

Appendix A - Air Quality Analysis Report

Air Quality Analysis and CEQA Assessment

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San Jose, California 95125*

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Table of Contents

1.0	INTRODUCTION	3
2.0	REGULATORY ENVIRONMENT	3
2.1	Federal Air Quality Regulations.....	3
2.2	State Air Quality Regulations	4
2.3	Regional Air Quality Regulations.....	4
2.4	Local Air Quality Regulations	5
3.0	AIR QUALITY	8
3.1	Setting	8
3.2	Criteria Air Pollutants	9
3.2.1	Thresholds of Significance	9
3.3	Air Quality Monitoring Data	2
3.4	Toxic Air Contaminants	4
3.5	Sensitive Receptors	4
4.0	IMPACTS AND MITIGATION	4
4.1	Project Impacts	5
4.2	GHG Emissions Methodology	5
4.3	GHG Emissions Results.....	8
4.4	Criteria Air Pollutants and Precursors Impacts	9
4.5	Mitigation measures	13
4.6	Cumulative impacts.....	14
4.7	Odor Impacts.....	15
4.8	Consistency with Air Quality Plans.....	15
5.0	CONCLUSION	16
6.0	SOURCES.....	16
7.0	LIMITATIONS.....	17

Figures

Figure 1	Site Vicinity Map
Figure 2	Site Plan

Tables

Table 1	Operational-Related Criteria Air Pollutant and Precursor Screening Level Sizes
Table 2	Air Quality CEQA Thresholds of Significance
Table 3	San Jose – Jackson Street Air Quality Monitoring Station, Yearly Historical Data
Table 4	San Jose – Knox Avenue Air Quality Monitoring Station, Yearly Historical Data

Table 5	Proposed Project
Table 6	Demolition Quantities and Construction Phasing
Table 7	Demolition and Construction equipment list
Table 8	Construction on-road trips
Table 9	Traffic Analysis with Trip Rates
Table 10	Cal EEMod Daily Trip Estimates
Table 11	Summary of Project Operational GHG and Current Operation GHG Emissions
Table 12	Summary of Project Construction GHG (2020 & 2021)
Table 13	Construction Criteria Pollutant Emissions Summary
Table 14	Estimated Operational Emissions Summary
Table 15	Summary of Project Operational VOC and TAP Current and Proposed Operation Emissions from USTs
Table 16	Fuel Dispensing Emissions
Table 17	Summary of Project Operational TAP Emissions and Trigger Levels
Table 18	BAAQMD Stationary Source Screening Analysis Tool for Nearby Data
Table 19	BAAQMD Road Risk Values

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Salkhi Petroleum

1103 Curtner Avenue, San Jose, California

1.0 INTRODUCTION

On behalf of Salkhi Petroleum (Salkhi), Antea Group has prepared this *Air Quality Analysis and CEQA Assessment* for the proposed Salkhi Service Station (site), located at 1103 Curtner Avenue in San Jose, California.

The Site is currently an inactive retail convenience store and fuel dispensing facility located at the northeast corner of Lincoln Ave and Curtner Ave in San José, California. Current site facilities include an inactive station building, four inactive fuel dispensers and two 20,000-gallon inactive gasoline underground storage tanks (USTs).

The proposed project includes the conversion of an inactive but existing 2,037- square foot convenience store, pump island canopy, and pump islands (Figure 1). The redevelopment of the site consists of the remodeling of the existing 2,037 square foot 24-hour convenience store, construction of a 1,708 square foot fueling canopy over 3 multi-product dispensers, one with diesel, and an addition of a 20,000-gallon underground storage tank on a 0.45 gross acre site (Figure 2). The Site is bounded by multi-tenant commercial retail to the north, a park to the west, Lincoln Park to the west, Curtner to the south and Lincoln Ave to the west. The convenience store will have a 24-hour operation for 7 days a week. Parking is proposed as 12 spaces for the convenience store as well as one (1) air and water station adjacent to the convenience store. Employees that own an automobile will park on site, those without, will be dropped off or take public transportation. Mitigation controls will include a Stage I and Stage II Vapor Recovery System.

This analysis will provide assessment for applicable rules and regulations under the California Environmental Quality Act (CEQA) and analyze for potential emissions impacting air quality from the intended construction and operation of the new fuel service station. Air quality within San Jose and the San Francisco Bay Area is regulated under the Bay Area Air Quality Management District (BAAQMD), with regulations and oversight from the California Air Resources Board (CARB) and the U.S. Environmental Protection Agency (EPA).

2.0 REGULATORY ENVIRONMENT

2.1 Federal Air Quality Regulations

The United States Environmental Protection Agency (EPA) mandates air quality based on the Federal Clean Air Act (FCAA), established in 1963 and amended in 1970, 1977, and 1990. Through the FCAA:

- The EPA established primary and secondary national ambient air quality standards (NAAQS)

- States are required to prepare State Implementation Plans for air quality control, which include emissions inventories and rules and regulations

Under the FCAA, the EPA has authority to regulate emissions of greenhouse gases (GHG). In addition, facilities emitting 25,000 metric tons or more of carbon dioxide per year must report emissions data to the EPA.

Title III of the FCAA Amendments (FCAAA) required the EPA to put into effect national emissions standards for hazardous air pollutants (NESHAP), including carbon monoxide, nitrogen oxides, ozone, particulate matter, sulfur oxides, and lead. The NESHAPs are regulated under Code of Federal Regulations (CFR) Title 40 Parts 61 and 63 (BAAQMD, 2017).

2.2 State Air Quality Regulations

State regulations for air quality in California are managed by the California Air Resources Board (CARB). The CARB is responsible for oversight of local air pollution control programs within California and implementing plans to maintain National Ambient Air Quality Standards (NAAQS). The CARB implemented the California Clean Air Act (CCAA) in 1988, requiring all air districts to achieve and maintain the California Ambient Air Quality Standards (CAAQS).

The CARB with approval from the EPA has delegated authority for implementation and enforcement of New Source Performance Standards (NSPS) and NESHAPs in the San Francisco Bay Area to the Bay Area Air Quality Management District (BAAQMD).

California regulates toxic air contaminants (TAC) through the Tanner Air Toxics Act, which set forth a procedure for the CARB to designate substances as TACs. TACs must have control measures to keep emissions below designated thresholds or utilize best available control technology to minimize emissions. TACs are also regulated through the Toxics Hot Spots Information and Assessment Act of 1987, requiring facilities that emit toxic substances above a specified level to prepare a toxic emissions inventory, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures.

Under Assembly Bill 32, the California Global Warming Solutions Act, California requires the reduction of statewide greenhouse gas emissions to 1990 levels by 2020, allowing the CARB to implement caps on emissions and develop tracking, reporting, and enforcement methods. Senate Bill 97 signed in 2007 specified that climate change is a prominent environmental issue requiring analysis under the California Environmental Quality Act (CEQA), leading to the 2009 CEQA guidelines for mitigating greenhouse gas emissions. Greenhouse gas emissions are also regulated under Assembly Bill 1493, Senate Bills 1078, 107, 1368, 97, and 375, and Executive Orders S-14-08, S-3-05, S-13-08, and S-1-07 (BAAQMD, 2017).

2.3 Regional Air Quality Regulations

Regionally, the site sits within the BAAQMD. Under oversight from the CARB, BAAQMD is responsible for maintaining air quality within the SFBAAB. The clean air strategy of the BAAQMD includes preparation of plans

for attainment of CAAQS, issuance of permits for stationary sources of air pollution, inspection of stationary sources of air pollution and response to citizen complaints, monitoring of air quality, and adoption and enforcement of rules and regulations concerning sources of air pollution, with respect to the FCAA and its amendments, and the CCAA.

The BAAQMD also enforces air quality under the CEQA, and BAAQMD guidelines for CEQA include criteria and thresholds for determining whether a project may have significant adverse air quality impact, specific procedures and modeling protocols for quantifying and analyzing air quality impacts, methods available to mitigate air quality impacts, and information for use in air quality assessments and environmental documents that will be updated more frequently such as air quality data, regulatory setting, climate, and topography.

The BAAQMD, Metropolitan Transportation Commission, and Association of Bay Area Governments prepared the Bay Area 1991 Clean Air Plan addressing the CCAA, with updates developed approximately every three years. The BAAQMD prepared the 2010 Clean Air Plan to address nonattainment of the national 1-hour ozone standard in the SFBAAB, with the purpose to update the Bay Area Ozone Strategy in accordance with the requirements of the CCAA to implement all feasible measures to reduce ozone, consider impacts of ozone control measures on particulate matter (PM), air toxics, and greenhouse gases (GHGs), review progress in improving air quality, and establish emission control measures (adopted by 2012).

On April 19, 2017, the BAAQMD adopted the 2017 Clean Air Plan, titled “Spare the Air Cool the Climate: A Blueprint for Clean Air and Climate Protection in the Bay Area”. It describes a strategy to reduce emissions and ambient concentrations of ozone, particulate matter, TACs, and GHGs. While PM is technically below state and national standards, the 2017 Clean Air Plan describes some Bay Area communities still impacted by localized concentrations and cites health studies finding negative health impacts from exposures to PM even below current standards, thus compelling BAAQMD to further reduce PM emissions. The BAAQMD is also focused on drastic reductions of GHGs with the goal of reducing Bay Area GHG emissions 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050.

Under BAAQMD Regulations 2-1 (General Permit Requirements), 2-2 (New Source Review), and 2-5 (New Source Review), all nonexempt sources that possess potential to emit TACs are required to obtain permits and be constructed and operated in accordance with applicable regulations (BAAQMD, 2017).

2.4 Local Air Quality Regulations

The City of San Jose has listed the following policy goals regarding air pollutant emission reduction in the City of San Jose General Plan (Envision San Jose 2040, 2011):

Goals MS-10 – Air Pollutant Emission Reduction

Minimize air pollutant emissions from new and existing development.

Policies – Air Pollutant Emission Reduction

MS-10.1 Assess projected air emissions from new development in conformance with the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines and relative to state and federal standards. Identify and implement feasible air emission reduction measures.

MS-10.2 Consider the cumulative air quality impacts from proposed developments for proposed land use designation changes and new development, consistent with the region's Clean Air Plan and State law.

MS-10.3 Promote the expansion and improvement of public transportation services and facilities, where appropriate, to both encourage energy conservation and reduce air pollution.

MS-10.4 Encourage effective regulation of mobile and stationary sources of air pollution, both inside and outside of San José. In particular support Federal and State regulations to improve automobile emission controls.

MS-10.5 In order to reduce vehicle miles traveled and traffic congestion, require new development within 2,000 feet of an existing or planned transit station to encourage the use of public transit and minimize the dependence on the automobile through the application of site design guidelines and transit incentives.

MS-10.6 Encourage mixed land use development near transit lines and provide retail and other types of service oriented uses within walking distance to minimize automobile dependent development.

MS-10.7 Encourage regional and statewide air pollutant emission reduction through energy conservation to improve air quality

MS-10.8 Minimize vegetation removal required for fire prevention. Require alternatives to discing, such as mowing, to the extent feasible. Where vegetation removal is required for property maintenance purposes, encourage alternatives that limit the exposure of bare soil.

MS-10.9 Foster educational programs about air pollution problems and solutions.

Actions – Air Pollutant Emission Reduction

MS-10.10 Actively enforce the City's ozone-depleting compound ordinance and supporting policy to ban the use of chlorofluorocarbon compounds (CFCs) in packaging and in building construction and remodeling. The City may consider adopting other policies or ordinances to reinforce this effort to help reduce damage to the global atmospheric ozone layer.

MS-10.11 Enforce the City's wood-burning appliance ordinance to limit air pollutant emissions from residential and commercial buildings.

MS-10.12 Increase the City's alternative fuel vehicle fleet with the co-benefit of reducing local air emissions. Implement the City's Environmentally Preferable Procurement Policy (Council Policy 4-6) and Pollution Prevention Policy (Council Policy 4-5) in a manner that reduces air emissions from municipal operations. Support policies that reduce vehicle use by City employees.

MS-10.13 As a part of City of San José Sustainable City efforts, educate the public about air polluting household consumer products and activities that generate air pollution. Increase public awareness about the alternative products and activities that reduce air pollutant emissions.

MS-10.14 Review and evaluate the effectiveness of site design measures, transit incentives, and new transportation technologies and encourage those that most successfully reduce air pollutant emissions.

Goal MS-11 – Toxic Air Contaminants

Minimize exposure of people to air pollution and toxic air contaminants such as ozone, carbon monoxide, lead, and particulate matter.

Policies – Toxic Air Contaminants

MS-11.1 Require completion of air quality modeling for sensitive land uses such as new residential developments that are located near sources of pollution such as freeways and industrial uses. Require new residential development projects and projects categorized as sensitive receptors to incorporate effective mitigation into project designs or be located an adequate distance from sources of toxic air contaminants (TACs) to avoid significant risks to health and safety.

MS-11.2 For projects that emit toxic air contaminants, require project proponents to prepare health risk assessments in accordance with BAAQMD-recommended procedures as part of environmental review and employ effective mitigation to reduce possible health risks to a less than significant level. Alternatively, require new projects (such as, but not limited to, industrial, manufacturing, and processing facilities) that are sources of TACs to be located an adequate distance from residential areas and other sensitive receptors.

MS-11.3 Review projects generating significant heavy-duty truck traffic to designate truck routes that minimize exposure of sensitive receptors to TACs and particulate matter.

MS-11.4 Encourage the installation of appropriate air filtration at existing schools, residences, and other sensitive receptor uses adversely affected by pollution sources.

MS-11.5 Encourage the use of pollution absorbing trees and vegetation in buffer areas between substantial sources of TACs and sensitive land uses.

Actions – Toxic Air Contaminants

MS-11.6 Develop and adopt a comprehensive Community Risk Reduction Plan that includes: baseline inventory of toxic air contaminants (TACs) and particulate matter smaller than 2.5 microns (PM_{2.5}), emissions from all sources, emissions reduction targets, and enforceable emission reduction strategies and performance measures. The Community Risk Reduction Plan will include enforcement and monitoring tools to ensure regular review of progress toward the emission reduction targets, progress reporting to the public and responsible agencies, and periodic updates of the plan, as appropriate.

MS-11.7 Consult with BAAQMD to identify stationary and mobile TAC sources and determine the need for and requirements of a health risk assessment for proposed developments.

MS-11.8 For new projects that generate truck traffic, require signage which reminds drivers that the State truck idling law limits truck idling to five minutes.

Goal MS-12 – Objectionable Odors

Minimize and avoid exposure of residents to objectionable odors.

Policies – Objectionable Odors

MS-12.1 For new, expanded, or modified facilities that are potential sources of objectionable odors (such as landfills, green waste and resource recovery facilities, wastewater treatment facilities, asphalt batch plants, and food processors), the City requires an analysis of possible odor impacts and the provision of odor minimization and control measures as mitigation.

MS-12.2 Require new residential development projects and projects categorized as sensitive receptors to be located an adequate distance from facilities that are existing and potential sources of odor. An adequate separation distance will be determined based upon the type, size and operations of the facility.

Goal MS-13 – Construction Air Emissions

Minimize air pollutant emissions during demolition and construction activities.

Policies – Construction Air Emissions

MS-13.1 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 minimum, conditions shall conform to construction mitigation measures recommended in the current BAAQMD CEQA Guidelines for the relevant project size and type.

MS-13.2 Construction and/or demolition projects that have the potential to disturb asbestos (from soil or building material) shall 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.

MS-13.3 Require subdivision designs and site planning to minimize grading and use landform grading in hillside areas.

Actions – Construction Air Emissions

MS-13.4 Adopt and periodically update dust, particulate, and exhaust control standard measures for demolition and grading activities to include on project plans as conditions of approval based upon construction mitigation measures in the BAAQMD CEQA Guidelines.

MS-13.5 Prevent silt loading on roadways that generates particulate matter air pollution by prohibiting unpaved or unprotected access to public roadways from construction sites.

MS-13.6 Revise the grading ordinance and condition grading permits to require that graded areas be stabilized from the completion of grading to commencement of construction.

3.0 AIR QUALITY

3.1 Setting

The site is located in eastern San Jose, California, in Santa Clara County, within the San Francisco Bay Area Air Basin (SFBAAB). It is located at the northeast corner of Lincoln Ave and Curtner Ave in San José, California, in a mixed commercial area.

The Bay Area has a Mediterranean climate, with generally warm, sunny summers and cool, wet winters. Temperatures typically range, in degrees Fahrenheit, from the high 50's to the low 80's during summer, and from the low 40's to the high 50's during winter. San Jose sits within the Santa Clara Valley, bordered by the San Francisco Bay to the north, and mountains to the south, east, and west.

Winds within the Santa Clara Valley roughly parallel the valley's northwest-southeast axis, with a north-northwesterly wind flowing through the valley during afternoons and early evenings, and a south-southeasterly drainage flow occurring during the late evenings and early mornings. During summers, the southern end of the valley may become a convergence zone where air from Monterey Bay south of the Valley flows northwards into the southern end of the valley and meets with the prevailing north-northwesterly winds. Wind speeds are greatest in spring and summer and weakest in fall and winter, though strong winds are not common.

Pollution from sources within the Santa Clara Valley come from the high concentration of industry and the large population (there are currently over one million people living in San Jose). The valley generates the highest mobile source emissions of any sub region in the SFBAAB. During higher temperatures encountered in the summer, the stable air and surrounding mountains combine to promote ozone formation in the valley. Local sources of pollution also combine with ozone precursors from the surrounding bay area carried by winds into the Santa Clara valley. The valley tends to channel pollutants to the southeast. Additionally, during the summer, ozone may be recirculated by southerly drainage flows in the late evenings and early mornings, and by prevailing northwesterlies in the afternoons, with a similar pattern occurring in winters as well. This recirculation of air in the valley increases the impact of air pollutants significantly (BAAQMD, 2017).

3.2 Criteria Air Pollutants

Five criteria pollutants most commonly measured and regulated include carbon monoxide, ground level ozone, nitrogen dioxide, sulfur dioxide, and suspended particulate matter (PM_{2.5} and PM₁₀). As discussed in **Section 2.0**, the EPA sets National Ambient Air Quality Standards (NAAQS) under the Federal Clean Air Act; California also sets California Ambient Air Quality Standards (CAAQS). Areas not violating the standards are considered to have attained the standard. The SFBAAB is, as of 2017 data, a non-attainment area for ozone and particulate matter PM_{2.5} (annual) and PM₁₀ (24-hour and annual) according to California standards, and for ozone and 24-hour PM_{2.5} according to national standards, making these pollutants of greatest concern for this area.

3.2.1 Thresholds of Significance

The SFBAAB is currently designated as a nonattainment area for state and national ozone standards and national particulate matter ambient air quality standards. SFBAAB's nonattainment status is attributed to the region's development history. Past, present and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

The BAAQMD has developed thresholds of significance for the SFBAAB for criteria air pollutants and precursors. The thresholds are based on emissions levels for which a project's individual emissions would be cumulatively considerable; emissions from each source within the region contribute to the overall air quality, thus having

potential to have a significant impact in the air quality and health for the entire region. If a project exceeds the designated thresholds, its emissions may result in significant adverse air quality for the region. Analysis for project emissions data is expected to be as rigorous as possible.

The BAAQMD has developed screening criteria to provide lead agencies and project applicants with a conservative indication of whether the proposed project could result in potentially significant air quality impacts. The screening criteria are listed below in **Table 1**; data has been taken directly from the BAAQMD CEQA Guidelines from May 2017.

Table 1. Operational-Related Criteria Air Pollutant and Precursor Screening Level Sizes			
Land Use Type	Operational Criteria Pollutant Screening Size	Operational GHG Screening Size	Construction-Related Screening Size
Single-family	325 du (NOX)	56 du	114 du (ROG)
Apartment, low-rise	451 du (ROG)	78 du	240 du (ROG)
Apartment, mid-rise	494 du (ROG)	87 du	240 du (ROG)
Apartment, high-rise	510 du (ROG)	91 du	249 du (ROG)
Condo/townhouse, general	451 du (ROG)	78 du	240 du (ROG)
Condo/townhouse, high-rise	511 du (ROG)	92 du	252 du (ROG)
Mobile home park	450 du (ROG)	82 du	114 du (ROG)
Retirement community	487 du (ROG)	94 du	114 du (ROG)
Congregate care facility	657 du (ROG)	143 du	240 du (ROG)
Day-care center	53 ksf (NOX)	11 ksf	277 ksf (ROG)
Elementary school	271 ksf (NOX)	44 ksf	277 ksf (ROG)
Elementary school	2747 students (ROG)	-	3904 students (ROG)
Junior high school	285 ksf (NOX)	-	277 ksf (ROG)
Junior high school	2460 students (NOX)	46 ksf	3261 students (ROG)
High school	311 ksf (NOX)	49 ksf	277 ksf (ROG)
High school	2390 students (NOX)	-	3012 students (ROG)
Junior college (2 years)	152 ksf (NOX)	28 ksf	277 ksf (ROG)
Junior college (2 years)	2865 students (ROG)	-	3012 students (ROG)
University/college (4 years)	1760 students (NOX)	320 students	3012 students (ROG)
Library	78 ksf (NOX)	15 ksf	277 ksf (ROG)
Place of worship	439 ksf (NOX)	61 ksf	277 ksf (ROG)
City park	2613 acres (ROG)	600 acres	67 acres (PM10)
Racquet club	291 ksf (NOX)	46 ksf	277 ksf (ROG)
Racquetball/health	128 ksf (NOX)	24 ksf	277 ksf (ROG)
Quality restaurant	47 ksf (NOX)	9 ksf	277 ksf (ROG)
High turnover restaurant	33 ksf (NOX)	7 ksf	277 ksf (ROG)
Fast food rest. w/ drive thru	6 ksf (NOX)	1 ksf	277 ksf (ROG)
Fast food rest. w/o drive thru	8 ksf (NOX)	1 ksf	277 ksf (ROG)
Operational-Related Criteria Air Pollutant and Precursor Screening Level Sizes			
Land Use Type	Operational Criteria Pollutant Screening Size	Operational GHG Screening Size	Construction-Related Screening Size
Hotel	489 rooms (NOX)	83 rooms	554 rooms (ROG)

Motel	688 rooms (NOX)	106 rooms	554 rooms (ROG)
Free-standing discount store	76 ksf (NOX)	15 ksf	277 ksf (ROG)
Free-standing discount superstore	87 ksf (NOX)	17 ksf	277 ksf (ROG)
Discount club	102 ksf (NOX)	20 ksf	277 ksf (ROG)
Regional shopping center	99 ksf (NOX)	19 ksf	277 ksf (ROG)
Electronic Superstore	95 ksf (NOX)	18 ksf	277 ksf (ROG)
Home improvement superstore	142 ksf (NOX)	26 ksf	277 ksf (ROG)
Strip mall	99 ksf (NOX)	19 ksf	277 ksf (ROG)
Hardware/paint store	83 ksf (NOX)	16 ksf	277 ksf (ROG)
Supermarket	42 ksf (NOX)	8 ksf	277 ksf (ROG)
Convenience market (24 hour)	5 ksf (NOX)	1 ksf	277 ksf (ROG)
Convenience market with gas pumps	4 ksf (NOX)	1 ksf	277 ksf (ROG)
Bank (with drive-through)	17 ksf (NOX)	3 ksf	277 ksf (ROG)
General office building	346 ksf (NOX)	53 ksf	277 ksf (ROG)
Office park	323 ksf (NOX)	50 ksf	277 ksf (ROG)
Government office building	61 ksf (NOX)	12 ksf	277 ksf (ROG)
Government (civic center)	149 ksf (NOX)	27 ksf	277 ksf (ROG)
Pharmacy/drugstore w/ drive through	49 ksf (NOX)	10 ksf	277 ksf (ROG)
Pharmacy/drugstore w/o drive through	48 ksf (NOX)	10 ksf	277 ksf (ROG)
Medical office building	117 ksf (NOX)	22 ksf	277 ksf (ROG)
Hospital	226 ksf (NOX)	39 ksf	277 ksf (ROG)
Hospital	334 beds (NOX)	84 ksf	337 beds (ROG)
Warehouse	864 ksf (NOX)	64 ksf	259 ksf (NOX)
General light industry	541 ksf (NOX)	121 ksf	259 ksf (NOX)
General light industry	72 acres (NOX)	-	11 acres (NOX)
General light industry	1249 employees (NOX)	-	540 employees (NOX)
General heavy industry	1899 ksf (ROG)	-	259 ksf (NOX)
General heavy industry	281 acres (ROG)	-	11 acres (NOX)
Industrial park	553 ksf (NOX)	65 ksf	259 ksf (NOX)
Industrial park	61 acres (NOX)	-	11 acres (NOX)
Industrial park	1154 employees (NOX)	-	577 employees (NOX)
Manufacturing	992 ksf (NOX)	89 ksf	259 ksf (NOX)

Notes: du = dwelling units; ksf = thousand square feet; NOX = oxides of nitrogen; ROG = reactive organic gases.
Screening levels include indirect and area source emissions. Emissions from engines (e.g., back-up generators) and industrial sources subject to Air District Rules and Regulations embedded in the land uses are not included in the screening estimates and must be added to the above land uses.
Refer to Appendix D for support documentation.
Source: Modeled by EDAW 2009.

As opposed to the actual thresholds of significance, the screening criteria listed above are solely for reference in determining potential significance.

The air quality CEQA thresholds of significance are located below in **Table 2**. The data is obtained directly from the BAAQMD CEQA Guidelines from May 2017.

Table 2. Air Quality CEQA Thresholds of Significance*				
Pollutant	Construction-Related		Operational-Related	
Project-Level				
Criteria Air Pollutants and Precursors (Regional)	Average Daily Emissions (lb/day)	Average Daily Emissions (lb/day)		Maximum Annual Emissions (tpy)
ROG	54	54		10
NOX	54	54		10
PM10	82 (exhaust)	82		15
PM2.5	54 (exhaust)	54		10
PM10/PM2.5 (fugitive dust)	Best Management Practices		None	
Local CO	None	9.0 ppm (8-hour average), 20.0 ppm (1-hour average)		
GHGs – Projects other than Stationary Sources	None	Compliance with Qualified GHG Reduction Strategy OR 1,100 MT of CO2e/yr OR 4.6 MT CO2e/SP/yr (residents+employees)		
GHGs –Stationary Sources	None		10,000 MT/yr	
Risk and Hazards for new sources and receptors (Individual Project)*	Same as Operational Thresholds**	Compliance with Qualified Community Risk Reduction Plan OR Increased cancer risk of >10.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient PM2.5 increase: > 0.3 µg/m ³ annual average <u>Zone of Influence:</u> 1,000-foot radius from property line of source or receptor		
Risk and Hazards for new sources and receptors (Cumulative Threshold)*	Same as Operational Thresholds**	Compliance with Qualified Community Risk Reduction Plan OR Cancer: > 100 in a million (from all local sources) Non-cancer: > 10.0 Hazard Index (from all local sources) (Chronic) PM2.5: > 0.8 µg/m ³ annual average (from all local sources) <u>Zone of Influence:</u> 1,000-foot radius from property line of source or receptor		
Accidental Release of Acutely Hazardous Air Pollutants*	None	Storage or use of acutely hazardous materials locating near receptors or new receptors locating near stored or used acutely hazardous materials considered significant		
Odors*	None	5 confirmed complaints per year averaged over three years		

Air Quality CEQA Thresholds of Significance*		
Pollutant	Construction-Related	Operational-Related
Plan-Level		
Criteria Air Pollutants and Precursors	None	1. Consistency with Current Air Quality Plan control measures, and 2. Projected VMT or vehicle trip increase is less than or equal to projected population increase
GHGs	None	Compliance with Qualified GHG Reduction Strategy OR 6.6 MT CO ₂ e/SP/yr (residents + employees)
Risks and Hazards*	None	1. Overlay zones around existing and planned sources of TACs (including adopted Risk Reduction Plan areas) and 2. Overlay zones of at least 500 feet from all freeways and high-volume roadways
Accidental Release of Acutely Hazardous Air Pollutants	None	None
Odors*	None	Identify the location, and include policies to reduce the impacts, of existing or planned sources of odors
Regional Plans (Transportation and Air Quality Plans)		
GHGs, Criteria Air Pollutants and Precursors, and Toxic Air Contaminants	None	No net increase in emissions
<p>CEQA = California Environmental Quality Act; CO = carbon monoxide; CO₂e = carbon dioxide equivalent; GHGs = greenhouse gases; lb/day = pounds per day; MT = metric tons; NOX = oxides of nitrogen; PM_{2.5} = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM₁₀ = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ppm = parts per million; ROG = reactive organic gases; SO₂ = sulfur dioxide; SP = service population; TACs = toxic air contaminants; TBP = toxic best practices; tons/day = tons per day; tpy = tons per year; yr = year; TBD: to be determined.</p> <p>*The receptor thresholds were the subject of litigation in <i>California Building Industry Association v. Bay Area Air Quality Management District</i> (2015) 62 Cal. 4th 369. The use of the receptor thresholds is discussed in section 2.8 of these Guidelines.</p> <p>** The Air District recommends that for construction projects that are less than one year duration, Lead Agencies should annualize impacts over the scope of actual days that peak impacts are to occur, rather than the full year.</p>		

The BAAQMD lists operational-related thresholds of significance for GHG emissions. It does not have thresholds of significance for construction-related GHG emissions. However, the GHG emissions from construction should be quantified and disclosed, and a significance of emission impacts be determined in relation to meeting the Assembly Bill 32 GHG reduction goals as required by the Public Resources Code, Section 21082.2. The lead agency is encouraged to incorporate best management practices in reduction of GHG emissions during construction where possible.

3.3 Air Quality Monitoring Data

The BAAQMD currently operates 36 air monitoring stations throughout the SFBAAB. The station closest to the site is the San Jose – Jackson Street station, located three to four miles from the site. Summarized air pollutant data is listed in **Table 3** below; the station monitors for PM_{2.5}, carbon monoxide, nitric oxide, nitrogen oxides, nitrogen dioxide, black carbon, sulfur dioxide, and ozone.

The federal health standard for PM_{2.5} is 35 micrograms per cubic meter averaged over a 24-hour day. Black carbon is a component of fine particulate matter, or PM_{2.5}, and consists of pure carbon in several forms. It has the same health impacts as PM_{2.5} and acts as an agent of climate change. There are no air quality standards for black carbon, other than the federal and state PM_{2.5} standards.

There are two federal standards for carbon monoxide: 90 parts per ten million (pptm) averaged over 8 hours, and 350 pptm averaged over one hour.

Nitric oxide (NO) and nitrogen dioxide (NO₂) are generally by-products of combustion. They rarely present in sufficient concentrations in the outside air to be a health concern in the Bay Area by themselves, but they are two of the major precursor pollutants associated with the formation of ozone. contributes to the formation of ozone. Oxides of nitrogen (NO_x) is a group term for the pollutants nitric oxide (NO) and nitrogen dioxide (NO₂). Relevant ambient air quality standards are set specifically for nitrogen dioxide; the federal standard for NO₂ is 100 parts per billion averaged over one hour.

Ozone (O₃) is the main ingredient in summertime smog. The federal health standard for ozone is 70 parts per billion averaged over 8 hours. Sulfur dioxide (SO₂) rarely rises to concentrations that become unhealthy in the Bay Area. The federal standard for sulfur dioxide is 75 parts per billion averaged over one hour.

Table 3. San Jose – Jackson Street Air Quality Monitoring Station, Yearly Historical Data

Measured Air Pollutant Levels, Annual Highest and Average Concentrations												
Pollutant (unit)	2014		2015		2016		2017		2018		2019	
	Highest	Average	Highest	Average	Highest	Average	Highest	Average	Highest	Average	Highest	Average
SO ₂ (ppb)	3	0.2	3	0.2	3	0.1	2	0.1	7	0.2	15	0.1
NO (ppb)	227	10	196	11	176	8	174	8	129	7	115	5
PM _{2.5} (µg/m ³)	112	8.4	108	9.9	88	8.4	158	9.7	195	12.7	56	9.1
NO ₂ (ppb)	58	13	49	13	51	11	68	12	86	12	60	11
NO _x	274	23	236	24	213	19	214	21	172	19	147	16

(ppb)												
Measured Air Pollutant Levels, Highest 1-hour and 8-hour Concentrations												
	2014		2015		2016		2017		2018		2019	
	Highest 1-hour	Highest 8-hour	Highest 1-hour	Highest 8-hour	Highest 1-hour	Highest 8-hour	Highest 1-hour	Highest 8-hour	Highest 1-hour	Highest 8-hour	Highest 1-hour	Highest 8-hour
CO (pptm)	24	19	24	16	20	13	21	16	25	20	17	11
O ₃ * (ppb)	89	66	94	84	87	66	121	98	78	61	95	81

Source: BAAQMD Air Monitoring Data (<http://www.baaqmd.gov/about-air-quality/current-air-quality/air-monitoring-data>)

*Concentrations for ozone are highest 1-hour average and 8-hour average concentrations

µg/m³ = measured in micrograms per cubic meter

ppb = measured in parts per billion

The second closet station to the site is the San Jose – Knox Avenue station, located four to five miles from the site. The summarized air pollutant data for this station is listed in **Table 4** below,

Table 4. San Jose – Knox Avenue Air Quality Monitoring Station, Yearly Historical Data

Measured Air Pollutant Levels, Annual Highest and Average Concentrations										
	2015		2016		2017		2018		2019	
Pollutant (unit)	Highest	Average	Highest	Average	Highest	Average	Highest	Average	Highest	Average
PM _{2.5} (µg/m ³)	99	8.4	179	9.1	129	10.9	482	12.1	56	9.1
NO (ppb)	219	17	173	12	160	12	135	11	160	8
NO _x (ppb)	246	37	199	28	196	29	185	27	196	23
NO ₂ (ppb)	61	18	52	16	77	17	88	17	65	14
BC (µg/m ³)	9.5	1	16.4	0.9	16.9	0.9	12.3	0.9	6	0.6
Measured Air Pollutant Levels, Highest 1-hour and 8-hour Concentrations										
	2015		2016		2017		2018		2019	
	Highest 1-hour	Highest 8-hour	Highest 1-hour	Highest 8-hour	Highest 1-hour	Highest 8-hour	Highest 1-hour	Highest 8-hour	Highest 1-hour	Highest 8-hour
CO (pptm)	27	20	25	16	26	18	28	22	20	15

Source: BAAQMD Air Monitoring Data (<http://www.baaqmd.gov/about-air-quality/current-air-quality/air-monitoring-data>)

µg/m³ = measured in micrograms per cubic meter

ppb = measured in parts per billion

3.4 Toxic Air Contaminants

Toxic Air Contaminants (TACs) are defined as a set of airborne pollutants that may pose a present or potential hazard to human health. Health effects associated with TACs are diverse and are thus generally assessed locally rather than regionally. They can result in short-term (acute) health issues such as respiratory irritation or headaches, or long-term (chronic) health issues such as cancer or asthma. In addition, they are identified if they are carcinogenic. Carcinogens are assumed to have no safe threshold below which health impacts would not occur, whereas non-carcinogenic substances are generally assumed to have a safe threshold. For assessing community risks and hazards, BAAQMD recommends a 1,000-foot radius around the project property boundary, with both individual and nearby cumulative sources within that range taken into consideration.

In the Bay Area, there are several specific urban communities where exposure to TACs is relatively high in comparison to others; this includes the region of San Jose containing the site. To address these areas, the BAAQMD initiated the Community Air Risk Evaluation (CARE) program in 2004 to identify areas with higher risk levels from TACs located with sensitive populations. The CARE program found that diesel PM, primarily from on- and off-road mobile sources, accounts for over 80 percent of inhalation cancer risk from TACs in the Bay Area (BAAQMD, 2017).

TACs are identified by the California Office of Environmental Health Hazard Assessment (OEHHA), and listed in BAAQMD's Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants. TACs for the site from construction or post-construction operation include compounds found in gasoline and diesel fuels and exhaust. In addition, PM_{2.5} may contain TACs, as it is a complex mixture of substances that includes elements such as carbon and metals, compounds such as nitrates, organics, and sulfates, and complex mixtures such as diesel exhaust and wood smoke. Gasoline stations are listed as a common stationary source type for TAC and PM_{2.5} emissions in the BAAQMD CEQA Guidelines from 2017.

3.5 Sensitive Receptors

Sensitive receptors include residential areas, hospitals and health care facilities, schools, or other areas where people and families may reside, or areas with groups particularly vulnerable to air contaminants such as children and elderly, athletes, or people with cardiovascular or chronic respiratory diseases. Those located within 1,000 feet of the source are of particular concern.

The site is located in a mixed residential and commercial area. Located to the east and south within 1,000 feet are residences, the closest being approximately 200 feet to the southeast; located north, east, and south along Curtner Avenue and Lincoln Avenue are commercial properties; located directly west is Lincoln Glen Park. Further outwards include more residences as well as schools north, south, east, and west of the site within approximately one mile. These include Willow High School, 2,600-feet west of the site and Regard Child Care and Development 820-feet northwest of the site. Commercial properties are located north, south, and west of the site.

Approximately ten miles east of the site are the foothills bordering San Jose. Further west, north, and south continue more developed areas.

4.0 IMPACTS AND MITIGATION

4.1 Project Impacts

The site currently consists of an approximate 2,037 square foot convenience store building, with a canopy over four multi-product fuel dispensers. The intended project proposes to remodel the existing building and remove the existing canopy and four fuel dispensers and construct a new 1,078-square foot canopy with three multi-dispenser fuel dispensers, and a 130-square foot trash enclosure. The existing 20,000-gallon underground storage tank, and existing split 20,000-gallon underground storage tank will be reused and an additional 20,000-gallon split underground storage tank will be installed. Underground storage tanks will include one 20,000-gallon tank for regular unleaded gasoline, one 20,000-gallon split tank with 12,000 gallons premium unleaded gasoline on one side and 8,000-gallon for diesel storage on the other side. The new 20,000-gallon split tank will include 10,000 gallons regular unleaded on one side and 10,000 gallons E85 (alcohol/gasoline blend) on the other side.

In accordance with CEQA Guidelines, a project impact would be considered significant if the project would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

The BAAQMD CEQA Air Quality Guidelines, May 2017, provides the thresholds of significance for the above. Table 2 in Section 3.2.1 summarizes the BAAQMD recommended thresholds.

In the sections below, an evaluation of the project-related impacts and comparison to the thresholds of significance is presented.

4.2 GHG Emissions Methodology

This evaluation compares project-related GHG emissions to current BAAQMD's CEQA thresholds of significance for operational GHG emissions: 1,100 metric tons (MT) of carbon dioxide equivalents (CO₂e) per year.

This analysis evaluates project impacts by the proposed use as a 3-pump gas station and convenience store. The facility has not been in operation for several years; therefore, netting for incremental impacts versus the proposed use is not applicable. Consistent with the approach for estimating operational GHG emissions, the total GHG

emissions from proposed construction/operations were estimated using the California Emissions Estimation Model (CalEEMod™ Version 2016.3.2).

Emissions for the proposed demolition, construction, and operation of a convenience store, 3-pump gas station, and parking area were estimated using CalEEMod™. The proposed layout of the project is presented in **Table 5**. Traffic patterns and trip rates were based on the results of a Transportation Impact Analysis (TIA) conducted by J. Daniel Takacs (TR1549) (December 19, 2016) for the proposed land use. Although the TIA included the installation of four multiuse fuel dispensers, the City of San Jose stated that because the number of fuel dispensers in the proposed project has decreased from four dispensers to three dispensers, the TIA previously conducted, does not need to be updated. Emissions from on-site demolition and construction phases were estimated based on a proposed construction equipment inventory and number of days for each phase as provided by the engineering design group for the project. The estimated demolition quantities and construction phasing is presented in **Table 6**. A proposed demolition and construction equipment list is presented in **Table 7** and the estimated construction on-road trips is presented in **Table 8**. For indirect source emissions from electricity generation/distribution, water and wastewater treatment, and solid waste disposal, default values were utilized for the model.

Table 5: Proposed Project

Proposed Land Use	CalEEMod Land Use Type	Proposed Size	Unit
Convenience Store	Convenience Store (24 hrs)	2,037	Square feet
Gasoline Pumps	Gasoline/Service Station	3	Pumps
Parking	Park Lot	11	Spaces

Table 6: Demolition Quantities and Construction Phasing

Demolition Quantities	
Structures	Existing Building (ft ³)
Canopy	3,222

Table 6: Demolition Quantities and Construction Phasing (Continued)

Construction Schedule				
Phase	Start Date*	End Date*	# Days per Week	Total Days
Demolition	10/10/2020	10/30/2020	5	10
Site Preparation	11/2/2020	11/6/2020	5	5
Grading	11/9/2020	11/20/2020	5	10
Construction	11/20/2020	1/1/2021	5	35

Architectural Coating (Painting)	1/1/2021	1/18/2021	5	5
Paving	1/18/2021	1/22/2021	5	5

* Dates are estimated. Start date has not been finalized.

Table 7: Demolition and Construction equipment list

Equipment List					
Phase	Equipment	Quantity	Usage (hrs/day)	HP	Load Factor
Demolition	Concrete/Industrial Saws	1	8	81	0.73
	Other Construction Equipment	1	6	247	0.40
	Tractors/Loaders/Backhoes	2	6	97	0.37
	Air Compressors	2	6	78	0.48
	Rubber Tire Dozers	1	1	247	0.40
Site Preparation	Excavators	1	6	187	0.41
	Tractors/Loaders/Backhoes	1	6	97	0.37
	Trenchers	1	6	78	0.50
	Graders	1	8	187	0.41
Grading	Tractors/Loaders/Backhoes	1	6	81	0.73
	Plate Compactor	1	8	65	0.40
	Surfacing Equipment	1	6	97	0.37
	Concrete/Industrial Saws	1	8	81	0.73
	Rubber Tire Dozers	1	1	247	0.40
Construction	Cranes	1	7	231	0.29
	Forklifts	1	6	89	0.20
	Tractors/Loaders/Backhoes	1	6	97	0.37
Paving	Paver	1	8	130	0.42
	Roller	1	8	80	0.38
	Cement and Mortar Mixers	1	8	9	0.56
	Tractors/Loaders/Backhoes	1	8	97	0.37
Architectural Coating	Air Compressor	1	6	78	0.48

Table 8: Construction on-road trips

On-Road Trips						
Phase Name	Worker (trips/day)	Vendor (trips/day)	Hauling (Total Trips)	Worker (miles/trip)	Vendor (miles/trip)	Hauling (miles/trip)
Demolition	15	0	15	10.80	7.3	20

Grading	8	0	10	10.80	7.3	20
Construction	3	1	0	10.80	7.3	20
Paving	10	0	0	10.80	7.3	20
Architectural Coating	1	0	0	10.80	7.3	20

A Transportation Impact Analysis (TIA) was conducted by J. Daniel Takacs (TR1549) (December 19, 2016) for the propose traffic patterns to estimate the number of trips. The results of the traffic analysis is presented in **Table 9**. The calculated Cal EEMod trip rates, based on the traffic analysis, is presented in **Table 10** for the proposed operation.

Table 9: Traffic Analysis with Trip Rates

Trip Generation ⁽¹⁾					
Land Use	Amount	Trip Rate		Trips	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Proposed Site					
Service Station with Convenience Store	8 VFP	10.16	13.51	81	108

⁽¹⁾ From "Transportation Impact Analysis for 1103 Curtner Avenue Service Station", by J. Daniel Takacs, December 16, 2016. VFP = Vehicle Fueling Positions

Table 10: Cal EEMod Daily Trip Estimates ⁽¹⁾

Land Use	CalEEMod Land Use Type	Average Daily Trip Rate	Average Trip Length (miles)	Daily VMT ⁽²⁾	Annual VMT	% of Total VMT
Proposed Site						
Convenience Store	Convenience Market (24 hrs)	28.51	9.5	60	21,710	30
Gasoline Pumps	Gasoline/Service Station	324	9.5	511	186,679	70

⁽¹⁾ Cal EEMod Daily Trip Estimates based on current project for 3 fuel dispensers (gasoline pumps).

⁽²⁾ Average daily VMT rate calculated as Annual VMT / 365 days per year.

4.3 GHG Emissions Results

A summary of the project GHG operational emissions is presented in **Table 11** starting in the baseline year of 2019. The net GHG emissions from project generated traffic, energy, waste and water result in emissions is 111.30 MT of CO₂e per year. This value is less than the BAAQMD threshold; therefore, the proposed project is in compliance with the qualified GHG Reduction Strategy.

Table 11: Summary of Project Operational GHG Emissions

Source	Units	2020 GHG Emissions (Project) ⁽¹⁾
Area	MT CO ₂ e/yr	3.10E-04
Energy ⁽²⁾		5.2678
Mobile		102.7291
Waste		3.0023
Water		0.2963
Totals	MT CO ₂ e/yr	111.2958
BAAQMD Threshold	MT CO ₂ e/yr	1,100
Exceeds Threshold		No

⁽¹⁾ GHG Emissions data from CalEEMod version 2016.3.2

⁽²⁾ Total including Natural gas and electric.

There are no CEQA thresholds for comparison to construction emissions. However, **Table 12** presents the total GHG emissions from construction activities.

Table 12: Summary of Project Construction GHG (2020 & 2021)

Pollutant	Off-road Mobile Emissions (MT CO ₂ e)	Onroad Mobile Emissions (MT CO ₂ e)	Total Emissions (MT CO ₂ e)	Construction Threshold
Total GHG	33.72	3.37	37.09	None

4.4 Criteria Air Pollutants and Precursors Impacts

Construction Emissions

During the construction phase of the project, emissions of air pollutants are expected to occur from the demolition activities, excavation, grading, new building construction, paving and from the application of architectural coatings. During demolition, excavation, grading and some building construction activities, fugitive dust could be generated. Estimated emissions of air pollutants during the construction phase of the project were compared to the BAAQMD significance criteria, which include thresholds based on total mass emissions on a pound per day basis, health risk based thresholds for diesel particulate matter, and a concentration threshold for PM_{2.5} on an annual basis. Construction activity is anticipated to include each of these comparisons and are discussed separately below.

Construction emissions were estimated for the project using CalEEMod (Version 2016.3.2). Data supplied by the project developer was used and for other parameters that were not provided or not available, CalEEMod default

values were utilized. **Tables 6, 7, and 8** in Section 4.2 presents the construction phase data as well as the types and numbers of construction equipment to be onsite.

Table 13 provides the estimated construction phase/period emissions, annualized emissions, and average daily emissions (computed by dividing the total annualized construction period emissions by the number of anticipated construction days). Emissions are totals of all construction phases. Based on the CalEEMod results, no emissions of criteria pollutants during construction would exceed the BAAQMD daily significance levels.

Table 13: Construction Criteria Pollutant Emissions Summary

Estimate Construction Emissions						
Units	ROG	NOx	PM ₁₀ *	PM _{2.5} *	CO	SOx
Annual per CalEEMod						
Tons/yr	0.04	0.29	0.03	0.02	0.22	4.00E-04
Normalized for 71-day Construction Period						
Tons/day	8.50E-03	0.06	5.80E-03	3.10E-03	0.04	7.78E-05
Lbs/day	0.12	0.81	0.08	0.05	0.64	1.14E-03
BAAQMD Thresholds	54	54	82	54	NA	NA
Exceed Threshold	No	No	No	No	NA	NA

* Includes exhaust plus fugitives.

As previously stated, construction activity is anticipated to include demolition of existing buildings, excavation, grading, building construction, paving and application of architectural coatings. During demolition, excavation, grading and some building construction activities, fugitive dust (PM_{2.5}) could be generated. Most of the dust would occur during excavation and grading activities. The amount of dust generated would be highly variable and would be dependent on the size of the area disturbed at any given time, amount of activity, and soil/weather conditions. In addition to the fugitive dust emissions, emissions of combustion PM_{2.5} would also occur. However, based on CalEEMod, criteria pollutants are much less than BAAQMD thresholds for construction and are insignificant.

Operational Emissions

The operational emissions for the (post-construction) project would be associated with vehicular and residential related type emissions. **Table 14** presents the estimated daily operational emissions.

Table 14: Estimated Operational Emissions Summary

Estimated Operational Emissions						
Units	ROG	NOx	PM ₁₀ *	PM _{2.5} *	CO	SOx
Tons/yr	0.07	0.27	0.08	0.02	0.49	1.20E-03
Lb/day ⁽¹⁾	0.38	1.48	0.43	0.12	2.69	6.58E-03
BAAQMD Thresholds	54	54	82	54	NA	NA
Exceed Threshold	No	No	No	No	NA	NA

* Includes exhaust plus fugitives.

⁽¹⁾ lb/day = tons/yr/365 days/yr x 2,000 lbs/ton

Carbon monoxide emissions from traffic generated by operation of the post-construction project would be the pollutant of greatest concern at the local level. Congested intersections with a large volume of traffic have the greatest potential to cause high-localized concentrations of carbon monoxide. Air pollutant monitoring data indicate that carbon monoxide levels have been at healthy levels (i.e., below state and federal standards) in the Bay Area since the early 1990s. As a result, the region has been designated as attainment for the standard. There is an ambient air quality monitoring station in San Jose that measures carbon monoxide concentrations. The highest measured level over any 8-hour averaging period during the last three years is less than or equal to 22 parts per thousand million (pptm). Intersections affected by the project operational traffic would not increase traffic at the affected intersections more than 44,000 vehicles per hour and thus would not cause a violation of an ambient air quality standard or have a considerable contribution to cumulative violations of these standards. Based on the discussion above, operation of the project is not expected to exceed the significant operational thresholds, violate any air quality standard, contribute substantially to an existing/projected air quality violation, or expose sensitive receptors to substantial air pollutant levels.

Air Emissions - Air Operation Permit

In addition to the vehicular and residential related type emissions, operational emissions for the (post-construction) project would also be associated with the transfer and storage of unleaded regular gasoline, premium unleaded gasoline, E85 (Ethanol/Gasoline, and diesel fuel into underground storage tanks (USTs).

Underground storage tanks will include one 20,000-gallon existing tank for regular unleaded gasoline, one existing 20,000-gallon split tank with 12,000 gallons premium unleaded gasoline on one side and 8,000-gallon for diesel storage on the other side. One new 20,000-gallon split tank will include 10,000 gallons regular unleaded on one side and 10,000 gallons E85 (alcohol/gasoline blend) on the other side. Pollutant emissions from the storage of gasoline, E85, and diesel are comprised of volatile organic compounds (VOC) and toxic air contaminants contained in the gasoline and diesel. The facility will be required to obtain a minor stationary source air permit for emissions of VOCs and TACs from fuel transferred for storage and fuel dispensing into customers vehicles.

Stage I Vapor Recovery will be used during the refueling of gasoline storage tanks to reduce hydrocarbon emissions. Vapors in the tank, which are displaced by the incoming gasoline, are routed through a hose into the cargo tanker, instead of being vented to the atmosphere. The facility will utilize dual point submerged fill. Stage II Vapor recovery will be used at the fueling dispensers.

Emissions from gasoline, E85, and diesel transfers to USTs was calculated based on the proposed maximum fuel throughput and tank capacities utilizing EPA TANKS 4.09d emissions software. The facility will utilize Stage I Vapor Control Systems for each UST as well as Stage II Vapor Recovery Systems for fuel dispensing to vehicles from pumps. **Table 15** presents a summary of incremental project emissions for the transfer of gasoline and diesel to USTs.

Table 15: Summary of Project Operational VOC and TAP Proposed Operation Emissions from USTs

Pollutant	Proposed (lbs/yr)	Proposed (lbs/hr)
VOC	692	0.08
Benzene	2.06	2.35E-04
Ethylbenzene	9.61	1.10E-03
n-Hexane	6.86	7.83E-04
Toluene	48.07	5.49E-03
Xylenes	48.07	5.49E-03

* Values presented include Stage I Vapor Control Efficiency

Vehicle fueling emissions occur when gasoline vapors are displaced by rising liquid in the vehicle fuel tank during gasoline dispensing. These vapors are adsorbed in a carbon canister installed on vehicles equipped with an on board refueling vapor recovery system (ORVR). When fueling non-ORVR vehicles, these vapors can be collected by a Phase II vapor recovery system and returned to the storage tank. The facility will install a Stage II vapor recovery system for fuel dispensing; therefore, vehicles equipped with an ORVR will also have additional emissions control with an enhanced vapor recovery program (EVR) utilizing the Stage II vapor recovery system.

Emissions from the dispensing of gasoline were calculated using emission factors developed by the California Air Resources Board published in "*Revised Emission Factors for Phase II Vehicle Refueling at California Gasoline Dispensing Facilities*", California Air Resources Board, December 23, 2013. Emission factors for dispensing of diesel is based on AP42, Section 5.1 and "*Gasoline Station Emission Calculator*", Colorado Department of Public Health and Environment. Based on that publication, the percent of gasoline dispensed to ORVR vehicles in California is estimated at 83% in 2018 and 85% in 2019. The emissions data presented in **Table 16** includes ORVR vehicles and non-ORVR vehicles based on the estimated percent provided in the publication.

Table 16: Fuel Dispensing Emissions

Pollutant	Proposed (lbs/yr)	Proposed (lbs/hr)
VOC	177.87	0.02
Benzene	0.51	5.86E-05
Ethylbenzene	0.09	9.76E-06
n-Hexane	1.15	1.32E-04
Toluene	1.33	1.52E-04
Xylenes	0.34	3.90E-05

Table 17 presents a comparison of the proposed emissions from UST storage and fuel dispensing and BAAQMD TAC Trigger levels per BAAQMD Regulation 2, Rule 5, 2-5-110 and Table 2-5-1.

Table 17: Summary of Project Operational TAP Emissions and Trigger Levels

Summary of TAP Emissions from USTs *						
Pollutant	Incremental Project Emissions (lb/yr)	Trigger Level (lbs/yr)	Incremental Project Emissions (lb/hr)	Trigger Level (lbs/hr)	Below Trigger (lb/yr)	Below Trigger (lb/hr)
Benzene	2.57	2.9	2.94E-03	0.06	Yes	Yes
Ethylbenzene	9.70	33	1.11E-03	-	Yes	Yes
n-Hexane	8.01	270,000	9.15E-04	-	Yes	Yes
Toluene	49.40	12,000	5.64E-03	82	Yes	Yes
Xylenes	48.41	27,000	5.53E-03	49	Yes	Yes

* per BAAQMD Regulation 2, Rule 5, 2-5-110 and Table 2-5-1

4.5 Mitigation measures

Post construction mitigation measures will include Stage I and Stage II Vapor Recovery Systems. The Project shall implement BAAQMD Recommended Best Control Measures for reducing fugitive dust emissions during construction. These measures are as follows:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two or more 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 mph;

- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used;
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). 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; and
- A publicly visible sign shall be posted with the telephone number and person to contact at the construction site 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.

4.6 Cumulative impacts

Cumulative stationary and mobile source impacts were assessed for the site and immediately surrounding area, to determine how the site may create an environmental impact in combination with nearby sources of pollution.

The BAAQMD Stationary Source Screening Analysis Tool was used to identify nearby stationary sources and assess cumulative impacts. This tool displays sources permitted with BAAQMD in Google Earth, and includes data for each site for cancer risk, hazard index, and PM_{2.5}. Two sources were listed in the tool within 1,000 feet of the site, which is BAAQMD's recommended search radius (BAAQMD, 2012). An additional source was listed within 2,500 feet of the site, as listed in **Table 18**, below.

Table 18. BAAQMD Stationary Source Screening Analysis Tool for Nearby Data

Source ID	Name	Address	Approximate Distance From Site (feet)	Cancer Risk (per one million people)	Hazard Index	PM _{2.5} (µg/m ³)
12637	Dry Clean A+	2214 Lincoln Avenue San Jose CA	115	0	0	0
G4001	Chevron #6139	2252 Lincoln Avenue San Jose CA	300	31.181	0.052	NA
4372	Patrician Cleaners	2306 D Almaden Road San Jose CA	2,500	0	0	0

The BAAQMD Highway Screening Analysis Tool was also utilized in assessing cumulative impacts from nearby sources. This tool lists PM_{2.5}, cancer risk, and both chronic and acute hazard indexes (HI) at heights of either 6 feet or 20 feet, depending on available data, for sections of major roadways, and displays this data using Google Earth.

The nearest major roadway listed in the tool is California Highway 87 east of the site, the nearest links of which are located approximately 4,900 to 5,400 feet from the site. Road risk values from the tool are located below in **Table 19**.

Table 19. BAAQMD Road Risk Values

HWY ID and Link	Road Risk Values (modeled at 6 feet high)			
	PM _{2.5}	Risk	Chronic HI	Acute HI
CA Hwy 87				
Link 509	0.040	3.5077	0.004	0.007
Link 527	0.015	1.518	0.001	0.007
Link 525	0.040	3.682	0.004	0.007

Due to the distance from the site being greater than 1,000 feet, these are not analyzed further for the cumulative impacts.

The BAAQMD significance threshold for cumulative cancer risk is 100 in a million and the cumulative hazard index greater than 10.0 (BAAQMD, 2017). For the above stationary sources, the cumulative cancer risk is 31.181 people per one million people, the total hazard index is 0.052, and the total PM_{2.5} is 0. Based on the estimated operational emissions presented in Table 15, and the emissions and trigger levels discussed in Table 17, cumulative impacts from the proposed project and surrounding area are not anticipated to exceed BAAQMD significance thresholds.

4.7 Odor Impacts

During construction, various diesel-powered vehicles and equipment would result in related odors onsite, which would be temporary, lasting only during active construction activities. Post-construction odors may be from fueling activities related to typical active gas station operation. Operation of the site is not anticipated to produce any objectionable odors compared to existing site operations based on Stage I and Stage II Vapor Recovery Systems. Overall, odor impacts from project operations are considered to be less-than-significant.

4.8 Consistency with Air Quality Plans

The San Jose General Plan (Envision 2040) makes choices between conservation and development, and defines the desirable balance between social, environmental, and economic costs in San Jose. Envision San Jose 2040 represents the official policy regarding the future character and quality of development and assesses the amount, type, and phasing of development needed to achieve its social, economic, and environmental goals. This project as designed will not be in conflict with the City's general plan and will implement mitigation measures for construction and operations in accordance with the land use type.

The BAAQMD 2017 Clean Air Plan provides a regional strategy to protect public health and protect the climate. To protect public health, the plan describes how the Air District will continue progress toward attaining all 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 plan defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious greenhouse gas reduction targets for 2030 and 2050 and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve those GHG reduction targets. The net GHG emissions from project generated traffic, energy, waste and water is less than the BAAQMD threshold; therefore, the proposed project is in compliance with the qualified GHG Reduction Strategy.

5.0 CONCLUSION

Based on the site's location within the SFBAAB, and data obtained from the nearest BAAQMD air quality monitoring stations, air contaminants of particular concern around the site include ozone and particulate matter.

To measure cumulative impacts of multiple air pollution sources within an area, the BAAQMD recommends a search radius of 1,000 feet from the site. A few sources identified include a dry cleaners and a convenience store with gas pumps store located near the site. In addition, these had relatively low cancer risks and hazard indexes, below the BAAQMD significance thresholds. Major highways were identified as far enough away from the site not to warrant further analysis for inclusion with cumulative impacts. Cumulative impacts are not anticipated to exceed BAAQMD significance thresholds for the area within a 1,000-2,000 foot search radius from the site.

Based on the CalEEMod results, no emissions of criteria pollutants during construction would exceed the BAAQMD daily significance levels.

The net GHG emissions from project generated traffic, energy, waste and water result in emissions of 111.296 MT of CO₂e per year. This value is less than the BAAQMD threshold; therefore, the proposed project is in compliance with the qualified GHG Reduction Strategy.

Based on the information presented in this Air Quality Analysis and CEQA Assessment, construction and operation of the project is not expected to exceed the significant operational thresholds, violate any air quality standard, contribute substantially to an existing/projected air quality violation, or expose sensitive receptors to substantial air pollutant levels. A minor source air permit application will be submitted to the BAAQMD for construction and operation of the facility related to gasoline and diesel storage and dispensing when the design of the facility is finalized.

6.0 SOURCES

Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines, May 2017,
http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en,
accessed February 2020.

Envision San Jose 2040, City Planning Division, November 2011, <https://www.sanjoseca.gov/your-government/departments/planning-building-code-enforcement/planning-division/citywide-planning/envision-san-jos-2040-general-plan> accessed February 2020

Final 2017 Clean Air Plan, Spare the Air Cool the Climate: A Blueprint for Clean Air and Climate Protection in the Bay Area, Bay Area Air Quality Management District (BAAQMD), April 2017, http://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-_proposed-final-cap-vol-1-pdf.pdf?la=en, accessed February 2020.

"Revised Emission Factors for Phase II Vehicle Refueling at California Gasoline Dispensing Facilities", California Air Resources Board, December 23, 2013
<https://www.arb.ca.gov/vapor/gdf-emisfactor/gdf-emisfactor.htm>

"Gasoline Station Emission Calculator", Colorado Department of Public Health and Environment.
<https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKEwj33tTei5fbAhXM2IMKHadjDrcQFggnMAA>

7.0 LIMITATIONS

The findings contained in this report represent Antea Group's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. For any reports cited that were not generated by Antea USA, Inc., the data from those reports are used "as is" and is assumed to be accurate. Antea USA, Inc. does not guarantee the accuracy of this data for the referenced work performed nor the inferences or conclusions stated in these reports. This report is based upon a specific scope of work requested by the client. The Contract between Antea Group and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Antea Group's Client and anyone else specifically listed on this report. Antea Group will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Antea Group makes no express or implied warranty as to the contents of this report.

Figures

- | | |
|----------|-------------------|
| Figure 1 | Site Vicinity Map |
| Figure 2 | Site Plan |



Legend
 Subject Property

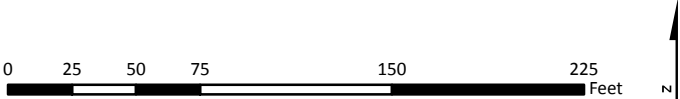

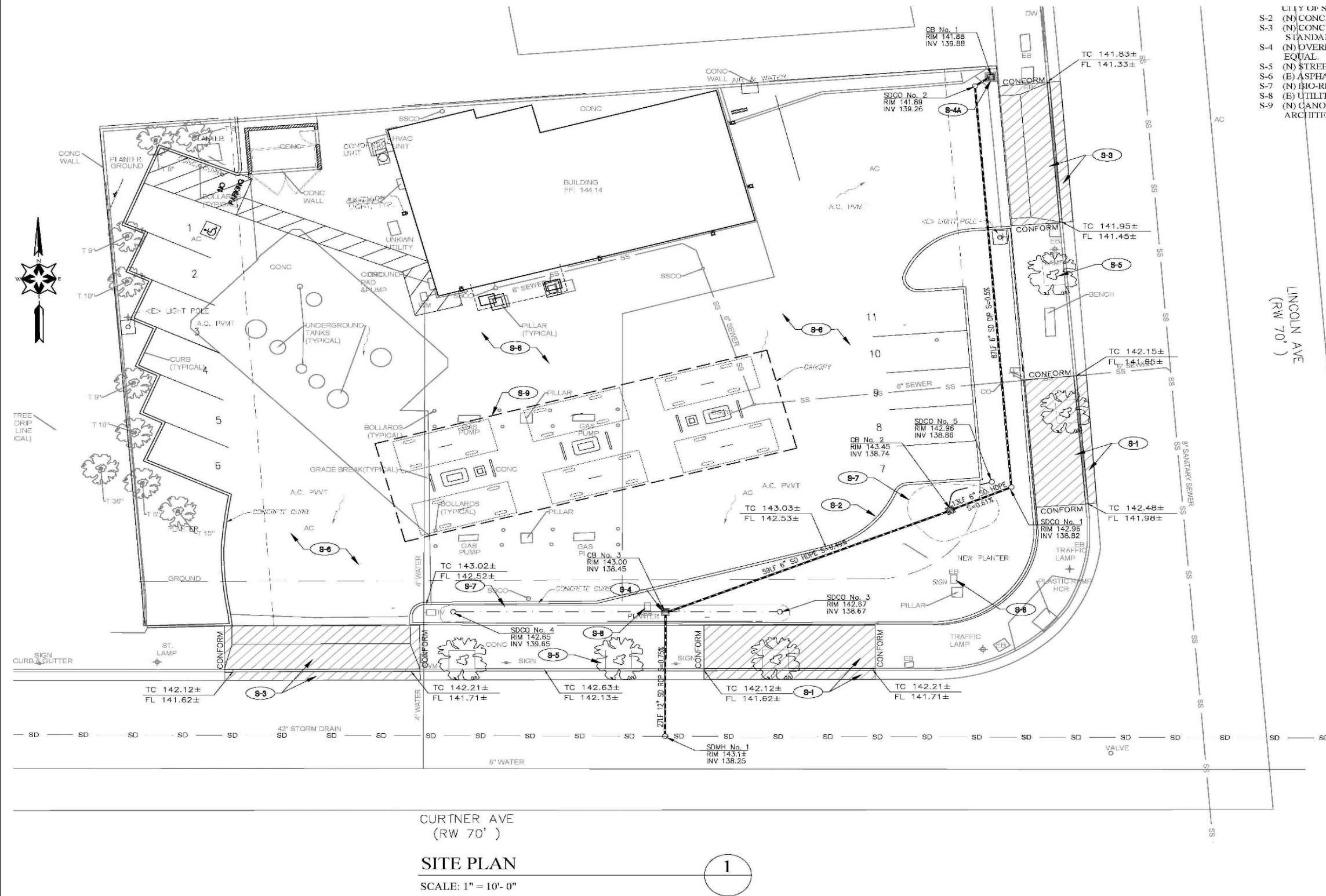


FIGURE 1
SITE VICINITY MAP
SALKHI PETROLEUM
1103 CURTNER AVENUE
SAN JOSE, CA

PROJECT NO. 200106230A	PREPARED BY MB	REF SCALE 1:900	
DATE 2/26/2020	REVIEWED BY TR	MAP SCALE 1 INCH = 75 FEET	

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



- CITY OF SAN JOSE CITY STANDARD DETAIL R-2.
- S-2 (N) CONCRETE CURB, PER DETAIL 3/C5.0.
 - S-3 (N) CONCRETE DRIVEWAY, PER CITY OF SAN JOSE CITY STANDARD DETAIL R-6.
 - S-4 (N) OVERFLOW RISER, CHRISTY V12 OR APPROVED EQUAL.
 - S-5 (N) STREET TREE, TYPICAL OF 5.
 - S-6 (E) ASPHALT OR PORTLAND CEMENT CONCRETE.
 - S-7 (N) BIO-RETENTION BASIN.
 - S-8 (E) UTILITY BOXES TO BE ADJUSTED TO FINISH GRADE.
 - S-9 (N) CANOPY, PUMPS AND CONCRETE SLAB. REFER TO ARCHITECTURAL DRAWINGS.

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PROJECT NAME:		FUELING FACILITY 1103 CURTNER AVENUE SAN JOSE, CA	
CLIENT NAME & ADDRESS:		SALKHI PETROLEUM 2145 MENDOCINO AVENUE SANTA ROSA, CA 95401	
NO.	DATE	PERMIT APPLICATION	DESCRIPTION
1	10/09/19	DS	BY
REVISION			

SHEET TITLE		SITE PLAN	
PROJECT NO.		S19030	
DRAWN BY:		DS	
CHECKED BY:		ES	
SCALE:		AS SHOWN	
DATE:		09/15/2019	
SHEET NO.		C1.0	
		of 7	

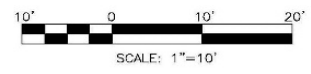


FIGURE 2 - SITE MAP
Salkhi Petroleum
1103 Curtner Avenue
San Jose, CA

PROJECT NO:	200106230A
DATE:	2/22/2020
SCALE:	NTS
DRAWN BY:	TR

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