.003198	0.003093	0.003112	0.02604	0.030418	0.015165	0.028738003	0.017493	0.051491726	0.0042	0.015312	0.015729
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002336	0.002634	0.003	0.008786306	0.003	0.014250178	0.001	0.00261	0.003336
A	PM25_RUNEX	0.000771	0.001159	0.00091	0.000894	0.008761	0.016127	0.005178	0.022386582	0.012067	0.00460949	0.001864	0.008187	0.021783
A	PM25_STREX	0.001362	0.001907	0.001524	0.001478	0.000123	5.22E-05	7.56E-05	1.3236E-07	0.000109	1.15963E-05	0.003197	4.21E-05	0.000214
A	ROG_DIURN	0.227323	0.469769	0.248439	0.276762	0.087274	0.048494	0.014918	4.02275E-05	0.069383	0.007038146	3.680755	0.041692	20.29626
A	ROG_HTSK	0.060745	0.120653	0.063468	0.068938	0.020831	0.011136	0.00342	1.26947E-05	0.014014	0.002098044	3.555147	0.009335	4.900484
A	ROG_IDLEX	0	0	0	0	0.01758	0.01365	0.020875	0.311156106	0.039789	0	0	0.197824	0
A	ROG_RESTL	0.227323	0.469769	0.248439	0.276762	0.087274	0.048494	0.014918	4.02275E-05	0.069383	0.007038146	3.680755	0.041692	20.29626
A	ROG_RUNEX	0.00434	0.013675	0.006865	0.008091	0.050519	0.082873	0.014952	0.014289903	0.031966	0.05310504	0.890508	0.040189	0.050568
A	ROG_RUNLS	0.170881	0.355945	0.18526	0.207423	0.123377	0.065349	0.028627	0.000113992	0.077263	0.007877766	3.783469	0.027699	0.119258
A	ROG_STREX	0.197184	0.337555	0.26551	0.301161	0.07823	0.041209	0.034167	2.38553E-07	0.071386	0.008378471	1.134366	0.029472	0.088942
A	SO2_IDLEX	0	0	0	0	7.6E-05	0.000128	0.00132	0.006214699	0.000846	0	0	0.001639	0
A	SO2_RUNEX	0.002161	0.002926	0.003015	0.003597	0.006498	0.00686	0.010167	0.012580529	0.011835	0.007389377	0.001835	0.008739	0.016224
A	SO2_STREX	0.000554	0.000754	0.000763	0.000904	0.000157	8.45E-05	6.71E-05	9.32988E-08	0.000119	2.99145E-05	0.000423	3.88E-05	0.000199
A	TOG_DIURN	0.227323	0.469769	0.248439	0.276762	0.087274	0.048494	0.014918	4.02275E-05	0.069383	0.007038146	0.080793	0.041692	20.29626
A	TOG_HTSK	0.060745	0.120653	0.063468	0.068938	0.020831	0.011136	0.00342	1.26947E-05	0.014014	0.002098044	3.555147	0.009335	4.900484
A	TOG_IDLEX	0	0	0	0	0.0248	0.018097	0.03926	0.541395418	0.052568	0	0	0.32342	0
A	TOG_RESTL	0.227323	0.469769	0.248439	0.276762	0.087274	0.048494	0.014918	4.02275E-05	0.069383	0.007038146	0.080793	0.041692	20.29626
A	TOG_RUNEX	0.006329	0.019954	0.010004	0.011775	0.060583	0.095343	0.026358	0.103810529	0.046832	0.694289379	1.091848	0.133799	0.062589
A	TOG_RUNLS	0.170881	0.355945	0.18526	0.207423	0.123377	0.065349	0.028627	0.000113992	0.077263	0.007877766	3.783469	0.027699	0.119258
A	TOG_STREX	0.215892	0.36958	0.2907	0.329734	0.085652	0.045119	0.037409	2.61185E-07	0.078158	0.009173371	1.234067	0.032269	0.097381
A	N2O_IDLEX	0	0	0	0	0.000589	0.00168	0.022195	0.116327365	0.013129	0	0	0.023481	0
A	N2O_RUNEX	0.003165	0.00587	0.004501	0.005405	0.035467	0.074134	0.137514	0.223022009	0.151496	0.151061958	0.036967	0.112558	0.068485
A	N2O_STREX	0.025397	0.032408	0.031653	0.032172	0.028461	0.015119	0.00476	3.77164E-06	0.011347	0.00458201	0.006341	0.004848	0.033159

CalEEMod EMFAC2021 Fleet Mix Input												Year	2030
FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market with	0.531238	0.031583	0.233465	0.129376	0.026017	0.006449	0.011093	0.023253	0.001673	0.001224	0.003477	0.000536	0.000615
Parking Lot	0.531238	0.031583	0.233465	0.129376	0.026017	0.006449	0.011093	0.023253	0.001673	0.001224	0.003477	0.000536	0.000615

CalEEMod EMFAC2021 Fleet Mix Input												Existing Year	2030
FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market with	0.531238	0.031583	0.233465	0.129376	0.026017	0.006449	0.011093	0.023253	0.001673	0.001224	0.003477	0.00053567	0.000615

Source: EMFAC2021 (v1.0.1) Emission Rates
Region Type: County
Region: Santa Clara
Calendar Year: 2022
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, g/mile for RUNEX, PMWB and PMTW, g/trip for STREX, HOTSQA and RUNLOS, g/vehicle/day for IDLEX and DIURN

[illegible]

Source: EMFAC2021 (v1.0.1) Emission Rates
Region Type: County
Region: Santa Clara
Calendar Year: 2050
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, g/mile for RUNEX, PMWB and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN

[illegible]

Attachment 4: Project Construction and Operational Emissions and Health Risk Calculations

Construction Health Risk Assessment and Calculations

World Oil Gas Station, Morgan Hill, CA

Year	Unmitigated DPM	DPM EMFAC2021	Unmitigated Emissions	Unmitigated Fug PM2.5	Fug PM2.5 EMFAC2021	Unmitigated Emissions
2022	0.0061	0.0001	0.0061	0.0069	0.00004	0.0069

World Oil Gas Station, Morgan Hill, CA

DPM Emissions and Modeling Emission Rates - Unmitigated

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions			Modeled Area (m ²)	DPM Emission Rate (g/s/m ²)
				(lb/yr)	(lb/hr)	(g/s)		
2022	Construction	0.0061	CON_DPM	12.2	0.00372	4.68E-04	1919	2.44E-07

Construction Hours

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

World Oil Gas Station, Morgan Hill, CA

PM2.5 Fugitive Dust Emissions for Modeling - Unmitigated

Construction Year	Activity	Area Source	PM2.5 Emissions	Modeled Area (m ²)	PM2.5 Emission Rate g/s/m ²
		(ton/year)	(lb/yr) (lb/hr) (g/s)		
2022	Construction	CON_FUG	0.0069 13.9 0.00423 5.32E-04	1,919	2.77E-07

Construction Hours

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

World Oil Gas Station, Morgan Hill, CA - Construction Health Impact Summary

Maximum Impacts at MEI Residential Location - Without Mitigation

Emissions Year						
	Maximum Concentrations		Cancer Risk* (per million)		Hazard Index	Maximum Annual PM2.5 Concentration* (µg/m ³)
	Exhaust PM10/DPM (µg/m ³)	Fugitive PM2.5 (µg/m ³)				
			Infant/Child	Adult	(-)	
2022	0.0259	0.0491	4.60	0.07	0.01	0.07

* Maximum cancer risk and maximum PM2.5 concentration occur at different locations.

World Oil Gas Station, Morgan Hill, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location -1.5 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor (mg/kg-day)⁻¹

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10⁻⁶

Where: C_{air} = concentration in air (µg/m³)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10⁻⁶ = Conversion factor

Values

Age → Parameter	Infant/Child			Adult
	3rd Trimester	0 - 2	2 - 16	16 - 30
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information			Infant/Child Cancer Risk (per million)	Adult - Exposure Information			Adult Cancer Risk (per million)	Maximum		
			DPM Conc (ug/m3)		Age Sensitivity Factor		Modeled DPM Conc (ug/m3)		Age Sensitivity Factor		Hazard Index	Fugitive PM2.5	Total PM2.5
			Year	Annual			Year	Annual					
0	0.25	-0.25 - 0*	2022	0.0259	10	0.35	2022	0.0259	-	-	0.01	0.05	0.07
1	1	0 - 1	2022	0.0259	10	4.25	2022	0.0259	1	0.07			
2	1	1 - 2		0.0000	10	0.00		0.0000	1	0.00			
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						4.60				0.07			

* Third trimester of pregnancy

World Oil Gas Station, Morgan Hill, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 4.5 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor (mg/kg-day)⁻¹

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10⁻⁶

Where: C_{air} = concentration in air (µg/m³)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10⁻⁶ = Conversion factor

Values

Age → Parameter	Infant/Child			Adult
	3rd Trimester	0 - 2	2 - 16	16 - 30
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information			Infant/Child Cancer Risk (per million)	Adult - Exposure Information			Adult Cancer Risk (per million)	Maximum		
			DPM Conc (ug/m3)		Age Sensitivity		Modeled		Age Sensitivity				
			Year	Annual	Factor		Year	Annual	Factor		Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2022	0.0109	10	0.15	2022	0.0109	-	-	0.002	0.01	0.02
1	1	0 - 1	2022	0.0109	10	1.79	2022	0.0109	1	0.03			
2	1	1 - 2		0.0000	10	0.00		0.0000	1	0.00			
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						1.94				0.03			

* Third trimester of pregnancy



Step 1:

Plant Name **New World Oil Gas Station**Plant No. **Proposed Gas Station**

Step 4:

Specify Source Type

Does facility have only diesel backup generators? **no**Is this analysis for a gas station? **yes**

Note: Default generic distance multiplier used if source is not a generator or gas station.

Step 5:

Read

Estimates

Total **2.703**Cancer Risk **0.013**Total **0.013**Chronic Hazard **0.000**Total PM2.5 **0.000**Concentration **0.000**per
1,000,000µg/m³

Step 2:

Estimate Distance

What is the distance (m) from the facility boundary to the MEI?

5Step 3:
Enter Emissions Data

Chemical Name	CAS No.	Emission	Cancer	Chronic	Concentration
	(dashes removed)	(lb/day)	(# / 1,000,000)	(index)	(µg/m3)
Fine Particulate Matter (PM2.5)					
1,1,1-Trichloroethane	71556	0.00E+00			
1,1,2,2-Tetrachloroethane	79345	0.00E+00			
1,1,2-Trichloroethane	79005	0.00E+00			
1,1-Dichloroethane	75343	0.00E+00			
1,1-Dichloroethylene	75354	0.00E+00			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268879	0.00E+00			
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001020	0.00E+00			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822469	0.00E+00			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562394	0.00E+00			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673897	0.00E+00			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227286	0.00E+00			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648269	0.00E+00			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653857	0.00E+00			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117449	0.00E+00			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408743	0.00E+00			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918219	0.00E+00			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321764	0.00E+00			
1,2,3,7,8-Pentachlorodibenzofuran	57117416	0.00E+00			
1,2-Dibromo-3-chloropropane	96128	0.00E+00			
1,2-Dibromoethane	106934	0.00E+00			
1,2-Dichloroethane	107062	0.00E+00			
1,2-Epoxybutane	106887	0.00E+00			
1,3-Butadiene	106990	0.00E+00			
1,3-Propane sultone	1120714	0.00E+00			
1,4-Dichlorobenzene	106467	0.00E+00			
1,4-Dioxane	123911	0.00E+00			
1,6-Dinitropyrene	42397648	0.00E+00			
1,8-Dinitropyrene	42397659	0.00E+00			
1-Nitropyrene	5522430	0.00E+00			
2',3,4,4',5-PeCB	65510443	0.00E+00			
2,3',4,4',5,5'-HxCB	52663726	0.00E+00			
2,3',4,4',5-PeCB	31508006	0.00E+00			
2,3,3',4,4',5'-HxCB	69782907	0.00E+00			
2,3,3',4,4',5,5'-HpCB	39635319	0.00E+00			
2,3,3',4,4',5-HxCB	38380084	0.00E+00			
2,3,3',4,4'-PeCB	32598144	0.00E+00			
2,3,4,4',5-PeCB	74472370	0.00E+00			
2,3,4,6,7,8-hexachlorodibenzofuran	60851345	0.00E+00			
2,3,4,7,8-Pentachlorodibenzofuran	57117314	0.00E+00			
2,3,7,8-Tetrachlorodibenzo-p-dioxin and related comp	1746016	0.00E+00			
2,3,7,8-Tetrachlorodibenzofuran	51207319	0.00E+00			
2,4,6-Trichlorophenol	88062	0.00E+00			
2,4-Diaminoanisole	615054	0.00E+00			
2,4-Diaminotoluene	95807	0.00E+00			
2,4-Dinitrotoluene	121142	0.00E+00			
2-Aminoanthraquinone	117793	0.00E+00			
2-Nitrofluorene	607578	0.00E+00			
3,3',4,4',5,5'-HxCB	32774166	0.00E+00			
3,3',4,4',5-PeCB	57465288	0.00E+00			
3,3',4,4'-TCB	32598133	0.00E+00			
3,3-Dichlorobenzidine	91941	0.00E+00			
3,4,4'-TCB	70362504	0.00E+00			
3-Methylcholanthrene	56495	0.00E+00			
4,4-Methylene bis(2-chloroaniline)	101144	0.00E+00			
4,4-Methylenedianiline	101779	0.00E+00			
4-Chloro-ortho-phenylenediamine	95830	0.00E+00			
4-Dimethylaminoazobenzene	60117	0.00E+00			
4-Nitropyrene	57835924	0.00E+00			
5-Methylchrysene	3697243	0.00E+00			

5-Nitroacenaphthene	602879	0.00E+00		
6-Nitrochrysene	7496028	0.00E+00		
7,12-Dimethylbenz(a)anthracene	57976	0.00E+00		
7H-dibenzo(c,g)carbazole	194592	0.00E+00		
Acetaldehyde	75070	0.00E+00		
Acetamide	60355	0.00E+00		
Acrolein	107028	0.00E+00		
Acrylamide	79061	0.00E+00		
Acrylic Acid	79107	0.00E+00		
Acrylonitrile	107131	0.00E+00		
Allyl chloride	107051	0.00E+00		
Ammonia	7664417	0.00E+00		
Aniline	62533	0.00E+00		
Arsenic	7440382	0.00E+00		
Arsine	7784421	0.00E+00		
Asbestos [1/(100 PCM fibers/m^3)]^-1	1332214	0.00E+00		
Benz(a)anthracene	56553	0.00E+00		
Benzene	71432	1.74E-02	2.22E+00	1.09E-02
Benzidine	92875	0.00E+00		
Benzo(a)pyrene	50328	0.00E+00		
Benzo(b)fluoranthene	205992	0.00E+00		
Benzo(j)fluoranthene	205823	0.00E+00		
Benzo(k)fluoranthene	207089	0.00E+00		
Benzyl Chloride	100447	0.00E+00		
Beryllium	7440417	0.00E+00		
Bis(2-chloroethyl) Ether	111444	0.00E+00		
Bis(2-chloromethyl) Ether	542881	0.00E+00		
Cadmium	7440439	0.00E+00		
Caprolactam	105602	0.00E+00		
Carbon Disulfide	75150	0.00E+00		
Carbon Monoxide	630080	0.00E+00		
Carbon Tetrachloride	56235	0.00E+00		
Carbonyl Sulfide	463581	0.00E+00		
Chlorinated paraffins (Avg. chain length C12; approx. 6	108171262	0.00E+00		
Chlorine	7782505	0.00E+00		
Chlorine Dioxide	10049044	0.00E+00		
Chlorite	7758192	0.00E+00		
Chlorobenzene	108907	0.00E+00		
Chlorodibromomethane	124481	0.00E+00		
Chloroethane (Ethyl Chloride)	75003	0.00E+00		
Chloroform	67663	0.00E+00		
Chloropicrin	76062	0.00E+00		
Chromic Trioxide	1333820	0.00E+00		
Chromium-hexavalent	18540299	0.00E+00		
Barium chromate2	10294403	0.00E+00		
Calcium chromate2	13765190	0.00E+00		
Lead chromate2	7758976	0.00E+00		
Sodium dichromate2	10588019	0.00E+00		
Strontium chromate2	7789062	0.00E+00		
CHROMIC TRIOXIDE (as chromic acid mist)	1333820	0.00E+00		
Chrysene	218019	0.00E+00		
Copper	7440508	0.00E+00		
Copper and Copper Compounds	7440508	0.00E+00		
Cresol Mixtures	1319773	0.00E+00		
Cupferron	135206	0.00E+00		
Cyanide	57125	0.00E+00		
Di(2-ethylhexyl)phthalate	117817	0.00E+00		
Dibenz(a-h)acridine	226368	0.00E+00		
Dibenz(a-h)anthracene	53703	0.00E+00		
Dibenz(a-j)acridine	224420	0.00E+00		
Dibenzo(a-e)pyrene	192654	0.00E+00		
Dibenzo(a-h)pyrene	189640	0.00E+00		
Dibenzo(a-i)pyrene	189559	0.00E+00		
Dibenzo(a-l)pyrene	191300	0.00E+00		
Diesel Exhaust Particulate	85105	0.00E+00		
Diethanolamine	111422	0.00E+00		
Dimethylformamide	68122	0.00E+00		
Direct Black 38 (Technical Grade)	1937377	0.00E+00		
Direct Blue 6 (Technical Grade)	2602462	0.00E+00		
Direct Brown 95 (Technical Grade)	16071866	0.00E+00		
Epichlorohydrin	106898	0.00E+00		
Ethylbenzene	100414	4.35E-02	4.84E-01	4.11E-05
Ethylene Glycol	107211	0.00E+00		
Ethylene Glycol Monobutyl Ether	111762	0.00E+00		
Ethylene Glycol Monoethyl Ether	110805	0.00E+00		
Ethylene Glycol Monoethyl Ether Acetate	111159	0.00E+00		
Ethylene Glycol Monomethyl Ether	109864	0.00E+00		
Ethylene Glycol Monomethyl Ether Acetate	110496	0.00E+00		
Ethylene Oxide	75218	0.00E+00		

Ethylene Thiourea	96457	0.00E+00
Fluorides	1101	0.00E+00
Formaldehyde (gas)	50000	0.00E+00
Glutaraldehyde	111308	0.00E+00
Hexachlorobenzene	118741	0.00E+00
Hexachlorocyclohexane (Technical Grade)	608731	0.00E+00
Hexachlorocyclohexane- Alpha Isomer	319846	0.00E+00
Hexachlorocyclohexane- Beta Isomer	319857	0.00E+00
Hexachlorocyclohexane- Gamma Isomer	58899	0.00E+00
Hydrazine	302012	0.00E+00
		0.00E+00
Hydrogen Chloride	7647010	
Hydrogen Cyanide	74908	0.00E+00
Hydrogen Fluoride	7664393	0.00E+00
Hydrogen Selenide	7783075	0.00E+00
Hydrogen Sulfide	7783064	0.00E+00
Indeno(1-2-3-c-d)pyrene	193395	0.00E+00
Isophorone	78591	0.00E+00
Isopropyl Alcohol	67630	0.00E+00
Lead Acetate	301042	0.00E+00
Lead and Lead Compounds	7439921	0.00E+00
Lead Phosphate	7446277	0.00E+00
Lead Subacetate	1335326	0.00E+00
m-CRESOL	108394	0.00E+00
m-XYLENE	108383	0.00E+00
Maleic Anhydride	108316	0.00E+00
Manganese & Manganese Compounds	7439965	0.00E+00
Mercury (Inorganic)	7439976	0.00E+00
Mercuric chloride	7487947	0.00E+00
Methanol	67561	0.00E+00
Methyl Bromide	74839	0.00E+00
Methyl Ethyl Ketone	78933	0.00E+00
Methyl Isocyanate	624839	0.00E+00
Methyl Tertiary Butyl Ether	1634044	0.00E+00
Methylene Chloride (Dichloromethane)	75092	0.00E+00
Methylene Diphenyl Isocyanate (MDI)	101688	0.00E+00
Michlers Ketone	90948	0.00E+00
n-Hexane	110543	0.00E+00
n-Nitroso-n-methylethylamine	10595956	0.00E+00
n-Nitrosodi-n-Butylamine	924163	0.00E+00
n-Nitrosodi-n-Propylamine	621647	0.00E+00
n-Nitrosodiethylamine	55185	0.00E+00
n-Nitrosodimethylamine	62759	0.00E+00
n-Nitrosodiphenylamine	86306	0.00E+00
n-Nitrosomorpholine	59892	0.00E+00
n-Nitrosopiperidine	100754	0.00E+00
n-Nitrosopyrrolidine	930552	0.00E+00
Naphthalene	91203	0.00E+00
Nickel and Nickel Compounds	7440020	0.00E+00
Nickel acetate	373024	0.00E+00
Nickel carbonate	3333673	0.00E+00
Nickel carbonyl	13463393	0.00E+00
Nickel hydroxide	12054487	0.00E+00
Nickelocene	1271289	0.00E+00
Nickel Oxide	1313991	0.00E+00
Nickel Refinery Dust	1146	0.00E+00
Nickel Subsulfide	12035722	0.00E+00
Nitric Acid	7697372	0.00E+00
Nitrogen Dioxide	10102440	0.00E+00
o-CRESOL	95487	0.00E+00
o-XYLENE	95476	0.00E+00
Oleum	8014957	0.00E+00
Ozone	10028156	0.00E+00
p-Chloro-o-toluidine	95692	0.00E+00
p-Cresidine	120718	0.00E+00
p-CRESOL	106445	0.00E+00
p-Nitrosodiphenylamine	156105	0.00E+00
p-XYLENE	106423	0.00E+00
Pentachlorophenol	87865	0.00E+00
Perchloroethylene	127184	0.00E+00
Phenol	108952	0.00E+00
Phosgene	75445	0.00E+00
Phosphine	7803512	0.00E+00
Phosphoric Acid	7664382	0.00E+00
Phthalic Anhydride	85449	0.00E+00
Polychlorinated Biphenyls	1336363	0.00E+00
Potassium Bromate	7758012	0.00E+00
Propylene	115071	0.00E+00

Propylene Glycol Monomethyl Ether	107982	0.00E+00	1.37E-03	1.76E-04	
Propylene oxide	75569	0.00E+00			
Selenium	7782492	0.00E+00			
Selenium sulfide	7446346	0.00E+00			
Silica (crystalline, respirable)	7631869	0.00E+00			
Sodium hydroxide	1310732	0.00E+00			
Styrene	100425	0.00E+00			
Sulfates	9960	0.00E+00			
Sulfur Dioxide	7446095	0.00E+00			
Sulfuric Acid	7664939	0.00E+00			
Sulfur Trioxide	7446719	0.00E+00			
Tertiary-butyl acetate	540885	0.00E+00			
Tetrachloroethylene	127184	0.00E+00			
Thioacetamide	62555	0.00E+00			
Toluene	108883	2.17E-01			
Toluene Diisocyanates	26471625	0.00E+00			
Toluene Diisocyanates (2,4 and 2, 6)	584849	0.00E+00			
Toluene Diisocyanates (2,4 and 2, 6)	91087	0.00E+00			
Trichloroethylene	79016	0.00E+00			
Triethylamine	121448	0.00E+00			
Urethane	51796	0.00E+00			
Vanadium pentoxide	1314621	0.00E+00			
Vinyl acetate	108054	0.00E+00			
Vinyl chloride	75014	0.00E+00			
Xylenes (technical mixture of m, o, p-isomers)	1330207	6.52E-02			
Vanadium	7440622	0.00E+00			
TOTAL UNADJUSTED Risk Values		2.703	0.013	0.000	

Existing GDF

BAAQMD Evaluation

0.516 lbs/10³ gal throughput

1,281	10^3 gal/year
-------	-----------------

0.33 tons/year

1. Emission factors from CARB "Revised Emissions Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities". December 23, 2013 (CARB, 2013). Assumes use of enhanced vapor recovery systems.
2. Fueling emissions based on CARB data for 2020 of 87% of vehicles use ORVR (CARB, 2013).
3. CAPCOA Air Toxics "Hot Spots" Program, Gasoline Service Station Industrywide Risk Assessment Guidelines, November 1997.
4. Emission factors are derived from SJAPCD Gasoline Dispensing Operations VOC Calculator and Appendix A in the 1997 CAPCOA Air Toxics "Hot Spots" Program document, Gasoline Service Station Industrywide Risk Assessment Guidelines.



Step 1:

Plant Name **New World Oil Gas Station**Plant No. **Existing Gas Station**

Step 4:

Specify Source Type

Does facility have only diesel backup generators? **no**Is this analysis for a gas station? **yes**

Note: Default generic distance multiplier used if source is not a generator or gas station.

Step 5:

Read

Estimates

Total **Cancer Risk** **0.968**per
1,000,000Total **Chronic Hazard** **0.004**Total **PM2.5** **0.000** $\mu\text{g}/\text{m}^3$

Step 2:

Estimate Distance

What is the distance (m) from the facility boundary to the MEI?

30Step 3:
Enter Emissions Data

Chemical Name	CAS No.	Emission	Cancer	Chronic	Concentration
	(dashes removed)	(lb/day)	(# / 1,000,000)	(index)	($\mu\text{g}/\text{m}^3$)
Fine Particulate Matter (PM2.5)					
1,1,1-Trichloroethane	71556	0.00E+00			
1,1,2,2-Tetrachloroethane	79345	0.00E+00			
1,1,2-Trichloroethane	79005	0.00E+00			
1,1-Dichloroethane	75343	0.00E+00			
1,1-Dichloroethylene	75354	0.00E+00			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268879	0.00E+00			
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001020	0.00E+00			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822469	0.00E+00			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562394	0.00E+00			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673897	0.00E+00			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227286	0.00E+00			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648269	0.00E+00			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653857	0.00E+00			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117449	0.00E+00			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408743	0.00E+00			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918219	0.00E+00			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321764	0.00E+00			
1,2,3,7,8-Pentachlorodibenzofuran	57117416	0.00E+00			
1,2-Dibromo-3-chloropropane	96128	0.00E+00			
1,2-Dibromoethane	106934	0.00E+00			
1,2-Dichloroethane	107062	0.00E+00			
1,2-Epoxybutane	106887	0.00E+00			
1,3-Butadiene	106990	0.00E+00			
1,3-Propane sultone	1120714	0.00E+00			
1,4-Dichlorobenzene	106467	0.00E+00			
1,4-Dioxane	123911	0.00E+00			
1,6-Dinitropyrene	42397648	0.00E+00			
1,8-Dinitropyrene	42397659	0.00E+00			
1-Nitropyrene	5522430	0.00E+00			
2',3,4,4',5-PeCB	65510443	0.00E+00			
2,3',4,4',5,5'-HxCB	52663726	0.00E+00			
2,3',4,4',5-PeCB	31508006	0.00E+00			
2,3,3',4,4',5'-HxCB	69782907	0.00E+00			
2,3,3',4,4',5,5'-HpCB	39635319	0.00E+00			
2,3,3',4,4',5-HxCB	38380084	0.00E+00			
2,3,3',4,4'-PeCB	32598144	0.00E+00			
2,3,4,4',5-PeCB	74472370	0.00E+00			
2,3,4,6,7,8-hexachlorodibenzofuran	60851345	0.00E+00			
2,3,4,7,8-Pentachlorodibenzofuran	57117314	0.00E+00			
2,3,7,8-Tetrachlorodibenzo-p-dioxin and related comp	1746016	0.00E+00			
2,3,7,8-Tetrachlorodibenzofuran	51207319	0.00E+00			
2,4,6-Trichlorophenol	88062	0.00E+00			
2,4-Diaminoanisole	615054	0.00E+00			
2,4-Diaminotoluene	95807	0.00E+00			
2,4-Dinitrotoluene	121142	0.00E+00			
2-Aminoanthraquinone	117793	0.00E+00			
2-Nitrofluorene	607578	0.00E+00			
3,3',4,4',5,5'-HxCB	32774166	0.00E+00			
3,3',4,4',5-PeCB	57465288	0.00E+00			
3,3',4,4'-TCB	32598133	0.00E+00			
3,3-Dichlorobenzidine	91941	0.00E+00			
3,4,4'-TCB	70362504	0.00E+00			
3-Methylcholanthrene	56495	0.00E+00			
4,4-Methylene bis(2-chloroaniline)	101144	0.00E+00			
4,4-Methylenedianiline	101779	0.00E+00			
4-Chloro-ortho-phenylenediamine	95830	0.00E+00			
4-Dimethylaminoazobenzene	60117	0.00E+00			
4-Nitropyrene	57835924	0.00E+00			
5-Methylchrysene	3697243	0.00E+00			

5-Nitroacenaphthene	602879	0.00E+00
6-Nitrochrysene	7496028	0.00E+00
7,12-Dimethylbenz(a)anthracene	57976	0.00E+00
7H-dibenzo(c,g)carbazole	194592	0.00E+00
Acetaldehyde	75070	0.00E+00
Acetamide	60355	0.00E+00
Acrolein	107028	0.00E+00
Acrylamide	79061	0.00E+00
Acrylic Acid	79107	0.00E+00
Acrylonitrile	107131	0.00E+00
Allyl chloride	107051	0.00E+00
Ammonia	7664417	0.00E+00
Aniline	62533	0.00E+00
Arsenic	7440382	0.00E+00
Arsine	7784421	0.00E+00
Asbestos [1/(100 PCM fibers/m^3)]^-1	1332214	0.00E+00
Benz(a)anthracene	56553	0.00E+00
Benzene	71432	1.11E-02
Benzidine	92875	0.00E+00
Benzo(a)pyrene	50328	0.00E+00
Benzo(b)fluoranthene	205992	0.00E+00
Benzo(j)fluoranthene	205823	0.00E+00
Benzo(k)fluoranthene	207089	0.00E+00
Benzyl Chloride	100447	0.00E+00
Beryllium	7440417	0.00E+00
Bis(2-chloroethyl) Ether	111444	0.00E+00
Bis(2-chloromethyl) Ether	542881	0.00E+00
Cadmium	7440439	0.00E+00
Caprolactam	105602	0.00E+00
Carbon Disulfide	75150	0.00E+00
Carbon Monoxide	630080	0.00E+00
Carbon Tetrachloride	56235	0.00E+00
Carbonyl Sulfide	463581	0.00E+00
Chlorinated paraffins (Avg. chain length C12; approx. 6	108171262	0.00E+00
Chlorine	7782505	0.00E+00
Chlorine Dioxide	10049044	0.00E+00
Chlorite	7758192	0.00E+00
Chlorobenzene	108907	0.00E+00
Chlorodibromomethane	124481	0.00E+00
Chloroethane (Ethyl Chloride)	75003	0.00E+00
Chloroform	67663	0.00E+00
Chloropicrin	76062	0.00E+00
Chromic Trioxide	1333820	0.00E+00
Chromium-hexavalent	18540299	0.00E+00
Barium chromate2	10294403	0.00E+00
Calcium chromate2	13765190	0.00E+00
Lead chromate2	7758976	0.00E+00
Sodium dichromate2	10588019	0.00E+00
Strontium chromate2	7789062	0.00E+00
CHROMIC TRIOXIDE (as chromic acid mist)	1333820	0.00E+00
Chrysene	218019	0.00E+00
Copper	7440508	0.00E+00
Copper and Copper Compounds	7440508	0.00E+00
Cresol Mixtures	1319773	0.00E+00
Cupferron	135206	0.00E+00
Cyanide	57125	0.00E+00
Di(2-ethylhexyl)phthalate	117817	0.00E+00
Dibenz(a-h)acridine	226368	0.00E+00
Dibenz(a-h)anthracene	53703	0.00E+00
Dibenz(a-j)acridine	224420	0.00E+00
Dibenzo(a-e)pyrene	192654	0.00E+00
Dibenzo(a-h)pyrene	189640	0.00E+00
Dibenzo(a-i)pyrene	189559	0.00E+00
Dibenzo(a-l)pyrene	191300	0.00E+00
Diesel Exhaust Particulate	85105	0.00E+00
Diethanolamine	111422	0.00E+00
Dimethylformamide	68122	0.00E+00
Direct Black 38 (Technical Grade)	1937377	0.00E+00
Direct Blue 6 (Technical Grade)	2602462	0.00E+00
Direct Brown 95 (Technical Grade)	16071866	0.00E+00
Epichlorohydrin	106898	0.00E+00
Ethylbenzene	100414	2.78E-02
Ethylene Glycol	107211	0.00E+00
Ethylene Glycol Monobutyl Ether	111762	0.00E+00
Ethylene Glycol Monoethyl Ether	110805	0.00E+00
Ethylene Glycol Monoethyl Ether Acetate	111159	0.00E+00
Ethylene Glycol Monomethyl Ether	109864	0.00E+00
Ethylene Glycol Monomethyl Ether Acetate	110496	0.00E+00
Ethylene Oxide	75218	0.00E+00

1.42E+00

7.00E-03

3.10E-01

2.63E-05

Ethylene Thiourea	96457	0.00E+00
Fluorides	1101	0.00E+00
Formaldehyde (gas)	50000	0.00E+00
Glutaraldehyde	111308	0.00E+00
Hexachlorobenzene	118741	0.00E+00
Hexachlorocyclohexane (Technical Grade)	608731	0.00E+00
Hexachlorocyclohexane- Alpha Isomer	319846	0.00E+00
Hexachlorocyclohexane- Beta Isomer	319857	0.00E+00
Hexachlorocyclohexane- Gamma Isomer	58899	0.00E+00
Hydrazine	302012	0.00E+00
		0.00E+00
Hydrogen Chloride	7647010	
Hydrogen Cyanide	74908	0.00E+00
Hydrogen Fluoride	7664393	0.00E+00
Hydrogen Selenide	7783075	0.00E+00
Hydrogen Sulfide	7783064	0.00E+00
Indeno(1-2-3-c-d)pyrene	193395	0.00E+00
Isophorone	78591	0.00E+00
Isopropyl Alcohol	67630	0.00E+00
Lead Acetate	301042	0.00E+00
Lead and Lead Compounds	7439921	0.00E+00
Lead Phosphate	7446277	0.00E+00
Lead Subacetate	1335326	0.00E+00
m-CRESOL	108394	0.00E+00
m-XYLENE	108383	0.00E+00
Maleic Anhydride	108316	0.00E+00
Manganese & Manganese Compounds	7439965	0.00E+00
Mercury (Inorganic)	7439976	0.00E+00
Mercuric chloride	7487947	0.00E+00
Methanol	67561	0.00E+00
Methyl Bromide	74839	0.00E+00
Methyl Ethyl Ketone	78933	0.00E+00
Methyl Isocyanate	624839	0.00E+00
Methyl Tertiary Butyl Ether	1634044	0.00E+00
Methylene Chloride (Dichloromethane)	75092	0.00E+00
Methylene Diphenyl Isocyanate (MDI)	101688	0.00E+00
Michlers Ketone	90948	0.00E+00
n-Hexane	110543	0.00E+00
n-Nitroso-n-methylethylamine	10595956	0.00E+00
n-Nitrosodi-n-Butylamine	924163	0.00E+00
n-Nitrosodi-n-Propylamine	621647	0.00E+00
n-Nitrosodiethylamine	55185	0.00E+00
n-Nitrosodimethylamine	62759	0.00E+00
n-Nitrosodiphenylamine	86306	0.00E+00
n-Nitrosomorpholine	59892	0.00E+00
n-Nitrosopiperidine	100754	0.00E+00
n-Nitrosopyrrolidine	930552	0.00E+00
Naphthalene	91203	0.00E+00
Nickel and Nickel Compounds	7440020	0.00E+00
Nickel acetate	373024	0.00E+00
Nickel carbonate	3333673	0.00E+00
Nickel carbonyl	13463393	0.00E+00
Nickel hydroxide	12054487	0.00E+00
Nickelocene	1271289	0.00E+00
Nickel Oxide	1313991	0.00E+00
Nickel Refinery Dust	1146	0.00E+00
Nickel Subsulfide	12035722	0.00E+00
Nitric Acid	7697372	0.00E+00
Nitrogen Dioxide	10102440	0.00E+00
o-CRESOL	95487	0.00E+00
o-XYLENE	95476	0.00E+00
Oleum	8014957	0.00E+00
Ozone	10028156	0.00E+00
p-Chloro-o-toluidine	95692	0.00E+00
p-Cresidine	120718	0.00E+00
p-CRESOL	106445	0.00E+00
p-Nitrosodiphenylamine	156105	0.00E+00
p-XYLENE	106423	0.00E+00
Pentachlorophenol	87865	0.00E+00
Perchloroethylene	127184	0.00E+00
Phenol	108952	0.00E+00
Phosgene	75445	0.00E+00
Phosphine	7803512	0.00E+00
Phosphoric Acid	7664382	0.00E+00
Phthalic Anhydride	85449	0.00E+00
Polychlorinated Biphenyls	1336363	0.00E+00
Potassium Bromate	7758012	0.00E+00
Propylene	115071	0.00E+00

Propylene Glycol Monomethyl Ether	107982	0.00E+00	8.77E-04		
Propylene oxide	75569	0.00E+00			
Selenium	7782492	0.00E+00			
Selenium sulfide	7446346	0.00E+00			
Silica (crystalline, respirable)	7631869	0.00E+00			
Sodium hydroxide	1310732	0.00E+00			
Styrene	100425	0.00E+00			
Sulfates	9960	0.00E+00			
Sulfur Dioxide	7446095	0.00E+00			
Sulfuric Acid	7664939	0.00E+00			
Sulfur Trioxide	7446719	0.00E+00			
Tertiary-butyl acetate	540885	0.00E+00			
Tetrachloroethylene	127184	0.00E+00			
Thioacetamide	62555	0.00E+00			
Toluene	108883	1.39E-01			
Toluene Diisocyanates	26471625	0.00E+00			
Toluene Diisocyanates (2,4 and 2, 6)	584849	0.00E+00			
Toluene Diisocyanates (2,4 and 2, 6)	91087	0.00E+00			
Trichloroethylene	79016	0.00E+00			
Triethylamine	121448	0.00E+00			
Urethane	51796	0.00E+00			
Vanadium pentoxide	1314621	0.00E+00			
Vinyl acetate	108054	0.00E+00			
Vinyl chloride	75014	0.00E+00			
Xylenes (technical mixture of m, o, p-isomers)	1330207	4.18E-02			
Vanadium	7440622	0.00E+00			
TOTAL UNADJUSTED Risk Values		1.731	0.008	0.000	

Attachment 5: Community Risk Modeling Information and Calculations

CT-EMFAC2017 Emissions Factors for Monterey Road 2022

File Name: Monterey Rd - World Oil - Santa Clara (SF) - 2022 - Annual.EF
CT-EMFAC2017 Version: 1.0.2.27401
Run Date: 8/2/2021 15:00
Area: Santa Clara (SF)
Analysis Year: 2022
Season: Annual

Vehicle Category	VMT	Diesel VMT	Gas VMT
	Fraction	Fraction	Fraction
	Across	Within	Within
	Category	Category	Category
Truck 1	0.015	0.478	0.522
Truck 2	0.02	0.94	0.046
Non-Truck	0.965	0.014	0.961

Road Type: Major/Collector
Silt Loading Factor: CARB 0.032 g/m2
Precipitation Correction: CARB P = 64 days N = 365 days

Fleet Average Running Exhaust Emission Factors (grams/veh-mile)

Pollutant Name	<= 5 mph	10 mph	15 mph	20 mph	25 mph	30 mph	35 mph	40 mph
PM2.5	0.010417	0.006915	0.004735	0.003408	0.002622	0.002145	0.001861	0.001715
TOG	0.220898	0.145348	0.097291	0.068555	0.051819	0.041294	0.034513	0.030252
Diesel PM	0.001756	0.001459	0.001108	0.000865	0.000743	0.000683	0.000662	0.000677

Fleet Average Running Loss Emission Factors (grams/veh-hour)

Pollutant Name	Emission Factor
TOG	1.418515

Fleet Average Tire Wear Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.002108

Fleet Average Brake Wear Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.016811

Fleet Average Road Dust Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.014871

=====END=====

Monterey Road Emissions and Health Risk Calculations

World Oil Gas Station, Morgan Hill, CA - Offsite Residential Roadway Modeling

Cumulative Operation - Monterey Road

DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions

Year =

2022

13.315

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area					(Sigma z) Initial Vertical Dimension
											Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	
DPM_MON	Monterey Road Northbound	NB	2	651.9	0.41	13.3	43.7	3.4	35	10,983	8,680	93,433	3.927E-09	2.895E-09	6.8	3.16
DPM_MON	Monterey Road Southbound	SB	2	649.2	0.40	13.3	43.7	3.4	35	10,983	8,644	93,046	3.927E-09	2.895E-09	6.8	3.16
Total										21,965						

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.00066			

Emission Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and DPM Emissions - DPM_MON

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.91%	429	3.20E-05	9	6.44%	707	5.27E-05	17	5.52%	606	4.52E-05
2	2.59%	284	2.12E-05	10	7.25%	796	5.93E-05	18	3.34%	367	2.73E-05
3	2.82%	310	2.31E-05	11	6.33%	695	5.18E-05	19	2.42%	266	1.98E-05
4	3.39%	372	2.77E-05	12	6.90%	758	5.64E-05	20	0.92%	101	7.53E-06
5	2.19%	241	1.79E-05	13	6.27%	689	5.13E-05	21	2.99%	328	2.45E-05
6	3.39%	372	2.77E-05	14	6.15%	675	5.03E-05	22	4.14%	455	3.39E-05
7	6.10%	670	4.99E-05	15	5.12%	562	4.19E-05	23	2.47%	271	2.02E-05
8	4.66%	512	3.81E-05	16	3.85%	423	3.15E-05	24	0.86%	94	7.04E-06
Total										10,985	

2022 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_MON

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.91%	429	3.19E-05	9	6.44%	707	5.25E-05	17	5.52%	606	4.50E-05
2	2.59%	284	2.11E-05	10	7.25%	796	5.91E-05	18	3.34%	367	2.72E-05
3	2.82%	310	2.30E-05	11	6.33%	695	5.16E-05	19	2.42%	266	1.97E-05
4	3.39%	372	2.76E-05	12	6.90%	758	5.62E-05	20	0.92%	101	7.50E-06
5	2.19%	241	1.78E-05	13	6.27%	689	5.11E-05	21	2.99%	328	2.44E-05
6	3.39%	372	2.76E-05	14	6.15%	675	5.01E-05	22	4.14%	455	3.37E-05
7	6.10%	670	4.97E-05	15	5.12%	562	4.17E-05	23	2.47%	271	2.01E-05
8	4.66%	512	3.80E-05	16	3.85%	423	3.14E-05	24	0.86%	94	7.01E-06
Total										10,985	

World Oil Gas Station, Morgan Hill, CA - Offsite Residential Roadway Modeling
Cumulative Operation - Monterey Road
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area					(Sigma z) Initial Vertical Dimension
											Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	
PM25 MON	Monterey Road Northbound	NB	2	651.9	0.41	13.3	44	1.3	35	10,983	8,680	93,433	1.104E-08	8.139E-09	2.6	1.21
PM25 MON	Monterey Road Southbound	SB	2	649.2	0.40	13.3	44	1.3	35	10,983	8,644	93,046	1.104E-08	8.139E-09	2.6	1.21
Total										21,965						

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.001861			

Emission Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and PM2.5 Emissions - PM25 MON

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	126	2.64E-05	9	7.11%	781	1.64E-04	17	7.39%	812	1.70E-04
2	0.42%	46	9.66E-06	10	4.39%	482	1.01E-04	18	8.17%	897	1.88E-04
3	0.41%	45	9.43E-06	11	4.67%	513	1.07E-04	19	5.70%	626	1.31E-04
4	0.27%	30	6.21E-06	12	5.89%	647	1.35E-04	20	4.27%	469	9.82E-05
5	0.50%	55	1.15E-05	13	6.15%	675	1.41E-04	21	3.26%	358	7.50E-05
6	0.91%	100	2.09E-05	14	6.03%	662	1.39E-04	22	3.30%	362	7.59E-05
7	3.79%	416	8.72E-05	15	7.01%	770	1.61E-04	23	2.46%	270	5.66E-05
8	7.76%	852	1.78E-04	16	7.13%	783	1.64E-04	24	1.86%	204	4.28E-05
Total										10,983	

2022 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM25 MON

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	126	2.63E-05	9	7.11%	781	1.63E-04	17	7.39%	812	1.69E-04
2	0.42%	46	9.62E-06	10	4.39%	482	1.01E-04	18	8.17%	897	1.87E-04
3	0.41%	45	9.39E-06	11	4.67%	513	1.07E-04	19	5.70%	626	1.31E-04
4	0.27%	30	6.18E-06	12	5.89%	647	1.35E-04	20	4.27%	469	9.78E-05
5	0.50%	55	1.15E-05	13	6.15%	675	1.41E-04	21	3.26%	358	7.47E-05
6	0.91%	100	2.08E-05	14	6.03%	662	1.38E-04	22	3.30%	362	7.56E-05
7	3.79%	416	8.68E-05	15	7.01%	770	1.61E-04	23	2.46%	270	5.63E-05
8	7.76%	852	1.78E-04	16	7.13%	783	1.63E-04	24	1.86%	204	4.26E-05
Total										10,983	

World Oil Gas Station, Morgan Hill, CA - Offsite Residential Roadway Modeling
Cumulative Operation - Monterey Road
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area					(Sigma z) Initial Vertical Dimension
											Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	
TEXH_MON	Monterey Road Northbound	NB	2	651.9	0.41	13.3	44	1.3	35	10,983	8,680	93,433	2.047E-07	1.509E-07	2.6	1.21
TEXH_MON	Monterey Road Southbound	SB	2	649.2	0.40	13.3	44	1.3	35	10,983	8,644	93,046	2.047E-07	1.509E-07	2.6	1.21
Total										21,965						

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.03451			

Emission Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_MON

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	126	4.90E-04	9	7.11%	781	3.03E-03	17	7.39%	812	3.15E-03
2	0.42%	46	1.79E-04	10	4.39%	482	1.87E-03	18	8.17%	897	3.48E-03
3	0.41%	45	1.75E-04	11	4.67%	513	1.99E-03	19	5.70%	626	2.43E-03
4	0.27%	30	1.15E-04	12	5.89%	647	2.51E-03	20	4.27%	469	1.82E-03
5	0.50%	55	2.13E-04	13	6.15%	675	2.62E-03	21	3.26%	358	1.39E-03
6	0.91%	100	3.88E-04	14	6.03%	662	2.57E-03	22	3.30%	362	1.41E-03
7	3.79%	416	1.62E-03	15	7.01%	770	2.99E-03	23	2.46%	270	1.05E-03
8	7.76%	852	3.31E-03	16	7.13%	783	3.04E-03	24	1.86%	204	7.93E-04
Total										10,983	

2022 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_MON

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	126	4.88E-04	9	7.11%	781	3.02E-03	17	7.39%	812	3.14E-03
2	0.42%	46	1.78E-04	10	4.39%	482	1.86E-03	18	8.17%	897	3.47E-03
3	0.41%	45	1.74E-04	11	4.67%	513	1.98E-03	19	5.70%	626	2.42E-03
4	0.27%	30	1.15E-04	12	5.89%	647	2.50E-03	20	4.27%	469	1.81E-03
5	0.50%	55	2.12E-04	13	6.15%	675	2.61E-03	21	3.26%	358	1.38E-03
6	0.91%	100	3.87E-04	14	6.03%	662	2.56E-03	22	3.30%	362	1.40E-03
7	3.79%	416	1.61E-03	15	7.01%	770	2.98E-03	23	2.46%	270	1.04E-03
8	7.76%	852	3.30E-03	16	7.13%	783	3.03E-03	24	1.86%	204	7.90E-04
Total										10,983	

World Oil Gas Station, Morgan Hill, CA - Offsite Residential Roadway Modeling
Cumulative Operation - Monterey Road
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area					(Sigma z) Initial Vertical Dimension
											Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	
TEVAP_MON	Monterey Road Northbound	NB	2	651.9	0.41	13.3	44	1.3	35	10,983	8,680	93,433	2.404E-07	1.773E-07	2.6	1.21
TEVAP_MON	Monterey Road Southbound	SB	2	649.2	0.40	13.3	44	1.3	35	10,983	8,644	93,046	2.404E-07	1.773E-07	2.6	1.21
Total										21,965						

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle per Hour (g/hour)	1.41852			
Emissions per Vehicle per Mile (g/VMT)	0.04053			

Emission Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_MON

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	126	5.76E-04	9	7.11%	781	3.56E-03	17	7.39%	812	3.70E-03
2	0.42%	46	2.10E-04	10	4.39%	482	2.20E-03	18	8.17%	897	4.09E-03
3	0.41%	45	2.05E-04	11	4.67%	513	2.34E-03	19	5.70%	626	2.85E-03
4	0.27%	30	1.35E-04	12	5.89%	647	2.95E-03	20	4.27%	469	2.14E-03
5	0.50%	55	2.50E-04	13	6.15%	675	3.08E-03	21	3.26%	358	1.63E-03
6	0.91%	100	4.56E-04	14	6.03%	662	3.02E-03	22	3.30%	362	1.65E-03
7	3.79%	416	1.90E-03	15	7.01%	770	3.51E-03	23	2.46%	270	1.23E-03
8	7.76%	852	3.89E-03	16	7.13%	783	3.57E-03	24	1.86%	204	9.32E-04
Total										10,983	

2022 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_MON

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	126	5.74E-04	9	7.11%	781	3.55E-03	17	7.39%	812	3.69E-03
2	0.42%	46	2.09E-04	10	4.39%	482	2.19E-03	18	8.17%	897	4.07E-03
3	0.41%	45	2.04E-04	11	4.67%	513	2.33E-03	19	5.70%	626	2.84E-03
4	0.27%	30	1.35E-04	12	5.89%	647	2.94E-03	20	4.27%	469	2.13E-03
5	0.50%	55	2.49E-04	13	6.15%	675	3.07E-03	21	3.26%	358	1.63E-03
6	0.91%	100	4.54E-04	14	6.03%	662	3.01E-03	22	3.30%	362	1.65E-03
7	3.79%	416	1.89E-03	15	7.01%	770	3.50E-03	23	2.46%	270	1.23E-03
8	7.76%	852	3.87E-03	16	7.13%	783	3.56E-03	24	1.86%	204	9.28E-04
Total										10,983	

World Oil Gas Station, Morgan Hill, CA - Offsite Residential Roadway Modeling
Cumulative Operation - Monterey Road
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2022

Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Line Area					(Sigma z) Initial Vertical Dimension
											Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	
FUG_MON	Monterey Road Northbound	NB	2	651.9	0.41	13.3	44	1.3	35	10,983	8,680	93,433	2.004E-07	1.478E-07	2.6	1.21
FUG_MON	Monterey Road Southbound	SB	2	649.2	0.40	13.3	44	1.3	35	10,983	8,644	93,046	2.004E-07	1.478E-07	2.6	1.21
Total											21,965					

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00211			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01681			
Road Dust - Emissions per Vehicle (g/VMT)	0.01487			
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.03379			

Emission Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_MON

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	126	4.80E-04	9	7.11%	781	2.97E-03	17	7.39%	812	3.09E-03
2	0.42%	46	1.75E-04	10	4.39%	482	1.83E-03	18	8.17%	897	3.41E-03
3	0.41%	45	1.71E-04	11	4.67%	513	1.95E-03	19	5.70%	626	2.38E-03
4	0.27%	30	1.13E-04	12	5.89%	647	2.46E-03	20	4.27%	469	1.78E-03
5	0.50%	55	2.09E-04	13	6.15%	675	2.57E-03	21	3.26%	358	1.36E-03
6	0.91%	100	3.80E-04	14	6.03%	662	2.52E-03	22	3.30%	362	1.38E-03
7	3.79%	416	1.58E-03	15	7.01%	770	2.93E-03	23	2.46%	270	1.03E-03
8	7.76%	852	3.24E-03	16	7.13%	783	2.98E-03	24	1.86%	204	7.77E-04
Total										10,983	

2022 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_MON

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	126	4.78E-04	9	7.11%	781	2.96E-03	17	7.39%	812	3.07E-03
2	0.42%	46	1.75E-04	10	4.39%	482	1.83E-03	18	8.17%	897	3.40E-03
3	0.41%	45	1.70E-04	11	4.67%	513	1.94E-03	19	5.70%	626	2.37E-03
4	0.27%	30	1.12E-04	12	5.89%	647	2.45E-03	20	4.27%	469	1.78E-03
5	0.50%	55	2.08E-04	13	6.15%	675	2.56E-03	21	3.26%	358	1.36E-03
6	0.91%	100	3.78E-04	14	6.03%	662	2.51E-03	22	3.30%	362	1.37E-03
7	3.79%	416	1.58E-03	15	7.01%	770	2.91E-03	23	2.46%	270	1.02E-03
8	7.76%	852	3.23E-03	16	7.13%	783	2.96E-03	24	1.86%	204	7.73E-04
Total										10,983	

**World Oil Gas Station, Mogan Hill, CA - Monterey Road Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Construction Cancer Risk and PM2.5 MEI Receptors (1.5m receptor height)**

<u>Emission Year</u>	2022
<u>Receptor Information</u>	Construction MEI receptors
Number of Receptors	2
Receptor Height	1.5 meters
Receptor Distances	At Construction MEI locations

<u>Meteorological Conditions</u>	
BAAQMD San Martin Airport Met Data	2013-2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Construction MEI Cancer Risk Maximum Concentrations - Cancer Risk MEI Location

Meteorological Data Years	Concentration (µg/m3)		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0027	0.1334	0.1566

Construction MEI PM2.5 Maximum Concentrations - PM2.5 MEI Location

Meteorological Data Years	PM2.5 Concentration (µg/m3)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.13775	0.1306	0.0072

**World Oil Gas Station, Mogan Hill, CA - Monterey Road Cancer Risk
Impacts at Construction MEIs - 1.5 meter receptor heights
30 Year Residential Exposure**

Cancer Risk Calculation Method

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor (mg/kg-day)⁻¹

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10⁻⁶

Where: C_{air} = concentration in air (µg/m³)

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

10⁻⁶ = Conversion factor

Cancer Potency Factors (mg/kg-day)⁻¹

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

Age → Parameter	Infant/Child			Adult
	3rd Trimester	0 - 2	2 - 16	16 - 30
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	0.85	0.85	0.72	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			TOTAL
Exposure Year	Exposure	Age	Year	Age Sensitivity Factor		Exhaust	Evaporative	DPM	Exhaust TOG	Evaporative TOG	
	Duration (years)				DPM	TOG	TOG				
0	0.25	-0.25 - 0*	2022	10	0.0027	0.1334	0.1566	0.031	0.009	0.0006	0.04
1	1	0 - 1	2022	10	0.0027	0.1334	0.1566	0.370	0.106	0.0074	0.48
2	1	1 - 2	2023	10	0.0027	0.1334	0.1566	0.370	0.106	0.0074	0.48
3	1	2 - 3	2024	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
4	1	3 - 4	2025	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
5	1	4 - 5	2026	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
6	1	5 - 6	2027	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
7	1	6 - 7	2028	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
8	1	7 - 8	2029	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
9	1	8 - 9	2030	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
10	1	9 - 10	2031	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
11	1	10 - 11	2032	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
12	1	11 - 12	2033	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
13	1	12 - 13	2034	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
14	1	13 - 14	2035	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
15	1	14 - 15	2036	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
16	1	15 - 16	2037	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
17	1	16-17	2038	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
18	1	17-18	2039	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
19	1	18-19	2040	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
20	1	19-20	2041	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
21	1	20-21	2042	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
22	1	21-22	2043	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
23	1	22-23	2044	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
24	1	23-24	2045	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
25	1	24-25	2046	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
26	1	25-26	2047	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
27	1	26-27	2048	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
28	1	27-28	2049	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
29	1	28-29	2050	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
30	1	29-30	2051	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
Total Increased Cancer Risk								1.57	0.450	0.031	2.05

* Third trimester of pregnancy

Maximum
Hazard Index 0.001
Fugitive PM2.5 0.13
Total PM2.5 0.14



BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Risk & Hazard Stationary Source Inquiry Form

This form is required when users request stationary source data from BAAQMD

This form is to be used with the BAAQMD's Google Earth stationary source screening tables.

[Click here for guidance on conducting risk & hazard screening, including roadways & freeways, refer to the District's Risk & Hazard Analysis flow chart.](#)

[Click here for District's Recommended Methods for Screening and Modeling Local Risks and Hazards document.](#)

Table A: Requester Contact Information

Date of Request	7/13/2021
Contact Name	Casey Divine
Affiliation	Illingworth & Rodkin, Inc.
Phone	707-794-0400 x103
Email	cdivine@illingworthrodkin.com
Project Name	World Oil Gas Station
Address	16720 Monterey Road
City	Morgan Hill
County	Santa Clara
Type (residential, commercial, mixed use, industrial, etc.)	Gas Station
Project Size (# of units or building square feet)	6 Pumps
Comments:	

For Air District assistance, the following steps must be completed:

1. Complete all the contact and project information requested in **Table A**. Forms will not be processed. Please include a project site map.
2. Download and install the free program Google Earth, <http://www.google.com/earth/download/ge/>, and then download the county specific Google Earth stationary source application files from the District's website, <http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx>. The small points on the map represent stationary sources permitted by the District (Map A on right). These permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc. Click on a point to view the source's Information Table, including the name, location, and preliminary estimated cancer risk, hazard index, and PM2.5 concentration.
3. Find the project site in Google Earth by inputting the site's address in the Google Earth search box.
4. Identify stationary sources within at least a 1000ft radius of project site. Verify that the location of the source on the map matches with the source's address in the Information Table, by using the Google Earth address search box to confirm the source's address location. Please report any mapping errors to the District.
5. List the stationary source information in **Table B** only.
6. Note that a small percentage of the stationary sources have Health Risk Screening Assessment (HRSA) data INSTEAD of screening level data. These sources will be noted by an asterisk next to the Plant Name (Map B on right). If HRSA values are presented, these values have already been modeled and cannot be adjusted further.
7. Email this completed form to District staff. District staff will provide the most recent risk, hazard, and PM2.5 data that are available for the source(s). If this information or data are not available, source emissions data will be provided. Staff will respond to inquiries within three weeks.

Note that a public records request received for the same stationary source information will cancel the processing of your SSIF request.

Submit forms, maps, and questions to Matthew Hanson at 415-749-8733, or mhanson@baaqmd.gov

Table B: Google Earth data											Construction MEI			
Distance from Receptor (feet) or MEI ¹	Plant No.	Facility Name	Address	Cancer Risk ²	Hazard Risk ²	PM _{2.5} ²	Source No. ³	Type of Source ⁴	Fuel Code ⁵	Status/Comments	Distance Adjustment Multiplier	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
650	23026	Airtronics Metal Products	140 San Pedro Avenue	0.01	--	0.02		3x Spraybooths, 2x Drying ovens		2018 Dataset	0.25	0.003	#VALUE!	0.01

Footnotes:

1. Maximally exposed individual
2. These Cancer Risk, Hazard Index, and PM2.5 columns represent the values in the Google Earth Plant Information Table.
3. Each plant may have multiple permits and sources.
4. Permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc.
5. Fuel codes: 98 = diesel, 189 = Natural Gas.
6. If a Health Risk Screening Assessment (HRSA) was completed for the source, the application number will be listed here.
7. The date that the HRSA was completed.
8. Engineer who completed the HRSA. For District purposes only.
9. All HRSA completed before 1/5/2010 need to be multiplied by an age sensitivity factor of 1.7.
10. The HRSA "Chronic Health" number represents the Hazard Index.
11. Further information about common sources:
 - a. Sources that only include diesel internal combustion engines can be adjusted using the BAAQMD's Diesel Multiplier worksheet.
 - b. The risk from natural gas boilers used for space heating when <25 MM BTU/hr would have an estimated cancer risk of one in a million or less, and a chronic hazard index of 0.003 or less. To be
 - c. BAAQMD Reg 11 Rule 16 required that all co-residential (sharing a wall, floor, ceiling or is in the same building as a residential unit) dry cleaners cease use of perc on July 1, 2010.
Therefore, there is no cancer risk, hazard or PM2.5 concentrations from co-residential dry cleaning businesses in the BAAQMD.
 - d. Non co-residential dry cleaners must phase out use of perc by Jan. 1, 2023. Therefore, the risk from these dry cleaners does not need to be factored in over a 70-year period, but instead should reflect the number
 - e. Gas stations can be adjusted using BAAQMD's Gas Station Distance Multplier worksheet.
 - f. Unless otherwise noted, exempt sources are considered insignificant. See BAAQMD Reg 2 Rule 1 for a list of exempt sources.
 - g. This spray booth is considered to be insignificant.

Date last updated:
03/13/2018

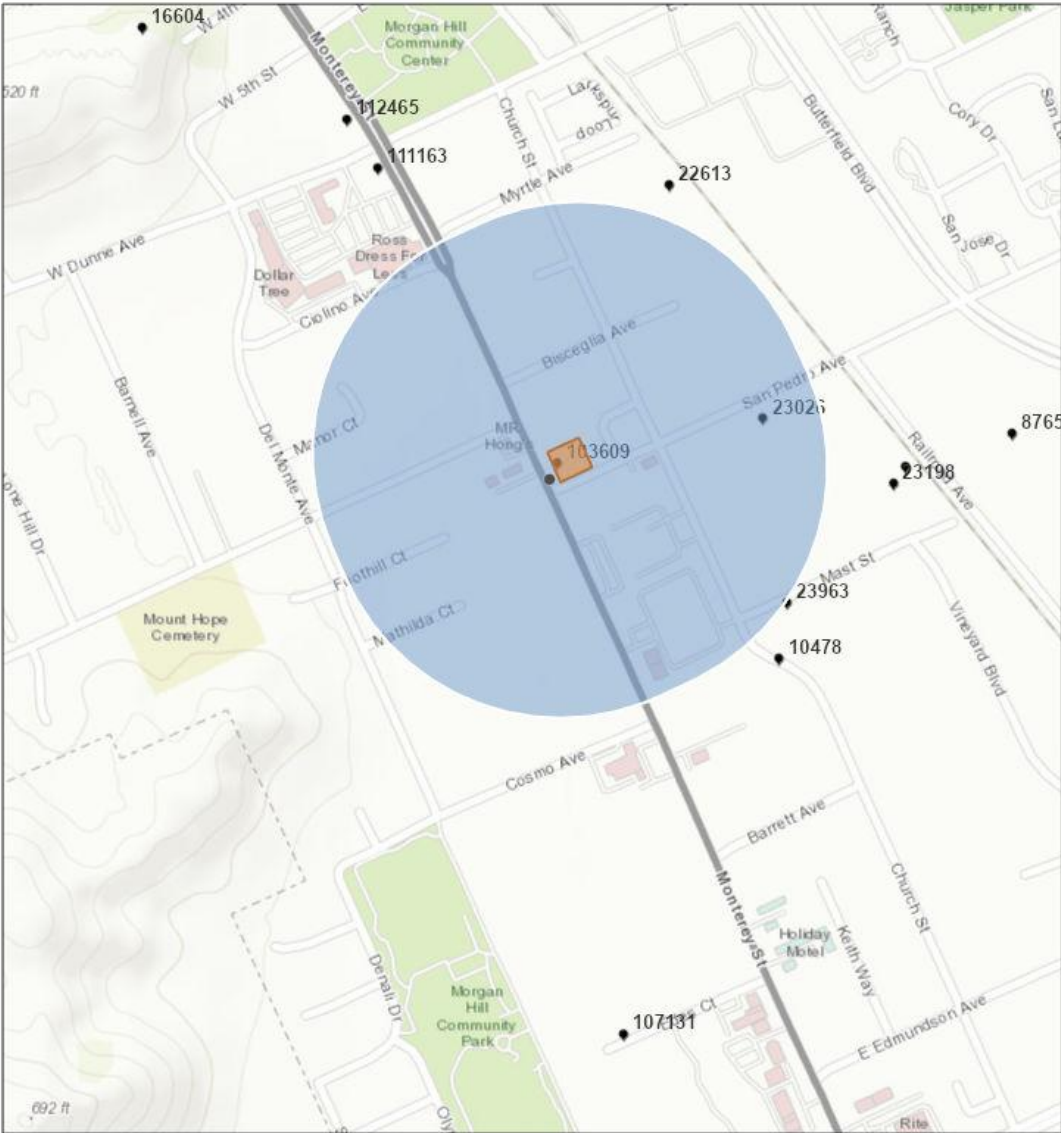


Stationary Source Risk & Hazards Screening Report

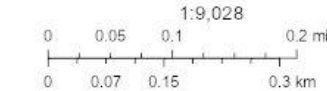
Area of Interest (AOI) Information

Area : 3,727,588.05 ft²

Jul 9 2021 9:29:07 Pacific Daylight Time



● Permitted Facilities 2018



City of San Jose, County of Santa Clara, County of Santa Cruz, Bureau of Land Management, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA

Summary

Name	Count	Area(ft ²)	Length(ft)
Permitted Facilities 2018	2	N/A	N/A

Permitted Facilities 2018

#	FACID	Name	Address	City	St
1	23026	Airtronics Metal Products	140 San Pedro Avenue	Morgan Hill	CA
2	103609	World Oil Marketing Company #52	16720 Monterey St	Morgan Hill	CA

#	Zip	County	Cancer	Hazard	PM_25	Type	Count
1	95037	Santa Clara	0.010	0.000	0.020	Contact BAAQMD	1
2	95037	Santa Clara	20.540	0.090	0.000	Gas Dispensing Facility	1

Note: The estimated risk and hazard impacts from these sources would be expected to be substantially lower when site specific Health Risk Screening Assessments are conducted.

The screening level map is not recommended for evaluating sensitive land uses such as schools, senior centers, day cares, and health facilities.

© Copyright 2018 Bay Area Air Quality Management District

APPENDIX F

VMT Assessment and Trip Generation and Operations Analysis



HEXAGON TRANSPORTATION CONSULTANTS, INC.

Memorandum

Date: June 4, 2021
To: Maria Kisyova, David J. Powers & Associates, Inc.
From: Robert Del Rio, T.E., Luis Descanzo
Subject: VMT Assessment for the Proposed World Oil Gas Station in Morgan Hill, California

Hexagon Transportation Consultants, Inc. has completed a vehicle-miles traveled (VMT) assessment for the proposed commercial development project located at 16720 Monterey Road (APN 817-01-002) in Morgan Hill, California (see Figure 1). The project as proposed would consist of the reconstruction of an existing gas station on-site to add two additional pump stations and retail space. The existing station provides four pump stations (eight gas pumps) and an 880 square-foot retail/convenience store. The proposed new gas station will provide a total of six pump stations (12 gas pumps) and a 2,115 square-foot retail store (see Figure 2 for site plan). The project would modify an existing driveway on Monterey Road from an 84-foot wide to a 32-foot wide driveway. No improvements to the existing 32-foot wide driveway on San Pedro Avenue are proposed. The purpose of this memorandum is to provide an assessment of the project's effect on VMT. The VMT assessment methodology and results are discussed below.

VMT Assessment Methodology and Results

Pursuant to Senate Bill (SB) 743, the California Environmental Quality Act (CEQA) 2019 Update Guidelines Section 15064.3, subdivision (b) states that VMT will be the metric in analyzing transportation impacts for land use projects for CEQA purposes. VMT is the total miles of travel by personal motorized vehicles a project is expected to generate in a day. VMT measures the full distance of personal motorized vehicle-trips with one end within the project. Typically, development projects that are farther from other, complementary land uses (such as a business park far from housing) and in areas without transit or active transportation infrastructure (bike lanes, sidewalks, etc.) generate more driving than development near complementary land uses with more robust transportation options. Therefore, developments located in a central business district with high density and diversity of complementary land uses and frequent transit services are expected to internalize trips and generate shorter and fewer vehicle trips than developments located in a suburban area with low density of residential developments and no transit serve in the project vicinity.

The City of Morgan Hill, at the time of this report, is undertaking a process of updating its General Plan policies to incorporate VMT methodologies and significance thresholds to be consistent with SB 743 but has not released draft thresholds. In the absence of an adopted, or even draft, City policy with numeric thresholds, this assessment relies on OPR guidelines in analyzing the project's effects on VMT.

The *Technical Advisory on Evaluating Transportation Impacts in CEQA* published by the Governor's Office of Planning and Research (OPR) in December 2018 provides recommendations regarding VMT evaluation methodology, significance thresholds, and screening thresholds for land use projects. However, the evaluation of VMT for development projects is limited to general land use categories such

Figure 1
Site Location

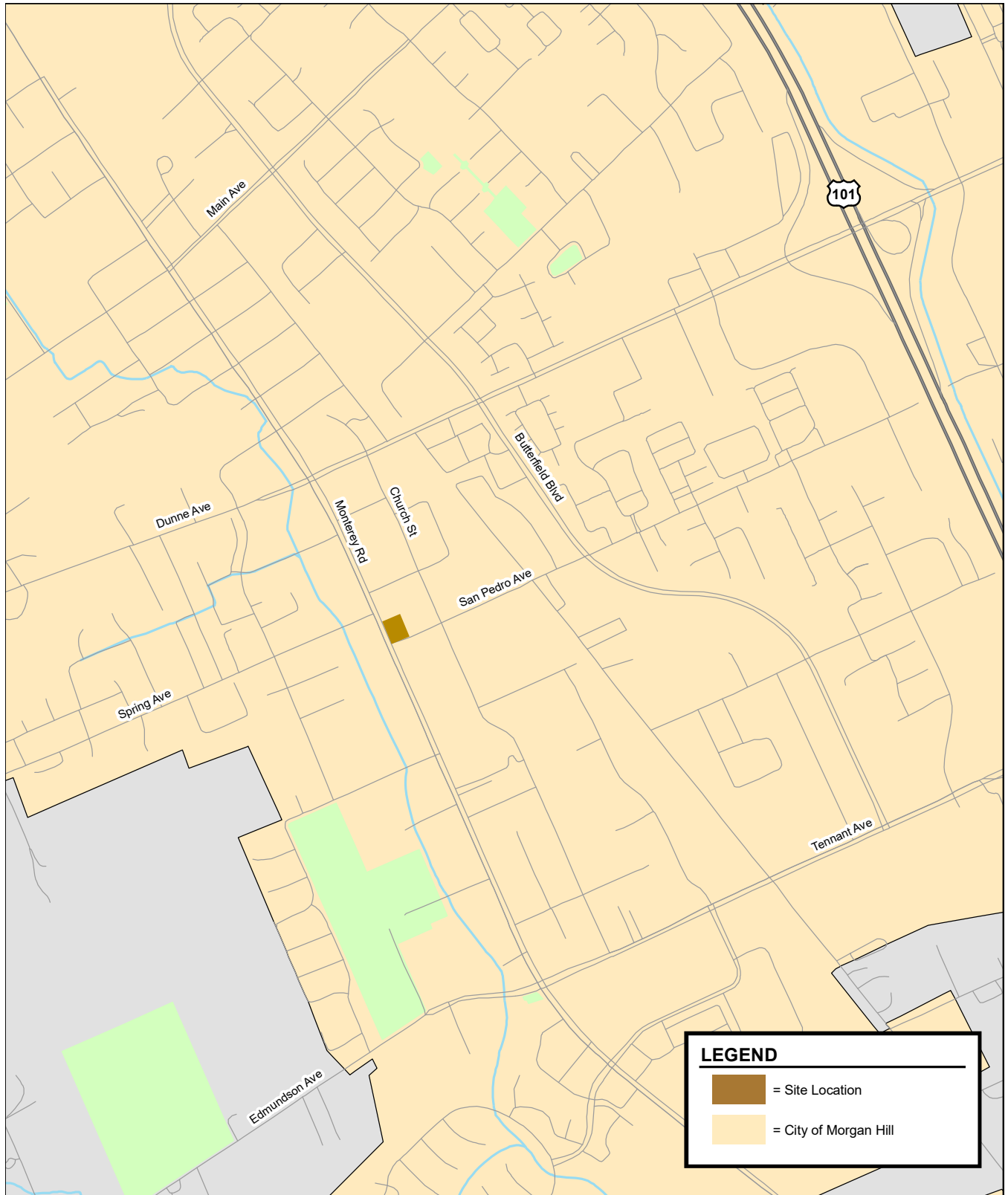
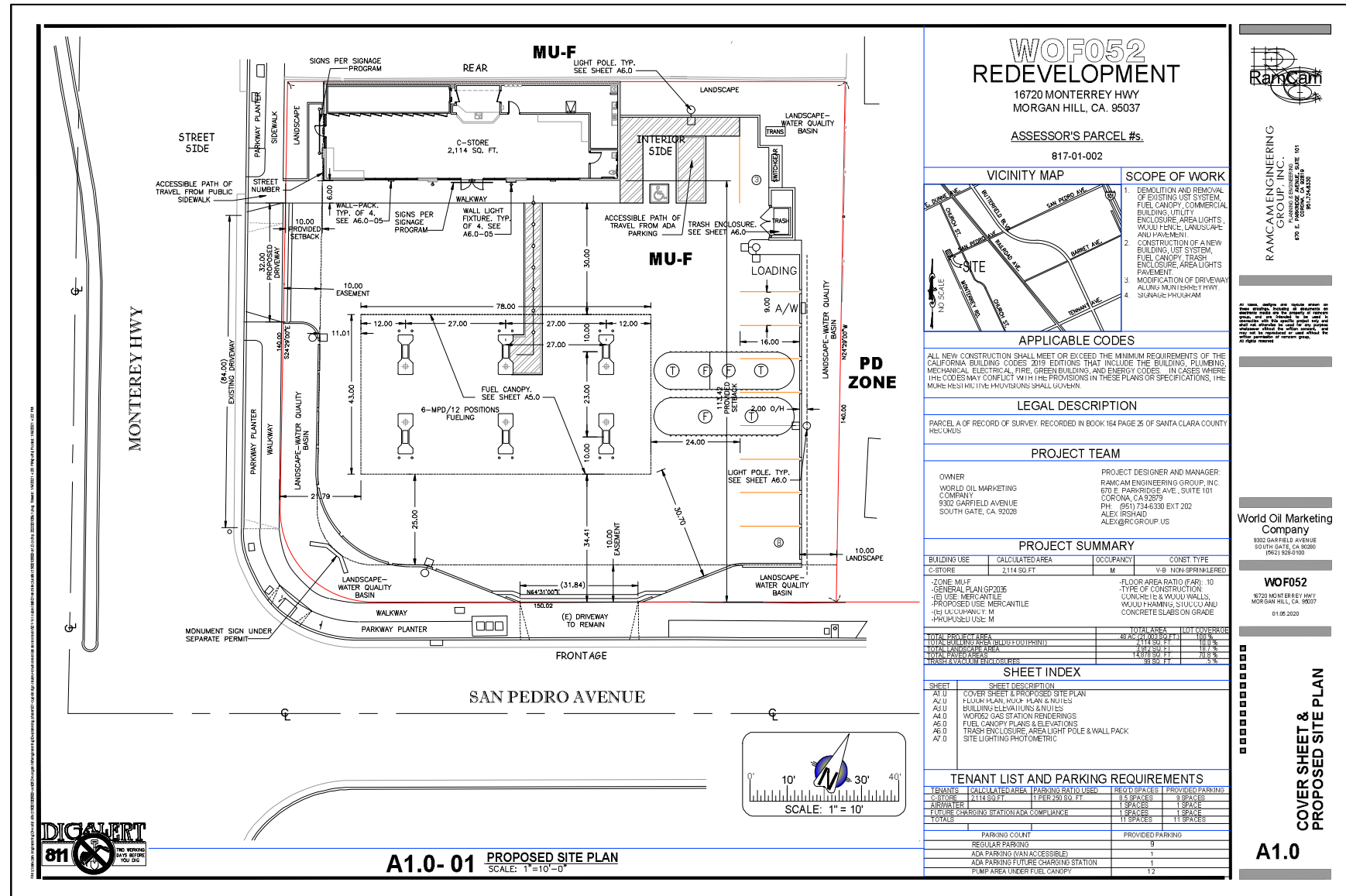


Figure 2
Site Plan

as residential, office, industrial, and retail. Therefore, the assessment of VMT for the proposed gas station required a conversion to an equivalent amount of one of the general land uses that has similar trip generating and trip origin/destination characteristics. The number and origination/destination of daily trips and resulting VMT generated by the proposed gas station would be similar to that of local-serving retail since the gas station will be centrally located within the city and not adjacent to a major regional freeway. Therefore, the proposed gas station was converted to an equivalent amount of local-serving retail space based on a comparison of estimated daily trips using ITE trip rates for the proposed gas station and typical retail uses.

Daily Trip Generation Estimates

Daily site-generated vehicular traffic for the proposed gas station was estimated based on trip generation rates compiled in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 10th Edition (2017)*. The proposed project would increase the size of the retail use on site to greater than 2,000 square feet, therefore rates for "Gasoline/Service Station with Convenience Market" (ITE Land Use 945) were used to estimate the trips generated by the proposed gas station. Based on the trip generation rates and the project size, it is estimated that the proposed gas station will generate 2,464 new daily vehicle trips prior to any trip reductions (see Table 1).

Table 1
Trip Generation Summary

Trip Generation Summary

Land Use	ITE Land Use Code ¹	Size	Daily	
			Rate	Trip
Proposed Land Use				
Gasoline/Service Station with Convenience Market	945	12 Vehicle Fueling Positions	205.36	2,464
Pass-by Reduction ²			56%	-1,380
Sub-Total				1,084
Existing Land Use Credit				
Gasoline/Service Station	944	8 Vehicle Fueling Positions	172.01	-1,376
Pass-by Reduction ²			42%	578
Sub-Total				-798
Total Net Project Trips				286
Equivalent Land Use				
Retail (Shopping Center)	820		37.75	286
Equivalent Square Footage		7,578 Square Feet		
Notes:				
¹ Source: ITE <i>Trip Generation Manual</i> , 10th Edition 2017.				
² Peak-hour passerby reduction rates obtained from the ITE Trip Generation Handbook, Third Edition.				
Daily peak-hour pass-by reductions are assumed to be the same as their PM peak-hour pass-by rate.				

Trip generation for gas stations are typically adjusted to account for pass-by-trips. Pass-by-trips are trips that would already be on the adjacent roadways (and are therefore already counted in the existing traffic) but would turn into the site while passing by. Justification for applying the pass-by-trip reduction is founded on the observation that such gas station traffic is not actually generated by the gas station, however, is already part of the ambient traffic levels. Pass-by-trips are therefore excluded from the traffic projections to yield net new project trips generated by the project. The pass-by reductions were derived based on information contained in the ITE *Trip Generation Handbook*, Third Edition 2017. ITE data show that gasoline/service stations with convenience markets have average pass-by trip reductions of 62% in the AM peak-hour and 56% in the PM peak-hour. Therefore, the lesser of the peak hour pass-by reductions was applied to the estimated daily trips.

Trip credit for the existing gas station on site also was applied since traffic generated by the existing use would be eliminated once the proposed project is built. The rates published for “Gasoline/Service Station” (ITE Land Use 944) were used to estimate the trips generated by the existing gas station, the retail component of which is less than 2,000 square feet in size. As with the proposed gas station, a pass-by trip reduction was applied. The existing site-generated traffic was subtracted from the project traffic estimates to obtain the net increase in traffic associated with the construction of the proposed project. After applying the ITE trip rates, pass-by reductions, and existing site trip credit, it is estimated that the project would generate 286 net new vehicle-trips per day.

VMT Assessment

The OPR provides screening threshold recommendations that are intended to identify when a project should be expected to cause a less-than-significant impact without conducting a detailed VMT evaluation. The OPR screening thresholds recommendations are based on project size, maps, transit availability, and provision of affordable housing. The OPR recommendations include the screening threshold criteria listed below:

- OPR recommends that office or residential projects not exceeding a level of 15 percent below existing VMT per capita and employee may indicate a less-than-significant impact on VMT.
- OPR recommends that projects (including office, residential, retail, and mixed-use developments) proposed within ½ mile of an existing major transit stop or within ¼ mile of an existing stop along a high-quality transit corridor may be presumed to have a less-than-significant impact on VMT.
- OPR recommends that 100 percent affordable residential development in infill locations be presumed to have a less-than-significant impact on VMT.
- OPR recommends that projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant impact on VMT.
- OPR recommends that local-serving retail developments (considered to be less than 50,000 s.f. in size) may be assumed to cause a less-than-significant impact on VMT.

As discussed above, the proposed project was converted to equivalent amount of retail/commercial use for the purpose of the VMT assessment since the OPR screening criteria outlined above are not directly applicable to the proposed gas station uses. The results of the conversion of the proposed gas station to an equivalent amount of retail/commercial space, shown on Table 1, indicate that the proposed gas station would generate net new daily trips equivalent to that of an approximately 7,578 s.f. retail development. If no credit for the existing gas station use on site were applied, the proposed gas station would generate daily trips equivalent to that of an approximately 28,715 s.f. retail development.

Per the OPR recommendations, since the daily trips and resulting VMT estimated to be generated by the proposed gas station would be equivalent to that generated by retail uses of less than 50,000 s.f. in size, it may be presumed to be a local-serving facility and would therefore have a less-than-significant impact on VMT. The OPR guidelines suggest that by adding retail opportunities into the urban fabric and thereby improving retail destination proximity, local-serving retail development tends to shorten trips and reduce VMT. As a result of the project having trip-making characteristics of a local-serving retail facility, it can be presumed that the project would have a less-than-significant impact on VMT.



HEXAGON TRANSPORTATION CONSULTANTS, INC.

Memorandum

Date: December 5, 2022
To: Maria Kisyova, David J. Powers & Associates, Inc.
From: Robert Del Rio, T.E., Luis Descanzo
Subject: Trip Generation and Operations Analysis for the Proposed World Oil Gas Station in Morgan Hill, California

Hexagon Transportation Consultants, Inc. has completed a trip generation and operations analysis for the proposed commercial development project located at 16720 Monterey Road (APN 817-01-002) in Morgan Hill, California (see Figure 1). The project as proposed would consist of the reconstruction of an existing gas station on-site to add two additional pump stations and retail space. The existing station provides four pump stations (eight gas pumps) and an 880 square-foot retail/convenience store. The proposed new gas station will provide a total of six pump stations (12 gas pumps) and a 2,115 square-foot retail store. The project would modify an existing driveway on Monterey Road from an 84-foot wide to a 32-foot wide driveway. No improvements to the existing 32-foot wide driveway on San Pedro Avenue are proposed. The methodology, results, and recommendations of the analysis are discussed below.

Scope of Study

The current General Plan, *Morgan Hill 2035 General Plan*, adopted in July 2016 uses Level of Service (LOS) as its primary metric for the evaluation of the projected operation of the City's roadway system. Therefore, this traffic operations analysis based upon peak hour intersection level of service analysis is included for consistency with the General Plan goals and policies. The traffic operations analysis supplements the CEQA required VMT analysis provided in a separate memorandum. However, the determination of project impacts per CEQA requirements is based solely on the VMT analysis.

The purposes of the trip generation and operations analysis are to evaluate the magnitude of traffic that would be added to the roadway system due to the proposed project and to determine whether a comprehensive traffic study is required for the proposed project. The analysis consists of an evaluation of trip generation and peak-hour intersection level of service analysis at intersections in the immediate vicinity of the project site. Traffic conditions were evaluated for the scenarios listed below.

Existing Conditions. Existing conditions represent the existing peak-hour traffic volumes on the existing roadway network. Existing traffic volumes were represented by traffic counts collected in March 2019 at the study intersections.

Existing Plus Project Conditions. Existing plus project peak-hour traffic volumes were estimated by adding to the existing traffic volumes the additional traffic that would be generated by the proposed project. Existing plus project conditions were evaluated relative to existing conditions in order to determine the effects of the proposed project on existing traffic conditions.

Year 2025 Cumulative Conditions. Year 2025 Cumulative conditions represent future traffic volumes on the future transportation network. Year 2025 Cumulative conditions include traffic

Figure 1
Site Location

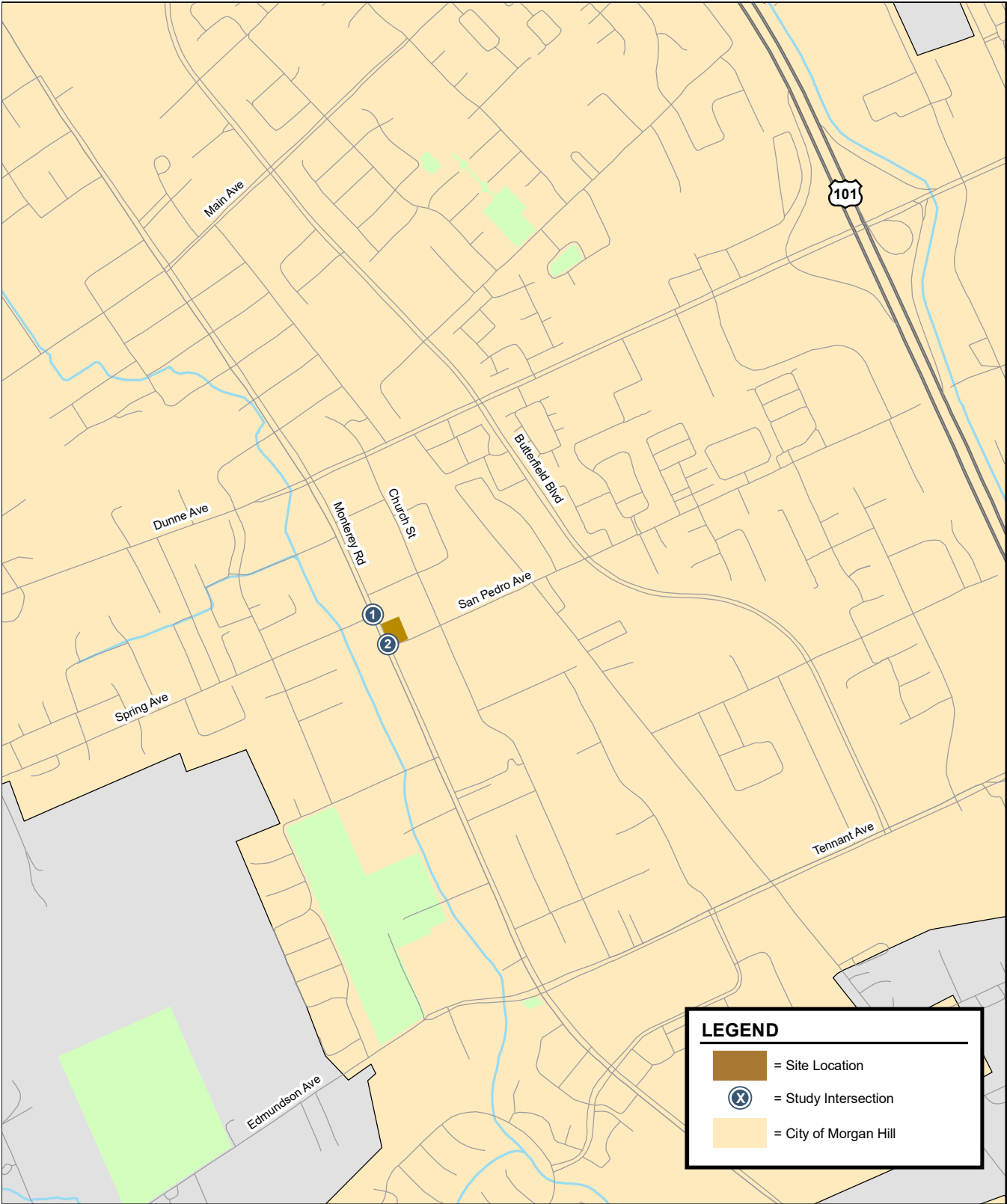
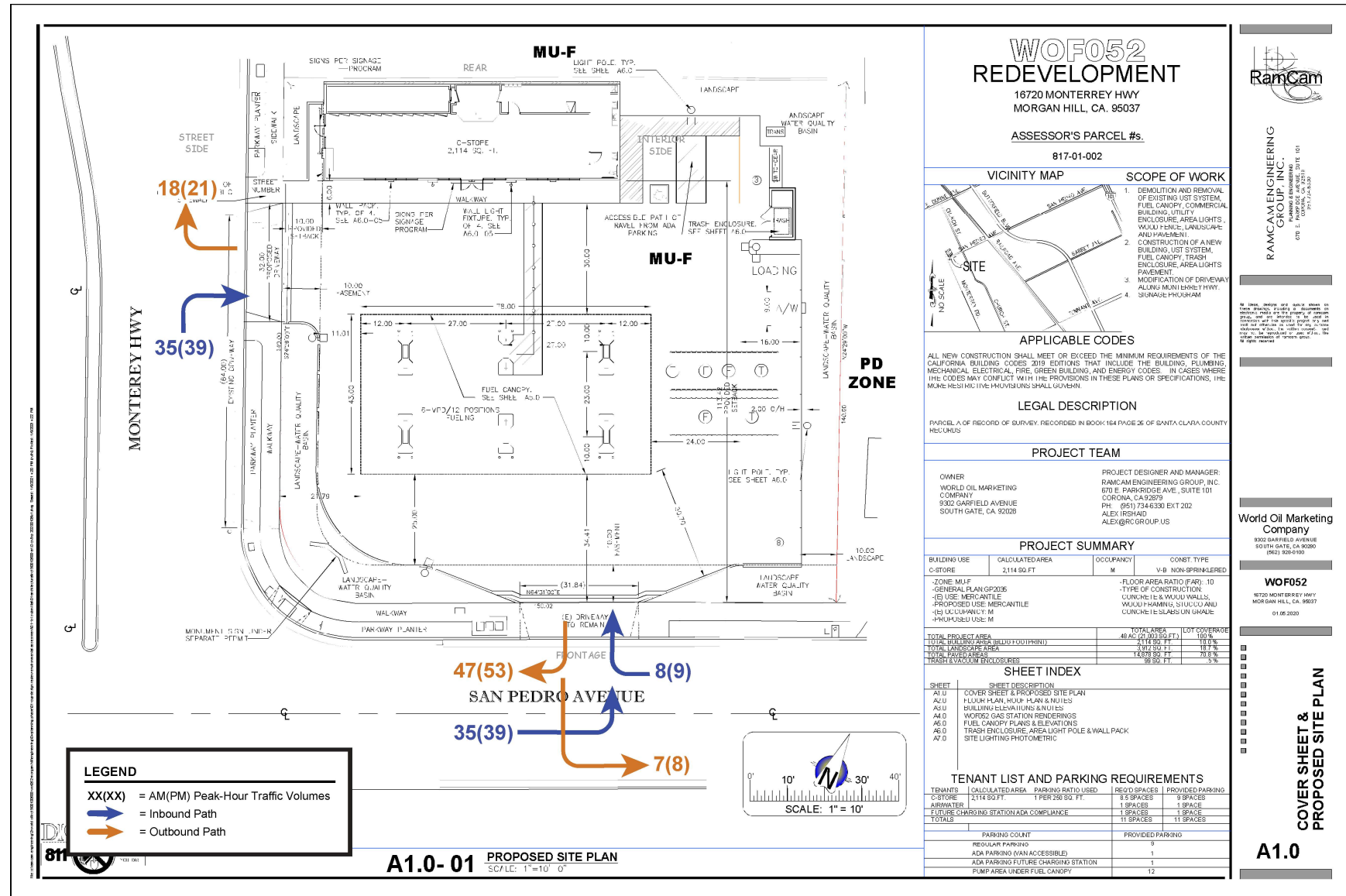


Figure 2
Site Plan and Gross Project Trips at Driveways



growth projected to occur in the Year 2025 without the proposed project, including a proposed senior housing facility located at 16685 Church Street.

Year 2025 Cumulative with Project Conditions. Year 2025 Cumulative with project conditions consists of Year 2025 Cumulative traffic conditions with the addition of project traffic.

Project Trip Generation Estimates and Assignment

In determining the project trip generation, the magnitude of traffic entering and existing the site is estimated for the AM and PM peak hours. Through empirical research, data have been collected that quantify the amount of traffic produced by many types of land uses. The research is compiled in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 10th Edition (2017)*. The standard trip generation rates can be applied to help predict the future traffic increases that would result from a new development. The proposed project would increase the size of the retail use on-site to greater than 2,000 square feet, therefore rates for "Gasoline/Service Station with Convenience Market" (ITE Land Use 945) were used to estimate the trips generated by the proposed gas station. Based on the trip generation rates and the project size, it is estimated that the proposed gas station is estimated to generate 150 new vehicle trips (77 inbound and 73 outbound) during the AM peak hour and 168 vehicle trips (86 inbound and 82 outbound) during the PM peak hour prior to any trip reductions (see Table 1).

Table 1
Trip Generation Summary

Land Use	ITE Land Use Code ¹	Size	Daily		AM Peak Hour				PM Peak Hour			
			Rate	Trip	Pk-Hr Rate	Trip			Pk-Hr Rate	Trip		
						In	Out	Total		In	Out	Total
Proposed Land Use												
Gasoline/Service Station with Convenience Market	945	12 Vehicle Fueling Positions	205.36	2,464	12.47	77	73	150	13.99	86	82	168
Pass-by Reduction ²			56%	-1,380	62%	-48	-45	-93	56%	-48	-46	-94
Sub-Total				1,084		29	28	57		38	36	74
Existing Land Use Credit												
Gasoline/Service Station	944	8 Vehicle Fueling Positions	172.01	-1,376	10.28	-41	-41	-82	14.03	-57	-56	-113
Pass-by Reduction ²			42%	578	58%	24	24	48	42%	24	24	48
Sub-Total				-798		-17	-17	-34		-33	-32	-65
Total Net Project Trips				286		12	11	23		5	4	9
Notes:												
¹ Source: ITE <i>Trip Generation Manual</i> , 10th Edition 2017.												
² AM and PM peak-hour passerby reduction rates obtained from the ITE Trip Generation Handbook, Third Edition.												
Daily peak-hour pass-by reductions are assumed to be the same as their PM peak-hour pass-by rate.												

Trip generation for gas stations are typically adjusted to account for pass-by-trips. Pass-by-trips are trips that would already be on the adjacent roadways (and are therefore already counted in the existing traffic) but would turn into the site while passing by. Justification for applying the pass-by-trip reduction is founded on the observation that such gas station traffic is not actually generated by the gas station, but is already part of the ambient traffic levels. Pass-by-trips are therefore excluded from the traffic projections to yield net new project trips generated by the project. However, at intersections providing direct access to the project site (i.e. project driveways), all project-generated traffic is included, including pass-by trips. The pass-by reductions were derived based on information contained in the ITE *Trip Generation Handbook*, Third Edition 2017. ITE data show that gasoline/service stations with convenience markets have average pass-by trip reductions of 62% in the AM peak-hour and 56% in the PM peak-hour.

Trip credit for the existing gas station on site also was applied since traffic generated by the existing use would be eliminated once the proposed project is built. The rates published for “Gasoline/Service Station” (ITE Land Use 944) were used to estimate the trips generated by the existing gas station, the retail component of which is less than 2,000 square feet in size. As with the proposed development, a pass-by trip reduction was applied. The existing site-generated traffic was subtracted from the project traffic estimates to obtain the net increase in traffic associated with the implementation of the proposed project.

After applying the ITE trip rates, pass-by reductions, and existing site trip credit, it is estimated that the project would generate 23 net new vehicle trips (12 inbound and 11 outbound) during the AM peak hour and 9 net new vehicle trips (5 inbound and 4 outbound) during the PM peak hour (see Table 1).

The directional distribution of site-generated traffic to and from the project site was estimated based on the existing travel patterns on the surrounding roadway network that reflect typical weekday AM and PM peak commute patterns, the location of the project driveways, freeway access points, and the locations of complimentary land uses. The peak-hour project trips associated with the proposed project were added to the transportation network in accordance with the distribution pattern. The project trip distribution pattern and assignment of project trips at the study intersections are shown on Figure 3.

Intersection Level of Service Analysis

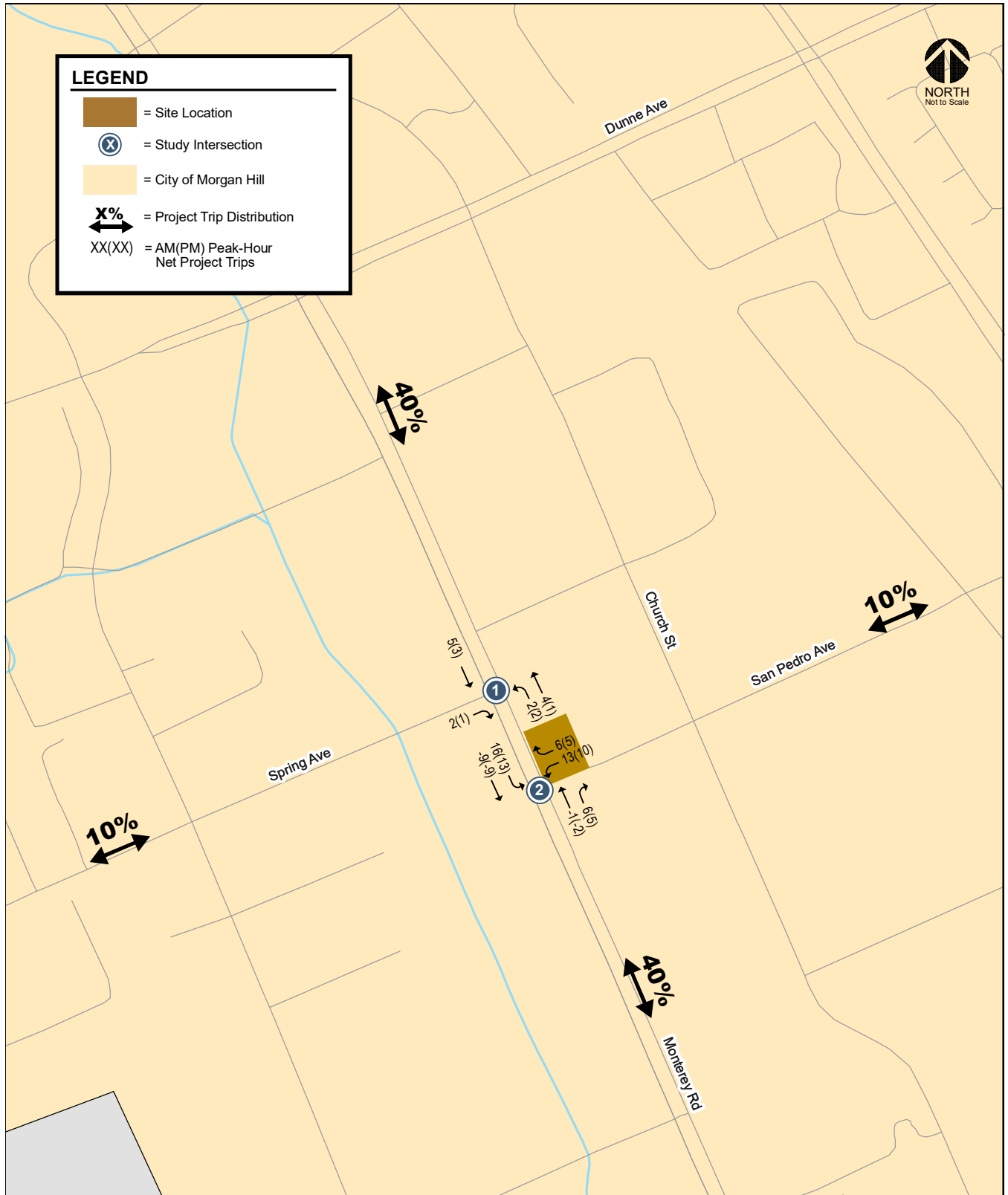
Traffic conditions at the intersection of Monterey Road/Spring Avenue and Monterey Road/San Pedro Avenue were analyzed for the weekday AM and PM peak hours of traffic. Other intersections in the project area were not studied because the addition of project trips will be minimal, less than 10 peak hour trips. The weekday AM peak hour of traffic generally falls within the 7:00 AM to 9:00 AM period and the weekday PM peak hour is typically in the 4:00 PM to 6:00 PM period. It is during these times that the most congested traffic conditions occur on a typical weekday.

Signalized Intersection Analysis

Signalized study intersections are subject to the City of Morgan Hill's level of service standards. The City of Morgan Hill's level of service methodology is TRAFFIX, which is based on the 2000 *Highway Capacity Manual* (HCM) method for signalized intersections. TRAFFIX evaluates signalized intersections operations based on average delay time for all vehicles at the intersection. Since TRAFFIX is also the CMP-designated intersection level of service methodology, the City of Morgan Hill methodology employs the CMP defaults values for the analysis parameters, which include adjusted saturation flow rates to reflect conditions in Santa Clara County. All intersections within the City of Morgan Hill are required to meet the City's LOS standard of LOS D, with the exception of the following:

- **LOS F** for Downtown intersections and segments including at Main/Monterey, along Monterey Road between Main and Fifth Street, and along Depot Street at First through Fifth Street;
- **LOS E** for the following intersections and freeway zones:
 - Main Avenue and Del Monte Avenue
 - Main Avenue and Depot Street
 - Dunne Avenue and Del Monte Avenue
 - Dunne Avenue and Monterey Avenue
 - Dunne Avenue and Church Street
 - Dunne Avenue and Depot Street
 - Cochrane Road and Monterey Road
 - Tennant Avenue and Monterey Road
 - Tennant Avenue and Butterfield Boulevard

Figure 3
Project Trip Distribution and Net Project Trip Assignment (Existing Plus Project Conditions)



- Cochrane Road Freeway Zone: from Madrone Parkway/Cochrane Plaza to Cochrane Road/DePaul Drive
- Dunne Avenue Freeway Zone: from Walnut Grove Drive/East Dunne Avenue to Condit Road/East Dunne Avenue
- Tennant Avenue Freeway Zone: from Butterfield Boulevard/Tennant Avenue to Condit Road/Tennant Avenue

According to the City of Morgan Hill level of service guidelines, a development is said to create a significant adverse effect on traffic conditions at a signalized intersection if for either peak hour:

1. The level of service at the intersection degrades from an acceptable level (LOS D or LOS E as identified above) under no project conditions to an unacceptable level (LOS E or F) under project conditions, or
2. The level of service at the intersection is an unacceptable level (LOS E or F as identified above) under no project conditions and the addition of project trips causes the average critical delay to increase by four (4) or more seconds *and* the volume-to-capacity ratio (V/C) to increase by 0.01.

An exception to this rule applies when the addition of project traffic reduces the amount of average delay for critical movements (i.e., the change in average delay for critical movements is negative). In this case, the threshold of significance is an increase in the critical V/C value by 0.01 or more.

Unsignalized Intersections

The methodology used to determine the level of service for unsignalized intersections is also TRAFFIX and the 2000 HCM methodology for unsignalized intersection analysis. This method is applicable for both two-way and all-way stop-controlled intersections. For the analysis of stop-controlled intersections, the 2000 HCM methodology evaluates intersection operations on the basis of average control delay time for all vehicles on the stop-controlled approaches. For the purpose of reporting level of service for one- and two-way stop-controlled intersections, the delay and corresponding level of service for the stop-controlled minor street approach with the highest delay is reported. For all-way stop-controlled intersections, the reported average delay and corresponding level of service is the average for all approaches at the intersection. The City uses a minimum acceptable level of service standard of LOS D for unsignalized intersections, in accordance with its adopted threshold of significance in its Guidelines for Preparation of Transportation Impact Reports.

Signal Warrants

The level of service analysis at unsignalized intersections is supplemented with an assessment of the need for signalization of the intersection. The need for signalization of unsignalized intersections is assessed based on the Peak Hour Volume Warrant (Warrant 3) described in the *California Manual on Uniform Traffic Control Devices for Streets and Highways (CA MUTCD)*, Part 4, Highway Traffic Signals, 2014. This method makes no evaluation of intersection level of service, but simply provides an indication whether vehicular peak hour traffic volumes are, or would be, sufficient to justify installation of a traffic signal. The decision to install a traffic signal should not be based purely on the warrants alone. Instead, the installation of a signal should be considered and further analysis performed when one or more of the warrants are met. Additionally, engineering judgment is exercised on a case-by-case basis to evaluate the effect a traffic signal will have on certain types of accidents and traffic conditions at the subject intersection as well as at adjacent intersections. Intersections that meet the peak hour warrant are subject to further analysis before determining that a traffic signal is necessary. Other options such as traffic control devices, signage, or geometric changes may be preferable based on existing field conditions.

Level of Service Results

The results of the intersection level of service analysis show that under existing conditions, the intersection of Monterey Road and San Pedro Avenue currently operates at a LOS F during the PM peak hour, which is below the City standard. The addition of project traffic would increase delays during the PM peak hour and also would degrade AM peak hour operations to an unacceptable LOS E. Under Year 2025 Cumulative conditions, the intersection is projected to operate at an unacceptable LOS F during both peak hours (without and with the proposed project). The substandard level of service is due to long delays experienced by turn-movements from San Pedro Avenue that is caused by limited gaps in traffic flow on Monterey Road. The approved Senior Housing development at 16685 Church Street is conditioned to construct a raised median along Monterey Road that would restrict left-turns out of San Pedro Avenue to southbound Monterey Road. With the left-turn restriction, only right-turns in and out at both San Pedro Avenue (east leg of the intersection) and the existing driveway (west leg of the intersection) as well as southbound left-turns would be allowed. With this intersection improvement, the intersection of Monterey Road and San Pedro Avenue would operate at an acceptable level of service under Existing and Year 2025 Cumulative conditions.

The results of the intersection level of service analysis also show that the study intersection of Monterey Road and Spring Avenue currently operates and is projected to continue to operate at an acceptable LOS B or better conditions under Year 2025 Cumulative conditions, and the addition of project traffic would not result in the degradation of the study intersection's levels of service during the AM and PM peak hours.

Based on the results of the intersection level of service analysis, the project would not have an adverse effect on operations at the study intersection. The results of level of service analysis are summarized in Table 2.

Site Access

The evaluation of site access is based on the site plan prepared by Ramcam Engineering Group dated January 5, 2020. Site access was evaluated to determine the adequacy of the site's access points with regard to the following: traffic volume, geometric design, and sight distance. Site access was evaluated in accordance with generally accepted traffic engineering standards and transportation planning principles.

As shown on Figure 2, the project would modify an existing driveway on Monterey Road from an 84-foot wide to a 32-foot wide driveway. The driveway would be located approximately 130 feet north of San Pedro Avenue. No improvements to the existing 32-foot wide driveway on San Pedro Avenue, located 130 feet east of Monterey Road, are proposed.

Driveway Design and Operations

Based on the project trip generation and trip assignment, it is estimated that a maximum of 86 inbound trips and 82 outbound trips would enter and exit the site during the peak hours. The estimated project trips at the project driveways are shown on Figure 2. Based on the relatively low traffic volumes on San Pedro Avenue and due to the right-in/right-out only operations at the Monterey Road driveway, operational issues are not expected to occur at the project driveways.

The City of Morgan Hill Design Standards specify a minimum driveway width of 16 feet and a maximum width of 36 feet. The site plan indicates both project driveways would measure 32 feet wide and would therefore meet City standards for driveway width.

Table 2
Intersection Level of Service Summary

Int. #	Intersection	Int. Control ¹	LOS Std	Peak Hour	Count Date	Existing		Existing Plus Project				Mitigation		Year 2025 Cumulative		Year 2025 Cumulative with Project						Mitigation	
						Delay ²	LOS	Delay ²	LOS	Incr. In Crit. Delay	Incr. In Crit. V/C	Delay ²	LOS	Delay ²	LOS	Delay ²	LOS	Incr. In Crit. Delay	Incr. In Crit. V/C	Delay ²	LOS		
1	Monterey Road and Spring Avenue	Signal	D	AM PM	03/14/19 03/21/19	5.1 11.3	A B	5.2 11.4	A B	0.1 0.0	0.002 0.001			4.7 12.0	A B	4.7 12.0	A B	0.1 0.0	0.002 0.001				
2	Monterey Road and San Pedro Avenue	OWSC	D	AM PM	03/14/19 03/14/19	26.7 71.1	D F	37.3 135.7	E F	N/A N/A	N/A N/A	12.7 14.3	B B	51.8 >250	F F	98.9 >250	F F	N/A N/A	N/A N/A	14.5 15.3	B C		

Notes:

¹OWSC = One-Way Stop-Controlled

²The reported delay and corresponding level of service for signalized intersections represent the average delay for all approaches at the intersection.

The reported delay and corresponding level of service for one- and two-way stop-controlled intersections are based on the stop-controlled approach with the highest delay.

Bold indicates unacceptable level of service or signal warrant met.

Bold and boxed indicate significant impact.

Sight Distance

The project driveways should be free and clear of any obstructions to provide adequate sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and other vehicles traveling on Monterey Road and San Pedro Avenue. Landscaping and signage should be located in such a way to ensure an unobstructed view for drivers existing the site. Sight distance generally should be provided in accordance with Caltrans standards. The minimum acceptable sight distance is most often the stopping sight distance.

San Pedro Avenue has a posted speed limit of 25 mph. For a design speed of 25 mph, the recommended Caltrans' stopping sight distance is 150 feet. Based on the project site plan and observations in the field, vehicles exiting the project site driveway would have adequate sight distance of westbound San Pedro Avenue. It should be noted that the existing driveway is located only 130 feet east of Monterey Road. However, vehicles turning from Monterey Road onto eastbound San Pedro Avenue would be traveling at speeds significantly less than 25 mph. Therefore, the driveway would have adequate sight distance along eastbound San Pedro Avenue.

Monterey Road has a posted speed limit of 35 mph. For a design speed of 35 mph, the recommended Caltrans' stopping sight distance is 250 feet. Based on the project site plan and observations in the field, vehicles exiting the project site driveway would have adequate sight distance along northbound Monterey Road. It should be noted that the proposed driveway would be located only 130 feet north of San Pedro Avenue. However, vehicles turning from San Pedro Avenue onto northbound Monterey Road would be traveling at speeds significantly less than 35 mph. Therefore, the proposed site driveway would have adequate sight distance along northbound Monterey Road.

On-Site Circulation

The project proposes to replace all existing pump stations on-site, which are currently oriented in an east-west direction. The site plan shows all new pump stations oriented in a north-south direction with on-site queuing space for at least one vehicle (approximately 25 feet) at each row of pump stations. Therefore, queues are not expected to spill-out of the site driveways. Drive aisles surrounding the northern, eastern, and southern sides of the fuel canopy are shown on the site plan to range from 24 to 30 feet wide, which allows for two-way circulation throughout the site. The drive aisle along the western side of the canopy (directly adjacent to Monterey Road) is shown to be 11 feet wide and will support one-way traffic if the adjacent pumping stations are occupied by vehicles. Overall, the proposed layout of the new gas station will allow for continuous circulation into and out of both project driveways and sufficient queueing space on-site.

Transit, Pedestrian, and Bicycle Facility Evaluation

The project site is served by VTA bus routes that run along Monterey Road. Frequent Route 68 (Gilroy Transit Center to San Jose Diridon Transit Center) serves bus stops at the intersection of Monterey Avenue and Spring Avenue, less than 400 feet walking distance from the project site.

In the vicinity of the project site, there are continuous sidewalks along most roadways and crosswalks provided at signalized intersections. It should be noted that a crosswalk is planned to be installed across the east leg of the Monterey Road/San Pedro Avenue intersection. Additionally, sidewalks along eastbound San Pedro Avenue between Monterey Road and Church Street would be constructed.

There are bike lanes in the project area located on Monterey Road, Tennant Avenue, Butterfield Boulevard, and Dunne Avenue. A trailhead providing access to the West Little Llagas Creek Trail is located less than 400 feet west of the project site. The trail runs southward between Spring Avenue and

La Crosse Drive, roughly parallel with Monterey Road. The project is not expected to generate a significant amount of bicycle trips. The demand generated by the proposed project could be accommodated by the existing bicycle facilities in the vicinity of the project site.

Traffic Study Requirements

The need for the preparation of a comprehensive traffic impact analysis for a particular development is based on its estimated trip generation and its effect on surrounding transportation facilities. The City of Morgan Hill requires the completion of a full traffic impact analysis if one of the following criteria are met:

1. Generates 100 or more net new peak hour trips; except that projects located in the 14-block Downtown Core area are exempt from this requirement. Net new peak hour trips are defined as the number of trips generated by the proposed development minus trips generated by existing development on the project site. (This threshold is consistent with the Valley Transportation Authority (VTA) policy.)
2. Adds 50 to 99 net new peak hour trips to the roadway system where nearby intersections are currently operating at or below the City's LOS standard, or projected to operate at or below the City's LOS standard with traffic added by approved developments; except that projects located in the 14-block Downtown Core area are exempt from this requirement. Adjacent or nearby intersections are defined as intersections to which the proposed development or proposed land use change adds 10 or more vehicle peak hour trips per lane.
3. Creates a transportation issue that City staff requests to have analyzed.

The proposed project will result in the addition of 23 net new AM peak-hour trips and 9 net new PM peak-hour trips to the roadway system under existing plus project conditions.

The results of the intersection level of service analysis show that with planned improvements, at the Monterey Road/San Pedro Avenue intersection, the addition of project traffic would not result in the degradation of the study intersection's levels of service during the AM and PM peak hours.

Therefore, the evaluation of trip generation and intersection operations concludes that the proposed project will not result in an adverse effect on operations to intersections in the project area and is consistent with the *Morgan Hill 2035 General Plan* goals and policies. However, City staff ultimately determines the need for traffic studies for new developments.

APPENDIX E

Noise Analysis

WORLD OIL GAS STATION NOISE ASSESSMENT

Morgan Hill, California

July 11, 2022

Prepared for:

**Maria Kisyova
David J. Powers & Associates, Inc.
1871 The Alameda, Suite 200
San José, CA 95126**

Prepared by:

**Carrie J. Janello
Michael S. Thill**

ILLINGWORTH & RODKIN, INC.
/// Acoustics • Air Quality ///
429 East Cotati Avenue
Cotati, CA 94931
(707) 794-0400

Project: 21-067

INTRODUCTION

A gas station redevelopment project is proposed at 16720 Monterey Road (APN 817-01-002) in Morgan Hill, California. As part of the proposed project, the existing 4-pump gas station, 880-square-foot retail store, and fuel canopy would be replaced with a new 6-pump gas station, a new underground storage tank (UST) system, a new canopy, and a 2,115-square-foot retail store.

This report evaluates the project's potential to result in significant noise impacts with respect to applicable guidelines established by the City of Morgan Hill. The report is divided into two sections: 1) the Setting Section provides a brief description of the fundamentals of environmental noise, summarizes applicable regulatory criteria, and discusses the results of the ambient noise monitoring survey completed at the site to document existing noise conditions; and 2) the Noise Assessment Section describes the permanent operational noise sources generated at the project site and evaluates the project's impact on existing noise-sensitive receptors in the project vicinity.

SETTING

Fundamentals of Environmental Noise

Noise may be defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound could be caused by its *pitch* or its *loudness*. *Pitch* is the height or depth of a tone or sound, depending on the relative rapidity (frequency) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. *Loudness* is intensity of sound waves combined with the reception characteristics of the ear. Intensity may be compared with the height of an ocean wave in that it is a measure of the amplitude of the sound wave.

In addition to the concepts of pitch and loudness, there are several noise measurement scales which are used to describe noise in a particular location. A *decibel (dB)* is a unit of measurement which indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a ten-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc. There is a relationship between the subjective noisiness or loudness of a sound and its intensity. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities. Technical terms are defined in Table 1.

There are several methods of characterizing sound. The most common in California is the *A-weighted sound level (dBA)*. This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Representative outdoor and indoor noise levels in units of dBA are shown in Table 2. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This *energy-equivalent sound/noise descriptor* is called *Leq*. The most common averaging period is hourly, but *Leq* can describe any series of noise events of arbitrary duration.

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

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

Effects of Noise

Sleep and Speech Interference

The thresholds for speech interference indoors are about 45 dBA if the noise is steady and above 55 dBA if the noise is fluctuating. Outdoors the thresholds are about 15 dBA higher. Steady noises of sufficient intensity (above 35 dBA) and fluctuating noise levels above about 45 dBA have been shown to affect sleep. Interior residential standards for multi-family dwellings are set by the State of California at 45 dBA L_{dn}/CNEL. Typically, the highest steady traffic noise level during the daytime is about equal to the L_{dn}/CNEL and nighttime levels are 10 dBA lower. The standard is designed for sleep and speech protection and most jurisdictions apply the same criterion for all residential uses. Typical structural attenuation is 12-17 dBA with open windows. With closed windows in good condition, the noise attenuation factor is around 20 dBA for an older structure and 25 dBA for a newer dwelling. Sleep and speech interference is therefore possible when exterior noise levels are about 57-62 dBA L_{dn}/CNEL with open windows and 65-70 dBA L_{dn}/CNEL if the windows are closed. Levels of 55-60 dBA are common along collector streets and secondary arterials, while 65-70 dBA is a typical value for a primary/major arterial. Levels of 75-80 dBA are normal noise levels at the first row of development outside a freeway right-of-way. In order to achieve an acceptable interior noise environment, bedrooms facing secondary roadways need to be able to have their windows closed; those facing major roadways and freeways typically need special glass windows.

Annoyance

Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that the causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn}/CNEL as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to

be disagreement about the relative annoyance of these different sources. When measuring the percentage of the population highly annoyed, the threshold for ground vehicle noise is about 50 dBA $L_{dn}/CNEL$. At a $L_{dn}/CNEL$ of about 60 dBA, approximately 12 percent of the population is highly annoyed. When the $L_{dn}/CNEL$ increases to 70 dBA, the percentage of the population highly annoyed increases to about 25-30 percent of the population. There is, therefore, an increase of about 2 percent per dBA between a $L_{dn}/CNEL$ of 60-70 dBA. Between a $L_{dn}/CNEL$ of 70-80 dBA, each decibel increase increases by about 3 percent the percentage of the population highly annoyed. People appear to respond more adversely to aircraft noise. When the $L_{dn}/CNEL$ is 60 dBA, approximately 30-35 percent of the population is believed to be highly annoyed. Each decibel increase to 70 dBA adds about 3 percentage points to the number of people highly annoyed. Above 70 dBA, each decibel increase results in about a 4 percent increase in the percentage of the population highly annoyed.

TABLE 1 Definition of Acoustical Terms Used in this Report

Term	Definition
Decibel, dB	A unit describing, the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20 micro Pascals.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micro Pascals (or 20 micro Newtons per square meter), where 1 Pascal is the pressure resulting from a force of 1 Newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micro Pascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and Ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, L_{eq}	The average A-weighted noise level during the measurement period.
L_{max} , L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
L_{01} , L_{10} , L_{50} , L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day/Night Noise Level, L_{dn} or DNL	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 p.m. and 7:00 a.m.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 p.m. to 10:00 p.m. and after addition of 10 decibels to sound levels measured in the night between 10:00 p.m. and 7:00 a.m.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Source: Handbook of Acoustical Measurements and Noise Control, Harris, 1998.

TABLE 2 Typical Noise Levels in the Environment

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110 dBA	Rock band
Jet fly-over at 1,000 feet		
	100 dBA	
Gas lawn mower at 3 feet		
	90 dBA	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	80 dBA	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower, 100 feet	70 dBA	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	60 dBA	
		Large business office
Quiet urban daytime	50 dBA	Dishwasher in next room
Quiet urban nighttime	40 dBA	Theater, large conference room
Quiet suburban nighttime	30 dBA	
		Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	20 dBA	
		Broadcast/recording studio
	10 dBA	
	0 dBA	

Source: Technical Noise Supplement (TeNS), California Department of Transportation, September 2013.

Regulatory Background

The City of Morgan Hill have established regulatory criteria that are applicable in this assessment. A summary of the applicable regulatory criteria is provided below.

City of Morgan Hill General Plan. The Safety, Services and Infrastructure Chapter in the Morgan Hill 2035 General Plan sets forth policies with the goal of minimizing the impact of noise on people through noise reduction and suppression techniques, and through appropriate land use policies in the City of Morgan Hill. The following policies are applicable to the proposed project:

Policy SSI-8.2- *Impact Evaluation*: The impact of proposed development project on existing land uses should be evaluated in terms of the potential for adverse community response based on significant increase in existing noise levels, regardless of compatibility guidelines.

Policy SSI-8.3- *Commercial and Industrial Noise Level Standards*: Evaluate interior noise levels in commercial and industrial structures on a case-by-case basis based on the use of the space.

Policy SSI-8.5- *Traffic Noise Level Standards*: Consider noise level increases resulting from traffic associated with new projects significant if: a) the noise level increase is 5 dBA L_{dn} or greater, with a future noise level of less than 60 dBA L_{dn} , or b) the noise level increase is 3 dBA L_{dn} or greater, with a future noise level of 60 dBA L_{dn} or greater.

Policy SSI-8.6- *Stationary Noise Level Standards*: Consider noise levels produced by stationary noise sources associated with new projects significant if they substantially exceed existing ambient noise levels.

Policy SSI-8.7- *Other Noise Sources*: Consider noise levels produced by other noise sources (such as ballfields) significant if an acoustical study demonstrates they would substantially exceed ambient noise levels.

Policy SSI-8.9- *Site Planning and Design*: Require attention to site planning and design techniques other than sound walls to reduce noise impacts, including: a) installing earth berms, b) increasing the distance between the noise source and the receiver; c) using non-sensitive structures such as parking lots, utility areas, and garages to shield noise-sensitive areas; d) orienting buildings to shield outdoor spaces from the noise source; and e) minimizing the noise at its source.

Policy SSI-9.3- *Sound Wall Design*: The maximum height of sound walls shall be eight feet. Residential projects adjacent to the freeway shall be designed to minimize sound wall height through location of a frontage road, use of two sound walls or other applicable measures. Sound wall design and location shall be coordinated for an entire project area and shall meet Caltrans noise attenuation criteria for a projected eight-lane freeway condition. If two sound walls are used, the first shall be located immediately adjacent to the freeway right-of-way and the second shall be located as necessary to meet Caltrans noise requirements for primary outdoor areas. The minimum rear yard setback to the second wall shall be 20 feet.

Policy SSI-9.5- Noise Studies for Private Development: In order to prevent significant noise impacts on neighborhood residents which are related to roadway extensions or construction of new roadways, require completion of a detailed noise study during project-level design to quantify noise levels generated by projects such as the Murphy Avenue extension to Mission View Drive and the Walnut Grove Extension to Diana Avenue. The study limits should include noise sensitive land uses adjacent to the project alignment as well as those along existing segments that would be connected to new segments. A significant impact would be identified where traffic noise levels would exceed the “normally acceptable” noise level standard for residential land uses and/or where ambient noise levels would be substantially increased with the project. Project specific mitigation measures could include, but not be limited to, considering the location of the planned roadway alignment relative to existing receivers in the vicinity, evaluating the use of noise barriers to attenuate project-generated traffic noise, and/or evaluating the use of “quiet pavement” to minimize traffic noise levels at the source. Mitigation should be designed to reduce noise levels into compliance with “normally acceptable” levels for residential noise and land use compatibility.

Policy SSI-9.6- Earth Berms: Allow and encourage earth berms in new development projects as an alternative to sound walls if adequate space is available.

Policy SSI-9.7- Sound Barrier Design: Require non-earthen sound barriers to be landscaped, vegetated, or otherwise designed and/or obscured to improve aesthetics and discourage graffiti and other vandalism.

City of Morgan Hill Municipal Code. The City of Morgan Hill’s Municipal Code Chapter 8.28 states that “It is unlawful and a misdemeanor for any person to make or continue, or cause to be made or continued, any loud, disturbing, unnecessary or unusual noise or any noise which annoys, disturbs, injures or endangers the comfort, health, repose, peace or safety of other persons within the city.” The following sections of the code would be applicable to the project:

- C. Blowers, Fans, and Combustion Engines. The operation of any noise-creating blower, power fan or internal combustion engine, the operation of which causes noise due to the explosion of operating gases or fluids, unless the noise from such blower or fan is muffled and such engine is equipped with a muffler device to deaden such noise;
- G. Loading or Unloading Vehicles and Opening Boxes. The creation of loud and excessive noise in connection with loading or unloading any vehicle or the opening and destruction of bales, boxes, crates and containers;

Chapter 18.76 establishes quantitative noise performance standards:

18.76.090 - Noise.

- A. No land use or activity may produce a noise level in excess of the standards in Table 18.76-1.

Table 18.76-1: Maximum Noise Levels

Receiving Land Use	Maximum Noise Level at Lot Line of Receiving Use ^[1]
Industrial and Wholesale	70 dBA
Commercial	65 dBA
Residential or Public/Quasi Public	60 dBA

Notes:

[1] The planning commission may allow an additional 5 dBA noise level at the lot line if the maximum noise level shown in Table 18.76-1 cannot be achieved with reasonable and feasible mitigation.

- B. Noise standards in Table 18.76-1 do not apply to noise generated by vehicle traffic in the public right-of-way or from temporary construction, demolition, and vehicles that enter and leave the site of the noise-generating use (e.g., construction equipment, trains, trucks).
- C. All uses and activities shall comply with Municipal Code Chapter 8.28 (Noise).

(Ord. No. 2277 N.S., § 5(Exh. A), 6-6-2018)

Existing Noise Environment

The project site is located at 16720 Monterey Road in the City of Morgan Hill. The project site is surrounded by a restaurant to the north, townhouses to the east, San Pedro Avenue and a vacant parcel to the south, and Monterey Road and commercial/retail uses to the west.

The noise environment at the site and in the surrounding area results primarily from vehicular traffic along Monterey Road. Local traffic along San Pedro Avenue and other surrounding roadways would also contribute to the existing noise environment. In addition, occasional aircraft flyovers associated with nearby San Martin Airport and San José International Airport have some contribution to the noise environment.

A noise monitoring survey consisting of one long-term (LT-1) and one short-term (ST-1) noise measurements was made at the site between Monday, July 26, 2021 and Thursday, July 29, 2021. All measurement locations are shown in Figure 1.

Long-term noise measurement LT-1 was made approximately 55 feet east of the centerline of Monterey Road. Hourly average noise levels at LT-1 typically ranged from 66 to 74 dBA L_{eq} during daytime hours (7:00 a.m. and 10:00 p.m.) and from 53 to 72 dBA L_{eq} during nighttime hours (10:00 p.m. and 7:00 a.m.). The day-night average noise level on Tuesday, July 27, 2021 and on Wednesday, July 28, 2021 was 73 dBA L_{dn} . The daily trend in noise levels at LT-1 is shown in Figures 2 through 5.

Short-term noise measurement was made on Monday, July 26, 2021, at 10:00 a.m. ST-1 was made in a 10-minute interval, and the results of the measurements are summarized in Table 3. ST-1 was along the eastern boundary of the site, near the existing residential land uses adjoining the site. Typical traffic noise levels along Monterey Road ranged from 50 to 69 dBA. The 10-minute L_{eq} measured at ST-1 was 57 dBA.

FIGURE 1 Noise Measurement Locations



Source: Google Earth 2021.

FIGURE 2 Daily Trend in Noise Levels at LT-1, Monday, July 26, 2021

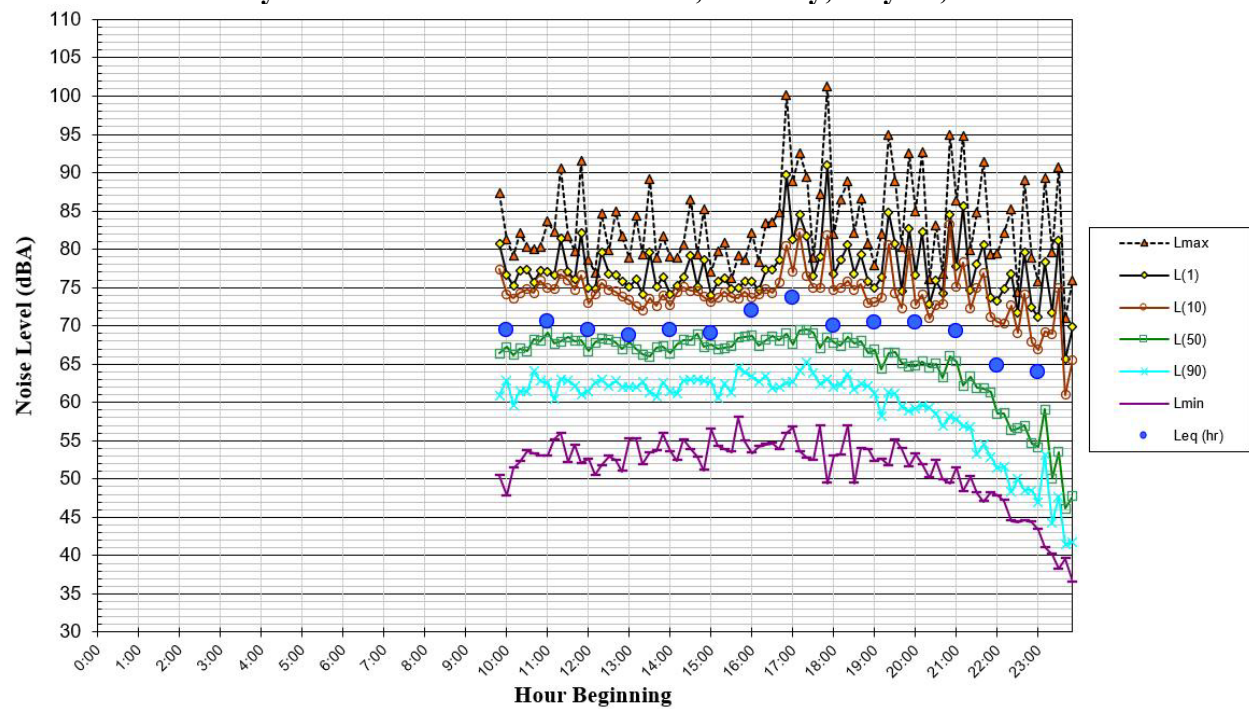


FIGURE 3 Daily Trend in Noise Levels at LT-1, Tuesday, July 27, 2021

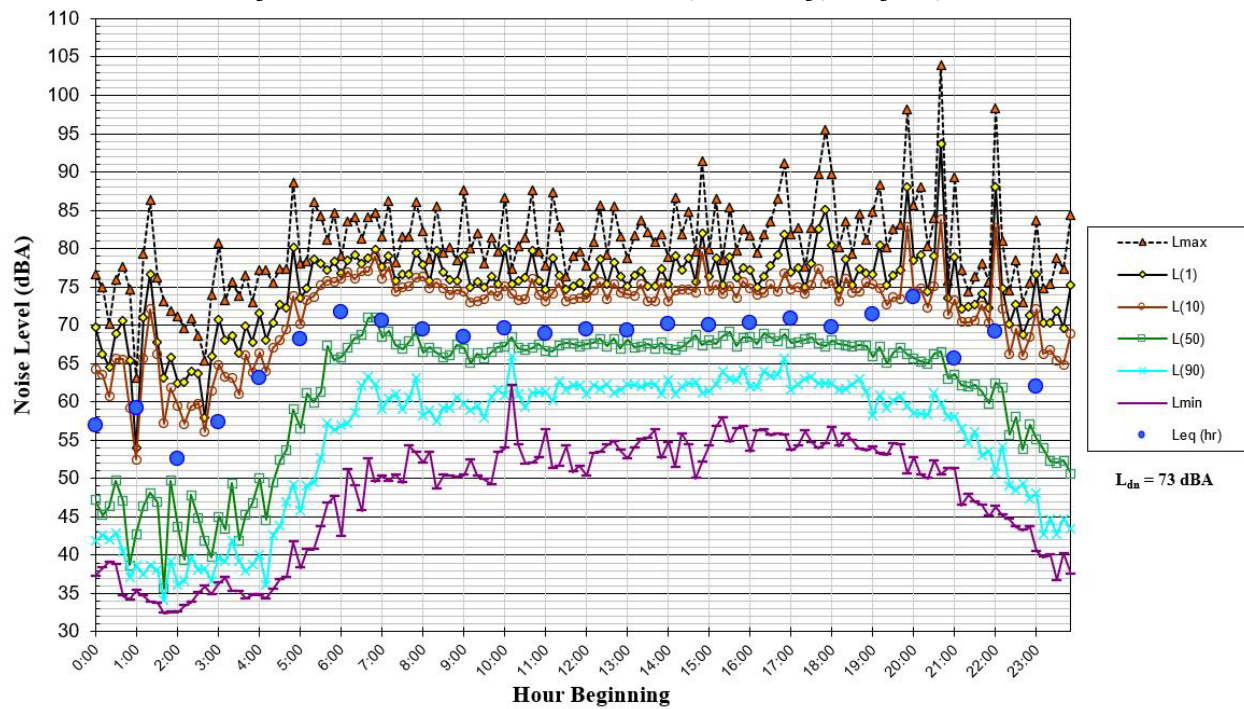


FIGURE 4 Daily Trend in Noise Levels at LT-1, Wednesday, July 28, 2021

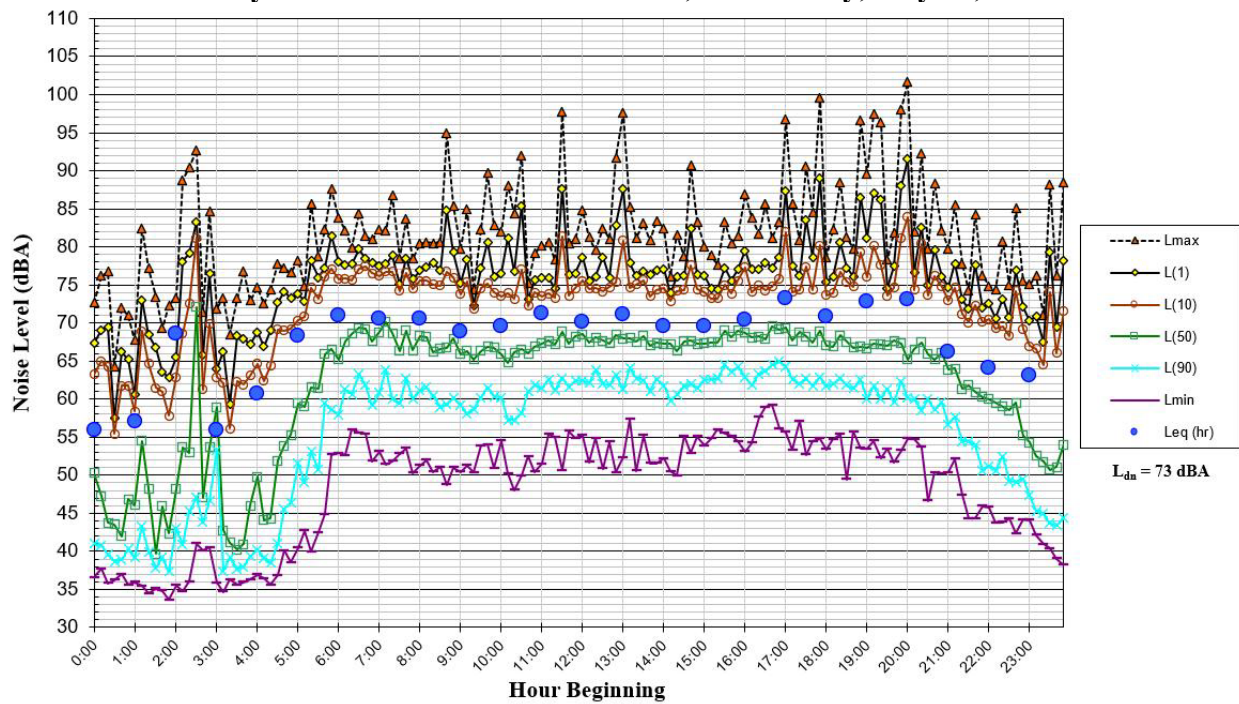


FIGURE 5 Daily Trend in Noise Levels at LT-1, Thursday, July 29, 2021

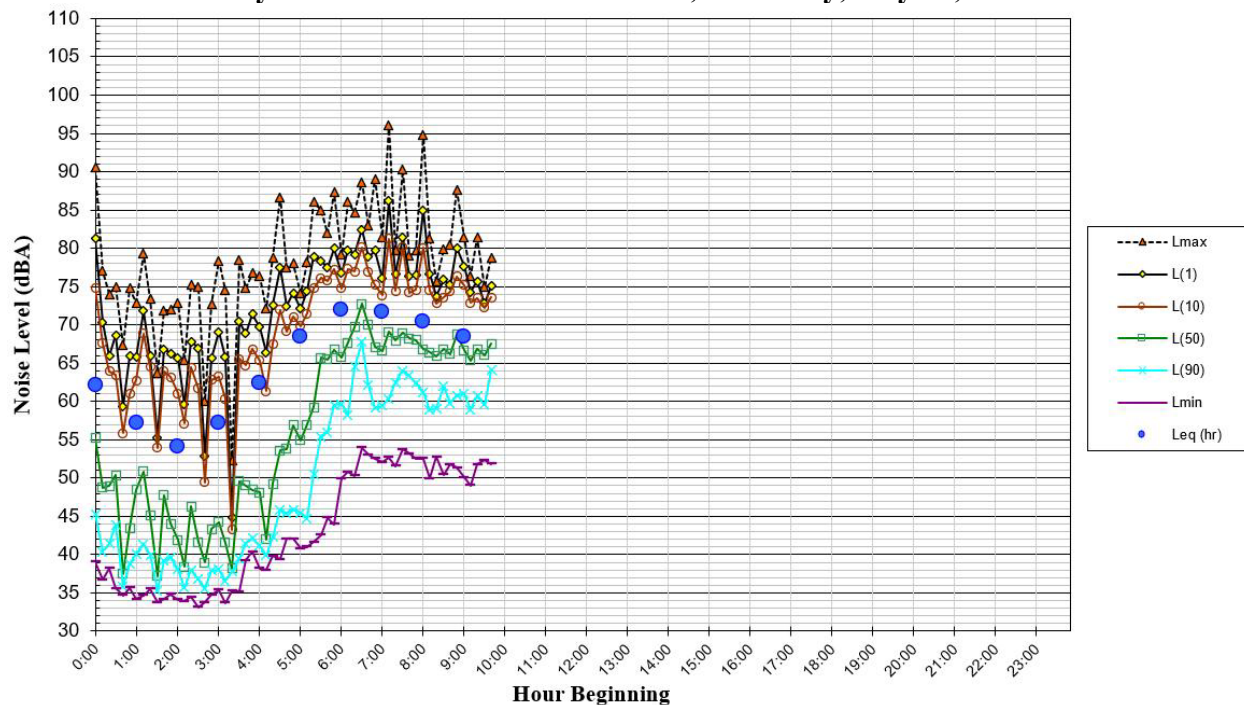


TABLE 3 Summary of Short-Term Noise Measurements (dBA)

Noise Measurement Location	Date, Time	Measured Noise Level, dBA					
		L _{max}	L ₍₁₎	L ₍₁₀₎	L ₍₅₀₎	L ₍₉₀₎	L _{eq}
ST-1: made along the eastern boundary of the project site	7/26/2021, 10:00-10:10	69	65	60	55	50	57

NOISE ASSESSMENT

Permanent Noise Level Increase

Policy SSI-8.5 of the City of Morgan Hill General Plan consider noise level increases resulting from traffic associated with new projects significant if: a) the noise level increase is 5 dBA L_{dn} or greater, with a future noise level of less than 60 dBA L_{dn} , or b) the noise level increase is 3 dBA L_{dn} or greater, with a future noise level of 60 dBA L_{dn} or greater. According to the 2035 noise contours included in the Morgan Hill 2035 Draft Environmental Impact Report,¹ the surrounding residences would have future noise levels exceeding 60 dBA L_{dn} . Therefore, a significant impact would occur if traffic due to the proposed project would permanently increase ambient levels by 3 dBA L_{dn} . For reference, a 3 dBA L_{dn} noise increase would be expected if the project would double existing traffic volumes along a roadway.

The traffic study completed for the proposed project included peak hour traffic volumes for two intersections in the project vicinity. The traffic volumes for the existing plus project scenario were

¹ Placeworks, "Morgan Hill 2035 DEIR," January 13, 2016.

compared to the traffic volumes for the existing scenario for all roadway segments included in the traffic study. A traffic noise increase of less than 1 dBA L_{dn} was calculated along each roadway segment. Therefore, the project-generated traffic noise would not result in a substantial, permanent noise level increase at noise-sensitive receptors. This would be a less-than-significant impact.

Operational Noise

Under the City of Morgan Hill's Noise Element and Municipal Code, noise levels produced by operational noise at the project site would be considered significant if noise levels substantially exceed existing ambient noise levels, exceed 60 dBA L_{eq} at residential properties, or would permanently increase ambient noise levels by 3 dBA L_{dn} , under Policy SSI-8.5 of the City's General Plan.

Propagating the hourly average noise levels measured at LT-1 to the residential property line, ambient noise levels would range from 53 to 61 dBA L_{eq} during daytime hours and from 40 to 60 dBA L_{eq} during nighttime hours, assuming a 5 dBA reduction from the existing sound wall. The estimated day-night average noise level would be 63 dBA L_{dn} at the residential backyards.

Mechanical Equipment

The proposed project would include a 2,115 square-foot retail store. Six pump stations, with the capacity of 12 gas pumps, would be constructed as part of the project. The fuel will be stored in a new underground storage tank (UST) system located to the east of the fuel canopy. The fueling stations and retail store will be open 24 hours a day, seven days per week.

A heating, ventilation and air conditioning (HVAC) unit, is proposed at the retail store. The selected HVAC unit would generate noise levels up to 66 dBA at a distance of 5 feet and would be located at the center of the rooftop of the convenience store. While the building façade would provide partial shielding, no attenuation is assumed in this study to credibly represent worst-case conditions.

The nearest noise-sensitive receptors would be approximately 100 feet east of the center of the proposed HVAC unit. Conservatively, the existing six-foot sound wall along the residential property line would provide a minimum 5 dBA of noise attenuation. Under this assumption, noise levels due to the HVAC unit would be about 35 dBA at the residential property line. Typically, HVAC units' cycle on and off throughout a 24-hour period. Therefore, these estimated noise levels would represent hourly average noise attributable to mechanical equipment during daytime and nighttime hours, and the estimated day-night average noise level would be 41 dBA L_{dn} . These units would not exceed 60 dBA L_{eq} or ambient noise levels at the nearest residential land uses, and this would not result in a measurable noise level increase (i.e., 0 dBA L_{dn} increase).

An air/water dispenser would be located at the project site along the eastern portion of the parking area. While the existing gas station does include such equipment, it is unknown if the ambient noise measurements included the operation of the existing air/water dispenser. Conservatively, it is assumed the ambient measurements did not include this noise source. This type of equipment typically generates noise levels up to 65 dBA at a distance of 5 feet and does not run continuously.

In a worst-case hour, it is assumed that this equipment would operate for a total of 20 minutes, which means the hourly average noise level would be 60 dBA L_{eq} at 5 feet. If this worst-hour would occur each hour between 7:00 a.m. and 10:00 p.m., the day-night average noise level at 5 feet would be 58 dBA L_{dn} .

The nearest residential property line is 15 feet from the proposed air/water dispenser. At this distance, maximum noise levels would be 51 dBA, hourly average noise levels would be 46 dBA L_{eq} , and day-night average noise levels would be 44 dBA L_{dn} . The air/water dispenser would not produce noise levels that would exceed 60 dBA L_{eq} or ambient noise levels at the nearest residential land uses, and this would not result in a measurable noise level increase (i.e., 0 dBA L_{dn} increase).

Parking Lot and Gas Station Activities

According to the site plan, 11 parking spaces are proposed as part of the project. These parking spaces would be located along the eastern boundary of the gas station area, nearest to the residences. Additionally, 12 fuel pumps would also include similar noise sources as parking spaces, which would include vehicular circulation, louder engines, car alarms, door slams, and human voices. These sources typically generate noise levels ranging from 53 to 63 dBA L_{max} at a distance of 50 feet.

The site is currently developed with 8 fuel pumps and does include parking. So, the residences to the east would be exposed to similar noise levels currently, and the ambient noise environment would also include noise from parking lot and gas station activities. However, for the purpose of estimating worst-case scenario, the proposed project is treated as a new development.

The isolated, maximum instantaneous noise sources generated by vehicular circulation at parking lots and gas stations would occur during both daytime and nighttime hours. The traffic study conducted for the proposed project includes the net daily trips and net peak hour AM and PM trips, assuming 12 vehicle fueling positions compared to the existing eight fueling positions. The net daily trips would increase by 286 trips, and the net peak hour increases would be 23 trips in the AM and 9 trips in the PM. Since the ambient noise levels included existing vehicle circulation at the gas station, the noise level increase from existing ambient conditions would be approximately 1 dBA L_{dn} , which would not be considered a substantial increase under the City's General Plan.

Truck Deliveries

Gas stations would also require heavy truck deliveries for fuel deposits. The proposed project estimates approximately 5,500 gallons of fuel to be sold daily. The typical fuel truck carries about 9,000 gallons, which would result in about 1 truck delivery per day. Additionally, smaller vender truck deliveries would occur at the retail store. For purposes of this analysis, one heavy fuel truck delivery and one vender truck delivery is assumed in one day. This would represent the worst-case scenario.

The fuel tanks would be located underground along the eastern portion of the project site. It is assumed that these trucks would access the site from San Pedro Avenue, park to the east of the fuel canopy, and dispense the fuel into tanks. A loading zone for the vender trucks is shown in the northernmost parking spot along the eastern side of the property.

Depositing the fuel into the tanks would not generate measurable noise levels; however, noise due to low speed truck maneuvering results from a combination of engine, exhaust, and tire noise, as well as the intermittent sounds of back-up alarms and releases of compressed air associated with truck/trailer air brakes. For the heavy fuel trucks, maximum instantaneous noise levels would typically range from 70 to 75 dBA L_{max} at a distance of 50 feet. Smaller vender trucks typically generate maximum noise levels of 60 to 65 dBA L_{max} at the same distance. While the length of time to dispense the fuel in the tanks or unload supplies could take as long as one hour or so, typically, delivery trucks are stationary during this time with the engine off. The total time when these maximum noise levels would occur would typically be for less than 3 minutes in any one hour.

Assuming worst-case conditions, this analysis assumes both truck deliveries would occur in the same hour, which would result in an hourly average noise level of 58 dBA L_{eq} at the nearest residential property line, assuming a 5 dBA reduction due to the existing sound wall. This would result in a day-night average noise level of 47 dBA L_{dn} .

When all noise sources on the site are added together (i.e., mechanical equipment, parking circulation, and truck deliveries) at the nearest residential property line, the day-night average noise level would be 65 dBA L_{dn} , which would result in a 2 dBA L_{dn} increase over ambient levels. This represents a less-than-significant impact.

Cumulative Noise

Cumulative noise impacts would include either cumulative traffic noise increases under future conditions or temporary construction noise from cumulative construction projects.

A significant cumulative traffic noise increase would occur if two criteria are met: 1) if the cumulative traffic noise level increase was 3 dBA L_{dn} or greater for future levels exceeding 60 dBA L_{dn} or was 5 dBA L_{dn} or greater for future levels at or below 60 dBA L_{dn} ; and 2) if the project would make a “cumulatively considerable” contribution to the overall traffic noise increase. A “cumulatively considerable” contribution would be defined as an increase of 1 dBA L_{dn} or more attributable solely to the proposed project.

The traffic study included 2025 cumulative traffic volumes, with and without the project. When both cumulative scenarios were compared to the existing traffic scenario, a noise level increase of 1 dBA L_{dn} or less was calculated along every roadway segment, with and without the project. Therefore, the project would not result in a cumulative noise increase due to traffic.

There are no known approved projects surrounding the project site that would be constructed during the same timeframe as the proposed project. Therefore, the noise-sensitive receptors surrounding the project site would not be subject to cumulative construction impacts.