



**Air Quality Analysis for the
National City CarMax Project
National City, California**

Prepared for
Centerpoint Integrated Solutions
355 Union Boulevard, Suite 301
Lakewood, CO 80228
Contact: John Thatcher

Prepared by
RECON Environmental, Inc.
3111 Camino del Rio North, Suite 600
San Diego, CA 92108
P 619.308.9333

RECON Number 7761
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A handwritten signature in black ink that reads "Jessica Fleming". The signature is written in a cursive, flowing style.

Jessica Fleming, Senior Environmental Analyst

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1: CalEEMod Output – Project Emissions

Acronyms

$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
AAQS	Ambient Air Quality Standards
AB	Assembly Bill
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CO	carbon monoxide
CUP	Conditional Use Permit
DPM	diesel particulate matter
HARRF	Hale Avenue Resource Recovery Facility
I-805	Interstate 805
LOS	Level of Service
LUC	Land Use Code
MXD-2	Major Mixed-Use District
NAAQS	National Ambient Air Quality Standards
NO ₂	nitrogen dioxide
NO _x	oxides of nitrogen
°F	degrees Fahrenheit
OEHHA	Office of Environmental Health Hazard Assessment
Pb	lead
PM ₁₀	particulate matter with an aerodynamic diameter of 10 microns or less
PM _{2.5}	particulate matter with an aerodynamic diameter of 2.5 microns or less
ppm	parts per million
RAQS	Regional Air Quality Strategy
ROG	reactive organic gas
SANDAG	San Diego Association of Governments
SCAQMD	South Coast Air Quality Management District
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SIP	State Implementation Plan
SO ₂	sulfur dioxide
SO _x	oxides of sulfur
SR-54	State Route 54
TACs	toxic air contaminants
TCM	Transportation Control Measures
U.S. EPA	United States Environmental Protection Act
USC	United States Code
VMT	vehicle miles travelled
VOC	volatile organic compounds

Executive Summary

This report evaluates potential local and regional air quality impacts associated with the proposed National City CarMax (project) located at the southwest corner of the intersection of Sweetwater Road and Plaza Bonita Road in National City, California. The project includes a General Plan Amendment, Rezone, Land Use Code (LUC) Amendment, Tentative Parcel Map and Conditional Use Permit to allow development of a CarMax pre-owned automobile dealership, service building and non-public carwash with associated access drives, parking lots and landscaped areas.

The primary goal of the San Diego Air Pollution Control District's Regional Air Quality Strategy (RAQS) is to reduce ozone precursor emissions. A General Plan Amendment is proposed to change the existing General Plan designation of the CarMax portion of the project parcel from Major Mixed-Use to Service Commercial. Based on the San Diego Association of Governments' (*Not So*) *Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, the 15.08-acre parcel could generate 3,016 to 30,160 daily trips under the existing Major Mixed-Use land use designation. Based on a trip rate of 50 trips per 1,000 square feet (SANDAG 2002), the 18,774-square-foot CarMax facility would generate 939 daily trips. This is less than the trips that could be generated by the project site under the existing Major Mixed-Use land use designation. Thus, the project would not exceed the RAQS emissions budgets. Additionally, the project would not add housing. Although the project would create new jobs, it is assumed that these would be filled by the local labor force rather than require relocation of workers from outside the region. Therefore, the project would be consistent with the growth projections for the region, and would not obstruct or conflict with the implementation of the RAQS.

Additionally, as calculated in this analysis, project construction emissions would not exceed the applicable City emissions thresholds. These thresholds are designed to provide limits below which project emissions would not significantly change regional air quality. Therefore, as project emissions would be well below these limits, project construction would not result in regional emissions that would exceed the National Ambient Air Quality Standards (NAAQS) or California Ambient Air Quality Standards (CAAQS) or contribute to existing violations. Additionally, construction emissions would be temporary, intermittent, and would cease at the end of project construction.

Long-term emissions of regional air pollutants occur from operational sources. Based on emissions estimates, project operational emissions would not exceed the applicable regional emissions thresholds. Therefore, as project emissions would be well below these limits, project operations would not result in regional emissions that would exceed the NAAQS or CAAQS or contribute to existing violations.

Due to increased requirements for cleaner vehicles, equipment, and fuels, carbon monoxide (CO) levels in the state have dropped substantially. All air basins are attainment or maintenance areas for CO. Based on recent screening procedures, intersections that experience less than 31,600 vehicles per hour are not anticipated to result in a CO hotspot.

With buildout of the project, intersection turning volumes would be significantly less than this screening level. Therefore, the project is not anticipated to result in a CO hot spot.

The project does not include heavy industrial or agricultural uses that are typically associated with objectionable odors. Thus, once operational, the project would not be a significant source of odors. However, the project would involve the use of diesel-powered equipment during construction. Diesel exhaust may occasionally be noticeable at adjacent properties; however, construction activities would be temporary and the odors would dissipate quickly in an outdoor environment.

Therefore, all air quality impacts associated with the project would be less than significant.

1.0 Introduction

The purpose of this report is to assess potential short-term and long-term local and regional air quality impacts resulting from development of the proposed National City CarMax project (project).

Air pollution affects all southern Californians. Effects can include the following:

- Increased respiratory infections
- Increased discomfort
- Missed days from work and school
- Increased mortality
- Polluted air also damages agriculture and our natural environment.

The project site is located within the San Diego Air Basin (SDAB), one of 15 air basins that geographically divide the state of California. The SDAB is currently classified as a federal non-attainment area for ozone, and a state non-attainment area for particulate matter less than 10 microns (PM₁₀), particulate matter less than 2.5 microns (PM_{2.5}), and ozone.

Air quality impacts can result from the construction and operation of the project. Construction impacts are short term and result from fugitive dust, equipment exhaust, and indirect effects associated with construction workers and deliveries. Operational impacts can occur on two levels: regional impacts resulting from growth-inducing development, or local hot-spot effects stemming from sensitive receivers being placed close to highly congested roadways. In the case of this project, operational impacts would be primarily due to emissions to the basin from mobile sources associated with vehicular travel along the roadways within the project area.

The analysis of impacts is based on federal and state Ambient Air Quality Standards (AAQS) and is assessed in accordance with the guidelines, policies, and standards established by the San Diego Air Pollution Control District (SDAPCD). Project compatibility with the adopted air quality plan for the area is also assessed. Measures are recommended, as required, to reduce potentially significant impacts.

2.0 Project Description

The project site is located at the southwest corner of the intersection of Sweetwater Road and Plaza Bonita Road in National City, California. The project site is situated along the Sweetwater River channel and is bordered to the west by I-805, to the north by SR-54 and Sweetwater Road, to the east by Plaza Bonita Road and Westfield Plaza Bonita Mall, and to the south by the vegetated channel of the Sweetwater River. Figures 1 and 2 show the regional location of the project site and an aerial photograph of the project site. Sensitive receptors in the vicinity of the project include residential uses northeast of Sweetwater Road and north of SR-54.




 Project Location



FIGURE 1
Regional Location



- Parcel Boundary
- Offsite Area
- Offsite Utility Relocation
- Frontage Improvement

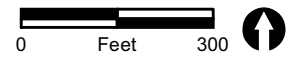


FIGURE 2

Project Location on Aerial Photograph

The project site would consist of two distinct pieces of land: The 15.08-acre project parcel and the 2.90-acre Offsite Area. The proposed CarMax facility and earthen channel would be constructed on the 15.08-acre project parcel, while the 2.90-acre Offsite Area consists of California Department of Transportation and City right-of-way (ROW) that would be temporarily impacted during construction. On the project parcel, the project proposes to construct a CarMax pre-owned automobile dealership, service building, non-public carwash, a customer/employee parking lot, a sales inventory lot, a staging lot, two public access driveways, one restricted access driveway, and landscaped areas within approximately 7.19 acres. The CarMax facility buildings would total approximately 18,774 square feet and include 157 parking spaces for customers and employees. The CarMax facility would also include 401 vehicle stalls in a sales inventory lot, and the facility reserves 0.9 acre for vehicle staging where cars are stored while waiting to be serviced. The project would also make frontage improvements to add a sidewalk along Plaza Bonita Road and would relocate an existing sewer line that traverses the project site into the centerline of Plaza Bonita Road.

Due to the elevation and adjacency to the unnamed creek, development of the project parcel would require grading of the property resulting in a net import of approximately 166,379 cubic yards (5,536 cubic yards of cut, 171,915 cubic yards of fill). Additionally, the project would recontour and redirect approximately 2,012 linear feet of the unnamed creek located on the project parcel by constructing an earthen channel that would traverse the northwestern boundary of the property. Figure 3 presents the proposed site plan.

The project includes a General Plan Amendment, Rezone, Land Use Code (LUC) Amendment, tentative parcel map, and Conditional Use Permit (CUP) to allow development of a CarMax pre-owned automobile dealership, service building and non-public carwash with associated access drives, parking lots and landscaped areas.

The proposed General Plan Amendment and Rezone would change the existing General Plan Designation and Zoning of the CarMax Facility portion of the project parcel from the Major Mixed-Use designation and the Major Mixed-Use District (MXD-2) zone to the Service Commercial General Plan designation and zone. The proposed General Plan Amendment and Rezone would also change the existing land use designation and zoning of the earthen channel portion of the project parcel and the Offsite Area from the Major Mixed-Use designation and the MXD-2 zone to the Open Space land use designation and zone. The LUC amendment is proposed to make automobile sales an allowed use in the CS zone subject to approval of a (CUP. The project includes a CUP for the proposed CarMax. A tentative parcel map is also proposed to subdivide the project parcel into two lots so the proposed CarMax facility and the earthen channel would be located on separate parcels.

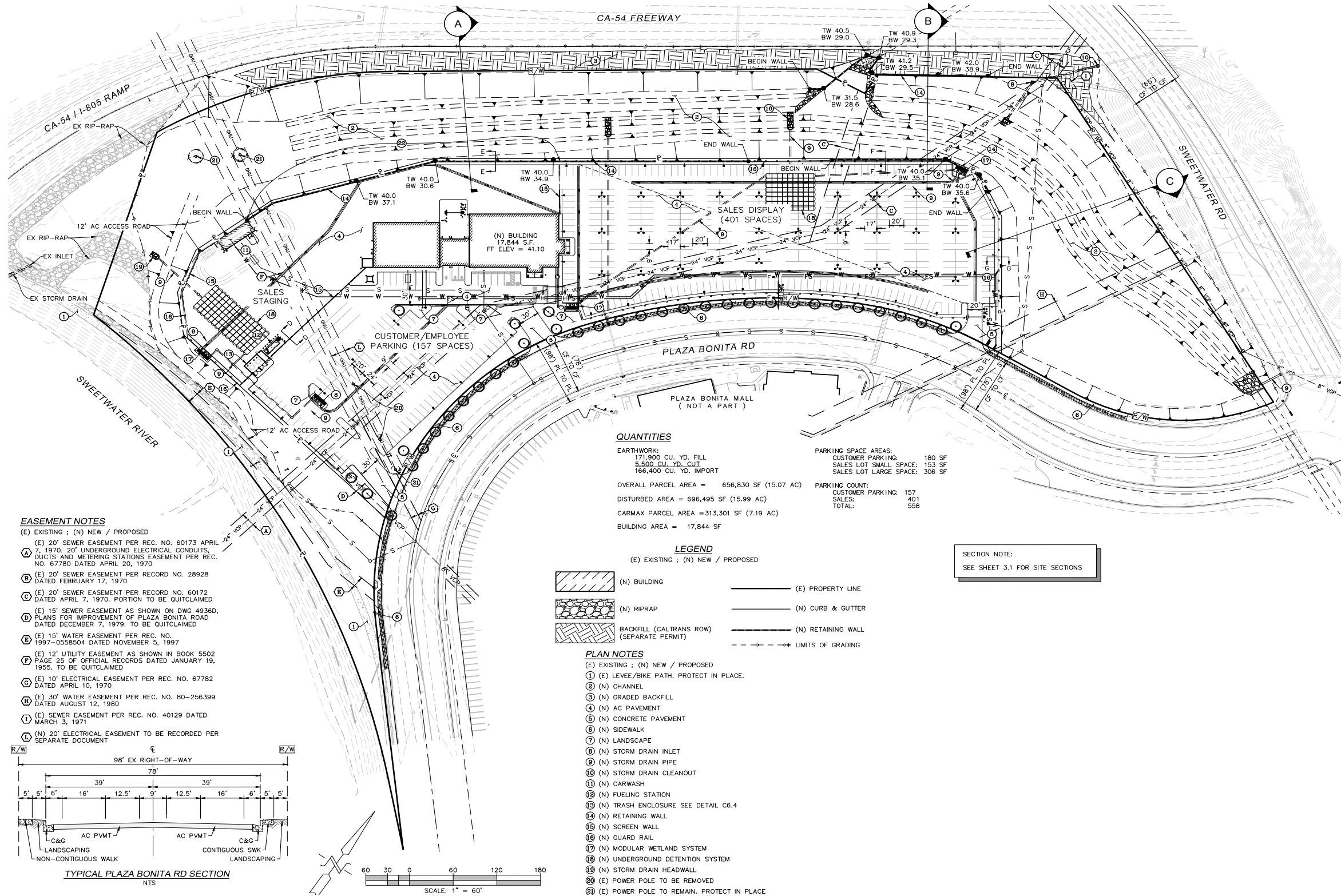


FIGURE 3
Site Plan

3.0 Regulatory Framework

3.1 Federal Regulations

AAQS represent the maximum levels of background pollution considered safe, with an adequate margin of safety, to protect the public health and welfare. The federal Clean Air Act (CAA) was enacted in 1970 and amended in 1977 and 1990 [42 United States Code (USC) 7401] for the purposes of protecting and enhancing the quality of the nation's air resources to benefit public health, welfare, and productivity. In 1971, in order to achieve the purposes of Section 109 of the CAA [42 USC 7409], the U.S. Environmental Protection Agency (EPA) developed primary and secondary National Ambient Air Quality Standards (NAAQS).

Six criteria pollutants of primary concern have been designated: ozone, carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), lead (Pb), and respirable particulate matter (PM₁₀ and PM_{2.5}). The primary NAAQS “. . . in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health . . .” and the secondary standards “. . . protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air” [42 USC 7409(b)(2)]. The primary NAAQS were established, with a margin of safety, considering long-term exposure for the most sensitive groups in the general population (i.e., children, senior citizens, and people with breathing difficulties). The NAAQS are presented in Table 1 (CARB 2016).

If an air basin is not in either federal or state attainment for a particular pollutant, the basin is classified as non-attainment area for that pollutant. The SDAB is currently classified as a federal non-attainment area for ozone.

Table 1 Ambient Air Quality Standards						
Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone ⁸	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.07 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
Respirable Particulate Matter (PM ₁₀) ⁹	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		–		
Fine Particulate Matter (PM _{2.5}) ⁹	24 Hour	No Separate State Standard		35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12 µg/m ³		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	Non-dispersive Infrared Photometry	35 ppm (40 mg/m ³)	–	Non-dispersive Infrared Photometry
	8 Hour	9.0 ppm (10 mg/m ³)		9 ppm (10 mg/m ³)	–	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		–	–	
Nitrogen Dioxide (NO ₂) ¹⁰	1 Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemi- luminescence	100 ppb (188 µg/m ³)	–	Gas Phase Chemi- luminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		0.053 ppm (100 µg/m ³)	Same as Primary Standard	
Sulfur Dioxide (SO ₂) ¹¹	1 Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb (196 µg/m ³)	–	Ultraviolet Fluorescence; Spectro- photometry (Pararosaniline Method)
	3 Hour	–		–	0.5 ppm (1,300 µg/m ³)	
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ¹¹	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas) ¹¹	–	
Lead ^{12,13}	30 Day Average	1.5 µg/m ³	Atomic Absorption	–	–	High Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m ³ (for certain areas) ¹²	Same as Primary Standard	
	Rolling 3-Month Average	–		0.15 µg/m ³		
Visibility Reducing Particles ¹⁴	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m ³	Ion Chroma- tography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹²	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chroma- tography			

See footnotes on next page.

ppm = parts per million; ppb = parts per billion; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter; – = not applicable.

- ¹ California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, particulate matter (PM_{10} , $\text{PM}_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- ² National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10} , the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above $150 \mu\text{g}/\text{m}^3$ is equal to or less than one. For $\text{PM}_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
- ³ Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- ⁴ Any equivalent measurement method which can be shown to the satisfaction of the Air Resources Board to give equivalent results at or near the level of the air quality standard may be used.
- ⁵ National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- ⁶ National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- ⁷ Reference method as described by the U.S. EPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the U.S. EPA.
- ⁸ On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
- ⁹ On December 14, 2012, the national annual $\text{PM}_{2.5}$ primary standard was lowered from $15 \mu\text{g}/\text{m}^3$ to $12.0 \mu\text{g}/\text{m}^3$. The existing national 24-hour $\text{PM}_{2.5}$ standards (primary and secondary) were retained at $35 \mu\text{g}/\text{m}^3$, as was the annual secondary standards of $15 \mu\text{g}/\text{m}^3$. The existing 24-hour PM_{10} standards (primary and secondary) of $150 \mu\text{g}/\text{m}^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
- ¹⁰ To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national standards are in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
- ¹¹ On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
- ¹² The ARB has identified lead and vinyl chloride as ‘toxic air contaminants’ with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
- ¹³ The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard ($1.5 \mu\text{g}/\text{m}^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
- ¹⁴ In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are “extinction of 0.23 per kilometer” and “extinction of 0.07 per kilometer” for the statewide and Lake Tahoe Air Basin standards, respectively.

SOURCE: CARB 2016.

3.2 State Regulations

3.2.1 Criteria Pollutants

The California Air Resources Board (CARB) has developed the California Ambient Air Quality Standards (CAAQS) and generally has set more stringent limits on the criteria pollutants than the NAAQS (see Table 1). In addition to the federal criteria pollutants, the CAAQS also specify standards for visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride (see Table 1).

Similar to the federal CAA, the state classifies either “attainment” or “non-attainment” areas for each pollutant based on the comparison of measured data with the CAAQS. The SDAB is a non-attainment area for the state ozone standards, the state PM₁₀ standard, and the state PM_{2.5} standard. The California CAA, which became effective on January 1, 1989, requires all areas of the state to attain the CAAQS at the earliest practicable date. The California CAA has specific air quality management strategies that must be adopted by the agency responsible for the non-attainment area. In the case of the SDAB, the responsible agency is the SDAPCD.

3.2.2 Toxic Air Contaminants

The public’s exposure to toxic air contaminants (TACs) is a significant public health issue in California. Diesel-exhaust particulate matter emissions have been established as TACs. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health (Assembly Bill [AB] 1807: Health and Safety Code Sections 39650–39674). The Legislature established a two-step process to address the potential health effects from TACs. The first step is the risk assessment (or identification) phase. The second step is the risk management (or control) phase of the process.

The California Air Toxics Program establishes the process for the identification and control of TACs and includes provisions to make the public aware of significant toxic exposures and for reducing risk. Additionally, the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, 1987, Connelly Bill) was enacted in 1987 and requires stationary sources to report the types and quantities of certain substances routinely released into the air. The goals of the Air Toxics "Hot Spots" Act are to collect emission data, to identify facilities having localized impacts, to ascertain health risks, to notify nearby residents of significant risks, and to reduce those significant risks to acceptable levels.

The Children’s Environmental Health Protection Act, California Senate Bill 25 (Chapter 731, Escutia, Statutes of 1999), focuses on children’s exposure to air pollutants. The act requires CARB to review its air quality standards from a children’s health perspective, evaluate the statewide air monitoring network, and develop any additional air toxic control measures needed to protect children’s health. Locally, toxic air pollutants are regulated through the SDAPCD’s Regulation XII. Of particular concern statewide are

diesel-exhaust particulate matter emissions. Diesel-exhaust particulate matter was established as a TAC in 1998, and is estimated to represent a majority of the cancer risk from TACs statewide (based on the statewide average). 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 program.

Following the identification of diesel particulate matter (DPM) as a TAC in 1998, CARB has worked on developing strategies and regulations aimed at reducing the risk from DPM. The overall strategy for achieving these reductions is found in the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles* (CARB 2000). A stated goal of the plan is to reduce the statewide cancer risk arising from exposure to DPM by 85 percent by 2020. To monitor the effectiveness of these efforts, CARB has supported field campaigns that measure real-world emissions from heavy-duty vehicles, and results indicate that regulations aimed at reducing emissions of DPM have been successful.

In April 2005, CARB published the *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB 2005). The handbook makes recommendations directed at protecting sensitive land uses from air pollutant emissions while balancing a myriad of other land use issues (e.g., housing, transportation needs, economics, etc.). It notes that the handbook is not regulatory or binding on local agencies and recognizes that application takes a qualitative approach. As reflected in the CARB Handbook, there is currently no adopted standard for the significance of health effects from mobile sources. Therefore, the CARB has provided guidelines for the siting of land uses near heavily traveled roadways. Of pertinence to this study, the CARB guidelines indicate that siting new sensitive land uses within 500 feet of a freeway or urban roads with 100,000 or more vehicles/day should be avoided when possible.

As an ongoing process, CARB will continue to establish new programs and regulations for the control of diesel particulate and other air-toxics emissions as appropriate. The continued development and implementation of these programs and policies will ensure that the public's exposure to DPM will continue to decline.

3.2.3 State Implementation Plan

The State Implementation Plan (SIP) is a collection of documents that set forth the state's strategies for achieving the NAAQS. In California, the SIP is a compilation of new and previously submitted plans, programs (such as air quality management plans, monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls. The CARB is the lead agency for all purposes related to the SIP under state law. Local air districts and other agencies, such as the Department of Pesticide Regulation and the Bureau of Automotive Repair, prepare SIP elements and submit them to CARB for review and approval. The CARB then forwards SIP revisions to the EPA for approval and publication

in the Federal Register. All of the items included in the California SIP are listed in the Code of Federal Regulations (CFR) at 40 CFR 52.220.

The SDAPCD is responsible for preparing and implementing the portion of the SIP applicable to the SDAB. The SIP plans for San Diego County specifically include the Redesignation Request and Maintenance Plan for the 1997 National Ozone Standard for San Diego County (2012), and the 2004 Revision to the California State Implementation Plan for Carbon Monoxide – Updated Maintenance Plan for Ten Federal Planning Areas.

3.2.4 The California Environmental Quality Act

Section 15125(d) of the California Environmental Quality Act (CEQA) Guidelines requires discussion of any inconsistencies between the project and applicable general plans and regional plans, including the applicable air quality attainment or maintenance plan (or SIP).

3.3 San Diego Air Pollution Control District

The SDAPCD prepared the original 1991/1992 Regional Air Quality Strategy (RAQS) in response to requirements set forth in the California CAA (SDAPCD 1992). The California CAA requires areas that are designated state non-attainment areas for ozone, CO, SO₂, and NO₂ prepare and implement plans to attain the standards by the earliest practicable date. The California CAA does not provide guidance on timing or requirements for attaining the state PM₁₀ and PM_{2.5} standards. Attached as part of the RAQS are the Transportation Control Measures (TCMs) adopted by the San Diego Association of Governments (SANDAG). Updates of the RAQS and corresponding TCM are required every three years. The RAQS and TCM set forth the steps needed to accomplish attainment of NAAQS and CAAQS. The most recent update of the RAQS and TCM occurred in 2016 (SDAPCD 2016).

4.0 Environmental Setting

4.1 Geographic Setting

The project is located in National City, about 4.5 miles east of the Pacific Ocean. The eastern portion of the SDAB is surrounded by mountains to the north, east, and south. These mountains tend to restrict airflow and concentrate pollutants in the valleys and low-lying areas below.

4.2 Climate

The project area, like the rest of San Diego County, has a Mediterranean climate characterized by warm, dry summers and mild winters. The mean annual temperature for the project area is 61 degrees Fahrenheit (°F). The average annual precipitation is 10 inches, falling primarily from November to April. Winter low temperatures in the project

area average about 45°F, and summer high temperatures average about 72°F. The average relative humidity is 69 percent and is based on the yearly average humidity at Lindbergh Field (Western Regional Climate Center 2020).

The dominant meteorological feature affecting the region is the Pacific High Pressure Zone, which produces the prevailing westerly to northwesterly winds. These winds tend to blow pollutants away from the coast toward the inland areas. Consequently, air quality near the coast is generally better than that which occurs at the base of the coastal mountain range.

Fluctuations in the strength and pattern of winds from the Pacific High Pressure Zone creates a temperature inversion layer (a layer in the atmosphere in which temperature increases with height) that acts as a lid to the vertical dispersion of air pollutants in the SDAB. Beneath the inversion layer pollutants become “trapped” as their ability to disperse diminishes. Sunlight reacts with air pollutants (reactive organic gas [ROG] and oxides of nitrogen [NO_x]) to create ozone. Thus, poorly dispersed pollutants along with strong sunlight results in the creation of ozone at this surface layer.

The prevailing wind pattern in the western portion of the SDAB includes a daytime onshore flow (i.e., sea breeze) and nighttime offshore flow (i.e., land breeze), which leads to pollutants being blown out to sea at night and returning to land the following day. The prevailing westerly wind pattern is sometimes interrupted by regional “Santa Ana” conditions. A Santa Ana occurs when a strong high pressure develops over the Nevada-Utah area and overcomes the prevailing westerly coastal winds, sending strong, steady, hot, dry northeasterly winds over the mountains and out to sea.

Strong Santa Anas tend to blow pollutants out over the ocean, producing clear days. However, at the onset or during breakdown of these conditions, or if the Santa Ana is weak, local air quality may be adversely affected. In these cases, emissions from the South Coast Air Basin to the north are blown out over the ocean, and low pressure over Baja California draws this pollutant-laden air mass southward. As the high pressure weakens, prevailing northwesterly winds reassert themselves and send this cloud of contamination ashore in the SDAB. When this event does occur, the combination of transported and locally produced contaminants produce the worst air quality measurements recorded in the basin (CARB 1997).

4.3 Existing Air Quality

Air quality at a particular location is a function of the kinds, amounts, and dispersal rates of pollutants being emitted into the air locally and throughout the basin. The major factors affecting pollutant dispersion are wind speed and direction, the vertical dispersion of pollutants (which is affected by inversions), and the local topography.

Air quality is commonly expressed as the number of days in which air pollution levels exceed state standards set by the CARB or federal standards set by the EPA. The SDAPCD maintains 11 air quality monitoring stations located throughout the greater San Diego metropolitan region. Air pollutant concentrations and meteorological information are

continuously recorded at these stations. Measurements are then used by scientists to help forecast daily air pollution levels.

The Chula Vista monitoring station located at 80 East J Street, approximately 2 miles south of the project site, is the nearest station to the project site. The Chula Vista monitoring station measures ozone, NO₂, PM₁₀, and PM_{2.5}. Table 2 provides a summary of measurements collected at the Chula Vista monitoring station for the years 2014 through 2018.

Table 2					
Summary of Air Quality Measurements Recorded at the Chula Vista Monitoring Station					
Pollutant/Standard	2014	2015	2016	2017	2018
Ozone					
Federal Max 8-hr (ppm)	0.072	0.066	0.068	0.074	0.064
Days 2015 Federal 8-hour Standard Exceeded (0.07 ppm)	1	0	0	1	0
Days 2008 Federal 8-hour Standard Exceeded (0.075 ppm)	0	0	0	0	0
State Max 8-hr (ppm)	0.072	0.067	0.069	0.075	0.065
Days State 8-hour Standard Exceeded (0.07 ppm)	1	0	0	1	0
Max. 1-hr (ppm)	0.093	0.088	0.073	0.085	0.076
Days State 1-hour Standard Exceeded (0.09 ppm)	0	0	0	0	0
Nitrogen Dioxide					
Max 1-hr (ppm)	0.055	0.049	0.054	0.057	0.052
Days State 1-hour Standard Exceeded (0.18 ppm)	0	0	0	0	0
Days Federal 1-hour Standard Exceeded (0.100 ppm)	0	0	0	0	0
Annual Average (ppm)	0.011	0.010	0.009	--	0.009
PM₁₀*					
Federal Max. Daily (µg/m ³)	38.0	46.0	48.0	59.0	45.0
Measured Days Federal 24-hour Standard Exceeded (150 µg/m ³)	0	0	0	0	0
Calculated Days Federal 24-hour Standard Exceeded (150 µg/m ³)	0.0	0.0	0.0	0.0	0.0
Federal Annual Average (µg/m ³)	22.9	19.7	21.6	21.4	20.7
State Max. Daily (µg/m ³)	39.0	45.0	48.0	61.0	45.0
Measured Days State 24-hour Standard Exceeded (50 µg/m ³)	0	0	0	1	0
Calculated Days State 24-hour Standard Exceeded (50 µg/m ³)	0.0	0.0	0.0	6.5	--
State Annual Average (µg/m ³)	23.4	19.8	21.8	21.7	--
PM_{2.5}*					
Federal Max. Daily (µg/m ³)	26.5	33.5	23.9	42.7	41.9
Measured Days Federal 24-hour Standard Exceeded (35 µg/m ³)	0	0	0	1	1
Calculated Days Federal 24-hour Standard Exceeded (35 µg/m ³)	0.0	0.0	0.0	--	2.7
Federal Annual Average (µg/m ³)	9.2	8.3	8.7	--	9.9
State Max. Daily (µg/m ³)	26.5	33.5	23.9	42.7	41.9
State Annual Average (µg/m ³)	9.3	8.4	8.7	--	10.0
SOURCE: CARB 2020.					
ppm = parts per million; µg/m ³ = micrograms per cubic meter; -- = Not available.					
* Calculated days value. Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.					

4.3.1 Ozone

Nitrogen oxides and hydrocarbons (ROG) are known as the chief “precursors” of ozone. These compounds react in the presence of sunlight to produce ozone, which is the primary air pollution problem in the SDAB. Because sunlight plays such an important role in its

formation, ozone pollution—or smog—is mainly a concern during the daytime in summer months. The SDAB is currently designated a federal and state non-attainment area for ozone. During the past two decades, San Diego had experienced a decline in ozone levels, despite the region’s growth in population and vehicle miles traveled (SDAPCD 2016).

About half of smog-forming emissions come from automobiles. Population growth in San Diego has resulted in a large increase in the number of automobiles expelling ozone-forming pollutants while operating on area roadways. In addition, the occasional transport of smog-filled air from the South Coast Air Basin only adds to the SDAB’s ozone problem. Stricter automobile emission controls, including more efficient automobile engines, have played a large role in why ozone levels have steadily decreased.

4.3.2 Carbon Monoxide

The SDAB is classified as a state attainment area and as a federal maintenance area for CO. Until 2003, no violations of the state standard for CO had been recorded in the SDAB since 1991, and no violations of the national standard had been recorded in the SDAB since 1989. The violations that took place in 2003 were likely the result of massive wildfires that occurred throughout the county. No violations of the state or federal CO standards have occurred since 2003.

Small-scale, localized concentrations of CO above the state and national standards have the potential to occur at intersections with stagnation points such as those that occur on major highways and heavily traveled and congested roadways. Localized high concentrations of CO are referred to as “CO hot spots” and are a concern at congested intersections, where automobile engines burn fuel less efficiently and their exhaust contains more CO.

4.3.3 Particulate Matter

Particulate matter is a complex mixture of microscopic solid or liquid particles including chemicals, soot, and dust. Anthropogenic sources of direct particulate emissions include crushing or grinding operations, dust stirred up by vehicle traffic, and combustion sources such as motor vehicles, power plants, wood burning, forest fires, agricultural burning and industrial processes. Additionally, indirect emissions may be formed when aerosols react with compounds found in the atmosphere.

Health studies have shown a significant association between exposure to particulate matter and premature death in people with heart or lung diseases. Other important effects include aggravation of respiratory and cardiovascular disease, lung disease, decreased lung function, asthma attacks, and certain cardiovascular problems such as heart attacks and irregular heartbeat (U.S. EPA 2016).

As its properties vary based on the size of suspended particles, particulate matter is generally categorized as particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) or particulate matter with an aerodynamic diameter of 2.5 microns or less (PM_{2.5})

4.3.3.1 PM₁₀

PM₁₀, occasionally referred to as “inhalable coarse particles” has an aerodynamic diameter of about one-seventh of the diameter of a human hair. High concentrations of PM₁₀ are often found near roadways, construction, mining, or agricultural operations.

4.3.3.2 PM_{2.5}

PM_{2.5}, occasionally referred to as “inhalable fine particles” has an aerodynamic diameter of about one-thirtieth of the diameter of a human hair. PM_{2.5} is the main cause of haze in many parts of the United States. Federal standards applicable to PM_{2.5} were first adopted in 1997.

4.3.4 Other Criteria Pollutants

The national and state standards for NO₂, oxides of sulfur (SO_x), and the previous standard for lead are being met in the SDAB, and the latest pollutant trends suggest that these standards will not be exceeded in the foreseeable future. The SDAB is also in attainment of the state standards for vinyl chloride, hydrogen sulfides, sulfates, and visibility-reducing particulates.

5.0 Thresholds of Significance

Thresholds used to evaluate potential impacts to air quality are based on applicable criteria in the CEQA Guidelines Appendix G and SDAPCD regulations. The project would have a significant air quality impact if it would:

1. Obstruct or conflict with the implementation of the RAQS.
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.

The SDAPCD does not provide specific numeric thresholds for determining the significance of air quality impacts under CEQA. However, the SDAPCD does specify Air Quality Impact Analysis trigger levels for new or modified stationary sources (SDAPCD Rules 20.2 and 20.3). These trigger levels do not generally apply to construction, mobile sources, or general land development projects; however, for comparative purposes, these levels are used to evaluate the increased emissions that would be discharged to the SDAB if the proposed project were approved. SDAPCD Rules 20.2 and 20.3 do not specify thresholds for ROG. However, rule 20.1 equates ROG and oxides of nitrogen (NO_x) emissions and applies the

same limitation on ROG and NO_x emissions in ozone non-attainment areas; therefore, the ROG threshold is set equal to the NO_x threshold. The air quality thresholds used in this analysis are shown in Table 3.

Pollutant	Emission Rate (pounds/hour)	Emission Rate (pounds/day)	Emission Rate (tons/year)
NO _x	25	250	40
SO _x	25	250	40
CO	100	550	100
PM ₁₀	--	100	15
Lead	--	3.2	0.6
ROG	--	250	--
PM _{2.5}	--	67	10
SOURCE: SDAPCD, Rules 20.1, 20.2, 20.3			

6.0 Air Quality Assessment

Construction impacts are short term and result from fugitive dust, equipment exhaust, and indirect effects associated with construction workers and deliveries. Operational impacts can occur on two levels: regional or local. In the case of this project, operational impacts are primarily due to emissions from mobile sources associated with the vehicular travel along the roadways within the project area.

Construction and operation air emissions were calculated using California Emissions Estimator Model (CalEEMod) 2016.3.2 (California Air Pollution Control Officers Association [CAPCOA] 2017). The CalEEMod program is a tool used to estimate air emissions resulting from land development projects based on California-specific emission factors. The model estimates mass emissions from two basic sources: construction sources and operational sources (i.e., area and mobile sources).

Inputs to CalEEMod include such items as the air basin containing the project, land uses, trip generation rates, trip lengths, vehicle fleet mix (percentage of autos, medium truck, etc.), trip destination (i.e., percent of trips from home to work, etc.), duration of construction phases, construction equipment usage, grading areas, season, and ambient temperature, as well as other parameters. The CalEEMod output files contained in Attachment 1 indicate the specific outputs for each model run. Emissions of NO_x, CO, SO_x, PM₁₀, PM_{2.5}, and ROG are calculated. Emission factors are not available for lead, and consequently, lead emissions are not calculated. The SDAB is currently in attainment of the federal and state lead standards. Furthermore, fuel used in construction equipment and most other vehicles is not leaded.

6.1 Construction Emissions

Construction-related activities are temporary, short-term sources of air emissions. Sources of construction-related air emissions include:

- Fugitive dust from grading activities;
- Construction equipment exhaust;
- Construction-related trips by workers, delivery trucks, and material-hauling trucks; and
- Construction-related power consumption.

Construction-related pollutants result from dust raised during demolition and grading, emissions from construction vehicles, and chemicals used during construction. Fugitive dust emissions vary greatly during construction and are dependent on the amount and type of activity, silt content of the soil, and the weather. Vehicles moving over paved and unpaved surfaces, demolition, excavation, earth movement, grading, and wind erosion from exposed surfaces are all sources of fugitive dust. Construction operations are subject to the requirements established in Regulation 4, Rules 52, 54, and 55, of the SDAPCD's rules and regulations.

Heavy-duty construction equipment is usually diesel powered. In general, emissions from diesel-powered equipment contain more NO_x, SO_x, and particulate matter than gasoline-powered engines. However, diesel-powered engines generally produce less CO and less ROG than do gasoline-powered engines. Standard construction equipment includes tractors/loaders/backhoes, rubber-tired dozers, excavators, graders, cranes, forklifts, rollers, paving equipment, generator sets, welders, cement and mortar mixers, and air compressors.

Construction emissions were modeled with construction activities beginning in January 2021. Primary inputs are the numbers of each piece of equipment and the length of each construction stage. Specific construction phasing and equipment parameters are not available at this time. However, CalEEMod can estimate the required construction equipment when project-specific information is unavailable. The estimates are based on surveys, performed by the SCAQMD and the Sacramento Metropolitan Air Quality Management District, of typical construction projects which provide a basis for scaling equipment needs and schedule with a project's size. Air emission estimates in CalEEMod are based on the duration of construction phases; construction equipment type, quantity, and usage; grading area; season; and ambient temperature, among other parameters. Project construction would occur in five stages: site preparation, grading/excavation, building construction, paving, and architectural coatings. Site grading would require a net import of approximately 166,379 cubic yards.

Table 4 shows the total projected construction maximum daily emission levels for each criteria pollutant. The CalEEMod output files for construction emissions are contained in Attachment 1.

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Site Preparation	4	41	22	<1	20	12
Grading	4	66	27	<1	11	5
Building Construction	3	24	23	<1	3	1
Paving	2	11	15	<1	1	1
Architectural Coatings	15	1	3	<1	<1	<1
Maximum Daily Emissions	15	66	27	<1	20	12
<i>Significance Threshold</i>	<i>250</i>	<i>250</i>	<i>550</i>	<i>250</i>	<i>100</i>	<i>67</i>

Standard dust control measures would be implemented as a part of project construction in accordance with SDAPCD rules and regulations. Fugitive dust emissions were calculated using CalEEMod default values, and did not take into account the required dust control measures. Thus, the emissions shown in Table 4 are conservative.

For assessing the significance of the air quality emissions resulting during construction of the project, the construction emissions were compared to the significance thresholds shown in Table 4. As shown, maximum daily construction emissions are projected to be less than the applicable thresholds for all criteria pollutants. Construction related air quality impacts would be less than significant.

6.2 Operation Emissions

Mobile source emissions would originate from traffic generated by the project. Area source emissions would result from the use of natural gas consumer products, and landscaping activities, as well as applying architectural coatings.

Mobile source operational emissions are based on the trip rate, trip length for each land use type and size. Based on a trip rate of 50 trips per 1,000 square feet (SANDAG 2002), the 18,774-square-foot CarMax facility would generate 939 daily trips. Based on regional data compiled by CARB as part of the emission factor model (EMFAC2017), the average regional trip length for all trips in San Diego County for the soonest operational year of 2022 is 7.48 miles (CARB 2017). Default vehicle emission factors for year 2022 were used.

Area source emissions associated with the project include consumer products, natural gas used in space and water heating, architectural coatings, and landscaping equipment. Hearths (fireplaces) and woodstoves are also a source of area emissions; however, the project would not include hearths or woodstoves.

Consumer products are chemically formulated products used by household and institutional consumers, including, but not limited to, detergents, cleaning compounds, polishes, floor finishes, disinfectants, sanitizers, and aerosol paints but not including other paint products, furniture coatings, or architectural coatings. Emissions due to consumer products are calculated using total building area and product emission factors.

Emissions are generated from the combustion of natural gas used in space and water heating. Emissions are based on the Residential Appliance Saturation Survey which is a comprehensive energy use assessment that includes the end use for various climate zones in California.

For architectural coatings, emissions result from evaporation of solvents contained in surface coatings such as in paints and primers. Emissions are based on the building surface area, architectural coating emission factors, and a reapplication rate of 10 percent of area per year.

Landscaping maintenance includes fuel combustion emission from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers as well as air compressors, generators, and pumps. Emission calculations take into account building area, equipment emission factors, and the number of operational days (summer days).

Table 5 provides a summary of the operational emissions generated by the project. CalEEMod output files for project operation are contained in Attachment 1. As shown, project-generated emissions are projected to be less than the City’s significance thresholds for all criteria pollutants.

Table 5 Summary of Project Operational Emissions (pounds per day)						
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Area Sources	1	<1	<1	0	<1	<1
Energy Sources	<1	<1	<1	<1	<1	<1
Mobile Sources	1	4	9	<1	2	1
Total	2	4	9	<1	2	1
<i>Significance Threshold</i>	<i>250</i>	<i>250</i>	<i>550</i>	<i>250</i>	<i>100</i>	<i>67</i>
Note: Totals may vary due to independent rounding.						

6.3 Impact Analysis

1. *Would the project obstruct or conflict with the implementation of the San Diego RAQS?*

The RAQS is the applicable regional air quality plan that sets forth the SDAPCD’s strategies for achieving the NAAQS and CAAQS. The SDAB is designated non-attainment for the federal and state ozone standard. Accordingly, the RAQS was developed to identify feasible emission control measures and provide expeditious progress toward attaining the standards for ozone. The two pollutants addressed in the RAQS are ROG and NO_x, which are precursors to the formation of ozone. Projected increases in motor vehicle usage, population, and growth create challenges in controlling emissions and by extension to maintaining and improving air quality. The RAQS, in conjunction with the TCM, were most recently adopted in 2016 as the air quality plan for the region (SDAPCD 2016).

The growth projections used by the SDAPCD to develop the RAQS emissions budgets are based on the population, vehicle trends, and land use plans developed in general plans and used by SANDAG in the development of the regional transportation plans and sustainable communities strategy. As such, projects that propose development that is consistent with the growth anticipated by SANDAG's growth projections and/or the general plan would not conflict with the RAQS. In the event that a project would propose development that would generate less traffic, population, or employment than anticipated by growth projections, the project would likewise be consistent with the RAQS. In the event a project proposes development that is greater than anticipated in the growth projections, further analysis would be warranted to determine if the project would exceed the growth projections used in the RAQS.

A General Plan Amendment is proposed to change the existing General Plan designation of the CarMax Facility portion of the project parcel from Major Mixed-Use to Service Commercial. The Major Mixed-Use designation allows for a variety of uses including low to mid-rise multiple-family dwellings, retail, restaurants, personal services, professional and administrative offices, public and quasi-public uses, and similar compatible uses. The Service Commercial designation provides for intensive commercial activities, specialized service establishments, and other compatible uses. Light manufacturing, wholesaling, and distribution uses are restricted to those that can be operated in a clean and quiet manner. According to SANDAG's *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, mixed-use projects have trip generation rates ranging from 200 trips per acre for all residential uses to 2,000 trips per acre for all commercial uses (SANDAG 2002). Using these rates, the 15.08-acre project parcel could generate 3,016 to 30,160 daily trips under the existing Major Mixed-Use land use designation. Based on a trip rate of 50 trips per 1,000 square feet (SANDAG 2002), the 18,774-square-foot CarMax facility would generate 939 daily trips. This would be less than the number of trips that could be generated by the project parcel under the existing Major Mixed-Use land use designation. Therefore, the project would not exceed the RAQS emissions budgets. Additionally, the project would not add housing. Although the project would create new jobs, it is assumed that these would be filled by the local labor force rather than require relocation of workers from outside the region. Therefore, the project would be consistent with the growth projections for the region and would not obstruct or conflict with the implementation of the RAQS. Impacts would be less than significant.

- 2. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?*

The region is classified as attainment for all criterion pollutants except ozone, PM₁₀, and PM_{2.5}. The SDAB is non-attainment for the 8-hour federal and state ozone standards. Ozone is not emitted directly, but is a result of atmospheric activity on precursors. NO_x and ROG are known as the chief "precursors" of ozone. These compounds react in the presence of sunlight to produce ozone. PM_{2.5} includes fine particles that are found in smoke and haze, and are emitted from all types of combustion activities (motor vehicles, power plants, wood burning, etc.) and certain industrial processes. PM₁₀ includes both fine and coarse dust

particles, and sources include crushing or grinding operations and dust from paved or unpaved roads.

As shown in Tables 4 and 5, emissions of ozone precursors (ROG and NO_x), PM₁₀, and PM_{2.5} from construction and operation would be below the City's thresholds of significance. These thresholds were developed based on the CAA de minimis level, which are designed to provide limits below which project emissions from an individual project would not significantly affect regional air quality or the timely attainment of the NAAQS and CAAQS. Therefore, the project would not result in a cumulatively considerable net increase in emissions of ozone, PM₁₀, or PM_{2.5}, and impacts would be less than significant.

3. Would the project expose sensitive receptors to substantial pollutant concentration including air toxics such as diesel particulates?

Sensitive land uses include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities. Residential land uses are located northeast of the project site across Sweetwater Road, and north/northwest of the project site across SR-54.

Diesel Particulate Matter – Construction

Construction of the project would result in the generation of diesel-exhaust DPM emissions from the use of off-road diesel equipment required for site grading and excavation, paving, and other construction activities and on-road diesel equipment used to bring materials to and from the project site.

Generation of DPM from construction projects typically occurs in a single area for a short period. Construction of the project would occur over an 18-month period. The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the Maximally Exposed Individual. The risks estimated for a Maximally Exposed Individual are higher if a fixed exposure occurs over a longer period of time. According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project (OEHHA 2015). Thus, if the duration of proposed construction activities near any specific sensitive receptor were 18 months, the exposure would be 5 percent of the total exposure period used for health risk calculation.

Therefore, DPM generated by project construction is not expected to create conditions where the probability is greater than 10 in 1 million of contracting cancer for the Maximally Exposed Individual or to generate ground-level concentrations of noncarcinogenic TACs that exceed a Hazard Index greater than 1 for the Maximally Exposed Individual. Additionally, with ongoing implementation of U.S. EPA and CARB requirements for cleaner fuels; off-road diesel engine retrofits; and new, low-emission diesel engine types, the DPM emissions of individual equipment would be substantially reduced over the years as

the project construction continues. Therefore, project construction would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be less than significant.

As discussed in Section 3.2.2, CARB has provided guidelines for the siting of land uses near heavily traveled roadways. The CARB guidelines indicate that siting new sensitive land uses within 500 feet of a freeway or urban roads with 100,000 or more vehicles per day should be avoided when possible. However, the project does not propose sensitive uses. Therefore, no impacts related to the siting of sensitive uses near heavily traveled roadways would occur.

Carbon Monoxide Hot Spots

Localized CO concentration is a direct function of motor vehicle activity at signalized intersections (e.g., idling time and traffic flow conditions), particularly during peak commute hours and meteorological conditions. The SDAB is a CO maintenance area under the federal CAA.

Due to increased requirements for cleaner vehicles, equipment, and fuels, CO levels in the state have dropped substantially. All air basins are attainment or maintenance areas for CO. Therefore, more recent screening procedures based on more current methodologies have been developed. The Sacramento Metropolitan Air Quality Management District developed a screening threshold in 2011, which states that any project involving an intersection experiencing 31,600 vehicles per hour or more will require detailed analysis. In addition, the Bay Area Air Quality Management District developed a screening threshold in 2010 that states that any project involving an intersection experiencing 44,000 vehicles per hour would require detailed analysis. This analysis conservatively assesses potential CO hot spots using the Sacramento Metropolitan Air Quality Management District screening threshold of 31,600 vehicles per hour. With buildout of the project, intersection turning volumes would be significantly less than this screening level. Therefore, the project is not anticipated to result in a CO hot spot. No impact would occur.

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

The project does not include heavy industrial or agricultural uses that are typically associated with odor complaints. During construction, diesel equipment may generate some nuisance odors. Sensitive receptors near the project site include residential uses to the northeast and to the north/northwest on the opposite side of SR-54; however, exposure to odors associated with project construction would be short term and temporary in nature. Once operational, the project would not be a significant source of odors. Therefore, the project would not result in other emissions such as those leading to odors adversely affecting a substantial number of people, and impacts would be less than significant.

7.0 Conclusions

The primary goal of the RAQS is to reduce ozone precursor emissions. A General Plan Amendment is proposed to change the existing General Plan designation of the project site from Major Mixed-Use to Service Commercial. Based on SANDAG's *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, the 15.08-acre project site could generate 3,016 to 30,160 daily trips under the existing Major Mixed-Use land use designation. Based on a trip rate of 50 trips per 1,000 square feet (SANDAG 2002), the 18,774-square-foot CarMax facility would generate 939 daily trips. This is less than the trips that could be generated by the project site under the existing Major Mixed-Use land use designation. Thus, the project would not exceed the RAQS emissions budgets. Additionally, the project would not add housing. Although the project would create new jobs, it is assumed that these would be filled by the local labor force rather than require relocation of workers from outside the region. Therefore, the project would be consistent with the growth projections for the region, and would not obstruct or conflict with the implementation of the RAQS.

As shown in Table 4, project construction emissions would not exceed the applicable regional emissions thresholds. These thresholds are designed to provide limits below which project emissions would not significantly change regional air quality. Therefore, as project emissions would be well below these limits, project construction would not result in regional emissions that would exceed the NAAQS or CAAQS or contribute to existing violations. Additionally, construction emissions would be temporary, intermittent, and would cease at the end of project construction.

Long-term emissions of regional air pollutants occur from operational sources. As shown in Table 5, project operational emissions would not exceed the applicable regional emissions thresholds. Therefore, as project emissions would be well below these limits, project operations would not result in regional emissions that would exceed the NAAQS or CAAQS or contribute to existing violations.

Due to increased requirements for cleaner vehicles, equipment, and fuels, CO levels in the state have dropped substantially. All air basins are attainment or maintenance areas for CO. Based on recent screening procedures, intersections that experience less than 31,600 vehicles per hour are not anticipated to result in a CO hotspot. With buildout of the project, intersection turning volumes would be significantly less than this screening level. Therefore, the project is not anticipated to result in a CO hot spot.

The project does not include heavy industrial or agricultural uses that are typically associated with objectionable odors. Thus, once operational, the project would not be a significant source of odors. However, the project would involve the use of diesel-powered equipment during construction. Diesel exhaust may occasionally be noticeable at adjacent properties; however, construction activities would be temporary and the odors would dissipate quickly in an outdoor environment. Therefore, this impact would be less than significant.

8.0 References Cited

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ATTACHMENT 1
CalEEMod Output – Project Emissions

7761 Carmax - San Diego County APCD Air District, Winter

7761 Carmax
San Diego County APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	8.68	Acre	8.68	378,100.80	0
Automobile Care Center	18.77	1000sqft	0.43	18,774.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	449.3	CH4 Intensity (lb/MW hr)	0.018	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

7761 Carmax - San Diego County APCD Air District, Winter

Project Characteristics - Energy intensity factors updated based on SDG&E renewable procurement (449.3, 0.018, 0.004)

Land Use - 18,774 sf Carmax
9.11 acres disturbed (7.19 acre Carmax, 1.92 acres off-site)

Construction Phase - Grading phase increased to 6 months due to amount of cut/fill

Grading -

Architectural Coating - SDAPCD Rule 67.0.1

Vehicle Trips - 50 trips/ksf
7.48 miles trip length

Area Coating - SDAPCD Rule 67.0.1

Energy Use -

Water And Wastewater - CalGreen requires 20% decrease in indoor water use that is not included in model (1,412,721.91 gallons)

Carwash water use added - 35 gallons/car, 100 cars/day = 1,277,500 gallons

Total 2,690,221.91 gallons

Trips and VMT -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblAreaCoating	Area_EF_Parking	250	100
tblConstructionPhase	NumDays	20.00	130.00
tblConstructionPhase	PhaseEndDate	2/25/2022	8/1/2022
tblConstructionPhase	PhaseEndDate	12/31/2021	6/3/2022
tblConstructionPhase	PhaseEndDate	2/12/2021	7/16/2021
tblConstructionPhase	PhaseEndDate	1/28/2022	7/1/2022
tblConstructionPhase	PhaseStartDate	1/29/2022	7/5/2022
tblConstructionPhase	PhaseStartDate	2/13/2021	7/19/2021

7761 Carmax - San Diego County APCD Air District, Winter

tblConstructionPhase	PhaseStartDate	1/1/2022	6/6/2022
tblGrading	MaterialImported	0.00	166,379.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	720.49	449.3
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblVehicleTrips	CC_TL	7.30	7.48
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	7.48
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CW_TL	9.50	7.48
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	ST_TR	23.72	50.00
tblVehicleTrips	SU_TR	11.88	50.00
tblVehicleTrips	WD_TR	23.72	50.00
tblWater	IndoorWaterUseRate	1,765,902.39	2,690,221.91

2.0 Emissions Summary

7761 Carmax - San Diego County APCD Air District, Winter

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6184	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0100e-003	6.0100e-003	2.0000e-005		6.4000e-003
Energy	6.4100e-003	0.0583	0.0490	3.5000e-004		4.4300e-003	4.4300e-003		4.4300e-003	4.4300e-003		69.9524	69.9524	1.3400e-003	1.2800e-003	70.3681
Mobile	1.0795	3.9620	8.7606	0.0225	1.8493	0.0211	1.8703	0.4942	0.0196	0.5139		2,292.5493	2,292.5493	0.1552		2,296.4296
Total	1.7043	4.0203	8.8124	0.0229	1.8493	0.0255	1.8748	0.4942	0.0241	0.5183		2,362.5077	2,362.5077	0.1566	1.2800e-003	2,366.8041

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6184	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0100e-003	6.0100e-003	2.0000e-005		6.4000e-003
Energy	6.4100e-003	0.0583	0.0490	3.5000e-004		4.4300e-003	4.4300e-003		4.4300e-003	4.4300e-003		69.9524	69.9524	1.3400e-003	1.2800e-003	70.3681
Mobile	1.0795	3.9620	8.7606	0.0225	1.8493	0.0211	1.8703	0.4942	0.0196	0.5139		2,292.5493	2,292.5493	0.1552		2,296.4296
Total	1.7043	4.0203	8.8124	0.0229	1.8493	0.0255	1.8748	0.4942	0.0241	0.5183		2,362.5077	2,362.5077	0.1566	1.2800e-003	2,366.8041

7761 Carmax - San Diego County APCD Air District, Winter

	ROG	NOx	CO	SO2	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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/4/2021	1/15/2021	5	10	
2	Grading	Grading	1/16/2021	7/16/2021	5	130	
3	Building Construction	Building Construction	7/19/2021	6/3/2022	5	230	
4	Paving	Paving	6/6/2022	7/1/2022	5	20	
5	Architectural Coating	Architectural Coating	7/5/2022	8/1/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 65

Acres of Paving: 8.68

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 28,161; Non-Residential Outdoor: 9,387; Striped Parking Area: 22,686 (Architectural Coating – sqft)

OffRoad Equipment

7761 Carmax - San Diego County APCD Air District, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	20,797.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	165.00	65.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	33.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

7761 Carmax - San Diego County APCD Air District, Winter

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	3.8882	40.4971	21.1543	0.0380	18.0663	2.0445	20.1107	9.9307	1.8809	11.8116		3,685.6569	3,685.6569	1.1920		3,715.4573

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
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
Worker	0.0706	0.0454	0.4488	1.3800e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		137.6186	137.6186	3.9500e-003		137.7174
Total	0.0706	0.0454	0.4488	1.3800e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		137.6186	137.6186	3.9500e-003		137.7174

7761 Carmax - San Diego County APCD Air District, Winter

3.2 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	3.8882	40.4971	21.1543	0.0380	18.0663	2.0445	20.1107	9.9307	1.8809	11.8116	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
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
Worker	0.0706	0.0454	0.4488	1.3800e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		137.6186	137.6186	3.9500e-003		137.7174
Total	0.0706	0.0454	0.4488	1.3800e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		137.6186	137.6186	3.9500e-003		137.7174

7761 Carmax - San Diego County APCD Air District, Winter

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.7322	0.0000	6.7322	3.3947	0.0000	3.3947			0.0000			0.0000
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599		1.0671	1.0671		2,871.9285	2,871.9285	0.9288		2,895.1495
Total	2.2903	24.7367	15.8575	0.0296	6.7322	1.1599	7.8921	3.3947	1.0671	4.4618		2,871.9285	2,871.9285	0.9288		2,895.1495

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.2203	41.3611	10.6637	0.1212	2.7954	0.1278	2.9232	0.7661	0.1223	0.8883		13,295.1897	13,295.1897	1.2343		13,326.0483
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
Worker	0.0588	0.0378	0.3740	1.1500e-003	0.1232	8.5000e-004	0.1241	0.0327	7.8000e-004	0.0335		114.6821	114.6821	3.2900e-003		114.7645
Total	1.2792	41.3989	11.0377	0.1224	2.9186	0.1286	3.0472	0.7988	0.1230	0.9218		13,409.8719	13,409.8719	1.2376		13,440.8129

7761 Carmax - San Diego County APCD Air District, Winter

3.3 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.7322	0.0000	6.7322	3.3947	0.0000	3.3947			0.0000			0.0000
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599		1.0671	1.0671	0.0000	2,871.9285	2,871.9285	0.9288		2,895.1495
Total	2.2903	24.7367	15.8575	0.0296	6.7322	1.1599	7.8921	3.3947	1.0671	4.4618	0.0000	2,871.9285	2,871.9285	0.9288		2,895.1495

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.2203	41.3611	10.6637	0.1212	2.7954	0.1278	2.9232	0.7661	0.1223	0.8883		13,295.1897	13,295.1897	1.2343		13,326.0483
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
Worker	0.0588	0.0378	0.3740	1.1500e-003	0.1232	8.5000e-004	0.1241	0.0327	7.8000e-004	0.0335		114.6821	114.6821	3.2900e-003		114.7645
Total	1.2792	41.3989	11.0377	0.1224	2.9186	0.1286	3.0472	0.7988	0.1230	0.9218		13,409.8719	13,409.8719	1.2376		13,440.8129

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3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2072	6.6013	1.8781	0.0172	0.4400	0.0145	0.4545	0.1267	0.0138	0.1405		1,844.8255	1,844.8255	0.1437		1,848.4184
Worker	0.6472	0.4162	4.1139	0.0127	1.3554	9.3600e-003	1.3648	0.3595	8.6200e-003	0.3682		1,261.5035	1,261.5035	0.0362		1,262.4096
Total	0.8544	7.0175	5.9920	0.0298	1.7955	0.0238	1.8193	0.4862	0.0225	0.5087		3,106.3290	3,106.3290	0.1800		3,110.8280

7761 Carmax - San Diego County APCD Air District, Winter

3.4 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2072	6.6013	1.8781	0.0172	0.4400	0.0145	0.4545	0.1267	0.0138	0.1405		1,844.8255	1,844.8255	0.1437		1,848.4184
Worker	0.6472	0.4162	4.1139	0.0127	1.3554	9.3600e-003	1.3648	0.3595	8.6200e-003	0.3682		1,261.5035	1,261.5035	0.0362		1,262.4096
Total	0.8544	7.0175	5.9920	0.0298	1.7955	0.0238	1.8193	0.4862	0.0225	0.5087		3,106.3290	3,106.3290	0.1800		3,110.8280

7761 Carmax - San Diego County APCD Air District, Winter

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1927	6.2340	1.7783	0.0170	0.4400	0.0125	0.4525	0.1267	0.0119	0.1386		1,827.1670	1,827.1670	0.1391		1,830.6452
Worker	0.6133	0.3794	3.8173	0.0122	1.3554	9.1600e-003	1.3646	0.3595	8.4400e-003	0.3680		1,215.2672	1,215.2672	0.0332		1,216.0967
Total	0.8061	6.6134	5.5956	0.0292	1.7955	0.0216	1.8171	0.4862	0.0204	0.5066		3,042.4342	3,042.4342	0.1723		3,046.7420

7761 Carmax - San Diego County APCD Air District, Winter

3.4 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1927	6.2340	1.7783	0.0170	0.4400	0.0125	0.4525	0.1267	0.0119	0.1386		1,827.1670	1,827.1670	0.1391		1,830.6452
Worker	0.6133	0.3794	3.8173	0.0122	1.3554	9.1600e-003	1.3646	0.3595	8.4400e-003	0.3680		1,215.2672	1,215.2672	0.0332		1,216.0967
Total	0.8061	6.6134	5.5956	0.0292	1.7955	0.0216	1.8171	0.4862	0.0204	0.5066		3,042.4342	3,042.4342	0.1723		3,046.7420

7761 Carmax - San Diego County APCD Air District, Winter

3.5 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	1.1371					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.2399	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
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
Worker	0.0558	0.0345	0.3470	1.1100e-003	0.1232	8.3000e-004	0.1241	0.0327	7.7000e-004	0.0335		110.4788	110.4788	3.0200e-003		110.5543
Total	0.0558	0.0345	0.3470	1.1100e-003	0.1232	8.3000e-004	0.1241	0.0327	7.7000e-004	0.0335		110.4788	110.4788	3.0200e-003		110.5543

7761 Carmax - San Diego County APCD Air District, Winter

3.5 Paving - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.660 3	2,207.660 3	0.7140		2,225.510 4
Paving	1.1371					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.2399	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.660 3	2,207.660 3	0.7140		2,225.510 4

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
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
Worker	0.0558	0.0345	0.3470	1.1100e-003	0.1232	8.3000e-004	0.1241	0.0327	7.7000e-004	0.0335		110.4788	110.4788	3.0200e-003		110.5543
Total	0.0558	0.0345	0.3470	1.1100e-003	0.1232	8.3000e-004	0.1241	0.0327	7.7000e-004	0.0335		110.4788	110.4788	3.0200e-003		110.5543

7761 Carmax - San Diego County APCD Air District, Winter

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	15.0470					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	15.2515	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
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
Worker	0.1227	0.0759	0.7635	2.4400e-003	0.2711	1.8300e-003	0.2729	0.0719	1.6900e-003	0.0736		243.0534	243.0534	6.6400e-003		243.2194
Total	0.1227	0.0759	0.7635	2.4400e-003	0.2711	1.8300e-003	0.2729	0.0719	1.6900e-003	0.0736		243.0534	243.0534	6.6400e-003		243.2194

7761 Carmax - San Diego County APCD Air District, Winter

3.6 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	15.0470					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	15.2515	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
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
Worker	0.1227	0.0759	0.7635	2.4400e-003	0.2711	1.8300e-003	0.2729	0.0719	1.6900e-003	0.0736		243.0534	243.0534	6.6400e-003		243.2194
Total	0.1227	0.0759	0.7635	2.4400e-003	0.2711	1.8300e-003	0.2729	0.0719	1.6900e-003	0.0736		243.0534	243.0534	6.6400e-003		243.2194

4.0 Operational Detail - Mobile

7761 Carmax - San Diego County APCD Air District, Winter

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0795	3.9620	8.7606	0.0225	1.8493	0.0211	1.8703	0.4942	0.0196	0.5139		2,292.5493	2,292.5493	0.1552		2,296.4296
Unmitigated	1.0795	3.9620	8.7606	0.0225	1.8493	0.0211	1.8703	0.4942	0.0196	0.5139		2,292.5493	2,292.5493	0.1552		2,296.4296

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	938.70	938.70	938.70	872,156	872,156
Parking Lot	0.00	0.00	0.00		
Total	938.70	938.70	938.70	872,156	872,156

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
Automobile Care Center	7.48	7.48	7.48	33.00	48.00	19.00	21	51	28
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

7761 Carmax - San Diego County APCD Air District, Winter

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Parking Lot	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	6.4100e-003	0.0583	0.0490	3.5000e-004		4.4300e-003	4.4300e-003		4.4300e-003	4.4300e-003		69.9524	69.9524	1.3400e-003	1.2800e-003	70.3681
NaturalGas Unmitigated	6.4100e-003	0.0583	0.0490	3.5000e-004		4.4300e-003	4.4300e-003		4.4300e-003	4.4300e-003		69.9524	69.9524	1.3400e-003	1.2800e-003	70.3681

7761 Carmax - San Diego County APCD Air District, Winter

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	594.596	6.4100e-003	0.0583	0.0490	3.5000e-004		4.4300e-003	4.4300e-003		4.4300e-003	4.4300e-003		69.9524	69.9524	1.3400e-003	1.2800e-003	70.3681
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		6.4100e-003	0.0583	0.0490	3.5000e-004		4.4300e-003	4.4300e-003		4.4300e-003	4.4300e-003		69.9524	69.9524	1.3400e-003	1.2800e-003	70.3681

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	0.594596	6.4100e-003	0.0583	0.0490	3.5000e-004		4.4300e-003	4.4300e-003		4.4300e-003	4.4300e-003		69.9524	69.9524	1.3400e-003	1.2800e-003	70.3681
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		6.4100e-003	0.0583	0.0490	3.5000e-004		4.4300e-003	4.4300e-003		4.4300e-003	4.4300e-003		69.9524	69.9524	1.3400e-003	1.2800e-003	70.3681

6.0 Area Detail

6.1 Mitigation Measures Area

7761 Carmax - San Diego County APCD Air District, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6184	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0100e-003	6.0100e-003	2.0000e-005		6.4000e-003
Unmitigated	0.6184	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0100e-003	6.0100e-003	2.0000e-005		6.4000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0825					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5357					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6000e-004	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0100e-003	6.0100e-003	2.0000e-005		6.4000e-003
Total	0.6184	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0100e-003	6.0100e-003	2.0000e-005		6.4000e-003

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0825					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5357					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6000e-004	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0100e-003	6.0100e-003	2.0000e-005		6.4000e-003
Total	0.6184	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0100e-003	6.0100e-003	2.0000e-005		6.4000e-003

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

7761 Carmax - San Diego County APCD Air District, Winter

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

7761 Carmax - San Diego County APCD Air District, Summer

7761 Carmax
San Diego County APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	8.68	Acre	8.68	378,100.80	0
Automobile Care Center	18.77	1000sqft	0.43	18,774.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	449.3	CH4 Intensity (lb/MW hr)	0.018	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

7761 Carmax - San Diego County APCD Air District, Summer

Project Characteristics - Energy intensity factors updated based on SDG&E renewable procurement (449.3, 0.018, 0.004)

Land Use - 18,774 sf Carmax

9.11 acres disturbed (7.19 acre Carmax, 1.92 acres off-site)

Construction Phase - Grading phase increased to 6 months due to amount of cut/fill

Grading -

Architectural Coating - SDAPCD Rule 67.0.1

Vehicle Trips - 50 trips/ksf

7.48 miles trip length

Area Coating - SDAPCD Rule 67.0.1

Energy Use -

Water And Wastewater - CalGreen requires 20% decrease in indoor water use that is not included in model (1,412,721.91 gallons)

Carwash water use added - 35 gallons/car, 100 cars/day = 1,277,500 gallons

Total 2,690,221.91 gallons

Trips and VMT -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblAreaCoating	Area_EF_Parking	250	100
tblConstructionPhase	NumDays	20.00	130.00
tblConstructionPhase	PhaseEndDate	2/25/2022	8/1/2022
tblConstructionPhase	PhaseEndDate	12/31/2021	6/3/2022
tblConstructionPhase	PhaseEndDate	2/12/2021	7/16/2021
tblConstructionPhase	PhaseEndDate	1/28/2022	7/1/2022
tblConstructionPhase	PhaseStartDate	1/29/2022	7/5/2022
tblConstructionPhase	PhaseStartDate	2/13/2021	7/19/2021

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tblConstructionPhase	PhaseStartDate	1/1/2022	6/6/2022
tblGrading	MaterialImported	0.00	166,379.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	720.49	449.3
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblVehicleTrips	CC_TL	7.30	7.48
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	7.48
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CW_TL	9.50	7.48
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	ST_TR	23.72	50.00
tblVehicleTrips	SU_TR	11.88	50.00
tblVehicleTrips	WD_TR	23.72	50.00
tblWater	IndoorWaterUseRate	1,765,902.39	2,690,221.91

2.0 Emissions Summary

7761 Carmax - San Diego County APCD Air District, Summer

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6184	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0100e-003	6.0100e-003	2.0000e-005		6.4000e-003
Energy	6.4100e-003	0.0583	0.0490	3.5000e-004		4.4300e-003	4.4300e-003		4.4300e-003	4.4300e-003		69.9524	69.9524	1.3400e-003	1.2800e-003	70.3681
Mobile	1.1177	3.9369	8.2440	0.0238	1.8493	0.0207	1.8700	0.4942	0.0193	0.5135		2,426.4289	2,426.4289	0.1487		2,430.1470
Total	1.7425	3.9952	8.2958	0.0242	1.8493	0.0251	1.8744	0.4942	0.0237	0.5180		2,496.3873	2,496.3873	0.1501	1.2800e-003	2,500.5216

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6184	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0100e-003	6.0100e-003	2.0000e-005		6.4000e-003
Energy	6.4100e-003	0.0583	0.0490	3.5000e-004		4.4300e-003	4.4300e-003		4.4300e-003	4.4300e-003		69.9524	69.9524	1.3400e-003	1.2800e-003	70.3681
Mobile	1.1177	3.9369	8.2440	0.0238	1.8493	0.0207	1.8700	0.4942	0.0193	0.5135		2,426.4289	2,426.4289	0.1487		2,430.1470
Total	1.7425	3.9952	8.2958	0.0242	1.8493	0.0251	1.8744	0.4942	0.0237	0.5180		2,496.3873	2,496.3873	0.1501	1.2800e-003	2,500.5216

7761 Carmax - San Diego County APCD Air District, Summer

	ROG	NOx	CO	SO2	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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/4/2021	1/15/2021	5	10	
2	Grading	Grading	1/16/2021	7/16/2021	5	130	
3	Building Construction	Building Construction	7/19/2021	6/3/2022	5	230	
4	Paving	Paving	6/6/2022	7/1/2022	5	20	
5	Architectural Coating	Architectural Coating	7/5/2022	8/1/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 65

Acres of Paving: 8.68

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 28,161; Non-Residential Outdoor: 9,387; Striped Parking Area: 22,686 (Architectural Coating – sqft)

OffRoad Equipment

7761 Carmax - San Diego County APCD Air District, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	20,797.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	165.00	65.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	33.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

7761 Carmax - San Diego County APCD Air District, Summer

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	3.8882	40.4971	21.1543	0.0380	18.0663	2.0445	20.1107	9.9307	1.8809	11.8116		3,685.6569	3,685.6569	1.1920		3,715.4573

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
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
Worker	0.0623	0.0405	0.4774	1.4700e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		146.5994	146.5994	4.1800e-003		146.7040
Total	0.0623	0.0405	0.4774	1.4700e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		146.5994	146.5994	4.1800e-003		146.7040

7761 Carmax - San Diego County APCD Air District, Summer

3.2 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	3.8882	40.4971	21.1543	0.0380	18.0663	2.0445	20.1107	9.9307	1.8809	11.8116	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
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
Worker	0.0623	0.0405	0.4774	1.4700e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		146.5994	146.5994	4.1800e-003		146.7040
Total	0.0623	0.0405	0.4774	1.4700e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		146.5994	146.5994	4.1800e-003		146.7040

7761 Carmax - San Diego County APCD Air District, Summer

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.7322	0.0000	6.7322	3.3947	0.0000	3.3947			0.0000			0.0000
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599		1.0671	1.0671		2,871.9285	2,871.9285	0.9288		2,895.1495
Total	2.2903	24.7367	15.8575	0.0296	6.7322	1.1599	7.8921	3.3947	1.0671	4.4618		2,871.9285	2,871.9285	0.9288		2,895.1495

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1875	41.0073	10.0322	0.1234	2.7954	0.1251	2.9205	0.7661	0.1197	0.8858		13,528.9331	13,528.9331	1.1951		13,558.8100
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
Worker	0.0519	0.0337	0.3979	1.2300e-003	0.1232	8.5000e-004	0.1241	0.0327	7.8000e-004	0.0335		122.1661	122.1661	3.4900e-003		122.2533
Total	1.2394	41.0411	10.4300	0.1246	2.9186	0.1260	3.0446	0.7988	0.1205	0.9193		13,651.0992	13,651.0992	1.1986		13,681.0633

7761 Carmax - San Diego County APCD Air District, Summer

3.3 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.7322	0.0000	6.7322	3.3947	0.0000	3.3947			0.0000			0.0000
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599		1.0671	1.0671	0.0000	2,871.9285	2,871.9285	0.9288		2,895.1495
Total	2.2903	24.7367	15.8575	0.0296	6.7322	1.1599	7.8921	3.3947	1.0671	4.4618	0.0000	2,871.9285	2,871.9285	0.9288		2,895.1495

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1875	41.0073	10.0322	0.1234	2.7954	0.1251	2.9205	0.7661	0.1197	0.8858		13,528.9331	13,528.9331	1.1951		13,558.8100
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
Worker	0.0519	0.0337	0.3979	1.2300e-003	0.1232	8.5000e-004	0.1241	0.0327	7.8000e-004	0.0335		122.1661	122.1661	3.4900e-003		122.2533
Total	1.2394	41.0411	10.4300	0.1246	2.9186	0.1260	3.0446	0.7988	0.1205	0.9193		13,651.0992	13,651.0992	1.1986		13,681.0633

7761 Carmax - San Diego County APCD Air District, Summer

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1965	6.6189	1.6868	0.0176	0.4400	0.0139	0.4539	0.1267	0.0133	0.1400		1,893.7877	1,893.7877	0.1353		1,897.1706
Worker	0.5707	0.3708	4.3764	0.0135	1.3554	9.3600e-003	1.3648	0.3595	8.6200e-003	0.3682		1,343.8275	1,343.8275	0.0384		1,344.7862
Total	0.7673	6.9897	6.0632	0.0311	1.7955	0.0233	1.8187	0.4862	0.0219	0.5081		3,237.6151	3,237.6151	0.1737		3,241.9568

7761 Carmax - San Diego County APCD Air District, Summer

3.4 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1965	6.6189	1.6868	0.0176	0.4400	0.0139	0.4539	0.1267	0.0133	0.1400		1,893.7877	1,893.7877	0.1353		1,897.1706
Worker	0.5707	0.3708	4.3764	0.0135	1.3554	9.3600e-003	1.3648	0.3595	8.6200e-003	0.3682		1,343.8275	1,343.8275	0.0384		1,344.7862
Total	0.7673	6.9897	6.0632	0.0311	1.7955	0.0233	1.8187	0.4862	0.0219	0.5081		3,237.6151	3,237.6151	0.1737		3,241.9568

7761 Carmax - San Diego County APCD Air District, Summer

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1828	6.2551	1.5975	0.0174	0.4400	0.0120	0.4520	0.1267	0.0114	0.1381		1,875.9896	1,875.9896	0.1312		1,879.2689
Worker	0.5395	0.3381	4.0696	0.0130	1.3554	9.1600e-003	1.3646	0.3595	8.4400e-003	0.3680		1,294.5236	1,294.5236	0.0352		1,295.4025
Total	0.7223	6.5933	5.6671	0.0304	1.7955	0.0211	1.8166	0.4862	0.0199	0.5061		3,170.5131	3,170.5131	0.1663		3,174.6714

7761 Carmax - San Diego County APCD Air District, Summer

3.4 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1828	6.2551	1.5975	0.0174	0.4400	0.0120	0.4520	0.1267	0.0114	0.1381		1,875.9896	1,875.9896	0.1312		1,879.2689
Worker	0.5395	0.3381	4.0696	0.0130	1.3554	9.1600e-003	1.3646	0.3595	8.4400e-003	0.3680		1,294.5236	1,294.5236	0.0352		1,295.4025
Total	0.7223	6.5933	5.6671	0.0304	1.7955	0.0211	1.8166	0.4862	0.0199	0.5061		3,170.5131	3,170.5131	0.1663		3,174.6714

7761 Carmax - San Diego County APCD Air District, Summer

3.5 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	1.1371					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.2399	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
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
Worker	0.0491	0.0307	0.3700	1.1800e-003	0.1232	8.3000e-004	0.1241	0.0327	7.7000e-004	0.0335		117.6840	117.6840	3.2000e-003		117.7639
Total	0.0491	0.0307	0.3700	1.1800e-003	0.1232	8.3000e-004	0.1241	0.0327	7.7000e-004	0.0335		117.6840	117.6840	3.2000e-003		117.7639

7761 Carmax - San Diego County APCD Air District, Summer

3.5 Paving - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.660 3	2,207.660 3	0.7140		2,225.510 4
Paving	1.1371					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.2399	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.660 3	2,207.660 3	0.7140		2,225.510 4

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
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
Worker	0.0491	0.0307	0.3700	1.1800e-003	0.1232	8.3000e-004	0.1241	0.0327	7.7000e-004	0.0335		117.6840	117.6840	3.2000e-003		117.7639
Total	0.0491	0.0307	0.3700	1.1800e-003	0.1232	8.3000e-004	0.1241	0.0327	7.7000e-004	0.0335		117.6840	117.6840	3.2000e-003		117.7639

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3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	15.0470					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	15.2515	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
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
Worker	0.1079	0.0676	0.8139	2.6000e-003	0.2711	1.8300e-003	0.2729	0.0719	1.6900e-003	0.0736		258.9047	258.9047	7.0300e-003		259.0805
Total	0.1079	0.0676	0.8139	2.6000e-003	0.2711	1.8300e-003	0.2729	0.0719	1.6900e-003	0.0736		258.9047	258.9047	7.0300e-003		259.0805

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3.6 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	15.0470					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	15.2515	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
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
Worker	0.1079	0.0676	0.8139	2.6000e-003	0.2711	1.8300e-003	0.2729	0.0719	1.6900e-003	0.0736		258.9047	258.9047	7.0300e-003		259.0805
Total	0.1079	0.0676	0.8139	2.6000e-003	0.2711	1.8300e-003	0.2729	0.0719	1.6900e-003	0.0736		258.9047	258.9047	7.0300e-003		259.0805

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.1177	3.9369	8.2440	0.0238	1.8493	0.0207	1.8700	0.4942	0.0193	0.5135		2,426.4289	2,426.4289	0.1487		2,430.1470
Unmitigated	1.1177	3.9369	8.2440	0.0238	1.8493	0.0207	1.8700	0.4942	0.0193	0.5135		2,426.4289	2,426.4289	0.1487		2,430.1470

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	938.70	938.70	938.70	872,156	872,156
Parking Lot	0.00	0.00	0.00		
Total	938.70	938.70	938.70	872,156	872,156

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
Automobile Care Center	7.48	7.48	7.48	33.00	48.00	19.00	21	51	28
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Parking Lot	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	6.4100e-003	0.0583	0.0490	3.5000e-004		4.4300e-003	4.4300e-003		4.4300e-003	4.4300e-003		69.9524	69.9524	1.3400e-003	1.2800e-003	70.3681
NaturalGas Unmitigated	6.4100e-003	0.0583	0.0490	3.5000e-004		4.4300e-003	4.4300e-003		4.4300e-003	4.4300e-003		69.9524	69.9524	1.3400e-003	1.2800e-003	70.3681

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	594.596	6.4100e-003	0.0583	0.0490	3.5000e-004		4.4300e-003	4.4300e-003		4.4300e-003	4.4300e-003		69.9524	69.9524	1.3400e-003	1.2800e-003	70.3681
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		6.4100e-003	0.0583	0.0490	3.5000e-004		4.4300e-003	4.4300e-003		4.4300e-003	4.4300e-003		69.9524	69.9524	1.3400e-003	1.2800e-003	70.3681

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	0.594596	6.4100e-003	0.0583	0.0490	3.5000e-004		4.4300e-003	4.4300e-003		4.4300e-003	4.4300e-003		69.9524	69.9524	1.3400e-003	1.2800e-003	70.3681
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		6.4100e-003	0.0583	0.0490	3.5000e-004		4.4300e-003	4.4300e-003		4.4300e-003	4.4300e-003		69.9524	69.9524	1.3400e-003	1.2800e-003	70.3681

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6184	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0100e-003	6.0100e-003	2.0000e-005		6.4000e-003
Unmitigated	0.6184	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0100e-003	6.0100e-003	2.0000e-005		6.4000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0825					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5357					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6000e-004	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0100e-003	6.0100e-003	2.0000e-005		6.4000e-003
Total	0.6184	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0100e-003	6.0100e-003	2.0000e-005		6.4000e-003

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0825					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5357					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6000e-004	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0100e-003	6.0100e-003	2.0000e-005		6.4000e-003
Total	0.6184	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0100e-003	6.0100e-003	2.0000e-005		6.4000e-003

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

7761 Carmax - San Diego County APCD Air District, Summer

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation
