GREENHOUSE GAS REPORT
LILAC HILLS RANCH
SAN DIEGO COUNTY, CALIFORNIA

SPECIFIC PLAN
GENERAL PLAN AMENDMENT
REZONE
EIR
TENTATIVE MAP (MASTER)
TENTATIVE MAP (PHASE 1 IMPLEMENTING TM)
MAJOR USE PERMIT

PROJECT APPLICANT:
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PREPARED FOR:
COUNTY OF SAN DIEGO
5510 OVERLAND AVENUE, THIRD FLOOR
SAN DIEGO, CA 92123
KIVA PROJECT: 09-0112513
SP 3810-12-001
GPA 3800-12-001
REZ 3600-12-003
TM 5571 RPL5 and 5572 RPL5
MUP 3300-12-005

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~~February 26~~June 23, 2015

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Glossary of Terms and Acronyms

AB	Assembly Bill
ANFO	Ammonium nitrate and fuel oil
APS	Alternative Planning Strategy
BAU	Business as usual
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CCR	Code of Regulations
CCS	Carbon, Capture and Sequestration
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH_4	Methane
CO_2	Carbon dioxide
CPUC	California Public Utilities Commission
CRV	California Redemption Value
°F	Degrees Fahrenheit
du/ac	Dwelling unit per acre
EIR	Environmental Impact Report
EO	Executive order
EPA	Environmental Protection Agency
EPIC	Energy Policy Initiative Center
FEIR	Final Environmental Impact Report
GHG	Greenhouse Gas
GPA	General Plan Amendment
GWP	Global warming potential
HFC	Hydrofluorocarbons
HVAC	Heating, Ventilation, and Air Conditioning
I-15	Interstate 15
IPCC	Intergovernmental Panel on Climate Change
LCFS	Low Carbon Fuel Standard
LEED-ND	Leadership in Energy and Environmental Design for Neighborhood Development
LEV	Low Emission Vehicle
$MMTCO_2E$	Million metric tons of CO_2 equivalent
mpg	Miles per gallon
MPO	Metropolitan Planning Organization
MSL	Mean sea level
$MTCO_2E$	Metric tons of CO_2 equivalent
MUP	Major Use Permit
MW	Megawatt
N_2O	Nitrous oxide
NAT	no action taken
NF_3	Nitrogen triflouride

NPS	National Park Service
PFC	Perfluorocarbons
Psp	Per service population
REZ	Rezone
RF	Recycling Facility
RPS	Renewables Portfolio Standard
RTP	Regional transportation plan
SANDAG	San Diego Association of Governments
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDG&E	San Diego Gas and Electric
SF_6	Sulfur hexafluoride
SJVAPCD	San Joaquin Valley Air Pollution Control District
SMAQMD	Sacramento Metropolitan Air Quality Management District
Title 24	California Code of Regulations, Title 24 (i.e., California Building Code)
TM	Tentative Map
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
VCMWD	Valley Center Municipal Water District
VMT	Vehicle miles traveled
WRCC	Western Regional Climate Center
WRF	Water Reclamation Facility

Executive Summary

The proposed 608-acre Lilac Hills Ranch project site is located within the Valley Center and Bonsall Community Planning areas of unincorporated County of San Diego, with State Route 76 to the north, Valley Center proper to the east, the City of Escondido to the south, and Interstate 15 and Old Highway 395 to the west.

The project would consist of a mix of residential, commercial, and institutional uses, along with parks and open space. Specifically, the project would include: 90,000 square feet of commercial, office, and retail uses, including a 50-room country inn; 903 traditional single-family detached houses; 164 single-family attached houses; 211 residential units within the commercial mixed-use areas; 468 age-restricted residential houses within a senior citizen's neighborhood; necessary facilities and amenities to serve the senior population (including a senior community center, and 200-bed group care facility); and a 2.0-acre Community Purpose Facilities (CPF) area that would be comprised of a private recreational facility and could include a fire station, with the total area of both not to exceed 40,000 square feet. The project also proposes a school site (K-8); and public and private neighborhood parks, a private recreational facility, and other recreational amenities. The mixed-use, commercial, and civic uses, with parks, form a Town Center and two Neighborhood Centers, to which residents can walk for various social and commercial needs.

Also planned within the project site are a Recycling Facility (RF), a Water Reclamation Facility (WRF), and other supporting infrastructure. Open space is proposed to retain some of the existing citrus and avocado groves and add additional agricultural open space along with 104.1 acres of sensitive resources including biological/wetland habitat. The project includes numerous design features, discussed further below, that serve to reduce the project's greenhouse gas (GHG) emissions.

This analysis is based on the requirements of the California Environmental Quality Act (CEQA) and the CEQA Guidelines. Under the first criterion set forth in Appendix G of the CEQA Guidelines, a significant global climate change impact would occur if implementation of the proposed project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. The significance analysis provided in this report is multi-faceted and evaluates the significance of the project's GHG emissions under this first criterion by reference to: (a) the existing environmental conditions on the project site; (b) the County's GHG Guidance, which requires at least a 16 percent reduction from the "unmitigated" project; (c) the Sacramento Metropolitan Air Quality Management District's (SMAQMD) Guide, which requires at least a 21.7 percent reduction from the no action taken (NAT) condition; and (d) the original 2008 Scoping Plan, which identifies a 28.5 percent reduction from the business-as-usual (BAU) condition.

Under the second criterion set forth in Appendix G of the CEQA Guidelines, a significant global climate change impact would occur if implementation of the proposed project would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. The significance analysis provided in this report evaluates the significance of the project's GHG emissions under this second criterion by reference to: (a) the County of San Diego's General Plan; (b) Senate Bill (SB) 375 and the 2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) adopted by the San Diego Association of Governments (SANDAG); and (~~b~~) the interim and horizon-year goals for 2030 and 2050 set forth in Executive Orders S-3-05 and B-30-15.

Prior to determining the emissions from the proposed project, this analysis assesses the GHG emissions attributable to existing, on-site uses. The project site is presently occupied primarily by agricultural uses, with 22 single-family homes scattered throughout the 608 acres at very low density. Baseline (2008) GHG emissions associated with these existing residential are approximately equivalent to 564 metric tons of carbon dioxide ($MTCO_2E$).

The project's GHG-reducing design features include:

- Use of Tier III, or higher, construction equipment, with the exception of concrete/industrial saws, generator sets, welders, air compressors, or for construction equipment where Tier III, or higher, is not available;
- Exceeding the 2008 Title 24 Energy Efficiency Standards by 30 percent for all proposed commercial development and residential dwelling units;
- Installation of Solar PV systems to provide at least 22 percent of the project's total electricity needs;
- Installation of high-efficiency lighting in all public street and area lighting (i.e., lighting not regulated by Title 24) to achieve an overall minimum 15 percent lighting energy reduction;
- Installation of highly-efficient appliances, including the installation of Energy Star appliances (including clothes washers, dishwashers, fans, and refrigerators) in 95 percent of the single-family and mixed-use residences, and Energy Star ventilation fans in the proposed hotel;
- Installation of natural gas only fireplaces (i.e., restriction against wood-burning fireplaces);
- Implementation of water conservation strategies that achieve a 20 percent reduction in indoor and outdoor water use;
- Use of Smart Meters to reduce electricity consumption;
- Require that only electric-powered landscaping equipment be used on property managed by the homeowners' association (HOA);
- Provision of a mix of resident-serving commercial and civic uses within one-half mile of residential uses, including neighborhood-serving retail and restaurant uses, an elementary/middle school, church site, recreation center, neighborhood park, and a recycling collection center; and

- Provision of a network of pedestrian and bicycle paths, in a complete and interconnected network, where currently there are very limited bicycling and pedestrian facilities.

First Appendix G Criterion

In accordance with CEQA Guidelines sections 15064.4(b)(1) and 15125(a), the significance analysis first identifies the numeric incremental increase in GHG emissions attributable to the project, compared to GHG emissions resulting from on-site existing conditions. As detailed in this analysis, this increase in GHG emissions over existing conditions is not a sufficiently informative or reliable indicator of the significance of the project's GHG emissions. Therefore, this report also considers other methods (i.e., the County's Guidance; SMAQMD's Guide; and the 2008 Scoping Plan) for purposes of analyzing the significance of the project's GHG emissions.

~~The proposed project's build-out emissions were quantified for 2020 and 2030.~~

In 2020, after considering all project design features, the proposed project would emit 32,978.58 to 33,865.07 MTCO$_2$E, depending on which assessment methodology is used (see Section 5.1 Calculation Methodology). Under the County's methodology, project design features would reduce the "mitigated" project emissions by 20.7 percent from the 2020 "unmitigated" project, which exceeds the County's 16 percent reduction target. Under the SMAQMD's methodology, the same project design features would reduce project-related emissions by 31.6 percent over the NAT condition, which is greater than the SMAQMD's 21.7 percent reduction target. Similarly, under a methodology based on the California Air Resources Board's (CARB) 2008 Scoping Plan, the same project design features would achieve a 30.0 percent reduction in GHG emissions as compared to the BAU condition, which is greater than the Scoping Plan's 28.5 percent reduction target. The project, by demonstrating compliance with the County's Guidance, SMAQMD's Guide, and the GHG emission reduction target of the 2008 Scoping Plan, also demonstrates consistency with Assembly Bill 32 (AB 32), the 2006 Global Warming Solutions Act, and its implementing Scoping Plans.

~~In 2030, after consideration of all project design features, the proposed project would emit 32,127 to 32,466 MTCO$_2$E emissions per year, depending on which methodology is used. Therefore, by year 2030, the project would achieve a 25.1 to 33 percent reduction. (The reductions in GHG emission between 2020 and 2030 are associated with continued improvements in energy efficiencies and vehicles, as estimated by CARB.)~~

Based on the above, the proposed project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, such that impacts would be less than significant.

Second Appendix G Criterion

As discussed further in Section 6.2.1, the proposed project would not frustrate the County of San Diego's General Plan policies relevant to GHG reduction. Rather, t~~T~~he proposed creation of a master-planned community with a mix of uses designed and intended to reduce resident-related vehicle miles traveled, as well as various sustainable design features and commitments, is consistent with applicable policies of the General Plan.

As discussed further in Section 6.2.2~~below~~, the proposed project would not frustrate the objectives of SB 375 or SANDAG's RTP/SCS due to its proposed creation of a master-planned community with a mix of uses designed and intended to reduce resident-related vehicle miles traveled.

As discussed further in Section 6.2.3, the proposed project is in line with the statewide GHG reductions needed to achieve the interim 2030 and horizon-year 2050 goals established by Executive Orders. ~~Due to the speculative nature of technologies available and regulations in place in 2050, and the constraints of existing modeling programs, the proposed project's emissions in 2050 cannot be accurately quantified and is thus qualitatively assessed, as discussed further in this report. Based on information presently available, and the project's demonstrated declining emissions trend through 2030, the proposed project would not frustrate the long-term goal of Executive Order S-3-05 to reduce the statewide GHG emissions level to 80 percent below the 1990 level by 2050.~~

In summary then, the proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions, such that impacts would be less than significant.

1.0 Introduction and Project Description

1.1 Understanding Global Climate Change

This subchapter summarizes relevant facts related to global climate change and GHG emissions, including causes of global climate change, sources of GHG emissions, and potential environmental effects of global climate change.

1.1.1 Causes of Global Climate Change

Global climate change is a change in the average weather of the earth, which can be measured by wind patterns, storms, precipitation, and temperature. The earth's climate is in a state of constant flux with periodic warming and cooling cycles. Extreme periods of cooling are termed "ice ages," which may then be followed by extended periods of warmth. For most of the earth's geologic history, these periods of warming and cooling have been the result of many complicated, interacting natural factors that include volcanic eruptions which spew gases and particles into the atmosphere; the amount of water, vegetation, and ice covering the earth's surface; subtle changes in the earth's orbit; and the amount of energy released by the sun (sun cycles). However, since the beginning of the Industrial Revolution around 1750, the average temperature of the earth has been increasing at a rate that is faster than can be explained by natural climate cycles alone.

GHGs influence the amount of heat that is trapped in the earth's atmosphere and thus play a critical role in determining the earth's surface temperature. Outgoing infrared radiation is absorbed by GHGs, resulting in a warming of the atmosphere. This phenomenon, known as the "greenhouse effect," is responsible for maintaining a habitable climate on Earth. With the Industrial Revolution came an increase in the combustion of carbon-based fuels such as wood, coal, oil, and biofuels, as well as the creation of GHG-emitting substances not found in nature. Such human activities have increased atmospheric GHG levels in excess of natural ambient concentrations. This has led to a trend of ~~unnatural~~ warming of the earth's atmosphere and oceans, with corresponding effects on global circulation patterns and climate.

1.1.1.1 Greenhouse Gases of Primary Concern

There are numerous GHGs, both naturally occurring (i.e., biogenic) and manmade (i.e., anthropogenic). Table 1 summarizes some of the most common. Each GHG has variable atmospheric lifetime and global warming potential (GWP).

TABLE 1
GLOBAL WARMING POTENTIALS AND ATMOSPHERIC LIFETIMES (YEARS) OF COMMON GHGs

Gas	Atmospheric Lifetime	100-year GWP	20-year GWP	500-year GWP
Carbon dioxide (CO_2)	50–200	1	1	1
Methane (CH_4)*	12 ± 3	21	56	6.5
Nitrous oxide (N_2O)	120	310	280	170
HFC-23	264	11,700	9,100	9,800
HFC-32	5.6	650	2,100	200
HFC-125	32.6	2,800	4,600	920
HFC-134a	14.6	1,300	3,400	420
HFC-143a	48.3	3,800	5,000	1,400
HFC-152a	1.5	140	460	42
HFC-227ea	36.5	2,900	4,300	950
HFC-236fa	209	6,300	5,100	4,700
HFC-43-10mee	17.1	1,300	3,000	400
CF_4	50,000	6,500	4,400	10,000
C_2F_6	10,000	9,200	6,200	14,000
C_3F_8	2,600	7,000	4,800	10,100
C_4F_{10}	2,600	7,000	4,800	10,100
c-C_4F_8	3,200	8,700	6,000	12,700
C_5F_{12}	4,100	7,500	5,100	11,000
C_6F_{14}	3,200	7,400	5,000	10,700
SF_6	3,200	23,900	16,300	34,900

SOURCE: U.S. Environmental Protection Agency 2010, Annex 6.
GWP = global warming potential.
*The methane GWP includes the direct effects and those indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO_2 is not included.

The atmospheric lifetime of a GHG is the average time the molecule stays stable in the atmosphere. Most GHGs have long atmospheric lifetimes, staying in the atmosphere hundreds or thousands of years.

The potential of a gas to trap heat and warm the atmosphere is measured by its GWP. Although GWP is related to its atmospheric lifetime, many other factors including chemical reactivity of the gas also influence GWP. GWP is reported as a unit-less factor representing the potential for the gas to affect global climate relative to the potential of carbon dioxide (CO_2). Because CO_2 is the reference gas for establishing GWP, by definition its GWP is 1. Although methane (CH_4) has a shorter atmospheric lifetime than carbon dioxide (CO_2), it has a 100-year GWP of 21; this means that CH_4 has 21 times more effect on global warming than CO_2 on a molecule-by-molecule basis. For purposes of reporting GHG emissions, all GHGs are converted to a common factor and reported as CO_2 equivalent (CO_2E).

The GWP is officially defined as (U.S. Environmental Protection Agency [U.S. EPA] 2010):

> The cumulative radiative forcing – both direct and indirect effects – integrated over a period of time from the emission of a unit mass of gas relative to some reference gas.

Although there are dozens of GHGs, state law (Health & Safety Code, §38505(g)) defines GHGs as the following seven compounds: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen triflouride (NF_3). Of these gases, CO_2, CH_4, and N_2O are produced by both biogenic and anthropogenic sources, and are the GHGs of primary concern in this analysis. The remaining gases occur as the result of industrial processes, such as refrigeration, aluminum production, semiconductor manufacture, and insulation in electric power transmission and distribution equipment, and are not of primary concern to this analysis.

1.1.2 Sources of GHG Emissions

The main sources of GHG emissions and the major sectors identified for emissions reductions strategies by CARB include transportation, electric power, residential, commercial and, industrial land uses, recycling and waste, high global warming potential sources, agriculture, and forestry. Two of these GHG emission sectors account for the majority of GHG emissions generated within California: transportation and electric power.

The transportation sector includes the GHG emissions associated with on-road vehicles, off-road vehicles, aviation, ships, and rail. GHG emissions from on-road and off-road vehicles are generated from the engines' combustion of fossil fuels and thus are typically estimated based on fuel type, fuel quantity consumed and vehicle miles traveled (VMT). CO_2 emissions account for the majority of GHG emissions from mobile sources and are directly related to the quantity of fuel combusted, while CH_4 and N_2O emissions depend more on the emissions-control technologies employed in the vehicle and distance traveled.

Emissions from the electric power sector, as measured statewide, represent the GHG emissions associated with use and production of electrical energy, including electricity generated out of state. Electricity use is associated with fulfilling commercial, residential and industrial energy needs, as well as with collecting, treating, storing, and distributing water, wastewater, and solid waste.

Direct GHG emissions from the commercial and residential sector include area sources such as landscape maintenance equipment, fireplaces, and natural gas consumption for space and water heating. Indirect GHG emissions are also generated off-site at electricity-generating plants to meet commercial and residential electricity demand for heating, cooling, ventilating, lighting and appliance needs. At the state level, these indirect electricity emissions are counted in the electric power sector. At the project level, both the electricity and natural gas needs of a proposed project are counted in the project's operational emissions estimates.

GHG emissions associated with industrial land uses, such as manufacturing plants and refineries, are predominantly comprised of stationary sources (e.g., boilers and engines) associated with industrial processes.

The recycling and waste sector represents the GHG emissions associated with operations at waste management facilities and landfills. GHG emissions are generated from solid waste disposal (including emissions associated with anaerobic and aerobic decomposition that primarily produce CH_4 and CO_2 emissions, respectively) and alternative daily cover (i.e., organic material used to cover waste piles, which also decompose and generate GHG emissions).

Examples of high global warming potential GHG sources include refrigerants (e.g., HFCs), industrial gases (e.g., PFCs and NF_3), and electrical insulation (e.g., SF_6). Although these GHGs are typically generated in much smaller quantities than CO_2, their high GWP results in considerable CO_2E statewide.

The agriculture sector represents the GHG emissions associated with agricultural processes as generated through the use of off-road farm equipment, irrigation pumps, residue burning, livestock, and fertilizer volatilization.

GHG emissions associated with the forestry sector include emissions from forest and rangeland fires and other disturbances such as pest damage, timber harvesting, wood waste decomposition, and other sources. CARB also tracks sinks or sequestration (i.e., the removal of CO_2) associated with forestry.

1.1.3 Potential Environmental Effects of Global Climate Change

According to the California Natural Resources Agency's *California Climate Adaptation Strategy* (2009), California should anticipate hotter and drier conditions, reduced winter snow, increased winter rain, and accelerating sea level rise. Extreme weather events, such as heat waves, wildfires, droughts, and floods are expected to become more common. By 2050, temperatures are projected to increase by 1.8 to 5.4 degrees Fahrenheit (°F) statewide. These climate changes will affect public health, water supply, food production, and ecosystems health. Such effects are briefly summarized in the following sections.

1.1.3.1 Public Health

Climate change can trigger a range of public health effects. Extreme heat waves, increases in pollen, more frequent wildfires, and changes in the spread of vector-borne diseases represent threats to the public health (Intergovernmental Panel on Climate Change [IPCC]

2007b). Climate change can also impact public health through changes to food supply, water systems, and shelter.

Health effects of increased temperature include heat exhaustion, heat stroke, and exacerbating existing cardiovascular and respiratory diseases, diabetes, nervous system disorders, emphysema, and epilepsy. Climate change can also promote the formation of ground-level pollutants, such as ozone and particulate matter, which have been shown to have adverse health effects, particularly among sensitive populations (IPCC 2007b).

1.1.3.2 Water

California can expect a 12 to 35 percent decrease in precipitation levels by mid-century, along with increased evaporation from higher temperatures (California Natural Resources Agency 2009). Snowpack serves a critical role in California's water supply. With increased temperatures, decreases in winter snow, and increases in winter rain, storage, and conveyance of water supply will become more of a challenge.

The average early spring snowpack runoff has decreased by about 10 percent over the last century. The Sierra Nevada snowpack is projected to decrease by 25 to 40 percent by 2050 compared to its mid-twentieth century average (California Natural Resources Agency 2009). The loss of snowpack would also hamper hydropower generation and snow-related recreational activities. Over the recent decades of the twenty-first century there has been a tendency for a lower spring snow pack grows. These lower amounts equate to a 60 percent loss in the measured volume available water resources from the Sierra Nevada by 2100 (Scripps Institute of Oceanography 2012).

1.1.3.3 Sea Level Rise

Rising sea levels, more intense coastal storms, and warmer water temperatures will increasingly threaten the state's coastal regions. Recent estimates suggest sea level rise of up to 55 inches by the end of this century (Cal Adapt 2013). Sea level rise of this magnitude would inundate coastal areas with salt water, accelerate coastal erosion, threaten levees and inland water systems, and disrupt natural habitats. An influx of saltwater would degrade California's estuaries, wetlands, and groundwater aquifers.

Saltwater intrusion caused by rising sea levels is a major threat to water quality within the southern edge of the Sacramento/San Joaquin River Delta. Saltwater intrusion will reduce water supply for plants, wildlife, agriculture, and metropolitan use. The Delta accounts for a portion of San Diego County's water supply and is important to the state as a whole (Cal Adapt 2013).

1.1.3.4 Agriculture

Increased GHG emissions are expected to cause widespread changes to agriculture, reducing the quantity and quality of agricultural products statewide. Reductions in available water supply to support agriculture will impact production. Although higher CO_2 levels can stimulate plant production and increase plant water-use efficiency, farmers will face greater water demand for crops and a less reliable water supply as temperatures rise.

Rising temperatures promote ozone formation, which will, in turn, make plants more susceptible to disease and pests and interfere with plant growth. Plant growth tends to be slow at low temperatures and increase up to a certain point with rising temperatures. Faster growth, however, can result in less-than-optimal development for many crops, thus decreasing the quantity and quality of yield for a number of agricultural products.

1.1.3.5 Ecosystems and Habitats

Climate change is anticipated to adversely affect biological resources in a number of ways. Various temperature-sensitive plant and animal species would have to adapt to warmer temperatures or shift their geographic range, which may not be feasible in certain instances. Species migration and invasions will alter species interactions. Longer fire seasons will affect vegetation and help to spread invasive species. Sea level rise may wipe out critical habitat for coastal species (IPCC 2007b, Ackerly 2012).

The timing and amounts of water released from reservoirs and diverted from streams are constrained by their effects on various native fish, including rare species. Several potential hydrological changes associated with global climate change could influence the ecology of aquatic life and have several negative effects on cold-water fish. If climate change raises air temperature by just a few degrees, this could raise the water temperatures above the tolerance of salmon and trout in many streams, favoring non-native fish, such as sunfish and carp. Unsuitable summer temperatures would be particularly problematic for many of the threatened and endangered fish that spend summers in cold-water streams, either as adults, juveniles, or both (IPCC 2007b, Ackerly 2012).

1.1.3.6 Wildfires

Climate change is predicted to increase the number of wildfires and the acreage affected. Wildfire occurrence statewide could increase from 57 percent to 169 percent by 2085, depending on the emissions scenario, and events are predicted be more severe (California Natural Resources Agency 2009). The wildfire season is already increasing in intensity, starting sooner, and lasting longer (California EPA [CalEPA] 2013).

1.2 Project Description

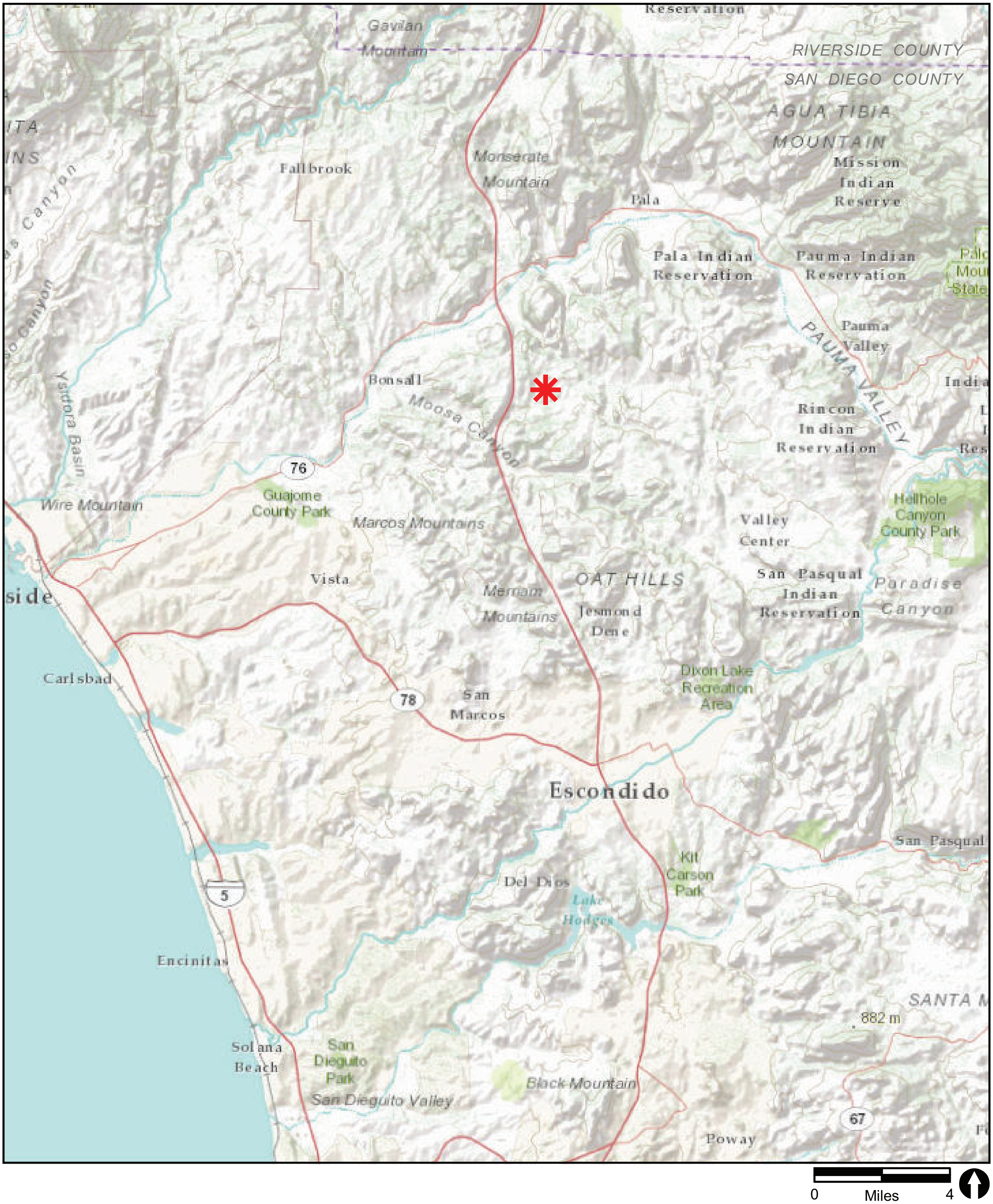
The project would consist of a mix of residential, commercial, and institutional uses, along with parks and open space. Specifically, the project would include 90,000 square feet of commercial, office and retail uses, including a 50-room country inn; 903 traditional single-family detached residences; 164 single-family attached residences; 211 residential units within commercial mixed-use areas; 468 age-restricted residences within a senior citizen's neighborhood; necessary facilities and amenities to serve the senior population (including a senior community center, and 200-bed group care facility); and a 2.0-acre Community Purpose Facilities (CPF) area that would be comprised of a private recreational facility and could include a fire station, with the total area of both not to exceed 40,000 square feet. The project also proposes a school site (K-8); and public and private neighborhood parks, a private recreational facility, and other recreational amenities. The mixed-use, commercial, and civic uses, with parks, form a Town Center and two Neighborhood Centers, to which residents can walk for various social and commercial needs.

Also planned within the project site are a RF, a WRF, and other supporting infrastructure. Open space is proposed to retain some of the existing citrus and avocado groves, and allows 104.1 acres of sensitive resources including biological/wetland habitat.

The project application includes a Specific Plan (SP12-001), a General Plan Amendment (GPA 12-001), a Rezone (REZ 12-003), a Master Tentative Map (TM 5571 RPL 4), an implementing Tentative Map for Phase 1 (TM 5572 RPL 4), one site plan (S12-018 for Parks), and a MUP for the WRF (MUP 12-005). The project would be implemented in five phases. Additional discretionary permits may be needed to implement latter phases, as identified in the Specific Plan.

1.2.1 Project Location

The project site is located in an unincorporated portion of San Diego County in the westernmost portion of the Valley Center Community Plan Area and easternmost portion of the Bonsall Community Plan Area, and adjacent to I-15 and Old Highway 395, as illustrated on Figures 1 and 2. From the northwest project corner, West Lilac Road serves as the northern boundary of the project site, while Rodriguez Road serves generally as the project boundary to the south and east. From the southwest project corner, the western boundary of the project runs along Old Highway 395/Shirey Road and extends to Standell Lane. From there, the project site extends back to Shirey Road, which serves as the northwestern project boundary.



Project Location

FIGURE 1

Regional Location

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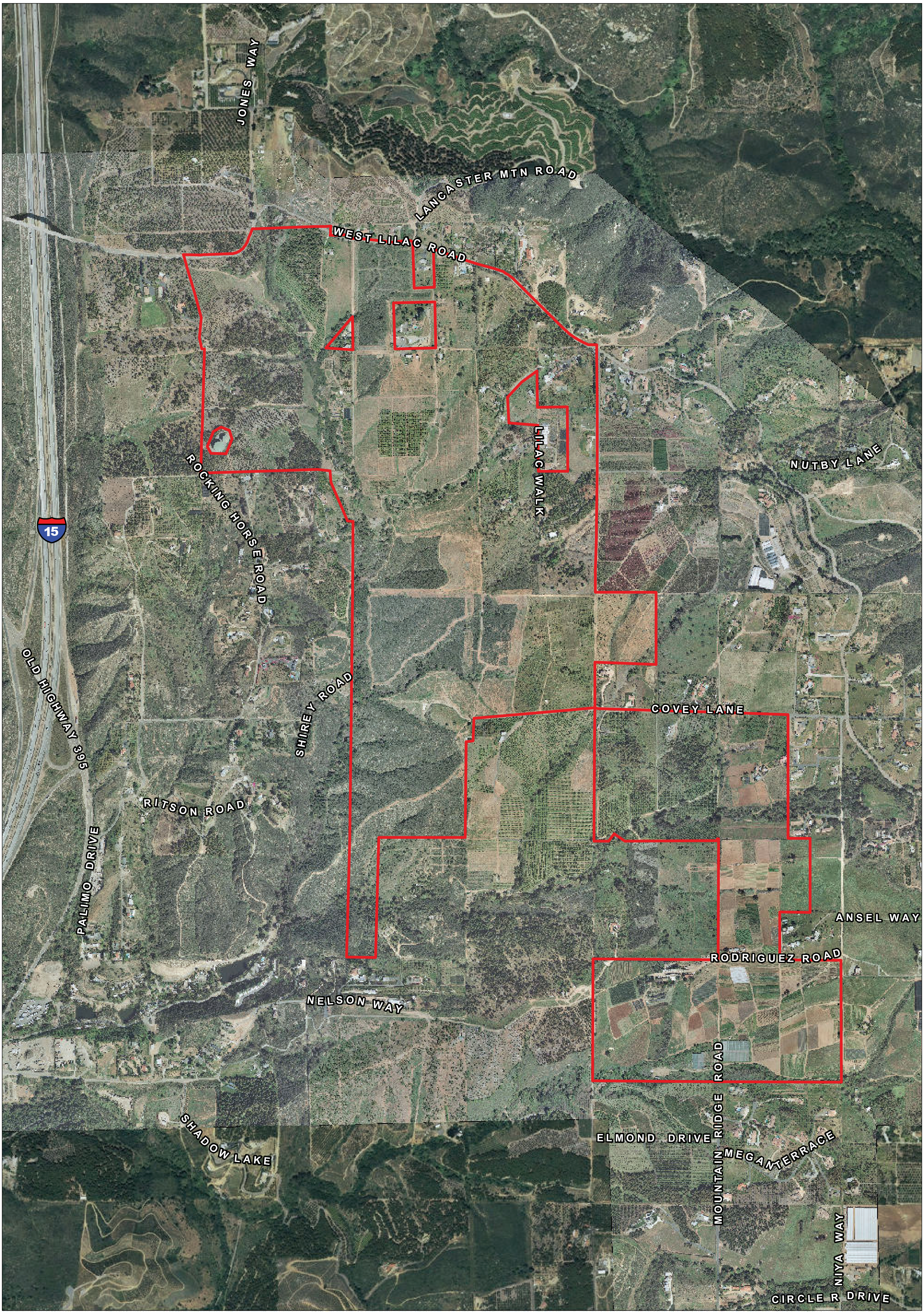

Project Boundary

FIGURE 2

Project Location on an Aerial Photograph

RECON

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1.2.2 Project's Component Parts

1.2.2.1 Requested Approvals

In order to develop the proposed project, a number of project approvals are requested from the County of San Diego. These include an amendment to the Regional Land Use Element Map, an amendment to the Valley Center Community Plan, an amendment to the Bonsall Community Plan, an amendment to the Regional Mobility Element, a rezone, adoption of the Lilac Hills Ranch Specific Plan (discussed further below), two tentative maps, two site plans, and a major use permit.

1.2.2.2 Specific Plan

This Specific Plan (SP12-001) provides the guidelines for implementation of the project, including future approvals and improvement plans, and establishes permitted land uses, densities, maximum number of residential units, required public facilities, and phasing and implementation mechanisms, and demonstrates compliance with applicable County policies. In addition to establishing regulations and zoning for the proposed planning areas, the Specific Plan also sets forth guidelines for the character and design of the project site, including architectural and landscape design guidelines.

a. Specific Plan Planning Areas

The project would be implemented in five phases, as discussed below. Table 2 provides a summary of the planning areas by category and their associated zoning.

TABLE 2
PLANNING AREA SUMMARY

Land Use	Planning Areas	Gross Acreage	Dwelling Units/ Square Feet (s.f.)
Single-family Detached	SFD	156.9	903
Single-family Senior	SFS	76.9	468
Single-family Attached	SFA	7.9	164
Group Care	GC	6.5	N/A
Commercial and Mixed-Use	C	15.3	211/ (90,000 s.f.)
K-8 School Site	S	12.0	N/A
Institutional Use	I	10.0	N/A
Parks - Dedicated to County	P10	13.5	N/A
Parks - HOA	P	10.1	N/A
Community Purpose Facility	CPF	2.0	N/A
Biological Open Space	OS	104.1	N/A
Common Areas/Agricultural Buffers	--	20.3	N/A
Manufactured Slopes	--	68.2	N/A
Circulating and Non-Circulating Roads	--	83.3	N/A
Water Reclamation Facility	WRF	2.4	N/A
Recycling Facility/Trail Head/Staging Area	RF	0.6	N/A
Detention Basins	DB	7.9	N/A
Wet Weather Storage	WWS	8.1	N/A
TOTAL		**608**	**1,746**

The Specific Plan map (Figure 3) shows the community divided into multiple planning areas with types of land uses ranging from single-family residential to biological open space. The phasing map (Figure 4) shows how the community has been divided into five phases with Phase 1 at the northeast corner and Phase 5 in the southeast corner of the community.

Phase 1 encompasses 121.5 acres and would be located in the northern portion of the project site, adjacent to West Lilac Road. This area would include 352 single-family detached units, along with 4.5 acres of public pocket park(s).

Phase 2 would be located just south of Phase 1, is the only Phase which is entirely surrounded by the other phases of the project (Phases 1 and 3), and is not adjacent to any existing homes or parcels. The 89.6-acre area would include the location of the Town Center and a maximum of approximately 196 single-family detached units, 59 single-family attached units, and 211 mixed-use residential units; 80,000 square feet of commercial space; and 0.8 acres of park, and a 2.0-acre Village Green. The RF would also be located within this phase, south of the Town Center.

Map Source: Vance and Associates, 2014

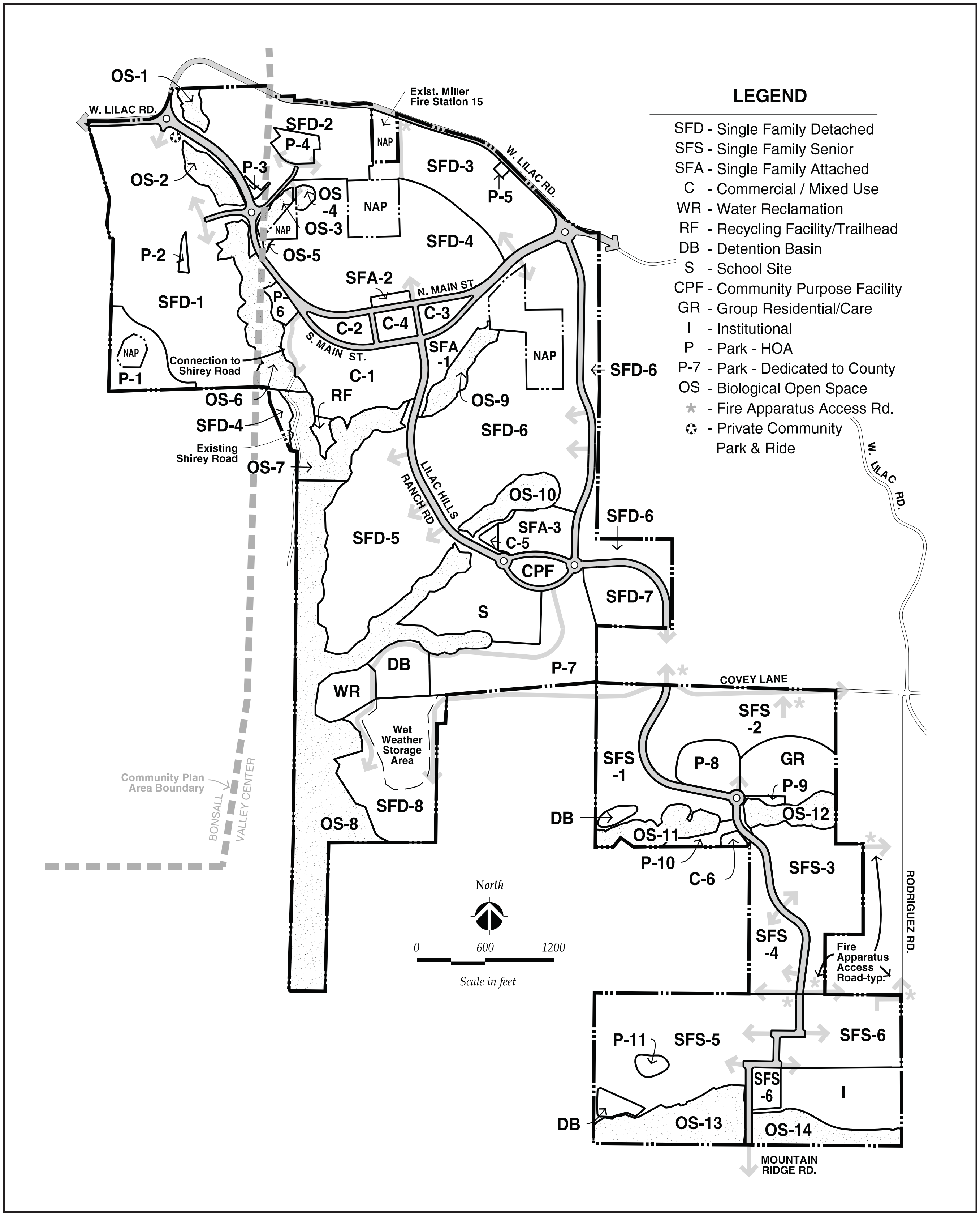

FIGURE 3

Specific Plan Map

RECON

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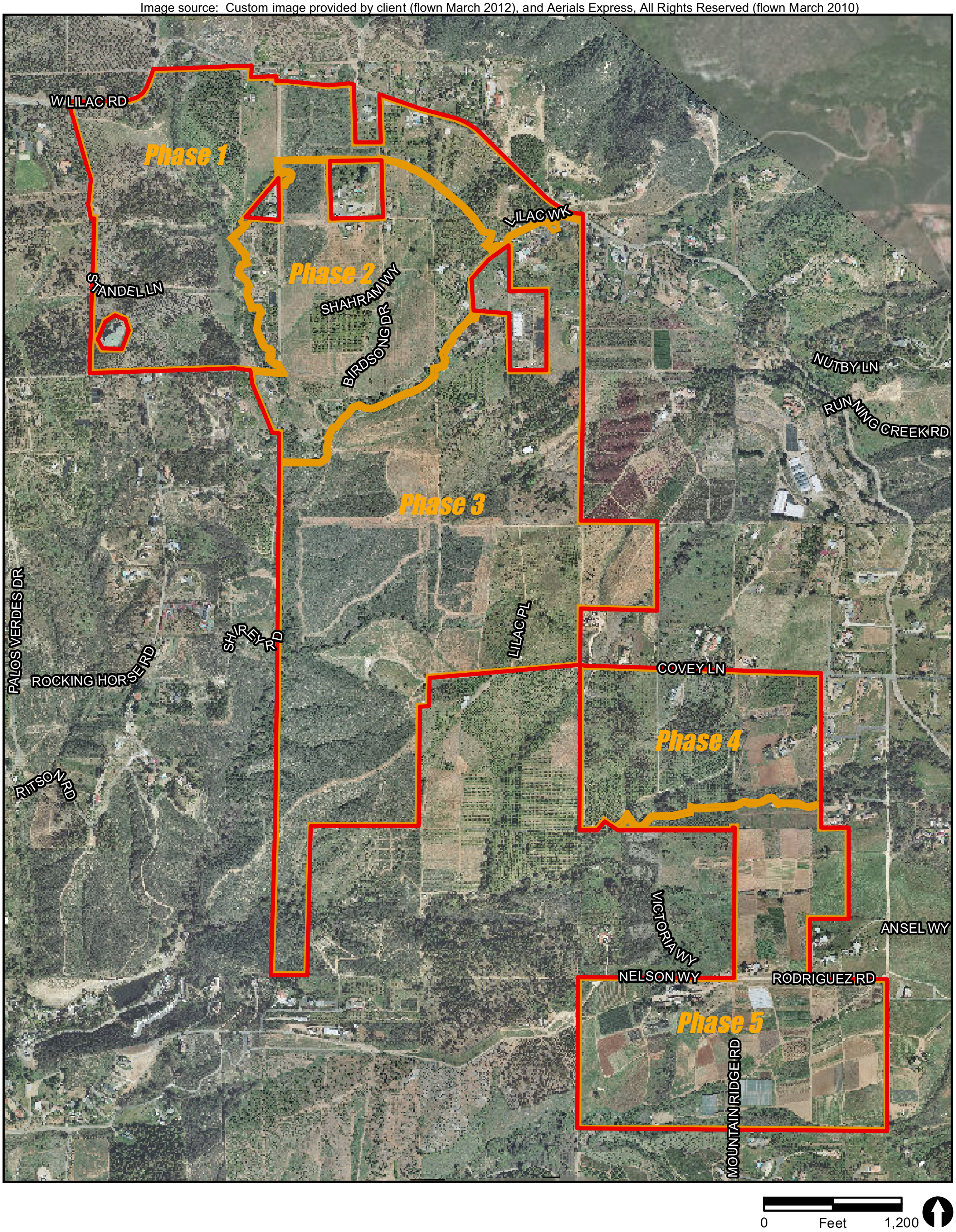
Image source: Custom image provided by client (flown March 2012), and Aerials Express, All Rights Reserved (flown March 2010)



Project Boundary

Phase Boundaries

FIGURE 4

Project Phases

RECON

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Phase 3 encompasses 223 acres and would be located directly south of Phase 2. This phase would include the construction of a maximum of 355 single-family detached and 105 single-family attached dwelling units and 7,500 square feet of commercial space. Also located within Phase 3 would be a 2.0-acre Community Purpose Facility area composed of a fire station and private recreational center not to exceed 40,000 square feet, combined. The WRF, a detention basin, and a 13.5-acre public park are also included with Phase 3.

Phase 4 would be located southeast of Phase 3. A total of 171 age-restricted/single-family detached homes and 2,500 square feet of commercial uses are proposed on 61.5 acres. Primary access to Phase 4 would be via Lilac Hills Ranch Road from Phase 3. Covey Lane would provide alternative access, and secondary emergency access would be provided via Street “B”, connecting to Rodriguez Road on the east. Also proposed within Phase 4 are a 3.3-acre senior center, a private park, a 200-unit Group Care facility (these units are permitted to have small private kitchens in addition to the facility group kitchen), a half-acre pocket park, and a detention basin.

Phase 5 would be located directly south of Phase 4. Phase 5 would include 297 age-restricted/single-family senior detached homes, 2,500 square feet of commercial space, and 10.0 acres for a religious/institutional use. Also included in Phase 5 is a detention basin. Primary access would be from a connection to Lilac Hills Ranch Road constructed in Phase 4 to the north, and a secondary fire apparatus access road would be provided via Rodriguez Road to the east and Mountain Ridge Road to the south for the Institutional parcel. Mountain Ridge Road is planned to be a gated road that will be accessible only by a portion of Phase 5 residence and opened during emergencies to facilitate evacuation of residents in the area during an emergency.

b. Construction

Infrastructure

Required roadway improvements and storm drains would be constructed in phases to ensure that improvements are in place at the time of need. The Specific Plan and Traffic Impact Study prepared for the project detail when roadway improvements occur in relation to residential occupancies of the phases. Water and wastewater facilities, along with dry utilities, would be phased as the residential units are occupied.

On-Site

The project would require on-site grading and improvements, including fuel modification zones, on 505.3 acres of the site, as depicted on the conceptual grading plan. Both cuts and fills are proposed within each grading area. Fill material would be transferred between the areas as required. Fill material would be transferred between the areas as required. Primary, or backbone, roadways would be constructed immediately following the grading stage of each construction phase, and additional on-site roadways, as traffic demand requires.

All grading would be balanced on-site. The maximum (worst case) grading/construction conditions are based on the assumption that 10 acres per day per phase would be actively graded[1]. Rock crushing would be required and would occur on-site, as needed, for continuous periods of less than 30 days.

Blasting would be required for several areas within the project site. Deep blasting (greater than 50 feet in depth) would occur in one location within the project site, near the detention basin in Phase 3. Blasting in this location is anticipated to remove 1,500 cubic yards (cy) of material. Moderate depth blasting (30–40 feet below existing grade) would occur in several areas across the site and occur within each phase. Blasting in these locations is anticipated to remove 24,000 cy of material. Shallow blasting would occur in two locations (Phases 1 and 4) and would remove approximately 28,000 cy of material. In total, between 1 to 2 percent of the total volume of material (a total of approximately 81,400 cy) to be moved would be the result of blasting. The blasting material is anticipated to be ammonium nitrate and fuel oil (ANFO), which is typically requires 1 pound of explosive to excavate 1 cy of rock (National Park Service [NPS] 1999). It is estimated that each blast would excavate 10,000 cy of rock material. It is estimated this would require 10,000 pounds of ANFO per blast with a total of 8 blasts over the life of the project for a total of 80,000 pounds of explosive.

Grading would be balanced with an estimated 4.07 million cy of cut and fill (less than 2,300 cy per home), without the need for export or import of soil. The majority of cut and fill slopes would be approximately 10 feet, and approximately 85 percent of all cubic yardage moved would be less than 20 feet deep. The grading plan also includes three hydromodification basins, located throughout the project site.

On-site grading quantities by phase are shown in Table 3, below. A detailed grading plan has been prepared for only Phase 1, in conjunction with the Tentative Map. Grading plans also would be required in conjunction with Tentative Maps for future phases.

[1]This is based on a 50,000 cubic yard a day cut, transport, and spread: 50,000 cy/27=X/10 ft=Y/43,560 sq ft =Z acres * 3 activities = ~10 acres, then assume a max of two crews working on site for 20.

TABLE 3
GRADING QUANTITIES BY PHASE (cy)

Phase	Cut	Fill	Net
1	715,000	860,000	(145,000)
2	635,000	830,000	(195,000)
3	1,815,000	1,260,000	555,000
4	295,000	420,000	(125,000)
5	610,000	700,000	(90,000)
TOTAL	**4,070,000**	**4,070,000**	**-**

cy = cubic yards

Based on information provided by the project applicant, the worst-case daily grading scenario for any development phase would be a maximum of 10 to 20 acres a day. It is estimated that grading would require 6 months for Phases 1, 2, 4, and 5, and 15 months for Phase 3. To determine a reasonable worst-case condition for assessing impacts, the average daily movement of material was calculated based on the total cut and fill by phase divided over the period of grading. Based on this calculation, the phase with the highest average daily volume necessary to balance all cut and fill would be Phase 1 with an average movement of 12,353 cy per day. It is projected that blasting would be required for approximately 1 to 2 percent of the total volume and would occur at various times during each phase as the grading reaches an appropriate depth.

c. Off-site Roadway Improvements

The project would improve the following off-site roadways:

- West Lilac Road
- Gopher Canyon Road/I-15 Northbound Ramps
- Gopher Canyon Road/I-15 Southbound Ramps
- Mountain Ridge Road to Circle R Drive
- Covey Lane to West Lilac Road
- Street “B” to Rodriguez Road
- Rodriguez Road from the project site to Covey Lane

d. Construction Vehicles and Equipment

A variety of equipment would be used during the construction of the project. However, the majority of equipment would be Tier III, with the exception of concrete/industrial saws, generator sets, welders, air compressors, or for construction equipment where Tier III, or higher, is not available, operational for eight hours per day. The maximum equipment that would be operational at any one particular time includes: 1 concrete/industrial saw, 4 tractors/loaders/backhoes, 6 crawler tractors, 5 rubber-tired loaders, 2 bore/drill rigs, 1 grader, 8 scrapers, 1 crane, 3 forklifts, 2 generator sets, 1 welder, 2 pavers, 2 paving equipment, 2 rollers, and 2 air compressors.

Blasting operations would require three to four drill rigs working per day. To accomplish 81,400 cy of cut, blasting would occur over approximately 9 days during the entire build-out of the project (assuming each blast can generate approximately 10,000 cy per blast). One or two hoe rams would be working on-site for the majority of grading, along with a mobile rock crusher. The mobile rock crusher would be utilized a total of 2 to 3 months maximum, spread out over 6 to 12 months (may move in and out as needed), per phase.

Construction vehicles would access the project site via I-15, Old Highway 395, and West Lilac Road. Construction staging areas would be located within areas proposed for grading within the project site. The grading equipment to be used for the project would be brought to the site at the beginning of the grading period and would remain on-site until the completion of the grading period (e.g., equipment would not be hauled to and from the site daily). A traffic control plan, approved prior to grading, would be prepared to minimize traffic impacts to surrounding communities.

1.2.3 Project Features That Affect GHG Emissions

This subchapter describes the elements of the project that would or could generate GHG emissions, as well as the design and location features of the project that will serve to reduce GHG emissions.

1.2.3.1 Project Elements That Generate GHGs

The project includes a Specific Plan. Its adoption would not, in itself, generate GHG emissions. However, implementation of the land uses proposed in the Specific Plan would generate GHG emissions. Project implementation would be associated with the following sources of GHG emissions:

- Construction-related emissions; and
- Operational emissions associated with: mobile sources; on-site fuel combustion for space and water heating; landscape maintenance equipment; fireplaces; off-site emissions at utility providers associated with the electricity, water and wastewater demands; and solid waste generation and disposal.

The timeframe for implementation of project elements would occur in five phases over several years. Full buildout was modeled in 2020. Year 2020 was used as a conservative point in time since emissions from future emissions would be reduced through continuing emissions regulations.

1.2.3.2 Project Elements That Reduce GHGs

The project includes several siting, design, and operational features that would have the effect of reducing potential GHG emissions beyond what is required by existing law. The quantification of these reductions is provided in Chapter 5.0 of this report. Chapter 8.0 includes a recap of the project's GHG-reducing design features along with enforcement provisions.

a. Project Design and Operation Measures

The project has been designed and will be operated to include measures to reduce GHG emissions from construction, energy use, water use, area sources, and waste disposal.

Use Tier III Construction Equipment

The project's Specific Plan requires each project phase to use a minimum of Tier III U.S. EPA/CARB-certified construction equipment, for the majority of construction equipment used. Specifically, Tier III, or higher, construction equipment would be used, with the exception of concrete/industrial saws, generator sets, welders, air compressors, or for construction equipment where Tier III, or higher, is not available. Tier III equipment may be replaced with Tier IV equipment in the final phases of construction. This project design feature was included in the modeling of construction emissions.

Common construction equipment is regulated by the U.S. EPA non-road diesel engine standards. These standards establish gas exhaust emission Tier I through IV standards, with the higher tiers being increasingly more stringent. The Tier III standards are met through advanced engine design and fuel controls, with limited use of exhaust gas after treatment (oxidation catalysts), and are purported to reduce Tier I emissions by one-third. The Tier IV emission standards are to be phased-in over the period of 2008–2015 and will achieve up to a 1/20 emission reduction through the use of control technologies including advanced exhaust gas after treatment (U.S. EPA 2012 and Komatsu 2006). Although primarily intended to reduce criteria pollutant emissions, by using more fuel-efficient and cleaner-burning Tier III and IV construction equipment, the GHG emissions from such equipment may also be reduced.

The condition to use minimum Tier III construction equipment is required by the Specific Plan and would be recorded on the demolition/grading permits and construction drawings, and incorporated into the construction contract. The construction contractor shall be responsible for implementing this requirement during construction. The County Building Official shall verify that the construction drawings have incorporated the minimum Tier III recommendations and would not issue a grading or building permit prior to this determination.

Exceed 2008 Title 24 Energy Efficiency by 30 Percent

The proposed project would achieve a minimum of 30 percent exceedance or equivalent over the 2008 Title 24, Part 6 energy efficiency standards. This performance measure would be required by the Specific Plan for each project phase and has been included in the modeling as a project design feature.

The current 2013 Title 24, Part 6 energy efficiency standards became effective July 1, 2014. However, this project design feature references an increase in energy efficiency relative to the 2008 Title 24, Part 6 energy efficiency standards because the GHG emission projections provided in this analysis were calculated using California Emissions Estimator Model (CalEEMod) Version 2011.1.1 which calculates energy emissions using 2008 Title 24 standards. The 2013 Energy Code has been estimated to achieve a 25 percent increase in residential and 30 percent in non-residential energy efficiencies over the 2008 Title 24 standards (California Energy Commission [CEC] 2013). Thus, a 30 percent exceeda~~e~~nce over the 2008 Title 24, Part 6 energy efficiency standards is estimated to be a 5 percent increase in residential energy efficiencies over the 2013 Title 24 standards and non-residential energy efficiencies equivalent to the 2013 Title 24 standards.

Additionally, subsequent versions of Title 24, Part 6 are anticipated to further increase energy efficiency requirements, and the proposed project would be subject to the current version of Title 24 at the time of building permit issuance, which may exceed the requirements of this project design feature. For example, it is anticipated that Title 24, Part 6 will require new residential construction to achieve net zero energy consumption by 2020 and any residential structures constructed after that requirement would be required to meet that standard regardless of the requirements of this design feature (CARB 2014a~~b~~).

Energy efficiency and water conservation measures would also be conditioned on the building permits and construction drawings and compliance would be demonstrated through the standard Title 24 compliance reporting process.

Solar Photovoltaic System

As identified in the Specific Plan, the will install 2,000 kilowatts (kW) of solar photovoltaic (PV) systems, which is estimated to provide 3,400,000 kilowatts per hour (kWh), calculated as approximately 22 percent of the project's total electricity needs at buildout. This project design feature was included in the modeling of project emissions. Solar PV systems may be installed on the roofs of the community centers, commercial uses, and/or multi-family and mixed-use development totaling 90,000 square feet with solar PV systems also being installed on approximately 500 single-family residences, as necessary, to achieve the 2,000 kW. Alternately, the project may install the 2,000 kW via 2 kW systems on 1,000 homes. The actual capacity and/or conversion efficiency of the photovoltaic panels may alter the actual number of roofs or non-residential roof space requirements to meet the annual 3,400,000 kWh requirement at project build-out. The remaining single-family residences would be pre-wired and pre-plumed for solar PV and solar thermal systems.

Install High-efficiency Lighting

The project's Specific Plan would require all project phases to install high-efficiency lighting in all public street and area lighting to achieve an overall minimum 15 percent lighting energy reduction. Area lighting is considered to be any common space lighting (e.g., parks, sidewalks, streets, landscaping, etc.) that is not regulated by Title 24. This project design feature was included in the modeling of project emissions.

Energy Star Appliances

The project's Specific Plan would require the installation and use of Energy Star appliances (including clothes washers, dish washers, fans, and refrigerators) in 95 percent of the single-family, mixed-use residential, and senior community residential uses. Additionally, Energy Star, or equivalent, ventilation fans would be installed in the proposed hotel. This project design feature was included in the modeling of project emissions.

Smart Meters

The project's Specific Plan would require the installation and use of Smart Meters. These meters provide utility customers with access to details on energy use and cost information, pricing programs based on peak energy demand, and the ability to program home appliances and devices to respond to energy use preferences based on cost, comfort, and convenience. Smart Meters increase awareness thus reducing energy cost and consumption. However, because there is no guidance on quantifying GHG emission reductions due to the installation and use of Smart Meters, the emission reduction benefits were not quantified in this analysis.

Electric Landscaping Equipment

The project's Specific Plan would require that only electric-powered landscaping equipment be used on property managed by the HOA. As a conservative analysis, 5 percent of the landscaping equipment was modeled as electric-powered.

Install Only Natural Gas (No Wood) Fireplaces

The project's Specific Plan includes a requirement that all fireplaces installed be natural gas or equivalent non-wood burning fireplaces. Additionally, the conversion to wood-burning fireplaces would be specifically prohibited by the HOA's by-laws, as well as the Covenants, Conditions and Restrictions associated with each lot.

Reduce Waste Disposal/Institute Recycling and Composting Services

The project's Specific Plan would provide the opportunity for recycling and composting services for all residences, in order to achieve the equivalent of a 20 percent reduction in waste disposal, relative to waste disposal rates identified by CalRecycle and used in CalEEMod (CAPCOA 2011), through the project's siting of an on-site RF proximate to the other waste-generating land uses, e.g., residences. This project design feature was included in the modeling of project emissions.

The RF would be constructed south of the Town Center. It would be owned and operated by a licensed private operator. The purpose of the facility would be to supplement recycling opportunities for project residents in addition to the weekly collection of waste, recycling material and green waste provided by franchised waste haulers, as required by the County of San Diego Solid Waste Management Ordinance and state law. The facility would include temporary roll-off bins or storage containers where recyclables and/or green waste generated from project residents may be consolidated for efficient off-site processing. If economically viable, a buy-back center may be opened at this location for residents to redeem California Redemption Value containers.

The facility would consist of a building and storage yard for truck and equipment storage. Composting would be done inside the building and the resultant material used by residents and the HOA for landscaping. The HOA would require professional landscaping companies maintaining HOA lots to utilize this facility for all clippings and trimmings. This facility would also be available for use by residents in the area surrounding the project site.

Reduce Potable Water Consumption

The project's Specific Plan would require that all project phases be designed to achieve a minimum 20 percent reduction in indoor and outdoor water use. The project would achieve an interior water use reduction of approximately 20 percent through provision of low-flow faucets and fixtures and other conservation measures.

Additionally, to meet the wastewater treatment requirements of the project, the Valley Center Municipal Water District (VCMWD) is considering four alternatives: (1) sending all wastewater to the existing Lower Moosa Canyon Water Reclamation Facility (Moosa WRF) via a forcemain, (2) construction of a scalping plant on-site that would provide reclaimed water for on-site uses but send solids to Moosa WRF for treatment, (3) construction of a scalping plant on-site to serve the northern portion of the project with the southern portion sent to Moosa WRF, or (4) construction of a full WRF that would treat all wastewater and solids generated by the project.

The project also includes on-site water improvements to distribution lines as well as off-site water improvements that would include connections to existing potable water distribution as well as new on- and off-site connection and distribution lines to recycled water. Recycled water could be generated from the proposed on-site WRF, which would be treated to a tertiary level and could be used to irrigate common and agricultural areas throughout the project site. At least two sources of reclaimed water are potentially available to the site, 400 acre-feet per year could be made available from the Moosa WRF, and if the WRF is developed, the project could generate an estimated 286 acre-feet per year (Dexter Wilson 2013). The project's yearly exterior irrigation water demand is estimated to be 626 acre-feet per year; 160 acre-feet per year for exterior potable uses and 466 acre-feet per year for non-potable uses. Based on the Wastewater Management Alternatives Analysis for the project, the WRF would generate approximately 46 percent of the total exterior demand and 61 percent of the non-potable demand (Dexter Wilson 2013). If non-potable water was utilized from the Moosa WRF, approximately 86 percent of the exterior non-potable demand could be met or 64 percent of the total exterior demand.

The project proposes to use recycled water to irrigate common area landscaping, slopes, parks, school fields, and as the primary method for irrigation of the retained groves, thereby reducing the need for imported and potable water (which, without access to recycled water, is typically also used for irrigation). Irrigation water may also be available from existing on-site wells. Whether and how much recycled water would be used on-site would ultimately be up to VCMWD (which is required to approve the facility), and would be done in accordance with their Master Plan. The present projection by VCMWD is that all reclaimed water generated by the proposed facility can be put to beneficial use on the project lands or be used to offset existing imported water demand somewhere else within the VCMWD service area. Potable water from the VCMWD would be the last choice of supply to meet irrigation needs.

As identified in the project's Specific Plan, the project also will comply with the County's design policies by incorporating and encouraging low-impact development and sustainable practices throughout the entire Specific Plan area, including future commercial development, residential common areas and individual homes.

Mixed-Use Development

The project proposes to provide a mix of residential and resident-serving commercial and civic uses. The non-residential uses include neighborhood-serving retail and restaurant uses, an elementary/middle school, church site, recreation center, neighborhood park, and a recycling center. All of these uses would be provided within one-half mile of proposed residential uses.

As identified in the project Specific Plan, a key project objective is to:

- Develop a community within San Diego County over the next few decades consistent with the Community Development Model by using the principles of Leadership in Energy and Environmental Design for Neighborhood Development (LEED-ND) or an equivalent for appropriate development and phasing of pedestrian-oriented mixed-use community where one does not currently exist for both new and existing residents.

By providing a variety of land uses proximate to each other, mixed-use development reduces the quantity and length of vehicle trips, thereby reducing VMT and the emission of GHGs associated with vehicle fuel combustion. This project design was included in the modeling of project emissions. Anticipated reductions in vehicle trips and trip lengths associated with mixed-use development are calculated by CalEEMod and are based on CAPCOA mitigation measures (CAPCOA 2010).

Increase Walking and Biking

The project proposes to provide an on-site network of pedestrian and bicycle paths, in a complete and interconnected network, where currently there are very limited bicycling and pedestrian facilities.

As identified in the project Specific Plan, two key objectives of the project are to:

- Provide a range of housing and lifestyle opportunities in a manner that encourages non-automotive mobility, and that provides public services and facilities.

- Provide a variety of recreational opportunities including parks for active and passive activities, and trails available to the public that connect the residential neighborhoods to the Town and neighborhood centers.

Thus, the project would be designed as a rural, bike and pedestrian-friendly community, with a centrally located Town Center and activity nodes located within a half-mile radius (a 20-minute walk) of the residential areas. Primary streetscapes would be designed to be pedestrian-oriented and contain tree-shaded walkways, pedestrian scaled lighting, and shortened or enhanced crosswalks.

The project also includes numerous trails, community pathways, bike lanes, and similar facilities throughout the project site. The project would include two bike lanes on Main Street through the Town Center. These bike lanes would provide a link for bicyclists to safely navigate the public road system in this part of Valley Center and provide a connection on the west to the Bonsall Community. Community pathways would be provided along Street ‘Z’, Main Street, and portions of Lilac Hills Ranch Road, south of Neighborhood Center North. By increasing walking and biking opportunities, reliance on automobile use is reduced, thereby reducing GHG emissions associated with vehicles fuel consumption. This project design was included in the modeling of project emissions. Anticipated reductions in vehicle trips and trip lengths associated with mixed-use development are calculated by CalEEMod and are based on CAPCOA mitigation measures (CAPCOA 2010).

b. Existing Regulatory Measures

The project's vehicle and energy GHG emissions would also be reduced as a result of several key existing federal and statewide regulations: the Light Duty Vehicle GHG Emissions Standards (including Pavley I and Low Emission Vehicle III" (LEV III) standards), the Low Carbon Fuel Standard (LCFS), the Renewable Portfolio Standard (RPS), and the Tire Pressure Program. These regulations are described in detail in subchapter 3.2.3.1. In brief, these regulations mandate improved vehicle engine design and low-carbon vehicle fuels that will reduce GHG emissions associated with fossil-fuel combustion, while the RPS promotes diversification of the state's electricity supply and decreased reliance on fossil fuel energy sources.

2.0 Environmental Setting

2.1 Existing Land Use and Surrounding Area

2.1.1 Surrounding Area

The project vicinity includes primarily agricultural, residential and open space uses. Agricultural uses are primarily citrus and avocado groves, but also include small vineyards, row crops, and nursery operations. Residential uses in the immediate vicinity (three miles from the project site) are primarily single-family homes on lots between 1 to 10 acres. Commercial uses (e.g., offices), industrial uses (e.g., rock processing and concrete batch plant), recreational vehicle campgrounds, and cattle grazing also occur in the area.

Transit services are not currently provided on or within a ¼ mile of the project site (Chen Ryan 2014). There are no neighborhood-serving uses such as grocery stores, restaurants, and retail in proximity to the site currently.

2.1.2 On-site Land Use and Physical Characteristics

The project site is generally characterized by relatively flat, marginal agricultural lands and gently rolling knolls, with steeper hillsides and ridges running north and south along the western edge. The project site is designated as semi-rural (Semi-Rural 10 and Semi-Rural SR-4), and zoned for Limited Agriculture (A70) and Rural Residential (RR). The primary land uses found on the project site are agricultural-related, with other uses consisting of open space and residential uses.

Agricultural lands cover the majority of the southeastern, east-central, and northern portions of the project area. The northern and central agricultural areas consist of orchard crops (primarily citrus and avocado) with some small areas of vineyard and nursery, while the southern concentrations of existing agricultural uses are primarily labor intensive row crops (vegetables and strawberries). An area used to produce stock for the commercial nursery business is located near the northwest part of the site. A total of 392.3 acres of agricultural lands exist on-site according to the biological technical report (RECON 2014), including 90.5 acres of row crops (vegetables and strawberries), 9.2 acres of nursery, 0.7 acre of vineyard, and 291.9 acres of orchard (citrus and avocado). Several buildings (approximately 16) exist within the project site associated with agricultural uses, including sheds, greenhouses and barns.

Twenty-two residences also exist on-site. The 22 residences and on-site agricultural operations (including the approximately 16 agricultural-associated buildings) would be removed from the project site to implement the proposed project. The existing residences are located on large lots scattered throughout the site. Based on the 2010 average Valley Center household size of 2.97 people (San Diego Association of Governments [SANDAG] 2010a), this roughly equates to an existing population of 66 people residing within the project site.

Wells occur in scattered locations across the site and are used to provide water to the orchards, vineyards, and other agricultural areas. Several man-made agricultural ponds that store water for irrigation purposes occur within the project area.

The project site includes approximately 145 acres of native open space. Native habitat occurs primarily along the drainage courses and on some of the steeper terrain on the western and southwestern portions of the project area. A total of 17 primary habitat types and vegetation communities were identified in the project survey area and buffer survey area (RECON 2014).

2.2 State and Local GHG Inventories

2.2.1 Statewide Inventory Data

CARB performs statewide GHG inventories. The inventory is divided into nine broad sectors of economic activity: agriculture, commercial, electricity generation, forestry, high GWP emitters, industrial, recycling and waste, residential, and transportation. Emissions are quantified in million metric tons of CO_2E ($MMTCO_2E$). Table 4 shows the estimated statewide GHG emissions for the years 1990, 2008, and 2011.

TABLE 4
CALIFORNIA GHG EMISSIONS BY SECTOR IN 1990, 2008 AND 2012

Sector	1990[1] Emissions in $MMTCO_2E$ (% total)[2]	2008[3] Emissions in $MMTCO_2E$ (% total)[2]	2012 Emissions in $MMTCO_2E$ (% total)[2]
Sources			
Agriculture	23.4 (5%)	37.99 (7%)	37.86 (7%)
Commercial	14.4 (3%)	13.37 (3%)	14.20 (3%)
Electricity Generation	110.6 (26%)	120.15 (25%)	95.09 (19%)
High GWP	--	12.87 (2%)	18.41 (3%)
Industrial	103.0 (24%)	87.54 (18%)	89.16 (21%)
Recycling and Waste	--	8.09 (1%)	8.49 (2%)
Residential	29.7 (7%)	29.07 (6%)	28.09 (7%)
Transportation	150.7 (35%)	178.02 (37%)	167.38 (38%)
Forestry (Net CO_2 flux)	-6.69	--	--
Not Specified	1.27	--	--
TOTAL	**426.6**	**487.10**	**458.68**

SOURCE: CARB 2007, 2014a
[1] 1990 data was retrieved from the CARB 2007 source.
[2] Percentages may not total 100 due to rounding.
[3] 2008 and 2012 data was retrieved from the CARB 2014b~~a~~ source.
[4] Reported emissions for key sectors. The inventory totals for 2008 and 2012 did not include Forestry or Not Specified sources.

As shown in Table 4, statewide GHG source emissions totaled 426.6 $MMTCO_2E$ in 1990, 487.10 $MMTCO_2E$ in 2008, and 458.68 $MMTCO_2E$ in 2012. Many factors affect year-to-year changes in GHG emissions, including economic activity, demographic influences, environmental conditions such as drought, and the impact of regulatory efforts to control GHG emissions. While CARB has adopted multiple GHG emission reduction measures, the effect of those reductions will not be seen until around 2015. According to CARB, most of the reductions since 2008 have been driven by economic factors (recession), previous energy efficiency actions, the renewable portfolio standard, and climate hydrology (CARB ~~2014a~~2014b). Transportation-related emissions consistently contribute the most GHG emissions, followed by electricity generation and industrial emissions.

The forestry sector is unique because it not only includes emissions associated with harvest, fire, and land use conversion (sources), but also includes removals of atmospheric CO_2 (sinks) by photosynthesis, which is then bound (sequestered) in plant tissues. However, estimates of CO_2 uptake and GHG emissions by processes occurring on forest, range, and other land types, such as urban forests, are not included in the current inventories as new research and analyses methods are required to better understand forest sector carbon accounting and the fundamental processes associated with sequestration and emissions (CARB 2014b~~a~~).

2.2.2 San Diego Countywide Inventory Data

A San Diego regional emissions inventory was prepared by the University of San Diego School of Law, Energy Policy Initiative Center (EPIC) and took into account the unique characteristics of the region. Their 2010 emissions inventory for San Diego is duplicated in Table 5. The sectors included in this inventory are somewhat different from those in the statewide inventory, which is based on the 2008 Scoping Plan categories.

TABLE 5
SAN DIEGO COUNTY GHG EMISSIONS BY SECTOR IN 2010

Sector	2010 Emissions in $MMTCO_2E$ (% total)[1]	
Agriculture/Forestry/Land Use	0.05	(0.2%)
Waste	0.6	(1.8%)
Electricity	8.3	(25.0%)
Natural Gas Consumption	2.9	(8.7%)
Industrial Processes & Products	1.8	(5.4%)
On-road Transportation	14.4	(43.4%)
Off-road Equipment & Vehicles	1.4	(4.2%)
Civil Aviation	1.9	(5.7%)
Rail	0.32	(1.0%)
Water-borne Navigation	0.1	(0.3%)
Other Fuels/Other	1.58	(4.8%)
Land Use Wildfires	0.28	(0.8%)
Development (Loss of Vegetation)	0.18	(0.5%)
Sequestration	(0.66)	(-0.5%)
TOTAL	**33.15**	

SOURCE: University of San Diego 2013.
[1]Percentages may not total 100 due to rounding.

Similar to the statewide emissions, transportation-related GHG emissions contributed the most countywide, followed by emissions associated with energy use. Transportation accounts for a higher proportion of GHG emissions in San Diego compared to the state, while electricity-related emissions represent the same proportion relative to the state as a whole. Industrial and agricultural emissions are substantially less represented in San Diego County compared to the state.

2.2.3 Project Site GHG Emissions

Current sources of on-site GHG emissions are associated with the vehicle use, energy use, water use, area sources (landscaping and other equipment use, stoves and fireplaces) and waste disposal practices of existing land uses. As identified above in subchapter 2.1.1, the project site is presently occupied primarily by agricultural uses, with 22 single-family homes scattered throughout the 608 acres at very low density.

Given the types of agricultural operations on-site (i.e., mostly orchard crops, some row crops, no livestock, no histosol or rice cultivation), current emissions of GHGs are mostly associated with off-road agricultural vehicles such as mowers, sprayers, tractors, balers, and tillers. Smaller amounts of GHGs are associated with fertilizer application and soil management. Conservatively, the agricultural emissions were not reported for on-site existing sources and uses due to the difficulty in securing reliable data.

Emissions due to the existing residential uses were quantified for year 2008 and 2020, as shown in Table 6. A comparison of the existing emissions to the proposed project emissions at build-out is provided in subchapter 6.1.

TABLE 6
ANNUAL ESTIMATED GHG EMISSIONS FOR EXISTING USES

Source	2008 Baseline Emissions ($MTCO_2E$)	2020 Projected Emissions ($MTCO_2E$)
Construction	--	--
Vehicles	392.54	292.83
Energy Use	95.26	86.59
Area Sources	52.70	58.54
Water Use	11.49	11.49
Solid Waste	11.75	11.75
TOTAL	**563.74**	**461.20**

The GHG emissions from 2008 include the 2008 SDG&E carbon intensity factors. They do not include vehicle GHG emission reductions due Pavley I or LCFS since these regulations are only reflected in emissions for scenario years 2011 and later.

The GHG emissions from 2020 reflect reductions from LCFS and Pavley I regulations included in the CalEEMod 2020 vehicle emission factors, the Initial RPS reduction calculated for 2020 (i.e., 20 percent renewable energy mix by 2020), the Tire Pressure Program, and LEV III standards. The projected emissions from existing sources and uses in 2020 are calculated to be lower than the existing emissions in 2008 and represent an 18.1 percent reduction from existing land uses by 2020, which is in line with the reduction anticipated by the state for existing land uses through regulatory action at the state and local level.

3.0 Regulatory Setting

This chapter identifies the most relevant federal, state, and local laws, rules, regulations, plans and policies that define the regulatory framework for climate change and reducing GHG emissions.

3.1 International/Federal

3.1.1 Intergovernmental Panel on Climate Change

In response to growing concern about pollutants in the upper atmosphere and the potential problem of climate change, the World Meteorological Organization and the United Nations Environment Programme (UNEP) established the IPCC in 1988. The IPCC was tasked with assessing the scientific, technical, and socioeconomic information relevant to understanding the scientific basis for human-induced climate change, its potential impacts, and options for adaptation and mitigation. IPCC reports provide scientific consensus on measurable changes to the climate; establish that these changes are caused by human activity; and identify that significant adverse impacts on the environment, the economy, and human health and welfare are unavoidable. As a member of the UNEP, the U.S. is a participant in the IPCC.

3.1.2 United Nations Framework Convention on Climate Change

In 1994, the United States joined a number of other nations in signing an international treaty known as the United Nations Framework Convention on Climate Change (UNFCCC). The UNFCCC recognized that global climate is a shared resource that can be affected by industrial and other emissions of GHGs and set an overall framework for intergovernmental efforts to tackle the challenges posed by global climate change. Under this treaty, governments agree to gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts; and cooperate with other nations in preparing for adaptation to the impacts of climate change (UNFCCC 2007).

3.1.3 Executive Office Climate Action Plan

The Executive Office has produced the President's Climate Action Plan, which includes goals of cutting carbon pollution and preparing for the impacts of climate change (Executive Office of the President 2013). Cutting carbon pollution is part of the President's goal to double renewable electricity generation by 2020, through accelerating clean energy permitting and expanding and modernizing the electric grid. The plan also states that the federal government will consume 20 percent of its electricity from renewable sources by 2020. This document was produced by the executive branch and has not passed through congressional channels.

3.1.3.1 GHG Emissions Intensity Reduction Programs

Towards the effort to reduce GHG emissions, in February 2002, the U.S. set a goal to reduce its GHG emissions intensity, which is the ratio of GHG emissions to economic output. In 2002, the U.S. GHG Emissions Intensity was 183 metric tons per million dollars of gross domestic product (U.S. EPA 2007). The goal established in February 2002 was to reduce this GHG emissions intensity by 18 percent by 2012 through the various GHG reduction programs.

One of these programs includes the Energy Star program that was first established in 1992 by the U.S. EPA and became a joint program with the U.S. Department of Energy in 1996. Energy Star is a program that labels energy efficient products with the Energy Star label. Energy Star enables consumers to choose energy-efficient and cost-saving products, with up to 30 percent energy savings over conventional appliances such as refrigerators, dishwashers, clothes washers, and fans.

Another key federal GHG reduction program is the Green Power Partnership program that establishes partnerships between the U.S. EPA, and companies and organizations that have bought or are considering buying green power (i.e., power generated from renewable energy sources). The U.S. EPA offers recognition and promotion to organizations that replace electricity consumption with green power.

3.1.4 U.S. EPA Authority to Regulate GHGs

On April 2, 2007, the U.S Supreme Court ruled that CO_2 is an air pollutant as defined under the Clean Air Act, and that the U.S. EPA has the authority to regulate GHG emissions.

3.1.5 Corporate Average Fuel Economy Standards

The federal Corporate Average Fuel Economy (CAFE) standards determine the fuel efficiency of certain vehicle classes in the U.S. While the standards had not changed since 1990, as part of the Energy and Security Act of 2007, the CAFE standards were increased for new light-duty vehicles to achieve the equivalent of 35 miles per gallon (mpg) by 2020. In October 2012, the EPA and National Highway Traffic Safety Administration (NHTSA) issued a final rule for new light-duty vehicles for model years 2017 to 2025 to achieve an equivalent of 54.5 mpg (Federal Register 2011). With improved gas mileage, fewer gallons of transportation fuel would be combusted to travel the same distance, thereby reducing nationwide GHG emissions associated with vehicle travel.

3.2 State

3.2.1 Executive Orders

3.2.1.1 EO S-3-05 – 2010, 2020 and 2050 Statewide GHG Emission ~~Targets~~Goals

This 2005 Executive Order (EO) proclaims that California is vulnerable to the impacts of climate change, including increased temperatures that could reduce the Sierra Nevada's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the EO established the following GHG emission reduction ~~targets~~ goals for the state of California:

- by 2010, reduce GHG emissions to 2000 levels;
- by 2020, reduce GHG emissions to 1990 levels;
- by 2050, reduce GHG emissions to 80 percent below 1990 levels.

This EO also directed the secretary of CalEPA to oversee the efforts made to reach these ~~targets~~goals, and to prepare biannual reports on the progress made toward meeting the ~~targets~~ goals and on the impacts to California related to global warming. The first such Climate Action Team Assessment Report was produced in March 2006 and has been updated every two years thereafter.

Of note, in adopting AB 32, discussed below, the Legislature did not adopt the 2050 horizon-year goal from the EO; and, in the last legislative session, the Legislature rejected legislation to enact the EO's 2050 goal (see *Cleveland National Forest Foundation v. San Diego Association of Governments* (2014) 231 Cal.App.4th 1056, 1096; *Professional Engineers in California Government v. Schwarzenegger* (2010) 50 Cal.4th 989, 1015; and State of California 2004).

3.2.1.2 EO B-30-15 – 2030 Statewide GHG Emission Goal

This EO, issued on April 29, 2015, established an interim GHG emission reduction goal for the state of California: by 2030, reduce GHG emissions to 40 percent below 1990 levels. This EO also directed all state agencies with jurisdiction over GHG-emitting sources to implement measures designed to achieve the new interim 2030 goal, as well as the pre-existing, long-term 2050 goal identified in EO S-3-05. Additionally, the EO directed CARB to update its Climate Action Scoping Plan to address the 2030 goal. Therefore, in the coming months, CARB is expected to develop statewide inventory projection data for 2030, as well as commence its efforts to identify reduction strategies capable of securing emission reductions that allow for achievement of the EO's new interim goal.

3.2.2 Assembly Bill 32 – California Global Warming Solutions Act of 2006

In response to EO S-3-05, the California Legislature passed AB 32, the California Global Warming Solutions Act of 2006, and thereby enacted Sections 38500–38599 of the California Health and Safety Code. The heart of AB 32 is its requirement that CARB establish an emissions cap and adopt rules and regulations that would reduce GHG emissions to 1990 levels by 2020. AB 32 also required CARB to adopt a plan by January 1, 2009 indicating how emission reductions would be achieved from significant GHG sources via regulations, market mechanisms, and other actions.

3.2.3 Climate Change Scoping Plan

3.2.3.1 1990 Emissions Level and 2020 Emissions Forecast

As directed by AB 32, in 2008, CARB adopted the Climate Change Scoping Plan: A Framework for Change (Scoping Plan), which identifies the main strategies California will implement to achieve the GHG reductions necessary to reduce forecasted BAU emissions in 2020 to the state's historic 1990 emissions level. In 2008, as part of its adoption of the Scoping Plan, CARB estimated that annual statewide GHG emissions were 427 $MMTCO_2E$ in 1990 and would reach 596 $MMTCO_2E$ by 2020 under a BAU condition (CARB 2008a). To achieve the mandate of AB 32, CARB determined that a 169 $MMTCO_2E$ (or approximate 28.5 percent) reduction in BAU emissions was needed by 2020. The 2020 emissions estimate used in the Scoping Plan was developed using pre-recession data and reflects GHG emissions expected to occur in the absence of any reduction measures in 2010 (CARB 2011a).

In 2011, CARB revised its 2020 BAU projections to account for the economic downturn and to account for laws that had taken affect but were not included in the 2008 calculations. Based on that effort, CARB updated the projected 2020 emissions to 507 $MMTCO_2E$ (CARB 2011a). With respect to the new economic data alone, CARB determined that the economic downturn reduced the 2020 BAU by 55 MMTCO2E; as a result, achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7 (not 28.5) percent from the 2020 BAU. ~~And~~Additionally, with the additional implementation of two reduction measures not previously included in the BAU calculations, CARB determined that implementation of Pavley I and the Initial RPS accounted for reductions of 26 $MMCO_2E$ and 12 $MMTCO_2E$, respectively; as a result, achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 15.8 (not 28.5) percent (CARB 2011a). Given the refined 2020 forecast of 507 $MMTCO_2E$ per year, CARB determined statewide GHG emissions would need to be reduced by 80 $MMTCO_2E$ (or 15.8 percent of 507 $MMTCO_2E$) by 2020 in order to reach the 1990 emission levels per AB 32 (CARB 2011a). The updated emissions projections and targets were incorporated into the Scoping Plan that was approved in 2011 (CARB 2011b).

Health & Safety Code section 38561(h) requires CARB to update the Scoping Plan every five years. Most recently, in 2014, CARB adopted the First Update to the Climate Change Scoping Plan: Building on the Framework (First Update). The stated purpose of the First Update is to "highlight[] California's success to date in reducing its GHG emissions and lay[] the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050" (CARB ~~2014b~~2014a). The First Update found that California is on track to meet the 2020 emissions reduction mandate established by AB 32, and noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80 percent below 1990 levels by 2050 if the State realizes the expected benefits of existing policy goals (CARB ~~2014b~~2014a).

In conjunction with the First Update, CARB identified "six key focus areas comprising major components of the State's economy to evaluate and describe the larger transformative actions that will be needed to meet the State's more expansive emission reduction needs by 2050" (CARB ~~2014b~~2014a). Those six areas are: (1) energy; (2) transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure); (3) agriculture; (4) water; (5) waste management; and, (6) natural and working lands. The First Update identifies key recommended actions for each sector that will facilitate achievement of the 2050 reduction ~~target~~goal.

Based on CARB's research efforts, it has a "strong sense of the mix of technologies needed to reduce emissions through 2050" (CARB ~~2014b~~2014a). Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings and industrial machinery; decarbonizing electricity and fuel supplies; and, the rapid market penetration of efficient and clean energy technologies.

As part of the First Update, CARB recalculated the State's 1990 emissions level using more recent GWPs identified by the IPCC. Using the recalculated 1990 emissions level and the revised 2020 emissions level projection identified in the 2011 Final Supplement, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 15 percent (instead of 28.5 percent or 16 percent) from the BAU conditions.

The First Update included a strong recommendation from CARB for setting a mid-term statewide GHG emissions reduction target. CARB specifically recommended that the mid-term target be consistent with: (i) the United States' pledge to reduce emissions 42 percent below 2005 levels (which translates to a 35 percent reduction from 1990 levels in California); and (ii) the long-term policy goal of reducing emissions to 80 percent below 1990 levels by 2050. However, to date, there is no legislative authorization for a post-2020 GHG reduction target, and CARB has not established such a target.

The First Update discusses new residential and commercial building energy efficiency improvements, specifically identifying progress towards zero net energy buildings by 2020 for residential buildings and 2030 for commercial buildings via Title 24, Part 6, as an element of meeting mid-term and long-term GHG reduction goals. The First Update expresses CARB's commitment to working with the California Public Utilities Commission (CPUC) and California Energy Commission (CEC) to facilitate further achievements in building energy efficiency.

The original 2008 Scoping Plan and the 2014 First Update represent important milestones in California's efforts to reduce GHG emissions statewide. The law also requires the Scoping Plan to be updated every five years. The Scoping Plan process, as stated, is also thorough and encourages public input and participation.

For example, the original 2008 Scoping Plan was introduced through four workshops held between November 30, 2007 and April 17, 2008. A draft Scoping Plan was released for public review and comment on June 2008, followed by more workshops in July and August 2008. The proposed Scoping Plan was released on October 2008 and considered at the Board hearing on December 12, 2008. In August 2011, after litigation, the initial Scoping Plan was re-approved by the Board, and was supported by the Final Supplement to the Scoping Plan Functional Equivalent Document.

In June 2013, CARB held a kick-off public workshop in Sacramento to discuss the development of the First Update to the 2008 Scoping Plan, public process, and overall schedule. In July 2013, subsequent regional workshops were held, which provided forums to discuss region-specific issues, concerns, and priorities. In addition, CARB accepted and considered informal stakeholder comments and reconvened the Environmental Justice Advisory Committee to advise and provide recommendations on the development of the First Update. On October 1, 2013, CARB released a discussion draft of the update for public review and comment. On October 15, 2013, CARB held a public workshop on the First Update and provided an update to the Board at the October 24, 2013 Board hearing. In addition, over 115 comment letters were submitted on the discussion draft. On February 10, 2014, CARB released the draft proposed First Update. On February 20, 2014, CARB held a Board meeting discussion that included opportunities for stakeholder feedback and public comment. On March 14, 2014, CARB released the Appendix F Environmental Analysis, including the 45-day public comment notice, the Appendix B Status of Scoping Plan Measures, and the Appendix C Focus Group Working Papers. On May 15, 2014, CARB released the First Update, staff's written responses to comments received on the draft and final environmental assessments. On May 22, 2014, the Board approved the First Update, along with the finalized environmental documents.

3.2.3.2 GHG Reduction Strategies

The majority of the Scoping Plan's GHG reduction strategies are directed at the two sectors with the largest GHG emissions contributions: transportation and electricity generation. The GHG reduction strategies for these sectors involve statutory mandates affecting vehicle or fuel manufacture, public transit, and public utilities. The reduction strategies employed by CARB are designed to reduce emissions from existing sources as well as future sources. The most relevant are outlined in the following sections.

a. AB 1493 – Light-Duty Vehicle GHG Emissions Standards

AB 1493, enacted in July 2002, directed CARB to adopt vehicle standards that lowered GHG emissions from passenger vehicles and light-duty trucks to the maximum extent technologically feasible, beginning with the 2009 model year.

CARB adopted these regulations (termed “Pavley I”) as a discrete early action measure pursuant to AB 32, and estimates that full implementation of Pavley I will reduce GHG emissions from California passenger vehicles by about 26 $MMTCO_2E$(CARB 2011a and 2011b). CARB has also adopted a second phase of the Pavley regulations that covers model years 2017 to 2025. These regulations were originally termed “Pavley II” but are now referred to as either the Low Emission Vehicle III” (LEV III) standards or the Advanced Clean Cars Program. In this report, they are referred to as the LEV III standards. CARB estimates that LEV III will reduce vehicle GHGs by an additional 4.0 $MMTCO_2E$ for a 2.4 percent reduction over Pavley I (CARB 2011a). These reductions come from improved vehicle technologies such as smaller engines with superchargers, continuously variable transmissions, and hybrid electric drives. On August 7, 2012 the final regulation for the adoption of LEV III became effective. It is expected that Pavley I and LEV III regulations will reduce GHG emissions from California passenger vehicles by about 22 percent in 2012 and about 30 percent in 2016, while improving fuel efficiency and reducing motorists’ costs (CARB 2013).

CARB has adopted a new approach to passenger vehicles – cars and light trucks – by combining the control of smog-causing pollutants and greenhouse gas emissions into a single coordinated package of standards, which includes efforts to support and accelerate the numbers of plug-on hybrids and zero-emission vehicles in California (CARB 2013).

b. Low Carbon Fuel Standard

An executive order (EO S-1-07) signed in 2007 directed that a statewide goal be established to reduce the carbon intensity of California’s transportation fuels by at least 10 percent by 2020 through a LCFS.

CARB adopted the LCFS as a discrete early action measure pursuant to AB 32 in April 2009. The LCFS is a performance standard with flexible compliance mechanisms intended to incentivize the development of a diverse set of clean low-carbon transportation fuel options. Its aim is to accelerate the availability and diversity of low-carbon fuels such as biofuels, electricity, and hydrogen by taking into consideration the full life cycle of GHG emissions.

In 2013, an ethanol company obtained a court order compelling CARB to remedy substantive and procedural defects under CEQA of the LCFS adoption process (POET, LLC v. CARB (2013) 217 Cal.App.4th 1214). However, the court allowed implementation of the LCFS to continue pending correction of the identified defects. Consequently, this analysis assumes that the LCFS will remain in effect during construction and operation of the project.

c. Renewable Portfolio Standard

The RPS promotes diversification of the state's electricity supply and decrease reliance on fossil fuel energy sources. Originally adopted in 2002 with a mandate to achieve a 20 percent renewable energy mix by 2020 (referred to as the "Initial RPS"), the mandate has been accelerated and increased to 33 percent by 2020. The purpose of the RPS, upon full implementation, is thus to provide 33 percent of the state's electricity needs through renewable energy sources (CARB 2008b). Renewable energy includes (but is not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas.

On January 28, 2015, Assembly Member Eduardo Garcia introduced AB 197, which – if enacted – would require an electrical corporation or local publicly-owned electric utility to adopt a long-term procurement strategy to achieve a target of procuring 50 (not 33) percent of its electricity products from eligible renewable energy resources by December 31, 2030.

The RPS is included in the Scoping Plan's list of GHG reduction measures to reduce energy sector emissions. In 2008, as part of the Scoping Plan, CARB estimated that full achievement of the 33 percent RPS goal would decrease statewide GHG emissions by 21.3 $MMTCO_2E$ (CARB 2008b). In 2011, CARB revised this number upwards to 24.0 $MMTCO_2E$ (CARB 2011a).

d. Tire Pressure Program

CARB's Tire Pressure Regulation took effect in September 2010. The purpose of this regulation is to reduce GHG emissions from vehicles operating with under inflated tires by inflating them to the recommended tire pressure rating. Automotive service providers must meet the regulation's following requirements:

- Check and inflate each vehicle's tires to the recommended tire pressure rating, with air or nitrogen, as appropriate, at the time of performing any automotive maintenance or repair service.
- Indicate on the vehicle service invoice that a tire inflation service was completed and the tire pressure measurements after the service were performed.
- Perform the tire pressure service using a tire pressure gauge with a total permissible error no greater than +2 pounds per square inch.
- Have access to a tire inflation reference that is current within three years of publication.

- Keep a copy of the service invoice for a minimum of three years, and make the vehicle service invoice available to CARB or its authorized representative upon request.

e. Million Solar Roofs Program

The Million Solar Roofs Program is one of CARB's GHG-reduction measures identified in the Scoping Plan to reduce energy sector emissions. The Million Solar Roofs Program was created by SB 1 in 2006 and includes the CPUC's California Solar Initiative and CEC's New Solar Homes Partnership. It requires publicly owned utilities to adopt, implement, and finance solar-incentive programs to lower the cost of solar systems and help achieve the goal of installing 3,000 megawatts (MW) of new solar capacity by 2020. Achievement of the program's goal is expected to equate to a reduction of 1.1 $MMTCO_2E$ (CARB 2011a).

f. Solid Waste Sources

The California Integrated Waste Management Act of 1989, as modified by AB 341, requires each jurisdiction's source reduction and recycling element to include an implementation schedule that shows: (1) diversion of 25 percent of all solid waste by January 1, 1995, through source reduction, recycling, and composting activities; (2) diversion of 50 percent of all solid waste on and after January 1, 2000; and (3) diversion of 75 percent of all solid waste on or after 2020, and annually thereafter. The California Department of Resources Recycling and Recovery (CalRecycle) is required to develop strategies, including source reduction, recycling, and composting activities, to achieve the 2020 goal.

CalRecycle published a discussion document, entitled *California's New Goal: 75 Percent Recycling,* which identified concepts that would assist the State in reaching the 75 percent goal by 2020. Subsequently, in October 2013, CalRecycle released a revised concept list, entitled *Update on AB 341 Legislative Report: Statewide Strategies to Achieve the 75 Percent Goal by 2020*.

3.2.4 SB 375 – Regional Emissions Targets

SB 375, the 2008 Sustainable Communities and Climate Protection Act, was signed into law in September 2008 and requires CARB to set regional targets for reducing passenger vehicle GHG emissions in accordance with the Scoping Plan (CARB 2010a). The purpose of SB 375 is to align regional transportation planning efforts, regional GHG reduction targets, and fair-share housing allocations under state housing law. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy to address GHG reduction targets from cars and light-duty trucks in the context of that MPO's Regional Transportation Plan (RTP).

The San Diego Association of Governments (SANDAG) is the San Diego region's MPO. SANDAG completed and adopted its 2050 RTP/SCS in October 2011, the first such plan in the state that included a SCS. CARB's targets for SANDAG call for a 7 percent reduction in GHG emissions per capita from automobiles and light duty trucks compared to 2005 levels by 2020, and a 13 percent reduction by 2035 (SANDAG 2010b). The reduction targets are to be updated every eight years, but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. As stated by SANDAG, the strategy set forth in the 2050 RTP/SCS is to "focus housing and job growth in the urbanized areas where there is existing and planned infrastructure, protect sensitive habitat and open space, invest in a network that gives residents and workers transportation options that reduce GHG emissions, promote equity for all, and implement the plan through incentives and collaboration" (SANDAG 2011a). In November 2011, CARB – by resolution – accepted SANDAG's GHG emissions quantification analysis and determination that, if implemented, the SCS would achieve CARB's 2020 and 2035 GHG emission reduction targets for the region.

After SANDAG's 3060 RTP/SCS was adopted, a lawsuit was filed by the Cleveland National Forest Foundation and others. On November 24, 2014, and after recirculation of the project's Draft EIR, Division One of the Fourth District Court of Appeal issued its decision in *Cleveland National Forest Foundation v. SANDAG*, Case No. D063288. In its decision, the Fourth District affirmed the trial court decision that SANDAG abused its discretion when it certified the EIR for the *2050 RTP/SCS* because it did not adequately analyze and mitigate GHG emission levels after year 2020. The *2050 RTP/SCS* EIR complied with CARB's AB 32-related GHG reduction target through 2020, but the EIR found that plan-related emissions would substantially increase after 2020 and through 2050. The majority of the Fourth District in the *Cleveland National* decision found SANDAG's EIR deficient because, although the EIR used three significance thresholds authorized by CEQA Guidelines section 15064.4(b), it did not assess the *2050 RTP/SCS*'s consistency with the 2050 GHG emissions goal identified in EO S-03-05, which the majority construed as "state climate policy."~~held that SANDAG failed to complete the environmental review required by CEQA~~.~~;~~ ~~however, the~~ The Fourth District did not require the set aside of SANDAG's 2050 RTP/SCS ~~itself has not been set aside.~~ ~~In early January 2015, SANDAG filed a petition for review of the Fourth District's decision with the California Supreme Court (Case No. S223603).~~ In March 2015~~However, at the time of publication of this report~~, ~~it is not yet known whether~~ the California Supreme Court ~~will~~ granted~~ or deny~~ SANDAG's petition for review (Case No. S223603)~~.~~, and the matter is pending before the court.

Pursuant to Government Code Section 65080(b)(2)(K), an SCS does not: (i) regulate the use of land; (ii) supersede the land use authority of cities and counties; or (iii) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process (CARB ~~2014b~~2014a, see also Gov. Code § 65080(b)).

3.2.5 Title 24 – California Building Code

The California Code of Regulations (CCR), Title 24, is referred to as the California Building Code, or CBC. It consists of a compilation of several distinct standards and codes related to building construction including, plumbing, electrical, interior acoustics, energy efficiency, handicap accessibility, and so on. Of particular relevance to GHG reductions are the CBC's energy efficiency and green building standards as outlined in subchapter 3.2.5.1.

3.2.5.1 Title 24, Part 6 – Energy Efficiency Standards

The CCR, Title 24, Part 6 is the Energy Efficiency Standards or California Energy Code. This code, originally enacted in 1978, establishes energy-efficiency standards for residential and non-residential buildings in order to reduce California's energy consumption. The Energy Code is updated periodically to incorporate and consider new energy-efficiency technologies and methodologies as they become available, and incentives in the form of rebates and tax breaks are provided on a sliding scale for buildings achieving energy efficiency above the minimum standards.

The Title 24 Energy Code governs energy consumed by major building envelope systems such as space heating and cooling, ventilation, water heating, and some aspects of the fixed lighting system. Non-building energy use, "plug-in" energy use (such as appliances, equipment, electronics, and plugin lighting), are independent of building design and not subject to Title 24.

The current version of the Energy Code, known as 2013 Title 24, or the 2013 Energy Code, became effective July 1, 2014. The 2013 Energy Code provides mandatory energy-efficiency measures as well as voluntary tiers for increased energy efficiency. Based on an impact analysis prepared by the California Energy Commission (CEC), for single-family residences the 2013 Energy Code has been estimated to achieve a 36.4 percent increase in electricity efficiencies and a 6.5 percent increase in natural gas efficiencies over the 2008 Title 24 standards (CEC 2013). The same report estimates increased efficiencies for multi-~~ple~~ family residences of 23.3 percent for electricity use and 3.8 percent for natural gas use. Non-residential structures are estimated to achieve a 21.8 and 16.8 percent increase in electricity and natural gas efficiencies, respectively. ~~The 2013 Energy Code has been estimated to achieve a 25 percent increase in residential and 30 percent in non-residential energy efficiencies over the 2008 Title 24 standards (California Energy Commission [CEC] 2013).~~ The 2008 Title 24 required energy savings of 15–35 percent above the former 2005 Title 24 Energy Code. The reference to 2005 Title 24 Energy Code is relevant in that many of the state's long-term energy and GHG reduction goals identify energy-saving targets relative to 2005 Title 24.

The CEC has~~recently~~ opened the public process and rulemaking proceedings for adoption of the 2016 Building Energy Efficiency Standards, which the CEC anticipates will be proposed for adoption in 2015 and have an effective date of January 1, 2017. In addition, as discussed later in this section, the CEC, in conjunction with the CPUC, has adopted a goal that all new residential and commercial construction achieve zero net energy by 2020 and 2030, respectively (CPUC ~~2013~~2015). It is expected that achievement of the zero net energy goal will occur via revisions to the Title 24 standards.

New construction and major renovations must demonstrate their compliance with the current Energy Code through submission and approval of a Title 24 Compliance Report to the local building permit review authority and the CEC. The compliance reports must demonstrate a building's energy performance through use of CEC-approved energy performance software that shows iterative increases in energy efficiency given the selection of various heating, ventilation, and air conditioning (HVAC); sealing; glazing; insulation; and other components related to the building envelope.

The Scoping Plan includes an Energy Efficiency GHG reduction measure that, among other things, calls for increased building and appliance energy efficiency through new standards and programs. In the Scoping Plan, CARB projects that approximately 26.3 $MMTCO_2E$ of GHGs could be reduced statewide through expanded energy efficiency programs, including updates to Title 24's energy efficiency standards.

3.2.5.2 Title 24, Part 11—California Green Building Standards

The California Green Building Standards Code, referred to as CALGreen, was added to Title 24 as Part 11 first in 2009 as a voluntary code, which then became mandatory effective January 1, 2011 (as part of the 2010 CBC). The 2013 revisions to CALGreen clarify existing regulation. CALGreen institutes mandatory minimum environmental performance standards for all ground-up new construction of commercial and low-rise residential buildings, state-owned buildings, schools, and hospitals. It also includes voluntary tiers (I and II) with stricter environmental performance standards for these same categories of residential and non-residential buildings. Local jurisdictions must enforce the minimum mandatory requirements and may also adopt the Green Building Standards with amendments for stricter requirements.

The mandatory standards require:

- 20 percent mandatory reduction in indoor water use relative to specified baseline levels;
- 50 percent construction/demolition waste diverted from landfills;
- mandatory inspections of energy systems to ensure optimal working efficiency; and
- requirements for low-pollutant emitting exterior and interior finish materials such as paints, carpets, vinyl flooring, and particleboards.

The voluntary standards require:

- Tier I—15 percent improvement in energy requirements, stricter water conservation requirements for specific fixtures, 65 percent reduction in construction waste, 10 percent recycled content, 20 percent permeable paving, 20 percent cement reduction, cool/solar reflective roof; and
- Tier II—30 percent improvement in energy requirements, stricter water conservation requirements for specific fixtures, 75 percent reduction in construction waste, 15 percent recycled content, 30 percent permeable paving, 30 percent cement reduction, cool/solar reflective roof.

Similar to the compliance reporting procedure described above for demonstrating energy code compliance in new buildings and major renovations, compliance with the CALGreen water reduction requirements must be demonstrated through completion of water use reporting forms for new low-rise residential and non-residential buildings. The water use compliance form must demonstrate a 20 percent reduction in indoor water use by either showing a 20 percent reduction in the overall baseline water use as identified in CALGreen or a reduced per-plumbing-fixture water use rate.

The Scoping Plan also includes a Green Building Strategy with the goal of expanding the use of green building practices to reduce the carbon footprint of new and existing buildings. Consistent with CALGreen, the Scoping Plan recognized that GHG reductions would be achieved through buildings that exceed minimum energy-efficiency standards, decrease consumption of potable water, reduce solid waste during construction and operation, and incorporate sustainable materials. Green building is thus a vehicle to achieve the Scoping Plan's statewide electricity and natural gas efficiency targets, and lower GHG emissions from waste and water transport sectors.

In the Scoping Plan, CARB projects that an additional 26 $MMTCO_2E$ could be reduced through expanded green building (CARB 2008b). However, this reduction is not counted toward the BAU 2020 reduction goal to avoid any double counting, as most of these reductions are accounted for in the electricity, waste, and water sectors. Because of this, CARB has assigned all emissions reductions that occur because of green building strategies to other sectors for meeting AB 32 requirements, but will continue to evaluate and refine the emissions from this sector.

3.2.6 Senate Bill 97 – CEQA GHG Amendments

SB 97 (Chapter 185, Statutes of 2007; Public Resources Code, Sections 21083.05 and 21097) acknowledges that climate change is a prominent environmental issue that requires analysis under the California Environmental Quality Act (CEQA). The California Natural Resources Agency adopted amendments to the CEQA Guidelines (California Code of Regulations, Title 14, Sections 15000-15387) to address GHG emissions, consistent with Legislature's directive in Public Resources Code Section 21083.05 (enacted as part of SB 97 [Chapter 185, Statutes 2007]). These changes took effect in March 2010.

3.3 Local – County of San Diego

3.3.1 General Plan

The County's General Plan incorporates smart growth and land planning principles intended to reduce VMT, and thus a reduction of GHGs. The General Plan aims to accomplish this by locating future development within and near existing infrastructure.

The General Plan includes a Conservation and Open Space Element which sets policies pertaining to greenhouse gas emissions, including:

COS-6.5: Best Management Practices. Encourage best management practices in agriculture and animal operations to protect watersheds, reduce GHG emissions, conserve energy and water, and utilize alternative energy sources, including wind and solar power.

Goal COS-14: Sustainable Land Development. Land use development techniques and patterns that reduce emissions of criteria pollutants and GHGs through minimized transportation and energy demands, while protecting public health and contributing to a more sustainable environment. [See also Goal LU-6]

COS-14.2: Villages and Rural Villages. Incorporate a mixture of uses within Villages and Rural Villages that encourage people to walk, bicycle, or use public transit to reduce air pollution and GHG emissions.

COS-14.9: Significant Producers of Air Pollutants. Require projects that generate potentially significant levels of air pollutants and/or GHGs such as quarries, landfill operations, or large land development projects to incorporate renewable energy, and the best available control technologies and practices into the project design.

COS-14.10: Low-Emission Construction Vehicles and Equipment. Require County contractors and encourage other developers to use low-emission construction vehicles and equipment to improve air quality and reduce GHG emissions.

COS-14.13: Incentives for Sustainable and Low GHG Development. Provide incentives such as expedited project review and entitlement processing for developers that maximize use of sustainable and low GHG land development practices in exceedance of State and local standards.

Goal COS-14: Sustainable Architecture and Buildings. Building design and construction techniques that reduce emissions of criteria pollutants and GHGs, while protecting public health and contributing to a more sustainable environment.

COS-15.1: Design and Construction of New Buildings. Require that new buildings be designed and constructed in accordance with "green building" programs that incorporate techniques and materials that maximize energy efficiency, incorporate the use of sustainable resources and recycled materials, and reduce emissions of GHGs and toxic air contaminants.

COS-16: Sustainable Mobility. Transportation and mobility systems that contribute to environmental and human sustainability and minimize GHG and other air pollutant emissions.

COS-16.3: Low-Emissions Vehicles and Equipment. Require County operations and encourage private development to provide incentives (such as priority parking) for the use of low- and zero-emission vehicles and equipment to improve air quality and reduce GHG emissions. [Refer also to Policy M-9.3 (Preferred Parking) in the Mobility Element.]

COS-17.1: Reduction of Solid Waste Materials. Reduce GHG emissions and future landfill capacity needs through reduction, reuse, or recycling of all types of solid waste that is generated. Divert solid waste from landfills in compliance with state law.

COS-17.4: Composting. Encourage composting throughout the County and minimize the amount of organic materials disposed at landfills.

COS-17.6: Recycling Containers. Require that all new land development projects include space for recycling containers.

3.3.2 Climate Action Plan

To comply with the 2011 adopted County General Plan Mitigation Measure CC1.2, Preparation of a CAP, the County developed and approved the County CAP in June 2012 to address issues of growth and climate change. Specifically, the County CAP was designed to mitigate the impacts of climate change and achieve meaningful GHG reductions by implementing goals and strategies within the County, consistent with AB 32, EO S-3-05, and to provide a mechanism that subsequent projects within the County may use as a means to address GHG impacts under CEQA.

After the County's CAP was adopted, a lawsuit was filed. On October 29, 2014, and after recirculation of the project's Draft EIR, Division One of the Fourth District Court of Appeal issued its decision in *Sierra Club v. County of San Diego*, Case No. D064243, 2014 WL 6657169. In its decision, the Fourth District held that the County ~~failed~~ did not~~to~~ prepare an adequate CAP, ~~and failed to~~ nor complete the environmental review required by CEQA for adoption of that CAP. In light of the litigation concerning the County's CAP, this GHG analysis does not rely on the County's CAP. ~~In early January 2015, the County filed a petition for review of the Fourth District's decision with the California Supreme Court (Case No. S223591). At the time of publication of this report, it is not yet known whether the California Supreme Court will grant or deny the County's petition for review. In light of the~~

~~pending litigation concerning the County CAP, this GHG analysis does not rely on the County's CAP.~~

In light of this litigation, the County is no longer implementing its *Guidelines for Determining Significance – Climate Change* (*2013 Guidelines*). Therefore, the greenhouse gas (GHG) emissions analysis provided in this section has been revised and no longer utilizes the *2013 Guidelines* to determine the significance of the project's GHG emissions.

4.0 Guidelines for Determining Significance

This analysis is based on: (i) the requirements of CEQA and the CEQA Guidelines; (ii) the 2006 Global Warming Solutions Act, including the California Air Resources Board's *Climate Change Scoping Plan: A Framework for Change* (Scoping Plan; CARB 2008b), the 2011 Final Supplement to the *Scoping Plan* (CARB 2011b), and the *First Update to the Climate Change Scoping Plan: Building on the Framework* (*First Update*; CARB ~~2014b~~2014a); (iii) the County of San Diego's *2015 GHG Guidance: Recommended Approach to Addressing Global Climate Change in CEQA Documents* (*2015 GHG Guidance*; County of San Diego 2015), as well as the County's General Plan; (iv) the Sacramento Metropolitan Air Quality Management District's (SMAQMD) *CEQA Guide* (SMAQMD 2014); (v) the 2008 Sustainable Communities and Climate Protection Act, including the San Diego Association of Governments' (SANDAG) *2050 Regional Transportation Plan/Sustainable Communities Strategy* (*2050 RTP/SCS*; SANDAG 2011b); and, (vi) Executive Orders S-3-05 and B-30-15.

CEQA Guidelines

A significant global climate change impact would occur if implementation of the proposed project would do the following:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The significance criteria for global climate change are based on Appendix G of the CEQA Guidelines. The first criterion requires evaluation of whether the project's GHG emissions would significantly impact the environment either directly or indirectly, while the second criterion requires evaluation of the Project's potential to conflict with any applicable plans, policies or regulations adopted to reduce GHG emissions.

It also should be mentioned that, in the context of CEQA, "GHG impacts are exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective" (CAPCOA 2008).

~~In order t~~To evaluate the project's significance relative to the two significance criteria identified in above, several methodologies have been utilized. Methodology 1a discloses the increase in GHG emissions due to project implementation with respect to existing conditions. Methodologies 1b through 1d provide a quantitative analysis of the project's consistency with AB 32, and each of those three methodologies provides a separate and independent ground for the AB 32-related significance determination. Methodologies 2a through 2c provide qualitative and semi-quantitative analysis of the project's compliance with applicable plans and policies for reduction of GHG emissions~~ as separate and independent grounds to determination the significance of project-related GHG emissions~~.

To determine impacts under the first criterion, i.e. generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, the following methodologies were utilized:

1 a. The first evaluation is based on the incremental increase in GHG emissions attributable to the project as compared to GHG emissions resulting from on-site existing conditions.

1 b. The second evaluation is based on the County's 2015 GHG Guidance, which states that if a project exceeds 900 $MTCO_2E$ annually, the project must demonstrate a minimum 16 percent reduction by 2020 over the "unmitigated" project;

1 c. The third evaluation under the first threshold is based on SMAQMD's CEQA Guide, which states that if a project exceeds 1,100 $MTCO_2E$, the project must demonstrate a minimum 21.7 percent reduction by 2020 over the "no action taken" condition (hereinafter referred to as the NAT condition); and,

1 d. The fourth evaluation is based on the methods and requirements of the 2008 Scoping Plan, which identified a 28.5 percent reduction by 2020 over a "business as usual" condition (hereinafter referred to as the BAU condition). This approach is consistent with the draft CEQA guidance recommended by the South Coast Air Quality Management District (SCAQMD).

To determine impacts under the second criterion, i.e. conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases, the following methodologies were utilized:

2 a. The first evaluation is based on an analysis of the project's consistency with the County of San Diego's General Plan Goals and Policies intended to reduce GHG emissions;

2 b. The ~~first~~ second evaluation is based on an analysis of the project's consistency with SB 375, including SANDAG's 2050 RTP/SCS; and,

2 c. The ~~second~~ third evaluation is based on whether the project's post-buildout GHG emissions trajectory would impede the attainment of the interim (2030) and ~~2050~~ horizon (2050) statewide GHG reduction goals identified in EOs B-30-15 and S-3-05~~, including the trajectory's relation to a mid-term goal~~.

The first evaluation under the first criterion is necessary as it discloses the extent to which the project may increase GHG emissions as compared to the existing environmental setting, which is identified as a factor that the lead agency should consider pursuant to CEQA Guidelines section 15064.4(b)(1).

The comparison of the proposed project's reduction in GHG emissions in relation to the percentage reductions target identified by the County of San Diego via reference to CARB's August 2011 Final Supplement to the Scoping Plan (see Section 3.2.3) is used as the second point of evaluation. As discussed, with respect to new economic data and the additional implementation of the Initial RPS and Pavley I, achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 16 percent. According to the County's 2015 GHG Guidance, the utilization of this percentage reduction target allows the analysis to consider whether the project would impede attainment of AB 32's emissions reduction mandate that the state return to its 1990 emissions level by 2020, which remains the only legislatively-mandated statewide mandate.

The third evaluation under the first criterion compares the proposed project's reduction in GHG emissions in relation to the percentage reduction target identified by the SMAQMD via reference to CARB's August 2011 Final Supplement to the Scoping Plan (see Section 3.2.3). As discussed, with respect to the conservative consideration of only the new economic data alone (and not the additional regulatory advancements), achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 21.7 percent. Utilization of this percentage reduction target allows an alternative analysis to consider whether the project would impede attainment of AB 32's emissions reduction mandate that the state return to its 1990 emissions level by 2020, as identified in SMAQMD's Guide "a 21.7 percent reduction of GHG emissions is adequate mitigation and shows consistency with AB 32 and Scoping Plan GHG reduction goals" (SMAQMD 2014).

The fourth evaluation under the first criterion compares the proposed project's reduction in GHG emissions in relation to the percentage reductions target identified in CARB's 2008 Scoping Plan. As discussed, achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 28.5 percent (CARB 2008b). Utilization of this percentage reduction target allows another alternative analysis to consider whether the project would impede attainment of AB 32's emissions reduction mandate that the state return to its 1990 emissions level by 2020.

The evaluation of the project's consistency with plans, policies, and regulations adopted to reduce GHG emissions includes consideration of the project's potential to conflict with: (1) the County's General Plan policies intended to reduce GHG emissions; (2) SANDAG's 2050 RTP/SCS, which was adopted for the purpose of reducing GHG emissions at the regional level from passenger vehicles pursuant to SB 375; ~~. Finally, consideration is given to~~ and (3) ~~the project's potential to conflict with~~ the 2030 and 2050 policy goals set forth in EOs B-30-15 and S-3-05~~, as well as the project's emissions trajectory relative to a mid-point to achieving the 2050 GHG emission reduction goal~~. As discussed further below, the California Supreme Court currently is considering whether EIRs are required to assess consistency with EOs in order to comply with CEQA. In an exercise of caution, this analysis considers the project's potential to conflict with the interim (2030) and horizon-year (2050) statewide GHG reduction policy goals set forth in the two EOs.

5.0 Calculation Methodology

This analysis estimates GHG emissions associated with construction and operation of the project and determines whether the project would have a cumulatively considerable incremental contribution to global climate change. GHG emissions estimates include both direct and reasonably foreseeable indirect GHG emissions from operations.

GHG emissions due to construction and operation of the project were calculated using (1) County of San Diego 2015 GHG Guidance, (2) the SMAQMD CEQA Guide, and (3) the 2008 Scoping Plan methodology. The following is a detailed discussion of how each emission source was calculated for each assessment methodology, and Table 7 provides a comparison of the methodologies.

5.1 Construction Emissions

On-site construction emissions were estimated using CalEEMod Version 2011.1.1 (CAPCOA 2011). CalEEMod calculates construction emissions for land use development projects based on various project-specific inputs, including building type, acreage, soil hauling, construction phasing, equipment lists, and worker commutes and materials delivery. Thus, project-generated GHG emissions were modeled based on information provided in the Lilac Hills Ranch Specific Plan and construction phasing plans.

TABLE 7
COMPARISON OF ASSESSMENT METHODOLOGIES

	County 2015 GHG Guidance		SMAQMD CEQA Guide		2008 Scoping Plan Method	
Source	"Unmitigated"	"Mitigated"	NAT Scenario	Proposed Project	BAU Condition	Proposed Project
Construction	Construction emissions amortized over 20 years and added to operational emissions.	Same as the "Unmitigated" project.	Construction emissions are amortized over a 25-year life time for non-residential and a 40-year life time for residential. Construction emissions are assessed separately from operation emissions and are not considered in the 2020 or any other future emission scenarios.	Same as the NAT scenario.	Construction emissions amortized over 30 years and added to operational emissions.	Same as the BAU condition.
Vehicles	Vehicle emissions include the effects of Pavley I. CalEEMod includes the effects of Pavley I as well as LCSF. The effects of LCSF were removed from the modeling results by increasing total emissions by 10 percent.	Vehicle emissions account for Pavley I, LEV III, LCFS, and the Tire Pressure Program, as well as project design features such as mixed-use development and increase in walking and biking, which achieve a 5.9 percent reduction in VMT.	Emissions do not include the reductions provided by state regulations. SMAQMD provides detailed guidance to alter the CalEEMod emission factors for all vehicle classes to remove the effects of Pavley I and LCSF.	Vehicle emissions account for Pavley I, LEV III, LCFS, and the Tire Pressure Program, as well as project design features, which accounted for a 5.9 percent reduction in VMT.	Vehicle emissions do not include the reductions provided by state regulations. The CalEEMod user manual provides guidance to alter the CalEEMod emission factors for specific vehicle classes (light duty autos, light duty trucks, and medium duty vehicles only) to remove the effects of Pavley I and LCSF.	Vehicle emissions account for Pavley I, LEV III, LCFS, and the Tire Pressure Program, as well as project design features, which accounted for a 5.9 percent reduction in VMT.

TABLE 7
COMPARISON OF ASSESSMENT METHODOLOGIES
(continued)

Source	County 2015 GHG Guidance		SMAQMD CEQA Guide		2008 Scoping Plan Method	
	"Unmitigated"	"Mitigated"	NAT Scenario	Proposed Project	BAU Condition	Proposed Project
Energy	The "unmitigated" project includes Title 24 2008, Part 6 standards. Additionally, a 14.7 percent reduction in electricity-related emissions is applied to account for the GHG emission factors reported in 2006 by SDG&E and the 20 percent reported in 2010.	Energy emissions include, increased energy efficiency (30 percent over 2008 Title 24, Part 6 standards.) An additional 13 percent reduction of "unmitigated" electricity-related emissions to account for the difference between the 20 percent RPS in 2010 and the final requirement of RPS in 2020 of 33 percent. Energy emissions also take into account the solar photovoltaic systems, and Energy Star appliances.	The NAT emissions account only for state laws in effect in 2006. Thus, energy emissions are based on 2005 Title 24, Part 6 standards. No change was applied to energy intensity factors in accordance with the SMAQMD CEQA Guide.	Project energy emissions include the increase in energy efficiency by 30 percent over Title 24 2008, Part 6 standards, the solar photovoltaic systems, Energy Star appliances. Additionally, to account for the effects of RPS, SDG&E energy intensity factors are recalculated following SMAQMD CEQA Guide guidance.	Energy emissions are based on 2005 Title 24, Part 6 standards. No reductions were applied to energy emission factors.	Energy emissions include, increased energy efficiency (30 percent over 2008 Title 24, Part 6 standards.) An additional 27.4 percent reduction over the BAU condition to account for the difference between the percent of RPS achieved in 2006 and the final requirement of RPS in 2020 of 33 percent. Energy emissions also take into account the solar photovoltaic systems, and Energy Star appliances.
Area	Area source emissions are calculated using a standard mix of wood-burning fireplaces as defined by SDAPCD and 180 wood-burning days per year. No fireplaces were included in the congregate care facility.	All parameters are the same as under the "Unmitigated" project, except all fire places are required to be natural gas. Additionally, electric landscaping equipment would be required for all HOA managed properties. For modeling purposes, this is assumed as 5 percent of all landscaping equipment.	Area source emissions are calculated using a standard mix of wood-burning fireplaces as defined by SDAPCD and 180 wood-burning days per year. No fireplaces were included in the congregate care facility.	All parameters are the same as under the NAT emissions, except all fire places are required to be natural gas. Additionally, electric landscaping equipment would be required for all HOA managed properties. For modeling purposes this is assumed as 5 percent of all landscaping equipment.	Area source emissions are calculated using a standard mix of wood-burning fireplaces as defined by SDAPCD and 180 wood-burning days per year. No fireplaces were included in the congregate care facility.	All parameters are the same as under the BAU condition, except all fire places are required to be natural gas. Additionally, electric landscaping equipment would be required for all HOA managed properties. For modeling purposes this is assumed as 5 percent of all landscaping equipment.

TABLE 7
COMPARISON OF ASSESSMENT METHODOLOGIES
(continued)

Source	County 2015 GHG Guidance		SMAQMD CEQA Guide		2008 Scoping Plan Method	
	“Unmitigated”	“Mitigated”	NAT Scenario	Proposed Project	BAU Condition	Proposed Project
Water	The “unmitigated” project is based on the state laws in effect at the time of application. Therefore, the emission estimates include the effects of RPS on water use and energy intensity.	Emissions include the project design feature of achieving a 20 percent reduction in indoor and outdoor water use. Additionally, the GHG emissions associated with the energy consumption used to supply the water has reduced by 13 percent to account for the remaining effects of RPS on the energy grid.	The NAT condition is based on state laws in effect in 2006. Thus, emissions do not include the effects of RPS beyond 5.6 percent, which was the percent reported in 2006.	Emissions include the project design feature of achieving a 20 percent reduction in indoor and outdoor water use. Additionally, the GHG emissions were reduced by 27.4 percent to account for the remaining effects of RPS on the energy grid since 2006.	The NAT condition is based on state laws in effect in 2006. Thus, emissions do not include the effects of RPS beyond 5.6 percent, which was the percent reported in 2006.	Emissions include the project design feature of achieving a 20 percent reduction in indoor and outdoor water use. Additionally, the GHG emissions associated with the energy consumption used to supply the water has reduced by 13 percent to account for the remaining effects of RPS on the energy grid.
Solid Waste	Emissions were calculated using CalEEMod default parameters, which are based on CalRecycle waste generation rates.	Emissions take into account a 20 percent reduction in standard waste generation rates that would result from construction of a RF and green waste drop-off center.	Emissions were calculated using CalEEMod default parameters, which are based on CalRecycle waste generation rates.	Emissions take into account a 20 percent reduction in standard waste generation rates that would result from construction of a RF and green waste drop-off center.	Emissions were calculated using CalEEMod default parameters, which are based on CalRecycle waste generation rates.	Emissions take into account a 20 percent reduction in standard waste generation rates that would result from construction of a RF and green waste drop-off center.

As all off-site construction would be associated with roadway improvements, off-site construction emission estimates were developed with the Road Construction Emissions Model, a model specifically designed for roadway improvement projects. Per the County's GHG Guidance, construction emissions are calculated and amortized over a 20-year period and included as part of the analysis.

5.1.1 On-site Construction Emissions

The project applicant has provided approximate timeframes for the five phases of construction activities. The phases would occur in the following order: Phase 1, Phase 4, Phase 2, Phase 5, and Phase 3. Each phase is estimated to be approximately 1.5 years in duration with the exception of Phase 3, which is estimated to last three to four years. The highest average cut-and-fill volume for any phase would be 12,353 cy. However, to be conservative, construction emissions were modeled based on a more intense 10-acre area with a daily movement volume of 50,000 cy [2]. CalEEMod does not calculate emissions from material movement and handling for balanced site conditions with no off-site hauling, thus, material movement and handling was calculated separately and added to the CalEEMod results to determine total construction emissions.

Inputs used to model construction emissions for each of the phases were based on equipment lists and cut-and-fill calculation provided by the project applicant. The construction equipment summarized in Table 8 is anticipated to be used in each phase of the project. Based on the project applicant's information, the majority of construction equipment would be composed of Tier III equipment, as outlined in the Design Features in subchapter 7.1, and may be replaced with Tier IV equipment in the final phases. The emissions calculated in this analysis are based on the tier levels presented in Table 8. Statewide data sets for horsepower, emission factors, and load factors provided as part of CalEEMod were used.

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[2] Based on grading a 10-acre site with an average blade depth of 3 feet (10 acres = 435,600 $feet^2$ x 3 feet = 1,306,800 $feet^3$ = 48,400 cy).

TABLE 8
CONSTRUCTION EQUIPMENT LIST

Construction Stage	Equipment Type	Quantity	Tier
Demolition	Concrete/industrial saws	1	II
Demolition	Crawler tractors	1	III
Demolition	Tractors/loaders/backhoes	1	III
Site Preparation	Crawler tractors	2	III
Site Preparation	Rubber-tired loaders	3	III
Grading	Bore/drill rigs	2	III
Grading	Crawler tractors	3	III
Grading	Graders	1	III
Grading	Rubber-tired loaders	2	III
Grading	Scrapers	8	III
Building Construction	Cranes	1	III
Building Construction	Forklifts	3	III
Building Construction	Generator sets	2	II
Building Construction	Tractors/loaders/backhoes	3	III
Building Construction	Welders	1	II
Paving	Pavers	2	III
Paving	Paving equipment	2	III
Paving	Rollers	2	III
Architectural Coating	Air compressors	2	I

Blasting operations would also be required for site preparation. The explosive material would consist of ammonium nitrate and fuel oil, known as ANFO. For modeling GHG impacts, it is estimated that each blast would require 10,000 pounds of explosive per blast and there would be a total of eight blasts for the project. This totals to 80,000 pounds of ANFO for the project.

Using these inputs in CalEEMod, on-site project construction is estimated to emit a total of 15,250.67 $MTCO_2E$. The CO_2E sources of emissions include off-road equipment as well as hauling, and vendor and worker on-road trips. However, CARB staff has advised CalEEMod users that this version of the model over-estimates off-road construction emissions by 33 percent due to outdated exhaust emission load factors (CARB 2010b). Therefore, the construction emissions from off-road construction equipment calculated in CalEEMod were then reduced by 33 percent to arrive at a more accurate estimate of 11,313.39 $MTCO_2E$ total construction emissions. Final on-site construction emissions output is contained in the Appendix.

5.1.2 Off-site Construction Emissions

Off-site emissions would occur during construction of Phase 1 within the first year and a half of overall construction. The off-site impacts consist of road widening activities over a total area of approximately 2.7 acres and were calculated using the Road Construction Emissions Model. The inputs to this model included a construction duration of two months, a total of three acres project area, with a maximum of three acres disturbed per day. Grading quantities would be balanced on site with no import/export. However, soil would be moved around the project site or from off-site locations to on-site locations. For modeling purposes, the total volume of soil hauled around the project site is projected to be 260 cubic yards per day. Worker commute distance is estimated to be 20 miles per day each way.

Based on these inputs, off-site construction would emit approximately 29.0 $MTCO_2E$ total. The complete inputs and outputs to this model are included in the Appendix.

5.1.3 Total Annual Construction Emissions

5.1.3.1 County 2015 GHG Guidance

According to the County's 2015 GHG Guidance, "construction emissions may be amortized over the expected (long-term) operational life of a project, which can conservatively be estimated at 20 years…" The County allows for evidence of longer lifetimes, however, for purposes of this analysis under County's 2015 GHG Guidance, and to be conservative, construction emissions are amortized over a 20-year lifetime. Based on a 20-year lifetime, annual GHG emissions from on-site construction would total 565.67 $MTCO_2E$ and annual GHG emissions from off-site construction would total 1.45 $MTCO_2E$. Therefore, total annual construction emissions, combining on-site and off-site quantities, would be approximately 567.1 $MTCO_2E$ per year, as summarized in Table 9 below. The Appendix contains the complete construction emission calculations.

TABLE 9
TOTAL AND ANNUAL CONSTRUCTION EMISSIONS – COUNTY 2015 GHG GUIDANCE

Construction Emissions	Total $MTCO_2E$	Annual $MTCO_2E$
On-Site	11,313.40	565.67
Off-Site	29.00	1.45
TOTAL	**11,342.40**	**567.12**

5.1.3.2 SMAQMD CEQA Guide

According to the SMAQMD CEQA Guide, "the finite amount of a project's construction related GHG emissions and the operational GHG emissions generated per year over the lifetime of the project should be disclosed separately" (SMAQMD 2014). <u>Project construction is estimated to generate 11,342.4 $MTCO_2E$ over an 8- to 10-year period, which may be affected, by market demands and the need to develop the site with an orderly expansion of roadways, public utilities, and infrastructure. Thus, the annual emissions during construction would range from 1134.3 to 1417.8 $MTCO_2E$. As the annual construction emissions would exceed 1,100 $MTCO_2E$, construction emissions have been amortized over the lifetime of the proposed buildings and added to the operation emissions estimate.</u>

Operational life of a building can be estimated to be 40 years for new residential and 25 years for conventional commercial (SMAQMD 2014). Therefore, under the SMAQMD Guide, construction emissions are amortized over a 25-year life time for non-residential and a 40-year lifetime for residential.

To determine the equivalent amortized annual construction emissions, the total construction emissions were divided based on the proportion of the total project acreage to be developed as residential or non-residential, excluding detention basins and biological preservation/ open space, but not parks. Based on the total acreage to be developed for these purposes, approximately 62 percent of the total construction emissions would be associated with residential and approximately 38 percent would be associated with non-residential. Off-site emissions associated with roadway improvements are included in the non-residential emissions.

Based on a 40-year lifetime, amortized residential construction would ~~generate~~ be 176.2 $MTCO_2E$ annually; and, using a 25-year lifetime, amortized non-residential construction would ~~generate~~ be 171.8 MTCO2E annually. This would result in a total of 348.0 $MTCO_2E$ annually associated with project construction. Amortized annual construction emissions calculated using the SMAQMD Guide are summarized in Table 10.

TABLE 10
TOTAL AND AMORTIZED ANNUAL CONSTRUCTION EMISSIONS - SMAQMD CEQA GUIDE

Construction Emissions	Percentage of Land for Use	Total $MTCO_2E$	Annual $MTCO_2E$
Residential	62.14%	7,048.6	176.2
Non-Residential	37.86%	4,293.9	171.8
TOTAL	**100%**	**11,342.4**	**348.0**

5.1.3.3 2008 Scoping Plan Method

For purposes of this BAU analysis, construction emissions are amortized over a 30-year life time (SCAQMD 2008). Based on a 30-year lifetime, annual GHG emissions from on-site construction would total 377.1 $MTCO_2E$ annually and annual GHG emissions from off-site construction would total 1 $MTCO_2E$ annually. Therefore, total annual construction emissions, combining on-site and off-site quantities, would be approximately 378.1 $MTCO_2E$ per year, as summarized in Table 11. The Appendix contains the complete construction emission calculations.

TABLE 11
TOTAL AND ANNUAL CONSTRUCTION EMISSIONS – 2008 SCOPING PLAN METHOD

Construction Emissions	Total $MTCO_2E$	Annual $MTCO_2E$
On-Site	11,313.4	377.1
Off-Site	29.0	1.0
TOTAL	**11,342.4**	**378.1**

5.2 Operational Emissions

Operational emissions that would occur in 2020, ~~and~~ 2030, and 2050 were estimated using CalEEMod Version 2011.1.1 (CAPCOA 2011) and EMFAC 2014. Calculations are based on build-out of the proposed land uses as shown below in Table 12.

TABLE 12
MODELED LAND USES

CalEEMod Land Use Subtype	Project Land Use (Lookup)[1]	Quantity[1]
Elementary School[2]	Elementary School (K-5)	568 students
Junior High School[2]	Middle School (6–8)	132 students
Church[5]	Institutional	10.7 acres
Industrial[3]	Water Reclamation[3]	2.4 acres
Industrial[3]	Recycling Center[3]	0.6 acres
City Park	Neighborhood/County Parks	23.8 acres
Hotel[3]	County Inn/Bed & Breakfast	50 rooms
Recreational[3]	Recreation Center	40,000 square feet
Apartments Low Rise[4]	Senior Community	468 du
Condo/Townhouse[4]	Single–family attached/ residential mixed-use units	375 du
Congregate Care (Assisted Living)[3]	Assisted Living	200 du
Single-family Housing[4]	Single Family	903 du
Strip Mall[3]	Specialty/Strip Commercial	61,500 square feet
Office[3]	Commercial and Mixed Use	28,500 square feet

[1] Land use type and quantities as identified in traffic study (Chen Ryan 2014), assuming a worst-case scenario with a greater number of single-family units than the Specific Plan land uses.
[2] School employee population is based on Valley Center and Bonsall school district school report card data to determine the number of classified teachers per student, which was supplemented with 1 principal, 1 administrative assistant per 250 students, 1 nurse/vice principal, and 1 custodian (CDE 2013).
[3] Water reclamation (industrial), recycling facility (industrial), bed & breakfast (hotel), congregate care facility (Senior Care Facility), and commercial retail employee population is based on Space Use Information from the U.S. EPA Energy Star Program (U.S. EPA 2013).
[4] Residential population is based on CalEEMod default population settings (CAPCOA 2011).
[5] Church employment population assumes 1 senior parishioner, 1 assistant parishioner, 1 administrative assistant and 1 custodian.

The modeling region selected was the San Diego Air Pollution Control District (SDAPCD) area with a rural setting, in climate zone 13. The electricity and natural gas provider is San Diego Gas & Electric. GHG emissions were estimated for vehicle use, energy use, water

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use, area sources (landscaping equipment and fireplaces), and waste disposal. Adjustments were made to the model's default density and population rates for several of the land uses, based on data from the traffic study and the Specific Plan. The Appendix includes the operational GHG emissions calculations for the project with design features, including the inputs and assumptions entered into the model. The calculation methodology and results are summarized below.

5.2.1 Vehicle Emissions

Emissions from vehicle fuel combustion are estimated in CalEEMod based on modeled fuel consumption and VMT data. CO_2 emissions from the CARB's 2011 Emission Factor Model (EMFAC2011) ~~2011~~ model, which account for the majority of emissions from mobile sources, are directly related to the quantity of fuel combusted; while CH_4 and N_2O emissions depend more on the emissions-control technologies employed in the vehicle and the distance traveled. While CalEEMod includes vehicle emission factors up to the year 2035, the vehicle emissions are based on EMFAC2011, which does not include the effects of electric vehicles or LEV III. Thus, to better represent future emissions, the calculation of 2030 and 2050 vehicle emissions were conducted using the 2014 Emission Factor Model (EMFAC2014) (CARB 2014c). GHG emissions in year 2030 and 2050 are based on the aggregated vehicle emissions per mile traveled in the County as reported in EMFAC2014.

Project VMT was calculated in CalEEMod using trip lengths based on California Survey data collected by Caltrans and CARB. Total project trip generation was adjusted to match the project trip generation contained in the traffic report (Chen Ryan 2014). Based on these inputs, overall annual project VMT would be 62,562,847 miles.

As indicated, the vehicular trip lengths used in CalEEMod are calculated independent of the traffic analysis and are based on the type of land uses and the purpose of the trips, e.g., home to work, home to shopping, etc. Thus, the individual trip lengths assigned to various trips in the GHG modeling range from 6.6 to 16.8 miles depending on the type of trip. Trips associated with work and business travel greater distances than shopping and other non-business related trips. CalEEMod calculated total VMT based on the total trips generated, the distribution of trip types, and the trip length for each type of trip. Based on the total annual trips generated and the total VMT, the average annual trip distance for the project was calculated to be 8.95 miles. This trip distance is considered conservative as SANDAG projects the average trip lengths associated with the project to range from 7.6 to 8.25 miles, depending on the traffic alternative (Chen Ryan 2014). It is assumed the SANDAG model is the more accurate prediction of trip length as SANDAG's expertise is transportation planning and all SANDAG data are based on regional surveys and data collection, while CalEEMod was developed as a statewide model and has only limited data specific to each jurisdiction within the state.

To account for the project's design, site parameters used in the modeling included increased diversity based on the various land uses included, a walkable street design with four intersections per square mile, and an improved on-site pedestrian network. With the addition of these attributes, the proposed project would result in 58,840,358 VMT, which is held constant for the 2030 and 2050 emissions estimates regardless of assessment method. This equates to an approximate 5.9 percent reduction in VMT and emissions when using the CalEEMod defaults associated with the number of intersections per square mile.

To validate the VMT reduction estimate generated by CalEEMod, an off-model calculation was performed using the methodology provided in CAPCOA's 2010 report *Quantifying Greenhouse Gas Mitigation Measures* for measure LUT-3, Increase Diversity of Urban and Suburban Developments (Mixed Use) (CAPCOA 2010). According to the literature, this reduction measure is applicable in a rural environment if the project is a master planned community, such as the Lilac Hills Ranch project (CAPCOA 2010). Based on the methodology outlined in the CAPCOA document, the measure's effectiveness is calculated based on the percentage of each land use included in the project. Based on the land use plan for the project~~,~~ (see Table 2), 42.9 percent of the land uses are residential, 0.6 percent are commercial, 4 percent are institutional, 0.5 percent are industrial, and 3.9 percent are park/recreation. From this mix, it is estimated a total VMT reduction of 17.2 percent would be achieved by the project. However, as the 5.9 percent calculated by CalEEMod is more conservative, the lower 5.9 percent reduction in VMT is used in the modeling for the project under all years.~~This estimate is consistent with published literature (CAPCOA 2010).~~

In addition to the effects of the project design, changes in the vehicle emission factors used to calculate various scenarios required different adjustments to match each of the different evaluations methods use in this analysis. The flowing discussions provide a summary of these changes based on each methodology.

5.2.1.1 County 2015 GHG Guidance

According to the County 2015 GHG Guidance, the "unmitigated" project emissions should include the reductions provided by Pavley I regulations. However, CalEEMod includes the effects of Pavley I and LCFS. Thus, after calculating vehicular emissions for the "unmitigated" project, the emissions were increased by 10 percent to remove the effects of LCFS. After corrections, the "unmitigated" 2020 project emissions were estimated to be 26,845.43 $MTCO_2E$ annually. The "mitigated" emissions account for additional reductions from statewide regulations that took effect after 2008, such as LEV III, LCFS, and the Tire Pressure Program (County of San Diego 2015). With these additional reductions, the "mitigated" 2020 project vehicle emissions were estimated to be 22,299.38 $MTCO_2E$ annually.

5.2.1.2 SMAQMD CEQA Guide

According to the SMAQMD CEQA Guide, the NAT condition emissions should not include the reductions provided by state regulations. Additionally, SMAQMD provides detailed guidance and methodology to alter the emission factors of all vehicles classes in CalEEMod to remove the effects of Pavley I and LCFS. Thus, based on this guidance, the emission factors were altered to remove the effects of Pavley I and LCFS. After corrections, the 2020 NAT emissions were estimated to be 31,657.07 $MTCO_2E$ annually. The proposed project emissions account for additional reductions from statewide regulations that took effect after 2008, such as LEV III, LCFS, and the Tire Pressure Program (County of San Diego 2015). With these additional reductions, the 2020 proposed project vehicle emissions were estimated to be 22,295.14 MTCO2E annually.

5.2.1.3 2008 Scoping Plan Method

Emissions were calculated based on the methods used in the 2008 Scoping Plan, which determined the emissions reduction target using a BAU condition that did not include the reductions provided by state tail pipe emission regulations. The effects of state regulations were then considered in the future projections. Additionally, the CalEEMod user manual provides guidance to create a BAU condition by manually changing the emission factors for specific vehicle classes, specifically light duty autos, light duty trucks, and medium duty vehicles. Based on the 2008 Scoping Plan example and the guidance in the CalEEMod manual, the emissions factors for these vehicle classes were altered to remove the effects of state regulations. After corrections, the 2020 BAU vehicular emissions were estimated to be 31,125.32 $MTCO_2E$ annually. The proposed project emissions account for reductions from statewide regulations such as Pavley I, LEV III, LCFS, and the Tire Pressure Program (County of San Diego 2015). With these additional reductions, the 2020 proposed project vehicle emissions were estimated to be 22,299.38 MTCO2E annually.

5.2.2 Energy Use Emissions

GHGs result from the generation of electricity from fossil fuels off-site in power plants. These emissions are considered indirect but are calculated in CalEEMod as associated with a building's operation. The project would be served by SDG&E. Therefore, SDG&E's specific energy intensity factors were used in the calculations. SDG&E's energy intensity factors are shown in Table 13.

TABLE 13
SDG&E EXISTING INTENSITY FACTORS

GHG	Existing Intensity Factor[1] (pounds/MWh)
Carbon Dioxide (CO_2)	780.790
Methane (CH_4)	0.029
Nitrous Oxide (N_2O)	0.011

[1]SOURCE: CalEEMod Version 2011.1.1.
MWh = megawatt hour

These energy intensity values are used in CalEEMod to determine the GHG emissions associated with electricity consumption by the project. Energy consumption is based on CARB's Local Government Operations Protocol (for CO_2) and E-Grid (for CH_4 and N_2O) values (CARB 2011b). According to the California Public Utilities Commission (CPUC) 2nd Quarterly Report in 2010 to the Legislature, SDG&E had a 5.6 percent renewables relative to total bundled sales (CPUC 2010).

Project design features intended to reduce energy or electricity consumption include increasing energy efficiency by 30 percent over 2008 Title 24; installing high-efficiency lighting to achieve a 15 percent lighting energy reduction from street and area lighting; installing smart electrical meters; and installing energy efficient appliances in all residential units, except the congregate care facility, including clothes washers (a 30 percent improvement), dish washers (a 15 percent improvement), fans (a 50 percent improvement), and refrigerators (a 15 percent improvement). Energy efficient fans would also be installed in the hotel. In addition to these measures, the Specific Plan includes a requirement for the project to provide a minimum of 22 percent of the on-site electricity through solar photovoltaic (PV) systems. Based on the modeling, the project would consume approximately 3,330,349 kWh annually. According to the California Solar Initiative website, the average solar PV system generates 1,700 kWh per installed kW. Thus, the project would be required to install approximately 2,000 kW of solar PV systems to generate 3,400,000. The actual capacity and/or conversion efficiency of the photovoltaic panels may alter the actual number of roofs or non-residential roof space requirements to meet the annual 3,400,000 kWh requirement at project build-out. The solar PV systems would be located on the community facility buildings, commercial structures, and/or other non-residential uses as well as single-family residential uses.

5.2.2.1 County 2015 GHG Guidance

According to the County 2015 GHG Guidance, the "unmitigated" project should be based on the state laws in effect at the time of application. Therefore, the "unmitigated" project includes the effects of the 2008 Title 24, Part 6, standards, which results in a conservative analysis as the 2011 Final Supplement did not integrate the 2008 Title 24 standards. Additionally, as the County's percentage reduction target assumes achievement of a

20 percent renewable energy mix in 2010 as stated in the 2011 Final Supplement, a 14.7 percent reduction was applied to the “unmitigated” project’s electricity-related GHG emissions. The 14.7 percent reduction in the “unmitigated” project emissions is to account for the GHG emission reductions achieved between the percentage of RPS reported in 2006 by SDG&E and the 20 percent reported in 2010. Based on these inputs, “unmitigated” project energy emissions were estimated to be 8,330.12 $MTCO_2E$ annually.

To account for the continuing effects of RPS through ~~project build out~~2020, an additional 13 percent reduction was applied to the “mitigated” project’s electricity-related GHG emissions. The additional 13 percent reduction in the “mitigated” project emissions is to account for the GHG emission reductions achieved between the 20 percent included in the County’s percentage reduction target and the final requirement of RPS in 2020 of 33 percent. Based on the project design features and the effects of RPS, the “mitigated” project energy emissions were estimated to be 5,501.97 $MTCO_2E$ annually.

For the 2030 and 2050 GHG emissions estimates, the recently reported intent of the executive branch to require the state to achieve a RPS of 50 percent was taken into account and an additional 17 percent reduction in GHG emissions associated with electricity was applied to the 2030 and 2050 “mitigated” project. Under this condition, the project’s 2030 and 2050 energy emissions would be 4,959 $MTCO_2E$.

5.2.2.2 SMAQMD CEQA Guide

According to the SMAQMD CEQA Guide, the NAT condition should be based on the state laws in effect in 2006. Therefore, the NAT includes the effects of the 2005 Title 24, Part 6. As the energy intensity factors in CalEEMod are based on 2006 data, no change was applied to the NAT condition energy intensity factor in CalEEMod, which is also consistent with the SMAQMD CEQA Guide. Based on these inputs, energy emissions were estimated to be 9,588.25 $MTCO_2E$ annually.

To account for the continuing effects of RPS through project build out, the SMAQMD CEQA Guide includes a methodology of calculating the effect of RPS on the energy intensity factors used in CalEEMod. Based on the SMAQMD methodology the SDG&E’s energy intensity factors were recalculated and are shown in Table 14. Based on the project design features and the effects of RPS, the “mitigated” energy emissions were estimated to be 5,437.17 $MTCO_2E$ annually.

TABLE 14
SDG&E 2020 INTENSITY FACTORS

GHG	2020 Intensity Factosr[1] (pounds/MWh)	2030/2050 Intensity Factors (pounds/MWh)
Carbon Dioxide (CO_2)	554.16	413.55
Methane (CH_4)	0.021	0.015
Nitrous Oxide (N_2O)	0.008	0.006

[1]SOURCE: SDG&E 2006, SMAQMD 2014
MWh = megawatt hour

For the 2030 and 2050 GHG emissions estimates, the recently reported intent of the executive branch to require the state to achieve a RPS of 50 percent was taken into account and an additional 17 percent reduction in GHG emissions associated with electricity was applied to the 2030 and 2050 project. The SDG&E's energy intensity factors were recalculated and are shown in Table 14 for 2030 and 2050. Based on the 50 percent RPS and project design features, the project's 2030 and 2050 energy emissions would be 5,380.3 $MTCO_2E$ annually.

5.2.2.3 2008 Scoping Plan Method

Emissions were calculated based on the methods used in the 2008 Scoping Plan, which determined the emissions reduction target using a BAU condition that did not include the reductions provided by state emission regulations or effects after the adoption of the 2005 Title 24.

As with the NAT condition, the BAU condition is based on the 2005 Title 24, and the 2006 energy intensity factors. Based on these inputs, BAU energy emissions were estimated to be the same as the NAT condition at 9,588.25 $MTCO_2E$ annually.

Unlike the NAT condition and more similar to the "mitigated" project condition, to account for the continuing effects of RPS through project build out, a percent reduction was applied to the proposed project's electricity-related GHG emissions. A 27.4 percent reduction in the project's emissions was applied to account for the GHG emission reductions achieved between 5.6 percent imbedded in the 2006 energy intensity factors and the final requirement of RPS in 2020 of 33 percent. Based on the project design features and the effects of RPS, the proposed project's energy emissions were estimated to be 5,501.97 $MTCO_2E$ annually.

For the 2030 and 2050 GHG emissions estimates, and for the reasons discussed above, an RPS of 50 percent was taken into account. This represents a 44.4 percent reduction in GHG emissions associated with electricity in years 2030 and 2050 as compared to the percentage of RPS SDG&E had achieved by 2006. Based on the 50 percent RPS and project design features, the project's 2030 and 2050 energy emissions would be 4,776 $MTCO_2E$ annually.

5.2.3 Area Source Emissions

GHGs are emitted from area sources such as landscape maintenance equipment and fireplaces. The use of fireplaces and woodstoves directly emits CO_2 from the combustion of natural gas, wood, or biomass, some of which are thus classified as biogenic. Wood burning stoves and fireplaces emit substantially more GHGs than natural gas burning ones. CalEEMod estimates emissions from hearths and woodstoves only for residential uses based on the type and size features of the residential land use inputs. Generally, commercial land uses do not have any hearths or woodstoves but can be added for those cases where they may occur, such as in restaurants or hotels. No hearths or woodstoves were attributed to any commercial uses proposed by the project.

Under the County 2015 GHG Guidance, SMAQMD CEQA Guide, and 2008 Scoping Plan methodology, the "unmitigated," NAT, and BAU area source emissions were calculated using a standard mix of wood-burning fireplaces as defined by the SDAPCD. The standard mix for residential uses included in CalEEMod is 35 percent wood burning fireplaces, 55 percent natural gas fueled fireplaces, and 10 percent with no fireplaces (CAPCOA 2011). The default annual burning days in CalEEMod is 246 days. However, 246 days is considered excessive for the region and the number of burning days was reduced to 180 days. For purposes of modeling, no fireplaces were included in the congregate care facility. The "unmitigated" area source emissions were estimated to be 3,185.20 $MTCO_2E$ per year.

The "mitigated" or proposed project condition included 90 percent of the residential units' fireplaces as natural gas fueled fireplaces and 10 percent of the units with no fireplaces. Similar to the "unmitigated", NAT, and BAU condition, no fireplaces were included in the congregate units and the default 246 days per year of use was changed to 180 days per year based on local climate and a shorter winter season. The "mitigated" or proposed project area source 2020 emissions were estimated to be 2,757.46 $MTCO_2E$ per year.

5.2.4 Water Use Emissions

The amount of water used and wastewater generated by a project has indirect GHG emissions associated with it, and if a WRF is constructed, could include some direct emissions. This analysis estimates emissions from the WRF by including 286 ac-ft./year under all scenarios.

Emissions associated with water/wastewater consumption/generation are a result of the energy used to supply, distribute, and treat the water and wastewater. In addition to the indirect GHG emissions associated with energy use, wastewater treatment can directly emit both methane and nitrous oxide.

Based on the land uses, CalEEMod water/wastewater estimates GHG emissions associated with supplying and treating the water and wastewater. CalEEMod's default rates of indoor and outdoor water use for each residential land use subtype comes from the Pacific Institute's 2003 *Waste Not, Want Not: The Potential for Urban Water Conservation in California* report and the American Water Works Association Research Foundation's *Commercial and Institutional End Uses of Water* as cited in the CalEEMod user guide (CAPCOA 2013). This indoor water use was multiplied by a factor to obtain outdoor water use rates and wastewater generation.

CalEEMod calculates GHG emissions from water and wastewater based on electricity intensity values for various phases of the supply and treatment cycle of water from CEC's 2006 *Refining Estimates of Water-related Energy Use in California*. Estimates are generated by multiplying the total projected water/wastewater demand by the applicable water electricity intensities and by the utility intensity GHG factors, which are estimated to change over time. The changes in the energy intensity factors are affected by requirements of Title 24, Part 6, as well as the effects of renewables mix in the state energy grid.

5.2.4.1 County 2015 GHG Guidance

According to the County 2015 GHG Guidance, the "unmitigated" project includes all effects of state laws in effect at the time of application. Therefore, because emissions are a result of the energy used to supply, distribute, and treat water and wastewater, the emission estimates include the effects of RPS on water use and energy intensity. Based on these inputs, the "unmitigated" water consumption is estimated to 2,537.20 $MTCO_2E$ annually.

The project has committed to achieving a 20 percent reduction in indoor and outdoor water use, as identified in the Lilac Hills Ranch Specific Plan. Therefore, the "mitigated" emission calculations included this 20 percent reduction. Additionally, the GHG emissions associated with the energy consumption used to supply the water has reduced by 13 percent to account for the remaining effects of RPS on the energy grid. Based on these inputs it is estimated that the total annual 2020 emissions associated the "mitigated" project water use would be 1,766.26 $MTCO_2E$.

<u>For the 2030 and 2050 GHG emissions estimates, an additional 17 percent reduction in GHG emissions associated with electricity consumption was taken into account. This reduction is due to the effect of RPS at 50 percent by 2030. Based on the 50 percent RPS and project design features, the project's 2030 and 2050 water emissions would be 1,466 $MTCO_2E$ annually.</u>

5.2.4.2 SMAQMD CEQA Guide

According to the SMAQMD CEQA Guide, the NAT condition would not include the effects of state laws that took effect after 2006. Therefore, the emission estimates do not include the effects of Title 24 2008 on water use or RPS beyond 5.6 percent, which was the percent reported in 2006 by SDG&E to the Legislature on its progress in achieving the RPS goal (SDG&E 2011). Based on these inputs, the NAT water consumption is estimated to generate 2,537.72 $MTCO_2E$ annually.

Under the SMAQMD CEQA Guide, the proposed project emissions calculations include an overall 20 percent reduction in indoor and outdoor water use as a project design feature. Additionally, the GHG emissions associated with the energy consumption used to supply the water was reduced by 27.4 percent to account for the remaining effects of RPS on the energy grid since 2006. Based on these inputs it is estimated that the total annual 2020 emissions associated the project water use would be 1,515.92 $MTCO_2E$.

For the 2030 and 2050 GHG emissions estimates, the conversion of the energy intensity factors reduce in GHG emissions from conveyance. Based on the revised energy intensity factors presented in Table 14 and project design features, the project's 2030 and 2050 water emissions would be approximately 1,516 $MTCO_2E$ annually.

5.2.4.3 2008 Scoping Plan Method

Using the same assumptions used in the 2008 Scoping Plan and the BAU methods provided in the CalEEMod user manual, and similar to the SMAQMD CEQA Guide, the BAU condition would not include the effects of state laws that took effect after 2006. Therefore, the emission estimates do not include the effects of Title 24 2008 on water use or RPS beyond 5.6 percent. Based on these inputs, the NAT water consumption is estimated to generate 2,537.72 $MTCO_2E$ annually.

As with all other conditions, the proposed project emissions calculations include an overall 20 percent reduction in indoor and outdoor water use as a project design feature. The GHG emissions associated with the energy consumption used to supply the water has reduced by 27.4 percent to account for the remaining effects of RPS on the energy grid since 2006. Based on these inputs, it is estimated that the total annual 2020 emissions associated the project water use would be 1,515.92 $MTCO_2E$.

For the 2030 and 2050 GHG emissions estimates, an additional 17 percent reduction in GHG emissions associated with electricity consumption was taken into account. This reduction is due to the effect of RPS at 50 percent by 2030. Based on the 50 percent RPS and project design features, the project's 2030 and 2050 water emissions would be approximately 1,421 $MTCO_2E$ annually.

5.2.5 Solid Waste Disposal Emissions

The disposal of solid waste produces GHG emissions from anaerobic decomposition in landfills, incineration, and transportation of waste. To estimate the GHG emissions that would be generated by disposing of the solid waste associated with the proposed project, the total volume of solid waste was first estimated in the model using waste disposal rates identified by CalRecycle. This estimate is considered conservative as it does not account for the state's policy goal – as set forth in Public Resources Code Section 41780.01 – that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by year 2020, and annually thereafter, which is included in the projections of the CARB Scoping Plan to meet the AB 32 GHG reduction targets. Estimates of the volume of solid waste, and waste categorization ratios, i.e., the percentage of paper products, food waste, and plant debris to total waste is based on rates developed by CalRecycle. The GHG emissions associated with disposal of solid waste into landfills is based on the U.S. EPA's WARM software that quantifies GHG emissions from solid waste based on the IPCC method using the degradable organic content of waste.

CalEEMod calculations for quantifying GHG emissions from solid waste are based on the IPCC method using the degradable organic content of waste. Solid waste GHG emissions associated with waste disposal for all scenarios were calculated using CalEEMod's default parameters. Under the "unmitigated", NAT, and BAU conditions, solid waste emissions were estimated to be 1,216.12 $MTCO_2E$ annually.

The proposed project would include a RF and green waste drop-off center. According to the Specific Plan, "the purpose of the recycling facility is to provide and encourage recycling by project residents in addition to the weekly collection of green waste." The facility would include office functions as well as storage for any equipment or materials.

The proposed collection of recycling and green waste is initially seen as a simple storage operation with little on-site operation other than the delivery of empty containers and the pick-up of full containers by large trucks, with occasional resident vehicles accessing the site. The reductions in emissions associated with the RF are expected to be approximately 20 percent, which was included in the project modeling as a design feature. The 20 percent reduction in standard waste generation rates is considered a conservative assessment based on the current state requirement of 75 percent waste diversion as included in CARB's 2014 First Update to the 2008 Scoping Plan. After inclusion of this project design feature, the 2020 GHG emissions associated the "mitigated" and proposed project conditions would be 972.89 $MTCO_2E$ annually.

For the 2030 and 2050 GHG emissions estimates, an additional 5 percent reduction in GHG emissions associated with solid waste was taken into account. This reduction is due to the effect of AB 431, which established a statewide goal of 75 percent recycling, composting, or source reduction of solid waste by 2020. Based on the additional 5 percent reduction and project design features, the project's 2030 and 2050 waste emissions would be 912 $MTCO_2E$ annually.

5.3 Emission Calculations

5.3.1 Existing Emissions

In accordance with State CEQA Guidance Section 15064.4(b)(1), this section considers the "extent to which the project may increase or reduce [GHG] emissions as compared to the existing environmental setting."

As shown in Table 15, the existing land uses emissions are calculated at 563.7 $MTCO_2E$ in 2008, and the project emissions are quantified to range from 32,982.8 to 33,806.9 $MTCO_2E$ in 2020, depending on which calculation method is used (see Section 5.1 Calculation Methodology). Therefore, the GHG emissions from the proposed project would be greater than the existing emissions, increasing emissions on the project site over and above existing conditions by 32,419.1 to 33,243.2 $MTCO_2E$.

TABLE 15
ANNUAL ESTIMATED GHG EMISSIONS
FOR EXISTING USES AND 2020 PROJECT WITH PROJECT DESIGN FEATURES (MTCO$_2$E)

		County 2015 GHG Guidance		SMAQMD CEQA Guide		2008 Scoping Plan Method	
Source	Existing Emissions	2020 Project Emissions	Increase	2020 Project Emissions	Increase	2020 Project Emissions	Increase
Construction		567.1	567.1	~~0.0~~348.0	~~0.0~~348.0	378.1	378.1
Vehicles	392.5	22,299.4	21,906.8	22,299.4	21,906.8	22,299.4	21,906.8
Energy Use	95.3	5,443.8	5,348.6	5,437.2	5,341.9	5,443.8	5,348.6
Area	52.7	2,757.5	2,704.8	2,757.5	2,704.8	2,757.5	2,704.8
Water Use	11.5	1,766.3	1,754.8	1,515.9	1,504.4	1,766.3	1,754.8
Solid Waste	11.8	972.9	961.1	972.9	961.1	972.9	961.1
TOTAL	**563.7**	**33,806.9**	**33,243.2**	**32,982.8**	**32,4~~19.08~~982.8**	**33,617.9**	**33,054.1**

5.3.2 Construction Emissions

Total annual construction emissions under each methodology are presented in Table 16. Each estimate combines on-site and off-site quantities and amortizes the emissions over the appropriate number of years under the different methodologies as discussed in Section 5.1.

TABLE 16
SUMMARY OF ANNUAL CONSTRUCTION EMISSIONS(MTCO$_2$E)

Construction Emissions	County 2015 GHG Guidance	SMAQMD CEQA Guide	2008 Scoping Plan Method
TOTAL	567.12	348.0	378.1

As construction emissions are finite in time, i.e. when construction ends, so do construction related emissions of GHGs, no additional construction emissions would be associated with future conditions.

These emissions would be added to the annual operational emissions in future years equal to the number of years of the project lifetime. Thus, under the County's 2015 GHG Guidance, construction emissions would be added to the operation emissions for 20 years after the final operation year. Thus, assuming a 20-year life time, construction emissions would be evaluated in any reduction targets up to the year 2045. Alternatively, under the 2008 Scoping Plan Method, the construction emissions would be included in a 2050 project estimate as the amortization period is 30 years. Under the SMAQMD Guide, construction emissions are assessed separately from operation emissions and are not considered in the 2020 or any other future emission scenarios.

5.3.2 Operations Emissions

5.3.2.1 County 2015 GHG Guidance

The County's 2015 GHG Guidance requires the calculation of "unmitigated" emissions and "mitigated" emissions based on the available information. Table 17 summarizes the "unmitigated" and "mitigated" project emissions from operation for year 2020, which is conservatively used as the first year of project operation. The year 2020 is considered conservative for modeling full build-out emissions as it represents the worst-case scenario with the highest project emissions as emissions in future years, such as 2025, would be lower. The year 2020 emissions are considered conservative for assessing project GHG impacts, as project emissions would be lower in future years as shown in the year 2030 and 2050 calculations. Emission estimates presented in Table 17 were completed based on the County's guidelines.

TABLE 17
OPERATIONAL GHG EMISSIONS WITH AND WITHOUT PROJECT DESIGN FEATURES – COUNTY 2015 GHG GUIDANCE ($MTCO_2E$)

Source	"Unmitigated" Project	"Mitigated" Project 2020	Percent Reduction	"Mitigated" Project 2030	"Mitigated" Project 2050
Vehicles	26,845.4	22,299.4	16.9%	~~20,308.5~~ 16,878.1	15,112.0
Energy	8,330.1	5,443.81	34.0%	~~5,443.8~~ 4,959.1	~~5,443.8~~ 4,959.1
Area	3,185.2	2,757.5	13.4%	2,757.5	2,757.5
Water	2,537.2	1,766.3	30.4%	1,~~766~~466.~~3~~0	1,~~7~~466.~~3~~0
Solid Waste	1,216.1	972.9	20.0%	~~972.9~~912.1	~~972.9~~912.1
TOTAL	**42,114.1**	**33,239.8**	**20.8%**	**~~31,248.9~~ 26,972.8**	**~~26,052.5~~ 25,206.7**

As shown, the "unmitigated" project would result in a net total of 42,114.1 $MTCO_2E$ annually while the mitigated project would result in a net total of 33,239.8 $MTCO_2E$ annually. At project buildout, in year 2030, GHG emissions would further reduce to ~~31,248.9~~26,972.8 $MTCO_2E$ annually. By 2050, the proposed project's GHG emissions would be further reduced to 25,206.7 $MTCO_2E$. The reductions in 2030 and 2050 vehicle emissions are due to continued vehicle emission reduction due to existing laws. The reduction in other sectors are primarily due to the effects of RPS at 50 percent in 2030 the effect AB 341 in diverting solid waste from landfills.~~Theis additional reduction is due to continued vehicle emission reduction due to existing laws.~~

5.3.2.2 SMAQMD CEQA Guide

Table 18 summarizes the NAT and project operation emissions for year 2020, which is conservatively used as the first year of project operation. As under the County 2015 GHG Guidance, the year 2020 emissions are considered conservative for assessing project GHG impacts, as project emissions would be lower in future years as shown in the year 2030 and 2050 calculations~~. 2030.~~. Emission estimates presented in Table 18 were completed based on the SMAQMD's methodology.

TABLE 18
OPERATIONAL GHG EMISSIONS FOR NAT CONDITION AND PROJECT WITH PROJECT DESIGN FEATURES– SMAQMD CEQA GUIDE ($MTCO_2E$)

Source	NAT 2020	Project 2020	Percent Reduction	Project 2030	Project 2050
Vehicles	31,657.1	22,299.4	29.6%	~~20,308.5~~ 16,878.1	15,112.0
Energy	9,588.3	5,437.2	43.3%	~~5,437.2~~ 4,673.2	~~5,437.2~~ 4,673.2
Area	3,185.2	2,757.5	13.4%	2,757.5	2,757.5
Water	2,537.7	1,515.9	40.3%	~~1,515.9~~ 1,196.8	~~1,515.9~~ 1,196.8
Solid Waste	1,216.1	972.9	20.0%	~~972. 9~~ 912.1	~~972. 9~~ 912.1
TOTAL	**48,184.4**	**32,982.8**	**31.5%**	**~~30,991.9~~ 26,417.7**	**~~24,822.6~~ 24,651.6**

As shown in Table 18, the "unmitigated" project would result in a gross total of 48,184.4 $MTCO_2E$ annually while the mitigated project would result in a gross total of 32,982.8 $MTCO_2E$ annually. At project buildout, in year 2030, GHG emissions would further reduce to ~~30,991.9~~ 26,417.7 $MTCO_2E$ annually. By 2050, the proposed project's GHG emissions would be further reduced to 24,651.6 $MTCO_2E$. The~~is~~ ~~additional~~ reductions in 2030 and 2050 vehicle emissions are~~is~~ due to continued vehicle emission reduction due to existing laws. The reduction in other sectors are primarily due to the effects of RPS at 50 percent in 2030 the effect AB 341 in diverting solid waste from landfills.

5.3.2.3 2008 Scoping Plan Method

Table 19 summarizes the 2008 Scoping Plan BAU and project emissions for year 2020, which is conservatively used as the first year of project operation. The year 2020 emissions are considered conservative for assessing project GHG impacts, as project emissions would be lower in future years as shown in the year 2030 and 2050 calculations. Emission estimates presented in Table 20 were completed based on the methodology identified in the 2008 Scoping Plan.

TABLE 19
OPERATIONAL GHG EMISSIONS FOR BAU CONDITION AND PROJECT WITH PROJECT DESIGN FEATURES – 2008 SCOPING PLAN METHOD ($MTCO_2E$)

Source	BAU 2020	Project 2020	Percent Reduction	Project 2030	Project 2050
Vehicles	31,125.3	22,299.4	29.6%	~~20,308.5~~ 16,878.1	15,112.0
Energy	9,588.3	5,443.8	43.3%	~~5,443.8~~ 4,776.2	4,776.2
Area	3,185.2	2,757.5	13.4%	2,757.5	2,757.5
Water	2,537.7	1,766.3	40.3%	~~1,766.3~~ 1,421.1	1,421.1
Solid Waste	1,216.1	972.9	20.0%	~~972.9~~ 912.1	912.1
TOTAL	**47,652.5**	**33,239.8**	**30.0%**	**~~31,248.9~~ 26,745.0**	**~~26,052.5~~ 24,978.9**

As shown in Table 19, the “unmitigated” project would result in a net total of 47,652.5 $MTCO_2E$ annually while the mitigated project would result in a net total of 33,239.8 $MTCO_2E$ annually. At project buildout, in year 2030, GHG emissions would further reduce to ~~31,248.9~~ 26,745.0 $MTCO_2E$ annually. By 2050, the proposed project’s annual GHG emissions would be further reduced to 24,978.9 $MTCO_2E$. The reductions in 2030 and 2050 vehicle emissions are due to continued vehicle emission reduction due to existing laws. The reduction in other sectors are primarily due to the effects of RPS at 50 percent in 2030 the effect AB 341 in diverting solid waste from landfills.~~This additional reduction is due to continued vehicle emission reduction due to existing laws.~~

5.3.3 2030 Emissions

Table 20 provides a summary of the project’s total 2030 emissions including construction and operational emissions for the “unmitigated” and the “mitigated” projects, as calculated per the County’s 2015 GHG Guidance. The annual construction emissions would total 567.1 $MTCO_2E$, and gross annual operational emissions would total 27.539.9~~31,248.9~~ $MTCO_2E$ as shown in Table 20 below.

TABLE 20
TOTAL ANNUAL ESTIMATED GHG EMISSIONS
WITH AND WITHOUT PROEJCT DESIGN FEATURES IN 2030 ($MTCO_2E$)

Source	"Unmitigated" Project Emissions (in $MTCO_2E$)	2030 "Mitigated" Project Emissions (in $MTCO_2E$)	Percent Reduction
Construction	567.1	567.12	0%
Vehicles	26,845.4	~~20,308.5~~ 16,878.1	~~24.4~~ 37.1%
Energy	8,330.1	~~5,443.8~~ 4,959.1	~~34.6~~ 40.5%
Area	3,185.2	2,757.5	13.4%
Water	2,537.2	~~1,766.3~~ 1,466.0	~~30.4~~ 42.2%
Solid Waste	1,216.1	~~972.9~~ 912.1	~~20~~ 25.0%
TOTAL	**42,681.2**	**~~31,248.9~~** **27,539.9**	**~~26.8~~** **35.5%**

As shown in Tables 17 through 20, most emissions categories are ~~constant in t~~reduced in year ~~he~~ 2030 ~~calculations~~, ~~including~~ excluding the existing uses, construction, ~~solid waste, energy,~~ and area~~, water, and solid waste sources~~. ~~This consistency between 2020 and 2030 is due to the lack of information of future regulatory requirements and technology advancements~~Emission reductions in energy and water are associated with a 17 percent increase in RPS to a total of 50 percent by 2030. Solid waste reductions are associated with the diversion of an additional 5 percent of solid waste associated with compliance with AB 341. Vehicle GHG emissions in 2030 show reductions primarily due to continued implementation of existing laws affecting fuel formulations and vehicle efficiencies as modeled with EMFAC-2014. (For disclosure purposes, CalEEMod estimates the total emissions would be 3,340 $MTCO_2E$ greater than EMFAC2014; however, as previously indicated, CalEEMod is based on EMFAC-2011, which is an older model that did not include LEV III.) As indicated in Table 20, the project would potentially achieve a 35.5 percent reduction in GHG emissions in 2030 when considering the effects of RPS at 50 percent the effect state transportation and AB 341.

5.3.4 2050 Emissions

Table 21 provides a summary of the project's total 2050 emissions including construction and operational emissions for the "unmitigated" and the "mitigated" projects. The gross annual operational emissions would total 25,773.8 $MTCO_2E$ as shown in Table 21 below.

TABLE 21
TOTAL ANNUAL ESTIMATED GHG EMISSIONS
WITH AND WITHOUT PROEJCT DESIGN FEATURES IN 2050 ($MTCO_2E$)

Source	"Unmitigated" Project Emissions (in $MTCO_2E$)	2050 "Mitigated" Project Emissions (in $MTCO_2E$)	Percent Reduction
Construction	567.1	567.1	0.0%
Vehicles	26,845.4	15,112.0	43.7%
Energy	8,330.1	4,959.1	40.5%
Area	3,185.2	2,757.5	13.4%
Water	2,537.2	1,466.0	42.2%
Solid Waste	1,216.1	912.1	25.0%
TOTAL	**42,681.2**	**25,773.8**	**39.6%**

As shown in Tables 17 through 21, the emissions estimates for most categories are constant in the 2030 and 2050 calculations. The unchanging nature of the emissions quantities between these years is due to the lack of information regarding future regulatory requirements and technology advancements for these emission sources. Based on EMFAC2014, vehicle-related GHG emissions in 2050 show reductions primarily due to continued implementation of existing laws affecting fuel formulations and vehicle efficiencies. As indicated in Table 21, the project would potentially achieve a 39.6 percent reduction in GHG emissions in 2050.

6.0 Impact Analysis

6.1 GHG Emissions

Under the first criterion identified in Appendix G of the CEQA Guidelines, a significant global climate change impact would occur if implementation of the proposed project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. The significance analysis provided in this report is multi-faceted and evaluates the significance of the project's GHG emissions under the first criterion by reference to: (a) the existing environmental conditions on the project site; (b) the County's Guidance, which requires at least a 16 percent reduction from the "unmitigated" condition; (c) SMAQMD Guide, which requires at least a 21.7 percent reduction from the NAT condition; and (d) the original 2008 Scoping Plan, which identifies a 28.5 percent reduction from the BAU condition.

6.1.1 Increase from Existing GHG Emissions

In accordance with CEQA Guidelines sections 15064.4(b)(1) and 15125(a), this section identifies the numeric incremental increase in GHG emissions attributable to the project, compared to GHG emissions resulting from on-site existing conditions. This report considers the "extent to which the project may increase or reduce [GHG] emissions as compared to the existing environmental setting."

While the project would result in an obvious change to the existing GHG emissions from the existing condition, because climate change is occurring on a global scale, it is not meaningfully possible to quantify the scientific effect of new GHG emissions caused by a single project or whether a project's net increase in GHG emissions, when coupled with other activities in the region, is cumulatively considerable. The SMAQMD has recognized "that there is no known level of emissions that determines if a single project will substantially impact overall GHG emission levels in the atmosphere" (SMAQMD 2014). Additionally, the San Joaquin Valley Air Pollution Control District (SJVAPCD) has concluded that "existing science is inadequate to support quantification of impacts that project specific GHG emissions have on global climatic change" (SJVAPCD 2009). Indeed, there is no scientific or regulatory consensus regarding what particular quantity of GHG emissions is considered significant, and there remains no applicable, adopted numeric threshold for assessing the significance of a project's emissions. Furthermore, the global scale of climate change makes it difficult to assess the significance of a single project, particularly one designed to accommodate anticipated population growth (Council on Environmental Quality 2014). Indeed, unlike criteria pollutants, GHG emissions and climate change are not localized effects, and their magnitude cannot be quantified locally (CAPCOA 2008).

Also, it should be noted that "AB 32 demonstrates California's commitment to reducing GHG emissions and the state's associated contribution to climate change, without intent to limit population or economic growth within the state" (SMAQMD 2014). As a result, there are negative policy implications arising from the utilization of a uniform numeric threshold because of its potential to conflict with projected population and economic growth. Indeed, CEQA is not a policy tool to control population or economic growth, and, the future residents and occupants of development enabled by this project would exist and live somewhere else even if this project were not approved. As stated in CAPCOA's *CEQA and Climate Change* document "[A] land development project, such as a specific plan, does not necessarily create 'new' emitters of GHG, but would theoretically accommodate a greater number of residents in the state. Some of the residents that would move to the project could already be California residents, while some may be from out of state (or would 'take the place' of in-state residents who 'vacate' their current residences to move to the new project). Some also may be associated with new births over deaths (net population growth) in the state. The out-of-state residents would be contributing new emissions in a statewide context, but would not necessarily be generating new emissions in a global context" (CAPCOA 2008).

In summary then, this numeric increase of approximately 32,762.81 to 33,301.33 $MTCO_2E$ per year, alone, is not a sufficiently informative or reliable indicator of the significance of the project's GHG emissions. Therefore, as discussed, this report also considers other methods for analyzing the significance of the project's GHG emissions.

6.1.2 County 2015 GHG Guidance

The County's *2015 GHG Guidance* includes a screening level of 900 $MTCO_2E$ to determine the need for additional analysis of project emissions. Because the project's net increase in emissions would be greater than the screening level, as demonstrated in section 6.1.1, further analysis with respect to the County's *2015 GHG Guidance* is provided here.

In accordance with CEQA Guidelines section 15064.4(b)(2)-(3), this section analyzes whether the project's GHG emissions are significant under the County's 2015 GHG Guidance, which requires the "mitigated" project to achieve at least a 16 percent reduction in GHG emissions from the "unmitigated" condition for impacts to be less than significant. As shown in Table ~~21~~22, Total Annual Construction and Operational Project GHG Emissions Summary—County's 2015 GHG Guidance, the project without its project design features would emit approximately 42,681.2 $MTCO_2E$ annually, whereas the project with its project design features would emit approximately 33,806.9 $MTCO_2E$ annually in 2020. This amounts to a 20.8 percent reduction, which exceeds the County's 16 percent reduction target. Therefore, impacts would be less than significant.

TABLE 22~~1~~
TOTAL ANNUAL CONSTRUCTION AND OPERATIONAL "UNMITIGATED" AND "MITIGATED" PROJECT GHG EMISSIONS – COUNTY 2015 GHG GUIDANCE

Source	"Unmitigated" Project	"Mitigated" Project 2020	Percent Reduction	Project 2030	Project 2050
Operational Emissions	42,114.1	33,239.8	20.9%	~~31,248.9~~ 26,972.8	**~~26,052.5~~** **25,206.7**
Construction Emission	567.1	567.1	0.0%	567.1	567.1
Total Emissions	**42,681.2**	**33,806.9**	**20.8%**	**~~31,816.0~~** **27,539.9**	**25,773.8** **~~26,619.6~~**

The design features incorporated into the project, for the "mitigated" condition, are described in Chapter 7.0 (and in subchapter 1.2.6). When any phase under the Specific Plan comes forward, it would be subject to the requirements of the Specific Plan that outline the project design features modeled in this analysis through conditions of approval of the project and all phases.

6.1.3 SMAQMD CEQA Guide

In accordance with CEQA Guidelines Section 15064.4(b)(2)-(3), this section analyzes whether the project's GHG emissions are significant under the SMAQMD's *CEQA Guide*, Chapter 6. The SMAQMD's *CEQA Guide* identifies 1,100 $MTCO_2E$ as a bright-line threshold for construction and operation emissions, i.e., annual project construction and operation GHG emissions below 1,100 $MTCO_2E$ would be considered less than significant. Alternately, where operation emissions would exceed 1,100 $MTCO_2E$, the project would be required to achieve a 21.7 percent or greater reduction in GHG emissions from a NAT condition for impacts to be less than significant.

As previously discussed, the SMAQMD considers construction and operation emissions separately. According to the SMAQMD CEQA Guide, annual construction or operation GHG emissions below 1,100 $MTCO_2E$ are considered less than significant. Based on the annual construction emissions estimates, annual construction would range from 1,134.3 to 1,417.8 $MTCO_2E$. As the annual construction emissions would exceed 1,100 $MTCO_2E$, construction emissions have been amortized over the lifetime of the proposed buildings and added to the operation emissions estimate. Based on a 40-year lifetime, amortized residential construction would be 176.2 $MTCO_2E$ annually; and, using a 25-year lifetime, amortized non-residential construction emissions would be 171.8 MTCO2E annually. This would be the equivalent of 348.0 $MTCO_2E$ annually. ~~under the SMAQMD CEQA Guide, the project's construction emissions amortize to 348 MTCO2E annually. Therefore, construction related GHG emissions would be less than significant.~~

As shown in Table 18 the project's operation emissions would exceed 1,100 $MTCO_2E$. Therefore, the project would be required to achieve SMAQMD's 21.7 percent reduction in GHG emissions over CARB's NAT condition to demonstrate consistency with AB 32. As shown in Table 2~~2~~3, Total Annual Operational NAT Condition and Project GHG Emissions – SMAQMD CEQA Guide, the project would emit approximately ~~32~~33~~,982.8~~330.932,982.8 $MTCO_2E$ per year, whereas the NAT condition would emit approximately 48,184.4 $MTCO_2E$ per year. This amounts to a 31.~~5~~ 3 percent reduction, which exceeds SMAQMD's 21.7 percent reduction target. Therefore, the project's GHG emissions would be less than significant.

TABLE 2~~2~~3
TOTAL ANNUAL CONSTRUCTION AND OPERATIONAL NAT CONDITION AND PROJECT GHG EMISSIONS – SMAQMD CEQA GUIDE ($MTCO_2E$)

Operational Emissions	NAT 2020	Project 2020	Percent Reduction	Project 2030	Project 2050
Operational Emissions	48,184.4	32,982.8	31.5%	~~30,991.9~~ 26,417.7	**24,651.6** ~~24,822.6~~
Construction Emission	348.0	348.0	0%	348.0	348.0
Total Emissions	**48,532.4** **~~48,184.4~~**	**33,330.9** **~~32,982.8~~**	**31.3~~5~~%**	**~~30,991.9~~** **26,756.7**	**24,999.6**

~~Note: Per the SMAQMD CEQA Guide, operational and construction emissions are evaluated separately, and construction emissions are not taken into account when evaluating the project against the 21.7 percent reduction goal from the NAT condition. For this reason, they are not included in this table. As discussed above, the project's construction emissions amortize to 348 MTCO2E annually, and construction related GHG emissions would be less than significant.~~

The design features incorporated into the project to achieve the performance threshold are described in Chapter 7.0 (and in subchapter 1.2.6). When any phase under the Specific Plan comes forward, it would be subject to the requirements of the Specific Plan that outline the project design features modeled in this analysis through conditions of approval of the project and all phases.

6.1.4 2008 Scoping Plan Method

In accordance with CEQA Guidelines section 15064.4(b)(2)-(3), this section analyzes whether the project's GHG emissions are consistent with the level of GHG reductions identified in the original 2008 Scoping Plan as necessary to achieve the reduction mandate of AB 32, which references at least a 28.5 percent reduction in GHG emissions from the BAU condition for impacts to be less than significant (CARB 2008b). As shown in Table 24~~3~~, Total Annual Construction and Operational BAU Condition and Project GHG Emissions – 2008 Scoping Plan Method, the BAU condition would emit a gross total of approximately 48,030.6 $MTCO_2E$ annually, whereas the project with its project design features would emit a net total of approximately 33,617.9 $MTCO_2E$ annually. This amounts to a 30.~~4~~0 percent reduction, which exceeds the 28.5 percent reduction target. Therefore, the project's GHG emissions would be consistent with the Scoping Plan reduction goals and impacts would be less than significant.

TABLE 24~~3~~
TOTAL ANNUAL CONSTRUCTION AND OPERATIONAL BAU CONDITION AND PROJECT GHG EMISSIONS – 2008 SCOPING PLAN METHOD

Source	BAU 2020	Project 2020	Percent Reduction	Project 2030	Project 2050
Operational Emissions	47,652.5	33,239.8	30.7%	~~31,248.9~~ 26,745.0	24,978.9
Construction Emission	378.1	378.1	0.0%	378.1	378.1
Total Emissions	**48,030.6**	**33,617.9**	**30.40%**	**~~31,249.0~~ 27,123.1**	**25,357.0**

The design features incorporated into the project, for the "mitigated" scenario, to achieve the performance threshold are described in Chapter 7.0 (and in subchapter 1.2.6). When any phase under the Specific Plan comes forward, it would be subject to the requirements of the Specific Plan that outline the project design features modeled in this analysis through conditions of approval of the project and all phases.

6.1.5 Impact Summary

As discussed, under the first significance criterion, a significant global climate change impact would occur if implementation of the proposed project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. In order to evaluate the project's significance, the project's GHG emissions were calculated using different assessment methodologies. Utilization of the reduction targets identified in the preceding sections allows for consideration of whether the project would impede attainment of AB 32's emissions reduction mandate that the state return to its 1990 emissions level by 2020.

After considering all project design features, the proposed project would emit ~~32,982.8~~33,330.9 to 33,806.9 MTCO_2E in 2020, depending on which assessment methodology is used. Under the County 2015 GHG Guidance, project design features would reduce the "mitigated" project emissions by 20.8 percent from the 2020 "unmitigated" condition, which exceeds the County's 16 percent reduction target established for the year 2020. Under the SMAQMD methodology, the same project design features would reduce project related emissions by 31.~~5~~ 3 percent over a "No Action Taken" condition, which is greater than the SMAQMD's 21.7 percent reduction target. Similarly, under a methodology based on the methods used to develop 2008 Scoping Plan, the same project design features would achieve a 30.~~4~~ 0 percent reduction in GHG emissions as compared to a BAU condition. The project, by demonstrating compliance with the County, SMAQMD, and 2008 Scoping Plan percent reduction targets, also demonstrates consistency with AB 32. Impacts would be less than significant.

6.2 Consistency with Plans

Under the second significance criterion, a significant global climate change impact would occur if implementation of the proposed project would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. The significance analysis provided in this report evaluates the significance of the project's GHG emissions under the second criterion by reference to: (a) the County of San Diego General Plan; (b) SB 375 and the 2050 RTP/SCS; and (~~b~~c) the EOs~~-~~ B-30-15 and S-3-05 goals for 2030 and 2050.

6.2.1 General Plan Goals and Policies

A detailed compilation of the proposed project's consistency with all applicable General Plan goals and policies is included as an attachment to the EIR (see the General Plan Consistency Analysis located in EIR Appendix W). The following discussion, however, highlights the project's consistency with relevant GHG policies of the General Plan's Conservation and Open Space Element.

COS-14.2 Villages and Rural Villages. Incorporate a mixture of uses within Villages and Rural Villages that encourage people to walk, bicycle, or use public transit to reduce air pollution and GHG emissions.

The project would develop Town and Neighborhood Centers with high-intensity land uses and pedestrian-friendly circulation that would be surrounded by less dense and intense land uses, accommodating future growth in a compact and sustainable footprint. Trips to

Escondido or Temecula would be reduced by the project's inclusion of commercial uses on-site, including an appropriately-scaled general store planned for the Village Town Center.

COS-14.3 Require design of residential subdivisions and nonresidential development through "green" and sustainable land development practices to conserve energy, water, open space, and natural resources.

The project is designed to meet the LEED for Neighborhood Development Certification or an equivalent program, and encourages sustainability through green neighborhood practices that are incorporated into the project's Specific Plan or are a part of the various accompanying Tentative and Final Maps, Site Plans, Landscape Plans and EIR Technical Appendices that would be adopted as a part of the project. As previously discussed, the project also includes, among other features, a Recycling Facility and Water Reclamation Facility; use of solar energy; and, drought tolerant landscaping and state-of-the-art water conservation and irrigation systems.

COS-14.4 Sustainable Technology and Projects. Require technologies and projects that contribute to the conservation of resources in a sustainable manner, that are compatible with community character, and that increase the self-sufficiency of individual communities, residents, and businesses.

As discussed above, the project is designed to meet the LEED for Neighborhood Development Certification or an equivalent program, and incorporates renewable on-site electricity generation, facilities for collection and separation of recyclable discards, use of recycled water, and energy conserving appliances and plumbing fixtures in homes. The project is designed to encourage non-automotive movement throughout the community including walking and bicycling for individual communities, residents, and businesses. The Town Center, school, parks, private recreation facility and institutional site all contribute to the development of a sense of community.

COS-14.9 Significant Producers of Air Pollutants. Require projects that generate potentially significant levels of air pollutants and/or GHGs such as quarries, landfill operations, or large land development projects to incorporate renewable energy, and the best available control technologies and practices into the project design.

Please see the discussion of the Specific Plan's policies and performance measures above, which highlights the project's incorporation of renewable energy and other green technologies that serve to reduce project-related GHG emissions.

COS-14.10 Low Emission Construction Vehicles and Equipment. Require County contractors and encourage other developers to use low emission construction vehicles and equipment to improve air quality and reduce GHG emissions.

Construction equipment utilized during project build-out would be Tier III, or higher, except where such equipment is not commercially and feasibly available.

COS-15.1 Design and Construction of New Buildings. Require that new buildings be designed and constructed in accordance with "green building" programs that incorporate techniques and materials that maximize energy efficiency, incorporate the use of sustainable resources and recycled materials, and reduce emissions of GHGs and toxic air contaminants.

The Specific Plan requires orderly and sensitive design, and in particular, green building design and construction, that maximizes energy efficiency, minimizes air pollution, and includes substantial solid waste recycling.

COS-15.4 Title 24 Energy Standards. Require development to minimize energy impacts from new buildings in accordance with or exceeding Title 24 energy standards.

All project buildings will meet all applicable energy standards at time of building permit issuance, and – at a minimum – will exceed the 2008 Title 24 standards by 30%.

COS-16.3 Low-Emissions Vehicles and Equipment. Require County operations and encourage private development to provide incentives (such as priority parking) for the use of low- and zero-emission vehicles and equipment to improve air quality and reduce GHG emissions. [Refer also to Policy M- 9.3 (Preferred Parking) in the Mobility Element.]

The project would provide "clean air" parking spaces consistent with the County's policies and the requirements of State law (e.g., Title 24 2013, Section 5.106.5.2, requires a percentage of parking spaces be dedicated to clean air vehicles depending on the total number of spaces provided).

COS-17.1 Reduction of Solid Waste Materials. Reduce greenhouse gas emissions and future landfill capacity needs through reduction, reuse, or recycling of all types of solid waste that is generated. Divert solid waste from landfills in compliance with State law.

The project would comply with all requirements of State law and facilitate reduction, reuse and recycling through its provision of an on-site Recycling Facility.

COS-17.6 Recycling Containers. Require that all new land development projects include space for recycling containers.

The project will include space for recycling containers in mixed-use, commercial and public use areas.

COS-19.1 Sustainable Development Practices. Require land development, building design, landscaping, and operational practices that minimize water consumption.

The project includes a comprehensive Water Conservation Plan that requires development, building design, landscaping, and operational practices that minimize water consumption. The project's General Use and Performance Standards include constructing all new buildings to install water saving technologies that reduce water consumption by 20~~%~~ percent, such as low flow showerheads and faucets, as well as high-efficiency appliances in new homes, including washers, dish washers, fans, refrigerators. A MUP for an onsite Wastewater Treatment Facility is processed concurrently with this project. Accordingly, the project would be designed with dual piping to use recycled water for irrigation of all community area landscaping. Irrigation of private yards for single family homes will be designed to support drought tolerant vegetation. State of the art irrigation controllers will be required that match water use to plant type and weather conditions.

6.2.2~~1~~ SB 375 and SANDAG 2050 RTP/SCS

In accordance with CEQA Guidelines section 15064.4(b)(3), this section analyzes the project's consistency with SB 375, including SANDAG's 2050 RTP/SCS.

At the regional level, SANDAG's 2050 RTP/SCS is an applicable plan adopted for the purpose of reducing GHGs. As previously discussed, SB 375 requires the regional transportation plan for regions of the state with a MPO to adopt an SCS, as part of its regional transportation plan, to achieve certain goals for the reduction of GHG emissions from automobiles and light trucks in a region (State of California 2008). CARB's adopted targets for the region's MPO, SANDAG, include a 7 percent per capita reduction in emissions by 2020 and a 13 percent per capita reduction by 2035. SANDAG's 2050 RTP/SCS is expected to result in regional per capita GHG emission reductions of 14 percent by 2020 and 13 percent by 2035, thereby reaching the goals established by CARB (SANDAG 2013). The elements of the 2050 RTP/SCS that contribute to the GHG reductions are large investments in transit, new light rail and bus rapid transit services, and transportation system management. CARB issued EO G-11-114, stating its acceptance of the GHG quantification determination in the 2050 RTP/SCS, and acknowledging that the plan, if implemented, would meet the targets that CARB established for the region for 2020 and 2035 (CARB 2011c).

SANDAG identified performance metrics and trends to explain and confirm the GHG reduction benefits of the 2050 RTP/SCS, while recognizing a projected increase of 400,000 new residences and 500,000 new jobs in the region (SANDAG 2013). These include assumptions that 80 percent of new housing would be located within a half-mile of transit stations by 2035, and 64 percent of all housing ~~will~~ would be within a half-mile of transit stations due to expanding transit systems. ~~, along with decreasing per capita vehicle miles~~ (SANDAG 2013). The *2050 RTP/SCS* also assumed 21 percent of the new housing and 14 percent of the new jobs would not occur within the Urban Area Transit Strategy Study Area where the greatest investments in public transit are being made. While the project site was not identified for development in the *2050 RTP/SCS*'s 2020 and 2035 forecasted development pattern maps, t~~T~~he project would be in-line with the SCS GHG benefits as the project would support and/or provide a range of housing types, services and jobs in a compact pattern of development located within a half-mile (10-minute walk) from at least seven diverse neighborhood assets such as retail, services, civic facilities and jobs. This in turn, would reduce the size of required infrastructure improvements and the number and length of automobile trips. Additionally, the project trip lengths would be shorter from the project site than from within the Valley Center Community as identified in the County General Plan and SCS (Chen Ryan 2014).

The project also requires less roadway infrastructure because of its compact design, which locates housing in close vicinity to commercial and public services, and its location one quarter mile from a regional transportation corridor, the I-15. The 2050 RTP lists I-15 as a Regional Transit Corridor in 2020 and 2035. The 2050 RTP increases the transit role of I-15, and lists I-15 as a High Quality Transit Corridor in 2050, which is defined to have major transit stops with 15-minute peak period services (SANDAG 2011a).

Based on the project emissions analysis, the “mitigated” project would achieve a 16.9 percent reduction of vehicle GHG emissions in 2020 and a 24.4 percent reduction in 2030, when compared to the “unmitigated” project. These vehicle emissions were modeled in CalEEMod for the proposed land uses and include the same vehicles classes as those used in the SCS and to derive the SB 375 targets (CARB 2011d). Therefore, the GHG emissions percentage reductions associated with the project would exceed the CARB adopted targets for the SANDAG region for vehicle emissions reductions. These percentage reductions equate to a per capita reduction specifically for vehicle emissions. As referenced within the RTP/SCS environmental impact report (SANDAG 2011c), CARB had not developed a target for 2050, and no emissions percentage reduction was included for the year 2050 in the RTP.

Additionally, for purposes of SB 375’s underlying policy goals, it is important to recognize that the proposed project contains a balanced mix of residential, commercial, civic, recreational and public facilities, all of which – when viewed from an integrated perspective – reduce the amount of vehicle miles traveled and corresponding GHG emissions. The project’s mix of uses allows for the project to achieve approximately 5.9 percent reduction in VMT, keeping those trips on the project site. Further, because the mix of land uses is coupled with an integrated pathway and trail plan, and traffic calming features, the pedestrian experience of the residents of and visitors to the proposed project will be beneficial and encourage non-vehicular travel, consistent with SB 375.

Finally, as demonstrated by Table 25, the proposed project is consistent with all applicable goals and policies of the *2050 RTP/SCS*.

TABLE 25
CONSISTENCY ANALYSIS WITH THE GOALS AND POLICY OBJECTIVES OF SANDAG'S 2050 RTP/SCS

Goal	Policy Objectives	Consistency Analysis
Mobility		
The transportation system should provide the general public and those who move goods with convenient travel options. The system also should operate in a way that maximizes productivity. It should reduce the time it takes to travel and the costs associated with travel.	Tailor transportation improvements to better connect people with jobs and other activities	*Consistent.* The project's circulation plan facilitates interconnectivity between the project's residential and nonresidential land uses, including retail, office and recreational uses.
	Provide convenient travel choices including transit, intercity and high speed trains, driving, ridesharing, walking, and biking	*Consistent*. The project encourages non-vehicular modes of transportation through the inclusion of pedestrian and bike paths. The project's transportation demand management program also would provide the means, resources and incentives for carpooling and ridesharing. Finally, the project would reserve a transit site stop in the town center. (See, e.g., EIR, Table 1-3.)
	Preserve and expand options for regional freight movement	*Not Applicable.* The project does not propose regional freight movement, and does not impair SANDAG's ability to preserve and expand movement options.
	Increase the use of transit, ridesharing, walking and biking in major corridors and communities	*Consistent*. For all of the reasons discussed above, the project would facilitate the use of the identified non-vehicular modes of transportation in the community.
	Provide transportation choices to better connect the San Diego region with Mexico, neighboring counties, and tribal nations	*Not Applicable.* The project does not impair the ability of SANDAG to work with the identified jurisdictions to better connect the San Diego region with other areas.
Reliability		
The transportation system should be reliable. Travelers should expect relatively consistent travel times, from day to day, for the same trip and mode of transportation.	Employ new technologies to make travel more reliable and convenient	*Not Applicable.* The project does not impair SANDAG's ability to employ new technologies to improve travel reliability and convenience.
	Manage the efficiency of the transportation system to improve traffic flow	*Not Applicable.* The project does not impair SANDAG's ability to manage the efficiency of the transportation system.

TABLE 25
CONSISTENCY ANALYSIS WITH THE GOALS AND POLICY OBJECTIVES OF SANDAG'S 2050 RTP/SCS

Goal	Policy Objectives	Consistency Analysis
System Preservation and Safety		
The transportation system should be well maintained to protect the public's investments in transportation. It also is critical to ensure a safe regional transportation system.	Keep the region's transportation system in a good state of repair	*Consistent.* The project would contribute fair-share payments to significantly impacted roadway facilities to the extent required by law, so as to keep the transportation system in a good state of repair.
	Reduce bottlenecks and increase safety by improving operations	*Consistent*. The project would contribute fair-share payments to address significant impacts relating to congestion along roadway facilities to the extent required by law.
	Improve emergency preparedness within the regional transportation system	*Consistent*. As discussed in Table 1-3 of the EIR, the project would include the adoption of an emergency evacuation plan, and the provision of educational materials.
Social Equity		
The transportation system should be designed to provide an equitable level of transportation services to all segments of the population.	Create equitable transportation opportunities for all populations regardless of age, ability, race, ethnicity, or income	*Consistent.* The project is designed to provide a range of housing and lifestyle opportunities on an equitable, non-discriminatory basis.
	Ensure access to jobs, services, and recreation for populations with fewer transportation choices	*Consistent.* The project will provide access to jobs, services and recreation on an equitable, non-discriminatory basis.
Healthy Environment		
The transportation system should promote environmental sustainability and foster efficient development patterns that optimize travel, housing, and employment choices. The system should encourage growth away from rural areas and closer to existing and planned development.	Develop transportation improvements that respect and enhance the environment	*Consistent.* The environmental impacts of the transportation improvements proposed by the project are studied in the Draft REIR and, to the extent significant impacts have been identified, feasible mitigation has been identified.
	Reduce greenhouse gas emission from vehicles and continue to improve air quality in the region	*Consistent.* The project's GHG emissions would not impair the State of California's ability to achieve the emissions reduction mandate established by AB 32, and would be less than significant.
	Make transportation investments that result in	*Consistent*. The project is designed to achieve LEED-ND

TABLE 25
CONSISTENCY ANALYSIS WITH THE GOALS AND POLICY OBJECTIVES OF SANDAG'S 2050 RTP/SCS

Goal	Policy Objectives	Consistency Analysis
	healthy and sustainable communities	certification (or equivalent), and will facilitate non-vehicular modes of transportation, thereby reducing vehicle miles traveled and emissions.
Prosperous Economy		
The transportation system should play a significant role in raising the region's standard of living.	Maximize the economic benefits of transportation investments	*Not Applicable.* The project does not impair the ability of SANDAG to maximize the benefits of its investments.
	Enhance the goods movement system to support economic prosperity	*Not Applicable.* The project does not impair the ability of SANDAG to enhance the goods movement system.

SOURCE*:* SANDAG, *2050 RTP/SCS*, Table 2.1

In summary, the proposed project would not conflict with the objectives of SB 375 and the 2050 RTP/SCS. Potential impacts associated with plans or policies would thus be less than significant.

6.2.3~~2~~ ~~2050 Reduction Goals~~Executive Orders B-30-15 and S-3-05

In accordance with CEQA Guidelines section 15064.4(b)(3), this section evaluates whether the project's post-buildout GHG emissions trajectory would impede the attainment of the 2030 and 2050 GHG reduction goals identified in EOs B-30-15 and S-3-05~~, including the trajectory's relation to a mid-term goal~~.

At the state level, EOs B-30-15 and S-3-05 ~~is an order from~~ were issued from the state's Executive Branch for the purpose of reducing GHG emissions. The ~~EO's~~ goal of EO S-3-05, to reduce GHG emissions to 1990 levels by 2020, was codified by the Legislature's adoption of ~~as~~ AB 32. ~~And~~As analyzed ~~above~~in section 6.1, the project is consistent with AB 32. Therefore, the project does not conflict with this component of the EO.

EO S-3-05 also established a goal to reduce GHG emissions to 80 percent below 1990 levels by 2050. This goal, however, was not codified by the Legislature. Similarly, EO B-30-15's goal to reduce statewide GHG emissions to 40 percent below 1990 levels by 2030 has not been codified by the Legislature.

~~Meeting the GHG-reduction goals beyond 2020 will require greater participation in existing measures, inclusion of additional measures, guidance from the state and federal authorities, additional state and federal regulations, improved technology, and infrastructure changes.~~

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~~As with the build out year of the project, after consideration of all project design features, the proposed project would emit 32,127 to 32,466 $MTCO_2E$ emissions per year in 2030, depending on which calculation methodology is used in determining significance. Therefore, by year 2030, the “mitigated” project would achieve a 25.1 to 33 percent reduction over the baseline scenarios. The reductions in GHG emissions in 2030 are associated with continued improvements in energy efficiencies and vehicles estimated by CARB after 2020 and through 2030. However, no interim year 2030 emission targets have been established.~~

~~The EO also establishes a goal to reduce GHG emissions to 80 percent below 1990 levels by 2050. This goal, however, was not codified~~

Because the 2030 and 2050 goals are an expression of executive policy (and not adopted legislative or regulatory action), there is an ongoing debate regarding their relevance to and force-and-effect under CEQA. Some environmental organizations and community groups contend that individual projects must achieve the reduction goals identified in the two EOs. However, , others note that the EOs establish statewide reduction goals that cannot be achieved in a vacuum by cities and counties and individual projects within the jurisdiction of those agencies; rather, achievement of the reduction goals will depend on a coordinated effort amongst federal, state, regional and local agencies to secure emission reductions from existing and new emission sources. Importantly, the ongoing debate regarding the application of the EOs to CEQA is currently pending before the California Supreme Court; which is considering whether EIRs must to assess consistency with EOs in order to comply with CEQA.

In light of the legal uncertainty associated with the application of the EOs to CEQA, this EIR considers whether the project has the potential to conflict with the statewide GHG reduction goals articulated in the EOs. The subsequent analysis does so, but at the same time recognizes that:

(1) The EOs establish statewide reduction goals, not project-level reduction goals;

(2) No agency with subject matter expertise has translated these statewide goals into project-level goals;

(3) Additional regulatory action from CARB, the state agency with expertise in the subject area, and other public agencies (primarily at the state level) will be required to facilitate achievement of the reduction goals due to the number of emission sources that are not under the direct control of local agencies (counties and cities) or project applicants;

(4) Forecasting pursuant to CEQA Guidelines section 15144 is required in order to estimate project-related emissions 15 and 35 years from now; and,

(5) CEQA does not demand perfection from lead agencies but good faith efforts, which is a particularly appropriate standard in this arena due to the ever-changing regulatory and scientific framework pertaining to global climate change and GHGs.

In an effort to assess the project's potential to conflict with the 2030 and 2050 statewide reduction goals of the two EOs, reference is made in this analysis to the Association of Environmental Professionals (AEP) draft whitepaper, titled *Beyond 2020: The Challenge of Greenhouse Gas Reduction Planning by Local Governments in California*. In its draft whitepaper, the AEP concluded that utilizing the EO's 2050 goal as a "*de facto*" significance threshold is "impractical" for cities and counties absent the California Legislature's adoption of a post-2020 GHG reduction target, as well as CARB's enactment of a plan of action (akin to the *Scoping Plan*) to achieve that target. This conclusion was rendered, in part, based on AEP's finding that "local jurisdictions cannot on their own develop feasible plans to deliver jurisdiction-level emission reduction all the way to the 2050 goal because the effort to change the economic activity and technology in use will require the action of the federal and State governments, as well as the financial ability (through market means or government funding) to implement the necessary changes." Because of the limitations on local action identified in the draft white paper, the AEP draft white paper recommended the establishment of a "substantial progress" significance criterion for purposes of CEQA, whereby the inquiry focuses on whether a project would impede substantial progress toward long-term GHG targets adopted by the Legislature (AEP 2015). Per the AEP, a significance determination rendered pursuant to CEQA for long-term GHG targets "should be based on consistency with 'substantial progress' along a post-2020 trajectory, but should not be based on meeting the 2050 target." CEQA Guidelines section 15064.4(a)(2) affirms the discretion of lead agencies to utilize qualitative analysis when assessing the significance of a project's GHG emissions. Therefore, in lieu of delineating a precise quantitative metric for determining whether a project would impede substantial progress, the AEP recommended that the inquiry focus on "whether local action and project mitigation results in reasonable local fair-share GHG reductions over time, showing substantial progress toward the long-term State reduction [goals]."

Additionally, s~~That being said, s~~tudies have shown that, in order to meet the 2050 ~~target~~goal, aggressive technologies in the transportation and energy sectors, including electrification and the decarbonization of fuel, will be required. In its Initial Scoping Plan, CARB acknowledged that the "measures needed to meet the 2050 ~~target~~ goal are too far in the future to define in detail" (CARB 2008). In the First Update, ~~however,~~ CARB generally described the type of activities required to achieve the 2050 ~~target~~goal: "energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and rapid market penetration of efficiency and clean energy technologies that requires significant efforts to deploy and scale markets for the cleanest technologies immediately" (CARB ~~2014b~~2014a).

~~Due to the technological shifts required and the unknown parameters of the regulatory framework in 2050, both of which serve to undermine the reasonable accuracy of the available GHG models, quantitatively analyzing the project's impacts relative to the 2050 goal is speculative for purposes of CEQA. Although the project's emissions level in 2050 cannot be reliably quantified, statewide efforts are underway to facilitate the state's achievement of that goal and it is reasonable to expect the project's emissions level to decline as the regulatory initiatives identified by CARB in the First Update are implemented, and other technological innovations occur. Stated differently, the project's emissions total at build-out represents the maximum emissions inventory for the project as California's emissions sources are being regulated (and foreseeably expected to continue to be regulated in the future) in furtherance of the state's environmental policy objectives. As such, given the reasonably anticipated decline in project emissions once fully constructed and operational, the project is consistent with the EO's horizon-year goal.~~

For example, CARB's First Update "lays the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050," and many of the emission reduction strategies recommended by CARB would serve to reduce the project's post-2020 emissions level to the extent applicable by law (CARB 2014b):

- **Energy Sector:** Continued improvements in California's appliance and building energy efficiency programs and initiatives, such as the State's zero net energy building goals, would serve to reduce the project's emissions level. ~~Additionally, further additions to California's renewable resource portfolio would favorably influence the project's emissions level.~~

  More specifically, the CEC currently anticipates adopting the 2016 Title 24 standards in May 2015, and assigning those standards with an effective date of January 1, 2017 (CEC 2015). Further, both the CEC and CPUC remain committed to their goal that all new residential construction in California achieve zero net energy standards by 2020 (CPUC 2015).

  Given the phasing projections for the project, it is likely that a subsequent, more rigorous iteration of the Title 24 standards will apply to the project at the time of building permit issuance. For example~~In light of the project's phasing schedule~~, the project's residential units likely will be subject to – at a minimum – the 2016 Title 24 standards. Additionally, it is estimated that approximately 60 to 70 percent of the project's residential units will be constructed *after* 2020, indicating those units likely will achieve zero net energy standards to the extent required by law. The GHG emission and energy savings associated with those standards have not been quantified at this time because the savings are unknown. As such, the assumption that all of the project's residential units will be constructed to achieve a 30 percent increase in efficiency over the 2008 Title 24 standards is conservative and serves to over-estimate GHG emissions in future years.

In addition to continued improvements in the state of California's building code, additions to California's renewable resource portfolio would reduce the project's emissions. For purposes of the post-2020 analysis presented below, the emission reduction benefits of achieving a 50 percent RPS by 2030 has been quantified as a 17 percent increase over RPS in 2020 (California 2015).

Governor Brown's 2015 inaugural address identified the achievement of a 50 percent RPS by 2030 as one of three cornerstone goals for his continuing climate policy objectives. Relatedly, CARB identified the expansion of California's renewable resources as an important component of the GHG reduction program outlined in its *First Update*, citing third-party studies concluding that the maximum penetration of renewable energy sources in California could be as high as 74 to 80 percent by 2050. After Governor Brown's address, in February 2015, California Senators DeLeon and Leno introduced SB 350, which seeks to codify the goal identified by Governor Brown through a number of amendments to the Health and Safety Code referred to as the Clean Energy and Pollution Reduction Act of 2015. In summary, assuming achievement of the 50 percent RPS in 2030 pursuant to CEQA's forecasting provision is appropriate in light of Governor Brown's inclusion of its achievement within his climate policy; CARB's desire to expand renewable resources pursuant its *First Update*; the California Legislature's pending consideration of legislation that would codify the 50 percent RPS if adopted; and, the availability of studies demonstrating that achievement of the 50 percent RPS is economically and environmentally advantageous, as well as technically feasible.

- **Transportation Sector:** Anticipated deployment of improved vehicle efficiency, zero emission technologies, lower carbon fuels, and improvement of existing transportation systems all will serve to reduce the project's emissions level. In addition, it is expected that these types of advancements will occur through coordinated federal (U.S. EPA and NHTSA) and state (CARB) regulatory action, as well as through roadway and transit improvements undertaken at the state, regional and local levels. Relatedly, the Executive Branch has established a goal to cut the petroleum use in cars and trucks by half by 2030. For purposes of the post-2020 analysis below, the new EMFAC2014 model has been used to quantify project-related mobile source emissions in 2030 and 2050. While~~However,~~ that model cannot anticipate future regulatory standards that are needed to de-carbonize California's transportation system and vehicle fleet, the model ~~but~~ represents the best available information at this time.

- **Water Sector:** The project's emissions level will be reduced as a result of further desired enhancements to water conservation technologies. The GHG emission savings associated with those conservation technologies have not been quantified at this time because the savings are unknown. However, for purposes of the post-2020 analysis, the effects of the 50 percent RPS would affect the GHG emissions associated with the electricity used in water conveyance. Therefore, as discussed in connection with the Energy Sector, the project's post-2020 emissions estimates assume an additional 17 percent reduction based on an increased RPS of 50 percent by 2030.

- **Waste Management Sector:** Plans to further improve recycling, reuse and reduction of solid waste will beneficially reduce the project's emissions level. For purposes of the post-2020 analysis below, the emission reduction benefits of California's policy goal that not less than 75 percent of solid waste generated be source reduced, recycled or composted by the year 2020 – as expressed in Public Resources Code section 41780.01(a) – have been quantified.

~~In addition to CARB's First Update, in January 2015, during his inaugural address, Governor Jerry Brown expressed a commitment to achieve "three ambitious goals" that he would like to see accomplished by 2030 to reduce the State's GHG emissions: (1) increasing the state's RPS goal from 33 percent in 2020 to 50 percent in 2030; (2) cutting the petroleum use in cars and trucks in half; and, (3) doubling the efficiency of existing buildings and making heating fuels cleaner. These expressions of Executive Branch policy may be manifested in adopted legislative or regulatory action through the state agencies and departments responsible for achieving the state's environmental policy objectives, particularly those relating to global climate change.~~

~~Further, a recent study shows that the state's existing and proposed regulatory framework will allow the state to reduce its GHG emissions level to 40 percent below 1990 levels by 2030, and to 60 percent below 1990 levels by 2050. Even though this study did not provide an exact regulatory and technological roadmap to achieve the 2050 goal, it demonstrated that various combinations of policies could allow the statewide emissions level to remain very low through 2050, suggesting that the combination of new technologies and other regulations not analyzed in the study could allow the state to meet the 2050 target (Greenblatt 2015).~~

~~Given the proportional contribution of mobile source-related GHG emissions to the state's inventory, recent studies also show that relatively new trends, such as the increasing importance of web-based shopping, the emergence of different driving patterns by the "millennial" generation and the increasing effect of Web-based applications on transportation choices, are beginning to substantially influence transportation choices and the energy used by transportation modes. These factors have changed the direction of transportation trends in recent years, and will require the creation of new models to effectively analyze future transportation patterns and the corresponding effect on GHG emissions.~~

~~In its First Update, CARB stated the importance of establishing a mid-term statewide GHG reduction target – i.e., set between 2020 and 2050 – to facilitate achievement of the state's long-term GHG reduction goals. To date, however, CARB has not adopted such a target~~

~~and the Legislature has not authorized one. Nonetheless, for the reasons described above, the project's post-2020 emissions trajectory is expected to follow a declining trend, consistent with any establishment of a mid-term target. Impacts would be less than significant.~~

A recent study shows that California's existing and proposed regulatory framework will allow the state to reduce its GHG emissions level to 40 percent below 1990 levels by 2030, and to 60 percent below 1990 levels by 2050. Even though this study did not provide an exact regulatory and technological roadmap to achieve the 2050 goal, it demonstrated that various combinations of policies could allow the statewide emissions level to remain very low through 2050, suggesting that the combination of new technologies and other regulations not analyzed in the study could allow the state to meet the 2050 goal(Greenblatt 2015). Another recent report similarly concluded that California could achieve a 38 percent reduction in statewide GHG emissions from the 1990 levels by 2030 if the identified reduction strategies were subject to early deployment.

As shown above, the state's Executive Branch has expressed goals to secure reductions in GHG emissions and be at the "forefront" in efforts to reduce GHG emissions. However, the course that will be charted to achieve the 2030 and 2050 statewide reduction goals is still being determined by the California Legislature and relevant regulatory agencies, most particularly CARB. Further, due to the technological shifts anticipated and the unknown parameters of the regulatory framework in 2030 and 2050, available GHG models and the corresponding technical analyses are subject to limitations for purposes of quantitatively estimating the project's emissions in 2030 and 2050.

Nonetheless, for purposes of this analysis, the project's GHG emissions in 2030 and 2050 were estimated in order to identify the emissions trend for the project in 2020, 2030 and 2050. Based on that modeling, as summarized below, the project's GHG emissions will steadily decrease with time as the state's existing and planned regulatory objectives are implemented and achieved:

- County's *2015 GHG Guidance* (Methodology 2 Calculation): Estimated project emissions in 2020 are 33,806.9 $MTCO_2E$; in 2030, those emissions would decrease to 27,539.9 $MTCO_2E$ (35.5 percent reduction), and, in 2050, those emission would decrease further to 25,773.8 (39.6 percent reduction) (see Tables 20 and 21).

- SMAQMD's *CEQA Guide* (Methodology 3 Calculation): Estimated project emissions in 2020 are 32,982.8 $MTCO_2E$; in 2030, those emissions would decrease to 26,756.7 $MTCO_2E$ (45.2 percent reduction), and, in 2050, those emission would decrease further to 24,999.6 (47.5 percent reduction) (see Table 22).

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- CARB's 2008 *Scoping Plan* (Methodology 4 Calculation): Estimated project emissions in 2020 are 33,239.8 $MTCO_2E$; in 2030, those emissions would decrease to 27,123.1 $MTCO_2E$ (43.5 percent reduction), and, in 2050, those emission would decrease further to 25,357.0 (47.2 percent reduction) (see Table 23).

In accordance with CEQA Guidelines section 15144, which recognizes that preparing an EIR necessarily involves some degree of forecasting, the emission reductions identified for the project in 2030 and 2050 are a result of: (i) application of the EMFAC2014 model; (ii) achievement of a 50 percent RPS by 2030; and, (iii) achievement of the 75 percent solid waste diversion goal by 2030, ten years later than the 2020 target year identified by AB 341/Public Resources Code section 41780.01(a). Conservatively, no other regulatory or technological advancements (e.g., zero net energy buildings) were assumed.

Arguably, whether the project would conflict with or impede substantial progress towards the statewide reduction goals established by EO B-30-15 for 2030 and by EO S-3-05 for 2050 cannot be reasonably determined at this time because no statutes or regulations have been adopted to translate these goals into comparable, scientifically-based emission reduction targets. In other words, rendering a significance determination relative to these two EOs would be speculative because they establish goals 15 and 35 years into the future; no agency with subject matter expertise has adopted regulations to achieve these statewide goals at the project-level level; and, available models cannot presently quantify all project-related emissions in those future years.

Nonetheless, because of the ongoing controversy regarding the application of these two EOs in the context of CEQA and the strong interest in California's post-2020 climate policy, this analysis renders a determination as to whether the project would conflict with or impede substantial progress towards the statewide reduction goals established by EO B-30-15 for 2030 and by EO S-3-05 for 2050. As illustrated above, the project exceeds the percentage reduction targets identified under three separate methodologies for achievement of AB 32's 2020 reduction mandate (see Methodologies 2 through 4)[3], evidencing that the project does more than its "fair share" for purposes of 2020 and is on the right track for purposes of post-2020 emission reductions. Further, the project's 2020 emissions totals represent the maximum emissions inventory for the project ; project emissions would continue to decline from 2030 through at least 2050 based on currently available models and regulatory forecasting. Given the reasonably anticipated and demonstrated decline in project

[3] Under Methodology 2, the project achieves a 20.8 percent reduction when only a 16 percent reduction is required; under Methodology 3, the project achieves a 31.3 percent reduction when only a 21.7 percent reduction is required; and, under Methodology 4, the project achieves a 30.0 percent reduction when only a 28.5 percent reduction is required.

emissions once fully constructed and operational, the project is in line with the GHG reductions needed to achieve the EOs' interim (2030) and horizon-year (2050) goals. Said differently, and consistent with the AEP's recommended criterion, the project would not impede substantial progress toward long-term GHG goals. As such, the project's impacts with respect to EO B-30-15 and EO S-3-05 are expected to be less than significant, and no mitigation is required.

7.0 Project Design Features and Enforcement

7.1 Design Features

Project design features that would have the effect of reducing potential GHG emissions include Specific Plan policies and performance measures for all phases, and a mixed-use project design that is oriented to increase walkability. Existing regulations would also serve to reduce the project's GHG emissions.

7.1.1 Specific Plan Policies and Performance Measures

The project includes a number of design features with which all phases would comply that would have the effect of reducing potential GHG emissions associated with construction, energy use, area sources, water demand, and waste disposal. The benefits of these design features in reducing GHG emissions has been quantified and demonstrated in Chapter 5.0 of this report.

7.1.1.1 Construction

The project includes the following design feature related to equipment used during construction.

Use Tier III Construction Equipment

Tier III, or higher, construction equipment will be used, with the exception of concrete/industrial saws, generator sets, welders, air compressors, or for construction equipment where Tier III, or higher, is not available.

7.1.1.2 Energy Conservation

The project includes the following performance measures related to energy use.

a. Exceed 2008 Title 24 Energy Efficiency Standards by 30 Percent

All projects subject to Title 24 shall exceed the 2008 Title 24, Part 6, Energy Efficiency Standards by a minimum of 30 percent. Thus under this measure, the project would be required to achieve an average of 5 percent over Title 24 2013 for residential structures and meet Title 24 2013 standards for commercial structures. However, a~~A~~s discussed in section 3.2.5, ~~Title 24 2013 has been adopted and~~ the project will be required to implement whatever are the current T~~t~~itle 24 standards in effect at time of building permit issuance.~~,~~ ~~thus under this measure, the project would be required to achieve an average of 5 percent over Title 24 2013 for residential structures and meet Title 24 2013 standards for commercial structures.~~

b. Solar Photovoltaic System

The project shall produce or cause to be produced renewable electricity by one of the following methods to be determined by the applicant: (1) installation of the equivalent to one photovoltaic (i.e., solar) power system no smaller than 2 kW on 500 single-family homes, and photovoltaic power system no smaller than [1,000 kW] on 90,000 square feet of non-residential roof area; or the installation of the equivalent to one photovoltaic power system no smaller than 2 kW on 1,000 single-family homes. The actual capacity and/or conversion efficiency of the photovoltaic panels may alter the actual number of roofs or non-residential roof space requirements to meet the annual 3,400,000 kWh requirement at project build-out.

c. Install High-efficiency Lighting

All projects shall install high-efficiency lighting in all public street and area lighting, such as parks and common areas, to achieve an overall minimum 15 percent lighting energy reduction relative to baseline lighting energy demand. Area lighting is considered to be any common space lighting (e.g., parks, sidewalks, streets, landscaping, etc.)

d. Install High-efficiency Appliances

All residential projects, including single-family residential, mixed-use residential and senior community residential, shall install Energy Star or equivalent high-efficiency appliances (including clothes washers, dish washers, fans, and refrigerators), and the proposed hotel shall install Energy Star, or equivalent, ventilation fans.

e. Use of Smart Meters

The project design shall include the installation and use of Smart Meters on all buildings.

f. Use of Electric Landscaping Equipment

All HOA managed properties shall enforce the use of only electric-powered landscaping equipment.

7.1.1.3 Area Sources

The project includes the following performance measure related to area sources that limits the type of residential fireplaces.

Install Only Natural Gas (No Wood) Fireplaces in Residential Uses

All residential projects intending to install fireplaces, including single-family residential, mixed-use residential, and senior community residential, shall install only natural gas or equivalent non-wood burning fireplaces.

7.1.1.4 Water Conservation

The project includes the following performance measure related to water conservation that will additionally conserve energy use.

Reduce Potable Water Consumption

All projects subject to Title 24 shall be designed to achieve a minimum 20 percent reduction in indoor/potable water demand and a 20 percent reduction in outdoor water use relative to baseline (2008 Title 24 Plumbing Code) indoor/outdoor water use.

7.1.1.5 Waste Diversion/Recycling

The project includes the following performance measure related to reducing solid waste disposal.

Reduce Waste Disposal/Institute Recycling and Composting Services

All projects shall implement recycling and composting services in order to achieve a 20 percent reduction in baseline waste disposal.

7.1.2 Specific Plan Siting and Design Measures

In addition to the above performance measures, required for all phases, the design, mix of uses, and mobility network of the phase have the effect of reducing potential GHG emissions associated with vehicle use. The benefits of these project design aspects in reducing VMT and GHG emissions have been quantified and demonstrated in the vehicle emissions discussion in Chapter 5.0 of this report.

7.1.2.1 Vehicle Miles Traveled

The project Specific Plan includes the following locational design features related to VMT reduction.

a. Mixed-use Development

The project proposes to provide residential and resident-serving commercial and civic uses in a pedestrian-oriented mixed-use community where one does not currently exist. The non-residential uses include neighborhood-serving retail and restaurant uses, an elementary/middle school, church site, recreation center, neighborhood park, and a recycling buyback center. All of these uses are to be provided within one-half mile of residential uses.

b. Walking and Biking Opportunities

The project proposes to provide a network of pedestrian and bicycle paths, in a complete and interconnected network, where currently there are very limited bicycling and pedestrian facilities.

7.1.3 Existing Regulations

In addition to the Specific Plan policies, performance measures, and project design features, the project's GHG emissions would also be reduced as a result of several existing statewide regulations: Pavley I, LEV III, LCFS, RPS, and the Tire Pressure Program. These regulations mandate improved vehicle engine design, which will reduce GHG emissions associated with newer model vehicles, and required reductions in the carbon content of vehicle fuels, which will reduce GHG emissions associated with all vehicles including existing vehicles. RPS promotes diversification of the state's electricity supply and decrease's reliance on fossil fuel energy sources. The benefits of these regulations in reducing the "unmitigated" as well as the "mitigated" project's vehicle and energy GHG emissions have been quantified and demonstrated emissions analysis in Chapter 5.0 of this report.

7.2 Enforcement

The project is a large discretionary project that will include permits for subsequent development phases, such as site plans, demolition and grading permits, building permits, and final occupancy permits. Future development phases within the project Specific Plan area will be reviewed by the County for conformance with the Specific Plan and Final Environmental Impact Report (FEIR). This phase-level review process will include review of individual phase submittal materials for compliance with all relevant phase Specific Plan policies and design guidelines, including the performance measures outlined in subchapter 7.1 that serve to reduce GHG emissions. All phases would have future GHG emissions reduction enforced through the conditions of approval.

For example, the condition to use minimum Tier III construction equipment would be recorded on the demolition/grading permits and construction drawings, and incorporated into the construction contract. The construction contractor shall be responsible for implementing this requirement during construction. The County Building Official shall verify that the construction drawings have incorporated the minimum Tier III recommendations and would not issue a grading or building permit prior to this determination.

Energy efficiency and water conservation measures would also be conditioned on the building permits and construction drawings and compliance would be demonstrated through the standard Title 24 compliance reporting process. For example:

As a condition of building permit approval, the construction plans and specifications shall indicate in the general notes or individual detail drawings the design features, product specifications and methods of construction and installation that are required to surpass the 2008 Title 24 Energy Efficiency Standards by a minimum of 30 percent. Verification of increased energy efficiencies shall be demonstrated based on a performance approach, using a CEC-approved energy compliance software program, in the Title 24 Compliance Reports provided by the applicant to the County prior to issuance of the building permit.

Prior to issuance of a final certificate of occupancy, the energy features shall undergo independent third party inspection and diagnostics as part of the verification and commissioning process; with compliance verified by the County's Building Official. Additional inspections may be conducted as needed to ensure compliance, and during the course of construction and following completion of the phase, the County may require the applicant to provide information and documents showing use of products, equipment and materials specified on the permitted plans and documents.

Typically, improved Title 24 energy efficiency is accomplished through improved HVAC systems and duct seals; enhanced ceiling, attic and wall insulation; energy-efficient three-coat stucco exteriors; energy-efficient lighting systems; and high-efficiency window glazing. Similarly, water conservation in building design is typically accomplished through advanced plumbing systems such as parallel hot water piping or hot water recirculation systems, and fixtures such as ultra-low flow toilets and water-saving showerheads and kitchen faucets. These can also be conditioned on the permits and evaluated through the standard Title 24 compliance reporting process. For example, to comply with the current Title 24, the overall use of potable water within each structure must be reduced by 20 percent consistent with the 2013 Title 24 requirements. In accordance with Title 24 criteria, this percent reduction in potable water use must be demonstrated by verifying each plumbing fixture and fitting meets the 20 percent reduced flow rate or by calculating a 20 percent reduction in the building water use baseline through standardized compliance reporting forms and worksheets.

If any future projects under the project Specific Plan have potentially significant adverse environmental effects that were not examined in the project FEIR, an Initial Study would be prepared for that project, leading to the preparation of either a Negative Declaration, Mitigated Negative Declaration, focused EIR, or supplement to the Specific Plan FEIR.

8.0 Residual Impacts and Conclusion

Mitigation is not necessary for the project. After considering all project design features, the proposed project would emit ~~32,978~~33,330.9~~.58~~ to 33,~~865~~806.9~~.07~~ MTCO$_2$E in 2020, depending on which assessment methodology is used. Under the County 2015 GHG Guidance, project design features would reduce the "mitigated" project emissions by 20.~~7~~8 percent from the 2020 "unmitigated" project, which exceeds the County's 16 percent reduction target established for the year 2020. Under the SMAQMD methodology, the same project design features would reduce project related emissions by 31.~~6~~3 percent over a "No Action Taken" condition, which is greater than the SMAQMD's 21.7 percent reduction target. Similarly, under a methodology based on the 2008 Scoping Plan, the same project design features would achieve a 30.4 percent reduction in GHG emissions as compared to a BAU condition, which is greater than the Scoping Plan's 28.5 percent reduction target. The project, by demonstrating compliance with the County 2015 GHG Guidance, SMAQMD, and 2008 Scoping Plan percentage reduction targets, also demonstrates consistency with AB 32. Impacts would be less than significant with implementation of the above-identified project design features and regulatory measures.

The project also would not frustrate the objectives of the County of San Diego General Plan, SB 375, SANDAG's 2050 RTP/SCS, or EOs S-3-05 and B-30-15 for the reasons discussed above. Therefore, potential impacts associated with plan or policy conflict would be less than significant with implementation of the above-identified project design features and regulatory measures.

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10.0 Appendix

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1) GHG Assumptions and Emissions Calculations

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SMAQMD Methodology

Source	NAT 2020	SMAQMD Project 2020	% Reduction over NAT	SMAQMD Project 2030	% Reduction over NAT	SMAQMD Project 2050	% Reduction over NAT
Energy - natural gas	3,678.7	2,592.7	29.5%	2,592.7	29.5%	2,592.7	29.5%
Energy - electricity	5,909.6	2,844.4	51.9%	2,080.5	64.8%	2,080.5	64.8%
Energy subtotal	**9,588.3**	**5,437.2**	**43.3%**	**4,673.2**	**51.3%**	**4,673.2**	**51.3%**
Vehicles	31,657.1	22,299.4	29.6%	16,878.1	46.7%	15,112.0	52.3%
Area	3,185.2	2,757.5	13.4%	2,757.5	13.4%	2,757.5	13.4%
Water	2,537.7	1,515.9	40.3%	1,196.8	52.8%	1,196.8	52.8%
Solid Waste	1,216.1	972.9	20.0%	912.1	25.0%	912.1	25.0%
	48,184.4	**32,982.8**	**31.5%**	**26,417.7**	**45.2%**	**24,651.6**	**48.8%**
Construction amortized over 25 years non-res, and 40 years res	348.0	348.0	0.0%	348.0	0.0%	348.0	0.0%
TOTAL GROSS EMISSIONS	48,532.3	33,330.8	**31.3%**	26,765.7	**44.8%**	24,999.6	**48.5%**
Emissions from Existing Uses (in Year 2020)	0.0	0.0	0	0.0	0	0.0	0

NAT Includes:
2005 Title 24
2006 SDG&E CO2 intensity
Historic Non-Pavely and Non-LCFS

Mitigated Includes:
Pavley I
LCFS
Increased Density 2.9 DU/Acre
Increase Walkability/On-site pedestian network
Increased Diversity (Master Planned Community in rural setting)
RPS additional percentage reduction - 27.4%
Construction beyond Title 24 2008 - 30%
Lighting Efficiency 15%
Energy Star in residential and hotel fans
No fireplaces in congregate care, all others Natural Gas
Recycling reduction 20%
Water reduction 20% - Indoor and Outdoor
22% SPV On-site
LEV III - 2.4%
Tire Pressure Program - 0.6%

Regulatory Includes:
Pavley I
LCFS
RPS additional percentage reduction - 27.4%

2030/2050:
RPS additional percentage reduction - 44.4% over 2006
EMFAC 2014 for 2030 and 2050 Vehicle Emissions
Waste Diversion +5% over 2020

BAU AB32 2008 Scoping Plan Compliance

Source	BAU	AB32 Project 2020	% Reduction	AB32 Project 2030	% Reduction	AB32 Project 2050	% Reduction
Energy - natural gas	3,678.65	2,592.74	29.5%	2,592.7	29.5%	2,592.7	29.5%
Energy - electricity	5,909.60	2,851.07	51.8%	2,183.5	63.1%	2,183.5	63.1%
Energy subtotal	**9,588.25**	**5,443.81**	**43.2%**	**4,776.2**	**50.2%**	**4,776.2**	**50.2%**
Vehicles	31,125.32	22,299.38	28.4%	16,878.1	45.8%	15,112.0	51.4%
Area	3,185.10	2,757.46	13.4%	2,757.5	13.4%	2,757.5	13.4%
Water	2,537.72	1,766.26	30.4%	1,421.1	44.0%	1,421.1	44.0%
Solid Waste	1,216.12	972.89	20.0%	912.1	25.0%	912.1	25.0%
	47,652.51	33,239.80	30.2%	26,745.0	43.9%	24,978.9	47.6%
Construction amortized over 30 Years	378.08	378.08	0.0%	378.1	0.0%	378.1	0.0%
TOTAL GROSS EMISSIONS	48,030.59	33,617.88	**30.0%**	27,123.11	**43.5%**	25,357.0	**47.2%**
	0	0	0	0	0	0	0

BAU Includes:
2005 Title 24
2006 SDG&E CO2 intensity
Historic Non-Pavely and Non-LCFS

Mitigated Includes:
Pavley I
LCFS
Increased Density 2.9 DU/Acre
Increase Walkability/On-site pedestian network
Increased Diversity (Master Planned Community in rural setting)
RPS additional percentage reduction - 27.4%
Construction beyond Title 24 2008 - 30%
Lighting Efficiency 15%
Energy Star in residential and hotel fans
No fireplaces in congregate care, all others Natural Gas
Recycling reduction 20%
Water reduction 20% - Indoor and Outdoor
22% SPV On-site
LEV III - 2.4%
Tire Pressure Program - 0.6%

Regulatory Includes:
Pavley I
LCFS
Title 24 2008

2030/2050:
RPS additional percentage reduction - 44.4% over 2006
EMFAC 2014 for 2030 and 2050 Vehicle Emissions
Waste Diversion +5% over 2020

County Methodology

Source	Unmitigated Project	Mitigated Project 2020	% Reduction	Mitigated Project 2030	% Reduction	Mitigated Project 2050	% Reduction
Energy - natural gas	3,419.5	2,592.7	24.2%	2,592.7	24.2%	2,592.7	24.2%
Energy - electricity	4,910.7	2,851.1	41.9%	2,366.4	51.8%	2,366.4	51.8%
Energy subtotal	**8,330.1**	**5,443.8**	**34.6%**	**4,959.1**	**40.5%**	**4,959.1**	**40.5%**
Vehicles	26,845.4	22,299.4	16.9%	16,878.1	37.1%	15,112.0	43.7%
Area	3,185.2	2,757.5	13.4%	2,757.5	13.4%	2,757.5	13.4%
Water	2,537.2	1,766.3	30.4%	1,466.0	42.2%	1,466.0	42.2%
Solid Waste	1,216.1	972.9	20.0%	912.1	25.0%	912.1	25.0%
Subtotal	42,114.1	33,239.8	21.1%	26,972.8	36.0%	25,206.7	40.1%
Construction amortized over 20 Years	567.1	567.1	0.0%	567.1	0.0%	567.1	0.0%
TOTAL GROSS EMISSIONS	42,681.2	33,806.9	**20.8%**	27,539.9	**35.5%**	25,773.8	**39.6%**
Emissions from Existing Uses (in Year 2020)	0.0	0.0	0.0%	0.0	0		0

Unmitigated Includes:

2005 Title 24 & Historic Energy Factors
2006 SDG&E CO2 intensity
Pavely I
Reduction of 14.4% in electricity emissions under RPS to meet 20%

Mitigated Includes:

Pavley I
LCFS
Increased Density 2.9 DU/Acre
Increase Walkability/On-site pedestian network
Increased Diversity (Master Planned Community in rural setting)
RPS additional percentage reduction - 13% (alt method would be 14.4+13=27.4%)
Construction beyond Title 24 2008 - 30%
Lighting Efficiency 15%
Energy Star in residential and hotel fans
No fireplaces in congregate care, all others Natural Gas
Recycling reduction 20%
Water emissions reduced by 13% to account for affects of RPS on statewide energy supplies
Water reduction 20% - Indoor and Outdoor
22% SPV On-site
LEV III - 2.4%
Tire Pressure Program - 0.6%

2030/2050:

RPS additional percentage reduction - 44.4% over 2006
EMFAC 2014 for 2030 and 2050 Vehicle Emissions
Waste Diversion +5% over 2020

2) CalEEMod Output—On-Site Construction Emissions

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Lilac Ranch - Phase 1 - Construction

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
City Park	3.2	Acre
Single Family Housing	350	Dwelling Unit

1.2 Other Project Characteristics

Urbanization Rural

Climate Zone 13

Wind Speed (m/s) 2.6

Precipitation Freq (Days) 40

Utility Company San Diego Gas & Electric

1.3 User Entered Comments

Project Characteristics -

Land Use - per specific plan summary table 01/2013

Trips and VMT - per SANDAG

Grading - max grading

Architectural Coating - per SDAPCD, rule 67, ROG reductions

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	0.85	6.63	3.57	0.01	0.03	0.34	0.37	0.00	0.34	0.34	0.00	723.28	723.28	0.07	0.00	724.74
2015	1.39	10.13	6.91	0.01	0.19	0.52	0.71	0.00	0.51	0.52	0.00	1,356.91	1,356.91	0.11	0.00	1,359.25
Total	**2.24**	**16.76**	**10.48**	**0.02**	**0.22**	**0.86**	**1.08**	**0.00**	**0.85**	**0.86**	**0.00**	**2,080.19**	**2,080.19**	**0.18**	**0.00**	**2,083.99**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	0.61	3.74	4.09	0.01	0.03	0.26	0.29	0.00	0.26	0.26	0.00	723.28	723.28	0.07	0.00	724.74
2015	1.63	7.13	7.94	0.01	0.19	0.48	0.67	0.00	0.48	0.48	0.00	1,356.91	1,356.91	0.11	0.00	1,359.25
Total	**2.24**	**10.87**	**12.03**	**0.02**	**0.22**	**0.74**	**0.96**	**0.00**	**0.74**	**0.74**	**0.00**	**2,080.19**	**2,080.19**	**0.18**	**0.00**	**2,083.99**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	25.52	0.33	29.72	0.01		0.00	3.84		0.00	3.84	361.54	459.16	820.70	0.34	0.03	838.46
Energy	0.07	0.62	0.26	0.00		0.00	0.05		0.00	0.05	0.00	1,507.06	1,507.06	0.04	0.02	1,515.49
Mobile	3.61	7.72	36.40	0.06	6.49	0.38	6.87	0.10	0.37	0.47	0.00	5,492.11	5,492.11	0.23	0.00	5,496.97
Waste						0.00	0.00		0.00	0.00	83.37	0.00	83.37	4.93	0.00	186.83
Water						0.00	0.00		0.00	0.00	0.00	176.99	176.99	0.70	0.02	197.86
Total	**29.20**	**8.67**	**66.38**	**0.07**	**6.49**	**0.38**	**10.76**	**0.10**	**0.37**	**4.36**	**444.91**	**7,635.32**	**8,080.23**	**6.24**	**0.07**	**8,235.61**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	25.52	0.33	29.72	0.01		0.00	3.84		0.00	3.84	361.54	459.16	820.70	0.34	0.03	838.46
Energy	0.07	0.62	0.26	0.00		0.00	0.05		0.00	0.05	0.00	1,507.06	1,507.06	0.04	0.02	1,515.49
Mobile	3.61	7.72	36.40	0.06	6.49	0.38	6.87	0.10	0.37	0.47	0.00	5,492.11	5,492.11	0.23	0.00	5,496.97
Waste						0.00	0.00		0.00	0.00	83.37	0.00	83.37	4.93	0.00	186.83
Water						0.00	0.00		0.00	0.00	0.00	176.99	176.99	0.70	0.02	197.86
Total	**29.20**	**8.67**	**66.38**	**0.07**	**6.49**	**0.38**	**10.76**	**0.10**	**0.37**	**4.36**	**444.91**	**7,635.32**	**8,080.23**	**6.24**	**0.07**	**8,235.61**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 Demolition - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.12	0.09	0.00		0.01	0.01		0.01	0.01	0.00	11.80	11.80	0.00	0.00	11.83
Total	**0.02**	**0.12**	**0.09**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**11.80**	**11.80**	**0.00**	**0.00**	**11.83**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.00	0.00	0.56
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.59	0.00	0.00	0.59
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.15**	**1.15**	**0.00**	**0.00**	**1.15**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.03	0.09	0.08	0.00		0.01	0.01		0.01	0.01	0.00	11.80	11.80	0.00	0.00	11.83
Total	**0.03**	**0.09**	**0.08**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**11.80**	**11.80**	**0.00**	**0.00**	**11.83**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.00	0.00	0.56
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.59	0.00	0.00	0.59
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.15**	**1.15**	**0.00**	**0.00**	**1.15**

3.3 Site Preparation - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.12	0.75	0.53	0.00		0.06	0.06		0.06	0.06	0.00	67.00	67.00	0.01	0.00	67.21
Total	**0.12**	**0.75**	**0.53**	**0.00**	**0.01**	**0.06**	**0.07**	**0.00**	**0.06**	**0.06**	**0.00**	**67.00**	**67.00**	**0.01**	**0.00**	**67.21**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.40	3.40	0.00	0.00	3.41
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.40**	**3.40**	**0.00**	**0.00**	**3.41**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.06	0.39	0.48	0.00		0.04	0.04		0.04	0.04	0.00	67.00	67.00	0.01	0.00	67.21
Total	**0.06**	**0.39**	**0.48**	**0.00**	**0.00**	**0.04**	**0.04**	**0.00**	**0.04**	**0.04**	**0.00**	**67.00**	**67.00**	**0.01**	**0.00**	**67.21**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.40	3.40	0.00	0.00	3.41
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.40**	**3.40**	**0.00**	**0.00**	**3.41**

3.4 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.70	5.74	2.86	0.01		0.26	0.26		0.26	0.26	0.00	630.32	630.32	0.06	0.00	631.52
Total	**0.70**	**5.74**	**2.86**	**0.01**	**0.01**	**0.26**	**0.27**	**0.00**	**0.26**	**0.26**	**0.00**	**630.32**	**630.32**	**0.06**	**0.00**	**631.52**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.01	0.01	0.07	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	9.60	9.60	0.00	0.00	9.61
Total	**0.01**	**0.01**	**0.07**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**9.60**	**9.60**	**0.00**	**0.00**	**9.61**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.51	3.25	3.43	0.01		0.21	0.21		0.21	0.21	0.00	630.32	630.32	0.06	0.00	631.52
Total	**0.51**	**3.25**	**3.43**	**0.01**	**0.00**	**0.21**	**0.21**	**0.00**	**0.21**	**0.21**	**0.00**	**630.32**	**630.32**	**0.06**	**0.00**	**631.52**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.01	0.01	0.07	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	9.60	9.60	0.00	0.00	9.61
Total	**0.01**	**0.01**	**0.07**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**9.60**	**9.60**	**0.00**	**0.00**	**9.61**

3.4 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.77	6.15	3.18	0.01		0.28	0.28		0.28	0.28	0.00	733.47	733.47	0.06	0.00	734.77
Total	**0.77**	**6.15**	**3.18**	**0.01**	**0.01**	**0.28**	**0.29**	**0.00**	**0.28**	**0.28**	**0.00**	**733.47**	**733.47**	**0.06**	**0.00**	**734.77**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.01	0.01	0.07	0.00	0.01	0.00	0.02	0.00	0.00	0.00	0.00	10.92	10.92	0.00	0.00	10.93
Total	**0.01**	**0.01**	**0.07**	**0.00**	**0.01**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**10.92**	**10.92**	**0.00**	**0.00**	**10.93**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.59	3.78	3.99	0.01		0.25	0.25		0.25	0.25	0.00	733.47	733.47	0.06	0.00	734.77
Total	**0.59**	**3.78**	**3.99**	**0.01**	**0.00**	**0.25**	**0.25**	**0.00**	**0.25**	**0.25**	**0.00**	**733.47**	**733.47**	**0.06**	**0.00**	**734.77**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.01	0.01	0.07	0.00	0.01	0.00	0.02	0.00	0.00	0.00	0.00	10.92	10.92	0.00	0.00	10.93
Total	**0.01**	**0.01**	**0.07**	**0.00**	**0.01**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**10.92**	**10.92**	**0.00**	**0.00**	**10.93**

3.5 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.50	3.39	2.64	0.00		0.21	0.21		0.21	0.21	0.00	416.57	416.57	0.04	0.00	417.42
Total	**0.50**	**3.39**	**2.64**	**0.00**		**0.21**	**0.21**		**0.21**	**0.21**	**0.00**	**416.57**	**416.57**	**0.04**	**0.00**	**417.42**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	0.05	0.52	0.33	0.00	0.03	0.02	0.05	0.00	0.02	0.02	0.00	90.10	90.10	0.00	0.00	90.14
Worker	0.06	0.07	0.69	0.00	0.14	0.01	0.15	0.00	0.01	0.01	0.00	105.86	105.86	0.01	0.00	105.99
Total	**0.11**	**0.59**	**1.02**	**0.00**	**0.17**	**0.03**	**0.20**	**0.00**	**0.03**	**0.03**	**0.00**	**195.96**	**195.96**	**0.01**	**0.00**	**196.13**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Off-Road	0.92	2.75	2.85	0.00		0.21	0.21		0.21	0.21	0.00	416.57	416.57	0.04	0.00	417.42
Total	**0.92**	**2.75**	**2.85**	**0.00**		**0.21**	**0.21**		**0.21**	**0.21**	**0.00**	**416.57**	**416.57**	**0.04**	**0.00**	**417.42**

<u>Mitigated Construction Off-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						tons/yr								MT/yr		
Hauling	0.00	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
Vendor	0.05	0.52	0.33	0.00	0.03	0.02	0.05	0.00	0.02	0.02	0.00	90.10	90.10	0.00	0.00	90.14
Worker	0.06	0.07	0.69	0.00	0.14	0.01	0.15	0.00	0.01	0.01	0.00	105.86	105.86	0.01	0.00	105.99
Total	**0.11**	**0.59**	**1.02**	**0.00**	**0.17**	**0.03**	**0.20**	**0.00**	**0.03**	**0.03**	**0.00**	**195.96**	**195.96**	**0.01**	**0.00**	**196.13**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						tons/yr								MT/yr		
Mitigated	3.61	7.72	36.40	0.06	6.49	0.38	6.87	0.10	0.37	0.47	0.00	5,492.11	5,492.11	0.23	0.00	5,496.97
Unmitigated	3.61	7.72	36.40	0.06	6.49	0.38	6.87	0.10	0.37	0.47	0.00	5,492.11	5,492.11	0.23	0.00	5,496.97
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	5.09	5.09	5.09	12,548	12,548
Single Family Housing	3,349.50	3,528.00	3069.50	12,341,703	12,341,703
Total	3,354.59	3,533.09	3,074.59	12,354,251	12,354,251

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
City Park	14.70	6.60	6.60	33.00	48.00	19.00
Single Family Housing	16.80	7.10	7.90	41.60	18.80	39.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	794.74	794.74	0.03	0.01	798.83
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	794.74	794.74	0.03	0.01	798.83
NaturalGas Mitigated	0.07	0.62	0.26	0.00		0.00	0.05		0.00	0.05	0.00	712.32	712.32	0.01	0.01	716.66
NaturalGas Unmitigated	0.07	0.62	0.26	0.00		0.00	0.05		0.00	0.05	0.00	712.32	712.32	0.01	0.01	716.66
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

Unmitigated

Land Use	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
	kBTU	tons/yr										MT/yr					
City Park	0	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
Single Family Housing	1.33484e+007	0.07	0.62	0.26	0.00		0.00	0.05		0.00	0.05	0.00	712.32	712.32	0.01	0.01	716.66
Total		**0.07**	**0.62**	**0.26**	**0.00**		**0.00**	**0.05**		**0.00**	**0.05**	**0.00**	**712.32**	**712.32**	**0.01**	**0.01**	**716.66**

Mitigated

Land Use	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
	kBTU	tons/yr										MT/yr					
City Park	0	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
Single Family Housing	1.33484e+007	0.07	0.62	0.26	0.00		0.00	0.05		0.00	0.05	0.00	712.32	712.32	0.01	0.01	716.66
Total		**0.07**	**0.62**	**0.26**	**0.00**		**0.00**	**0.05**		**0.00**	**0.05**	**0.00**	**712.32**	**712.32**	**0.01**	**0.01**	**716.66**

5.3 Energy by Land Use - Electricity

Unmitigated

Land Use	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	kWh	tons/yr				MT/yr			
City Park	0					0.00	0.00	0.00	0.00
Single Family Housing	2.24401e+006					794.74	0.03	0.01	798.83
Total						**794.74**	**0.03**	**0.01**	**798.83**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
City Park	0					0.00	0.00	0.00	0.00
Single Family Housing	2.24401e+006					794.74	0.03	0.01	798.83
Total						**794.74**	**0.03**	**0.01**	**798.83**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	25.52	0.33	29.72	0.01		0.00	3.84		0.00	3.84	361.54	459.16	820.70	0.34	0.03	838.46
Unmitigated	25.52	0.33	29.72	0.01		0.00	3.84		0.00	3.84	361.54	459.16	820.70	0.34	0.03	838.46
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.98					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.46					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hearth	21.99	0.30	27.06	0.01		0.00	3.82		0.00	3.82	361.54	454.87	816.40	0.34	0.03	834.07
Landscaping	0.08	0.03	2.66	0.00		0.00	0.01		0.00	0.01	0.00	4.29	4.29	0.00	0.00	4.39
Total	**25.51**	**0.33**	**29.72**	**0.01**		**0.00**	**3.83**		**0.00**	**3.83**	**361.54**	**459.16**	**820.69**	**0.34**	**0.03**	**838.46**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.98					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.46					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	21.99	0.30	27.06	0.01		0.00	3.82		0.00	3.82	361.54	454.87	816.40	0.34	0.03	834.07
Landscaping	0.08	0.03	2.66	0.00		0.00	0.01		0.00	0.01	0.00	4.29	4.29	0.00	0.00	4.39
Total	**25.51**	**0.33**	**29.72**	**0.01**		**0.00**	**3.83**		**0.00**	**3.83**	**361.54**	**459.16**	**820.69**	**0.34**	**0.03**	**838.46**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					176.99	0.70	0.02	197.86
Unmitigated					176.99	0.70	0.02	197.86
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 3.81274					15.00	0.00	0.00	15.08
Single Family Housing	22.8039 / 14.3764					161.98	0.70	0.02	182.79
Total						**176.98**	**0.70**	**0.02**	**197.87**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 3.81274					15.00	0.00	0.00	15.08
Single Family Housing	22.8039 / 14.3764					161.98	0.70	0.02	182.79
Total						**176.98**	**0.70**	**0.02**	**197.87**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			

Mitigated					83.37	4.93	0.00	186.83
Unmitigated					83.37	4.93	0.00	186.83
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	0.28					0.06	0.00	0.00	0.13
Single Family Housing	410.41					83.31	4.92	0.00	186.70
Total						**83.37**	**4.92**	**0.00**	**186.83**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	0.28					0.06	0.00	0.00	0.13
Single Family Housing	410.41					83.31	4.92	0.00	186.70
Total						**83.37**	**4.92**	**0.00**	**186.83**

9.0 Vegetation

Lilac Ranch - Phase 1 - Construction

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
City Park	3.2	Acre
Single Family Housing	350	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Utility Company**	San Diego Gas & Electric
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - per specific plan summary table 01/2013

Grading - max grading

Architectural Coating - per SDAPCD, rule 67, ROG reductions

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Trips and VMT - per SANDAG

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	1.21	1.34	1.04	0.00	0.02	0.11	0.14	0.00	0.11	0.11	0.00	138.92	138.92	0.02	0.00	139.31
Total	**1.21**	**1.34**	**1.04**	**0.00**	**0.02**	**0.11**	**0.14**	**0.00**	**0.11**	**0.11**	**0.00**	**138.92**	**138.92**	**0.02**	**0.00**	**139.31**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	1.27	0.84	0.98	0.00	0.02	0.07	0.10	0.00	0.07	0.07	0.00	138.92	138.92	0.02	0.00	139.31
Total	**1.27**	**0.84**	**0.98**	**0.00**	**0.02**	**0.07**	**0.10**	**0.00**	**0.07**	**0.07**	**0.00**	**138.92**	**138.92**	**0.02**	**0.00**	**139.31**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	25.52	0.33	29.72	0.01		0.00	3.84		0.00	3.84	361.54	459.16	820.70	0.34	0.03	838.46
Energy	0.07	0.62	0.26	0.00		0.00	0.05		0.00	0.05	0.00	1,507.06	1,507.06	0.04	0.02	1,515.49
Mobile	3.61	7.72	36.40	0.06	6.49	0.38	6.87	0.10	0.37	0.47	0.00	5,492.11	5,492.11	0.23	0.00	5,496.97
Waste						0.00	0.00		0.00	0.00	83.37	0.00	83.37	4.93	0.00	186.83
Water						0.00	0.00		0.00	0.00	0.00	176.99	176.99	0.70	0.02	197.86
Total	**29.20**	**8.67**	**66.38**	**0.07**	**6.49**	**0.38**	**10.76**	**0.10**	**0.37**	**4.36**	**444.91**	**7,635.32**	**8,080.23**	**6.24**	**0.07**	**8,235.61**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	25.52	0.33	29.72	0.01		0.00	3.84		0.00	3.84	361.54	459.16	820.70	0.34	0.03	838.46
Energy	0.07	0.62	0.26	0.00		0.00	0.05		0.00	0.05	0.00	1,507.06	1,507.06	0.04	0.02	1,515.49
Mobile	3.61	7.72	36.40	0.06	6.49	0.38	6.87	0.10	0.37	0.47	0.00	5,492.11	5,492.11	0.23	0.00	5,496.97
Waste						0.00	0.00		0.00	0.00	83.37	0.00	83.37	4.93	0.00	186.83
Water						0.00	0.00		0.00	0.00	0.00	176.99	176.99	0.70	0.02	197.86
Total	**29.20**	**8.67**	**66.38**	**0.07**	**6.49**	**0.38**	**10.76**	**0.10**	**0.37**	**4.36**	**444.91**	**7,635.32**	**8,080.23**	**6.24**	**0.07**	**8,235.61**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 paving - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.16	0.99	0.68	0.00		0.08	0.08		0.08	0.08	0.00	87.32	87.32	0.01	0.00	87.60
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.16**	**0.99**	**0.68**	**0.00**		**0.08**	**0.08**		**0.08**	**0.08**	**0.00**	**87.32**	**87.32**	**0.01**	**0.00**	**87.60**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.00	0.00	0.03	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	4.22	4.22	0.00	0.00	4.23
Total	**0.00**	**0.00**	**0.03**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**4.22**	**4.22**	**0.00**	**0.00**	**4.23**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.08	0.51	0.63	0.00		0.05	0.05		0.05	0.05	0.00	87.32	87.32	0.01	0.00	87.60
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.08**	**0.51**	**0.63**	**0.00**		**0.05**	**0.05**		**0.05**	**0.05**	**0.00**	**87.32**	**87.32**	**0.01**	**0.00**	**87.60**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.00	0.00	0.03	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	4.22	4.22	0.00	0.00	4.23
Total	**0.00**	**0.00**	**0.03**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**4.22**	**4.22**	**0.00**	**0.00**	**4.23**

3.3 architectural coating - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.98					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.05	0.34	0.25	0.00		0.03	0.03		0.03	0.03	0.00	33.41	33.41	0.00	0.00	33.50
Total	**1.03**	**0.34**	**0.25**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**33.41**	**33.41**	**0.00**	**0.00**	**33.50**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.01	0.01	0.09	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	13.97	13.97	0.00	0.00	13.98
Total	**0.01**	**0.01**	**0.09**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**13.97**	**13.97**	**0.00**	**0.00**	**13.98**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr									MT/yr					
Archit. Coating	0.98				0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.19	0.32	0.24	0.00		0.02	0.02		0.02	0.02	0.00	33.41	33.41	0.00	0.00	33.50
Total	**1.17**	**0.32**	**0.24**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**33.41**	**33.41**	**0.00**	**0.00**	**33.50**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.01	0.01	0.09	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	13.97	13.97	0.00	0.00	13.98
Total	**0.01**	**0.01**	**0.09**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**13.97**	**13.97**	**0.00**	**0.00**	**13.98**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.61	7.72	36.40	0.06	6.49	0.38	6.87	0.10	0.37	0.47	0.00	5,492.11	5,492.11	0.23	0.00	5,496.97

Unmitigated	3.61	7.72	36.40	0.06	6.49	0.38	6.87	0.10	0.37	0.47	0.00	5,492.11	5,492.11	0.23	0.00	5,496.97
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	5.09	5.09	5.09	12,548	12,548
Single Family Housing	3,349.50	3,528.00	3069.50	12,341,703	12,341,703
Total	3,354.59	3,533.09	3,074.59	12,354,251	12,354,251

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
City Park	14.70	6.60	6.60	33.00	48.00	19.00
Single Family Housing	16.80	7.10	7.90	41.60	18.80	39.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	794.74	794.74	0.03	0.01	798.83
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	794.74	794.74	0.03	0.01	798.83
NaturalGas Mitigated	0.07	0.62	0.26	0.00		0.00	0.05		0.00	0.05	0.00	712.32	712.32	0.01	0.01	716.66

NaturalGas Unmitigated	0.07	0.62	0.26	0.00		0.00	0.05		0.00	0.05	0.00	712.32	712.32	0.01	0.01	716.66
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
City Park	0	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
Single Family Housing	1.33484e+007	0.07	0.62	0.26	0.00		0.00	0.05		0.00	0.05	0.00	712.32	712.32	0.01	0.01	716.66
Total		**0.07**	**0.62**	**0.26**	**0.00**		**0.00**	**0.05**		**0.00**	**0.05**	**0.00**	**712.32**	**712.32**	**0.01**	**0.01**	**716.66**

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	tons/yr										MT/yr					
City Park	0	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
Single Family Housing	1.33484e+007	0.07	0.62	0.26	0.00		0.00	0.05		0.00	0.05	0.00	712.32	712.32	0.01	0.01	716.66
Total		**0.07**	**0.62**	**0.26**	**0.00**		**0.00**	**0.05**		**0.00**	**0.05**	**0.00**	**712.32**	**712.32**	**0.01**	**0.01**	**716.66**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
City Park	0					0.00	0.00	0.00	0.00
Single Family Housing	2.24401e+006					794.74	0.03	0.01	798.83
Total						**794.74**	**0.03**	**0.01**	**798.83**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
City Park	0					0.00	0.00	0.00	0.00
Single Family Housing	2.24401e+006					794.74	0.03	0.01	798.83
Total						**794.74**	**0.03**	**0.01**	**798.83**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	25.52	0.33	29.72	0.01		0.00	3.84		0.00	3.84	361.54	459.16	820.70	0.34	0.03	838.46
Unmitigated	25.52	0.33	29.72	0.01		0.00	3.84		0.00	3.84	361.54	459.16	820.70	0.34	0.03	838.46
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					

Architectural Coating	0.98					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.46					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	21.99	0.30	27.06	0.01		0.00	3.82		0.00	3.82	361.54	454.87	816.40	0.34	0.03	834.07
Landscaping	0.08	0.03	2.66	0.00		0.00	0.01		0.00	0.01	0.00	4.29	4.29	0.00	0.00	4.39
Total	**25.51**	**0.33**	**29.72**	**0.01**		**0.00**	**3.83**		**0.00**	**3.83**	**361.54**	**459.16**	**820.69**	**0.34**	**0.03**	**838.46**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.98					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.46					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	21.99	0.30	27.06	0.01		0.00	3.82		0.00	3.82	361.54	454.87	816.40	0.34	0.03	834.07
Landscaping	0.08	0.03	2.66	0.00		0.00	0.01		0.00	0.01	0.00	4.29	4.29	0.00	0.00	4.39
Total	**25.51**	**0.33**	**29.72**	**0.01**		**0.00**	**3.83**		**0.00**	**3.83**	**361.54**	**459.16**	**820.69**	**0.34**	**0.03**	**838.46**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					176.99	0.70	0.02	197.86

Unmitigated					176.99	0.70	0.02	197.86
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 3.81274					15.00	0.00	0.00	15.08
Single Family Housing	22.8039 / 14.3764					161.98	0.70	0.02	182.79
Total						**176.98**	**0.70**	**0.02**	**197.87**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 3.81274					15.00	0.00	0.00	15.08
Single Family Housing	22.8039 / 14.3764					161.98	0.70	0.02	182.79
Total						**176.98**	**0.70**	**0.02**	**197.87**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					83.37	4.93	0.00	186.83
Unmitigated					83.37	4.93	0.00	186.83
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	0.28					0.06	0.00	0.00	0.13
Single Family Housing	410.41					83.31	4.92	0.00	186.70
Total						**83.37**	**4.92**	**0.00**	**186.83**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	0.28					0.06	0.00	0.00	0.13
Single Family Housing	410.41					83.31	4.92	0.00	186.70
Total						**83.37**	**4.92**	**0.00**	**186.83**

9.0 Vegetation

Lilac Ranch - Phase 2 - Construction
San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
User Defined Industrial	0.6	User Defined Unit
City Park	2.8	Acre
Single Family Housing	196	Dwelling Unit
User Defined Residential	270	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Utility Company**	San Diego Gas & Electric
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - per specific plan summary table 01/2013 & from 2013 traffic study (ChenRyan)

Trips and VMT - per SANDAG

Grading - max grading

Architectural Coating - per SDAPCD, rule 67, ROG reductions

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Demolition -

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	1.72	12.68	7.96	0.02	0.16	0.61	0.77	0.00	0.61	0.61	0.00	1,733.23	1,733.23	0.14	0.00	1,736.15
2017	0.39	2.38	2.84	0.01	0.23	0.13	0.37	0.00	0.13	0.13	0.00	507.79	507.79	0.03	0.00	508.46
Total	**2.11**	**15.06**	**10.80**	**0.03**	**0.39**	**0.74**	**1.14**	**0.00**	**0.74**	**0.74**	**0.00**	**2,241.02**	**2,241.02**	**0.17**	**0.00**	**2,244.61**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	1.58	8.77	9.74	0.02	0.16	0.59	0.75	0.00	0.59	0.60	0.00	1,733.23	1,733.23	0.14	0.00	1,736.15
2017	0.73	2.34	3.01	0.01	0.23	0.16	0.39	0.00	0.16	0.16	0.00	507.79	507.79	0.03	0.00	508.46
Total	**2.31**	**11.11**	**12.75**	**0.03**	**0.39**	**0.75**	**1.14**	**0.00**	**0.75**	**0.76**	**0.00**	**2,241.02**	**2,241.02**	**0.17**	**0.00**	**2,244.61**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	35.74	0.44	39.56	0.01		0.00	5.11		0.00	5.11	481.36	611.34	1,092.70	0.46	0.05	1,116.34
Energy	0.04	0.34	0.15	0.00		0.00	0.03		0.00	0.03	0.00	843.96	843.96	0.02	0.01	848.67
Mobile	2.02	4.33	20.39	0.04	3.64	0.21	3.85	0.06	0.21	0.26	0.00	3,077.36	3,077.36	0.13	0.00	3,080.08

Waste						0.00	0.00		0.00	0.00	46.74	0.00	46.74	2.76	0.00	104.74
Water						0.00	0.00		0.00	0.00	0.00	103.84	103.84	0.39	0.01	115.55
Total	**37.80**	**5.11**	**60.10**	**0.05**	**3.64**	**0.21**	**8.99**	**0.06**	**0.21**	**5.40**	**528.10**	**4,636.50**	**5,164.60**	**3.76**	**0.07**	**5,265.38**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	35.74	0.44	39.56	0.01		0.00	5.11		0.00	5.11	481.36	611.34	1,092.70	0.46	0.05	1,116.34
Energy	0.04	0.34	0.15	0.00		0.00	0.03		0.00	0.03	0.00	843.96	843.96	0.02	0.01	848.67
Mobile	2.02	4.33	20.39	0.04	3.64	0.21	3.85	0.06	0.21	0.26	0.00	3,077.36	3,077.36	0.13	0.00	3,080.08
Waste						0.00	0.00		0.00	0.00	46.74	0.00	46.74	2.76	0.00	104.74
Water						0.00	0.00		0.00	0.00	0.00	103.84	103.84	0.39	0.01	115.55
Total	**37.80**	**5.11**	**60.10**	**0.05**	**3.64**	**0.21**	**8.99**	**0.06**	**0.21**	**5.40**	**528.10**	**4,636.50**	**5,164.60**	**3.76**	**0.07**	**5,265.38**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.10	0.08	0.00		0.01	0.01		0.01	0.01	0.00	11.11	11.11	0.00	0.00	11.13
Total	**0.02**	**0.10**	**0.08**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**11.11**	**11.11**	**0.00**	**0.00**	**11.13**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.00	0.00	0.56
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.53	0.00	0.00	0.53
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.09**	**1.09**	**0.00**	**0.00**	**1.09**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.03	0.08	0.08	0.00		0.01	0.01		0.01	0.01	0.00	11.11	11.11	0.00	0.00	11.13

Total	0.03	0.08	0.08	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00	11.11	11.11	0.00	0.00	11.13

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.00	0.00	0.56
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.53	0.00	0.00	0.53
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.09**	**1.09**	**0.00**	**0.00**	**1.09**

3.3 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.11	0.65	0.52	0.00		0.05	0.05		0.05	0.05	0.00	67.00	67.00	0.01	0.00	67.18
Total	**0.11**	**0.65**	**0.52**	**0.00**	**0.01**	**0.05**	**0.06**	**0.00**	**0.05**	**0.05**	**0.00**	**67.00**	**67.00**	**0.01**	**0.00**	**67.18**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.25	3.25	0.00	0.00	3.25

Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.25**	**3.25**	**0.00**	**0.00**	**3.25**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.06	0.39	0.48	0.00		0.04	0.04		0.04	0.04	0.00	67.00	67.00	0.01	0.00	67.18
Total	**0.06**	**0.39**	**0.48**	**0.00**	**0.00**	**0.04**	**0.04**	**0.00**	**0.04**	**0.04**	**0.00**	**67.00**	**67.00**	**0.01**	**0.00**	**67.18**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.25	3.25	0.00	0.00	3.25
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.25**	**3.25**	**0.00**	**0.00**	**3.25**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	1.37	10.61	5.74	0.01		0.47	0.47		0.47	0.47	0.00	1,375.25	1,375.25	0.11	0.00	1,377.58
Total	**1.37**	**10.61**	**5.74**	**0.01**	**0.01**	**0.47**	**0.48**	**0.00**	**0.47**	**0.47**	**0.00**	**1,375.25**	**1,375.25**	**0.11**	**0.00**	**1,377.58**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.01	0.01	0.12	0.00	0.03	0.00	0.03	0.00	0.00	0.00	0.00	19.98	19.98	0.00	0.00	20.00
Total	**0.01**	**0.01**	**0.12**	**0.00**	**0.03**	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**19.98**	**19.98**	**0.00**	**0.00**	**20.00**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	1.11	7.09	7.49	0.01		0.47	0.47		0.47	0.47	0.00	1,375.25	1,375.25	0.11	0.00	1,377.58
Total	**1.11**	**7.09**	**7.49**	**0.01**	**0.00**	**0.47**	**0.47**	**0.00**	**0.47**	**0.47**	**0.00**	**1,375.25**	**1,375.25**	**0.11**	**0.00**	**1,377.58**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.01	0.01	0.12	0.00	0.03	0.00	0.03	0.00	0.00	0.00	0.00	19.98	19.98	0.00	0.00	20.00
Total	**0.01**	**0.01**	**0.12**	**0.00**	**0.03**	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**19.98**	**19.98**	**0.00**	**0.00**	**20.00**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.15	1.02	0.86	0.00		0.06	0.06		0.06	0.06	0.00	137.45	137.45	0.01	0.00	137.70
Total	**0.15**	**1.02**	**0.86**	**0.00**		**0.06**	**0.06**		**0.06**	**0.06**	**0.00**	**137.45**	**137.45**	**0.01**	**0.00**	**137.70**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	0.02	0.23	0.15	0.00	0.01	0.01	0.02	0.00	0.01	0.01	0.00	43.44	43.44	0.00	0.00	43.46
Worker	0.04	0.05	0.46	0.00	0.10	0.00	0.11	0.00	0.00	0.01	0.00	74.66	74.66	0.00	0.00	74.75
Total	**0.06**	**0.28**	**0.61**	**0.00**	**0.11**	**0.01**	**0.13**	**0.00**	**0.01**	**0.02**	**0.00**	**118.10**	**118.10**	**0.00**	**0.00**	**118.21**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.30	0.91	0.94	0.00		0.07	0.07		0.07	0.07	0.00	137.45	137.45	0.01	0.00	137.70
Total	**0.30**	**0.91**	**0.94**	**0.00**		**0.07**	**0.07**		**0.07**	**0.07**	**0.00**	**137.45**	**137.45**	**0.01**	**0.00**	**137.70**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	0.02	0.23	0.15	0.00	0.01	0.01	0.02	0.00	0.01	0.01	0.00	43.44	43.44	0.00	0.00	43.46
Worker	0.04	0.05	0.46	0.00	0.10	0.00	0.11	0.00	0.00	0.01	0.00	74.66	74.66	0.00	0.00	74.75
Total	**0.06**	**0.28**	**0.61**	**0.00**	**0.11**	**0.01**	**0.13**	**0.00**	**0.01**	**0.02**	**0.00**	**118.10**	**118.10**	**0.00**	**0.00**	**118.21**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.27	1.85	1.72	0.00		0.11	0.11		0.11	0.11	0.00	274.89	274.89	0.02	0.00	275.36
Total	**0.27**	**1.85**	**1.72**	**0.00**		**0.11**	**0.11**		**0.11**	**0.11**	**0.00**	**274.89**	**274.89**	**0.02**	**0.00**	**275.36**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	0.04	0.44	0.28	0.00	0.03	0.01	0.04	0.00	0.01	0.01	0.00	86.99	86.99	0.00	0.00	87.02
Worker	0.08	0.09	0.84	0.00	0.20	0.01	0.21	0.00	0.01	0.01	0.00	145.91	145.91	0.01	0.00	146.08
Total	**0.12**	**0.53**	**1.12**	**0.00**	**0.23**	**0.02**	**0.25**	**0.00**	**0.02**	**0.02**	**0.00**	**232.90**	**232.90**	**0.01**	**0.00**	**233.10**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.61	1.82	1.88	0.00		0.14	0.14		0.14	0.14	0.00	274.89	274.89	0.02	0.00	275.36
Total	**0.61**	**1.82**	**1.88**	**0.00**		**0.14**	**0.14**		**0.14**	**0.14**	**0.00**	**274.89**	**274.89**	**0.02**	**0.00**	**275.36**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	0.04	0.44	0.28	0.00	0.03	0.01	0.04	0.00	0.01	0.01	0.00	86.99	86.99	0.00	0.00	87.02
Worker	0.08	0.09	0.84	0.00	0.20	0.01	0.21	0.00	0.01	0.01	0.00	145.91	145.91	0.01	0.00	146.08
Total	**0.12**	**0.53**	**1.12**	**0.00**	**0.23**	**0.02**	**0.25**	**0.00**	**0.02**	**0.02**	**0.00**	**232.90**	**232.90**	**0.01**	**0.00**	**233.10**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated	2.02	4.33	20.39	0.04	3.64	0.21	3.85	0.06	0.21	0.26	0.00	3,077.36	3,077.36	0.13	0.00	3,080.08
Unmitigated	2.02	4.33	20.39	0.04	3.64	0.21	3.85	0.06	0.21	0.26	0.00	3,077.36	3,077.36	0.13	0.00	3,080.08
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	4.45	4.45	4.45	10,980	10,980
Single Family Housing	1,875.72	1,975.68	1718.92	6,911,354	6,911,354
User Defined Industrial	0.00	0.00	0.00		
User Defined Residential	0.00	0.00	0.00		
Total	1,880.17	1,980.13	1,723.37	6,922,333	6,922,333

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
City Park	14.70	6.60	6.60	33.00	48.00	19.00
Single Family Housing	16.80	7.10	7.90	41.60	18.80	39.60
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Residential	16.80	7.10	7.90	41.60	18.80	39.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	445.05	445.05	0.02	0.01	447.35
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	445.05	445.05	0.02	0.01	447.35
NaturalGas Mitigated	0.04	0.34	0.15	0.00		0.00	0.03		0.00	0.03	0.00	398.90	398.90	0.01	0.01	401.33
NaturalGas Unmitigated	0.04	0.34	0.15	0.00		0.00	0.03		0.00	0.03	0.00	398.90	398.90	0.01	0.01	401.33
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
City Park	0	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
Single Family Housing	7.47512e+006	0.04	0.34	0.15	0.00		0.00	0.03		0.00	0.03	0.00	398.90	398.90	0.01	0.01	401.33
User Defined Industrial	0	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
User Defined Residential	0	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
Total		**0.04**	**0.34**	**0.15**	**0.00**		**0.00**	**0.03**		**0.00**	**0.03**	**0.00**	**398.90**	**398.90**	**0.01**	**0.01**	**401.33**

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	tons/yr										MT/yr					
City Park	0	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
Single Family Housing	7.47512e+006	0.04	0.34	0.15	0.00		0.00	0.03		0.00	0.03	0.00	398.90	398.90	0.01	0.01	401.33
User Defined Industrial	0	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
User Defined Residential	0	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
Total		**0.04**	**0.34**	**0.15**	**0.00**		**0.00**	**0.03**		**0.00**	**0.03**	**0.00**	**398.90**	**398.90**	**0.01**	**0.01**	**401.33**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
City Park	0					0.00	0.00	0.00	0.00
Single Family Housing	1.25665e+006					445.05	0.02	0.01	447.35
User Defined Industrial	0					0.00	0.00	0.00	0.00
User Defined Residential	0					0.00	0.00	0.00	0.00
Total						**445.05**	**0.02**	**0.01**	**447.35**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
City Park	0					0.00	0.00	0.00	0.00
Single Family Housing	1.25665e+006					445.05	0.02	0.01	447.35
User Defined Industrial	0					0.00	0.00	0.00	0.00
User Defined Residential	0					0.00	0.00	0.00	0.00
Total						**445.05**	**0.02**	**0.01**	**447.35**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	35.74	0.44	39.56	0.01		0.00	5.11		0.00	5.11	481.36	611.34	1,092.70	0.46	0.05	1,116.34
Unmitigated	35.74	0.44	39.56	0.01		0.00	5.11		0.00	5.11	481.36	611.34	1,092.70	0.46	0.05	1,116.34
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.81					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	4.54					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	29.28	0.40	36.02	0.01		0.00	5.09		0.00	5.09	481.36	605.62	1,086.98	0.45	0.05	1,110.51
Landscaping	0.11	0.04	3.53	0.00		0.00	0.02		0.00	0.02	0.00	5.72	5.72	0.01	0.00	5.84
Total	**35.74**	**0.44**	**39.55**	**0.01**		**0.00**	**5.11**		**0.00**	**5.11**	**481.36**	**611.34**	**1,092.70**	**0.46**	**0.05**	**1,116.35**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.81					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	4.54					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	29.28	0.40	36.02	0.01		0.00	5.09		0.00	5.09	481.36	605.62	1,086.98	0.45	0.05	1,110.51
Landscaping	0.11	0.04	3.53	0.00		0.00	0.02		0.00	0.02	0.00	5.72	5.72	0.01	0.00	5.84
Total	**35.74**	**0.44**	**39.55**	**0.01**		**0.00**	**5.11**		**0.00**	**5.11**	**481.36**	**611.34**	**1,092.70**	**0.46**	**0.05**	**1,116.35**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					103.84	0.39	0.01	115.55
Unmitigated					103.84	0.39	0.01	115.55
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 3.33615					13.13	0.00	0.00	13.19
Single Family Housing	12.7702 / 8.05077					90.71	0.39	0.01	102.36
User Defined Industrial	0 / 0					0.00	0.00	0.00	0.00
User Defined Residential	0 / 0					0.00	0.00	0.00	0.00
Total						**103.84**	**0.39**	**0.01**	**115.55**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 3.33615					13.13	0.00	0.00	13.19
Single Family Housing	12.7702 / 8.05077					90.71	0.39	0.01	102.36
User Defined Industrial	0 / 0					0.00	0.00	0.00	0.00
User Defined Residential	0 / 0					0.00	0.00	0.00	0.00
Total						**103.84**	**0.39**	**0.01**	**115.55**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					46.74	2.76	0.00	104.74
Unmitigated					46.74	2.76	0.00	104.74
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	0.24					0.05	0.00	0.00	0.11
Single Family Housing	230.01					46.69	2.76	0.00	104.64

User Defined Industrial	0					0.00	0.00	0.00	0.00
User Defined Residential	0					0.00	0.00	0.00	0.00
Total						**46.74**	**2.76**	**0.00**	**104.75**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	0.24					0.05	0.00	0.00	0.11
Single Family Housing	230.01					46.69	2.76	0.00	104.64
User Defined Industrial	0					0.00	0.00	0.00	0.00
User Defined Residential	0					0.00	0.00	0.00	0.00
Total						**46.74**	**2.76**	**0.00**	**104.75**

9.0 Vegetation

Lilac Ranch - Phase 2 - Construction
San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
User Defined Industrial	0.6	User Defined Unit
City Park	2.8	Acre
Single Family Housing	196	Dwelling Unit
User Defined Residential	270	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Utility Company**	San Diego Gas & Electric
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - per specific plan summary table 01/2013 & from 2013 traffic study (ChenRyan)

Trips and VMT - per SANDAG

Grading - max grading

Architectural Coating - per SDAPCD, rule 67, ROG reductions

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.15	0.92	0.69	0.00	0.01	0.08	0.08	0.00	0.08	0.08	0.00	90.06	90.06	0.01	0.00	90.32
2017	1.87	0.30	0.41	0.00	0.04	0.02	0.06	0.00	0.02	0.02	0.00	62.23	62.23	0.01	0.00	62.34
Total	**2.02**	**1.22**	**1.10**	**0.00**	**0.05**	**0.10**	**0.14**	**0.00**	**0.10**	**0.10**	**0.00**	**152.29**	**152.29**	**0.02**	**0.00**	**152.66**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.09	0.50	0.64	0.00	0.01	0.05	0.06	0.00	0.05	0.05	0.00	90.06	90.06	0.01	0.00	90.32
2017	2.01	0.33	0.41	0.00	0.04	0.02	0.06	0.00	0.02	0.02	0.00	62.23	62.23	0.01	0.00	62.34
Total	**2.10**	**0.83**	**1.05**	**0.00**	**0.05**	**0.07**	**0.12**	**0.00**	**0.07**	**0.07**	**0.00**	**152.29**	**152.29**	**0.02**	**0.00**	**152.66**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	35.74	0.44	39.56	0.01		0.00	5.11		0.00	5.11	481.36	611.34	1,092.70	0.46	0.05	1,116.34
Energy	0.04	0.34	0.15	0.00		0.00	0.03		0.00	0.03	0.00	843.96	843.96	0.02	0.01	848.67
Mobile	2.02	4.33	20.39	0.04	3.64	0.21	3.85	0.06	0.21	0.26	0.00	3,077.36	3,077.36	0.13	0.00	3,080.08
Waste						0.00	0.00		0.00	0.00	46.74	0.00	46.74	2.76	0.00	104.74

Water						0.00	0.00		0.00	0.00	0.00	103.84	103.84	0.39	0.01	115.55
Total	**37.80**	**5.11**	**60.10**	**0.05**	**3.64**	**0.21**	**8.99**	**0.06**	**0.21**	**5.40**	**528.10**	**4,636.50**	**5,164.60**	**3.76**	**0.07**	**5,265.38**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	35.74	0.44	39.56	0.01		0.00	5.11		0.00	5.11	481.36	611.34	1,092.70	0.46	0.05	1,116.34
Energy	0.04	0.34	0.15	0.00		0.00	0.03		0.00	0.03	0.00	843.96	843.96	0.02	0.01	848.67
Mobile	2.02	4.33	20.39	0.04	3.64	0.21	3.85	0.06	0.21	0.26	0.00	3,077.36	3,077.36	0.13	0.00	3,080.08
Waste						0.00	0.00		0.00	0.00	46.74	0.00	46.74	2.76	0.00	104.74
Water						0.00	0.00		0.00	0.00	0.00	103.84	103.84	0.39	0.01	115.55
Total	**37.80**	**5.11**	**60.10**	**0.05**	**3.64**	**0.21**	**8.99**	**0.06**	**0.21**	**5.40**	**528.10**	**4,636.50**	**5,164.60**	**3.76**	**0.07**	**5,265.38**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.15	0.92	0.66	0.00		0.08	0.08		0.08	0.08	0.00	86.00	86.00	0.01	0.00	86.25
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.15**	**0.92**	**0.66**	**0.00**		**0.08**	**0.08**		**0.08**	**0.08**	**0.00**	**86.00**	**86.00**	**0.01**	**0.00**	**86.25**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	4.06	4.06	0.00	0.00	4.06
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**4.06**	**4.06**	**0.00**	**0.00**	**4.06**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.08	0.50	0.62	0.00		0.05	0.05		0.05	0.05	0.00	86.00	86.00	0.01	0.00	86.25
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.08**	**0.50**	**0.62**	**0.00**		**0.05**	**0.05**		**0.05**	**0.05**	**0.00**	**86.00**	**86.00**	**0.01**	**0.00**	**86.25**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	4.06	4.06	0.00	0.00	4.06
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**4.06**	**4.06**	**0.00**	**0.00**	**4.06**

3.3 architectural coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	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
Vendor	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
Worker	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
Total	**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**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	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
Total	**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**

3.3 architectural coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.81					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.04	0.28	0.24	0.00		0.02	0.02		0.02	0.02	0.00	33.15	33.15	0.00	0.00	33.23
Total	**1.85**	**0.28**	**0.24**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**33.15**	**33.15**	**0.00**	**0.00**	**33.23**

Unmitigated Construction Off-Site

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
	tons/yr										MT/yr					
Hauling	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
Vendor	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
Worker	0.02	0.02	0.17	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	29.08	29.08	0.00	0.00	29.11
Total	**0.02**	**0.02**	**0.17**	**0.00**	**0.04**	**0.00**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**29.08**	**29.08**	**0.00**	**0.00**	**29.11**

Mitigated Construction On-Site

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
	tons/yr										MT/yr					
Archit. Coating	1.81					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.19	0.32	0.24	0.00		0.02	0.02		0.02	0.02	0.00	33.15	33.15	0.00	0.00	33.23
Total	**2.00**	**0.32**	**0.24**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**33.15**	**33.15**	**0.00**	**0.00**	**33.23**

Mitigated Construction Off-Site

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
	tons/yr										MT/yr					
Hauling	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
Vendor	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
Worker	0.02	0.02	0.17	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	29.08	29.08	0.00	0.00	29.11
Total	**0.02**	**0.02**	**0.17**	**0.00**	**0.04**	**0.00**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**29.08**	**29.08**	**0.00**	**0.00**	**29.11**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.02	4.33	20.39	0.04	3.64	0.21	3.85	0.06	0.21	0.26	0.00	3,077.36	3,077.36	0.13	0.00	3,080.08
Unmitigated	2.02	4.33	20.39	0.04	3.64	0.21	3.85	0.06	0.21	0.26	0.00	3,077.36	3,077.36	0.13	0.00	3,080.08
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	4.45	4.45	4.45	10,980	10,980
Single Family Housing	1,875.72	1,975.68	1718.92	6,911,354	6,911,354
User Defined Industrial	0.00	0.00	0.00		
User Defined Residential	0.00	0.00	0.00		
Total	1,880.17	1,980.13	1,723.37	6,922,333	6,922,333

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
City Park	14.70	6.60	6.60	33.00	48.00	19.00
Single Family Housing	16.80	7.10	7.90	41.60	18.80	39.60
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00

User Defined Residential	16.80	7.10	7.90	41.60	18.80	39.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	445.05	445.05	0.02	0.01	447.35
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	445.05	445.05	0.02	0.01	447.35
NaturalGas Mitigated	0.04	0.34	0.15	0.00		0.00	0.03		0.00	0.03	0.00	398.90	398.90	0.01	0.01	401.33
NaturalGas Unmitigated	0.04	0.34	0.15	0.00		0.00	0.03		0.00	0.03	0.00	398.90	398.90	0.01	0.01	401.33
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
City Park	0	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
Single Family Housing	7.47512e+006	0.04	0.34	0.15	0.00		0.00	0.03		0.00	0.03	0.00	398.90	398.90	0.01	0.01	401.33
User Defined Industrial	0	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
User Defined Residential	0	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
Total		**0.04**	**0.34**	**0.15**	**0.00**		**0.00**	**0.03**		**0.00**	**0.03**	**0.00**	**398.90**	**398.90**	**0.01**	**0.01**	**401.33**

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	tons/yr										MT/yr					
City Park	0	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
Single Family Housing	7.47512e+006	0.04	0.34	0.15	0.00		0.00	0.03		0.00	0.03	0.00	398.90	398.90	0.01	0.01	401.33
User Defined Industrial	0	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
User Defined Residential	0	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
Total		**0.04**	**0.34**	**0.15**	**0.00**		**0.00**	**0.03**		**0.00**	**0.03**	**0.00**	**398.90**	**398.90**	**0.01**	**0.01**	**401.33**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
City Park	0					0.00	0.00	0.00	0.00
Single Family Housing	1.25665e+006					445.05	0.02	0.01	447.35
User Defined Industrial	0					0.00	0.00	0.00	0.00
User Defined Residential	0					0.00	0.00	0.00	0.00
Total						**445.05**	**0.02**	**0.01**	**447.35**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
City Park	0					0.00	0.00	0.00	0.00
Single Family Housing	1.25665e+006					445.05	0.02	0.01	447.35
User Defined Industrial	0					0.00	0.00	0.00	0.00

User Defined Residential	0					0.00	0.00	0.00	0.00
Total						**445.05**	**0.02**	**0.01**	**447.35**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	35.74	0.44	39.56	0.01		0.00	5.11		0.00	5.11	481.36	611.34	1,092.70	0.46	0.05	1,116.34
Unmitigated	35.74	0.44	39.56	0.01		0.00	5.11		0.00	5.11	481.36	611.34	1,092.70	0.46	0.05	1,116.34
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.81					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	4.54					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	29.28	0.40	36.02	0.01		0.00	5.09		0.00	5.09	481.36	605.62	1,086.98	0.45	0.05	1,110.51
Landscaping	0.11	0.04	3.53	0.00		0.00	0.02		0.00	0.02	0.00	5.72	5.72	0.01	0.00	5.84
Total	**35.74**	**0.44**	**39.55**	**0.01**		**0.00**	**5.11**		**0.00**	**5.11**	**481.36**	**611.34**	**1,092.70**	**0.46**	**0.05**	**1,116.35**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.81					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	4.54					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	29.28	0.40	36.02	0.01		0.00	5.09		0.00	5.09	481.36	605.62	1,086.98	0.45	0.05	1,110.51
Landscaping	0.11	0.04	3.53	0.00		0.00	0.02		0.00	0.02	0.00	5.72	5.72	0.01	0.00	5.84
Total	**35.74**	**0.44**	**39.55**	**0.01**		**0.00**	**5.11**		**0.00**	**5.11**	**481.36**	**611.34**	**1,092.70**	**0.46**	**0.05**	**1,116.35**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					103.84	0.39	0.01	115.55
Unmitigated					103.84	0.39	0.01	115.55
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 3.33615					13.13	0.00	0.00	13.19
Single Family Housing	12.7702 / 8.05077					90.71	0.39	0.01	102.36
User Defined Industrial	0 / 0					0.00	0.00	0.00	0.00
User Defined Residential	0 / 0					0.00	0.00	0.00	0.00
Total						**103.84**	**0.39**	**0.01**	**115.55**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 3.33615					13.13	0.00	0.00	13.19
Single Family Housing	12.7702 / 8.05077					90.71	0.39	0.01	102.36
User Defined Industrial	0 / 0					0.00	0.00	0.00	0.00
User Defined Residential	0 / 0					0.00	0.00	0.00	0.00
Total						**103.84**	**0.39**	**0.01**	**115.55**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			

Mitigated					46.74	2.76	0.00	104.74
Unmitigated					46.74	2.76	0.00	104.74
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	0.24					0.05	0.00	0.00	0.11
Single Family Housing	230.01					46.69	2.76	0.00	104.64
User Defined Industrial	0					0.00	0.00	0.00	0.00
User Defined Residential	0					0.00	0.00	0.00	0.00
Total						**46.74**	**2.76**	**0.00**	**104.75**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	0.24					0.05	0.00	0.00	0.11
Single Family Housing	230.01					46.69	2.76	0.00	104.64
User Defined Industrial	0					0.00	0.00	0.00	0.00
User Defined Residential	0					0.00	0.00	0.00	0.00
Total						**46.74**	**2.76**	**0.00**	**104.75**

9.0 Vegetation

Lilac Ranch - Phase 3 - Construction
San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Office Park	3.5	1000sqft
Elementary School	700	Student
User Defined Industrial	2.4	User Defined Unit
City Park	12	Acre
Health Club	40	1000sqft
Condo/Townhouse	105	Dwelling Unit
Single Family Housing	357	Dwelling Unit

1.2 Other Project Characteristics

Urbanization Rural

Climate Zone 13

Wind Speed (m/s) 2.6

Precipitation Freq (Days) 40

Utility Company San Diego Gas & Electric

1.3 User Entered Comments

Project Characteristics -

Land Use - per specific plan summary table.

Grading - max disturbance per equipment

Demolition -

Trips and VMT - per SANDAG

Architectural Coating -

Construction Off-road Equipment Mitigation -

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.71	5.17	3.21	0.01	0.03	0.25	0.28	0.00	0.25	0.25	0.00	720.91	720.91	0.06	0.00	722.12
2018	1.21	8.26	7.07	0.02	0.35	0.39	0.74	0.01	0.39	0.39	0.00	1,522.78	1,522.78	0.10	0.00	1,524.83
2019	0.67	4.16	5.32	0.01	0.44	0.21	0.65	0.01	0.21	0.21	0.00	1,017.06	1,017.06	0.05	0.00	1,018.17
2020	0.63	3.84	5.22	0.01	0.44	0.19	0.63	0.01	0.18	0.19	0.00	1,016.36	1,016.36	0.05	0.00	1,017.39
2021	0.58	3.51	5.09	0.01	0.44	0.16	0.60	0.01	0.16	0.17	0.00	1,010.61	1,010.61	0.05	0.00	1,011.56
Total	**3.80**	**24.94**	**25.91**	**0.06**	**1.70**	**1.20**	**2.90**	**0.04**	**1.19**	**1.21**	**0.00**	**5,287.72**	**5,287.72**	**0.31**	**0.00**	**5,294.07**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.61	3.73	4.06	0.01	0.02	0.26	0.28	0.00	0.26	0.26	0.00	720.91	720.91	0.06	0.00	722.12
2018	1.69	7.46	8.49	0.02	0.35	0.50	0.84	0.01	0.50	0.50	0.00	1,522.78	1,522.78	0.10	0.00	1,524.83
2019	1.44	4.74	5.70	0.01	0.44	0.32	0.76	0.01	0.32	0.33	0.00	1,017.06	1,017.06	0.05	0.00	1,018.17
2020	1.43	4.71	5.61	0.01	0.44	0.32	0.76	0.01	0.32	0.33	0.00	1,016.36	1,016.36	0.05	0.00	1,017.39
2021	1.42	4.65	5.51	0.01	0.44	0.32	0.76	0.01	0.32	0.33	0.00	1,010.61	1,010.61	0.05	0.00	1,011.56
Total	**6.59**	**25.29**	**29.37**	**0.06**	**1.69**	**1.72**	**3.40**	**0.04**	**1.72**	**1.75**	**0.00**	**5,287.72**	**5,287.72**	**0.31**	**0.00**	**5,294.07**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	33.74	0.43	39.18	0.01		0.00	5.06		0.00	5.06	477.23	606.09	1,083.32	0.45	0.04	1,106.75
Energy	0.09	0.79	0.35	0.00		0.00	0.06		0.00	0.06	0.00	2,143.97	2,143.97	0.06	0.03	2,155.86
Mobile	4.59	8.76	41.13	0.10	10.19	0.54	10.73	0.16	0.52	0.69	0.00	7,417.24	7,417.24	0.28	0.00	7,423.13
Waste						0.00	0.00		0.00	0.00	167.86	0.00	167.86	9.92	0.00	376.19
Water						0.00	0.00		0.00	0.00	0.00	316.11	316.11	1.07	0.03	348.19
Total	**38.42**	**9.98**	**80.66**	**0.11**	**10.19**	**0.54**	**15.85**	**0.16**	**0.52**	**5.81**	**645.09**	**10,483.41**	**11,128.50**	**11.78**	**0.10**	**11,410.12**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	33.74	0.43	39.18	0.01		0.00	5.06		0.00	5.06	477.23	606.09	1,083.32	0.45	0.04	1,106.75
Energy	0.09	0.79	0.35	0.00		0.00	0.06		0.00	0.06	0.00	2,143.97	2,143.97	0.06	0.03	2,155.86
Mobile	4.59	8.76	41.13	0.10	10.19	0.54	10.73	0.16	0.52	0.69	0.00	7,417.24	7,417.24	0.28	0.00	7,423.13
Waste						0.00	0.00		0.00	0.00	167.86	0.00	167.86	9.92	0.00	376.19
Water						0.00	0.00		0.00	0.00	0.00	316.11	316.11	1.07	0.03	348.19
Total	**38.42**	**9.98**	**80.66**	**0.11**	**10.19**	**0.54**	**15.85**	**0.16**	**0.52**	**5.81**	**645.09**	**10,483.41**	**11,128.50**	**11.78**	**0.10**	**11,410.12**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.09	0.08	0.00		0.01	0.01		0.01	0.01	0.00	10.41	10.41	0.00	0.00	10.43
Total	**0.01**	**0.09**	**0.08**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**10.41**	**10.41**	**0.00**	**0.00**	**10.43**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.00	0.00	0.57
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.49	0.00	0.00	0.49
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.06**	**1.06**	**0.00**	**0.00**	**1.06**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.03	0.08	0.07	0.00		0.01	0.01		0.01	0.01	0.00	10.41	10.41	0.00	0.00	10.43
Total	**0.03**	**0.08**	**0.07**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**10.41**	**10.41**	**0.00**	**0.00**	**10.43**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.00	0.00	0.57
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.49	0.00	0.00	0.49
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.06**	**1.06**	**0.00**	**0.00**	**1.06**

3.3 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.10	0.61	0.52	0.00		0.05	0.05		0.05	0.05	0.00	67.00	67.00	0.01	0.00	67.17
Total	**0.10**	**0.61**	**0.52**	**0.00**	**0.01**	**0.05**	**0.06**	**0.00**	**0.05**	**0.05**	**0.00**	**67.00**	**67.00**	**0.01**	**0.00**	**67.17**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.17	3.17	0.00	0.00	3.18
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.17**	**3.17**	**0.00**	**0.00**	**3.18**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.06	0.39	0.48	0.00		0.04	0.04		0.04	0.04	0.00	67.00	67.00	0.01	0.00	67.17
Total	**0.06**	**0.39**	**0.48**	**0.00**	**0.00**	**0.04**	**0.04**	**0.00**	**0.04**	**0.04**	**0.00**	**67.00**	**67.00**	**0.01**	**0.00**	**67.17**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.17	3.17	0.00	0.00	3.18
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.17**	**3.17**	**0.00**	**0.00**	**3.18**

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.59	4.47	2.54	0.01		0.20	0.20		0.20	0.20	0.00	630.32	630.32	0.05	0.00	631.33
Total	**0.59**	**4.47**	**2.54**	**0.01**	**0.01**	**0.20**	**0.21**	**0.00**	**0.20**	**0.20**	**0.00**	**630.32**	**630.32**	**0.05**	**0.00**	**631.33**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.00	0.01	0.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	8.95	8.95	0.00	0.00	8.96
Total	**0.00**	**0.01**	**0.05**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**8.95**	**8.95**	**0.00**	**0.00**	**8.96**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.51	3.25	3.43	0.01		0.21	0.21		0.21	0.21	0.00	630.32	630.32	0.05	0.00	631.33
Total	**0.51**	**3.25**	**3.43**	**0.01**	**0.00**	**0.21**	**0.21**	**0.00**	**0.21**	**0.21**	**0.00**	**630.32**	**630.32**	**0.05**	**0.00**	**631.33**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.00	0.01	0.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	8.95	8.95	0.00	0.00	8.96
Total	**0.00**	**0.01**	**0.05**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**8.95**	**8.95**	**0.00**	**0.00**	**8.96**

3.4 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.66	4.85	2.91	0.01		0.21	0.21		0.21	0.21	0.00	744.93	744.93	0.05	0.00	746.06
Total	**0.66**	**4.85**	**2.91**	**0.01**	**0.01**	**0.21**	**0.22**	**0.00**	**0.21**	**0.21**	**0.00**	**744.93**	**744.93**	**0.05**	**0.00**	**746.06**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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

Vendor	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
Worker	0.01	0.01	0.06	0.00	0.01	0.00	0.02	0.00	0.00	0.00	0.00	10.34	10.34	0.00	0.00	10.35
Total	**0.01**	**0.01**	**0.06**	**0.00**	**0.01**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**10.34**	**10.34**	**0.00**	**0.00**	**10.35**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.60	3.84	4.05	0.01		0.25	0.25		0.25	0.25	0.00	744.93	744.93	0.05	0.00	746.06
Total	**0.60**	**3.84**	**4.05**	**0.01**	**0.00**	**0.25**	**0.25**	**0.00**	**0.25**	**0.25**	**0.00**	**744.93**	**744.93**	**0.05**	**0.00**	**746.06**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.01	0.01	0.06	0.00	0.01	0.00	0.02	0.00	0.00	0.00	0.00	10.34	10.34	0.00	0.00	10.35
Total	**0.01**	**0.01**	**0.06**	**0.00**	**0.01**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**10.34**	**10.34**	**0.00**	**0.00**	**10.35**

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.38	2.54	2.57	0.00		0.14	0.14		0.14	0.14	0.00	414.45	414.45	0.03	0.00	415.09

Total	**0.38**	**2.54**	**2.57**	**0.00**		**0.14**	**0.14**		**0.14**	**0.14**	**0.00**	**414.45**	**414.45**	**0.03**	**0.00**	**415.09**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	0.07	0.76	0.49	0.00	0.05	0.03	0.08	0.00	0.02	0.03	0.00	160.46	160.46	0.00	0.00	160.52
Worker	0.10	0.11	1.05	0.00	0.28	0.01	0.29	0.00	0.01	0.01	0.00	192.59	192.59	0.01	0.00	192.80
Total	**0.17**	**0.87**	**1.54**	**0.00**	**0.33**	**0.04**	**0.37**	**0.00**	**0.03**	**0.04**	**0.00**	**353.05**	**353.05**	**0.01**	**0.00**	**353.32**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.92	2.74	2.84	0.00		0.21	0.21		0.21	0.21	0.00	414.45	414.45	0.03	0.00	415.09
Total	**0.92**	**2.74**	**2.84**	**0.00**		**0.21**	**0.21**		**0.21**	**0.21**	**0.00**	**414.45**	**414.45**	**0.03**	**0.00**	**415.09**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	0.07	0.76	0.49	0.00	0.05	0.03	0.08	0.00	0.02	0.03	0.00	160.46	160.46	0.00	0.00	160.52
Worker	0.10	0.11	1.05	0.00	0.28	0.01	0.29	0.00	0.01	0.01	0.00	192.59	192.59	0.01	0.00	192.80

Total	0.17	0.87	1.54	0.00	0.33	0.04	0.37	0.00	0.03	0.04	0.00	353.05	353.05	0.01	0.00	353.32

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.46	3.07	3.40	0.01		0.16	0.16		0.16	0.16	0.00	551.90	551.90	0.04	0.00	552.68
Total	**0.46**	**3.07**	**3.40**	**0.01**		**0.16**	**0.16**		**0.16**	**0.16**	**0.00**	**551.90**	**551.90**	**0.04**	**0.00**	**552.68**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	0.09	0.96	0.61	0.00	0.07	0.03	0.10	0.00	0.03	0.03	0.00	213.91	213.91	0.00	0.00	213.99
Worker	0.13	0.13	1.31	0.00	0.37	0.01	0.38	0.01	0.01	0.02	0.00	251.24	251.24	0.01	0.00	251.50
Total	**0.22**	**1.09**	**1.92**	**0.00**	**0.44**	**0.04**	**0.48**	**0.01**	**0.04**	**0.05**	**0.00**	**465.15**	**465.15**	**0.01**	**0.00**	**465.49**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.22	3.65	3.78	0.01		0.28	0.28		0.28	0.28	0.00	551.90	551.90	0.04	0.00	552.68
Total	**1.22**	**3.65**	**3.78**	**0.01**		**0.28**	**0.28**		**0.28**	**0.28**	**0.00**	**551.90**	**551.90**	**0.04**	**0.00**	**552.68**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	0.09	0.96	0.61	0.00	0.07	0.03	0.10	0.00	0.03	0.03	0.00	213.91	213.91	0.00	0.00	213.99
Worker	0.13	0.13	1.31	0.00	0.37	0.01	0.38	0.01	0.01	0.02	0.00	251.24	251.24	0.01	0.00	251.50
Total	**0.22**	**1.09**	**1.92**	**0.00**	**0.44**	**0.04**	**0.48**	**0.01**	**0.04**	**0.05**	**0.00**	**465.15**	**465.15**	**0.01**	**0.00**	**465.49**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.42	2.80	3.40	0.01		0.14	0.14		0.14	0.14	0.00	554.02	554.02	0.03	0.00	554.72
Total	**0.42**	**2.80**	**3.40**	**0.01**		**0.14**	**0.14**		**0.14**	**0.14**	**0.00**	**554.02**	**554.02**	**0.03**	**0.00**	**554.72**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	0.08	0.92	0.59	0.00	0.07	0.03	0.10	0.00	0.03	0.03	0.00	214.94	214.94	0.00	0.00	215.01
Worker	0.12	0.12	1.23	0.00	0.37	0.01	0.38	0.01	0.01	0.02	0.00	247.41	247.41	0.01	0.00	247.66
Total	**0.20**	**1.04**	**1.82**	**0.00**	**0.44**	**0.04**	**0.48**	**0.01**	**0.04**	**0.05**	**0.00**	**462.35**	**462.35**	**0.01**	**0.00**	**462.67**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.22	3.66	3.80	0.01		0.28	0.28		0.28	0.28	0.00	554.02	554.02	0.03	0.00	554.72
Total	**1.22**	**3.66**	**3.80**	**0.01**		**0.28**	**0.28**		**0.28**	**0.28**	**0.00**	**554.02**	**554.02**	**0.03**	**0.00**	**554.72**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	0.08	0.92	0.59	0.00	0.07	0.03	0.10	0.00	0.03	0.03	0.00	214.94	214.94	0.00	0.00	215.01
Worker	0.12	0.12	1.23	0.00	0.37	0.01	0.38	0.01	0.01	0.02	0.00	247.41	247.41	0.01	0.00	247.66
Total	**0.20**	**1.04**	**1.82**	**0.00**	**0.44**	**0.04**	**0.48**	**0.01**	**0.04**	**0.05**	**0.00**	**462.35**	**462.35**	**0.01**	**0.00**	**462.67**

3.5 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	tons/yr										MT/yr					
Off-Road	0.38	2.51	3.36	0.01		0.12	0.12		0.12	0.12	0.00	551.90	551.90	0.03	0.00	552.54
Total	**0.38**	**2.51**	**3.36**	**0.01**		**0.12**	**0.12**		**0.12**	**0.12**	**0.00**	**551.90**	**551.90**	**0.03**	**0.00**	**552.54**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	0.08	0.88	0.56	0.00	0.07	0.03	0.10	0.00	0.03	0.03	0.00	214.31	214.31	0.00	0.00	214.38
Worker	0.12	0.12	1.17	0.00	0.37	0.02	0.38	0.01	0.01	0.02	0.00	244.41	244.41	0.01	0.00	244.64
Total	**0.20**	**1.00**	**1.73**	**0.00**	**0.44**	**0.05**	**0.48**	**0.01**	**0.04**	**0.05**	**0.00**	**458.72**	**458.72**	**0.01**	**0.00**	**459.02**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.22	3.65	3.78	0.01		0.28	0.28		0.28	0.28	0.00	551.90	551.90	0.03	0.00	552.54
Total	**1.22**	**3.65**	**3.78**	**0.01**		**0.28**	**0.28**		**0.28**	**0.28**	**0.00**	**551.90**	**551.90**	**0.03**	**0.00**	**552.54**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	0.08	0.88	0.56	0.00	0.07	0.03	0.10	0.00	0.03	0.03	0.00	214.31	214.31	0.00	0.00	214.38
Worker	0.12	0.12	1.17	0.00	0.37	0.02	0.38	0.01	0.01	0.02	0.00	244.41	244.41	0.01	0.00	244.64
Total	**0.20**	**1.00**	**1.73**	**0.00**	**0.44**	**0.05**	**0.48**	**0.01**	**0.04**	**0.05**	**0.00**	**458.72**	**458.72**	**0.01**	**0.00**	**459.02**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.59	8.76	41.13	0.10	10.19	0.54	10.73	0.16	0.52	0.69	0.00	7,417.24	7,417.24	0.28	0.00	7,423.13
Unmitigated	4.59	8.76	41.13	0.10	10.19	0.54	10.73	0.16	0.52	0.69	0.00	7,417.24	7,417.24	0.28	0.00	7,423.13
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	19.08	19.08	19.08	47,055	47,055
Condo/Townhouse	691.95	751.80	637.35	2,563,448	2,563,448
Elementary School	903.00	0.00	0.00	1,931,890	1,931,890
Health Club	1,317.20	834.80	1069.20	2,176,406	2,176,406
Office Park	39.97	5.74	2.66	86,140	86,140
Single Family Housing	3,416.49	3,598.56	3130.89	12,588,537	12,588,537
User Defined Industrial	0.00	0.00	0.00		
Total	6,387.69	5,209.98	4,859.18	19,393,477	19,393,477

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
City Park	14.70	6.60	6.60	33.00	48.00	19.00
Condo/Townhouse	16.80	7.10	7.90	41.60	18.80	39.60
Elementary School	14.70	6.60	6.60	65.00	30.00	5.00
Health Club	14.70	6.60	6.60	16.90	64.10	19.00
Office Park	14.70	6.60	6.60	33.00	48.00	19.00

Single Family Housing	16.80	7.10	7.90	41.60	18.80	39.60
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	1,237.28	1,237.28	0.05	0.02	1,243.65
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	1,237.28	1,237.28	0.05	0.02	1,243.65
NaturalGas Mitigated	0.09	0.79	0.35	0.00		0.00	0.06		0.00	0.06	0.00	906.69	906.69	0.02	0.02	912.21
NaturalGas Unmitigated	0.09	0.79	0.35	0.00		0.00	0.06		0.00	0.06	0.00	906.69	906.69	0.02	0.02	912.21
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

<u>Unmitigated</u>

	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	tons/yr										MT/yr					
City Park	0	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
Condo/Townhouse	2.42307e+006	0.01	0.11	0.05	0.00		0.00	0.01		0.00	0.01	0.00	129.30	129.30	0.00	0.00	130.09
Elementary School	362839	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	19.36	19.36	0.00	0.00	19.48
Health Club	471600	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	25.17	25.17	0.00	0.00	25.32
Office Park	117880	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00	0.00	6.29	6.29	0.00	0.00	6.33

Single Family Housing	1.36154e+007	0.07	0.63	0.27	0.00		0.00	0.05		0.00	0.05	0.00	726.57	726.57	0.01	0.01	730.99
User Defined Industrial	0	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
Total		**0.08**	**0.79**	**0.35**	**0.00**		**0.00**	**0.06**		**0.00**	**0.06**	**0.00**	**906.69**	**906.69**	**0.01**	**0.01**	**912.21**

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	tons/yr										MT/yr					
City Park	0	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
Condo/Townhouse	2.42307e+006	0.01	0.11	0.05	0.00		0.00	0.01		0.00	0.01	0.00	129.30	129.30	0.00	0.00	130.09
Elementary School	362839	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	19.36	19.36	0.00	0.00	19.48
Health Club	471600	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	25.17	25.17	0.00	0.00	25.32
Office Park	117880	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00	0.00	6.29	6.29	0.00	0.00	6.33
Single Family Housing	1.36154e+007	0.07	0.63	0.27	0.00		0.00	0.05		0.00	0.05	0.00	726.57	726.57	0.01	0.01	730.99
User Defined Industrial	0	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
Total		**0.08**	**0.79**	**0.35**	**0.00**		**0.00**	**0.06**		**0.00**	**0.06**	**0.00**	**906.69**	**906.69**	**0.01**	**0.01**	**912.21**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
City Park	0					0.00	0.00	0.00	0.00
Condo/Townhouse	434278					153.80	0.01	0.00	154.60
Elementary School	348793					123.53	0.00	0.00	124.16
Health Club	360000					127.50	0.00	0.00	128.15
Office Park	61600					21.82	0.00	0.00	21.93
Single Family Housing	2.28889e+006					810.63	0.03	0.01	814.81

User Defined Industrial	0					0.00	0.00	0.00	0.00
Total						**1,237.28**	**0.04**	**0.01**	**1,243.65**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
City Park	0					0.00	0.00	0.00	0.00
Condo/Townhouse	434278					153.80	0.01	0.00	154.60
Elementary School	348793					123.53	0.00	0.00	124.16
Health Club	360000					127.50	0.00	0.00	128.15
Office Park	61600					21.82	0.00	0.00	21.93
Single Family Housing	2.28889e+006					810.63	0.03	0.01	814.81
User Defined Industrial	0					0.00	0.00	0.00	0.00
Total						**1,237.28**	**0.04**	**0.01**	**1,243.65**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	33.74	0.43	39.18	0.01		0.00	5.06		0.00	5.06	477.23	606.09	1,083.32	0.45	0.04	1,106.75

Unmitigated	33.74	0.43	39.18	0.01		0.00	5.06		0.00	5.06	477.23	606.09	1,083.32	0.45	0.04	1,106.75
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.29					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	3.32					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	29.03	0.39	35.71	0.01		0.00	5.05		0.00	5.04	477.23	600.43	1,077.65	0.45	0.04	1,100.97
Landscaping	0.10	0.04	3.47	0.00		0.00	0.02		0.00	0.02	0.00	5.67	5.67	0.01	0.00	5.78
Total	**33.74**	**0.43**	**39.18**	**0.01**		**0.00**	**5.07**		**0.00**	**5.06**	**477.23**	**606.10**	**1,083.32**	**0.46**	**0.04**	**1,106.75**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.29					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	3.32					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	29.03	0.39	35.71	0.01		0.00	5.05		0.00	5.04	477.23	600.43	1,077.65	0.45	0.04	1,100.97
Landscaping	0.10	0.04	3.47	0.00		0.00	0.02		0.00	0.02	0.00	5.67	5.67	0.01	0.00	5.78
Total	**33.74**	**0.43**	**39.18**	**0.01**		**0.00**	**5.07**		**0.00**	**5.06**	**477.23**	**606.10**	**1,083.32**	**0.46**	**0.04**	**1,106.75**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					316.11	1.07	0.03	348.19
Unmitigated					316.11	1.07	0.03	348.19
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 14.2978					56.26	0.00	0.00	56.55
Condo/Townhouse	6.84117 / 4.31291					48.60	0.21	0.01	54.84
Elementary School	1.69697 / 4.36363					25.01	0.05	0.00	26.63
Health Club	2.36573 / 1.44996					16.64	0.07	0.00	18.80
Office Park	0.622068 / 0.381268					4.38	0.02	0.00	4.94
Single Family Housing	23.26 / 14.6639					165.22	0.72	0.02	186.44
User Defined Industrial	0 / 0					0.00	0.00	0.00	0.00
Total						**316.11**	**1.07**	**0.03**	**348.20**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			

City Park	0 / 14.2978					56.26	0.00	0.00	56.55
Condo/Townhouse	6.84117 / 4.31291					48.60	0.21	0.01	54.84
Elementary School	1.69697 / 4.36363					25.01	0.05	0.00	26.63
Health Club	2.36573 / 1.44996					16.64	0.07	0.00	18.80
Office Park	0.622068 / 0.381268					4.38	0.02	0.00	4.94
Single Family Housing	23.26 / 14.6639					165.22	0.72	0.02	186.44
User Defined Industrial	0 / 0					0.00	0.00	0.00	0.00
Total						**316.11**	**1.07**	**0.03**	**348.20**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					167.86	9.92	0.00	376.19
Unmitigated					167.86	9.92	0.00	376.19
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			

City Park	1.03					0.21	0.01	0.00	0.47
Condo/Townhouse	48.3					9.80	0.58	0.00	21.97
Elementary School	127.75					25.93	1.53	0.00	58.12
Health Club	228					46.28	2.74	0.00	103.72
Office Park	3.26					0.66	0.04	0.00	1.48
Single Family Housing	418.61					84.97	5.02	0.00	190.43
User Defined Industrial	0					0.00	0.00	0.00	0.00
Total						**167.85**	**9.92**	**0.00**	**376.19**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	1.03					0.21	0.01	0.00	0.47
Condo/Townhouse	48.3					9.80	0.58	0.00	21.97
Elementary School	127.75					25.93	1.53	0.00	58.12
Health Club	228					46.28	2.74	0.00	103.72
Office Park	3.26					0.66	0.04	0.00	1.48
Single Family Housing	418.61					84.97	5.02	0.00	190.43
User Defined Industrial	0					0.00	0.00	0.00	0.00
Total						**167.85**	**9.92**	**0.00**	**376.19**

9.0 Vegetation

Lilac Ranch - Phase 3 - Construction
San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Office Park	3.5	1000sqft
Elementary School	700	Student
User Defined Industrial	2.4	User Defined Unit
City Park	12	Acre
Health Club	40	1000sqft
Condo/Townhouse	105	Dwelling Unit
Single Family Housing	357	Dwelling Unit

1.2 Other Project Characteristics

Urbanization Rural

Climate Zone 13

Wind Speed (m/s) 2.6

Precipitation Freq (Days) 40

Utility Company San Diego Gas & Electric

1.3 User Entered Comments

Project Characteristics -

Land Use - per specific plan summary table

Grading -

Trips and VMT - per SANDAG

Construction Off-road Equipment Mitigation -

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.37	1.08	1.06	0.00	0.04	0.09	0.13	0.00	0.09	0.09	0.00	148.82	148.82	0.02	0.00	149.14
2019	0.46	0.50	0.74	0.00	0.07	0.04	0.11	0.00	0.04	0.04	0.00	116.40	116.40	0.01	0.00	116.57
2020	0.46	0.47	0.72	0.00	0.07	0.03	0.11	0.00	0.03	0.03	0.00	115.90	115.90	0.01	0.00	116.05
2021	0.45	0.42	0.71	0.00	0.07	0.03	0.10	0.00	0.03	0.03	0.00	115.05	115.05	0.01	0.00	115.19
Total	**1.74**	**2.47**	**3.23**	**0.00**	**0.25**	**0.19**	**0.45**	**0.00**	**0.19**	**0.19**	**0.00**	**496.17**	**496.17**	**0.05**	**0.00**	**496.95**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.47	0.83	1.02	0.00	0.04	0.07	0.11	0.00	0.07	0.07	0.00	148.82	148.82	0.02	0.00	149.14
2019	0.77	0.66	0.74	0.00	0.07	0.04	0.11	0.00	0.04	0.04	0.00	116.40	116.40	0.01	0.00	116.57
2020	0.77	0.66	0.72	0.00	0.07	0.04	0.11	0.00	0.04	0.04	0.00	115.90	115.90	0.01	0.00	116.05
2021	0.77	0.66	0.71	0.00	0.07	0.04	0.11	0.00	0.04	0.04	0.00	115.05	115.05	0.01	0.00	115.19
Total	**2.78**	**2.81**	**3.19**	**0.00**	**0.25**	**0.19**	**0.44**	**0.00**	**0.19**	**0.19**	**0.00**	**496.17**	**496.17**	**0.05**	**0.00**	**496.95**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Area	33.74	0.43	39.18	0.01		0.00	5.06		0.00	5.06	477.23	606.09	1,083.32	0.45	0.04	1,106.75
Energy	0.09	0.79	0.35	0.00		0.00	0.06		0.00	0.06	0.00	2,143.97	2,143.97	0.06	0.03	2,155.86
Mobile	4.59	8.76	41.13	0.10	10.19	0.54	10.73	0.16	0.52	0.69	0.00	7,417.24	7,417.24	0.28	0.00	7,423.13
Waste						0.00	0.00		0.00	0.00	167.86	0.00	167.86	9.92	0.00	376.19
Water						0.00	0.00		0.00	0.00	0.00	316.11	316.11	1.07	0.03	348.19
Total	**38.42**	**9.98**	**80.66**	**0.11**	**10.19**	**0.54**	**15.85**	**0.16**	**0.52**	**5.81**	**645.09**	**10,483.41**	**11,128.50**	**11.78**	**0.10**	**11,410.12**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	33.74	0.43	39.18	0.01		0.00	5.06		0.00	5.06	477.23	606.09	1,083.32	0.45	0.04	1,106.75
Energy	0.09	0.79	0.35	0.00		0.00	0.06		0.00	0.06	0.00	2,143.97	2,143.97	0.06	0.03	2,155.86
Mobile	4.59	8.76	41.13	0.10	10.19	0.54	10.73	0.16	0.52	0.69	0.00	7,417.24	7,417.24	0.28	0.00	7,423.13
Waste						0.00	0.00		0.00	0.00	167.86	0.00	167.86	9.92	0.00	376.19
Water						0.00	0.00		0.00	0.00	0.00	316.11	316.11	1.07	0.03	348.19
Total	**38.42**	**9.98**	**80.66**	**0.11**	**10.19**	**0.54**	**15.85**	**0.16**	**0.52**	**5.81**	**645.09**	**10,483.41**	**11,128.50**	**11.78**	**0.10**	**11,410.12**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.13	0.80	0.65	0.00		0.06	0.06		0.06	0.06	0.00	86.00	86.00	0.01	0.00	86.22
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.13**	**0.80**	**0.65**	**0.00**		**0.06**	**0.06**		**0.06**	**0.06**	**0.00**	**86.00**	**86.00**	**0.01**	**0.00**	**86.22**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	3.88	3.88	0.00	0.00	3.88
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**3.88**	**3.88**	**0.00**	**0.00**	**3.88**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Off-Road	0.08	0.50	0.62	0.00		0.05	0.05		0.05	0.05	0.00	86.00	86.00	0.01	0.00	86.22
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.08**	**0.50**	**0.62**	**0.00**		**0.05**	**0.05**		**0.05**	**0.05**	**0.00**	**86.00**	**86.00**	**0.01**	**0.00**	**86.22**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	3.88	3.88	0.00	0.00	3.88
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**3.88**	**3.88**	**0.00**	**0.00**	**3.88**

3.3 architectural coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.18					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.04	0.26	0.24	0.00		0.02	0.02		0.02	0.02	0.00	33.41	33.41	0.00	0.00	33.47
Total	**0.22**	**0.26**	**0.24**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**33.41**	**33.41**	**0.00**	**0.00**	**33.47**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.00	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
Vendor	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
Worker	0.01	0.01	0.14	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	25.54	25.54	0.00	0.00	25.56
Total	**0.01**	**0.01**	**0.14**	**0.00**	**0.04**	**0.00**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**25.54**	**25.54**	**0.00**	**0.00**	**25.56**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.18					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.19	0.32	0.24	0.00		0.02	0.02		0.02	0.02	0.00	33.41	33.41	0.00	0.00	33.47
Total	**0.37**	**0.32**	**0.24**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**33.41**	**33.41**	**0.00**	**0.00**	**33.47**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.01	0.01	0.14	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	25.54	25.54	0.00	0.00	25.56
Total	**0.01**	**0.01**	**0.14**	**0.00**	**0.04**	**0.00**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**25.54**	**25.54**	**0.00**	**0.00**	**25.56**

3.3 architectural coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Archit. Coating	0.37					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.07	0.48	0.48	0.00		0.03	0.03		0.03	0.03	0.00	66.56	66.56	0.01	0.00	66.68
Total	**0.44**	**0.48**	**0.48**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**66.56**	**66.56**	**0.01**	**0.00**	**66.68**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.03	0.03	0.26	0.00	0.07	0.00	0.08	0.00	0.00	0.00	0.00	49.84	49.84	0.00	0.00	49.89
Total	**0.03**	**0.03**	**0.26**	**0.00**	**0.07**	**0.00**	**0.08**	**0.00**	**0.00**	**0.00**	**0.00**	**49.84**	**49.84**	**0.00**	**0.00**	**49.89**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.37					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.37	0.63	0.48	0.00		0.04	0.04		0.04	0.04	0.00	66.56	66.56	0.01	0.00	66.68
Total	**0.74**	**0.63**	**0.48**	**0.00**		**0.04**	**0.04**		**0.04**	**0.04**	**0.00**	**66.56**	**66.56**	**0.01**	**0.00**	**66.68**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Vendor	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
Worker	0.03	0.03	0.26	0.00	0.07	0.00	0.08	0.00	0.00	0.00	0.00	49.84	49.84	0.00	0.00	49.89
Total	**0.03**	**0.03**	**0.26**	**0.00**	**0.07**	**0.00**	**0.08**	**0.00**	**0.00**	**0.00**	**0.00**	**49.84**	**49.84**	**0.00**	**0.00**	**49.89**

3.3 architectural coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.37					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.06	0.44	0.48	0.00		0.03	0.03		0.03	0.03	0.00	66.82	66.82	0.01	0.00	66.92
Total	**0.43**	**0.44**	**0.48**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**66.82**	**66.82**	**0.01**	**0.00**	**66.92**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.02	0.02	0.24	0.00	0.07	0.00	0.08	0.00	0.00	0.00	0.00	49.08	49.08	0.00	0.00	49.13
Total	**0.02**	**0.02**	**0.24**	**0.00**	**0.07**	**0.00**	**0.08**	**0.00**	**0.00**	**0.00**	**0.00**	**49.08**	**49.08**	**0.00**	**0.00**	**49.13**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.37					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.38	0.64	0.48	0.00		0.04	0.04		0.04	0.04	0.00	66.82	66.82	0.01	0.00	66.92
Total	**0.75**	**0.64**	**0.48**	**0.00**		**0.04**	**0.04**		**0.04**	**0.04**	**0.00**	**66.82**	**66.82**	**0.01**	**0.00**	**66.92**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.02	0.02	0.24	0.00	0.07	0.00	0.08	0.00	0.00	0.00	0.00	49.08	49.08	0.00	0.00	49.13
Total	**0.02**	**0.02**	**0.24**	**0.00**	**0.07**	**0.00**	**0.08**	**0.00**	**0.00**	**0.00**	**0.00**	**49.08**	**49.08**	**0.00**	**0.00**	**49.13**

3.3 architectural coating - 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	tons/yr										MT/yr					
Archit. Coating	0.37					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.06	0.40	0.47	0.00		0.02	0.02		0.02	0.02	0.00	66.56	66.56	0.00	0.00	66.66
Total	**0.43**	**0.40**	**0.47**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**66.56**	**66.56**	**0.00**	**0.00**	**66.66**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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

Worker	0.02	0.02	0.23	0.00	0.07	0.00	0.08	0.00	0.00	0.00	0.00	48.49	48.49	0.00	0.00	48.53
Total	**0.02**	**0.02**	**0.23**	**0.00**	**0.07**	**0.00**	**0.08**	**0.00**	**0.00**	**0.00**	**0.00**	**48.49**	**48.49**	**0.00**	**0.00**	**48.53**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.37					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.37	0.63	0.48	0.00		0.04	0.04		0.04	0.04	0.00	66.56	66.56	0.00	0.00	66.66
Total	**0.74**	**0.63**	**0.48**	**0.00**		**0.04**	**0.04**		**0.04**	**0.04**	**0.00**	**66.56**	**66.56**	**0.00**	**0.00**	**66.66**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.02	0.02	0.23	0.00	0.07	0.00	0.08	0.00	0.00	0.00	0.00	48.49	48.49	0.00	0.00	48.53
Total	**0.02**	**0.02**	**0.23**	**0.00**	**0.07**	**0.00**	**0.08**	**0.00**	**0.00**	**0.00**	**0.00**	**48.49**	**48.49**	**0.00**	**0.00**	**48.53**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.59	8.76	41.13	0.10	10.19	0.54	10.73	0.16	0.52	0.69	0.00	7,417.24	7,417.24	0.28	0.00	7,423.13
Unmitigated	4.59	8.76	41.13	0.10	10.19	0.54	10.73	0.16	0.52	0.69	0.00	7,417.24	7,417.24	0.28	0.00	7,423.13
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	19.08	19.08	19.08	47,055	47,055
Condo/Townhouse	691.95	751.80	637.35	2,563,448	2,563,448
Elementary School	903.00	0.00	0.00	1,931,890	1,931,890
Health Club	1,317.20	834.80	1069.20	2,176,406	2,176,406
Office Park	39.97	5.74	2.66	86,140	86,140
Single Family Housing	3,416.49	3,598.56	3130.89	12,588,537	12,588,537
User Defined Industrial	0.00	0.00	0.00		
Total	6,387.69	5,209.98	4,859.18	19,393,477	19,393,477

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
City Park	14.70	6.60	6.60	33.00	48.00	19.00
Condo/Townhouse	16.80	7.10	7.90	41.60	18.80	39.60
Elementary School	14.70	6.60	6.60	65.00	30.00	5.00
Health Club	14.70	6.60	6.60	16.90	64.10	19.00
Office Park	14.70	6.60	6.60	33.00	48.00	19.00
Single Family Housing	16.80	7.10	7.90	41.60	18.80	39.60
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	1,237.28	1,237.28	0.05	0.02	1,243.65
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	1,237.28	1,237.28	0.05	0.02	1,243.65
NaturalGas Mitigated	0.09	0.79	0.35	0.00		0.00	0.06		0.00	0.06	0.00	906.69	906.69	0.02	0.02	912.21
NaturalGas Unmitigated	0.09	0.79	0.35	0.00		0.00	0.06		0.00	0.06	0.00	906.69	906.69	0.02	0.02	912.21
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
City Park	0	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
Condo/Townhouse	2.42307e+006	0.01	0.11	0.05	0.00		0.00	0.01		0.00	0.01	0.00	129.30	129.30	0.00	0.00	130.09
Elementary School	362839	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	19.36	19.36	0.00	0.00	19.48
Health Club	471600	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	25.17	25.17	0.00	0.00	25.32
Office Park	117880	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00	0.00	6.29	6.29	0.00	0.00	6.33
Single Family Housing	1.36154e+007	0.07	0.63	0.27	0.00		0.00	0.05		0.00	0.05	0.00	726.57	726.57	0.01	0.01	730.99
User Defined Industrial	0	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

Total		0.08	0.79	0.35	0.00		0.00	0.06		0.00	0.06	0.00	906.69	906.69	0.01	0.01	912.21

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	tons/yr										MT/yr					
City Park	0	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
Condo/Townhouse	2.42307e+006	0.01	0.11	0.05	0.00		0.00	0.01		0.00	0.01	0.00	129.30	129.30	0.00	0.00	130.09
Elementary School	362839	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	19.36	19.36	0.00	0.00	19.48
Health Club	471600	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	25.17	25.17	0.00	0.00	25.32
Office Park	117880	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00	0.00	6.29	6.29	0.00	0.00	6.33
Single Family Housing	1.36154e+007	0.07	0.63	0.27	0.00		0.00	0.05		0.00	0.05	0.00	726.57	726.57	0.01	0.01	730.99
User Defined Industrial	0	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
Total		**0.08**	**0.79**	**0.35**	**0.00**		**0.00**	**0.06**		**0.00**	**0.06**	**0.00**	**906.69**	**906.69**	**0.01**	**0.01**	**912.21**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
City Park	0					0.00	0.00	0.00	0.00
Condo/Townhouse	434278					153.80	0.01	0.00	154.60
Elementary School	348793					123.53	0.00	0.00	124.16
Health Club	360000					127.50	0.00	0.00	128.15
Office Park	61600					21.82	0.00	0.00	21.93
Single Family Housing	2.28889e+006					810.63	0.03	0.01	814.81
User Defined Industrial	0					0.00	0.00	0.00	0.00
Total						**1,237.28**	**0.04**	**0.01**	**1,243.65**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
City Park	0					0.00	0.00	0.00	0.00
Condo/Townhouse	434278					153.80	0.01	0.00	154.60
Elementary School	348793					123.53	0.00	0.00	124.16
Health Club	360000					127.50	0.00	0.00	128.15
Office Park	61600					21.82	0.00	0.00	21.93
Single Family Housing	2.28889e+006					810.63	0.03	0.01	814.81
User Defined Industrial	0					0.00	0.00	0.00	0.00
Total						**1,237.28**	**0.04**	**0.01**	**1,243.65**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	33.74	0.43	39.18	0.01		0.00	5.06		0.00	5.06	477.23	606.09	1,083.32	0.45	0.04	1,106.75
Unmitigated	33.74	0.43	39.18	0.01		0.00	5.06		0.00	5.06	477.23	606.09	1,083.32	0.45	0.04	1,106.75
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Architectural Coating	1.29					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	3.32					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	29.03	0.39	35.71	0.01		0.00	5.05		0.00	5.04	477.23	600.43	1,077.65	0.45	0.04	1,100.97
Landscaping	0.10	0.04	3.47	0.00		0.00	0.02		0.00	0.02	0.00	5.67	5.67	0.01	0.00	5.78
Total	**33.74**	**0.43**	**39.18**	**0.01**		**0.00**	**5.07**		**0.00**	**5.06**	**477.23**	**606.10**	**1,083.32**	**0.46**	**0.04**	**1,106.75**

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Architectural Coating	1.29					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	3.32					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	29.03	0.39	35.71	0.01		0.00	5.05		0.00	5.04	477.23	600.43	1,077.65	0.45	0.04	1,100.97
Landscaping	0.10	0.04	3.47	0.00		0.00	0.02		0.00	0.02	0.00	5.67	5.67	0.01	0.00	5.78
Total	**33.74**	**0.43**	**39.18**	**0.01**		**0.00**	**5.07**		**0.00**	**5.06**	**477.23**	**606.10**	**1,083.32**	**0.46**	**0.04**	**1,106.75**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					316.11	1.07	0.03	348.19
Unmitigated					316.11	1.07	0.03	348.19
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 14.2978					56.26	0.00	0.00	56.55
Condo/Townhouse	6.84117 / 4.31291					48.60	0.21	0.01	54.84
Elementary School	1.69697 / 4.36363					25.01	0.05	0.00	26.63
Health Club	2.36573 / 1.44996					16.64	0.07	0.00	18.80
Office Park	0.622068 / 0.381268					4.38	0.02	0.00	4.94
Single Family Housing	23.26 / 14.6639					165.22	0.72	0.02	186.44
User Defined Industrial	0 / 0					0.00	0.00	0.00	0.00
Total						**316.11**	**1.07**	**0.03**	**348.20**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 14.2978					56.26	0.00	0.00	56.55
Condo/Townhouse	6.84117 / 4.31291					48.60	0.21	0.01	54.84

Elementary School	1.69697 / 4.36363					25.01	0.05	0.00	26.63
Health Club	2.36573 / 1.44996					16.64	0.07	0.00	18.80
Office Park	0.622068 / 0.381268					4.38	0.02	0.00	4.94
Single Family Housing	23.26 / 14.6639					165.22	0.72	0.02	186.44
User Defined Industrial	0 / 0					0.00	0.00	0.00	0.00
Total						**316.11**	**1.07**	**0.03**	**348.20**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					167.86	9.92	0.00	376.19
Unmitigated					167.86	9.92	0.00	376.19
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	1.03					0.21	0.01	0.00	0.47
Condo/Townhouse	48.3					9.80	0.58	0.00	21.97

Elementary School	127.75					25.93	1.53	0.00	58.12
Health Club	228					46.28	2.74	0.00	103.72
Office Park	3.26					0.66	0.04	0.00	1.48
Single Family Housing	418.61					84.97	5.02	0.00	190.43
User Defined Industrial	0					0.00	0.00	0.00	0.00
Total						**167.85**	**9.92**	**0.00**	**376.19**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	1.03					0.21	0.01	0.00	0.47
Condo/Townhouse	48.3					9.80	0.58	0.00	21.97
Elementary School	127.75					25.93	1.53	0.00	58.12
Health Club	228					46.28	2.74	0.00	103.72
Office Park	3.26					0.66	0.04	0.00	1.48
Single Family Housing	418.61					84.97	5.02	0.00	190.43
User Defined Industrial	0					0.00	0.00	0.00	0.00
Total						**167.85**	**9.92**	**0.00**	**376.19**

9.0 Vegetation

Lilac Ranch - Phase 4 - Construction

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
City Park	3.7	Acre
Congregate Care (Assisted Living)	200	Dwelling Unit
Congregate Care (Assisted Living)	171	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Utility Company**	San Diego Gas & Electric
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - per specific plan summary table 01/2013

Trips and VMT - per SANDAG

Grading - max grading

Architectural Coating - per SDAPCD, rule 67, ROG reductions

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	1.60	12.45	6.78	0.02	0.05	0.59	0.64	0.00	0.59	0.59	0.00	1,489.07	1,489.07	0.13	0.00	1,491.79
2016	0.63	3.73	4.27	0.01	0.33	0.22	0.55	0.01	0.22	0.22	0.00	729.28	729.28	0.05	0.00	730.35
Total	**2.23**	**16.18**	**11.05**	**0.03**	**0.38**	**0.81**	**1.19**	**0.01**	**0.81**	**0.81**	**0.00**	**2,218.35**	**2,218.35**	**0.18**	**0.00**	**2,222.14**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	1.23	7.64	8.26	0.02	0.04	0.52	0.56	0.00	0.52	0.52	0.00	1,489.07	1,489.07	0.13	0.00	1,491.79
2016	1.09	3.40	4.51	0.01	0.33	0.24	0.57	0.01	0.24	0.24	0.00	729.28	729.28	0.05	0.00	730.35
Total	**2.32**	**11.04**	**12.77**	**0.03**	**0.37**	**0.76**	**1.13**	**0.01**	**0.76**	**0.76**	**0.00**	**2,218.35**	**2,218.35**	**0.18**	**0.00**	**2,222.14**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	48.74	0.66	60.18	0.02		0.00	8.12		0.00	8.12	766.45	968.87	1,735.33	0.72	0.07	1,772.88
Energy	0.02	0.18	0.08	0.00		0.00	0.01		0.00	0.01	0.00	666.87	666.87	0.02	0.01	670.49
Mobile	1.06	2.26	10.64	0.02	1.90	0.11	2.01	0.03	0.11	0.14	0.00	1,605.61	1,605.61	0.07	0.00	1,607.03
Waste						0.00	0.00		0.00	0.00	68.79	0.00	68.79	4.07	0.00	154.15
Water						0.00	0.00		0.00	0.00	0.00	189.05	189.05	0.74	0.02	211.19

Total	49.82	3.10	70.90	0.04	1.90	0.11	10.14	0.03	0.11	8.27	835.24	3,430.40	4,265.65	5.62	0.10	4,415.74

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	48.74	0.66	60.18	0.02		0.00	8.12		0.00	8.12	766.45	968.87	1,735.33	0.72	0.07	1,772.88
Energy	0.02	0.18	0.08	0.00		0.00	0.01		0.00	0.01	0.00	666.87	666.87	0.02	0.01	670.49
Mobile	1.06	2.26	10.64	0.02	1.90	0.11	2.01	0.03	0.11	0.14	0.00	1,605.61	1,605.61	0.07	0.00	1,607.03
Waste						0.00	0.00		0.00	0.00	68.79	0.00	68.79	4.07	0.00	154.15
Water						0.00	0.00		0.00	0.00	0.00	189.05	189.05	0.74	0.02	211.19
Total	**49.82**	**3.10**	**70.90**	**0.04**	**1.90**	**0.11**	**10.14**	**0.03**	**0.11**	**8.27**	**835.24**	**3,430.40**	**4,265.65**	**5.62**	**0.10**	**4,415.74**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 Demolition - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.11	0.09	0.00		0.01	0.01		0.01	0.01	0.00	11.80	11.80	0.00	0.00	11.83
Total	**0.02**	**0.11**	**0.09**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**11.80**	**11.80**	**0.00**	**0.00**	**11.83**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.00	0.00	0.19
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.00	0.00	0.58
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.77**	**0.77**	**0.00**	**0.00**	**0.77**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.03	0.09	0.08	0.00		0.01	0.01		0.01	0.01	0.00	11.80	11.80	0.00	0.00	11.83
Total	**0.03**	**0.09**	**0.08**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**11.80**	**11.80**	**0.00**	**0.00**	**11.83**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.00	0.00	0.19
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.00	0.00	0.58
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.77**	**0.77**	**0.00**	**0.00**	**0.77**

3.3 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.11	0.69	0.51	0.00		0.06	0.06		0.06	0.06	0.00	65.88	65.88	0.01	0.00	66.07
Total	**0.11**	**0.69**	**0.51**	**0.00**	**0.01**	**0.06**	**0.07**	**0.00**	**0.06**	**0.06**	**0.00**	**65.88**	**65.88**	**0.01**	**0.00**	**66.07**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.27	3.27	0.00	0.00	3.27
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.27**	**3.27**	**0.00**	**0.00**	**3.27**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.06	0.38	0.47	0.00		0.04	0.04		0.04	0.04	0.00	65.88	65.88	0.01	0.00	66.07
Total	**0.06**	**0.38**	**0.47**	**0.00**	**0.00**	**0.04**	**0.04**	**0.00**	**0.04**	**0.04**	**0.00**	**65.88**	**65.88**	**0.01**	**0.00**	**66.07**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.27	3.27	0.00	0.00	3.27
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.27**	**3.27**	**0.00**	**0.00**	**3.27**

3.4 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	1.46	11.63	6.02	0.01		0.52	0.52		0.52	0.52	0.00	1,386.71	1,386.71	0.12	0.00	1,389.18
Total	**1.46**	**11.63**	**6.02**	**0.01**	**0.01**	**0.52**	**0.53**	**0.00**	**0.52**	**0.52**	**0.00**	**1,386.71**	**1,386.71**	**0.12**	**0.00**	**1,389.18**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.01	0.01	0.13	0.00	0.03	0.00	0.03	0.00	0.00	0.00	0.00	20.64	20.64	0.00	0.00	20.67
Total	**0.01**	**0.01**	**0.13**	**0.00**	**0.03**	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**20.64**	**20.64**	**0.00**	**0.00**	**20.67**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	1.12	7.15	7.55	0.01		0.47	0.47		0.47	0.47	0.00	1,386.71	1,386.71	0.12	0.00	1,389.18
Total	**1.12**	**7.15**	**7.55**	**0.01**	**0.00**	**0.47**	**0.47**	**0.00**	**0.47**	**0.47**	**0.00**	**1,386.71**	**1,386.71**	**0.12**	**0.00**	**1,389.18**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.01	0.01	0.13	0.00	0.03	0.00	0.03	0.00	0.00	0.00	0.00	20.64	20.64	0.00	0.00	20.67
Total	**0.01**	**0.01**	**0.13**	**0.00**	**0.03**	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**20.64**	**20.64**	**0.00**	**0.00**	**20.67**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.45	3.07	2.61	0.00		0.19	0.19		0.19	0.19	0.00	414.45	414.45	0.04	0.00	415.23
Total	**0.45**	**3.07**	**2.61**	**0.00**		**0.19**	**0.19**		**0.19**	**0.19**	**0.00**	**414.45**	**414.45**	**0.04**	**0.00**	**415.23**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	0.05	0.52	0.33	0.00	0.03	0.02	0.05	0.00	0.02	0.02	0.00	97.03	97.03	0.00	0.00	97.08
Worker	0.13	0.14	1.33	0.00	0.30	0.01	0.31	0.00	0.01	0.02	0.00	217.79	217.79	0.01	0.00	218.05
Total	**0.18**	**0.66**	**1.66**	**0.00**	**0.33**	**0.03**	**0.36**	**0.00**	**0.03**	**0.04**	**0.00**	**314.82**	**314.82**	**0.01**	**0.00**	**315.13**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.92	2.74	2.84	0.00		0.21	0.21		0.21	0.21	0.00	414.45	414.45	0.04	0.00	415.23
Total	**0.92**	**2.74**	**2.84**	**0.00**		**0.21**	**0.21**		**0.21**	**0.21**	**0.00**	**414.45**	**414.45**	**0.04**	**0.00**	**415.23**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.00	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
Vendor	0.05	0.52	0.33	0.00	0.03	0.02	0.05	0.00	0.02	0.02	0.00	97.03	97.03	0.00	0.00	97.08
Worker	0.13	0.14	1.33	0.00	0.30	0.01	0.31	0.00	0.01	0.02	0.00	217.79	217.79	0.01	0.00	218.05
Total	**0.18**	**0.66**	**1.66**	**0.00**	**0.33**	**0.03**	**0.36**	**0.00**	**0.03**	**0.04**	**0.00**	**314.82**	**314.82**	**0.01**	**0.00**	**315.13**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.06	2.26	10.64	0.02	1.90	0.11	2.01	0.03	0.11	0.14	0.00	1,605.61	1,605.61	0.07	0.00	1,607.03
Unmitigated	1.06	2.26	10.64	0.02	1.90	0.11	2.01	0.03	0.11	0.14	0.00	1,605.61	1,605.61	0.07	0.00	1,607.03
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	5.88	5.88	5.88	14,509	14,509
Congregate Care (Assisted Living)	548.00	440.00	488.00	1,939,146	1,939,146
Congregate Care (Assisted Living)	468.54	376.20	417.24	1,657,970	1,657,970
Total	1,022.42	822.08	911.12	3,611,625	3,611,625

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
City Park	14.70	6.60	6.60	33.00	48.00	19.00
Congregate Care (Assisted Living)	16.80	7.10	7.90	41.60	18.80	39.60
Congregate Care (Assisted Living)	16.80	7.10	7.90	41.60	18.80	39.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	458.20	458.20	0.02	0.01	460.56
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	458.20	458.20	0.02	0.01	460.56
NaturalGas Mitigated	0.02	0.18	0.08	0.00		0.00	0.01		0.00	0.01	0.00	208.67	208.67	0.00	0.00	209.94
NaturalGas Unmitigated	0.02	0.18	0.08	0.00		0.00	0.01		0.00	0.01	0.00	208.67	208.67	0.00	0.00	209.94
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
City Park	0	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

Congregate Care (Assisted Living)	1.80232e+006	0.01	0.08	0.04	0.00		0.00	0.01		0.00	0.01	0.00	96.18	96.18	0.00	0.00	96.76
Congregate Care (Assisted Living)	2.10798e+006	0.01	0.10	0.04	0.00		0.00	0.01		0.00	0.01	0.00	112.49	112.49	0.00	0.00	113.17
Total		**0.02**	**0.18**	**0.08**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**208.67**	**208.67**	**0.00**	**0.00**	**209.93**

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	tons/yr										MT/yr					
City Park	0	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
Congregate Care (Assisted Living)	1.80232e+006	0.01	0.08	0.04	0.00		0.00	0.01		0.00	0.01	0.00	96.18	96.18	0.00	0.00	96.76
Congregate Care (Assisted Living)	2.10798e+006	0.01	0.10	0.04	0.00		0.00	0.01		0.00	0.01	0.00	112.49	112.49	0.00	0.00	113.17
Total		**0.02**	**0.18**	**0.08**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**208.67**	**208.67**	**0.00**	**0.00**	**209.93**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
City Park	0					0.00	0.00	0.00	0.00
Congregate Care (Assisted Living)	596313					211.19	0.01	0.00	212.28
Congregate Care (Assisted Living)	697442					247.01	0.01	0.00	248.28
Total						**458.20**	**0.02**	**0.00**	**460.56**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			

City Park	0					0.00	0.00	0.00	0.00
Congregate Care (Assisted Living)	596313					211.19	0.01	0.00	212.28
Congregate Care (Assisted Living)	697442					247.01	0.01	0.00	248.28
Total						**458.20**	**0.02**	**0.00**	**460.56**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	48.74	0.66	60.18	0.02		0.00	8.12		0.00	8.12	766.45	968.87	1,735.33	0.72	0.07	1,772.88
Unmitigated	48.74	0.66	60.18	0.02		0.00	8.12		0.00	8.12	766.45	968.87	1,735.33	0.72	0.07	1,772.88
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

<u>Unmitigated</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.58					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	1.45					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	46.62	0.63	57.36	0.02		0.00	8.10		0.00	8.10	766.45	964.32	1,730.77	0.72	0.07	1,768.23
Landscaping	0.09	0.03	2.82	0.00		0.00	0.02		0.00	0.02	0.00	4.55	4.55	0.00	0.00	4.65

Total	48.74	0.66	60.18	0.02		0.00	8.12		0.00	8.12	766.45	968.87	1,735.32	0.72	0.07	1,772.88

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.58					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	1.45					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	46.62	0.63	57.36	0.02		0.00	8.10		0.00	8.10	766.45	964.32	1,730.77	0.72	0.07	1,768.23
Landscaping	0.09	0.03	2.82	0.00		0.00	0.02		0.00	0.02	0.00	4.55	4.55	0.00	0.00	4.65
Total	**48.74**	**0.66**	**60.18**	**0.02**		**0.00**	**8.12**		**0.00**	**8.12**	**766.45**	**968.87**	**1,735.32**	**0.72**	**0.07**	**1,772.88**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					189.05	0.74	0.02	211.19
Unmitigated					189.05	0.74	0.02	211.19
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 4.40848					17.35	0.00	0.00	17.44
Congregate Care (Assisted Living)	24.1721 / 15.239					171.70	0.74	0.02	193.75
Total						**189.05**	**0.74**	**0.02**	**211.19**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 4.40848					17.35	0.00	0.00	17.44
Congregate Care (Assisted Living)	24.1721 / 15.239					171.70	0.74	0.02	193.75
Total						**189.05**	**0.74**	**0.02**	**211.19**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					68.79	4.07	0.00	154.15
Unmitigated					68.79	4.07	0.00	154.15

Total	NA	NA	NA	NA	NA	NA	NA	NA

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	0.32					0.06	0.00	0.00	0.15
Congregate Care (Assisted Living)	338.54					68.72	4.06	0.00	154.01
Total						**68.78**	**4.06**	**0.00**	**154.16**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	0.32					0.06	0.00	0.00	0.15
Congregate Care (Assisted Living)	338.54					68.72	4.06	0.00	154.01
Total						**68.78**	**4.06**	**0.00**	**154.16**

9.0 Vegetation

Lilac Ranch - Phase 4 - Construction

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
City Park	3.7	Acre
Congregate Care (Assisted Living)	200	Dwelling Unit
Congregate Care (Assisted Living)	171	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Utility Company**	San Diego Gas & Electric
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - per specific plan summary table 01/2013

Trips and VMT - per SANDAG

Grading - max grading

Architectural Coating - per SDAPCD, rule 67, ROG reductions

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.80	1.25	1.11	0.00	0.05	0.10	0.15	0.00	0.10	0.10	0.00	152.36	152.36	0.02	0.00	152.74
Total	**0.80**	**1.25**	**1.11**	**0.00**	**0.05**	**0.10**	**0.15**	**0.00**	**0.10**	**0.10**	**0.00**	**152.36**	**152.36**	**0.02**	**0.00**	**152.74**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.87	0.84	1.06	0.00	0.05	0.07	0.12	0.00	0.07	0.07	0.00	152.36	152.36	0.02	0.00	152.74
Total	**0.87**	**0.84**	**1.06**	**0.00**	**0.05**	**0.07**	**0.12**	**0.00**	**0.07**	**0.07**	**0.00**	**152.36**	**152.36**	**0.02**	**0.00**	**152.74**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	48.74	0.66	60.18	0.02		0.00	8.12		0.00	8.12	766.45	968.87	1,735.33	0.72	0.07	1,772.88
Energy	0.02	0.18	0.08	0.00		0.00	0.01		0.00	0.01	0.00	666.87	666.87	0.02	0.01	670.49
Mobile	1.06	2.26	10.64	0.02	1.90	0.11	2.01	0.03	0.11	0.14	0.00	1,605.61	1,605.61	0.07	0.00	1,607.03
Waste						0.00	0.00		0.00	0.00	68.79	0.00	68.79	4.07	0.00	154.15
Water						0.00	0.00		0.00	0.00	0.00	189.05	189.05	0.74	0.02	211.19
Total	**49.82**	**3.10**	**70.90**	**0.04**	**1.90**	**0.11**	**10.14**	**0.03**	**0.11**	**8.27**	**835.24**	**3,430.40**	**4,265.65**	**5.62**	**0.10**	**4,415.74**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	48.74	0.66	60.18	0.02		0.00	8.12		0.00	8.12	766.45	968.87	1,735.33	0.72	0.07	1,772.88
Energy	0.02	0.18	0.08	0.00		0.00	0.01		0.00	0.01	0.00	666.87	666.87	0.02	0.01	670.49
Mobile	1.06	2.26	10.64	0.02	1.90	0.11	2.01	0.03	0.11	0.14	0.00	1,605.61	1,605.61	0.07	0.00	1,607.03
Waste						0.00	0.00		0.00	0.00	68.79	0.00	68.79	4.07	0.00	154.15
Water						0.00	0.00		0.00	0.00	0.00	189.05	189.05	0.74	0.02	211.19
Total	**49.82**	**3.10**	**70.90**	**0.04**	**1.90**	**0.11**	**10.14**	**0.03**	**0.11**	**8.27**	**835.24**	**3,430.40**	**4,265.65**	**5.62**	**0.10**	**4,415.74**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.15	0.92	0.66	0.00		0.08	0.08		0.08	0.08	0.00	86.00	86.00	0.01	0.00	86.25
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.15**	**0.92**	**0.66**	**0.00**		**0.08**	**0.08**		**0.08**	**0.08**	**0.00**	**86.00**	**86.00**	**0.01**	**0.00**	**86.25**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	4.06	4.06	0.00	0.00	4.06
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**4.06**	**4.06**	**0.00**	**0.00**	**4.06**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.08	0.50	0.62	0.00		0.05	0.05		0.05	0.05	0.00	86.00	86.00	0.01	0.00	86.25
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.08**	**0.50**	**0.62**	**0.00**		**0.05**	**0.05**		**0.05**	**0.05**	**0.00**	**86.00**	**86.00**	**0.01**	**0.00**	**86.25**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	4.06	4.06	0.00	0.00	4.06
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**4.06**	**4.06**	**0.00**	**0.00**	**4.06**

3.3 architectural coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.58					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.05	0.31	0.25	0.00		0.03	0.03		0.03	0.03	0.00	33.41	33.41	0.00	0.00	33.49
Total	**0.63**	**0.31**	**0.25**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**33.41**	**33.41**	**0.00**	**0.00**	**33.49**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.02	0.02	0.18	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	28.89	28.89	0.00	0.00	28.93
Total	**0.02**	**0.02**	**0.18**	**0.00**	**0.04**	**0.00**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**28.89**	**28.89**	**0.00**	**0.00**	**28.93**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.58					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.19	0.32	0.24	0.00		0.02	0.02		0.02	0.02	0.00	33.41	33.41	0.00	0.00	33.49
Total	**0.77**	**0.32**	**0.24**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**33.41**	**33.41**	**0.00**	**0.00**	**33.49**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.02	0.02	0.18	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	28.89	28.89	0.00	0.00	28.93
Total	**0.02**	**0.02**	**0.18**	**0.00**	**0.04**	**0.00**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**28.89**	**28.89**	**0.00**	**0.00**	**28.93**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated	1.06	2.26	10.64	0.02	1.90	0.11	2.01	0.03	0.11	0.14	0.00	1,605.61	1,605.61	0.07	0.00	1,607.03
Unmitigated	1.06	2.26	10.64	0.02	1.90	0.11	2.01	0.03	0.11	0.14	0.00	1,605.61	1,605.61	0.07	0.00	1,607.03
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	5.88	5.88	5.88	14,509	14,509
Congregate Care (Assisted Living)	548.00	440.00	488.00	1,939,146	1,939,146
Congregate Care (Assisted Living)	468.54	376.20	417.24	1,657,970	1,657,970
Total	1,022.42	822.08	911.12	3,611,625	3,611,625

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
City Park	14.70	6.60	6.60	33.00	48.00	19.00
Congregate Care (Assisted Living)	16.80	7.10	7.90	41.60	18.80	39.60
Congregate Care (Assisted Living)	16.80	7.10	7.90	41.60	18.80	39.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	458.20	458.20	0.02	0.01	460.56

Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	458.20	458.20	0.02	0.01	460.56
NaturalGas Mitigated	0.02	0.18	0.08	0.00		0.00	0.01		0.00	0.01	0.00	208.67	208.67	0.00	0.00	209.94
NaturalGas Unmitigated	0.02	0.18	0.08	0.00		0.00	0.01		0.00	0.01	0.00	208.67	208.67	0.00	0.00	209.94
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
City Park	0	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
Congregate Care (Assisted Living)	1.80232e+006	0.01	0.08	0.04	0.00		0.00	0.01		0.00	0.01	0.00	96.18	96.18	0.00	0.00	96.76
Congregate Care (Assisted Living)	2.10798e+006	0.01	0.10	0.04	0.00		0.00	0.01		0.00	0.01	0.00	112.49	112.49	0.00	0.00	113.17
Total		**0.02**	**0.18**	**0.08**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**208.67**	**208.67**	**0.00**	**0.00**	**209.93**

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	tons/yr										MT/yr					
City Park	0	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
Congregate Care (Assisted Living)	1.80232e+006	0.01	0.08	0.04	0.00		0.00	0.01		0.00	0.01	0.00	96.18	96.18	0.00	0.00	96.76
Congregate Care (Assisted Living)	2.10798e+006	0.01	0.10	0.04	0.00		0.00	0.01		0.00	0.01	0.00	112.49	112.49	0.00	0.00	113.17
Total		**0.02**	**0.18**	**0.08**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**208.67**	**208.67**	**0.00**	**0.00**	**209.93**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e

Land Use	kWh	tons/yr				MT/yr			
City Park	0					0.00	0.00	0.00	0.00
Congregate Care (Assisted Living)	596313					211.19	0.01	0.00	212.28
Congregate Care (Assisted Living)	697442					247.01	0.01	0.00	248.28
Total						**458.20**	**0.02**	**0.00**	**460.56**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
City Park	0					0.00	0.00	0.00	0.00
Congregate Care (Assisted Living)	596313					211.19	0.01	0.00	212.28
Congregate Care (Assisted Living)	697442					247.01	0.01	0.00	248.28
Total						**458.20**	**0.02**	**0.00**	**460.56**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	48.74	0.66	60.18	0.02		0.00	8.12		0.00	8.12	766.45	968.87	1,735.33	0.72	0.07	1,772.88
Unmitigated	48.74	0.66	60.18	0.02		0.00	8.12		0.00	8.12	766.45	968.87	1,735.33	0.72	0.07	1,772.88

Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.58					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	1.45					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	46.62	0.63	57.36	0.02		0.00	8.10		0.00	8.10	766.45	964.32	1,730.77	0.72	0.07	1,768.23
Landscaping	0.09	0.03	2.82	0.00		0.00	0.02		0.00	0.02	0.00	4.55	4.55	0.00	0.00	4.65
Total	**48.74**	**0.66**	**60.18**	**0.02**		**0.00**	**8.12**		**0.00**	**8.12**	**766.45**	**968.87**	**1,735.32**	**0.72**	**0.07**	**1,772.88**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.58					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	1.45					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	46.62	0.63	57.36	0.02		0.00	8.10		0.00	8.10	766.45	964.32	1,730.77	0.72	0.07	1,768.23
Landscaping	0.09	0.03	2.82	0.00		0.00	0.02		0.00	0.02	0.00	4.55	4.55	0.00	0.00	4.65
Total	**48.74**	**0.66**	**60.18**	**0.02**		**0.00**	**8.12**		**0.00**	**8.12**	**766.45**	**968.87**	**1,735.32**	**0.72**	**0.07**	**1,772.88**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					189.05	0.74	0.02	211.19
Unmitigated					189.05	0.74	0.02	211.19
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 4.40848					17.35	0.00	0.00	17.44
Congregate Care (Assisted Living)	24.1721 / 15.239					171.70	0.74	0.02	193.75
Total						**189.05**	**0.74**	**0.02**	**211.19**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 4.40848					17.35	0.00	0.00	17.44
Congregate Care (Assisted Living)	24.1721 / 15.239					171.70	0.74	0.02	193.75
Total						**189.05**	**0.74**	**0.02**	**211.19**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					68.79	4.07	0.00	154.15
Unmitigated					68.79	4.07	0.00	154.15
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	0.32					0.06	0.00	0.00	0.15
Congregate Care (Assisted Living)	338.54					68.72	4.06	0.00	154.01
Total						**68.78**	**4.06**	**0.00**	**154.16**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	0.32					0.06	0.00	0.00	0.15
Congregate Care (Assisted Living)	338.54					68.72	4.06	0.00	154.01
Total						**68.78**	**4.06**	**0.00**	**154.16**

9.0 Vegetation

Lilac Ranch - Phase 5 - Construction

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Place of Worship	233.05	1000sqft
City Park	2.1	Acre
Congregate Care (Assisted Living)	297	Dwelling Unit
Strip Mall	2.5	1000sqft

1.2 Other Project Characteristics

Urbanization Rural

Climate Zone 13

Wind Speed (m/s) 2.6

Precipitation Freq (Days) 40

Utility Company San Diego Gas & Electric

1.3 User Entered Comments

Project Characteristics -

Land Use - per specific plan summary table 01/2013 & from 2013 traffic study (ChenRyan)

Trips and VMT - per SANDAG

Grading - max grading

Architectural Coating - per SDAPCD, rule 67, ROG reductions

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Demolition -

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.11	0.64	0.53	0.00	0.01	0.05	0.07	0.00	0.05	0.05	0.00	70.01	70.01	0.01	0.00	70.19
2017	1.74	12.38	8.78	0.02	0.31	0.58	0.88	0.01	0.57	0.58	0.00	1,959.60	1,959.60	0.14	0.00	1,962.55
2018	0.19	1.15	1.47	0.00	0.13	0.06	0.20	0.00	0.06	0.06	0.00	274.82	274.82	0.02	0.00	275.14
Total	**2.04**	**14.17**	**10.78**	**0.02**	**0.45**	**0.69**	**1.15**	**0.01**	**0.68**	**0.69**	**0.00**	**2,304.43**	**2,304.43**	**0.17**	**0.00**	**2,307.88**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.09	0.41	0.50	0.00	0.01	0.04	0.05	0.00	0.04	0.04	0.00	70.01	70.01	0.01	0.00	70.19
2017	1.88	9.65	10.89	0.02	0.30	0.64	0.94	0.01	0.64	0.64	0.00	1,959.60	1,959.60	0.14	0.00	1,962.55
2018	0.37	1.22	1.56	0.00	0.13	0.08	0.22	0.00	0.08	0.08	0.00	274.82	274.82	0.02	0.00	275.14
Total	**2.34**	**11.28**	**12.95**	**0.02**	**0.44**	**0.76**	**1.21**	**0.01**	**0.76**	**0.76**	**0.00**	**2,304.43**	**2,304.43**	**0.17**	**0.00**	**2,307.88**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	21.55	0.28	25.20	0.01		0.00	3.26		0.00	3.26	306.79	389.63	696.42	0.29	0.03	711.49

Energy	0.03	0.28	0.17	0.00		0.00	0.02		0.00	0.02	0.00	1,436.05	1,436.05	0.05	0.02	1,443.73
Mobile	2.92	5.81	27.81	0.04	4.34	0.26	4.61	0.07	0.25	0.32	0.00	3,735.23	3,735.23	0.17	0.00	3,738.72
Waste						0.00	0.00		0.00	0.00	325.23	0.00	325.23	19.22	0.00	728.87
Water						0.00	0.00		0.00	0.00	0.00	227.19	227.19	0.83	0.02	251.85
Total	**24.50**	**6.37**	**53.18**	**0.05**	**4.34**	**0.26**	**7.89**	**0.07**	**0.25**	**3.60**	**632.02**	**5,788.10**	**6,420.12**	**20.56**	**0.07**	**6,874.66**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	21.55	0.28	25.20	0.01		0.00	3.26		0.00	3.26	306.79	389.63	696.42	0.29	0.03	711.49
Energy	0.03	0.28	0.17	0.00		0.00	0.02		0.00	0.02	0.00	1,436.05	1,436.05	0.05	0.02	1,443.73
Mobile	2.92	5.81	27.81	0.04	4.34	0.26	4.61	0.07	0.25	0.32	0.00	3,735.23	3,735.23	0.17	0.00	3,738.72
Waste						0.00	0.00		0.00	0.00	325.23	0.00	325.23	19.22	0.00	728.87
Water						0.00	0.00		0.00	0.00	0.00	227.19	227.19	0.83	0.02	251.85
Total	**24.50**	**6.37**	**53.18**	**0.05**	**4.34**	**0.26**	**7.89**	**0.07**	**0.25**	**3.60**	**632.02**	**5,788.10**	**6,420.12**	**20.56**	**0.07**	**6,874.66**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.09	0.08	0.00		0.01	0.01		0.01	0.01	0.00	10.41	10.41	0.00	0.00	10.44
Total	**0.01**	**0.09**	**0.08**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**10.41**	**10.41**	**0.00**	**0.00**	**10.44**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.00	0.00	0.56
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.00	0.00	0.50
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.06**	**1.06**	**0.00**	**0.00**	**1.06**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.03	0.08	0.07	0.00		0.01	0.01		0.01	0.01	0.00	10.41	10.41	0.00	0.00	10.44
Total	**0.03**	**0.08**	**0.07**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**10.41**	**10.41**	**0.00**	**0.00**	**10.44**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.00	0.00	0.56
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.00	0.00	0.50
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.06**	**1.06**	**0.00**	**0.00**	**1.06**

3.3 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.09	0.54	0.43	0.00		0.04	0.04		0.04	0.04	0.00	55.83	55.83	0.01	0.00	55.98
Total	**0.09**	**0.54**	**0.43**	**0.00**	**0.01**	**0.04**	**0.05**	**0.00**	**0.04**	**0.04**	**0.00**	**55.83**	**55.83**	**0.01**	**0.00**	**55.98**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.71	2.71	0.00	0.00	2.71
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.71**	**2.71**	**0.00**	**0.00**	**2.71**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.05	0.32	0.40	0.00		0.03	0.03		0.03	0.03	0.00	55.83	55.83	0.01	0.00	55.98
Total	**0.05**	**0.32**	**0.40**	**0.00**	**0.00**	**0.03**	**0.03**	**0.00**	**0.03**	**0.03**	**0.00**	**55.83**	**55.83**	**0.01**	**0.00**	**55.98**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.71	2.71	0.00	0.00	2.71
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.71**	**2.71**	**0.00**	**0.00**	**2.71**

3.3 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.10	0.09	0.00		0.01	0.01		0.01	0.01	0.00	11.17	11.17	0.00	0.00	11.19
Total	**0.02**	**0.10**	**0.09**	**0.00**	**0.01**	**0.01**	**0.02**	**0.00**	**0.01**	**0.01**	**0.00**	**11.17**	**11.17**	**0.00**	**0.00**	**11.19**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.53	0.00	0.00	0.53
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.53**	**0.53**	**0.00**	**0.00**	**0.53**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.06	0.08	0.00		0.01	0.01		0.01	0.01	0.00	11.17	11.17	0.00	0.00	11.19
Total	**0.01**	**0.06**	**0.08**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**11.17**	**11.17**	**0.00**	**0.00**	**11.19**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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

Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.53	0.00	0.00	0.53
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.53**	**0.53**	**0.00**	**0.00**	**0.53**

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	1.29	9.75	5.54	0.01		0.43	0.43		0.43	0.43	0.00	1,375.25	1,375.25	0.10	0.00	1,377.45
Total	**1.29**	**9.75**	**5.54**	**0.01**	**0.01**	**0.43**	**0.44**	**0.00**	**0.43**	**0.43**	**0.00**	**1,375.25**	**1,375.25**	**0.10**	**0.00**	**1,377.45**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.01	0.01	0.11	0.00	0.03	0.00	0.03	0.00	0.00	0.00	0.00	19.52	19.52	0.00	0.00	19.54
Total	**0.01**	**0.01**	**0.11**	**0.00**	**0.03**	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**19.52**	**19.52**	**0.00**	**0.00**	**19.54**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Off-Road	1.11	7.09	7.49	0.01		0.47	0.47		0.47	0.47	0.00	1,375.25	1,375.25	0.10	0.00	1,377.45
Total	**1.11**	**7.09**	**7.49**	**0.01**	**0.00**	**0.47**	**0.47**	**0.00**	**0.47**	**0.47**	**0.00**	**1,375.25**	**1,375.25**	**0.10**	**0.00**	**1,377.45**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.01	0.01	0.11	0.00	0.03	0.00	0.03	0.00	0.00	0.00	0.00	19.52	19.52	0.00	0.00	19.54
Total	**0.01**	**0.01**	**0.11**	**0.00**	**0.03**	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**19.52**	**19.52**	**0.00**	**0.00**	**19.54**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.27	1.85	1.72	0.00		0.11	0.11		0.11	0.11	0.00	274.89	274.89	0.02	0.00	275.36
Total	**0.27**	**1.85**	**1.72**	**0.00**		**0.11**	**0.11**		**0.11**	**0.11**	**0.00**	**274.89**	**274.89**	**0.02**	**0.00**	**275.36**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	0.05	0.57	0.36	0.00	0.04	0.02	0.06	0.00	0.02	0.02	0.00	112.76	112.76	0.00	0.00	112.81
Worker	0.09	0.10	0.96	0.00	0.23	0.01	0.24	0.00	0.01	0.01	0.00	165.47	165.47	0.01	0.00	165.66

Total	**0.14**	**0.67**	**1.32**	**0.00**	**0.27**	**0.03**	**0.30**	**0.00**	**0.03**	**0.03**	**0.00**	**278.23**	**278.23**	**0.01**	**0.00**	**278.47**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.61	1.82	1.88	0.00		0.14	0.14		0.14	0.14	0.00	274.89	274.89	0.02	0.00	275.36
Total	**0.61**	**1.82**	**1.88**	**0.00**		**0.14**	**0.14**		**0.14**	**0.14**	**0.00**	**274.89**	**274.89**	**0.02**	**0.00**	**275.36**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	0.05	0.57	0.36	0.00	0.04	0.02	0.06	0.00	0.02	0.02	0.00	112.76	112.76	0.00	0.00	112.81
Worker	0.09	0.10	0.96	0.00	0.23	0.01	0.24	0.00	0.01	0.01	0.00	165.47	165.47	0.01	0.00	165.66
Total	**0.14**	**0.67**	**1.32**	**0.00**	**0.27**	**0.03**	**0.30**	**0.00**	**0.03**	**0.03**	**0.00**	**278.23**	**278.23**	**0.01**	**0.00**	**278.47**

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.12	0.84	0.85	0.00		0.05	0.05		0.05	0.05	0.00	137.45	137.45	0.01	0.00	137.66
Total	**0.12**	**0.84**	**0.85**	**0.00**		**0.05**	**0.05**		**0.05**	**0.05**	**0.00**	**137.45**	**137.45**	**0.01**	**0.00**	**137.66**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	0.02	0.27	0.17	0.00	0.02	0.01	0.03	0.00	0.01	0.01	0.00	56.44	56.44	0.00	0.00	56.46
Worker	0.04	0.04	0.44	0.00	0.12	0.00	0.12	0.00	0.00	0.01	0.00	80.94	80.94	0.00	0.00	81.02
Total	**0.06**	**0.31**	**0.61**	**0.00**	**0.14**	**0.01**	**0.15**	**0.00**	**0.01**	**0.02**	**0.00**	**137.38**	**137.38**	**0.00**	**0.00**	**137.48**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.30	0.91	0.94	0.00		0.07	0.07		0.07	0.07	0.00	137.45	137.45	0.01	0.00	137.66
Total	**0.30**	**0.91**	**0.94**	**0.00**		**0.07**	**0.07**		**0.07**	**0.07**	**0.00**	**137.45**	**137.45**	**0.01**	**0.00**	**137.66**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	0.02	0.27	0.17	0.00	0.02	0.01	0.03	0.00	0.01	0.01	0.00	56.44	56.44	0.00	0.00	56.46
Worker	0.04	0.04	0.44	0.00	0.12	0.00	0.12	0.00	0.00	0.01	0.00	80.94	80.94	0.00	0.00	81.02
Total	**0.06**	**0.31**	**0.61**	**0.00**	**0.14**	**0.01**	**0.15**	**0.00**	**0.01**	**0.02**	**0.00**	**137.38**	**137.38**	**0.00**	**0.00**	**137.48**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.92	5.81	27.81	0.04	4.34	0.26	4.61	0.07	0.25	0.32	0.00	3,735.23	3,735.23	0.17	0.00	3,738.72
Unmitigated	2.92	5.81	27.81	0.04	4.34	0.26	4.61	0.07	0.25	0.32	0.00	3,735.23	3,735.23	0.17	0.00	3,738.72
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	3.34	3.34	3.34	8,235	8,235
Congregate Care (Assisted Living)	813.78	653.40	724.68	2,879,632	2,879,632
Place of Worship	2,123.09	2,416.73	8536.62	5,212,526	5,212,526
Strip Mall	110.80	105.10	51.08	161,917	161,917
Total	3,051.00	3,178.57	9,315.72	8,262,310	8,262,310

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
City Park	14.70	6.60	6.60	33.00	48.00	19.00
Congregate Care (Assisted Living)	16.80	7.10	7.90	41.60	18.80	39.60
Place of Worship	14.70	6.60	6.60	0.00	95.00	5.00

Strip Mall	14.70	6.60	6.60	16.60	64.40	19.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	1,122.07	1,122.07	0.04	0.02	1,127.84
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	1,122.07	1,122.07	0.04	0.02	1,127.84
NaturalGas Mitigated	0.03	0.28	0.17	0.00		0.00	0.02		0.00	0.02	0.00	313.98	313.98	0.01	0.01	315.89
NaturalGas Unmitigated	0.03	0.28	0.17	0.00		0.00	0.02		0.00	0.02	0.00	313.98	313.98	0.01	0.01	315.89
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
City Park	0	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
Congregate Care (Assisted Living)	3.13035e+006	0.02	0.14	0.06	0.00		0.00	0.01		0.00	0.01	0.00	167.05	167.05	0.00	0.00	168.06
Place of Worship	2.74766e+006	0.01	0.13	0.11	0.00		0.00	0.01		0.00	0.01	0.00	146.63	146.63	0.00	0.00	147.52
Strip Mall	5725	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.31	0.31	0.00	0.00	0.31
Total		**0.03**	**0.27**	**0.17**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**313.99**	**313.99**	**0.00**	**0.00**	**315.89**

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	tons/yr										MT/yr					
City Park	0	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
Congregate Care (Assisted Living)	3.13035e+006	0.02	0.14	0.06	0.00		0.00	0.01		0.00	0.01	0.00	167.05	167.05	0.00	0.00	168.06
Place of Worship	2.74766e+006	0.01	0.13	0.11	0.00		0.00	0.01		0.00	0.01	0.00	146.63	146.63	0.00	0.00	147.52
Strip Mall	5725	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.31	0.31	0.00	0.00	0.31
Total		**0.03**	**0.27**	**0.17**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**313.99**	**313.99**	**0.00**	**0.00**	**315.89**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
City Park	0					0.00	0.00	0.00	0.00
Congregate Care (Assisted Living)	1.0357e+006					366.80	0.01	0.01	368.69
Place of Worship	2.09745e+006					742.83	0.03	0.01	746.66
Strip Mall	35100					12.43	0.00	0.00	12.50
Total						**1,122.06**	**0.04**	**0.02**	**1,127.85**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
City Park	0					0.00	0.00	0.00	0.00
Congregate Care (Assisted Living)	1.0357e+006					366.80	0.01	0.01	368.69
Place of Worship	2.09745e+006					742.83	0.03	0.01	746.66

Strip Mall	35100					12.43	0.00	0.00	12.50
Total						**1,122.06**	**0.04**	**0.02**	**1,127.85**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	21.55	0.28	25.20	0.01		0.00	3.26		0.00	3.26	306.79	389.63	696.42	0.29	0.03	711.49
Unmitigated	21.55	0.28	25.20	0.01		0.00	3.26		0.00	3.26	306.79	389.63	696.42	0.29	0.03	711.49
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.74					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.08					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	18.66	0.25	22.96	0.01		0.00	3.24		0.00	3.24	306.79	385.99	692.78	0.29	0.03	707.77
Landscaping	0.07	0.03	2.25	0.00		0.00	0.01		0.00	0.01	0.00	3.64	3.64	0.00	0.00	3.72
Total	**21.55**	**0.28**	**25.21**	**0.01**		**0.00**	**3.25**		**0.00**	**3.25**	**306.79**	**389.63**	**696.42**	**0.29**	**0.03**	**711.49**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.74					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.08					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	18.66	0.25	22.96	0.01		0.00	3.24		0.00	3.24	306.79	385.99	692.78	0.29	0.03	707.77
Landscaping	0.07	0.03	2.25	0.00		0.00	0.01		0.00	0.01	0.00	3.64	3.64	0.00	0.00	3.72
Total	**21.55**	**0.28**	**25.21**	**0.01**		**0.00**	**3.25**		**0.00**	**3.25**	**306.79**	**389.63**	**696.42**	**0.29**	**0.03**	**711.49**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					227.19	0.83	0.02	251.85
Unmitigated					227.19	0.83	0.02	251.85
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 2.50211					9.85	0.00	0.00	9.90
Congregate Care (Assisted Living)	19.3507 / 12.1994					137.45	0.60	0.02	155.11
Place of Worship	7.29188 / 11.4052					78.58	0.23	0.01	85.37
Strip Mall	0.185181 / 0.113498					1.30	0.01	0.00	1.47
Total						**227.18**	**0.84**	**0.03**	**251.85**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 2.50211					9.85	0.00	0.00	9.90
Congregate Care (Assisted Living)	19.3507 / 12.1994					137.45	0.60	0.02	155.11
Place of Worship	7.29188 / 11.4052					78.58	0.23	0.01	85.37
Strip Mall	0.185181 / 0.113498					1.30	0.01	0.00	1.47
Total						**227.18**	**0.84**	**0.03**	**251.85**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			

Mitigated					325.23	19.22	0.00	728.87
Unmitigated					325.23	19.22	0.00	728.87
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	0.18					0.04	0.00	0.00	0.08
Congregate Care (Assisted Living)	271.01					55.01	3.25	0.00	123.29
Place of Worship	1328.39					269.65	15.94	0.00	604.31
Strip Mall	2.63					0.53	0.03	0.00	1.20
Total						**325.23**	**19.22**	**0.00**	**728.88**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	0.18					0.04	0.00	0.00	0.08
Congregate Care (Assisted Living)	271.01					55.01	3.25	0.00	123.29
Place of Worship	1328.39					269.65	15.94	0.00	604.31
Strip Mall	2.63					0.53	0.03	0.00	1.20
Total						**325.23**	**19.22**	**0.00**	**728.88**

9.0 Vegetation

Lilac Ranch - Phase 5 - Construction

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Place of Worship	233.05	1000sqft
City Park	2.1	Acre
Congregate Care (Assisted Living)	297	Dwelling Unit
Strip Mall	2.5	1000sqft

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Utility Company**	San Diego Gas & Electric
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - per specific plan summary table 01/2013 & from 2013 traffic study (ChenRyan)

Trips and VMT - per SANDAG

Grading - max grading

Architectural Coating - per SDAPCD, rule 67, ROG reductions

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.54	1.01	0.90	0.00	0.03	0.08	0.11	0.00	0.08	0.08	0.00	123.19	123.19	0.01	0.00	123.49
2018	0.40	0.14	0.21	0.00	0.02	0.01	0.03	0.00	0.01	0.01	0.00	32.87	32.87	0.00	0.00	32.92
Total	**0.94**	**1.15**	**1.11**	**0.00**	**0.05**	**0.09**	**0.14**	**0.00**	**0.09**	**0.09**	**0.00**	**156.06**	**156.06**	**0.01**	**0.00**	**156.41**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.56	0.67	0.86	0.00	0.03	0.06	0.09	0.00	0.06	0.06	0.00	123.19	123.19	0.01	0.00	123.49
2018	0.47	0.17	0.21	0.00	0.02	0.01	0.03	0.00	0.01	0.01	0.00	32.87	32.87	0.00	0.00	32.92
Total	**1.03**	**0.84**	**1.07**	**0.00**	**0.05**	**0.07**	**0.12**	**0.00**	**0.07**	**0.07**	**0.00**	**156.06**	**156.06**	**0.01**	**0.00**	**156.41**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	21.55	0.28	25.20	0.01		0.00	3.26		0.00	3.26	306.79	389.63	696.42	0.29	0.03	711.49
Energy	0.03	0.28	0.17	0.00		0.00	0.02		0.00	0.02	0.00	1,436.05	1,436.05	0.05	0.02	1,443.73
Mobile	2.92	5.81	27.81	0.04	4.34	0.26	4.61	0.07	0.25	0.32	0.00	3,735.23	3,735.23	0.17	0.00	3,738.72
Waste						0.00	0.00		0.00	0.00	325.23	0.00	325.23	19.22	0.00	728.87

Water						0.00	0.00		0.00	0.00	0.00	227.19	227.19	0.83	0.02	251.85
Total	**24.50**	**6.37**	**53.18**	**0.05**	**4.34**	**0.26**	**7.89**	**0.07**	**0.25**	**3.60**	**632.02**	**5,788.10**	**6,420.12**	**20.56**	**0.07**	**6,874.66**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	21.55	0.28	25.20	0.01		0.00	3.26		0.00	3.26	306.79	389.63	696.42	0.29	0.03	711.49
Energy	0.03	0.28	0.17	0.00		0.00	0.02		0.00	0.02	0.00	1,436.05	1,436.05	0.05	0.02	1,443.73
Mobile	2.92	5.81	27.81	0.04	4.34	0.26	4.61	0.07	0.25	0.32	0.00	3,735.23	3,735.23	0.17	0.00	3,738.72
Waste						0.00	0.00		0.00	0.00	325.23	0.00	325.23	19.22	0.00	728.87
Water						0.00	0.00		0.00	0.00	0.00	227.19	227.19	0.83	0.02	251.85
Total	**24.50**	**6.37**	**53.18**	**0.05**	**4.34**	**0.26**	**7.89**	**0.07**	**0.25**	**3.60**	**632.02**	**5,788.10**	**6,420.12**	**20.56**	**0.07**	**6,874.66**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.14	0.86	0.66	0.00		0.07	0.07		0.07	0.07	0.00	86.00	86.00	0.01	0.00	86.24
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.14**	**0.86**	**0.66**	**0.00**		**0.07**	**0.07**		**0.07**	**0.07**	**0.00**	**86.00**	**86.00**	**0.01**	**0.00**	**86.24**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	3.97	3.97	0.00	0.00	3.97
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**3.97**	**3.97**	**0.00**	**0.00**	**3.97**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.08	0.50	0.62	0.00		0.05	0.05		0.05	0.05	0.00	86.00	86.00	0.01	0.00	86.24
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.08**	**0.50**	**0.62**	**0.00**		**0.05**	**0.05**		**0.05**	**0.05**	**0.00**	**86.00**	**86.00**	**0.01**	**0.00**	**86.24**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	3.97	3.97	0.00	0.00	3.97
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**3.97**	**3.97**	**0.00**	**0.00**	**3.97**

3.3 architectural coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.37					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.14	0.12	0.00		0.01	0.01		0.01	0.01	0.00	16.58	16.58	0.00	0.00	16.61
Total	**0.39**	**0.14**	**0.12**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**16.58**	**16.58**	**0.00**	**0.00**	**16.61**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.01	0.01	0.10	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	16.65	16.65	0.00	0.00	16.67
Total	**0.01**	**0.01**	**0.10**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**16.65**	**16.65**	**0.00**	**0.00**	**16.67**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.37					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.09	0.16	0.12	0.00		0.01	0.01		0.01	0.01	0.00	16.58	16.58	0.00	0.00	16.61
Total	**0.46**	**0.16**	**0.12**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**16.58**	**16.58**	**0.00**	**0.00**	**16.61**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.01	0.01	0.10	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	16.65	16.65	0.00	0.00	16.67
Total	**0.01**	**0.01**	**0.10**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**16.65**	**16.65**	**0.00**	**0.00**	**16.67**

3.3 architectural coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.37					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.13	0.12	0.00		0.01	0.01		0.01	0.01	0.00	16.58	16.58	0.00	0.00	16.61
Total	**0.39**	**0.13**	**0.12**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**16.58**	**16.58**	**0.00**	**0.00**	**16.61**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.01	0.01	0.09	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	16.29	16.29	0.00	0.00	16.31
Total	**0.01**	**0.01**	**0.09**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**16.29**	**16.29**	**0.00**	**0.00**	**16.31**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.37					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.09	0.16	0.12	0.00		0.01	0.01		0.01	0.01	0.00	16.58	16.58	0.00	0.00	16.61
Total	**0.46**	**0.16**	**0.12**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**16.58**	**16.58**	**0.00**	**0.00**	**16.61**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	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
Vendor	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
Worker	0.01	0.01	0.09	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	16.29	16.29	0.00	0.00	16.31
Total	**0.01**	**0.01**	**0.09**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**16.29**	**16.29**	**0.00**	**0.00**	**16.31**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.92	5.81	27.81	0.04	4.34	0.26	4.61	0.07	0.25	0.32	0.00	3,735.23	3,735.23	0.17	0.00	3,738.72
Unmitigated	2.92	5.81	27.81	0.04	4.34	0.26	4.61	0.07	0.25	0.32	0.00	3,735.23	3,735.23	0.17	0.00	3,738.72
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	3.34	3.34	3.34	8,235	8,235
Congregate Care (Assisted Living)	813.78	653.40	724.68	2,879,632	2,879,632
Place of Worship	2,123.09	2,416.73	8536.62	5,212,526	5,212,526
Strip Mall	110.80	105.10	51.08	161,917	161,917
Total	3,051.00	3,178.57	9,315.72	8,262,310	8,262,310

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
City Park	14.70	6.60	6.60	33.00	48.00	19.00
Congregate Care (Assisted Living)	16.80	7.10	7.90	41.60	18.80	39.60
Place of Worship	14.70	6.60	6.60	0.00	95.00	5.00

Strip Mall	14.70	6.60	6.60	16.60	64.40	19.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	1,122.07	1,122.07	0.04	0.02	1,127.84
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	1,122.07	1,122.07	0.04	0.02	1,127.84
NaturalGas Mitigated	0.03	0.28	0.17	0.00		0.00	0.02		0.00	0.02	0.00	313.98	313.98	0.01	0.01	315.89
NaturalGas Unmitigated	0.03	0.28	0.17	0.00		0.00	0.02		0.00	0.02	0.00	313.98	313.98	0.01	0.01	315.89
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
City Park	0	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
Congregate Care (Assisted Living)	3.13035e+006	0.02	0.14	0.06	0.00		0.00	0.01		0.00	0.01	0.00	167.05	167.05	0.00	0.00	168.06
Place of Worship	2.74766e+006	0.01	0.13	0.11	0.00		0.00	0.01		0.00	0.01	0.00	146.63	146.63	0.00	0.00	147.52
Strip Mall	5725	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.31	0.31	0.00	0.00	0.31
Total		**0.03**	**0.27**	**0.17**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**313.99**	**313.99**	**0.00**	**0.00**	**315.89**

Mitigated

Land Use	NaturalGas Use kBTU	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
		tons/yr										MT/yr					
City Park	0	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
Congregate Care (Assisted Living)	3.13035e+006	0.02	0.14	0.06	0.00		0.00	0.01		0.00	0.01	0.00	167.05	167.05	0.00	0.00	168.06
Place of Worship	2.74766e+006	0.01	0.13	0.11	0.00		0.00	0.01		0.00	0.01	0.00	146.63	146.63	0.00	0.00	147.52
Strip Mall	5725	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.31	0.31	0.00	0.00	0.31
Total		**0.03**	**0.27**	**0.17**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**313.99**	**313.99**	**0.00**	**0.00**	**315.89**

5.3 Energy by Land Use - Electricity

Unmitigated

Land Use	Electricity Use kWh	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
		tons/yr				MT/yr			
City Park	0					0.00	0.00	0.00	0.00
Congregate Care (Assisted Living)	1.0357e+006					366.80	0.01	0.01	368.69
Place of Worship	2.09745e+006					742.83	0.03	0.01	746.66
Strip Mall	35100					12.43	0.00	0.00	12.50
Total						**1,122.06**	**0.04**	**0.02**	**1,127.85**

Mitigated

Land Use	Electricity Use kWh	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
		tons/yr				MT/yr			
City Park	0					0.00	0.00	0.00	0.00
Congregate Care (Assisted Living)	1.0357e+006					366.80	0.01	0.01	368.69
Place of Worship	2.09745e+006					742.83	0.03	0.01	746.66

Strip Mall	35100					12.43	0.00	0.00	12.50
Total						**1,122.06**	**0.04**	**0.02**	**1,127.85**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	21.55	0.28	25.20	0.01		0.00	3.26		0.00	3.26	306.79	389.63	696.42	0.29	0.03	711.49
Unmitigated	21.55	0.28	25.20	0.01		0.00	3.26		0.00	3.26	306.79	389.63	696.42	0.29	0.03	711.49
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.74					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.08					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	18.66	0.25	22.96	0.01		0.00	3.24		0.00	3.24	306.79	385.99	692.78	0.29	0.03	707.77
Landscaping	0.07	0.03	2.25	0.00		0.00	0.01		0.00	0.01	0.00	3.64	3.64	0.00	0.00	3.72
Total	**21.55**	**0.28**	**25.21**	**0.01**		**0.00**	**3.25**		**0.00**	**3.25**	**306.79**	**389.63**	**696.42**	**0.29**	**0.03**	**711.49**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.74					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.08					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	18.66	0.25	22.96	0.01		0.00	3.24		0.00	3.24	306.79	385.99	692.78	0.29	0.03	707.77
Landscaping	0.07	0.03	2.25	0.00		0.00	0.01		0.00	0.01	0.00	3.64	3.64	0.00	0.00	3.72
Total	**21.55**	**0.28**	**25.21**	**0.01**		**0.00**	**3.25**		**0.00**	**3.25**	**306.79**	**389.63**	**696.42**	**0.29**	**0.03**	**711.49**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					227.19	0.83	0.02	251.85
Unmitigated					227.19	0.83	0.02	251.85
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 2.50211					9.85	0.00	0.00	9.90
Congregate Care (Assisted Living)	19.3507 / 12.1994					137.45	0.60	0.02	155.11
Place of Worship	7.29188 / 11.4052					78.58	0.23	0.01	85.37
Strip Mall	0.185181 / 0.113498					1.30	0.01	0.00	1.47
Total						**227.18**	**0.84**	**0.03**	**251.85**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
City Park	0 / 2.50211					9.85	0.00	0.00	9.90
Congregate Care (Assisted Living)	19.3507 / 12.1994					137.45	0.60	0.02	155.11
Place of Worship	7.29188 / 11.4052					78.58	0.23	0.01	85.37
Strip Mall	0.185181 / 0.113498					1.30	0.01	0.00	1.47
Total						**227.18**	**0.84**	**0.03**	**251.85**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			

Mitigated					325.23	19.22	0.00	728.87
Unmitigated					325.23	19.22	0.00	728.87
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	0.18					0.04	0.00	0.00	0.08
Congregate Care (Assisted Living)	271.01					55.01	3.25	0.00	123.29
Place of Worship	1328.39					269.65	15.94	0.00	604.31
Strip Mall	2.63					0.53	0.03	0.00	1.20
Total						**325.23**	**19.22**	**0.00**	**728.88**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
City Park	0.18					0.04	0.00	0.00	0.08
Congregate Care (Assisted Living)	271.01					55.01	3.25	0.00	123.29
Place of Worship	1328.39					269.65	15.94	0.00	604.31
Strip Mall	2.63					0.53	0.03	0.00	1.20
Total						**325.23**	**19.22**	**0.00**	**728.88**

9.0 Vegetation

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3) Road Construction Emissions Model Output – Off-Site Construction Emissions

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	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	
On-Site Emissions						
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	
Off-Road*	1,322.57	1,325.62	2,566.65	1,334.70	1,325.03	
Hauling	0.56	0.56	0.57	0.19	0.56	
Vendor	90.10	130.48	803.90	97.08	169.27	
Worker	148.74	277.78	1,136.57	275.56	306.91	
Paving	0.00	0.00	0.00	0.00	0.00	
Arch Coating	0.00	0.00	0.00	0.00	0.00	
Total On-Site Emissions	1,561.97	1,734.44	4,507.69	1,707.53	1,801.77	
Off-Site Emissions	29.00	0.00	0.00	0.00	0.00	
TOTAL EMISSIONS	1,590.97	1,734.44	4,507.69	1,707.53	1,801.77	**11,342.39**
Amortized Over 20 Years	79.55	86.72	225.38	85.38	90.09	**567.12**

*Off-Road emissions reduced by 33% due to outdated exhaust emission load factors

PHASE 1

Demolition 2014	
Fugitive Dust	0
Off-Road	11.83
Hauling	0.56
Vendor	0
Worker	0.59
Site Preparation 2014	
Fugitive Dust	0
Off-Road	67.21
Hauling	0
Vendor	0
Worker	3.41
Grading 2014	
Fugitive Dust	0
Off-Road	631.52
Hauling	0
Vendor	0
Worker	9.61
Grading 2015	
Fugitive Dust	0
Off-Road	734.77
Hauling	0
Vendor	0
Worker	10.93
Building Construction 2015	
Fugitive Dust	0
Off-Road	417.42
Hauling	0
Vendor	90.1
Worker	105.99
Paving 2015	
Off-Road	87.6
Paving	0
Hauling	0
Vendor	0
Worker	4.23
Architectural Coating 2015	
Arch Coating	0
Off-Road	33.5
Hauling	0
Vendor	0
Worker	13.98

PHASE 2

Demolition 2016	
Fugitive Dust	0
Off-Road	11.13
Hauling	0.56
Vendor	0
Worker	0.53
Site Preparation 2016	
Fugitive Dust	0
Off-Road	67.18
Hauling	0
Vendor	0
Worker	3.25
Grading 2016	
Fugitive Dust	0
Off-Road	1377.58
Hauling	0
Vendor	0
Worker	20
Building Construction 2016	
Fugitive Dust	0
Off-Road	137.7
Hauling	0
Vendor	43.46
Worker	74.75
Building Construction 2017	
Fugitive Dust	0
Off-Road	275.36
Hauling	0
Vendor	87.02
Worker	146.08
Paving 2016	
Off-Road	86.25
Paving	0
Hauling	0
Vendor	0
Worker	4.06
Architectural Coating 2016	
Arch Coating	0
Off-Road	0
Hauling	0
Vendor	0
Worker	0
Architectural Coating 2017	
Arch Coating	0
Off-Road	33.23
Hauling	0
Vendor	0
Worker	29.11

PHASE 3

Demolition 2017	
Fugitive Dust	0
Off-Road	10.43
Hauling	0.57
Vendor	0
Worker	0.49
Site Preparation 2017	
Fugitive Dust	0
Off-Road	67.17
Hauling	0
Vendor	0
Worker	3.18
Grading 2017	
Fugitive Dust	0
Off-Road	631.33
Hauling	0
Vendor	0
Worker	8.96
Grading 2018	
Fugitive Dust	0
Off-Road	746.06
Hauling	0
Vendor	0
Worker	10.35
Building Construction 2018	
Fugitive Dust	0
Off-Road	415.09
Hauling	0
Vendor	160.52
Worker	192.8
Building Construction 2019	
Fugitive Dust	0
Off-Road	552.68
Hauling	0
Vendor	213.99
Worker	251.5
Building Construction 2020	
Fugitive Dust	0
Off-Road	554.72
Hauling	0
Vendor	215.01
Worker	247.66
Building Construction 2021	
Fugitive Dust	0
Off-Road	552.54
Hauling	0
Vendor	214.38
Worker	244.64
Paving 2018	
Off-Road	86.22
Paving	0
Hauling	0
Vendor	0

PHASE 4

Demolition 2015	
Fugitive Dust	0
Off-Road	11.83
Hauling	0.19
Vendor	0
Worker	0.58
Site Preparation 2015	
Fugitive Dust	0
Off-Road	66.07
Hauling	0
Vendor	0
Worker	3.27
Grading 2015	
Fugitive Dust	0
Off-Road	1389.18
Hauling	0
Vendor	0
Worker	20.67
Building Construction 2016	
Fugitive Dust	0
Off-Road	415.23
Hauling	0
Vendor	97.08
Worker	218.05
Paving 2016	
Off-Road	86.25
Paving	0
Hauling	0
Vendor	0
Worker	4.06
Architectural Coating 2016	
Arch Coating	0
Off-Road	33.49
Hauling	0
Vendor	0
Worker	28.93

PHASE 5

Demolition 2016	
Fugitive Dust	0
Off-Road	10.44
Hauling	0.56
Vendor	0
Worker	0.5
Site Preparation 2016	
Fugitive Dust	0
Off-Road	55.98
Hauling	0
Vendor	0
Worker	2.71
Site Preparation 2017	
Fugitive Dust	0
Off-Road	11.19
Hauling	0
Vendor	0
Worker	0.53
Grading 2017	
Fugitive Dust	0
Off-Road	1377.45
Hauling	0
Vendor	0
Worker	19.54
Building Construction 2017	
Fugitive Dust	0
Off-Road	275.36
Hauling	0
Vendor	112.81
Worker	165.66
Building Construction 2018	
Fugitive Dust	0
Off-Road	137.66
Hauling	0
Vendor	56.46
Worker	81.02
Paving 2017	
Off-Road	86.24
Paving	0
Hauling	0
Vendor	0
Worker	3.97
Architectural Coating 2017	
Arch Coating	0
Off-Road	16.61
Hauling	0
Vendor	0
Worker	16.67
Architectural Coating 2018	
Arch Coating	0
Off-Road	16.61
Hauling	0
Vendor	0

				Worker	3.88			Worker	16.31
				Architectural Coating 2018					
				Arch Coating	0				
				Off-Road	33.47				
				Hauling	0				
				Vendor	0				
				Worker	25.56				
				Architectural Coating 2019					
				Arch Coating	0				
				Off-Road	66.68				
				Hauling	0				
				Vendor	0				
				Worker	49.89				
				Architectural Coating 2020					
				Arch Coating	0				
				Off-Road	66.92				
				Hauling	0				
				Vendor	0				
				Worker	49.13				
				Architectural Coating 2021					
				Arch Coating	0				
				Off-Road	66.66				
				Hauling	0				
				Vendor	0				
				Worker	48.53				
TOTAL		TOTAL		TOTAL		TOTAL		TOTAL	
Fugitive Dust	0	Fugitive Dust	0	Fugitive Dust	0	Fugitive Dust	0	Fugitive Dust	0
Off-Road	1983.9	Off-Road	1988.43	Off-Road	3850	Off-Road	2002.05	Off-Road	1987.54
Hauling	0.56	Hauling	0.56	Hauling	0.57	Hauling	0.19	Hauling	0.56
Vendor	90.1	Vendor	130.48	Vendor	803.9	Vendor	97.08	Vendor	169.27
Worker	148.74	Worker	277.78	Worker	1136.6	Worker	275.56	Worker	306.91
Paving	0	Paving	0	Paving	0	Paving	0	Paving	0
Arch Coating	0	Arch Coating	0	Arch Coating	0	Arch Coating	0	Arch Coating	0
TOTAL	2223.3	TOTAL	2397.25	TOTAL	5791	TOTAL	2374.88	TOTAL	2464.28

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4) Project with Design Features GHG missions Calculations

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AB32/2008 Scoping Plan Analysis

BAU Project

6153: Lilac Ranch - operational - GHG - BAU - 2020

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Office Park	28.5	1000sqft
Elementary School	568	Student
Junior High School	132	Student
User Defined Educational	10.7	User Defined Unit
User Defined Industrial	2.4	User Defined Unit
User Defined Industrial	0.6	User Defined Unit
City Park	23.8	Acre
Hotel	50	Room
User Defined Recreational	40	User Defined Unit
Apartments Low Rise	468	Dwelling Unit
Condo/Townhouse	375	Dwelling Unit
Congregate Care (Assisted Living)	200	Dwelling Unit
Single Family Housing	903	Dwelling Unit
Strip Mall	61.5	1000sqft

1.2 Other Project Characteristics

Urbanization Rural

Climate Zone 13

Wind Speed (m/s) 2.6

Precipitation Freq (Days)

Utility Company San Diego Gas & Electric

1.3 User Entered Comments

40

Project Characteristics - CO2 Intensity revised based on the percentage achieved under the Renewables Portfolio Standard per County Guidance and SMAQMD Methodology 12/8/14

Land Use - Per project plans

Off-road Equipment - Contruction calculated seperately

Trips and VMT - Construction Calculated Sperately

Vehicle Trips - Per traffic report, the project generates 19406.

Vechicle Emission Factors - BAU emissions from CalEEMod Appendix D

Vechicle Emission Factors - BAU emissions from CalEEMod Appendix D

Vechicle Emission Factors - BAU emissions from CalEEMod Appendix D

Woodstoves - The project would not include wood stoves, fireplace use reduced to 180 from default 246 days. No fireplaces in congregate care, all other fire places standard

Area Coating - SDAPCD Rule 67

Energy Use - Electric use for education and recreation based on general industrial/worship uses

Water And Wastewater - Based on WTR Report and Appendix D Table 9.1 Water Consumption Rates

Solid Waste - Based on Appendix D 10.1

Sequestration - Based on project plans

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - Reductions strategies based on CAPCOA Mitigation

Area Mitigation - 5% Electric landscaping equipment based on HOA area landscaping

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

2.0 Emissions Summary

2.1 Overall Construction

Calculated Seperately

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	124.62	1.39	133.46	0.00		0.00	16.47		0.00	16.47	1,450.61	1,684.22	3,134.83	0.06	0.16	3,185.10
Energy	0.37	3.19	1.58	0.02		0.00	0.26		0.00	0.26	0.00	9,535.73	9,535.73	0.29	0.15	9,588.25
Mobile	15.58	31.07	145.41	0.32	32.89	1.79	34.68	0.53	1.72	2.25	0.00	31,102.57	31,102.57	1.08	0.00	31,125.32
Waste						0.00	0.00		0.00	0.00	542.65	0.00	542.65	32.07	0.00	1,216.12
Water						0.00	0.00		0.00	0.00	0.00	2,208.06	2,208.06	11.18	0.31	2,537.72
Total	**140.57**	**35.65**	**280.45**	**0.34**	**32.89**	**1.79**	**51.41**	**0.53**	**1.72**	**18.98**	**1,993.26**	**44,530.58**	**46,523.84**	**44.68**	**0.62**	**47,652.51**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	124.62	1.39	133.46	0.00		0.00	16.47		0.00	16.47	1,450.61	1,684.22	3,134.83	0.06	0.16	3,185.10
Energy	0.37	3.19	1.58	0.02		0.00	0.26		0.00	0.26	0.00	9,535.73	9,535.73	0.29	0.15	9,588.25
Mobile	15.58	31.07	145.41	0.32	32.89	1.79	34.68	0.53	1.72	2.25	0.00	31,102.57	31,102.57	1.08	0.00	31,125.32
Waste						0.00	0.00		0.00	0.00	542.65	0.00	542.65	32.07	0.00	1,216.12
Water						0.00	0.00		0.00	0.00	0.00	2,208.06	2,208.06	11.18	0.31	2,537.72
Total	**140.57**	**35.65**	**280.45**	**0.34**	**32.89**	**1.79**	**51.41**	**0.53**	**1.72**	**18.98**	**1,993.26**	**44,530.58**	**46,523.84**	**44.68**	**0.62**	**47,652.51**

3.0 Construction Detail

Calculated Seperately

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	15.58	31.07	145.41	0.32	32.89	1.79	34.68	0.53	1.72	2.25	0.00	31,102.57	31,102.57	1.08	0.00	31,125.32
Unmitigated	15.58	31.07	145.41	0.32	32.89	1.79	34.68	0.53	1.72	2.25	0.00	31,102.57	31,102.57	1.08	0.00	31,125.32
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	3,084.12	3,350.88	2840.76	11,425,652	11,425,652
City Park	37.84	37.84	37.84	93,326	93,326
Condo/Townhouse	2,471.25	2,685.00	2276.25	9,155,170	9,155,170
Congregate Care (Assisted Living)	548.00	440.00	488.00	1,939,146	1,939,146
Elementary School	732.72	0.00	0.00	1,567,591	1,567,591
Hotel	408.50	409.50	297.50	789,173	789,173
Junior High School	213.84	0.00	0.00	481,818	481,818
Office Park	325.47	46.74	21.66	701,428	701,428
Single Family Housing	8,862.95	9,102.24	7919.31	32,426,391	32,426,391
Strip Mall	2,725.68	2,585.46	1256.45	3,983,152	3,983,152
User Defined Educational	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
User Defined Recreational	0.00	0.00	0.00		
Total	19,410.37	18,657.66	15,137.77	62,562,847	62,562,847

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Apartments Low Rise	16.80	7.10	7.90	41.60	18.80	39.60
City Park	14.70	6.60	6.60	33.00	48.00	19.00
Condo/Townhouse	16.80	7.10	7.90	41.60	18.80	39.60
Congregate Care (Assisted Living)	16.80	7.10	7.90	41.60	18.80	39.60
Elementary School	14.70	6.60	6.60	65.00	30.00	5.00
Hotel	14.70	6.60	6.60	19.40	61.60	19.00
Junior High School	14.70	6.60	6.60	72.80	22.20	5.00
Office Park	14.70	6.60	6.60	33.00	48.00	19.00
Single Family Housing	16.80	7.10	7.90	41.60	18.80	39.60
Strip Mall	14.70	6.60	6.60	16.60	64.40	19.00
User Defined Educational	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Recreational	14.70	6.60	6.60	0.00	0.00	0.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	5,879.34	5,879.34	0.22	0.08	5,909.60
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	5,879.34	5,879.34	0.22	0.08	5,909.60
NaturalGas Mitigated	0.37	3.19	1.58	0.02		0.00	0.26		0.00	0.26	0.00	3,656.40	3,656.40	0.07	0.07	3,678.65
NaturalGas Unmitigated	0.37	3.19	1.58	0.02		0.00	0.26		0.00	0.26	0.00	3,656.40	3,656.40	0.07	0.07	3,678.65

Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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	tons/yr										MT/yr					
Apartments Low Rise	8.31182e+006	0.04	0.38	0.16	0.00		0.00	0.03		0.00	0.03	0.00	443.55	443.55	0.01	0.01	446.25
City Park	0	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
Condo/Townhouse	9.20976e+006	0.05	0.42	0.18	0.00		0.00	0.03		0.00	0.03	0.00	491.47	491.47	0.01	0.01	494.46
Congregate Care (Assisted Living)	2.23673e+006	0.01	0.10	0.04	0.00		0.00	0.01		0.00	0.01	0.00	119.36	119.36	0.00	0.00	120.09
Elementary School	326709	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	17.43	17.43	0.00	0.00	17.54
Hotel	4.47143e+006	0.02	0.22	0.18	0.00		0.00	0.02		0.00	0.02	0.00	238.61	238.61	0.00	0.00	240.06
Junior High School	106765	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00	0.00	5.70	5.70	0.00	0.00	5.73
Office Park	1.0773e+006	0.01	0.05	0.04	0.00		0.00	0.00		0.00	0.00	0.00	57.49	57.49	0.00	0.00	57.84
Single Family Housing	3.76678e+007	0.20	1.74	0.74	0.01		0.00	0.14		0.00	0.14	0.00	2,010.10	2,010.10	0.04	0.04	2,022.33
Strip Mall	148215	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	7.91	7.91	0.00	0.00	7.96
User Defined Educational	2.86414e+006	0.02	0.14	0.12	0.00		0.00	0.01		0.00	0.01	0.00	152.84	152.84	0.00	0.00	153.77
User Defined Industrial	1.28485e+006	0.01	0.06	0.05	0.00		0.00	0.00		0.00	0.00	0.00	68.56	68.56	0.00	0.00	68.98
User Defined Industrial	321211	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	17.14	17.14	0.00	0.00	17.25
User Defined Recreational	491600	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	26.23	26.23	0.00	0.00	26.39
Total		**0.36**	**3.19**	**1.56**	**0.01**		**0.00**	**0.24**		**0.00**	**0.24**	**0.00**	**3,656.39**	**3,656.39**	**0.06**	**0.06**	**3,678.65**

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	tons/yr										MT/yr					
Apartments Low Rise	8.31182e+006	0.04	0.38	0.16	0.00		0.00	0.03		0.00	0.03	0.00	443.55	443.55	0.01	0.01	446.25

City Park	0	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
Condo/Townhouse	9.20976e+006	0.05	0.42	0.18	0.00		0.00	0.03		0.00	0.03	0.00	491.47	491.47	0.01	0.01	494.46
Congregate Care (Assisted Living)	2.23673e+006	0.01	0.10	0.04	0.00		0.00	0.01		0.00	0.01	0.00	119.36	119.36	0.00	0.00	120.09
Elementary School	326709	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	17.43	17.43	0.00	0.00	17.54
Hotel	4.47143e+006	0.02	0.22	0.18	0.00		0.00	0.02		0.00	0.02	0.00	238.61	238.61	0.00	0.00	240.06
Junior High School	106765	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00	0.00	5.70	5.70	0.00	0.00	5.73
Office Park	1.0773e+006	0.01	0.05	0.04	0.00		0.00	0.00		0.00	0.00	0.00	57.49	57.49	0.00	0.00	57.84
Single Family Housing	3.76678e+007	0.20	1.74	0.74	0.01		0.00	0.14		0.00	0.14	0.00	2,010.10	2,010.10	0.04	0.04	2,022.33
Strip Mall	148215	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	7.91	7.91	0.00	0.00	7.96
User Defined Educational	2.86414e+006	0.02	0.14	0.12	0.00		0.00	0.01		0.00	0.01	0.00	152.84	152.84	0.00	0.00	153.77
User Defined Industrial	1.28485e+006	0.01	0.06	0.05	0.00		0.00	0.00		0.00	0.00	0.00	68.56	68.56	0.00	0.00	68.98
User Defined Industrial	321211	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	17.14	17.14	0.00	0.00	17.25
User Defined Recreational	491600	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	26.23	26.23	0.00	0.00	26.39
Total		**0.36**	**3.19**	**1.56**	**0.01**		**0.00**	**0.24**		**0.00**	**0.24**	**0.00**	**3,656.39**	**3,656.39**	**0.06**	**0.06**	**3,678.65**

5.3 Energy by Land Use - Electricity

<u>Unmitigated</u>

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Low Rise	1.67116e+006					591.86	0.02	0.01	594.91
City Park	0					0.00	0.00	0.00	0.00
Condo/Townhouse	1.56726e+006					555.06	0.02	0.01	557.92
Congregate Care (Assisted Living)	711642					252.04	0.01	0.00	253.33
Elementary School	301541					106.79	0.00	0.00	107.34
Hotel	1.11731e+006					395.71	0.01	0.01	397.75
Junior High School	98540.2					34.90	0.00	0.00	35.08
Office Park	526110					186.33	0.01	0.00	187.29
Single Family Housing	5.91067e+006					2,093.32	0.08	0.03	2,104.10

Strip Mall	909585					322.14	0.01	0.00	323.80
User Defined Educational	2.18597e+006					774.18	0.03	0.01	778.17
User Defined Industrial	245156					86.82	0.00	0.00	87.27
User Defined Industrial	980623					347.30	0.01	0.00	349.09
User Defined Recreational	375200					132.88	0.00	0.00	133.56
Total						**5,879.33**	**0.20**	**0.07**	**5,909.61**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Low Rise	1.67116e+006					591.86	0.02	0.01	594.91
City Park	0					0.00	0.00	0.00	0.00
Condo/Townhouse	1.56726e+006					555.06	0.02	0.01	557.92
Congregate Care (Assisted Living)	711642					252.04	0.01	0.00	253.33
Elementary School	301541					106.79	0.00	0.00	107.34
Hotel	1.11731e+006					395.71	0.01	0.01	397.75
Junior High School	98540.2					34.90	0.00	0.00	35.08
Office Park	526110					186.33	0.01	0.00	187.29
Single Family Housing	5.91067e+006					2,093.32	0.08	0.03	2,104.10
Strip Mall	909585					322.14	0.01	0.00	323.80
User Defined Educational	2.18597e+006					774.18	0.03	0.01	778.17
User Defined Industrial	245156					86.82	0.00	0.00	87.27
User Defined Industrial	980623					347.30	0.01	0.00	349.09
User Defined Recreational	375200					132.88	0.00	0.00	133.56
Total						**5,879.33**	**0.20**	**0.07**	**5,909.61**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	124.62	1.39	133.46	0.00		0.00	16.47		0.00	16.47	1,450.61	1,684.22	3,134.83	0.06	0.16	3,185.10
Unmitigated	124.62	1.39	133.46	0.00		0.00	16.47		0.00	16.47	1,450.61	1,684.22	3,134.83	0.06	0.16	3,185.10
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.43					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	12.88					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	107.87	1.22	118.81	0.00		0.00	16.39		0.00	16.39	1,450.61	1,660.35	3,110.96	0.03	0.16	3,160.74
Landscaping	0.45	0.17	14.66	0.00		0.00	0.08		0.00	0.08	0.00	23.87	23.87	0.02	0.00	24.36
Total	**124.63**	**1.39**	**133.47**	**0.00**		**0.00**	**16.47**		**0.00**	**16.47**	**1,450.61**	**1,684.22**	**3,134.83**	**0.05**	**0.16**	**3,185.10**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

SubCategory	tons/yr										MT/yr					
Architectural Coating	3.43					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	12.88					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	107.87	1.22	118.81	0.00		0.00	16.39		0.00	16.39	1,450.61	1,660.35	3,110.96	0.03	0.16	3,160.74
Landscaping	0.45	0.17	14.66	0.00		0.00	0.08		0.00	0.08	0.00	23.87	23.87	0.02	0.00	24.36
Total	**124.63**	**1.39**	**133.47**	**0.00**		**0.00**	**16.47**		**0.00**	**16.47**	**1,450.61**	**1,684.22**	**3,134.83**	**0.05**	**0.16**	**3,185.10**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					2,208.06	11.18	0.31	2,537.72
Unmitigated					2,208.06	11.18	0.31	2,537.72
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Low Rise	30.4921 / 19.2233					216.60	0.94	0.03	244.41
City Park	0 / 28.3573					111.58	0.00	0.00	112.15

Condo/Townhouse	24.4328 / 15.4033					173.55	0.75	0.02	195.84
Congregate Care (Assisted Living)	13.0308 / 8.21507					92.56	0.40	0.01	104.45
Elementary School	1.37697 / 3.54078					20.30	0.04	0.00	21.61
Hotel	1.26834 / 0.140927					6.42	0.04	0.00	7.56
Junior High School	0.32 / 0.822856					4.72	0.01	0.00	5.02
Office Park	5.06541 / 3.10461					35.63	0.16	0.00	40.25
Single Family Housing	58.8341 / 37.0911					417.92	1.81	0.05	471.59
Strip Mall	4.55546 / 2.79206					32.04	0.14	0.00	36.20
User Defined Educational	6.97887 / 10.9157					75.21	0.22	0.01	81.71
User Defined Industrial	88.6432 / 4.4968					427.47	2.72	0.07	507.29
User Defined Recreational	128.509 / 0					594.06	3.94	0.11	709.65
Total						**2,208.06**	**11.17**	**0.30**	**2,537.73**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Low Rise	30.4921 / 19.2233					216.60	0.94	0.03	244.41
City Park	0 / 28.3573					111.58	0.00	0.00	112.15
Condo/Townhouse	24.4328 / 15.4033					173.55	0.75	0.02	195.84
Congregate Care (Assisted Living)	13.0308 / 8.21507					92.56	0.40	0.01	104.45
Elementary School	1.37697 / 3.54078					20.30	0.04	0.00	21.61
Hotel	1.26834 / 0.140927					6.42	0.04	0.00	7.56
Junior High School	0.32 / 0.822856					4.72	0.01	0.00	5.02
Office Park	5.06541 / 3.10461					35.63	0.16	0.00	40.25
Single Family Housing	58.8341 / 37.0911					417.92	1.81	0.05	471.59
Strip Mall	4.55546 / 2.79206					32.04	0.14	0.00	36.20
User Defined Educational	6.97887 / 10.9157					75.21	0.22	0.01	81.71

User Defined Industrial	88.6432 / 4.4968					427.47	2.72	0.07	507.29
User Defined Recreational	128.509 / 0					594.06	3.94	0.11	709.65
Total						**2,208.06**	**11.17**	**0.30**	**2,537.73**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					542.65	32.07	0.00	1,216.12
Unmitigated					542.65	32.07	0.00	1,216.12
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Low Rise	215.28					43.70	2.58	0.00	97.93
City Park	2.05					0.42	0.02	0.00	0.93
Condo/Townhouse	172.5					35.02	2.07	0.00	78.47
Congregate Care (Assisted Living)	182.5					37.05	2.19	0.00	83.02
Elementary School	103.66					21.04	1.24	0.00	47.16

Hotel	27.38					5.56	0.33	0.00	12.46
Junior High School	24.09					4.89	0.29	0.00	10.96
Office Park	26.51					5.38	0.32	0.00	12.06
Single Family Housing	1059.03					214.97	12.70	0.00	481.77
Strip Mall	64.58					13.11	0.77	0.00	29.38
User Defined Educational	160.6					32.60	1.93	0.00	73.06
User Defined Industrial	508.1					103.14	6.10	0.00	231.14
User Defined Recreational	127					25.78	1.52	0.00	57.77
Total						**542.66**	**32.06**	**0.00**	**1,216.11**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Low Rise	215.28					43.70	2.58	0.00	97.93
City Park	2.05					0.42	0.02	0.00	0.93
Condo/Townhouse	172.5					35.02	2.07	0.00	78.47
Congregate Care (Assisted Living)	182.5					37.05	2.19	0.00	83.02
Elementary School	103.66					21.04	1.24	0.00	47.16
Hotel	27.38					5.56	0.33	0.00	12.46
Junior High School	24.09					4.89	0.29	0.00	10.96
Office Park	26.51					5.38	0.32	0.00	12.06
Single Family Housing	1059.03					214.97	12.70	0.00	481.77
Strip Mall	64.58					13.11	0.77	0.00	29.38
User Defined Educational	160.6					32.60	1.93	0.00	73.06
User Defined Industrial	508.1					103.14	6.10	0.00	231.14
User Defined Recreational	127					25.78	1.52	0.00	57.77
Total						**542.66**	**32.06**	**0.00**	**1,216.11**

9.0 Vegetation

Proposed Project 2020

6153: Lilac Ranch - operational - SDC - AB32 - Proposed - 2020

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Office Park	28.5	1000sqft
Elementary School	568	Student
Junior High School	132	Student
User Defined Educational	10.7	User Defined Unit
User Defined Industrial	2.4	User Defined Unit
User Defined Industrial	0.6	User Defined Unit
City Park	23.8	Acre
Hotel	50	Room
User Defined Recreational	40	User Defined Unit
Apartments Low Rise	468	Dwelling Unit
Condo/Townhouse	375	Dwelling Unit
Congregate Care (Assisted Living)	200	Dwelling Unit
Single Family Housing	903	Dwelling Unit
Strip Mall	61.5	1000sqft

1.2 Other Project Characteristics

Urbanization Rural

Climate Zone 13

Wind Speed (m/s) 2.6

Precipitation Freq (Days)

Utility Company San Diego Gas & Electric

1.3 User Entered Comments

40

Land Use - Per project plans

Off-road Equipment - Contruction calculated seperately

Trips and VMT - Construction Calculated Sperately

Vehicle Trips - Per traffic report, the project generates 19406.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - The project would not include wood stoves, fireplace use reduced to 180 from default 246 days. No fireplaces in congregate care, all other fire places standard.

Area Coating - SDAPCD Rule 67

Energy Use - Electric use for education and recreation based on general industrial/worship uses

Water And Wastewater - Based on WTR Report and Appendix D Table 9.1 Water Consumption Rates

Solid Waste - Based on Appendix D 10.1

Sequestration - Based on project plans

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - Reductions strategies based on CAPCOA Mitigation

Area Mitigation - 5% Electric landscaping equipment based on HOA area landscaping

Energy Mitigation -

2.0 Emissions Summary

2.1 Overall Construction

Construction Calculated Separately

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	124.62	1.39	133.46	0.00		0.00	16.47		0.00	16.47	1,450.61	1,684.22	3,134.83	0.06	0.16	3,185.10
Energy	0.34	2.97	1.48	0.02		0.00	0.24		0.00	0.24	0.00	9,106.15	9,106.15	0.28	0.14	9,156.21
Mobile	15.58	31.07	145.41	0.32	32.89	1.79	34.68	0.53	1.72	2.25	0.00	24,382.19	24,382.19	1.08	0.00	24,404.94
Waste						0.00	0.00		0.00	0.00	542.65	0.00	542.65	32.07	0.00	1,216.12
Water						0.00	0.00		0.00	0.00	0.00	2,208.06	2,208.06	11.18	0.31	2,537.72
Total	**140.54**	**35.43**	**280.35**	**0.34**	**32.89**	**1.79**	**51.39**	**0.53**	**1.72**	**18.96**	**1,993.26**	**37,380.62**	**39,373.88**	**44.67**	**0.61**	**40,500.09**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	16.06	0.17	14.50	0.00		0.00	0.27		0.00	0.27	0.00	2,740.45	2,740.45	0.07	0.05	2,757.46
Energy	0.26	2.25	1.13	0.01		0.00	0.18		0.00	0.18	0.00	6,484.04	6,484.04	0.19	0.10	6,519.83
Mobile	14.92	29.62	138.49	0.30	30.93	1.68	32.62	0.49	1.62	2.12	0.00	22,967.53	22,967.53	1.02	0.00	22,989.05
Waste						0.00	0.00		0.00	0.00	434.12	0.00	434.12	25.66	0.00	972.89
Water						0.00	0.00		0.00	0.00	0.00	1,766.45	1,766.45	8.94	0.24	2,030.18
Total	**31.24**	**32.04**	**154.12**	**0.31**	**30.93**	**1.68**	**33.07**	**0.49**	**1.62**	**2.57**	**434.12**	**33,958.47**	**34,392.59**	**35.88**	**0.39**	**35,269.41**

3.0 Construction Detail

Construction Calculated Separately

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

Increase Diversity

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	14.92	29.62	138.49	0.30	30.93	1.68	32.62	0.49	1.62	2.12	0.00	22,967.53	22,967.53	1.02	0.00	22,989.05
Unmitigated	15.58	31.07	145.41	0.32	32.89	1.79	34.68	0.53	1.72	2.25	0.00	24,382.19	24,382.19	1.08	0.00	24,404.94
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	3,084.12	3,350.88	2840.76	11,425,652	10,745,826
City Park	37.84	37.84	37.84	93,326	87,773
Condo/Townhouse	2,471.25	2,685.00	2276.25	9,155,170	8,610,437
Congregate Care (Assisted Living)	548.00	440.00	488.00	1,939,146	1,823,767
Elementary School	732.72	0.00	0.00	1,567,591	1,474,319
Hotel	408.50	409.50	297.50	789,173	742,217
Junior High School	213.84	0.00	0.00	481,818	453,149
Office Park	325.47	46.74	21.66	701,428	659,693
Single Family Housing	8,862.95	9,102.24	7919.31	32,426,391	30,497,021
Strip Mall	2,725.68	2,585.46	1256.45	3,983,152	3,746,154
User Defined Educational	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
User Defined Recreational	0.00	0.00	0.00		
Total	19,410.37	18,657.66	15,137.77	62,562,847	58,840,358

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Apartments Low Rise	16.80	7.10	7.90	41.60	18.80	39.60
City Park	14.70	6.60	6.60	33.00	48.00	19.00
Condo/Townhouse	16.80	7.10	7.90	41.60	18.80	39.60
Congregate Care (Assisted Living)	16.80	7.10	7.90	41.60	18.80	39.60
Elementary School	14.70	6.60	6.60	65.00	30.00	5.00
Hotel	14.70	6.60	6.60	19.40	61.60	19.00
Junior High School	14.70	6.60	6.60	72.80	22.20	5.00
Office Park	14.70	6.60	6.60	33.00	48.00	19.00
Single Family Housing	16.80	7.10	7.90	41.60	18.80	39.60
Strip Mall	14.70	6.60	6.60	16.60	64.40	19.00
User Defined Educational	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Recreational	14.70	6.60	6.60	0.00	0.00	0.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Kilowatt Hours of Renewable Electricity Generated

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	3,906.99	3,906.99	0.15	0.06	3,927.10
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	5,707.38	5,707.38	0.21	0.08	5,736.76
NaturalGas Mitigated	0.26	2.25	1.13	0.01		0.00	0.18		0.00	0.18	0.00	2,577.05	2,577.05	0.05	0.05	2,592.74
NaturalGas Unmitigated	0.34	2.97	1.48	0.02		0.00	0.24		0.00	0.24	0.00	3,398.77	3,398.77	0.07	0.06	3,419.45
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
Apartments Low Rise	7.8208e+006	0.04	0.36	0.15	0.00		0.00	0.03		0.00	0.03	0.00	417.35	417.35	0.01	0.01	419.89
City Park	0	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
Condo/Townhouse	8.65382e+006	0.05	0.40	0.17	0.00		0.00	0.03		0.00	0.03	0.00	461.80	461.80	0.01	0.01	464.61
Congregate Care (Assisted Living)	2.10798e+006	0.01	0.10	0.04	0.00		0.00	0.01		0.00	0.01	0.00	112.49	112.49	0.00	0.00	113.17

Elementary School	294418	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	15.71	15.71	0.00	0.00	15.81
Hotel	4.41771e+006	0.02	0.22	0.18	0.00		0.00	0.02		0.00	0.02	0.00	235.75	235.75	0.00	0.00	237.18
Junior High School	96212.5	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	5.13	5.13	0.00	0.00	5.17
Office Park	959880	0.01	0.05	0.04	0.00		0.00	0.00		0.00	0.00	0.00	51.22	51.22	0.00	0.00	51.53
Single Family Housing	3.44389e+007	0.19	1.59	0.68	0.01		0.00	0.13		0.00	0.13	0.00	1,837.79	1,837.79	0.04	0.03	1,848.98
Strip Mall	140835	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	7.52	7.52	0.00	0.00	7.56
User Defined Educational	2.74761e+006	0.01	0.13	0.11	0.00		0.00	0.01		0.00	0.01	0.00	146.62	146.62	0.00	0.00	147.52
User Defined Industrial	1.23257e+006	0.01	0.06	0.05	0.00		0.00	0.00		0.00	0.00	0.00	65.77	65.77	0.00	0.00	66.18
User Defined Industrial	308143	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	16.44	16.44	0.00	0.00	16.54
User Defined Recreational	471600	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	25.17	25.17	0.00	0.00	25.32
Total		**0.34**	**2.97**	**1.47**	**0.01**		**0.00**	**0.23**		**0.00**	**0.23**	**0.00**	**3,398.76**	**3,398.76**	**0.06**	**0.05**	**3,419.46**

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	tons/yr										MT/yr					
Apartments Low Rise	5.86377e+006	0.03	0.27	0.11	0.00		0.00	0.02		0.00	0.02	0.00	312.91	312.91	0.01	0.01	314.82
City Park	0	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
Condo/Townhouse	6.43804e+006	0.03	0.30	0.13	0.00		0.00	0.02		0.00	0.02	0.00	343.56	343.56	0.01	0.01	345.65
Congregate Care (Assisted Living)	1.59482e+006	0.01	0.07	0.03	0.00		0.00	0.01		0.00	0.01	0.00	85.11	85.11	0.00	0.00	85.62
Elementary School	212930	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	11.36	11.36	0.00	0.00	11.43
Hotel	3.33416e+006	0.02	0.16	0.14	0.00		0.00	0.01		0.00	0.01	0.00	177.92	177.92	0.00	0.00	179.01
Junior High School	69583.3	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	3.71	3.71	0.00	0.00	3.74
Office Park	729030	0.00	0.04	0.03	0.00		0.00	0.00		0.00	0.00	0.00	38.90	38.90	0.00	0.00	39.14
Single Family Housing	2.57211e+007	0.14	1.19	0.50	0.01		0.00	0.10		0.00	0.10	0.00	1,372.57	1,372.57	0.03	0.03	1,380.93
Strip Mall	118695	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00	0.00	6.33	6.33	0.00	0.00	6.37
User Defined Educational	2.4302e+006	0.01	0.12	0.10	0.00		0.00	0.01		0.00	0.01	0.00	129.68	129.68	0.00	0.00	130.47
User Defined Industrial	1.09018e+006	0.01	0.05	0.04	0.00		0.00	0.00		0.00	0.00	0.00	58.18	58.18	0.00	0.00	58.53

User Defined Industrial	272546	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	14.54	14.54	0.00	0.00	14.63
User Defined Recreational	417120	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	22.26	22.26	0.00	0.00	22.39
Total		**0.25**	**2.25**	**1.12**	**0.01**		**0.00**	**0.17**		**0.00**	**0.17**	**0.00**	**2,577.03**	**2,577.03**	**0.05**	**0.05**	**2,592.73**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Low Rise	1.64392e+006					582.21	0.02	0.01	585.21
City Park	0					0.00	0.00	0.00	0.00
Condo/Townhouse	1.55099e+006					549.30	0.02	0.01	552.13
Congregate Care (Assisted Living)	697442					247.01	0.01	0.00	248.28
Elementary School	283021					100.23	0.00	0.00	100.75
Hotel	1.05923e+006					375.14	0.01	0.01	377.07
Junior High School	92488.1					32.76	0.00	0.00	32.92
Office Park	501600					177.65	0.01	0.00	178.56
Single Family Housing	5.78955e+006					2,050.43	0.08	0.03	2,060.98
Strip Mall	863460					305.80	0.01	0.00	307.38
User Defined Educational	2.09741e+006					742.82	0.03	0.01	746.64
User Defined Industrial	235224					83.31	0.00	0.00	83.74
User Defined Industrial	940896					333.23	0.01	0.00	334.94
User Defined Recreational	360000					127.50	0.00	0.00	128.15
Total						**5,707.39**	**0.20**	**0.07**	**5,736.75**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e

Land Use	kWh	tons/yr				MT/yr			
Apartments Low Rise	1.24763e+006					441.86	0.02	0.01	444.13
City Park	-242857					-86.01	0.00	0.00	-86.45
Condo/Townhouse	1.17571e+006					416.39	0.02	0.01	418.53
Congregate Care (Assisted Living)	413050					146.29	0.01	0.00	147.04
Elementary School	-7133.11					-2.53	0.00	0.00	-2.54
Hotel	633860					224.49	0.01	0.00	225.64
Junior High School	-165825					-58.73	0.00	0.00	-59.03
Office Park	178587					63.25	0.00	0.00	63.57
Single Family Housing	5.02828e+006					1,780.82	0.07	0.03	1,789.98
Strip Mall	484350					171.54	0.01	0.00	172.42
User Defined Educational	1.63747e+006					579.93	0.02	0.01	582.91
User Defined Industrial	-31978.8					-11.33	0.00	0.00	-11.38
User Defined Industrial	600656					212.73	0.01	0.00	213.82
User Defined Recreational	79882.9					28.29	0.00	0.00	28.44
Total						**3,906.99**	**0.17**	**0.06**	**3,927.08**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

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
	tons/yr										MT/yr					
Mitigated	16.06	0.17	14.50	0.00		0.00	0.27		0.00	0.27	0.00	2,740.45	2,740.45	0.07	0.05	2,757.46
Unmitigated	124.62	1.39	133.46	0.00		0.00	16.47		0.00	16.47	1,450.61	1,684.22	3,134.83	0.06	0.16	3,185.10
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Architectural Coating	3.43					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	12.88					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	107.87	1.22	118.81	0.00		0.00	16.39		0.00	16.39	1,450.61	1,660.35	3,110.96	0.03	0.16	3,160.74
Landscaping	0.45	0.17	14.66	0.00		0.00	0.08		0.00	0.08	0.00	23.87	23.87	0.02	0.00	24.36
Total	**124.63**	**1.39**	**133.47**	**0.00**		**0.00**	**16.47**		**0.00**	**16.47**	**1,450.61**	**1,684.22**	**3,134.83**	**0.05**	**0.16**	**3,185.10**

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Architectural Coating	3.43					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	11.92					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hearth	0.27	0.00	0.01	0.00		0.00	0.19		0.00	0.19	0.00	2,716.93	2,716.93	0.05	0.05	2,733.47
Landscaping	0.44	0.17	14.48	0.00		0.00	0.08		0.00	0.08	0.00	23.52	23.52	0.02	0.00	23.99
Total	**16.06**	**0.17**	**14.49**	**0.00**		**0.00**	**0.27**		**0.00**	**0.27**	**0.00**	**2,740.45**	**2,740.45**	**0.07**	**0.05**	**2,757.46**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					1,766.45	8.94	0.24	2,030.18
Unmitigated					2,208.06	11.18	0.31	2,537.72
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Low Rise	30.4921 / 19.2233					216.60	0.94	0.03	244.41
City Park	0 / 28.3573					111.58	0.00	0.00	112.15
Condo/Townhouse	24.4328 / 15.4033					173.55	0.75	0.02	195.84
Congregate Care (Assisted Living)	13.0308 / 8.21507					92.56	0.40	0.01	104.45
Elementary School	1.37697 / 3.54078					20.30	0.04	0.00	21.61

Hotel	1.26834 / 0.140927					6.42	0.04	0.00	7.56
Junior High School	0.32 / 0.822856					4.72	0.01	0.00	5.02
Office Park	5.06541 / 3.10461					35.63	0.16	0.00	40.25
Single Family Housing	58.8341 / 37.0911					417.92	1.81	0.05	471.59
Strip Mall	4.55546 / 2.79206					32.04	0.14	0.00	36.20
User Defined Educational	6.97887 / 10.9157					75.21	0.22	0.01	81.71
User Defined Industrial	88.6432 / 4.4968					427.47	2.72	0.07	507.29
User Defined Recreational	128.509 / 0					594.06	3.94	0.11	709.65
Total						**2,208.06**	**11.17**	**0.30**	**2,537.73**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Low Rise	24.3937 / 15.3786					173.28	0.75	0.02	195.53
City Park	0 / 22.6858					89.26	0.00	0.00	89.72
Condo/Townhouse	19.5462 / 12.3226					138.84	0.60	0.02	156.67
Congregate Care (Assisted Living)	10.4246 / 6.57206					74.05	0.32	0.01	83.56
Elementary School	1.10157 / 2.83262					16.24	0.03	0.00	17.29
Hotel	1.01467 / 0.112741					5.13	0.03	0.00	6.05
Junior High School	0.256 / 0.658285					3.77	0.01	0.00	4.02
Office Park	4.05233 / 2.48369					28.51	0.12	0.00	32.20
Single Family Housing	47.0673 / 29.6728					334.33	1.45	0.04	377.27
Strip Mall	3.64437 / 2.23364					25.64	0.11	0.00	28.96
User Defined Educational	5.58309 / 8.73253					60.17	0.17	0.01	65.37
User Defined Industrial	70.9145 / 3.59744					341.97	2.18	0.06	405.83
User Defined Recreational	102.807 / 0					475.25	3.16	0.08	567.72
Total						**1,766.44**	**8.93**	**0.24**	**2,030.19**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					434.12	25.66	0.00	972.89
Unmitigated					542.65	32.07	0.00	1,216.12
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Low Rise	215.28					43.70	2.58	0.00	97.93
City Park	2.05					0.42	0.02	0.00	0.93
Condo/Townhouse	172.5					35.02	2.07	0.00	78.47
Congregate Care (Assisted Living)	182.5					37.05	2.19	0.00	83.02
Elementary School	103.66					21.04	1.24	0.00	47.16
Hotel	27.38					5.56	0.33	0.00	12.46
Junior High School	24.09					4.89	0.29	0.00	10.96
Office Park	26.51					5.38	0.32	0.00	12.06

Single Family Housing	1059.03					214.97	12.70	0.00	481.77
Strip Mall	64.58					13.11	0.77	0.00	29.38
User Defined Educational	160.6					32.60	1.93	0.00	73.06
User Defined Industrial	508.1					103.14	6.10	0.00	231.14
User Defined Recreational	127					25.78	1.52	0.00	57.77
Total						**542.66**	**32.06**	**0.00**	**1,216.11**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Low Rise	172.224					34.96	2.07	0.00	78.35
City Park	1.64					0.33	0.02	0.00	0.75
Condo/Townhouse	138					28.01	1.66	0.00	62.78
Congregate Care (Assisted Living)	146					29.64	1.75	0.00	66.42
Elementary School	82.928					16.83	0.99	0.00	37.73
Hotel	21.904					4.45	0.26	0.00	9.96
Junior High School	19.272					3.91	0.23	0.00	8.77
Office Park	21.208					4.31	0.25	0.00	9.65
Single Family Housing	847.224					171.98	10.16	0.00	385.42
Strip Mall	51.664					10.49	0.62	0.00	23.50
User Defined Educational	128.48					26.08	1.54	0.00	58.45
User Defined Industrial	406.48					82.51	4.88	0.00	184.91
User Defined Recreational	101.6					20.62	1.22	0.00	46.22
Total						**434.12**	**25.65**	**0.00**	**972.91**

9.0 Vegetation

Proposed Project 2025/2030

6153: Lilac Ranch - operational - AB32 - Proposed - 2030

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Office Park	28.5	1000sqft
Elementary School	568	Student
Junior High School	132	Student
User Defined Educational	10.7	User Defined Unit
User Defined Industrial	2.4	User Defined Unit
User Defined Industrial	0.6	User Defined Unit
City Park	23.8	Acre
Hotel	50	Room
User Defined Recreational	40	User Defined Unit
Apartments Low Rise	468	Dwelling Unit
Condo/Townhouse	375	Dwelling Unit
Congregate Care (Assisted Living)	200	Dwelling Unit
Single Family Housing	903	Dwelling Unit
Strip Mall	61.5	1000sqft

1.2 Other Project Characteristics

Urbanization Rural

Climate Zone 13

Wind Speed (m/s) 2.6

Precipitation Freq (Days)

Utility Company San Diego Gas & Electric

1.3 User Entered Comments

40

Project Characteristics -

Land Use - Per project plans

Off-road Equipment - Contruction calculated seperately

Trips and VMT - Construction Calculated Sperately

Vehicle Trips - Per traffic report, the project generates 19406.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - The project would not include wood stoves, fireplace use reduced to 180 from default 246 days. No fireplaces in congregate care, all other fire places standard

Area Coating - SDAPCD Rule 67

Energy Use - Electric use for education and recreation based on general industrial/worship uses

Water And Wastewater - Based on WTR Report and Appendix D Table 9.1 Water Consumption Rates

Solid Waste - Based on Appendix D 10.1

Sequestration - Based on project plans

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - Reductions strategies based on CAPCOA Mitigation

Area Mitigation - 5% Electric landscaping equipment based on HOA area landscaping

Energy Mitigation -

Construction Phase - Construction calculated seperately

Waste Mitigation -

2.0 Emissions Summary

2.1 Overall Construction

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Area	124.61	1.39	133.37	0.00		0.00	16.47		0.00	16.47	1,450.61	1,684.22	3,134.83	0.05	0.16	3,185.09
Energy	0.34	2.97	1.48	0.02		0.00	0.24		0.00	0.24	0.00	9,106.15	9,106.15	0.28	0.14	9,156.21
Mobile	11.60	20.75	99.92	0.32	32.88	1.66	34.53	0.52	1.60	2.12	0.00	22,205.02	22,205.02	0.80	0.00	22,221.91
Waste						0.00	0.00		0.00	0.00	542.65	0.00	542.65	32.07	0.00	1,216.12
Water						0.00	0.00		0.00	0.00	0.00	2,208.06	2,208.06	11.18	0.31	2,537.72
Total	**136.55**	**25.11**	**234.77**	**0.34**	**32.88**	**1.66**	**51.24**	**0.52**	**1.60**	**18.83**	**1,993.26**	**35,203.45**	**37,196.71**	**44.38**	**0.61**	**38,317.05**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	16.05	0.17	14.41	0.00		0.00	0.27		0.00	0.27	0.00	2,740.45	2,740.45	0.07	0.05	2,757.45
Energy	0.26	2.25	1.13	0.01		0.00	0.18		0.00	0.18	0.00	6,484.04	6,484.04	0.19	0.10	6,519.83
Mobile	11.10	19.84	95.06	0.30	30.92	1.56	32.48	0.49	1.51	2.00	0.00	20,916.58	20,916.58	0.76	0.00	20,932.57
Waste						0.00	0.00		0.00	0.00	135.66	0.00	135.66	8.02	0.00	304.03
Water						0.00	0.00		0.00	0.00	0.00	1,766.45	1,766.45	8.94	0.24	2,030.18
Total	**27.41**	**22.26**	**110.60**	**0.31**	**30.92**	**1.56**	**32.93**	**0.49**	**1.51**	**2.45**	**135.66**	**31,907.52**	**32,043.18**	**17.98**	**0.39**	**32,544.06**

3.0 Construction Detail

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

Increase Diversity

Improve Pedestrian Network

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
	tons/yr										MT/yr					
Mitigated	11.10	19.84	95.06	0.30	30.92	1.56	32.48	0.49	1.51	2.00	0.00	20,916.58	20,916.58	0.76	0.00	20,932.57
Unmitigated	11.60	20.75	99.92	0.32	32.88	1.66	34.53	0.52	1.60	2.12	0.00	22,205.02	22,205.02	0.80	0.00	22,221.91
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	3,084.12	3,350.88	2840.76	11,425,652	10,745,826
City Park	37.84	37.84	37.84	93,326	87,773
Condo/Townhouse	2,471.25	2,685.00	2276.25	9,155,170	8,610,437
Congregate Care (Assisted Living)	548.00	440.00	488.00	1,939,146	1,823,767
Elementary School	732.72	0.00	0.00	1,567,591	1,474,319
Hotel	408.50	409.50	297.50	789,173	742,217
Junior High School	213.84	0.00	0.00	481,818	453,149
Office Park	325.47	46.74	21.66	701,428	659,693
Single Family Housing	8,858.43	9,102.24	7919.31	32,414,456	30,485,796
Strip Mall	2,725.68	2,585.46	1256.45	3,983,152	3,746,154
User Defined Educational	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
User Defined Recreational	0.00	0.00	0.00		
Total	19,405.85	18,657.66	15,137.77	62,550,913	58,829,133

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Apartments Low Rise	16.80	7.10	7.90	41.60	18.80	39.60
City Park	14.70	6.60	6.60	33.00	48.00	19.00
Condo/Townhouse	16.80	7.10	7.90	41.60	18.80	39.60

Congregate Care (Assisted Living)	16.80	7.10	7.90	41.60	18.80	39.60
Elementary School	14.70	6.60	6.60	65.00	30.00	5.00
Hotel	14.70	6.60	6.60	19.40	61.60	19.00
Junior High School	14.70	6.60	6.60	72.80	22.20	5.00
Office Park	14.70	6.60	6.60	33.00	48.00	19.00
Single Family Housing	16.80	7.10	7.90	41.60	18.80	39.60
Strip Mall	14.70	6.60	6.60	16.60	64.40	19.00
User Defined Educational	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Recreational	14.70	6.60	6.60	0.00	0.00	0.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Kilowatt Hours of Renewable Electricity Generated

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	3,906.99	3,906.99	0.15	0.06	3,927.10
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	5,707.38	5,707.38	0.21	0.08	5,736.76
NaturalGas Mitigated	0.26	2.25	1.13	0.01		0.00	0.18		0.00	0.18	0.00	2,577.05	2,577.05	0.05	0.05	2,592.74
NaturalGas Unmitigated	0.34	2.97	1.48	0.02		0.00	0.24		0.00	0.24	0.00	3,398.77	3,398.77	0.07	0.06	3,419.45
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
Apartments Low Rise	7.8208e+006	0.04	0.36	0.15	0.00		0.00	0.03		0.00	0.03	0.00	417.35	417.35	0.01	0.01	419.89
City Park	0	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
Condo/Townhouse	8.65382e+006	0.05	0.40	0.17	0.00		0.00	0.03		0.00	0.03	0.00	461.80	461.80	0.01	0.01	464.61
Congregate Care (Assisted Living)	2.10798e+006	0.01	0.10	0.04	0.00		0.00	0.01		0.00	0.01	0.00	112.49	112.49	0.00	0.00	113.17
Elementary School	294418	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	15.71	15.71	0.00	0.00	15.81
Hotel	4.41771e+006	0.02	0.22	0.18	0.00		0.00	0.02		0.00	0.02	0.00	235.75	235.75	0.00	0.00	237.18
Junior High School	96212.5	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	5.13	5.13	0.00	0.00	5.17
Office Park	959880	0.01	0.05	0.04	0.00		0.00	0.00		0.00	0.00	0.00	51.22	51.22	0.00	0.00	51.53
Single Family Housing	3.44389e+007	0.19	1.59	0.68	0.01		0.00	0.13		0.00	0.13	0.00	1,837.79	1,837.79	0.04	0.03	1,848.98
Strip Mall	140835	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	7.52	7.52	0.00	0.00	7.56
User Defined Educational	2.74761e+006	0.01	0.13	0.11	0.00		0.00	0.01		0.00	0.01	0.00	146.62	146.62	0.00	0.00	147.52
User Defined Industrial	1.23257e+006	0.01	0.06	0.05	0.00		0.00	0.00		0.00	0.00	0.00	65.77	65.77	0.00	0.00	66.18
User Defined Industrial	308143	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	16.44	16.44	0.00	0.00	16.54
User Defined Recreational	471600	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	25.17	25.17	0.00	0.00	25.32
Total		**0.34**	**2.97**	**1.47**	**0.01**		**0.00**	**0.23**		**0.00**	**0.23**	**0.00**	**3,398.76**	**3,398.76**	**0.06**	**0.05**	**3,419.46**

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	tons/yr										MT/yr					
Apartments Low Rise	5.86377e+006	0.03	0.27	0.11	0.00		0.00	0.02		0.00	0.02	0.00	312.91	312.91	0.01	0.01	314.82
City Park	0	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

Condo/Townhouse	6.43804e+006	0.03	0.30	0.13	0.00		0.00	0.02		0.00	0.02	0.00	343.56	343.56	0.01	0.01	345.65
Congregate Care (Assisted Living)	1.59482e+006	0.01	0.07	0.03	0.00		0.00	0.01		0.00	0.01	0.00	85.11	85.11	0.00	0.00	85.62
Elementary School	212930	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	11.36	11.36	0.00	0.00	11.43
Hotel	3.33416e+006	0.02	0.16	0.14	0.00		0.00	0.01		0.00	0.01	0.00	177.92	177.92	0.00	0.00	179.01
Junior High School	69583.3	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	3.71	3.71	0.00	0.00	3.74
Office Park	729030	0.00	0.04	0.03	0.00		0.00	0.00		0.00	0.00	0.00	38.90	38.90	0.00	0.00	39.14
Single Family Housing	2.57211e+007	0.14	1.19	0.50	0.01		0.00	0.10		0.00	0.10	0.00	1,372.57	1,372.57	0.03	0.03	1,380.93
Strip Mall	118695	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00	0.00	6.33	6.33	0.00	0.00	6.37
User Defined Educational	2.4302e+006	0.01	0.12	0.10	0.00		0.00	0.01		0.00	0.01	0.00	129.68	129.68	0.00	0.00	130.47
User Defined Industrial	1.09018e+006	0.01	0.05	0.04	0.00		0.00	0.00		0.00	0.00	0.00	58.18	58.18	0.00	0.00	58.53
User Defined Industrial	272546	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	14.54	14.54	0.00	0.00	14.63
User Defined Recreational	417120	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	22.26	22.26	0.00	0.00	22.39
Total		**0.25**	**2.25**	**1.12**	**0.01**		**0.00**	**0.17**		**0.00**	**0.17**	**0.00**	**2,577.03**	**2,577.03**	**0.05**	**0.05**	**2,592.73**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Low Rise	1.64392e+006					582.21	0.02	0.01	585.21
City Park	0					0.00	0.00	0.00	0.00
Condo/Townhouse	1.55099e+006					549.30	0.02	0.01	552.13
Congregate Care (Assisted Living)	697442					247.01	0.01	0.00	248.28
Elementary School	283021					100.23	0.00	0.00	100.75
Hotel	1.05923e+006					375.14	0.01	0.01	377.07
Junior High School	92488.1					32.76	0.00	0.00	32.92
Office Park	501600					177.65	0.01	0.00	178.56
Single Family Housing	5.78955e+006					2,050.43	0.08	0.03	2,060.98
Strip Mall	863460					305.80	0.01	0.00	307.38

User Defined Educational	2.09741e+006					742.82	0.03	0.01	746.64
User Defined Industrial	235224					83.31	0.00	0.00	83.74
User Defined Industrial	940896					333.23	0.01	0.00	334.94
User Defined Recreational	360000					127.50	0.00	0.00	128.15
Total						**5,707.39**	**0.20**	**0.07**	**5,736.75**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Low Rise	1.24763e+006					441.86	0.02	0.01	444.13
City Park	-242857					-86.01	0.00	0.00	-86.45
Condo/Townhouse	1.17571e+006					416.39	0.02	0.01	418.53
Congregate Care (Assisted Living)	413050					146.29	0.01	0.00	147.04
Elementary School	-7133.11					-2.53	0.00	0.00	-2.54
Hotel	633860					224.49	0.01	0.00	225.64
Junior High School	-165825					-58.73	0.00	0.00	-59.03
Office Park	178587					63.25	0.00	0.00	63.57
Single Family Housing	5.02828e+006					1,780.82	0.07	0.03	1,789.98
Strip Mall	484350					171.54	0.01	0.00	172.42
User Defined Educational	1.63747e+006					579.93	0.02	0.01	582.91
User Defined Industrial	-31978.8					-11.33	0.00	0.00	-11.38
User Defined Industrial	600656					212.73	0.01	0.00	213.82
User Defined Recreational	79882.9					28.29	0.00	0.00	28.44
Total						**3,906.99**	**0.17**	**0.06**	**3,927.08**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	16.05	0.17	14.41	0.00		0.00	0.27		0.00	0.27	0.00	2,740.45	2,740.45	0.07	0.05	2,757.45
Unmitigated	124.61	1.39	133.37	0.00		0.00	16.47		0.00	16.47	1,450.61	1,684.22	3,134.83	0.05	0.16	3,185.09
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.43					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	12.88					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	107.87	1.22	118.81	0.00		0.00	16.39		0.00	16.39	1,450.61	1,660.35	3,110.96	0.03	0.16	3,160.74

Landscaping	0.44	0.17	14.57	0.00		0.00	0.08		0.00	0.08	0.00	23.87	23.87	0.02	0.00	24.35
Total	**124.62**	**1.39**	**133.38**	**0.00**		**0.00**	**16.47**		**0.00**	**16.47**	**1,450.61**	**1,684.22**	**3,134.83**	**0.05**	**0.16**	**3,185.09**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.43					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	11.92					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.27	0.00	0.01	0.00		0.00	0.19		0.00	0.19	0.00	2,716.93	2,716.93	0.05	0.05	2,733.47
Landscaping	0.43	0.17	14.39	0.00		0.00	0.08		0.00	0.08	0.00	23.52	23.52	0.02	0.00	23.98
Total	**16.05**	**0.17**	**14.40**	**0.00**		**0.00**	**0.27**		**0.00**	**0.27**	**0.00**	**2,740.45**	**2,740.45**	**0.07**	**0.05**	**2,757.45**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					1,766.45	8.94	0.24	2,030.18
Unmitigated					2,208.06	11.18	0.31	2,537.72
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Low Rise	30.4921 / 19.2233					216.60	0.94	0.03	244.41
City Park	0 / 28.3573					111.58	0.00	0.00	112.15
Condo/Townhouse	24.4328 / 15.4033					173.55	0.75	0.02	195.84
Congregate Care (Assisted Living)	13.0308 / 8.21507					92.56	0.40	0.01	104.45
Elementary School	1.37697 / 3.54078					20.30	0.04	0.00	21.61
Hotel	1.26834 / 0.140927					6.42	0.04	0.00	7.56
Junior High School	0.32 / 0.822856					4.72	0.01	0.00	5.02
Office Park	5.06541 / 3.10461					35.63	0.16	0.00	40.25
Single Family Housing	58.8341 / 37.0911					417.92	1.81	0.05	471.59
Strip Mall	4.55546 / 2.79206					32.04	0.14	0.00	36.20
User Defined Educational	6.97887 / 10.9157					75.21	0.22	0.01	81.71
User Defined Industrial	88.6432 / 4.4968					427.47	2.72	0.07	507.29
User Defined Recreational	128.509 / 0					594.06	3.94	0.11	709.65
Total						**2,208.06**	**11.17**	**0.30**	**2,537.73**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Low Rise	24.3937 / 15.3786					173.28	0.75	0.02	195.53
City Park	0 / 22.6858					89.26	0.00	0.00	89.72
Condo/Townhouse	19.5462 / 12.3226					138.84	0.60	0.02	156.67
Congregate Care (Assisted Living)	10.4246 / 6.57206					74.05	0.32	0.01	83.56
Elementary School	1.10157 / 2.83262					16.24	0.03	0.00	17.29

Hotel	1.01467 / 0.112741					5.13	0.03	0.00	6.05
Junior High School	0.256 / 0.658285					3.77	0.01	0.00	4.02
Office Park	4.05233 / 2.48369					28.51	0.12	0.00	32.20
Single Family Housing	47.0673 / 29.6728					334.33	1.45	0.04	377.27
Strip Mall	3.64437 / 2.23364					25.64	0.11	0.00	28.96
User Defined Educational	5.58309 / 8.73253					60.17	0.17	0.01	65.37
User Defined Industrial	70.9145 / 3.59744					341.97	2.18	0.06	405.83
User Defined Recreational	102.807 / 0					475.25	3.16	0.08	567.72
Total						**1,766.44**	**8.93**	**0.24**	**2,030.19**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					135.66	8.02	0.00	304.03
Unmitigated					542.65	32.07	0.00	1,216.12
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e

Land Use	tons	tons/yr				MT/yr			
Apartments Low Rise	215.28					43.70	2.58	0.00	97.93
City Park	2.05					0.42	0.02	0.00	0.93
Condo/Townhouse	172.5					35.02	2.07	0.00	78.47
Congregate Care (Assisted Living)	182.5					37.05	2.19	0.00	83.02
Elementary School	103.66					21.04	1.24	0.00	47.16
Hotel	27.38					5.56	0.33	0.00	12.46
Junior High School	24.09					4.89	0.29	0.00	10.96
Office Park	26.51					5.38	0.32	0.00	12.06
Single Family Housing	1059.03					214.97	12.70	0.00	481.77
Strip Mall	64.58					13.11	0.77	0.00	29.38
User Defined Educational	160.6					32.60	1.93	0.00	73.06
User Defined Industrial	508.1					103.14	6.10	0.00	231.14
User Defined Recreational	127					25.78	1.52	0.00	57.77
Total						**542.66**	**32.06**	**0.00**	**1,216.11**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Low Rise	53.82					10.92	0.65	0.00	24.48
City Park	0.5125					0.10	0.01	0.00	0.23
Condo/Townhouse	43.125					8.75	0.52	0.00	19.62
Congregate Care (Assisted Living)	45.625					9.26	0.55	0.00	20.76
Elementary School	25.915					5.26	0.31	0.00	11.79
Hotel	6.845					1.39	0.08	0.00	3.11
Junior High School	6.0225					1.22	0.07	0.00	2.74
Office Park	6.6275					1.35	0.08	0.00	3.01

Single Family Housing	264.757					53.74	3.18	0.00	120.44
Strip Mall	16.145					3.28	0.19	0.00	7.34
User Defined Educational	40.15					8.15	0.48	0.00	18.26
User Defined Industrial	127.025					25.78	1.52	0.00	57.79
User Defined Recreational	31.75					6.44	0.38	0.00	14.44
Total						**135.64**	**8.02**	**0.00**	**304.01**

9.0 Vegetation

County of San Diego Analysis

“Unmitigated” Project

6153: Lilac Ranch - operational - Unmitigated - Proposed - 2020

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Office Park	28.5	1000sqft
Elementary School	568	Student
Junior High School	132	Student
User Defined Educational	10.7	User Defined Unit
User Defined Industrial	2.4	User Defined Unit
User Defined Industrial	0.6	User Defined Unit
City Park	23.8	Acre
Hotel	50	Room
User Defined Recreational	40	User Defined Unit
Apartments Low Rise	468	Dwelling Unit
Condo/Townhouse	375	Dwelling Unit
Congregate Care (Assisted Living)	200	Dwelling Unit
Single Family Housing	903	Dwelling Unit
Strip Mall	61.5	1000sqft

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**		**Utility Company**	San Diego Gas & Electric
Climate Zone	13		2.6		
		Precipitation Freq (Days)			

1.3 User Entered Comments

Project Characteristics - CO2 Intensity revised based on the percentage achieved under the Renewables Portfolio Standard per County Guidance and SMAQMD Methodology 12/8/14

Land Use - Per project plans

Off-road Equipment - Contruction calculated seperately

Trips and VMT - Construction Calculated Sperately

Vehicle Trips - Per traffic report, the project generates 19406.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - The project would not include wood stoves, fireplace use reduced to 180 from default 246 days. No fireplaces in congregate care, all other fire places standard

Area Coating - SDAPCD Rule 67

Energy Use - Electric use for education and recreation based on general industrial/worship uses

Water And Wastewater - Based on WTR Report and Appendix D Table 9.1 Water Consumption Rates

Solid Waste - Based on Appendix D 10.1

Sequestration - Based on project plans

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

2.0 Emissions Summary

2.1 Overall Construction

Calculated Seperately

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	124.62	1.39	133.46	0.00		0.00	16.47		0.00	16.47	1,450.61	1,684.22	3,134.83	0.06	0.16	3,185.10
Energy	0.34	2.97	1.48	0.02		0.00	0.24		0.00	0.24	0.00	9,106.15	9,106.15	0.28	0.14	9,156.21
Mobile	15.58	31.07	145.41	0.32	32.89	1.79	34.68	0.53	1.72	2.25	0.00	24,382.19	24,382.19	1.08	0.00	24,404.94
Waste						0.00	0.00		0.00	0.00	542.65	0.00	542.65	32.07	0.00	1,216.12
Water						0.00	0.00		0.00	0.00	0.00	2,208.06	2,208.06	11.18	0.31	2,537.72
Total	**140.54**	**35.43**	**280.35**	**0.34**	**32.89**	**1.79**	**51.39**	**0.53**	**1.72**	**18.96**	**1,993.26**	**37,380.62**	**39,373.88**	**44.67**	**0.61**	**40,500.09**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	124.62	1.39	133.46	0.00		0.00	16.47		0.00	16.47	1,450.61	1,684.22	3,134.83	0.06	0.16	3,185.10
Energy	0.34	2.97	1.48	0.02		0.00	0.24		0.00	0.24	0.00	9,106.15	9,106.15	0.28	0.14	9,156.21
Mobile	15.58	31.07	145.41	0.32	32.89	1.79	34.68	0.53	1.72	2.25	0.00	24,382.19	24,382.19	1.08	0.00	24,404.94
Waste						0.00	0.00		0.00	0.00	542.65	0.00	542.65	32.07	0.00	1,216.12
Water						0.00	0.00		0.00	0.00	0.00	2,208.06	2,208.06	11.18	0.31	2,537.72
Total	**140.54**	**35.43**	**280.35**	**0.34**	**32.89**	**1.79**	**51.39**	**0.53**	**1.72**	**18.96**	**1,993.26**	**37,380.62**	**39,373.88**	**44.67**	**0.61**	**40,500.09**

3.0 Construction Detail

Calculated Seperately

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	15.58	31.07	145.41	0.32	32.89	1.79	34.68	0.53	1.72	2.25	0.00	24,382.19	24,382.19	1.08	0.00	24,404.94
Unmitigated	15.58	31.07	145.41	0.32	32.89	1.79	34.68	0.53	1.72	2.25	0.00	24,382.19	24,382.19	1.08	0.00	24,404.94
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	3,084.12	3,350.88	2840.76	11,425,652	11,425,652
City Park	37.84	37.84	37.84	93,326	93,326
Condo/Townhouse	2,471.25	2,685.00	2276.25	9,155,170	9,155,170
Congregate Care (Assisted Living)	548.00	440.00	488.00	1,939,146	1,939,146
Elementary School	732.72	0.00	0.00	1,567,591	1,567,591
Hotel	408.50	409.50	297.50	789,173	789,173
Junior High School	213.84	0.00	0.00	481,818	481,818
Office Park	325.47	46.74	21.66	701,428	701,428
Single Family Housing	8,862.95	9,102.24	7919.31	32,426,391	32,426,391
Strip Mall	2,725.68	2,585.46	1256.45	3,983,152	3,983,152
User Defined Educational	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
User Defined Recreational	0.00	0.00	0.00		
Total	19,410.37	18,657.66	15,137.77	62,562,847	62,562,847

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Apartments Low Rise	16.80	7.10	7.90	41.60	18.80	39.60
City Park	14.70	6.60	6.60	33.00	48.00	19.00
Condo/Townhouse	16.80	7.10	7.90	41.60	18.80	39.60
Congregate Care (Assisted Living)	16.80	7.10	7.90	41.60	18.80	39.60
Elementary School	14.70	6.60	6.60	65.00	30.00	5.00
Hotel	14.70	6.60	6.60	19.40	61.60	19.00
Junior High School	14.70	6.60	6.60	72.80	22.20	5.00
Office Park	14.70	6.60	6.60	33.00	48.00	19.00
Single Family Housing	16.80	7.10	7.90	41.60	18.80	39.60
Strip Mall	14.70	6.60	6.60	16.60	64.40	19.00
User Defined Educational	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Recreational	14.70	6.60	6.60	0.00	0.00	0.00

5.0 Energy Detail

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
	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	5,707.38	5,707.38	0.21	0.08	5,736.76
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	5,707.38	5,707.38	0.21	0.08	5,736.76
NaturalGas Mitigated	0.34	2.97	1.48	0.02		0.00	0.24		0.00	0.24	0.00	3,398.77	3,398.77	0.07	0.06	3,419.45
NaturalGas Unmitigated	0.34	2.97	1.48	0.02		0.00	0.24		0.00	0.24	0.00	3,398.77	3,398.77	0.07	0.06	3,419.45
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

<u>Unmitigated</u>

Land Use	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
	kBTU	tons/yr										MT/yr					
Apartments Low Rise	7.8208e+006	0.04	0.36	0.15	0.00		0.00	0.03		0.00	0.03	0.00	417.35	417.35	0.01	0.01	419.89
City Park	0	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
Condo/Townhouse	8.65382e+006	0.05	0.40	0.17	0.00		0.00	0.03		0.00	0.03	0.00	461.80	461.80	0.01	0.01	464.61
Congregate Care (Assisted Living)	2.10798e+006	0.01	0.10	0.04	0.00		0.00	0.01		0.00	0.01	0.00	112.49	112.49	0.00	0.00	113.17
Elementary School	294418	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	15.71	15.71	0.00	0.00	15.81
Hotel	4.41771e+006	0.02	0.22	0.18	0.00		0.00	0.02		0.00	0.02	0.00	235.75	235.75	0.00	0.00	237.18
Junior High School	96212.5	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	5.13	5.13	0.00	0.00	5.17
Office Park	959880	0.01	0.05	0.04	0.00		0.00	0.00		0.00	0.00	0.00	51.22	51.22	0.00	0.00	51.53

Single Family Housing	3.44389e+007	0.19	1.59	0.68	0.01		0.00	0.13		0.00	0.13	0.00	1,837.79	1,837.79	0.04	0.03	1,848.98
Strip Mall	140835	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	7.52	7.52	0.00	0.00	7.56
User Defined Educational	2.74761e+006	0.01	0.13	0.11	0.00		0.00	0.01		0.00	0.01	0.00	146.62	146.62	0.00	0.00	147.52
User Defined Industrial	1.23257e+006	0.01	0.06	0.05	0.00		0.00	0.00		0.00	0.00	0.00	65.77	65.77	0.00	0.00	66.18
User Defined Industrial	308143	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	16.44	16.44	0.00	0.00	16.54
User Defined Recreational	471600	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	25.17	25.17	0.00	0.00	25.32
Total		**0.34**	**2.97**	**1.47**	**0.01**		**0.00**	**0.23**		**0.00**	**0.23**	**0.00**	**3,398.76**	**3,398.76**	**0.06**	**0.05**	**3,419.46**

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	tons/yr										MT/yr					
Apartments Low Rise	7.8208e+006	0.04	0.36	0.15	0.00		0.00	0.03		0.00	0.03	0.00	417.35	417.35	0.01	0.01	419.89
City Park	0	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
Condo/Townhouse	8.65382e+006	0.05	0.40	0.17	0.00		0.00	0.03		0.00	0.03	0.00	461.80	461.80	0.01	0.01	464.61
Congregate Care (Assisted Living)	2.10798e+006	0.01	0.10	0.04	0.00		0.00	0.01		0.00	0.01	0.00	112.49	112.49	0.00	0.00	113.17
Elementary School	294418	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	15.71	15.71	0.00	0.00	15.81
Hotel	4.41771e+006	0.02	0.22	0.18	0.00		0.00	0.02		0.00	0.02	0.00	235.75	235.75	0.00	0.00	237.18
Junior High School	96212.5	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	5.13	5.13	0.00	0.00	5.17
Office Park	959880	0.01	0.05	0.04	0.00		0.00	0.00		0.00	0.00	0.00	51.22	51.22	0.00	0.00	51.53
Single Family Housing	3.44389e+007	0.19	1.59	0.68	0.01		0.00	0.13		0.00	0.13	0.00	1,837.79	1,837.79	0.04	0.03	1,848.98
Strip Mall	140835	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	7.52	7.52	0.00	0.00	7.56
User Defined Educational	2.74761e+006	0.01	0.13	0.11	0.00		0.00	0.01		0.00	0.01	0.00	146.62	146.62	0.00	0.00	147.52
User Defined Industrial	1.23257e+006	0.01	0.06	0.05	0.00		0.00	0.00		0.00	0.00	0.00	65.77	65.77	0.00	0.00	66.18
User Defined Industrial	308143	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	16.44	16.44	0.00	0.00	16.54
User Defined Recreational	471600	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	25.17	25.17	0.00	0.00	25.32
Total		**0.34**	**2.97**	**1.47**	**0.01**		**0.00**	**0.23**		**0.00**	**0.23**	**0.00**	**3,398.76**	**3,398.76**	**0.06**	**0.05**	**3,419.46**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Low Rise	1.64392e+006					582.21	0.02	0.01	585.21
City Park	0					0.00	0.00	0.00	0.00
Condo/Townhouse	1.55099e+006					549.30	0.02	0.01	552.13
Congregate Care (Assisted Living)	697442					247.01	0.01	0.00	248.28
Elementary School	283021					100.23	0.00	0.00	100.75
Hotel	1.05923e+006					375.14	0.01	0.01	377.07
Junior High School	92488.1					32.76	0.00	0.00	32.92
Office Park	501600					177.65	0.01	0.00	178.56
Single Family Housing	5.78955e+006					2,050.43	0.08	0.03	2,060.98
Strip Mall	863460					305.80	0.01	0.00	307.38
User Defined Educational	2.09741e+006					742.82	0.03	0.01	746.64
User Defined Industrial	235224					83.31	0.00	0.00	83.74
User Defined Industrial	940896					333.23	0.01	0.00	334.94
User Defined Recreational	360000					127.50	0.00	0.00	128.15
Total						**5,707.39**	**0.20**	**0.07**	**5,736.75**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Low Rise	1.64392e+006					582.21	0.02	0.01	585.21
City Park	0					0.00	0.00	0.00	0.00
Condo/Townhouse	1.55099e+006					549.30	0.02	0.01	552.13

Congregate Care (Assisted Living)	697442					247.01	0.01	0.00	248.28
Elementary School	283021					100.23	0.00	0.00	100.75
Hotel	1.05923e+006					375.14	0.01	0.01	377.07
Junior High School	92488.1					32.76	0.00	0.00	32.92
Office Park	501600					177.65	0.01	0.00	178.56
Single Family Housing	5.78955e+006					2,050.43	0.08	0.03	2,060.98
Strip Mall	863460					305.80	0.01	0.00	307.38
User Defined Educational	2.09741e+006					742.82	0.03	0.01	746.64
User Defined Industrial	235224					83.31	0.00	0.00	83.74
User Defined Industrial	940896					333.23	0.01	0.00	334.94
User Defined Recreational	360000					127.50	0.00	0.00	128.15
Total						**5,707.39**	**0.20**	**0.07**	**5,736.75**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	124.62	1.39	133.46	0.00		0.00	16.47		0.00	16.47	1,450.61	1,684.22	3,134.83	0.06	0.16	3,185.10
Unmitigated	124.62	1.39	133.46	0.00		0.00	16.47		0.00	16.47	1,450.61	1,684.22	3,134.83	0.06	0.16	3,185.10
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.43					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	12.88					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	107.87	1.22	118.81	0.00		0.00	16.39		0.00	16.39	1,450.61	1,660.35	3,110.96	0.03	0.16	3,160.74
Landscaping	0.45	0.17	14.66	0.00		0.00	0.08		0.00	0.08	0.00	23.87	23.87	0.02	0.00	24.36
Total	**124.63**	**1.39**	**133.47**	**0.00**		**0.00**	**16.47**		**0.00**	**16.47**	**1,450.61**	**1,684.22**	**3,134.83**	**0.05**	**0.16**	**3,185.10**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.43					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	12.88					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	107.87	1.22	118.81	0.00		0.00	16.39		0.00	16.39	1,450.61	1,660.35	3,110.96	0.03	0.16	3,160.74
Landscaping	0.45	0.17	14.66	0.00		0.00	0.08		0.00	0.08	0.00	23.87	23.87	0.02	0.00	24.36
Total	**124.63**	**1.39**	**133.47**	**0.00**		**0.00**	**16.47**		**0.00**	**16.47**	**1,450.61**	**1,684.22**	**3,134.83**	**0.05**	**0.16**	**3,185.10**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					2,208.06	11.18	0.31	2,537.72
Unmitigated					2,208.06	11.18	0.31	2,537.72
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Low Rise	30.4921 / 19.2233					216.60	0.94	0.03	244.41
City Park	0 / 28.3573					111.58	0.00	0.00	112.15
Condo/Townhouse	24.4328 / 15.4033					173.55	0.75	0.02	195.84
Congregate Care (Assisted Living)	13.0308 / 8.21507					92.56	0.40	0.01	104.45
Elementary School	1.37697 / 3.54078					20.30	0.04	0.00	21.61
Hotel	1.26834 / 0.140927					6.42	0.04	0.00	7.56
Junior High School	0.32 / 0.822856					4.72	0.01	0.00	5.02
Office Park	5.06541 / 3.10461					35.63	0.16	0.00	40.25
Single Family Housing	58.8341 / 37.0911					417.92	1.81	0.05	471.59
Strip Mall	4.55546 / 2.79206					32.04	0.14	0.00	36.20
User Defined Educational	6.97887 / 10.9157					75.21	0.22	0.01	81.71
User Defined Industrial	88.6432 / 4.4968					427.47	2.72	0.07	507.29
User Defined Recreational	128.509 / 0					594.06	3.94	0.11	709.65
Total						**2,208.06**	**11.17**	**0.30**	**2,537.73**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Low Rise	30.4921 / 19.2233					216.60	0.94	0.03	244.41
City Park	0 / 28.3573					111.58	0.00	0.00	112.15
Condo/Townhouse	24.4328 / 15.4033					173.55	0.75	0.02	195.84
Congregate Care (Assisted Living)	13.0308 / 8.21507					92.56	0.40	0.01	104.45
Elementary School	1.37697 / 3.54078					20.30	0.04	0.00	21.61
Hotel	1.26834 / 0.140927					6.42	0.04	0.00	7.56
Junior High School	0.32 / 0.822856					4.72	0.01	0.00	5.02
Office Park	5.06541 / 3.10461					35.63	0.16	0.00	40.25
Single Family Housing	58.8341 / 37.0911					417.92	1.81	0.05	471.59
Strip Mall	4.55546 / 2.79206					32.04	0.14	0.00	36.20
User Defined Educational	6.97887 / 10.9157					75.21	0.22	0.01	81.71
User Defined Industrial	88.6432 / 4.4968					427.47	2.72	0.07	507.29
User Defined Recreational	128.509 / 0					594.06	3.94	0.11	709.65
Total						**2,208.06**	**11.17**	**0.30**	**2,537.73**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					542.65	32.07	0.00	1,216.12

Unmitigated					542.65	32.07	0.00	1,216.12
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Low Rise	215.28					43.70	2.58	0.00	97.93
City Park	2.05					0.42	0.02	0.00	0.93
Condo/Townhouse	172.5					35.02	2.07	0.00	78.47
Congregate Care (Assisted Living)	182.5					37.05	2.19	0.00	83.02
Elementary School	103.66					21.04	1.24	0.00	47.16
Hotel	27.38					5.56	0.33	0.00	12.46
Junior High School	24.09					4.89	0.29	0.00	10.96
Office Park	26.51					5.38	0.32	0.00	12.06
Single Family Housing	1059.03					214.97	12.70	0.00	481.77
Strip Mall	64.58					13.11	0.77	0.00	29.38
User Defined Educational	160.6					32.60	1.93	0.00	73.06
User Defined Industrial	508.1					103.14	6.10	0.00	231.14
User Defined Recreational	127					25.78	1.52	0.00	57.77
Total						**542.66**	**32.06**	**0.00**	**1,216.11**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Low Rise	215.28					43.70	2.58	0.00	97.93

City Park	2.05					0.42	0.02	0.00	0.93
Condo/Townhouse	172.5					35.02	2.07	0.00	78.47
Congregate Care (Assisted Living)	182.5					37.05	2.19	0.00	83.02
Elementary School	103.66					21.04	1.24	0.00	47.16
Hotel	27.38					5.56	0.33	0.00	12.46
Junior High School	24.09					4.89	0.29	0.00	10.96
Office Park	26.51					5.38	0.32	0.00	12.06
Single Family Housing	1059.03					214.97	12.70	0.00	481.77
Strip Mall	64.58					13.11	0.77	0.00	29.38
User Defined Educational	160.6					32.60	1.93	0.00	73.06
User Defined Industrial	508.1					103.14	6.10	0.00	231.14
User Defined Recreational	127					25.78	1.52	0.00	57.77
Total						**542.66**	**32.06**	**0.00**	**1,216.11**

9.0 Vegetation

“Mitigated” Project 2020

6153: Lilac Ranch - operational - Mitigated - Proposed - 2020

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Office Park	28.5	1000sqft
Elementary School	568	Student
Junior High School	132	Student
User Defined Educational	10.7	User Defined Unit
User Defined Industrial	2.4	User Defined Unit
User Defined Industrial	0.6	User Defined Unit
City Park	23.8	Acre
Hotel	50	Room
User Defined Recreational	40	User Defined Unit
Apartments Low Rise	468	Dwelling Unit
Condo/Townhouse	375	Dwelling Unit
Congregate Care (Assisted Living)	200	Dwelling Unit
Single Family Housing	903	Dwelling Unit
Strip Mall	61.5	1000sqft

1.2 Other Project Characteristics

Urbanization Rural

Climate Zone 13

Wind Speed (m/s) 2.6

Precipitation Freq (Days)

Utility Company San Diego Gas & Electric

1.3 User Entered Comments

40

Land Use - Per project plans

Off-road Equipment - Contruction calculated seperately

Trips and VMT - Construction Calculated Sperately

Vehicle Trips - Per traffic report, the project generates 19406.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - The project would not include wood stoves, fireplace use reduced to 180 from default 246 days. No fireplaces in congregate care, all other fire places standard.

Area Coating - SDAPCD Rule 67

Energy Use - Electric use for education and recreation based on general industrial/worship uses

Water And Wastewater - Based on WTR Report and Appendix D Table 9.1 Water Consumption Rates

Solid Waste - Based on Appendix D 10.1

Sequestration - Based on project plans

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - Reductions strategies based on CAPCOA Mitigation

Area Mitigation - 5% Electric landscaping equipment based on HOA area landscaping

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

2.0 Emissions Summary

2.1 Overall Construction

Construction Calculated Separately

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	124.62	1.39	133.46	0.00		0.00	16.47		0.00	16.47	1,450.61	1,684.22	3,134.83	0.06	0.16	3,185.10
Energy	0.34	2.97	1.48	0.02		0.00	0.24		0.00	0.24	0.00	9,106.15	9,106.15	0.28	0.14	9,156.21
Mobile	15.58	31.07	145.41	0.32	32.89	1.79	34.68	0.53	1.72	2.25	0.00	24,382.19	24,382.19	1.08	0.00	24,404.94
Waste						0.00	0.00		0.00	0.00	542.65	0.00	542.65	32.07	0.00	1,216.12
Water						0.00	0.00		0.00	0.00	0.00	2,208.06	2,208.06	11.18	0.31	2,537.72
Total	**140.54**	**35.43**	**280.35**	**0.34**	**32.89**	**1.79**	**51.39**	**0.53**	**1.72**	**18.96**	**1,993.26**	**37,380.62**	**39,373.88**	**44.67**	**0.61**	**40,500.09**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	16.06	0.17	14.50	0.00		0.00	0.27		0.00	0.27	0.00	2,740.45	2,740.45	0.07	0.05	2,757.46
Energy	0.26	2.25	1.13	0.01		0.00	0.18		0.00	0.18	0.00	6,484.04	6,484.04	0.19	0.10	6,519.83
Mobile	14.92	29.62	138.49	0.30	30.93	1.68	32.62	0.49	1.62	2.12	0.00	22,967.53	22,967.53	1.02	0.00	22,989.05
Waste						0.00	0.00		0.00	0.00	434.12	0.00	434.12	25.66	0.00	972.89
Water						0.00	0.00		0.00	0.00	0.00	1,766.45	1,766.45	8.94	0.24	2,030.18
Total	**31.24**	**32.04**	**154.12**	**0.31**	**30.93**	**1.68**	**33.07**	**0.49**	**1.62**	**2.57**	**434.12**	**33,958.47**	**34,392.59**	**35.88**	**0.39**	**35,269.41**

3.0 Construction Detail

Construction Calculated Separately

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

Increase Diversity

Integrate Below Market Rate Housing

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	14.92	29.62	138.49	0.30	30.93	1.68	32.62	0.49	1.62	2.12	0.00	22,967.53	22,967.53	1.02	0.00	22,989.05
Unmitigated	15.58	31.07	145.41	0.32	32.89	1.79	34.68	0.53	1.72	2.25	0.00	24,382.19	24,382.19	1.08	0.00	24,404.94
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	3,084.12	3,350.88	2840.76	11,425,652	10,745,826
City Park	37.84	37.84	37.84	93,326	87,773
Condo/Townhouse	2,471.25	2,685.00	2276.25	9,155,170	8,610,437
Congregate Care (Assisted Living)	548.00	440.00	488.00	1,939,146	1,823,767
Elementary School	732.72	0.00	0.00	1,567,591	1,474,319
Hotel	408.50	409.50	297.50	789,173	742,217
Junior High School	213.84	0.00	0.00	481,818	453,149
Office Park	325.47	46.74	21.66	701,428	659,693
Single Family Housing	8,862.95	9,102.24	7919.31	32,426,391	30,497,021
Strip Mall	2,725.68	2,585.46	1256.45	3,983,152	3,746,154
User Defined Educational	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
User Defined Recreational	0.00	0.00	0.00		
Total	19,410.37	18,657.66	15,137.77	62,562,847	58,840,358

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Apartments Low Rise	16.80	7.10	7.90	41.60	18.80	39.60
City Park	14.70	6.60	6.60	33.00	48.00	19.00
Condo/Townhouse	16.80	7.10	7.90	41.60	18.80	39.60
Congregate Care (Assisted Living)	16.80	7.10	7.90	41.60	18.80	39.60
Elementary School	14.70	6.60	6.60	65.00	30.00	5.00
Hotel	14.70	6.60	6.60	19.40	61.60	19.00
Junior High School	14.70	6.60	6.60	72.80	22.20	5.00
Office Park	14.70	6.60	6.60	33.00	48.00	19.00
Single Family Housing	16.80	7.10	7.90	41.60	18.80	39.60
Strip Mall	14.70	6.60	6.60	16.60	64.40	19.00
User Defined Educational	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00

User Defined Recreational	14.70	6.60	6.60	0.00	0.00	0.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Kilowatt Hours of Renewable Electricity Generated

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	3,906.99	3,906.99	0.15	0.06	3,927.10
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	5,707.38	5,707.38	0.21	0.08	5,736.76
NaturalGas Mitigated	0.26	2.25	1.13	0.01		0.00	0.18		0.00	0.18	0.00	2,577.05	2,577.05	0.05	0.05	2,592.74
NaturalGas Unmitigated	0.34	2.97	1.48	0.02		0.00	0.24		0.00	0.24	0.00	3,398.77	3,398.77	0.07	0.06	3,419.45
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
Apartments Low Rise	7.8208e+006	0.04	0.36	0.15	0.00		0.00	0.03		0.00	0.03	0.00	417.35	417.35	0.01	0.01	419.89
City Park	0	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
Condo/Townhouse	8.65382e+006	0.05	0.40	0.17	0.00		0.00	0.03		0.00	0.03	0.00	461.80	461.80	0.01	0.01	464.61

Congregate Care (Assisted Living)	2.10798e+006	0.01	0.10	0.04	0.00		0.00	0.01		0.00	0.01	0.00	112.49	112.49	0.00	0.00	113.17
Elementary School	294418	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	15.71	15.71	0.00	0.00	15.81
Hotel	4.41771e+006	0.02	0.22	0.18	0.00		0.00	0.02		0.00	0.02	0.00	235.75	235.75	0.00	0.00	237.18
Junior High School	96212.5	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	5.13	5.13	0.00	0.00	5.17
Office Park	959880	0.01	0.05	0.04	0.00		0.00	0.00		0.00	0.00	0.00	51.22	51.22	0.00	0.00	51.53
Single Family Housing	3.44389e+007	0.19	1.59	0.68	0.01		0.00	0.13		0.00	0.13	0.00	1,837.79	1,837.79	0.04	0.03	1,848.98
Strip Mall	140835	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	7.52	7.52	0.00	0.00	7.56
User Defined Educational	2.74761e+006	0.01	0.13	0.11	0.00		0.00	0.01		0.00	0.01	0.00	146.62	146.62	0.00	0.00	147.52
User Defined Industrial	1.23257e+006	0.01	0.06	0.05	0.00		0.00	0.00		0.00	0.00	0.00	65.77	65.77	0.00	0.00	66.18
User Defined Industrial	308143	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	16.44	16.44	0.00	0.00	16.54
User Defined Recreational	471600	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	25.17	25.17	0.00	0.00	25.32
Total		**0.34**	**2.97**	**1.47**	**0.01**		**0.00**	**0.23**		**0.00**	**0.23**	**0.00**	**3,398.76**	**3,398.76**	**0.06**	**0.05**	**3,419.46**

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	tons/yr										MT/yr					
Apartments Low Rise	5.86377e+006	0.03	0.27	0.11	0.00		0.00	0.02		0.00	0.02	0.00	312.91	312.91	0.01	0.01	314.82
City Park	0	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
Condo/Townhouse	6.43804e+006	0.03	0.30	0.13	0.00		0.00	0.02		0.00	0.02	0.00	343.56	343.56	0.01	0.01	345.65
Congregate Care (Assisted Living)	1.59482e+006	0.01	0.07	0.03	0.00		0.00	0.01		0.00	0.01	0.00	85.11	85.11	0.00	0.00	85.62
Elementary School	212930	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	11.36	11.36	0.00	0.00	11.43
Hotel	3.33416e+006	0.02	0.16	0.14	0.00		0.00	0.01		0.00	0.01	0.00	177.92	177.92	0.00	0.00	179.01
Junior High School	69583.3	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	3.71	3.71	0.00	0.00	3.74
Office Park	729030	0.00	0.04	0.03	0.00		0.00	0.00		0.00	0.00	0.00	38.90	38.90	0.00	0.00	39.14
Single Family Housing	2.57211e+007	0.14	1.19	0.50	0.01		0.00	0.10		0.00	0.10	0.00	1,372.57	1,372.57	0.03	0.03	1,380.93
Strip Mall	118695	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00	0.00	6.33	6.33	0.00	0.00	6.37
User Defined Educational	2.4302e+006	0.01	0.12	0.10	0.00		0.00	0.01		0.00	0.01	0.00	129.68	129.68	0.00	0.00	130.47

User Defined Industrial	1.09018e+006	0.01	0.05	0.04	0.00		0.00	0.00		0.00	0.00	0.00	58.18	58.18	0.00	0.00	58.53
User Defined Industrial	272546	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	14.54	14.54	0.00	0.00	14.63
User Defined Recreational	417120	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	22.26	22.26	0.00	0.00	22.39
Total		**0.25**	**2.25**	**1.12**	**0.01**		**0.00**	**0.17**		**0.00**	**0.17**	**0.00**	**2,577.03**	**2,577.03**	**0.05**	**0.05**	**2,592.73**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Low Rise	1.64392e+006					582.21	0.02	0.01	585.21
City Park	0					0.00	0.00	0.00	0.00
Condo/Townhouse	1.55099e+006					549.30	0.02	0.01	552.13
Congregate Care (Assisted Living)	697442					247.01	0.01	0.00	248.28
Elementary School	283021					100.23	0.00	0.00	100.75
Hotel	1.05923e+006					375.14	0.01	0.01	377.07
Junior High School	92488.1					32.76	0.00	0.00	32.92
Office Park	501600					177.65	0.01	0.00	178.56
Single Family Housing	5.78955e+006					2,050.43	0.08	0.03	2,060.98
Strip Mall	863460					305.80	0.01	0.00	307.38
User Defined Educational	2.09741e+006					742.82	0.03	0.01	746.64
User Defined Industrial	235224					83.31	0.00	0.00	83.74
User Defined Industrial	940896					333.23	0.01	0.00	334.94
User Defined Recreational	360000					127.50	0.00	0.00	128.15
Total						**5,707.39**	**0.20**	**0.07**	**5,736.75**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Low Rise	1.24763e+006					441.86	0.02	0.01	444.13
City Park	-242857					-86.01	0.00	0.00	-86.45
Condo/Townhouse	1.17571e+006					416.39	0.02	0.01	418.53
Congregate Care (Assisted Living)	413050					146.29	0.01	0.00	147.04
Elementary School	-7133.11					-2.53	0.00	0.00	-2.54
Hotel	633860					224.49	0.01	0.00	225.64
Junior High School	-165825					-58.73	0.00	0.00	-59.03
Office Park	178587					63.25	0.00	0.00	63.57
Single Family Housing	5.02828e+006					1,780.82	0.07	0.03	1,789.98
Strip Mall	484350					171.54	0.01	0.00	172.42
User Defined Educational	1.63747e+006					579.93	0.02	0.01	582.91
User Defined Industrial	-31978.8					-11.33	0.00	0.00	-11.38
User Defined Industrial	600656					212.73	0.01	0.00	213.82
User Defined Recreational	79882.9					28.29	0.00	0.00	28.44
Total						**3,906.99**	**0.17**	**0.06**	**3,927.08**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	16.06	0.17	14.50	0.00		0.00	0.27		0.00	0.27	0.00	2,740.45	2,740.45	0.07	0.05	2,757.46
Unmitigated	124.62	1.39	133.46	0.00		0.00	16.47		0.00	16.47	1,450.61	1,684.22	3,134.83	0.06	0.16	3,185.10
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.43					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	12.88					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	107.87	1.22	118.81	0.00		0.00	16.39		0.00	16.39	1,450.61	1,660.35	3,110.96	0.03	0.16	3,160.74
Landscaping	0.45	0.17	14.66	0.00		0.00	0.08		0.00	0.08	0.00	23.87	23.87	0.02	0.00	24.36
Total	**124.63**	**1.39**	**133.47**	**0.00**		**0.00**	**16.47**		**0.00**	**16.47**	**1,450.61**	**1,684.22**	**3,134.83**	**0.05**	**0.16**	**3,185.10**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.43					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Consumer Products	11.92					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.27	0.00	0.01	0.00		0.00	0.19		0.00	0.19	0.00	2,716.93	2,716.93	0.05	0.05	2,733.47
Landscaping	0.44	0.17	14.48	0.00		0.00	0.08		0.00	0.08	0.00	23.52	23.52	0.02	0.00	23.99
Total	**16.06**	**0.17**	**14.49**	**0.00**		**0.00**	**0.27**		**0.00**	**0.27**	**0.00**	**2,740.45**	**2,740.45**	**0.07**	**0.05**	**2,757.46**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					1,766.45	8.94	0.24	2,030.18
Unmitigated					2,208.06	11.18	0.31	2,537.72
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Low Rise	30.4921 / 19.2233					216.60	0.94	0.03	244.41
City Park	0 / 28.3573					111.58	0.00	0.00	112.15
Condo/Townhouse	24.4328 / 15.4033					173.55	0.75	0.02	195.84
Congregate Care (Assisted Living)	13.0308 / 8.21507					92.56	0.40	0.01	104.45

Elementary School	1.37697 / 3.54078					20.30	0.04	0.00	21.61
Hotel	1.26834 / 0.140927					6.42	0.04	0.00	7.56
Junior High School	0.32 / 0.822856					4.72	0.01	0.00	5.02
Office Park	5.06541 / 3.10461					35.63	0.16	0.00	40.25
Single Family Housing	58.8341 / 37.0911					417.92	1.81	0.05	471.59
Strip Mall	4.55546 / 2.79206					32.04	0.14	0.00	36.20
User Defined Educational	6.97887 / 10.9157					75.21	0.22	0.01	81.71
User Defined Industrial	88.6432 / 4.4968					427.47	2.72	0.07	507.29
User Defined Recreational	128.509 / 0					594.06	3.94	0.11	709.65
Total						**2,208.06**	**11.17**	**0.30**	**2,537.73**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Low Rise	24.3937 / 15.3786					173.28	0.75	0.02	195.53
City Park	0 / 22.6858					89.26	0.00	0.00	89.72
Condo/Townhouse	19.5462 / 12.3226					138.84	0.60	0.02	156.67
Congregate Care (Assisted Living)	10.4246 / 6.57206					74.05	0.32	0.01	83.56
Elementary School	1.10157 / 2.83262					16.24	0.03	0.00	17.29
Hotel	1.01467 / 0.112741					5.13	0.03	0.00	6.05
Junior High School	0.256 / 0.658285					3.77	0.01	0.00	4.02
Office Park	4.05233 / 2.48369					28.51	0.12	0.00	32.20
Single Family Housing	47.0673 / 29.6728					334.33	1.45	0.04	377.27
Strip Mall	3.64437 / 2.23364					25.64	0.11	0.00	28.96
User Defined Educational	5.58309 / 8.73253					60.17	0.17	0.01	65.37
User Defined Industrial	70.9145 / 3.59744					341.97	2.18	0.06	405.83
User Defined Recreational	102.807 / 0					475.25	3.16	0.08	567.72

Total						1,766.44	8.93	0.24	2,030.19

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					434.12	25.66	0.00	972.89
Unmitigated					542.65	32.07	0.00	1,216.12
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Low Rise	215.28					43.70	2.58	0.00	97.93
City Park	2.05					0.42	0.02	0.00	0.93
Condo/Townhouse	172.5					35.02	2.07	0.00	78.47
Congregate Care (Assisted Living)	182.5					37.05	2.19	0.00	83.02
Elementary School	103.66					21.04	1.24	0.00	47.16
Hotel	27.38					5.56	0.33	0.00	12.46
Junior High School	24.09					4.89	0.29	0.00	10.96

Office Park	26.51					5.38	0.32	0.00	12.06
Single Family Housing	1059.03					214.97	12.70	0.00	481.77
Strip Mall	64.58					13.11	0.77	0.00	29.38
User Defined Educational	160.6					32.60	1.93	0.00	73.06
User Defined Industrial	508.1					103.14	6.10	0.00	231.14
User Defined Recreational	127					25.78	1.52	0.00	57.77
Total						**542.66**	**32.06**	**0.00**	**1,216.11**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Low Rise	172.224					34.96	2.07	0.00	78.35
City Park	1.64					0.33	0.02	0.00	0.75
Condo/Townhouse	138					28.01	1.66	0.00	62.78
Congregate Care (Assisted Living)	146					29.64	1.75	0.00	66.42
Elementary School	82.928					16.83	0.99	0.00	37.73
Hotel	21.904					4.45	0.26	0.00	9.96
Junior High School	19.272					3.91	0.23	0.00	8.77
Office Park	21.208					4.31	0.25	0.00	9.65
Single Family Housing	847.224					171.98	10.16	0.00	385.42
Strip Mall	51.664					10.49	0.62	0.00	23.50
User Defined Educational	128.48					26.08	1.54	0.00	58.45
User Defined Industrial	406.48					82.51	4.88	0.00	184.91
User Defined Recreational	101.6					20.62	1.22	0.00	46.22
Total						**434.12**	**25.65**	**0.00**	**972.91**

9.0 Vegetation

“Mitigated” Project 2025/2030

6153: Lilac Ranch - operational - Mitigated Project - 2030

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Office Park	28.5	1000sqft
Elementary School	568	Student
Junior High School	132	Student
User Defined Educational	10.7	User Defined Unit
User Defined Industrial	2.4	User Defined Unit
User Defined Industrial	0.6	User Defined Unit
City Park	23.8	Acre
Hotel	50	Room
User Defined Recreational	40	User Defined Unit
Apartments Low Rise	468	Dwelling Unit
Condo/Townhouse	375	Dwelling Unit
Congregate Care (Assisted Living)	200	Dwelling Unit
Single Family Housing	903	Dwelling Unit
Strip Mall	61.5	1000sqft

1.2 Other Project Characteristics

Urbanization Rural

Climate Zone 13

Wind Speed (m/s) 2.6

Precipitation Freq (Days)

Utility Company San Diego Gas & Electric

1.3 User Entered Comments

40

Project Characteristics -

Land Use - Per project plans

Off-road Equipment - Contruction calculated seperately

Trips and VMT - Construction Calculated Sperately

Vehicle Trips - Per traffic report, the project generates 19406.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - The project would not include wood stoves, fireplace use reduced to 180 from default 246 days. No fireplaces in congregate care, all other fire places standard

Area Coating - SDAPCD Rule 67

Energy Use - Electric use for education and recreation based on general industrial/worship uses

Water And Wastewater - Based on WTR Report and Appendix D Table 9.1 Water Consumption Rates

Solid Waste - Based on Appendix D 10.1

Sequestration - Based on project plans

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - Reductions strategies based on CAPCOA Mitigation

Area Mitigation - 5% Electric landscaping equipment based on HOA area landscaping

Energy Mitigation -

Water Mitigation -

Waste Mitigation - Per State Scoping Plan

Construction Phase - Construction Calculated Seperately

2.0 Emissions Summary

2.1 Overall Construction

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	124.61	1.39	133.37	0.00		0.00	16.47		0.00	16.47	1,450.61	1,684.22	3,134.83	0.05	0.16	3,185.09
Energy	0.34	2.97	1.48	0.02		0.00	0.24		0.00	0.24	0.00	9,106.15	9,106.15	0.28	0.14	9,156.21
Mobile	11.60	20.75	99.92	0.32	32.88	1.66	34.53	0.52	1.60	2.12	0.00	22,205.02	22,205.02	0.80	0.00	22,221.91
Waste						0.00	0.00		0.00	0.00	542.65	0.00	542.65	32.07	0.00	1,216.12
Water						0.00	0.00		0.00	0.00	0.00	2,208.06	2,208.06	11.18	0.31	2,537.72
Total	**136.55**	**25.11**	**234.77**	**0.34**	**32.88**	**1.66**	**51.24**	**0.52**	**1.60**	**18.83**	**1,993.26**	**35,203.45**	**37,196.71**	**44.38**	**0.61**	**38,317.05**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	16.05	0.17	14.41	0.00		0.00	0.27		0.00	0.27	0.00	2,740.45	2,740.45	0.07	0.05	2,757.45
Energy	0.26	2.25	1.13	0.01		0.00	0.18		0.00	0.18	0.00	6,484.04	6,484.04	0.19	0.10	6,519.83
Mobile	11.10	19.84	95.06	0.30	30.92	1.56	32.48	0.49	1.51	2.00	0.00	20,916.58	20,916.58	0.76	0.00	20,932.57
Waste						0.00	0.00		0.00	0.00	135.66	0.00	135.66	8.02	0.00	304.03
Water						0.00	0.00		0.00	0.00	0.00	1,766.45	1,766.45	8.94	0.24	2,030.18
Total	**27.41**	**22.26**	**110.60**	**0.31**	**30.92**	**1.56**	**32.93**	**0.49**	**1.51**	**2.45**	**135.66**	**31,907.52**	**32,043.18**	**17.98**	**0.39**	**32,544.06**

3.0 Construction Detail

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

Increase Diversity

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	11.10	19.84	95.06	0.30	30.92	1.56	32.48	0.49	1.51	2.00	0.00	20,916.58	20,916.58	0.76	0.00	20,932.57
Unmitigated	11.60	20.75	99.92	0.32	32.88	1.66	34.53	0.52	1.60	2.12	0.00	22,205.02	22,205.02	0.80	0.00	22,221.91
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	3,084.12	3,350.88	2840.76	11,425,652	10,745,826
City Park	37.84	37.84	37.84	93,326	87,773
Condo/Townhouse	2,471.25	2,685.00	2276.25	9,155,170	8,610,437
Congregate Care (Assisted Living)	548.00	440.00	488.00	1,939,146	1,823,767
Elementary School	732.72	0.00	0.00	1,567,591	1,474,319
Hotel	408.50	409.50	297.50	789,173	742,217
Junior High School	213.84	0.00	0.00	481,818	453,149
Office Park	325.47	46.74	21.66	701,428	659,693
Single Family Housing	8,858.43	9,102.24	7919.31	32,414,456	30,485,796
Strip Mall	2,725.68	2,585.46	1256.45	3,983,152	3,746,154
User Defined Educational	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
User Defined Recreational	0.00	0.00	0.00		
Total	19,405.85	18,657.66	15,137.77	62,550,913	58,829,133

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Apartments Low Rise	16.80	7.10	7.90	41.60	18.80	39.60
City Park	14.70	6.60	6.60	33.00	48.00	19.00
Condo/Townhouse	16.80	7.10	7.90	41.60	18.80	39.60
Congregate Care (Assisted Living)	16.80	7.10	7.90	41.60	18.80	39.60
Elementary School	14.70	6.60	6.60	65.00	30.00	5.00
Hotel	14.70	6.60	6.60	19.40	61.60	19.00
Junior High School	14.70	6.60	6.60	72.80	22.20	5.00
Office Park	14.70	6.60	6.60	33.00	48.00	19.00
Single Family Housing	16.80	7.10	7.90	41.60	18.80	39.60
Strip Mall	14.70	6.60	6.60	16.60	64.40	19.00
User Defined Educational	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Recreational	14.70	6.60	6.60	0.00	0.00	0.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Kilowatt Hours of Renewable Electricity Generated

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	3,906.99	3,906.99	0.15	0.06	3,927.10

Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	5,707.38	5,707.38	0.21	0.08	5,736.76
NaturalGas Mitigated	0.26	2.25	1.13	0.01		0.00	0.18		0.00	0.18	0.00	2,577.05	2,577.05	0.05	0.05	2,592.74
NaturalGas Unmitigated	0.34	2.97	1.48	0.02		0.00	0.24		0.00	0.24	0.00	3,398.77	3,398.77	0.07	0.06	3,419.45
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
Apartments Low Rise	7.8208e+006	0.04	0.36	0.15	0.00		0.00	0.03		0.00	0.03	0.00	417.35	417.35	0.01	0.01	419.89
City Park	0	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
Condo/Townhouse	8.65382e+006	0.05	0.40	0.17	0.00		0.00	0.03		0.00	0.03	0.00	461.80	461.80	0.01	0.01	464.61
Congregate Care (Assisted Living)	2.10798e+006	0.01	0.10	0.04	0.00		0.00	0.01		0.00	0.01	0.00	112.49	112.49	0.00	0.00	113.17
Elementary School	294418	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	15.71	15.71	0.00	0.00	15.81
Hotel	4.41771e+006	0.02	0.22	0.18	0.00		0.00	0.02		0.00	0.02	0.00	235.75	235.75	0.00	0.00	237.18
Junior High School	96212.5	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	5.13	5.13	0.00	0.00	5.17
Office Park	959880	0.01	0.05	0.04	0.00		0.00	0.00		0.00	0.00	0.00	51.22	51.22	0.00	0.00	51.53
Single Family Housing	3.44389e+007	0.19	1.59	0.68	0.01		0.00	0.13		0.00	0.13	0.00	1,837.79	1,837.79	0.04	0.03	1,848.98
Strip Mall	140835	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	7.52	7.52	0.00	0.00	7.56
User Defined Educational	2.74761e+006	0.01	0.13	0.11	0.00		0.00	0.01		0.00	0.01	0.00	146.62	146.62	0.00	0.00	147.52
User Defined Industrial	1.23257e+006	0.01	0.06	0.05	0.00		0.00	0.00		0.00	0.00	0.00	65.77	65.77	0.00	0.00	66.18
User Defined Industrial	308143	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	16.44	16.44	0.00	0.00	16.54
User Defined Recreational	471600	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	25.17	25.17	0.00	0.00	25.32
Total		**0.34**	**2.97**	**1.47**	**0.01**		**0.00**	**0.23**		**0.00**	**0.23**	**0.00**	**3,398.76**	**3,398.76**	**0.06**	**0.05**	**3,419.46**

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	tons/yr										MT/yr					
Apartments Low Rise	5.86377e+006	0.03	0.27	0.11	0.00		0.00	0.02		0.00	0.02	0.00	312.91	312.91	0.01	0.01	314.82
City Park	0	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
Condo/Townhouse	6.43804e+006	0.03	0.30	0.13	0.00		0.00	0.02		0.00	0.02	0.00	343.56	343.56	0.01	0.01	345.65
Congregate Care (Assisted Living)	1.59482e+006	0.01	0.07	0.03	0.00		0.00	0.01		0.00	0.01	0.00	85.11	85.11	0.00	0.00	85.62
Elementary School	212930	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	11.36	11.36	0.00	0.00	11.43
Hotel	3.33416e+006	0.02	0.16	0.14	0.00		0.00	0.01		0.00	0.01	0.00	177.92	177.92	0.00	0.00	179.01
Junior High School	69583.3	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	3.71	3.71	0.00	0.00	3.74
Office Park	729030	0.00	0.04	0.03	0.00		0.00	0.00		0.00	0.00	0.00	38.90	38.90	0.00	0.00	39.14
Single Family Housing	2.57211e+007	0.14	1.19	0.50	0.01		0.00	0.10		0.00	0.10	0.00	1,372.57	1,372.57	0.03	0.03	1,380.93
Strip Mall	118695	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00	0.00	6.33	6.33	0.00	0.00	6.37
User Defined Educational	2.4302e+006	0.01	0.12	0.10	0.00		0.00	0.01		0.00	0.01	0.00	129.68	129.68	0.00	0.00	130.47
User Defined Industrial	1.09018e+006	0.01	0.05	0.04	0.00		0.00	0.00		0.00	0.00	0.00	58.18	58.18	0.00	0.00	58.53
User Defined Industrial	272546	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	14.54	14.54	0.00	0.00	14.63
User Defined Recreational	417120	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	22.26	22.26	0.00	0.00	22.39
Total		**0.25**	**2.25**	**1.12**	**0.01**		**0.00**	**0.17**		**0.00**	**0.17**	**0.00**	**2,577.03**	**2,577.03**	**0.05**	**0.05**	**2,592.73**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Low Rise	1.64392e+006					582.21	0.02	0.01	585.21
City Park	0					0.00	0.00	0.00	0.00
Condo/Townhouse	1.55099e+006					549.30	0.02	0.01	552.13
Congregate Care (Assisted Living)	697442					247.01	0.01	0.00	248.28
Elementary School	283021					100.23	0.00	0.00	100.75

Hotel	1.05923e+006					375.14	0.01	0.01	377.07
Junior High School	92488.1					32.76	0.00	0.00	32.92
Office Park	501600					177.65	0.01	0.00	178.56
Single Family Housing	5.78955e+006					2,050.43	0.08	0.03	2,060.98
Strip Mall	863460					305.80	0.01	0.00	307.38
User Defined Educational	2.09741e+006					742.82	0.03	0.01	746.64
User Defined Industrial	235224					83.31	0.00	0.00	83.74
User Defined Industrial	940896					333.23	0.01	0.00	334.94
User Defined Recreational	360000					127.50	0.00	0.00	128.15
Total						**5,707.39**	**0.20**	**0.07**	**5,736.75**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Low Rise	1.24763e+006					441.86	0.02	0.01	444.13
City Park	-242857					-86.01	0.00	0.00	-86.45
Condo/Townhouse	1.17571e+006					416.39	0.02	0.01	418.53
Congregate Care (Assisted Living)	413050					146.29	0.01	0.00	147.04
Elementary School	-7133.11					-2.53	0.00	0.00	-2.54
Hotel	633860					224.49	0.01	0.00	225.64
Junior High School	-165825					-58.73	0.00	0.00	-59.03
Office Park	178587					63.25	0.00	0.00	63.57
Single Family Housing	5.02828e+006					1,780.82	0.07	0.03	1,789.98
Strip Mall	484350					171.54	0.01	0.00	172.42
User Defined Educational	1.63747e+006					579.93	0.02	0.01	582.91
User Defined Industrial	-31978.8					-11.33	0.00	0.00	-11.38
User Defined Industrial	600656					212.73	0.01	0.00	213.82

User Defined Recreational	79882.9					28.29	0.00	0.00	28.44
Total						**3,906.99**	**0.17**	**0.06**	**3,927.08**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	16.05	0.17	14.41	0.00		0.00	0.27		0.00	0.27	0.00	2,740.45	2,740.45	0.07	0.05	2,757.45
Unmitigated	124.61	1.39	133.37	0.00		0.00	16.47		0.00	16.47	1,450.61	1,684.22	3,134.83	0.05	0.16	3,185.09
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.43					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	12.88					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	107.87	1.22	118.81	0.00		0.00	16.39		0.00	16.39	1,450.61	1,660.35	3,110.96	0.03	0.16	3,160.74
Landscaping	0.44	0.17	14.57	0.00		0.00	0.08		0.00	0.08	0.00	23.87	23.87	0.02	0.00	24.35
Total	**124.62**	**1.39**	**133.38**	**0.00**		**0.00**	**16.47**		**0.00**	**16.47**	**1,450.61**	**1,684.22**	**3,134.83**	**0.05**	**0.16**	**3,185.09**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.43					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	11.92					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.27	0.00	0.01	0.00		0.00	0.19		0.00	0.19	0.00	2,716.93	2,716.93	0.05	0.05	2,733.47
Landscaping	0.43	0.17	14.39	0.00		0.00	0.08		0.00	0.08	0.00	23.52	23.52	0.02	0.00	23.98
Total	**16.05**	**0.17**	**14.40**	**0.00**		**0.00**	**0.27**		**0.00**	**0.27**	**0.00**	**2,740.45**	**2,740.45**	**0.07**	**0.05**	**2,757.45**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr				MT/yr			
Mitigated					1,766.45	8.94	0.24	2,030.18
Unmitigated					2,208.06	11.18	0.31	2,537.72
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Low Rise	30.4921 / 19.2233					216.60	0.94	0.03	244.41
City Park	0 / 28.3573					111.58	0.00	0.00	112.15
Condo/Townhouse	24.4328 / 15.4033					173.55	0.75	0.02	195.84
Congregate Care (Assisted Living)	13.0308 / 8.21507					92.56	0.40	0.01	104.45
Elementary School	1.37697 / 3.54078					20.30	0.04	0.00	21.61
Hotel	1.26834 / 0.140927					6.42	0.04	0.00	7.56
Junior High School	0.32 / 0.822856					4.72	0.01	0.00	5.02
Office Park	5.06541 / 3.10461					35.63	0.16	0.00	40.25
Single Family Housing	58.8341 / 37.0911					417.92	1.81	0.05	471.59
Strip Mall	4.55546 / 2.79206					32.04	0.14	0.00	36.20
User Defined Educational	6.97887 / 10.9157					75.21	0.22	0.01	81.71
User Defined Industrial	88.6432 / 4.4968					427.47	2.72	0.07	507.29
User Defined Recreational	128.509 / 0					594.06	3.94	0.11	709.65
Total						**2,208.06**	**11.17**	**0.30**	**2,537.73**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	tons/yr				MT/yr			
Apartments Low Rise	24.3937 / 15.3786					173.28	0.75	0.02	195.53
City Park	0 / 22.6858					89.26	0.00	0.00	89.72
Condo/Townhouse	19.5462 / 12.3226					138.84	0.60	0.02	156.67
Congregate Care (Assisted Living)	10.4246 / 6.57206					74.05	0.32	0.01	83.56
Elementary School	1.10157 / 2.83262					16.24	0.03	0.00	17.29
Hotel	1.01467 / 0.112741					5.13	0.03	0.00	6.05
Junior High School	0.256 / 0.658285					3.77	0.01	0.00	4.02
Office Park	4.05233 / 2.48369					28.51	0.12	0.00	32.20
Single Family Housing	47.0673 / 29.6728					334.33	1.45	0.04	377.27
Strip Mall	3.64437 / 2.23364					25.64	0.11	0.00	28.96
User Defined Educational	5.58309 / 8.73253					60.17	0.17	0.01	65.37
User Defined Industrial	70.9145 / 3.59744					341.97	2.18	0.06	405.83
User Defined Recreational	102.807 / 0					475.25	3.16	0.08	567.72
Total						**1,766.44**	**8.93**	**0.24**	**2,030.19**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					135.66	8.02	0.00	304.03
Unmitigated					542.65	32.07	0.00	1,216.12

Total	NA	NA	NA	NA	NA	NA	NA	NA

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Low Rise	215.28					43.70	2.58	0.00	97.93
City Park	2.05					0.42	0.02	0.00	0.93
Condo/Townhouse	172.5					35.02	2.07	0.00	78.47
Congregate Care (Assisted Living)	182.5					37.05	2.19	0.00	83.02
Elementary School	103.66					21.04	1.24	0.00	47.16
Hotel	27.38					5.56	0.33	0.00	12.46
Junior High School	24.09					4.89	0.29	0.00	10.96
Office Park	26.51					5.38	0.32	0.00	12.06
Single Family Housing	1059.03					214.97	12.70	0.00	481.77
Strip Mall	64.58					13.11	0.77	0.00	29.38
User Defined Educational	160.6					32.60	1.93	0.00	73.06
User Defined Industrial	508.1					103.14	6.10	0.00	231.14
User Defined Recreational	127					25.78	1.52	0.00	57.77
Total						**542.66**	**32.06**	**0.00**	**1,216.11**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Low Rise	53.82					10.92	0.65	0.00	24.48
City Park	0.5125					0.10	0.01	0.00	0.23

Condo/Townhouse	43.125					8.75	0.52	0.00	19.62
Congregate Care (Assisted Living)	45.625					9.26	0.55	0.00	20.76
Elementary School	25.915					5.26	0.31	0.00	11.79
Hotel	6.845					1.39	0.08	0.00	3.11
Junior High School	6.0225					1.22	0.07	0.00	2.74
Office Park	6.6275					1.35	0.08	0.00	3.01
Single Family Housing	264.757					53.74	3.18	0.00	120.44
Strip Mall	16.145					3.28	0.19	0.00	7.34
User Defined Educational	40.15					8.15	0.48	0.00	18.26
User Defined Industrial	127.025					25.78	1.52	0.00	57.79
User Defined Recreational	31.75					6.44	0.38	0.00	14.44
Total						**135.64**	**8.02**	**0.00**	**304.01**

9.0 Vegetation

SMAQMD Analysis

NAT Project

6153: Lilac Ranch - operational - SMAQMD - NAT - 2020

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Office Park	28.5	1000sqft
Elementary School	568	Student
Junior High School	132	Student
User Defined Educational	10.7	User Defined Unit
User Defined Industrial	2.4	User Defined Unit
User Defined Industrial	0.6	User Defined Unit
City Park	23.8	Acre
Hotel	50	Room
User Defined Recreational	40	User Defined Unit
Apartments Low Rise	468	Dwelling Unit
Condo/Townhouse	375	Dwelling Unit
Congregate Care (Assisted Living)	200	Dwelling Unit
Single Family Housing	903	Dwelling Unit
Strip Mall	61.5	1000sqft

1.2 Other Project Characteristics

Urbanization Urban

Climate Zone 13

Wind Speed (m/s) 2.6

Precipitation Freq (Days)

Utility Company San Diego Gas & Electric

1.3 User Entered Comments

40

Project Characteristics - CO2 Intensity revised based on the percentage achieved under the Renewables Portfolio Standard per County Guidance and SMAQMD Methodology 12/8/14

Land Use - per client

Off-road Equipment - Contruction calculated seperately

Trips and VMT - Construction Calculated Sperately

Vehicle Trips - Per traffic report, the project generates 19406 weekday trips.

Vechicle Emission Factors - Changes in NAT emissions factors based on SCAQMD guidance. LDA, LDT1&2, MDV from Appendix D, All others Change shown in EMFAC2011 2020 differences with and without Pavelyl & LCFS

Vechicle Emission Factors - Changes in NAT emissions factors based on SCAQMD guidance. LDA, LDT1&2, MDV from Appendix D, All others Change shown in EMFAC2011 2020 differences with and without Pavelyl & LCFS

Vechicle Emission Factors - Changes in NAT emissions factors based on SCAQMD guidance. LDA, LDT1&2, MDV from Appendix D, All others Change shown in EMFAC2011 2020 differences with and without Pavelyl & LCFS

Woodstoves - The project would not include wood stoves, fireplace use reduced to 180 from default 246 days. No fireplaces in congregate care.

Area Coating - Interior VOC limits reduced based on SDAPCD Rule 67

Energy Use - Electric use for userdefined uses based on general industrial historic values

Water And Wastewater - Based on WTR Report and Appendix D Table 9.1 Water Consumption Rates

Solid Waste - Based on Appendix D 10.1

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Sequestration -

2.0 Emissions Summary

2.1 Overall Construction

Calculated Seperately

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	124.71	1.41	134.17	0.00		0.00	16.47		0.00	16.46	1,450.61	1,684.22	3,134.83	0.06	0.16	3,185.20
Energy	0.37	3.19	1.58	0.02		0.00	0.26		0.00	0.26	0.00	9,535.73	9,535.73	0.29	0.15	9,588.25
Mobile	15.58	31.07	145.41	0.32	32.89	1.79	34.68	0.53	1.72	2.25	0.00	31,634.32	31,634.32	1.08	0.00	31,657.07
Waste						0.00	0.00		0.00	0.00	542.65	0.00	542.65	32.07	0.00	1,216.12
Water						0.00	0.00		0.00	0.00	0.00	2,208.06	2,208.06	11.18	0.31	2,537.72
Total	**140.66**	**35.67**	**281.16**	**0.34**	**32.89**	**1.79**	**51.41**	**0.53**	**1.72**	**18.97**	**1,993.26**	**45,062.33**	**47,055.59**	**44.68**	**0.62**	**48,184.36**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	124.71	1.41	134.17	0.00		0.00	16.47		0.00	16.46	1,450.61	1,684.22	3,134.83	0.06	0.16	3,185.20
Energy	0.37	3.19	1.58	0.02		0.00	0.26		0.00	0.26	0.00	9,535.73	9,535.73	0.29	0.15	9,588.25
Mobile	15.58	31.07	145.41	0.32	32.89	1.79	34.68	0.53	1.72	2.25	0.00	31,634.32	31,634.32	1.08	0.00	31,657.07
Waste						0.00	0.00		0.00	0.00	542.65	0.00	542.65	32.07	0.00	1,216.12
Water						0.00	0.00		0.00	0.00	0.00	2,208.06	2,208.06	11.18	0.31	2,537.72
Total	**140.66**	**35.67**	**281.16**	**0.34**	**32.89**	**1.79**	**51.41**	**0.53**	**1.72**	**18.97**	**1,993.26**	**45,062.33**	**47,055.59**	**44.68**	**0.62**	**48,184.36**

3.0 Construction Detail

Calculated Seperately

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	15.58	31.07	145.41	0.32	32.89	1.79	34.68	0.53	1.72	2.25	0.00	31,634.32	31,634.32	1.08	0.00	31,657.07
Unmitigated	15.58	31.07	145.41	0.32	32.89	1.79	34.68	0.53	1.72	2.25	0.00	31,634.32	31,634.32	1.08	0.00	31,657.07
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	3,084.12	3,350.88	2840.76	11,425,652	11,425,652
City Park	37.84	37.84	37.84	93,326	93,326
Condo/Townhouse	2,471.25	2,685.00	2276.25	9,155,170	9,155,170
Congregate Care (Assisted Living)	548.00	440.00	488.00	1,939,146	1,939,146
Elementary School	732.72	0.00	0.00	1,567,591	1,567,591
Hotel	408.50	409.50	297.50	789,173	789,173
Junior High School	213.84	0.00	0.00	481,818	481,818
Office Park	325.47	46.74	21.66	701,428	701,428
Single Family Housing	8,862.95	9,102.24	7919.31	32,426,391	32,426,391
Strip Mall	2,725.68	2,585.46	1256.45	3,983,152	3,983,152
User Defined Educational	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
User Defined Recreational	0.00	0.00	0.00		
Total	19,410.37	18,657.66	15,137.77	62,562,847	62,562,847

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Apartments Low Rise	16.80	7.10	7.90	41.60	18.80	39.60
City Park	14.70	6.60	6.60	33.00	48.00	19.00
Condo/Townhouse	16.80	7.10	7.90	41.60	18.80	39.60
Congregate Care (Assisted Living)	16.80	7.10	7.90	41.60	18.80	39.60
Elementary School	14.70	6.60	6.60	65.00	30.00	5.00
Hotel	14.70	6.60	6.60	19.40	61.60	19.00
Junior High School	14.70	6.60	6.60	72.80	22.20	5.00
Office Park	14.70	6.60	6.60	33.00	48.00	19.00
Single Family Housing	16.80	7.10	7.90	41.60	18.80	39.60
Strip Mall	14.70	6.60	6.60	16.60	64.40	19.00
User Defined Educational	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Recreational	14.70	6.60	6.60	0.00	0.00	0.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	5,879.34	5,879.34	0.22	0.08	5,909.60

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	5,879.34	5,879.34	0.22	0.08	5,909.60
NaturalGas Mitigated	0.37	3.19	1.58	0.02		0.00	0.26		0.00	0.26	0.00	3,656.40	3,656.40	0.07	0.07	3,678.65
NaturalGas Unmitigated	0.37	3.19	1.58	0.02		0.00	0.26		0.00	0.26	0.00	3,656.40	3,656.40	0.07	0.07	3,678.65
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

<u>Unmitigated</u>

	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	tons/yr										MT/yr					
Apartments Low Rise	8.31182e+006	0.04	0.38	0.16	0.00		0.00	0.03		0.00	0.03	0.00	443.55	443.55	0.01	0.01	446.25
City Park	0	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
Condo/Townhouse	9.20976e+006	0.05	0.42	0.18	0.00		0.00	0.03		0.00	0.03	0.00	491.47	491.47	0.01	0.01	494.46
Congregate Care (Assisted Living)	2.23673e+006	0.01	0.10	0.04	0.00		0.00	0.01		0.00	0.01	0.00	119.36	119.36	0.00	0.00	120.09
Elementary School	326709	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	17.43	17.43	0.00	0.00	17.54
Hotel	4.47143e+006	0.02	0.22	0.18	0.00		0.00	0.02		0.00	0.02	0.00	238.61	238.61	0.00	0.00	240.06
Junior High School	106765	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00	0.00	5.70	5.70	0.00	0.00	5.73
Office Park	1.0773e+006	0.01	0.05	0.04	0.00		0.00	0.00		0.00	0.00	0.00	57.49	57.49	0.00	0.00	57.84
Single Family Housing	3.76678e+007	0.20	1.74	0.74	0.01		0.00	0.14		0.00	0.14	0.00	2,010.10	2,010.10	0.04	0.04	2,022.33
Strip Mall	148215	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	7.91	7.91	0.00	0.00	7.96
User Defined Educational	2.86414e+006	0.02	0.14	0.12	0.00		0.00	0.01		0.00	0.01	0.00	152.84	152.84	0.00	0.00	153.77
User Defined Industrial	1.28485e+006	0.01	0.06	0.05	0.00		0.00	0.00		0.00	0.00	0.00	68.56	68.56	0.00	0.00	68.98
User Defined Industrial	321211	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	17.14	17.14	0.00	0.00	17.25
User Defined Recreational	491600	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	26.23	26.23	0.00	0.00	26.39
Total		**0.36**	**3.19**	**1.56**	**0.01**		**0.00**	**0.24**		**0.00**	**0.24**	**0.00**	**3,656.39**	**3,656.39**	**0.06**	**0.06**	**3,678.65**

<u>Mitigated</u>

	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	tons/yr										MT/yr					
Apartments Low Rise	8.31182e+006	0.04	0.38	0.16	0.00		0.00	0.03		0.00	0.03	0.00	443.55	443.55	0.01	0.01	446.25
City Park	0	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
Condo/Townhouse	9.20976e+006	0.05	0.42	0.18	0.00		0.00	0.03		0.00	0.03	0.00	491.47	491.47	0.01	0.01	494.46
Congregate Care (Assisted Living)	2.23673e+006	0.01	0.10	0.04	0.00		0.00	0.01		0.00	0.01	0.00	119.36	119.36	0.00	0.00	120.09
Elementary School	326709	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	17.43	17.43	0.00	0.00	17.54
Hotel	4.47143e+006	0.02	0.22	0.18	0.00		0.00	0.02		0.00	0.02	0.00	238.61	238.61	0.00	0.00	240.06
Junior High School	106765	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00	0.00	5.70	5.70	0.00	0.00	5.73
Office Park	1.0773e+006	0.01	0.05	0.04	0.00		0.00	0.00		0.00	0.00	0.00	57.49	57.49	0.00	0.00	57.84
Single Family Housing	3.76678e+007	0.20	1.74	0.74	0.01		0.00	0.14		0.00	0.14	0.00	2,010.10	2,010.10	0.04	0.04	2,022.33
Strip Mall	148215	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	7.91	7.91	0.00	0.00	7.96
User Defined Educational	2.86414e+006	0.02	0.14	0.12	0.00		0.00	0.01		0.00	0.01	0.00	152.84	152.84	0.00	0.00	153.77
User Defined Industrial	1.28485e+006	0.01	0.06	0.05	0.00		0.00	0.00		0.00	0.00	0.00	68.56	68.56	0.00	0.00	68.98
User Defined Industrial	321211	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	17.14	17.14	0.00	0.00	17.25
User Defined Recreational	491600	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	26.23	26.23	0.00	0.00	26.39
Total		**0.36**	**3.19**	**1.56**	**0.01**		**0.00**	**0.24**		**0.00**	**0.24**	**0.00**	**3,656.39**	**3,656.39**	**0.06**	**0.06**	**3,678.65**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Low Rise	1.67116e+006					591.86	0.02	0.01	594.91
City Park	0					0.00	0.00	0.00	0.00
Condo/Townhouse	1.56726e+006					555.06	0.02	0.01	557.92
Congregate Care (Assisted Living)	711642					252.04	0.01	0.00	253.33
Elementary School	301541					106.79	0.00	0.00	107.34

Hotel	1.11731e+006					395.71	0.01	0.01	397.75
Junior High School	98540.2					34.90	0.00	0.00	35.08
Office Park	526110					186.33	0.01	0.00	187.29
Single Family Housing	5.91067e+006					2,093.32	0.08	0.03	2,104.10
Strip Mall	909585					322.14	0.01	0.00	323.80
User Defined Educational	2.18597e+006					774.18	0.03	0.01	778.17
User Defined Industrial	245156					86.82	0.00	0.00	87.27
User Defined Industrial	980623					347.30	0.01	0.00	349.09
User Defined Recreational	375200					132.88	0.00	0.00	133.56
Total						**5,879.33**	**0.20**	**0.07**	**5,909.61**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Low Rise	1.67116e+006					591.86	0.02	0.01	594.91
City Park	0					0.00	0.00	0.00	0.00
Condo/Townhouse	1.56726e+006					555.06	0.02	0.01	557.92
Congregate Care (Assisted Living)	711642					252.04	0.01	0.00	253.33
Elementary School	301541					106.79	0.00	0.00	107.34
Hotel	1.11731e+006					395.71	0.01	0.01	397.75
Junior High School	98540.2					34.90	0.00	0.00	35.08
Office Park	526110					186.33	0.01	0.00	187.29
Single Family Housing	5.91067e+006					2,093.32	0.08	0.03	2,104.10
Strip Mall	909585					322.14	0.01	0.00	323.80
User Defined Educational	2.18597e+006					774.18	0.03	0.01	778.17
User Defined Industrial	245156					86.82	0.00	0.00	87.27
User Defined Industrial	980623					347.30	0.01	0.00	349.09

User Defined Recreational	375200					132.88	0.00	0.00	133.56
Total						**5,879.33**	**0.20**	**0.07**	**5,909.61**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	124.71	1.41	134.17	0.00		0.00	16.47		0.00	16.46	1,450.61	1,684.22	3,134.83	0.06	0.16	3,185.20
Unmitigated	124.71	1.41	134.17	0.00		0.00	16.47		0.00	16.46	1,450.61	1,684.22	3,134.83	0.06	0.16	3,185.20
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.43					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	12.88					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	107.87	1.22	118.81	0.00		0.00	16.39		0.00	16.39	1,450.61	1,660.35	3,110.96	0.03	0.16	3,160.74
Landscaping	0.54	0.18	15.37	0.00		0.00	0.08		0.00	0.08	0.00	23.87	23.87	0.03	0.00	24.46
Total	**124.72**	**1.40**	**134.18**	**0.00**		**0.00**	**16.47**		**0.00**	**16.47**	**1,450.61**	**1,684.22**	**3,134.83**	**0.06**	**0.16**	**3,185.20**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.43					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	12.88					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	107.87	1.22	118.81	0.00		0.00	16.39		0.00	16.39	1,450.61	1,660.35	3,110.96	0.03	0.16	3,160.74
Landscaping	0.54	0.18	15.37	0.00		0.00	0.08		0.00	0.08	0.00	23.87	23.87	0.03	0.00	24.46
Total	**124.72**	**1.40**	**134.18**	**0.00**		**0.00**	**16.47**		**0.00**	**16.47**	**1,450.61**	**1,684.22**	**3,134.83**	**0.06**	**0.16**	**3,185.20**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					2,208.06	11.18	0.31	2,537.72
Unmitigated					2,208.06	11.18	0.31	2,537.72
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	tons/yr				MT/yr			
Apartments Low Rise	30.4921 / 19.2233					216.60	0.94	0.03	244.41
City Park	0 / 28.3573					111.58	0.00	0.00	112.15
Condo/Townhouse	24.4328 / 15.4033					173.55	0.75	0.02	195.84
Congregate Care (Assisted Living)	13.0308 / 8.21507					92.56	0.40	0.01	104.45
Elementary School	1.37697 / 3.54078					20.30	0.04	0.00	21.61
Hotel	1.26834 / 0.140927					6.42	0.04	0.00	7.56
Junior High School	0.32 / 0.822856					4.72	0.01	0.00	5.02
Office Park	5.06541 / 3.10461					35.63	0.16	0.00	40.25
Single Family Housing	58.8341 / 37.0911					417.92	1.81	0.05	471.59
Strip Mall	4.55546 / 2.79206					32.04	0.14	0.00	36.20
User Defined Educational	6.97887 / 10.9157					75.21	0.22	0.01	81.71
User Defined Industrial	88.6432 / 4.4968					427.47	2.72	0.07	507.29
User Defined Recreational	128.509 / 0					594.06	3.94	0.11	709.65
Total						**2,208.06**	**11.17**	**0.30**	**2,537.73**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Low Rise	30.4921 / 19.2233					216.60	0.94	0.03	244.41
City Park	0 / 28.3573					111.58	0.00	0.00	112.15
Condo/Townhouse	24.4328 / 15.4033					173.55	0.75	0.02	195.84
Congregate Care (Assisted Living)	13.0308 / 8.21507					92.56	0.40	0.01	104.45
Elementary School	1.37697 / 3.54078					20.30	0.04	0.00	21.61
Hotel	1.26834 / 0.140927					6.42	0.04	0.00	7.56
Junior High School	0.32 / 0.822856					4.72	0.01	0.00	5.02
Office Park	5.06541 / 3.10461					35.63	0.16	0.00	40.25

Single Family Housing	58.8341 / 37.0911					417.92	1.81	0.05	471.59
Strip Mall	4.55546 / 2.79206					32.04	0.14	0.00	36.20
User Defined Educational	6.97887 / 10.9157					75.21	0.22	0.01	81.71
User Defined Industrial	88.6432 / 4.4968					427.47	2.72	0.07	507.29
User Defined Recreational	128.509 / 0					594.06	3.94	0.11	709.65
Total						**2,208.06**	**11.17**	**0.30**	**2,537.73**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					542.65	32.07	0.00	1,216.12
Unmitigated					542.65	32.07	0.00	1,216.12
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Low Rise	215.28					43.70	2.58	0.00	97.93
City Park	2.05					0.42	0.02	0.00	0.93

Condo/Townhouse	172.5					35.02	2.07	0.00	78.47
Congregate Care (Assisted Living)	182.5					37.05	2.19	0.00	83.02
Elementary School	103.66					21.04	1.24	0.00	47.16
Hotel	27.38					5.56	0.33	0.00	12.46
Junior High School	24.09					4.89	0.29	0.00	10.96
Office Park	26.51					5.38	0.32	0.00	12.06
Single Family Housing	1059.03					214.97	12.70	0.00	481.77
Strip Mall	64.58					13.11	0.77	0.00	29.38
User Defined Educational	160.6					32.60	1.93	0.00	73.06
User Defined Industrial	508.1					103.14	6.10	0.00	231.14
User Defined Recreational	127					25.78	1.52	0.00	57.77
Total						**542.66**	**32.06**	**0.00**	**1,216.11**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Low Rise	215.28					43.70	2.58	0.00	97.93
City Park	2.05					0.42	0.02	0.00	0.93
Condo/Townhouse	172.5					35.02	2.07	0.00	78.47
Congregate Care (Assisted Living)	182.5					37.05	2.19	0.00	83.02
Elementary School	103.66					21.04	1.24	0.00	47.16
Hotel	27.38					5.56	0.33	0.00	12.46
Junior High School	24.09					4.89	0.29	0.00	10.96
Office Park	26.51					5.38	0.32	0.00	12.06
Single Family Housing	1059.03					214.97	12.70	0.00	481.77
Strip Mall	64.58					13.11	0.77	0.00	29.38
User Defined Educational	160.6					32.60	1.93	0.00	73.06

User Defined Industrial	508.1					103.14	6.10	0.00	231.14
User Defined Recreational	127					25.78	1.52	0.00	57.77
Total						**542.66**	**32.06**	**0.00**	**1,216.11**

9.0 Vegetation

Proposed Project 2020

6153: Lilac Ranch - operational - SMAQMD - Proposed - 2020
San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Office Park	28.5	1000sqft
Elementary School	568	Student
Junior High School	132	Student
User Defined Educational	10.7	User Defined Unit
User Defined Industrial	2.4	User Defined Unit
User Defined Industrial	0.6	User Defined Unit
City Park	23.8	Acre
Hotel	50	Room
User Defined Recreational	40	User Defined Unit
Apartments Low Rise	468	Dwelling Unit
Condo/Townhouse	375	Dwelling Unit
Congregate Care (Assisted Living)	200	Dwelling Unit
Single Family Housing	903	Dwelling Unit
Strip Mall	61.5	1000sqft

1.2 Other Project Characteristics

Urbanization Rural

Climate Zone 13

Wind Speed (m/s) 2.6

Precipitation Freq (Days)

Utility Company San Diego Gas & Electric

1.3 User Entered Comments

40

Project Characteristics - CO2 Intensity revised based on the percentage achieved under the Renewables Portfolio Standard per County Guidance and SMAQMD Methodology 12/8/14

Land Use - Per project plans

Off-road Equipment - Contruction calculated seperately

Trips and VMT - Construction Calculated Sperately

Vehicle Trips - Per traffic report, the project generates 19406.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - The project would not include wood stoves, fireplace use reduced to 180 from default 246 days. No fireplaces in congregate care, all other fire places standard

Area Coating - SDAPCD Rule 67

Energy Use - Electric use for education and recreation based on general industrial/worship uses

Water And Wastewater - Based on WTR Report and Appendix D Table 9.1 Water Consumption Rates

Solid Waste - Based on Appendix D 10.1

Sequestration - Based on project plans

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - Reductions strategies based on CAPCOA Mitigation

Area Mitigation - 5% Electric landscaping equipment based on HOA area landscaping

Energy Mitigation -

2.0 Emissions Summary

2.1 Overall Construction

Construction Calculated Separately

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Area	124.62	1.39	133.46	0.00		0.00	16.47		0.00	16.47	1,450.61	1,684.22	3,134.83	0.06	0.16	3,185.10
Energy	0.34	2.97	1.48	0.02		0.00	0.24		0.00	0.24	0.00	7,449.54	7,449.54	0.22	0.12	7,491.58
Mobile	15.58	31.07	145.41	0.32	32.89	1.79	34.68	0.53	1.72	2.25	0.00	24,382.19	24,382.19	1.08	0.00	24,404.94
Waste						0.00	0.00		0.00	0.00	542.65	0.00	542.65	32.07	0.00	1,216.12
Water						0.00	0.00		0.00	0.00	0.00	1,568.34	1,568.34	11.16	0.30	1,894.90
Total	**140.54**	**35.43**	**280.35**	**0.34**	**32.89**	**1.79**	**51.39**	**0.53**	**1.72**	**18.96**	**1,993.26**	**35,084.29**	**37,077.55**	**44.59**	**0.58**	**38,192.64**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	16.06	0.17	14.50	0.00		0.00	0.27		0.00	0.27	0.00	2,740.45	2,740.45	0.07	0.05	2,757.46
Energy	0.26	2.25	1.13	0.01		0.00	0.18		0.00	0.18	0.00	5,350.01	5,350.01	0.15	0.09	5,380.31
Mobile	14.92	29.62	138.49	0.30	30.93	1.68	32.62	0.49	1.62	2.12	0.00	22,967.53	22,967.53	1.02	0.00	22,989.05
Waste						0.00	0.00		0.00	0.00	434.12	0.00	434.12	25.66	0.00	972.89
Water						0.00	0.00		0.00	0.00	0.00	1,254.67	1,254.67	8.92	0.24	1,515.92
Total	**31.24**	**32.04**	**154.12**	**0.31**	**30.93**	**1.68**	**33.07**	**0.49**	**1.62**	**2.57**	**434.12**	**32,312.66**	**32,746.78**	**35.82**	**0.38**	**33,615.63**

3.0 Construction Detail

Construction Calculated Separately

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

Increase Diversity

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	14.92	29.62	138.49	0.30	30.93	1.68	32.62	0.49	1.62	2.12	0.00	22,967.53	22,967.53	1.02	0.00	22,989.05
Unmitigated	15.58	31.07	145.41	0.32	32.89	1.79	34.68	0.53	1.72	2.25	0.00	24,382.19	24,382.19	1.08	0.00	24,404.94
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	3,084.12	3,350.88	2840.76	11,425,652	10,745,826
City Park	37.84	37.84	37.84	93,326	87,773
Condo/Townhouse	2,471.25	2,685.00	2276.25	9,155,170	8,610,437
Congregate Care (Assisted Living)	548.00	440.00	488.00	1,939,146	1,823,767
Elementary School	732.72	0.00	0.00	1,567,591	1,474,319
Hotel	408.50	409.50	297.50	789,173	742,217
Junior High School	213.84	0.00	0.00	481,818	453,149
Office Park	325.47	46.74	21.66	701,428	659,693

Single Family Housing	8,862.95	9,102.24	7919.31	32,426,391	30,497,021
Strip Mall	2,725.68	2,585.46	1256.45	3,983,152	3,746,154
User Defined Educational	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
User Defined Recreational	0.00	0.00	0.00		
Total	19,410.37	18,657.66	15,137.77	62,562,847	58,840,358

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Apartments Low Rise	16.80	7.10	7.90	41.60	18.80	39.60
City Park	14.70	6.60	6.60	33.00	48.00	19.00
Condo/Townhouse	16.80	7.10	7.90	41.60	18.80	39.60
Congregate Care (Assisted Living)	16.80	7.10	7.90	41.60	18.80	39.60
Elementary School	14.70	6.60	6.60	65.00	30.00	5.00
Hotel	14.70	6.60	6.60	19.40	61.60	19.00
Junior High School	14.70	6.60	6.60	72.80	22.20	5.00
Office Park	14.70	6.60	6.60	33.00	48.00	19.00
Single Family Housing	16.80	7.10	7.90	41.60	18.80	39.60
Strip Mall	14.70	6.60	6.60	16.60	64.40	19.00
User Defined Educational	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Recreational	14.70	6.60	6.60	0.00	0.00	0.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Kilowatt Hours of Renewable Electricity Generated

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	2,772.96	2,772.96	0.11	0.04	2,787.57
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	4,050.77	4,050.77	0.15	0.06	4,072.12
NaturalGas Mitigated	0.26	2.25	1.13	0.01		0.00	0.18		0.00	0.18	0.00	2,577.05	2,577.05	0.05	0.05	2,592.74
NaturalGas Unmitigated	0.34	2.97	1.48	0.02		0.00	0.24		0.00	0.24	0.00	3,398.77	3,398.77	0.07	0.06	3,419.45
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
Apartments Low Rise	7.8208e+006	0.04	0.36	0.15	0.00		0.00	0.03		0.00	0.03	0.00	417.35	417.35	0.01	0.01	419.89
City Park	0	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
Condo/Townhouse	8.65382e+006	0.05	0.40	0.17	0.00		0.00	0.03		0.00	0.03	0.00	461.80	461.80	0.01	0.01	464.61
Congregate Care (Assisted Living)	2.10798e+006	0.01	0.10	0.04	0.00		0.00	0.01		0.00	0.01	0.00	112.49	112.49	0.00	0.00	113.17
Elementary School	294418	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	15.71	15.71	0.00	0.00	15.81
Hotel	4.41771e+006	0.02	0.22	0.18	0.00		0.00	0.02		0.00	0.02	0.00	235.75	235.75	0.00	0.00	237.18
Junior High School	96212.5	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	5.13	5.13	0.00	0.00	5.17
Office Park	959880	0.01	0.05	0.04	0.00		0.00	0.00		0.00	0.00	0.00	51.22	51.22	0.00	0.00	51.53
Single Family Housing	3.44389e+007	0.19	1.59	0.68	0.01		0.00	0.13		0.00	0.13	0.00	1,837.79	1,837.79	0.04	0.03	1,848.98
Strip Mall	140835	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	7.52	7.52	0.00	0.00	7.56
User Defined Educational	2.74761e+006	0.01	0.13	0.11	0.00		0.00	0.01		0.00	0.01	0.00	146.62	146.62	0.00	0.00	147.52
User Defined Industrial	1.23257e+006	0.01	0.06	0.05	0.00		0.00	0.00		0.00	0.00	0.00	65.77	65.77	0.00	0.00	66.18

User Defined Industrial	308143	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	16.44	16.44	0.00	0.00	16.54
User Defined Recreational	471600	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	25.17	25.17	0.00	0.00	25.32
Total		**0.34**	**2.97**	**1.47**	**0.01**		**0.00**	**0.23**		**0.00**	**0.23**	**0.00**	**3,398.76**	**3,398.76**	**0.06**	**0.05**	**3,419.46**

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	tons/yr										MT/yr					
Apartments Low Rise	5.86377e+006	0.03	0.27	0.11	0.00		0.00	0.02		0.00	0.02	0.00	312.91	312.91	0.01	0.01	314.82
City Park	0	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
Condo/Townhouse	6.43804e+006	0.03	0.30	0.13	0.00		0.00	0.02		0.00	0.02	0.00	343.56	343.56	0.01	0.01	345.65
Congregate Care (Assisted Living)	1.59482e+006	0.01	0.07	0.03	0.00		0.00	0.01		0.00	0.01	0.00	85.11	85.11	0.00	0.00	85.62
Elementary School	212930	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	11.36	11.36	0.00	0.00	11.43
Hotel	3.33416e+006	0.02	0.16	0.14	0.00		0.00	0.01		0.00	0.01	0.00	177.92	177.92	0.00	0.00	179.01
Junior High School	69583.3	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	3.71	3.71	0.00	0.00	3.74
Office Park	729030	0.00	0.04	0.03	0.00		0.00	0.00		0.00	0.00	0.00	38.90	38.90	0.00	0.00	39.14
Single Family Housing	2.57211e+007	0.14	1.19	0.50	0.01		0.00	0.10		0.00	0.10	0.00	1,372.57	1,372.57	0.03	0.03	1,380.93
Strip Mall	118695	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00	0.00	6.33	6.33	0.00	0.00	6.37
User Defined Educational	2.4302e+006	0.01	0.12	0.10	0.00		0.00	0.01		0.00	0.01	0.00	129.68	129.68	0.00	0.00	130.47
User Defined Industrial	1.09018e+006	0.01	0.05	0.04	0.00		0.00	0.00		0.00	0.00	0.00	58.18	58.18	0.00	0.00	58.53
User Defined Industrial	272546	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	14.54	14.54	0.00	0.00	14.63
User Defined Recreational	417120	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	22.26	22.26	0.00	0.00	22.39
Total		**0.25**	**2.25**	**1.12**	**0.01**		**0.00**	**0.17**		**0.00**	**0.17**	**0.00**	**2,577.03**	**2,577.03**	**0.05**	**0.05**	**2,592.73**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e

Land Use	kWh	tons/yr				MT/yr			
Apartments Low Rise	1.64392e+006					413.22	0.02	0.01	415.40
City Park	0					0.00	0.00	0.00	0.00
Condo/Townhouse	1.55099e+006					389.86	0.01	0.01	391.92
Congregate Care (Assisted Living)	697442					175.31	0.01	0.00	176.24
Elementary School	283021					71.14	0.00	0.00	71.52
Hotel	1.05923e+006					266.25	0.01	0.00	267.66
Junior High School	92488.1					23.25	0.00	0.00	23.37
Office Park	501600					126.08	0.00	0.00	126.75
Single Family Housing	5.78955e+006					1,455.28	0.06	0.02	1,462.95
Strip Mall	863460					217.04	0.01	0.00	218.19
User Defined Educational	2.09741e+006					527.21	0.02	0.01	529.99
User Defined Industrial	235224					59.13	0.00	0.00	59.44
User Defined Industrial	940896					236.51	0.01	0.00	237.75
User Defined Recreational	360000					90.49	0.00	0.00	90.97
Total						**4,050.77**	**0.15**	**0.05**	**4,072.15**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Low Rise	1.24763e+006					313.61	0.01	0.00	315.26
City Park	-242857					-61.05	0.00	0.00	-61.37
Condo/Townhouse	1.17571e+006					295.53	0.01	0.00	297.09
Congregate Care (Assisted Living)	413050					103.83	0.00	0.00	104.37
Elementary School	-7133.11					-1.79	0.00	0.00	-1.80
Hotel	633860					159.33	0.01	0.00	160.17
Junior High School	-165825					-41.68	0.00	0.00	-41.90

Office Park	178587					44.89	0.00	0.00	45.13
Single Family Housing	5.02828e+006					1,263.92	0.05	0.02	1,270.58
Strip Mall	484350					121.75	0.00	0.00	122.39
User Defined Educational	1.63747e+006					411.60	0.02	0.01	413.77
User Defined Industrial	-31978.8					-8.04	0.00	0.00	-8.08
User Defined Industrial	600656					150.98	0.01	0.00	151.78
User Defined Recreational	79882.9					20.08	0.00	0.00	20.19
Total						**2,772.96**	**0.11**	**0.03**	**2,787.58**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	16.06	0.17	14.50	0.00		0.00	0.27		0.00	0.27	0.00	2,740.45	2,740.45	0.07	0.05	2,757.46

Unmitigated	124.62	1.39	133.46	0.00		0.00	16.47		0.00	16.47	1,450.61	1,684.22	3,134.83	0.06	0.16	3,185.10
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.43					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	12.88					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	107.87	1.22	118.81	0.00		0.00	16.39		0.00	16.39	1,450.61	1,660.35	3,110.96	0.03	0.16	3,160.74
Landscaping	0.45	0.17	14.66	0.00		0.00	0.08		0.00	0.08	0.00	23.87	23.87	0.02	0.00	24.36
Total	**124.63**	**1.39**	**133.47**	**0.00**		**0.00**	**16.47**		**0.00**	**16.47**	**1,450.61**	**1,684.22**	**3,134.83**	**0.05**	**0.16**	**3,185.10**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.43					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	11.92					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.27	0.00	0.01	0.00		0.00	0.19		0.00	0.19	0.00	2,716.93	2,716.93	0.05	0.05	2,733.47
Landscaping	0.44	0.17	14.48	0.00		0.00	0.08		0.00	0.08	0.00	23.52	23.52	0.02	0.00	23.99
Total	**16.06**	**0.17**	**14.49**	**0.00**		**0.00**	**0.27**		**0.00**	**0.27**	**0.00**	**2,740.45**	**2,740.45**	**0.07**	**0.05**	**2,757.46**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					1,254.67	8.92	0.24	1,515.92
Unmitigated					1,568.34	11.16	0.30	1,894.90
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Low Rise	30.4921 / 19.2233					153.83	0.94	0.03	181.34
City Park	0 / 28.3573					79.19	0.00	0.00	79.61
Condo/Townhouse	24.4328 / 15.4033					123.26	0.75	0.02	145.30
Congregate Care (Assisted Living)	13.0308 / 8.21507					65.74	0.40	0.01	77.49
Elementary School	1.37697 / 3.54078					14.41	0.04	0.00	15.69
Hotel	1.26834 / 0.140927					4.56	0.04	0.00	5.69
Junior High School	0.32 / 0.822856					3.35	0.01	0.00	3.65
Office Park	5.06541 / 3.10461					25.31	0.16	0.00	29.87
Single Family Housing	58.8341 / 37.0911					296.81	1.81	0.05	349.89
Strip Mall	4.55546 / 2.79206					22.76	0.14	0.00	26.87
User Defined Educational	6.97887 / 10.9157					53.40	0.22	0.01	59.80
User Defined Industrial	88.6432 / 4.4968					303.68	2.72	0.07	382.90
User Defined Recreational	128.509 / 0					422.05	3.94	0.10	536.80
Total						**1,568.35**	**11.17**	**0.29**	**1,894.90**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Low Rise	24.3937 / 15.3786					123.06	0.75	0.02	145.07
City Park	0 / 22.6858					63.35	0.00	0.00	63.69
Condo/Townhouse	19.5462 / 12.3226					98.61	0.60	0.02	116.24
Congregate Care (Assisted Living)	10.4246 / 6.57206					52.59	0.32	0.01	62.00
Elementary School	1.10157 / 2.83262					11.53	0.03	0.00	12.55
Hotel	1.01467 / 0.112741					3.65	0.03	0.00	4.55
Junior High School	0.256 / 0.658285					2.68	0.01	0.00	2.92
Office Park	4.05233 / 2.48369					20.24	0.12	0.00	23.90
Single Family Housing	47.0673 / 29.6728					237.44	1.45	0.04	279.91
Strip Mall	3.64437 / 2.23364					18.21	0.11	0.00	21.49
User Defined Educational	5.58309 / 8.73253					42.72	0.17	0.00	47.84
User Defined Industrial	70.9145 / 3.59744					242.94	2.17	0.06	306.32
User Defined Recreational	102.807 / 0					337.64	3.15	0.08	429.44
Total						**1,254.66**	**8.91**	**0.23**	**1,515.92**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					434.12	25.66	0.00	972.89
Unmitigated					542.65	32.07	0.00	1,216.12
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Low Rise	215.28					43.70	2.58	0.00	97.93
City Park	2.05					0.42	0.02	0.00	0.93
Condo/Townhouse	172.5					35.02	2.07	0.00	78.47
Congregate Care (Assisted Living)	182.5					37.05	2.19	0.00	83.02
Elementary School	103.66					21.04	1.24	0.00	47.16
Hotel	27.38					5.56	0.33	0.00	12.46
Junior High School	24.09					4.89	0.29	0.00	10.96
Office Park	26.51					5.38	0.32	0.00	12.06
Single Family Housing	1059.03					214.97	12.70	0.00	481.77
Strip Mall	64.58					13.11	0.77	0.00	29.38
User Defined Educational	160.6					32.60	1.93	0.00	73.06
User Defined Industrial	508.1					103.14	6.10	0.00	231.14
User Defined Recreational	127					25.78	1.52	0.00	57.77
Total						**542.66**	**32.06**	**0.00**	**1,216.11**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Low Rise	172.224					34.96	2.07	0.00	78.35
City Park	1.64					0.33	0.02	0.00	0.75
Condo/Townhouse	138					28.01	1.66	0.00	62.78
Congregate Care (Assisted Living)	146					29.64	1.75	0.00	66.42
Elementary School	82.928					16.83	0.99	0.00	37.73
Hotel	21.904					4.45	0.26	0.00	9.96
Junior High School	19.272					3.91	0.23	0.00	8.77
Office Park	21.208					4.31	0.25	0.00	9.65
Single Family Housing	847.224					171.98	10.16	0.00	385.42
Strip Mall	51.664					10.49	0.62	0.00	23.50
User Defined Educational	128.48					26.08	1.54	0.00	58.45
User Defined Industrial	406.48					82.51	4.88	0.00	184.91
User Defined Recreational	101.6					20.62	1.22	0.00	46.22
Total						**434.12**	**25.65**	**0.00**	**972.91**

9.0 Vegetation

Proposed Project 2025/2030

6153: Lilac Ranch - operational - SMAQMD - Proposed - 2030

San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Office Park	28.5	1000sqft
Elementary School	568	Student
Junior High School	132	Student
User Defined Educational	10.7	User Defined Unit
User Defined Industrial	2.4	User Defined Unit
User Defined Industrial	0.6	User Defined Unit
City Park	23.8	Acre
Hotel	50	Room
User Defined Recreational	40	User Defined Unit
Apartments Low Rise	468	Dwelling Unit
Condo/Townhouse	375	Dwelling Unit
Congregate Care (Assisted Living)	200	Dwelling Unit
Single Family Housing	903	Dwelling Unit
Strip Mall	61.5	1000sqft

1.2 Other Project Characteristics

Urbanization Rural

Climate Zone 13

Wind Speed (m/s) 2.6

Precipitation Freq (Days)

Utility Company San Diego Gas & Electric

1.3 User Entered Comments

40

Project Characteristics - CO2 Intensity revised based on the percentage achieved under the Renewables Portfolio Standard per County Guidance and SMAQMD Methodology 12/8/14, assumes a RPS of 50% by 2030

Land Use - Per project plans

Construction Phase - Construction calculated seperately

Off-road Equipment - Contruction calculated seperately

Trips and VMT - Construction Calculated Sperately

Vehicle Trips - Per traffic report, the project generates 19406.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - The project would not include wood stoves, fireplace use reduced to 180 from default 246 days. No fireplaces in congregate care.

Area Coating - SDAPCD Rule 67

Energy Use - Electric use for education and recreation based on general industrial/worship uses

Water And Wastewater - Based on WTR Report and Appendix D Table 9.1 Water Consumption Rates

Solid Waste - Based on Appendix D 10.1

Land Use Change -

Sequestration - Based on project plans

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - Reductions strategies based on CAPCOA Mitigation

Area Mitigation - 5% Electric landscaping equipment based on HOA area landscaping

Energy Mitigation -

Waste Mitigation -

2.0 Emissions Summary

2.1 Overall Construction

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	124.61	1.39	133.37	0.00		0.00	16.47		0.00	16.47	1,450.61	1,684.22	3,134.83	0.05	0.16	3,185.09
Energy	0.34	2.97	1.48	0.02		0.00	0.24		0.00	0.24	0.00	6,422.08	6,422.08	0.17	0.11	6,458.67
Mobile	11.62	20.78	100.07	0.32	32.93	1.66	34.59	0.52	1.60	2.12	0.00	22,239.68	22,239.68	0.81	0.00	22,256.60
Waste						0.00	0.00		0.00	0.00	542.65	0.00	542.65	32.07	0.00	1,216.12
Water						0.00	0.00		0.00	0.00	0.00	1,171.57	1,171.57	11.14	0.29	1,496.03
Total	**136.57**	**25.14**	**234.92**	**0.34**	**32.93**	**1.66**	**51.30**	**0.52**	**1.60**	**18.83**	**1,993.26**	**31,517.55**	**33,510.81**	**44.24**	**0.56**	**34,612.51**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	16.05	0.17	14.41	0.00		0.00	0.27		0.00	0.27	0.00	2,740.45	2,740.45	0.07	0.05	2,757.45
Energy	0.26	2.25	1.13	0.01		0.00	0.18		0.00	0.18	0.00	4,646.66	4,646.66	0.12	0.08	4,673.23
Mobile	11.11	19.87	95.21	0.30	30.97	1.56	32.53	0.49	1.51	2.00	0.00	20,949.23	20,949.23	0.76	0.00	20,965.24
Waste						0.00	0.00		0.00	0.00	135.66	0.00	135.66	8.02	0.00	304.03
Water						0.00	0.00		0.00	0.00	0.00	937.26	937.26	8.91	0.23	1,196.82
Total	**27.42**	**22.29**	**110.75**	**0.31**	**30.97**	**1.56**	**32.98**	**0.49**	**1.51**	**2.45**	**135.66**	**29,273.60**	**29,409.26**	**17.88**	**0.36**	**29,896.77**

3.0 Construction Detail

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

Increase Diversity

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	11.11	19.87	95.21	0.30	30.97	1.56	32.53	0.49	1.51	2.00	0.00	20,949.23	20,949.23	0.76	0.00	20,965.24
Unmitigated	11.62	20.78	100.07	0.32	32.93	1.66	34.59	0.52	1.60	2.12	0.00	22,239.68	22,239.68	0.81	0.00	22,256.60
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	3,084.12	3,350.88	2840.76	11,425,652	10,745,826
City Park	37.84	37.84	37.84	93,326	87,773
Condo/Townhouse	2,471.25	2,685.00	2276.25	9,155,170	8,610,437
Congregate Care (Assisted Living)	548.00	440.00	488.00	1,939,146	1,823,767
Elementary School	732.72	0.00	0.00	1,567,591	1,474,319
Hotel	408.50	409.50	297.50	789,173	742,217
Junior High School	213.84	0.00	0.00	481,818	453,149
Office Park	325.47	46.74	21.66	701,428	659,693
Single Family Housing	8,895.45	9,102.24	7919.31	32,512,320	30,577,837
Strip Mall	2,725.68	2,585.46	1256.45	3,983,152	3,746,154
User Defined Educational	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
User Defined Recreational	0.00	0.00	0.00		
Total	19,442.88	18,657.66	15,137.77	62,648,776	58,921,174

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Apartments Low Rise	16.80	7.10	7.90	41.60	18.80	39.60

City Park	14.70	6.60	6.60	33.00	48.00	19.00
Condo/Townhouse	16.80	7.10	7.90	41.60	18.80	39.60
Congregate Care (Assisted Living)	16.80	7.10	7.90	41.60	18.80	39.60
Elementary School	14.70	6.60	6.60	65.00	30.00	5.00
Hotel	14.70	6.60	6.60	19.40	61.60	19.00
Junior High School	14.70	6.60	6.60	72.80	22.20	5.00
Office Park	14.70	6.60	6.60	33.00	48.00	19.00
Single Family Housing	16.80	7.10	7.90	41.60	18.80	39.60
Strip Mall	14.70	6.60	6.60	16.60	64.40	19.00
User Defined Educational	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00
User Defined Recreational	14.70	6.60	6.60	0.00	0.00	0.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Kilowatt Hours of Renewable Electricity Generated

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	2,069.61	2,069.61	0.08	0.03	2,080.49
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	3,023.31	3,023.31	0.11	0.04	3,039.21
NaturalGas Mitigated	0.26	2.25	1.13	0.01		0.00	0.18		0.00	0.18	0.00	2,577.05	2,577.05	0.05	0.05	2,592.74

NaturalGas Unmitigated	0.34	2.97	1.48	0.02		0.00	0.24		0.00	0.24	0.00	3,398.77	3,398.77	0.07	0.06	3,419.45
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

<u>Unmitigated</u>

	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	tons/yr										MT/yr					
Apartments Low Rise	7.8208e+006	0.04	0.36	0.15	0.00		0.00	0.03		0.00	0.03	0.00	417.35	417.35	0.01	0.01	419.89
City Park	0	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
Condo/Townhouse	8.65382e+006	0.05	0.40	0.17	0.00		0.00	0.03		0.00	0.03	0.00	461.80	461.80	0.01	0.01	464.61
Congregate Care (Assisted Living)	2.10798e+006	0.01	0.10	0.04	0.00		0.00	0.01		0.00	0.01	0.00	112.49	112.49	0.00	0.00	113.17
Elementary School	294418	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	15.71	15.71	0.00	0.00	15.81
Hotel	4.41771e+006	0.02	0.22	0.18	0.00		0.00	0.02		0.00	0.02	0.00	235.75	235.75	0.00	0.00	237.18
Junior High School	96212.5	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	5.13	5.13	0.00	0.00	5.17
Office Park	959880	0.01	0.05	0.04	0.00		0.00	0.00		0.00	0.00	0.00	51.22	51.22	0.00	0.00	51.53
Single Family Housing	3.44389e+007	0.19	1.59	0.68	0.01		0.00	0.13		0.00	0.13	0.00	1,837.79	1,837.79	0.04	0.03	1,848.98
Strip Mall	140835	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	7.52	7.52	0.00	0.00	7.56
User Defined Educational	2.74761e+006	0.01	0.13	0.11	0.00		0.00	0.01		0.00	0.01	0.00	146.62	146.62	0.00	0.00	147.52
User Defined Industrial	1.23257e+006	0.01	0.06	0.05	0.00		0.00	0.00		0.00	0.00	0.00	65.77	65.77	0.00	0.00	66.18
User Defined Industrial	308143	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	16.44	16.44	0.00	0.00	16.54
User Defined Recreational	471600	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	25.17	25.17	0.00	0.00	25.32
Total		**0.34**	**2.97**	**1.47**	**0.01**		**0.00**	**0.23**		**0.00**	**0.23**	**0.00**	**3,398.76**	**3,398.76**	**0.06**	**0.05**	**3,419.46**

<u>Mitigated</u>

	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	tons/yr										MT/yr					

Apartments Low Rise	5.86377e+006	0.03	0.27	0.11	0.00		0.00	0.02		0.00	0.02	0.00	312.91	312.91	0.01	0.01	314.82
City Park	0	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
Condo/Townhouse	6.43804e+006	0.03	0.30	0.13	0.00		0.00	0.02		0.00	0.02	0.00	343.56	343.56	0.01	0.01	345.65
Congregate Care (Assisted Living)	1.59482e+006	0.01	0.07	0.03	0.00		0.00	0.01		0.00	0.01	0.00	85.11	85.11	0.00	0.00	85.62
Elementary School	212930	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	11.36	11.36	0.00	0.00	11.43
Hotel	3.33416e+006	0.02	0.16	0.14	0.00		0.00	0.01		0.00	0.01	0.00	177.92	177.92	0.00	0.00	179.01
Junior High School	69583.3	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	3.71	3.71	0.00	0.00	3.74
Office Park	729030	0.00	0.04	0.03	0.00		0.00	0.00		0.00	0.00	0.00	38.90	38.90	0.00	0.00	39.14
Single Family Housing	2.57211e+007	0.14	1.19	0.50	0.01		0.00	0.10		0.00	0.10	0.00	1,372.57	1,372.57	0.03	0.03	1,380.93
Strip Mall	118695	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00	0.00	6.33	6.33	0.00	0.00	6.37
User Defined Educational	2.4302e+006	0.01	0.12	0.10	0.00		0.00	0.01		0.00	0.01	0.00	129.68	129.68	0.00	0.00	130.47
User Defined Industrial	1.09018e+006	0.01	0.05	0.04	0.00		0.00	0.00		0.00	0.00	0.00	58.18	58.18	0.00	0.00	58.53
User Defined Industrial	272546	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	14.54	14.54	0.00	0.00	14.63
User Defined Recreational	417120	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	22.26	22.26	0.00	0.00	22.39
Total		**0.25**	**2.25**	**1.12**	**0.01**		**0.00**	**0.17**		**0.00**	**0.17**	**0.00**	**2,577.03**	**2,577.03**	**0.05**	**0.05**	**2,592.73**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Low Rise	1.64392e+006					308.41	0.01	0.00	310.03
City Park	0					0.00	0.00	0.00	0.00
Condo/Townhouse	1.55099e+006					290.98	0.01	0.00	292.51
Congregate Care (Assisted Living)	697442					130.84	0.00	0.00	131.53
Elementary School	283021					53.10	0.00	0.00	53.38
Hotel	1.05923e+006					198.72	0.01	0.00	199.76
Junior High School	92488.1					17.35	0.00	0.00	17.44
Office Park	501600					94.10	0.00	0.00	94.60

Single Family Housing	5.78955e+006					1,086.15	0.04	0.02	1,091.86
Strip Mall	863460					161.99	0.01	0.00	162.84
User Defined Educational	2.09741e+006					393.49	0.01	0.01	395.56
User Defined Industrial	235224					44.13	0.00	0.00	44.36
User Defined Industrial	940896					176.52	0.01	0.00	177.45
User Defined Recreational	360000					67.54	0.00	0.00	67.89
Total						**3,023.32**	**0.10**	**0.03**	**3,039.21**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Low Rise	1.24763e+006					234.06	0.01	0.00	235.29
City Park	-242857					-45.56	0.00	0.00	-45.80
Condo/Townhouse	1.17571e+006					220.57	0.01	0.00	221.73
Congregate Care (Assisted Living)	413050					77.49	0.00	0.00	77.90
Elementary School	-7133.11					-1.34	0.00	0.00	-1.35
Hotel	633860					118.92	0.00	0.00	119.54
Junior High School	-165825					-31.11	0.00	0.00	-31.27
Office Park	178587					33.50	0.00	0.00	33.68
Single Family Housing	5.02828e+006					943.33	0.03	0.01	948.30
Strip Mall	484350					90.87	0.00	0.00	91.34
User Defined Educational	1.63747e+006					307.20	0.01	0.00	308.82
User Defined Industrial	-31978.8					-6.00	0.00	0.00	-6.03
User Defined Industrial	600656					112.69	0.00	0.00	113.28
User Defined Recreational	79882.9					14.99	0.00	0.00	15.07
Total						**2,069.61**	**0.06**	**0.01**	**2,080.50**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	16.05	0.17	14.41	0.00		0.00	0.27		0.00	0.27	0.00	2,740.45	2,740.45	0.07	0.05	2,757.45
Unmitigated	124.61	1.39	133.37	0.00		0.00	16.47		0.00	16.47	1,450.61	1,684.22	3,134.83	0.05	0.16	3,185.09
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.43					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Consumer Products	12.88					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	107.87	1.22	118.81	0.00		0.00	16.39		0.00	16.39	1,450.61	1,660.35	3,110.96	0.03	0.16	3,160.74
Landscaping	0.44	0.17	14.57	0.00		0.00	0.08		0.00	0.08	0.00	23.87	23.87	0.02	0.00	24.35
Total	**124.62**	**1.39**	**133.38**	**0.00**		**0.00**	**16.47**		**0.00**	**16.47**	**1,450.61**	**1,684.22**	**3,134.83**	**0.05**	**0.16**	**3,185.09**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.43					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	11.92					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.27	0.00	0.01	0.00		0.00	0.19		0.00	0.19	0.00	2,716.93	2,716.93	0.05	0.05	2,733.47
Landscaping	0.43	0.17	14.39	0.00		0.00	0.08		0.00	0.08	0.00	23.52	23.52	0.02	0.00	23.98
Total	**16.05**	**0.17**	**14.40**	**0.00**		**0.00**	**0.27**		**0.00**	**0.27**	**0.00**	**2,740.45**	**2,740.45**	**0.07**	**0.05**	**2,757.45**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					937.26	8.91	0.23	1,196.82
Unmitigated					1,171.57	11.14	0.29	1,496.03

Total	NA	NA	NA	NA	NA	NA	NA	NA

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Low Rise	30.4921 / 19.2233					114.90	0.93	0.02	142.20
City Park	0 / 28.3573					59.11	0.00	0.00	59.42
Condo/Townhouse	24.4328 / 15.4033					92.06	0.75	0.02	113.94
Congregate Care (Assisted Living)	13.0308 / 8.21507					49.10	0.40	0.01	60.77
Elementary School	1.37697 / 3.54078					10.76	0.04	0.00	12.02
Hotel	1.26834 / 0.140927					3.41	0.04	0.00	4.53
Junior High School	0.32 / 0.822856					2.50	0.01	0.00	2.79
Office Park	5.06541 / 3.10461					18.90	0.16	0.00	23.44
Single Family Housing	58.8341 / 37.0911					221.69	1.80	0.05	274.37
Strip Mall	4.55546 / 2.79206					17.00	0.14	0.00	21.08
User Defined Educational	6.97887 / 10.9157					39.88	0.21	0.01	46.20
User Defined Industrial	88.6432 / 4.4968					226.91	2.71	0.07	305.72
User Defined Recreational	128.509 / 0					315.37	3.93	0.10	429.55
Total						**1,171.59**	**11.12**	**0.28**	**1,496.03**

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Low Rise	24.3937 / 15.3786					91.92	0.75	0.02	113.76
City Park	0 / 22.6858					47.28	0.00	0.00	47.53

Condo/Townhouse	19.5462 / 12.3226					73.65	0.60	0.02	91.15
Congregate Care (Assisted Living)	10.4246 / 6.57206					39.28	0.32	0.01	48.62
Elementary School	1.10157 / 2.83262					8.61	0.03	0.00	9.62
Hotel	1.01467 / 0.112741					2.73	0.03	0.00	3.63
Junior High School	0.256 / 0.658285					2.00	0.01	0.00	2.23
Office Park	4.05233 / 2.48369					15.12	0.12	0.00	18.75
Single Family Housing	47.0673 / 29.6728					177.35	1.44	0.04	219.50
Strip Mall	3.64437 / 2.23364					13.60	0.11	0.00	16.86
User Defined Educational	5.58309 / 8.73253					31.90	0.17	0.00	36.96
User Defined Industrial	70.9145 / 3.59744					181.52	2.17	0.06	244.57
User Defined Recreational	102.807 / 0					252.29	3.15	0.08	343.64
Total						**937.25**	**8.90**	**0.23**	**1,196.82**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					135.66	8.02	0.00	304.03
Unmitigated					542.65	32.07	0.00	1,216.12
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Low Rise	215.28					43.70	2.58	0.00	97.93
City Park	2.05					0.42	0.02	0.00	0.93
Condo/Townhouse	172.5					35.02	2.07	0.00	78.47
Congregate Care (Assisted Living)	182.5					37.05	2.19	0.00	83.02
Elementary School	103.66					21.04	1.24	0.00	47.16
Hotel	27.38					5.56	0.33	0.00	12.46
Junior High School	24.09					4.89	0.29	0.00	10.96
Office Park	26.51					5.38	0.32	0.00	12.06
Single Family Housing	1059.03					214.97	12.70	0.00	481.77
Strip Mall	64.58					13.11	0.77	0.00	29.38
User Defined Educational	160.6					32.60	1.93	0.00	73.06
User Defined Industrial	508.1					103.14	6.10	0.00	231.14
User Defined Recreational	127					25.78	1.52	0.00	57.77
Total						**542.66**	**32.06**	**0.00**	**1,216.11**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Low Rise	53.82					10.92	0.65	0.00	24.48
City Park	0.5125					0.10	0.01	0.00	0.23
Condo/Townhouse	43.125					8.75	0.52	0.00	19.62
Congregate Care (Assisted Living)	45.625					9.26	0.55	0.00	20.76
Elementary School	25.915					5.26	0.31	0.00	11.79

Hotel	6.845					1.39	0.08	0.00	3.11
Junior High School	6.0225					1.22	0.07	0.00	2.74
Office Park	6.6275					1.35	0.08	0.00	3.01
Single Family Housing	264.757					53.74	3.18	0.00	120.44
Strip Mall	16.145					3.28	0.19	0.00	7.34
User Defined Educational	40.15					8.15	0.48	0.00	18.26
User Defined Industrial	127.025					25.78	1.52	0.00	57.79
User Defined Recreational	31.75					6.44	0.38	0.00	14.44
Total						**135.64**	**8.02**	**0.00**	**304.01**

9.0 Vegetation

5~~7~~) ~~Climate Action Plan Checklist~~EMFAC 2014 Calculations

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2030 Emissions Summary

Vehicle Class	VMT	CO2	CH4	NOX
LDA	55246598.96	12217.91976	0.334568	3.21197
LDT1	3332668.79	984.0759281	0.023951	0.285671
LDT2	15899421.82	4619.129969	0.065372	0.836919
LHD1	1083576.866	769.4433653	0.017347	1.222671
LHD2	473166.0251	359.4807565	0.003899	0.197447
MCY	503373.3168	109.3841593	0.301101	0.685945
MDV	8754804.292	3277.528604	0.056303	0.734604
MH	70092.82011	92.6467243	0.000858	0.076951
T6 Ag	3928.586338	5.479039861	1.12E-05	0.016534
T6 CAIRP Heavy	2512.47052	3.172232301	5.47E-06	0.004719
T6 CAIRP Small	7712.6644	9.936043867	1.58E-05	0.01275
T6 Instate Construction Heavy	37841.59876	49.71675974	9.46E-05	0.071266
T6 Instate Construction Small	101657.3141	132.2574186	0.00023	0.189189
T6 Instate Heavy	341613.4606	437.9647607	0.000848	0.725197
T6 Instate Small	862011.8648	1121.343734	0.001941	1.568232
T6 OOS Heavy	1439.551185	1.81787822	3.14E-06	0.002717
T6 OOS Small	4419.066847	5.692979723	9.05E-06	0.007305
T6 Public	39599.34159	53.12041697	9.40E-05	0.138671
T6 Utility	5582.406319	7.376628856	9.70E-06	0.013699
T6TS	174715.9457	245.2488008	0.005024	0.100112
T7 Ag	2922.302246	6.900100365	2.04E-05	0.026602
T7 CAIRP	384338.9302	649.0429055	0.00172	0.805495
T7 CAIRP Construction	26844.54181	46.70349904	0.000122	0.057553
T7 NNOOS	476580.7516	809.3924671	0.001915	0.862287
T7 NOOS	151813.7641	260.6566053	0.000698	0.331035
T7 Other Port	108045.4914	176.5035439	0.000459	0.208919
T7 POAK				
T7 POLA	60669.78686	103.2330844	0.000285	0.143391
T7 Public	30705.42427	64.89998081	0.000207	0.268601
T7 Single	191161.8575	327.515212	0.000682	0.369446
T7 Single Construction	69443.29763	119.0551225	0.000249	0.139792
T7 SWCV	83529.86834	320.2725583	0.342573	0.337472
T7 Tractor	581132.2517	953.6010165	0.002572	1.342957
T7 Tractor Construction	51775.11093	88.56121067	0.000235	0.132351
T7 Utility	2867.705265	5.723550225	1.14E-05	0.01131
T7IS	23466.7386	42.4699607	0.003409	0.087253
PTO	37957.55965	78.35419173	0.00039	0.17515
SBUS	70343.8135	88.22327768	0.002647	0.204827
UBUS	150269.1993	296.9924955	0.199621	0.486036
Motor Coach	37137.96848	70.23222487	0.000176	0.100159
OBUS	97329.04587	134.7316439	0.002122	0.045044
All Other Buses	38624.90047	51.40734422	0.000103	0.08665
Total	89623697.47	29197.20796	1.371901	16.3249

Trips	17419718.62
Total VMT	89,623,697.47
Total grams CO2	26,487,260,339.88
Total grams CH4	1,244,567.72
Total grams NOX	14,809,697.52
CO2 g/mi	295.54
CH4 g/mi	0.0139
NOX g/mi	0.1652
Average Miles Per Trip	5.14

Vehicle Class	VMT	CO2	CH4	NOX
LDA	61929442.17	11960.22776	0.327679	3.044997
LDT1	3620948.44	884.3905471	0.00728	0.101424
LDT2	17695838.07	4051.498798	0.039856	0.527582
LHD1	1086771.282	726.9444677	0.008005	0.227951
LHD2	533647.0679	396.5753357	0.003727	0.090429
MCY	554061.2182	121.5646131	0.333588	0.758513
MDV	9672644.487	2505.969878	0.023533	0.305284
MH	67231.83231	86.62281581	0.000323	0.046498
T6 Ag	3928.586338	5.206093481	1.03E-05	0.014119
T6 CAIRP Heavy	3158.362595	3.993156326	6.88E-06	0.006134
T6 CAIRP Small	9695.393661	12.48854792	2.00E-05	0.016673
T6 Instate Construction Heavy	73804.49692	94.7268146	0.000179	0.129418
T6 Instate Construction Small	198267.7047	255.7861963	0.000445	0.375369
T6 Instate Heavy	434839.7222	548.8934528	0.001004	0.813416
T6 Instate Small	1096429.922	1413.072389	0.00245	2.007462
T6 OOS Heavy	1809.623071	2.287934156	3.94E-06	0.003515
T6 OOS Small	5555.096199	7.155468618	1.15E-05	0.009553
T6 Public	45073.88844	59.3394497	8.34E-05	0.122939
T6 Utility	6478.186857	8.492556029	1.12E-05	0.015735
T6TS	203126.5756	284.5557685	0.005269	0.093564
T7 Ag	2922.302246	6.060288472	1.78E-05	0.020741
T7 CAIRP	483142.6643	816.1362895	0.002135	0.971395
T7 CAIRP Construction	52356.34773	91.42340369	0.000243	0.114426
T7 NNOOS	599097.5049	1034.889711	0.002446	1.116561
T7 NOOS	190841.2099	327.5008265	0.000865	0.397968
T7 Other Port	149856.169	244.6665874	0.000658	0.306847
T7 POAK				
T7 POLA	106599.0115	175.7225205	0.000473	0.215816
T7 Public	32496.36594	63.57495698	0.000146	0.138953
T7 Single	242848.3202	401.5304891	0.000847	0.409114
T7 Single Construction	135438.9829	225.3823912	0.00048	0.2475
T7 SWCV	100623.0572	357.5003673	0.439592	0.096204
T7 Tractor	733911.3563	1184.852367	0.003052	1.451002
T7 Tractor Construction	100979.772	168.5311372	0.000447	0.236581
T7 Utility	3327.871441	6.433278035	1.30E-05	0.012718
T7IS	27238.09218	48.92074124	0.004146	0.11018
PTO	48220.54839	96.37974645	0.000486	0.214591
SBUS	80441.42091	95.03436959	0.003555	0.133157
UBUS	160426.3068	301.8606329	0.14284	0.085201
Motor Coach	46685.19275	86.72418263	0.000209	0.115124
OBUS	110722.7	152.7270542	0.002229	0.044407
All Other Buses	45528.08376	58.71400796	0.000109	0.086424
Total	100696455.4	29374.35739	1.358472	15.23549

Trips	21303138.65
Total VMT	100,696,455.41
Total grams CO2	26,647,967,594.30
Total grams CH4	1,232,385.19
Total grams NOX	13,821,399.39
CO2 g/mi	264.64
CH4 g/mi	0.0122
NOX g/mi	0.1373
Average Miles Per Trip	4.7

6~~8~~) ~~Efficiency Threshold Evaluation~~VMT Reduction Calculation

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6153 Lilac Hills Ranch Reductions Confimation

From CAPCOA Quantifying Greenhouse Gas Mitigation Measures, published August 2010:

Increase Diversity of Urban Developments (Mixed Use)
Range of Effectiveness 9-30%

Urban Setting:
The urban project will be predominantly characterized by properties on which various uses, such as office, commercial, institutional, and residential, are combined in a single building or on a single site in an integrated development project with functional interrelationships and a coherent physical design. The mixed-use development should encourage walking and other non-auto modes of transport from residential to office/commercial/institutional locations (and vice versa). The residential units should be within ¼-mile of parks, schools, or other civic uses. The project should minimize the need for external trips by including services/facilities for day care, banking/ATM, restaurants, vehicle refueling, and shopping.

Formula
% VMT Reduction = Land Use * B
[not to exceed 30%]

Where:
Land Use = (Land Use Index - 0.15) /0.15
Land Use Index = -(Summation([% Land Use "N"] * ln([% Land Use "N"] + …) / ln(6)
B = 0.09

Project Specific Data

Proposed Project			
Land Use	Planning Areas	Gross Acreage	Dwelling Units/ Square Feet (s.f.)
Single-family Detached	SFD	156.9	903
Single-family Senior	SFS	76.9	468
Single-family Attached	SFA	7.9	164
Group Care	GC	6.5	N/A
Commercial and Mixed-Use	C	15.3	211/(90,000 s.f.)
K-8 School Site	S	12	N/A
Institutional Use	I	10	N/A
Parks - Dedicated to County	P10	13.5	N/A
Parks - HOA	P	10.1	N/A
Community Purpose Facility	CPF	2	N/A
Biological Open Space	OS	104.1	N/A
Common Areas/Agricultural Buffers	--	20.3	N/A
Manufactured Slopes	--	68.2	N/A
Circulating and Non-Circulating Roads	--	83.3	N/A
Water Reclamation Facility	WRF	2.4	N/A
Recycling Facility/Trail Head/Staging Are	RF	0.6	N/A
Detention Basins	DB	7.9	N/A
Wet Weather Storage	WWS	8.1	N/A
TOTAL		606	1,746

Proposed Land Uses			
Land Use	Gross Acreage	Percent of Total Land Use	
Single Family	241.7	39.9%	
Multi Family[1]	17.975	3.0%	42.9%
Commercial[2]	3.825	0.6%	
Industrial	3	0.5%	
Institutional	24	4.0%	
Park	23.6	3.9%	
Land Use that is NOT counted	291.9	48.2%	
Total	606	100.0%	

Notes:
[1] Multi Family includes Group Care and 75% of "Commercial and Mixed Use"
[2] Commercial includes 25% of "Commercial and Mixed Use"

Calculations

Land Use Index = 0.437
Land Use = 192%

% VMT Reduction = 17.24%
Between 9% and 30% ? Yes