Technical Appendix A

Air Quality Impact Analysis
Urban Crossroads, Inc.
June 6, 2012

41 Corporate Park, Suite 300
Irvine, CA 92606

Prepared by:

Haseeb Qureshi, MES

Prepared for:

Ms. Tracy Zinn
T&B Planning
17542 East 17th Street, Suite 100
Tustin, CA 92780

NORTH NEWPORT CENTER PLANNED COMMUNITY
AIR QUALITY IMPACT ANALYSIS
CITY OF NEWPORT BEACH, CALIFORNIA

June 6, 2012

JN:08210-05 AQ REPORT
HQ

TABLE OF CONTENTS

Section Page

LIST OF APPENDICES

LIST OF EXHIBITS

LIST OF TABLES

NORTH NEWPORT CENTER PLANNED COMMUNITY
AIR QUALITY IMPACT ANALYSIS
CITY OF NEWPORT BEACH, CALIFORNIA

1.0 INTRODUCTION

This report presents the results of the air quality impact analysis (AQIA) prepared by Urban Crossroads, Inc. for the proposed North Newport Center Planned Community (NNCPC) (referred to as "Project").

1.1 PURPOSE OF REPORT

The purpose of this report is to satisfy CEQA Guidelines section 15168(c), which requires the City to analyze whether subsequent activities regarding the North Newport Center zoning require an additional environmental document beyond the Final Environmental Impact Report ("EIR") for the City of Newport Beach General Plan 2006 Update (State Clearinghouse No. 200601119) ("General Plan EIR"), and the first North Newport Center Addendum to the Environmental Impact Report for the City of Newport Beach General Plan 2006 Update, approved by Resolution No. 2007-79 on December 11, 2007. The General Plan EIR was certified by the Newport Beach City Council on July 25, 2006, as adequately addressing the potential environmental impacts associated with the buildout of the City of Newport Beach, inclusive of North Newport Center. Pursuant to CEQA Guidelines section 15168(c), this report analyzes whether the Project would have effects that were not examined in the General Plan EIR and confirms that the Project will not result in new effects and will not require new mitigation measures so that the City can determine whether it is appropriate to approve the Project as within the scope of the General Plan EIR. As required by CEQA Guidelines section 15168(e), this report also analyzes whether: (i) the Project is within the scope of the General Plan 2006 Update; and (ii) the General Plan EIR adequately describes the subsequent activity for the purposes of CEQA.

CEQA Guidelines section 15164(a) states: "The lead agency or responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR have occurred." Pursuant to CEQA Guidelines section 15162, no subsequent EIR may be required for the project unless the City determines, on the basis of substantial evidence, that one or more of the following conditions are met:

> *(a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:*

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR, was certified as complete or the Negative Declaration was adopted, shows any of the following:

(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

In order to provide the analysis necessary for the City to make its determination under CEQA Guidelines section 15168(c), this AQIA evaluates the potential impacts to air quality associated with construction and operation of the proposed Project. Additional information beyond that required for the City's determination is included for public information.

1.2 PROJECT OVERVIEW

The NNCPC Development Plan currently allows for 430 multi-family residential units to be developed in areas of the NNCPC designated MU-H3 by the General Plan. In comparison, the General Plan allows a maximum of 450 units in the MU-H3 category throughout the Newport Center Statistical Area. In other words, of the 450 MU-H3 residential units allowed by the General Plan in the Newport Center Statistical Area, 430 are specifically assigned to the areas of the NNCPC designated by the NNCPC Development Plan as Block 500, Block 600 and San Joaquin Plaza. The remaining 20 units are allowed to be developed in any MU-H3 designated area in the Newport Center Statistical Area. Five (5) MU-H3 units have been assigned to the Golf Realty Fund Tennis Club development and the other 15 MU-H3 units are not assigned to any particular property.

In addition, certain areas of the City are identified on the General Plan Land Use Map as "Anomaly Locations," where a maximum development intensity is allowed pursuant to General Plan Tables LU1 and LU2. Anomaly Location 43 in the Newport Center Statistical Area (Statistical Area L1) is developed with a 532 room resort hotel presently operated by Marriott Hotels and Resorts. General Plan Table LU2 allows a maximum of 611 hotel rooms in Anomaly Location 43; therefore, 79 hotel rooms allowed by the General Plan are un-built. The proposed Project would convert the 79 un-built hotel rooms to 79 multi-family residential units and then transfer them to the San Joaquin Plaza portion of the NNCPC.

Under existing conditions, Block 500, Block 600, and San Joaquin Plaza are developed with commercial/office land uses and the Island Hotel. No multi-family residential units are constructed in these areas, although the NNCPC Development Plan allows for up to 430 residential units. Thus, the City's General Plan and NNCPC Development Plan currently allow for the existing land uses in Block 500, Block 600 and San Joaquin Plaza to be supplemented by or partially replaced with multi-family residential housing.

The Project Applicant proposes an amendment to the NNCPC Development Plan to increase the allowable residential development intensity by 94 units (comprising 15 un-assigned and un-built multi-family units and the 79 hotel units that would be converted to multi-family units) and to assign those 94 units, along with 430 units already allocated to the NNCCP, to the portion of the NNCCP designated as San Joaquin Plaza.

No specific development project is proposed at this time. A proposal to develop a specific residential project in the San Joaquin Plaza would be subject to the procedures for development specified in the NNCPC Development Plan. There would be no change to the boundaries of the NNCPC Development Plan area or any constituent blocks or sub-districts, and there would be no change in the permitted types of land uses, development regulations, or design guidelines resulting from approval of the proposed NNCPC Development Plan Amendment.

Since no specific development is proposed at this time, and the exact location of the units is unknown, a specific calculation of emissions that may be associated with future construction activities is not possible and is not provided in this analysis. However, construction activities would be consistent with the assumptions made in the General Plan EIR and would not result in any new impacts or increase the severity of any impacts previously identified in the General Plan EIR. For purposes of this analysis, the air quality impacts centered on the on-going operations of the 94 units are evaluated.

1.3 OPERATIONAL ACTIVITY RECOMMENDED MITIGATION MEASURES

The proposed project will not result in a significant regional or localized air quality impact during operational activity, nor would the project substantially increase the severity of any impacts previously disclosed in the General Plan EIR; accordingly, mitigation is not required.

1.4 SUMMARY OF FINDINGS

- The Project will not conflict with or obstruct implementation of the applicable air quality plan.
- The Project will not violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- The Project will not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors.
- The Project will not expose sensitive receptors to substantial pollutant concentrations.
- The Project will not create objectionable odors affecting a substantial number of people.

2.0 EXISTING CONDITIONS

This section provides an overview of the existing air quality conditions in the project area and region.

2.1 SOUTH COAST AIR BASIN

The project site is located in the SCAB within the jurisdiction of SCAQMD. The SCAQMD was created by the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the Act, the SCAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and state air quality standards. As discussed above, the Project site is located within the South Coast Air Basin, a 6,745-square mile subregion of the SCAQMD, which includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County.

The SCAB is bound by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Los Angeles County portion of the Mojave Desert Air Basin is bound by the San Gabriel Mountains to the south and west, the Los Angeles / Kern County border to the north, and the Los Angeles / San Bernardino County border to the east. The Riverside County portion of the Salton Sea Air Basin is bound by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley.

2.2 REGIONAL CLIMATE

The regional climate has a substantial influence on air quality in the SCAB. In addition, the temperature, wind, humidity, precipitation, and amount of sunshine influence the air quality.

The annual average temperatures throughout the SCAB vary from the low to middle 60s (degrees Fahrenheit). Due to a decreased marine influence, the eastern portion of the SCAB shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the SCAB, with average minimum temperatures of 47°F in downtown Los Angeles and 36°F in San Bernardino. All portions of the SCAB have recorded maximum temperatures above 100°F.

Although the climate of the SCAB can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of SCAB climate. Humidity restricts visibility in the SCAB, and the conversion of sulfur dioxide to sulfates is heightened in air with high relative humidity. The marine layer provides an environment for that conversion process, especially during the spring and

summer months. The annual average relative humidity within the SCAB is 71 percent along the coast and 59 percent inland. Since the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast.

More than 90 percent of the SCAB's rainfall occurs from November through April. The annual average rainfall varies from approximately nine inches in Riverside to fourteen inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SCAB with frequency being higher near the coast.

Due to its generally clear weather, about three-quarters of available sunshine is received in the SCAB. The remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. On the shortest day of the year there are approximately 10 hours of possible sunshine, and on the longest day of the year there are approximately 14-1/2 hours of possible sunshine.

The importance of wind to air pollution is considerable. The direction and speed of the wind determines the horizontal dispersion and transport of the air pollutants. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings five to ten periods of strong, dry offshore winds, locally termed "Santa Anas" each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over southern California. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the SCAB is the "Catalina Eddy," a low level cyclonic (counterclockwise) flow centered over Santa Catalina Island which results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal sections.

In the SCAB, there are two distinct temperature inversion structures that control vertical mixing of air pollution. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing which effectively acts as an impervious lid to pollutants over the entire SCAB. The mixing height for the inversion structure is normally situated 1,000 to 1,500 feet above mean sea level.

A second inversion-type forms in conjunction with the drainage of cool air off the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter, when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as NO_X and CO from vehicles, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline.

2.3 WIND PATTERNS AND PROJECT LOCATION

The distinctive climate of the Project area and the SCAB is determined by its terrain and geographical location. The Basin is located in a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter.

Wind patterns across the south coastal region are characterized by westerly and southwesterly on-shore winds during the day and easterly or northeasterly breezes at night. Winds are characteristically light although the speed is somewhat greater during the dry summer months than during the rainy winter season.

Wind speed and direction data is monitored by the SCAQMD for the Project area (Source Receptor Area) (SRA) 18; this data was obtained from North Orange County Coastal monitoring station, which is the nearest monitoring station to the proposed project. As shown in the following wind rose exhibit (Exhibit 2-1), the prevailing winds move predominately from the northwest to the southeast with an average wind speed of 1.06 meters per second (m/s) or 3.48 feet per second (f/s).

2.4 EXISTING AIR QUALITY

Existing air quality is measured based upon ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect, as well health effects of each pollutant regulated under these standards are shown in Table 2-1.

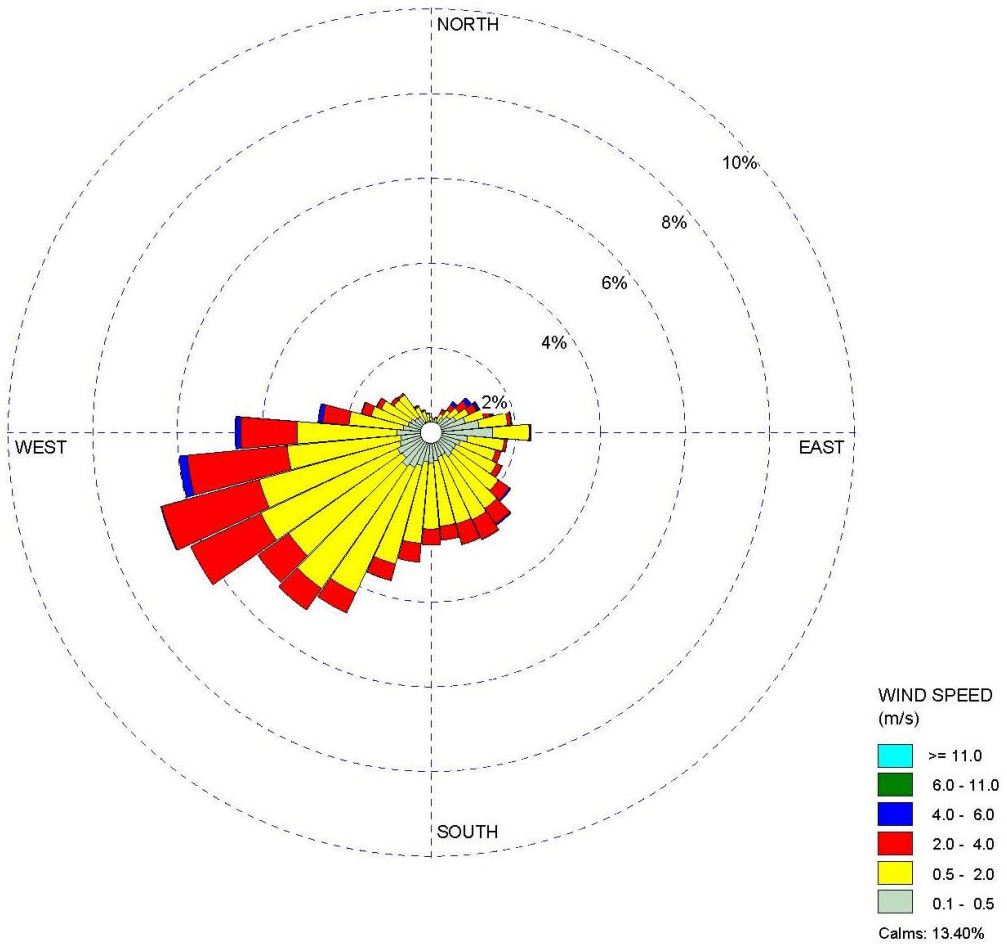
The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards presented in Table 2-1. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for O_3, CO, SO_2, NO_2, PM_{10}, and $PM_{2.5}$ are not equaled or exceeded at any time in any consecutive three-year period; and the federal standards (other than

EXHIBIT 2-1

WIND ROSE

WIND ROSE PLOT:
csta

DISPLAY:
Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD:	COMPANY NAME:	
	2005-2007 Jan 1 - Dec 31 00:00 - 23:00	MODELER:	
	CALM WINDS: 13.40%	TOTAL COUNT: 25385 hrs.	
	AVG. WIND SPEED: 1.06 m/s	DATE: 1/28/2009	PROJECT NO.:

WRPLOT View - Lakes Environmental Software

TABLE 2-1

STATE AND NATIONAL CRITERIA POLLUTANT STANDARDS, EFFECTS, AND SOURCES

Pollutant	Averaging Time	State Standard	National Standard	Health and Atmospheric Effects	Major Sources
Ozone	1 hour 8 hours	0.09 ppm 0.07 ppm1	--- 0.075 ppm	High concentrations can directly affect lungs, causing irritation. Long-term exposure may cause damage to lung tissue.	Formed when reactive organic gases (ROG) and nitrogen oxides (NOx) react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial / industrial mobile equipment.
Carbon Monoxide	1 hour 8 hours	20 ppm 9.0 ppm	35 ppm 9 ppm	Classified as a chemical asphyxiant, carbon monoxide interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines, primarily gasoline-powered motor vehicles.
Nitrogen Dioxide	1 hour Annual Avg.	0.18 ppm 0.030	--- 0.053 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown.	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.
Sulfur Dioxide	1 hour 3 hours 24 hours	0.25 ppm --- 0.04 ppm	75 ppb --- ---	Irritates upper respiratory tract; injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron, and steel. Limits visibility and reduces sunlight.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
Inhalable Particulate Matter (PM-10)	24 hours Annual Avg.	50 µg/m3 20 µg/m3	150 µg/m3 ---	May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility.	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
Fine Particulate Matter (PM-2.5)	24 hours Annual Avg.	--- 12 µg/m3	35 µg/m3 15 µg/m3	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and results in surface soiling.	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including NOx, sulfur oxides, and organics.
Lead	Monthly Ave. Quarterly Rolling 3-Month Avg.	1.5 µg/m3 --- ---	--- 1.5 µg/m3 0.15 µg/m3	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurological dysfunction.	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
Hydrogen Sulfide	1 hour	0.03 ppm	No National Standard	Nuisance odor (rotten egg smell), headache and breathing difficulties (higher concentrations)	Geothermal Power Plants, Petroleum Production and refining
Sulfates	24 hour	25 µg/m3	No National Standard	Breathing difficulties, aggravates asthma, reduced visibility	Produced by the reaction in the air of SO2.
Visibility Reducing Particles	8 hour	Light extinction of 0.23/km; visibility of 10 miles or more	No National Standard	Reduces visibility, reduced airport safety, lower real estate value, discourages tourism.	See PM10/PM2.5.

NOTE: ppm = parts per million; µg/m^3 = micrograms per cubic meter.

1 This concentration was approved by the Air Resources Board on April 28, 2005 and became effective May 17, 2006.

SOURCE: California Air Resources Board, 09/08/2010 (http://www.arb.ca.gov/research/aaqs/aaqs2.pdf). *Ambient Air Quality Standards,* available at http://www.arb.ca.gov/research/aaqs/aaqs2.pdf Standards last updated November 17, 2008. California Air Resources Board, 2001. *CARB Fact Sheet: Air Pollution Sources, Effects and Control,* http://www.arb.ca.gov/research/health/fs/fs2/fs2.htm, page last updated December 2005.

O_3, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not exceeded more than once per year. The O_3 standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when 99 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

2.5 REGIONAL AIR QUALITY

The SCAQMD monitors levels of various criteria pollutants at 30 monitoring stations throughout the air district. In 2009, the federal and state standards were exceeded on one or more days for ozone, PM_{10}, and $PM_{2.5}$ at most monitoring locations. No areas of the SCAB exceeded federal or state standards for NO_2, SO_2, CO, sulfates or lead. See Table 3-2 for attainment designations for the SCAB.

2.6 LOCAL AIR QUALITY

Relative to the Project site, the nearest long-term air quality monitoring site for Ozone (O_3), Carbon Monoxide (CO), Nitrogen Dioxide (NO_2), Inhalable Particulates (PM_{10}), Fine Particulates ($PM_{2.5}$) and is the South Coast Air Quality Management District North Coastal (SRA 18) monitoring station.

The most recent three (3) years of data available[1] is shown on Table 2-3 and identifies the number of days standards were exceeded for the study area, which was chosen to be representative of the local air quality at the Project site. Additionally, data for SO_2 has been omitted as attainment is regularly met in the South Coast Air Basin and few monitoring stations measure SO_2 concentrations.

Criteria pollutants are pollutants that are regulated through the development of human health based and/or environmentally based criteria for setting permissible levels. Examples of sources and effects of the criteria pollutants are identified below:

- Carbon Monoxide (CO): Is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, motor vehicles operating at slow speeds are the primary source of CO in the Basin. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.

- Sulfur Dioxide (SO_2): Is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When

[1] Year 2011 air quality monitoring station data was not available at the time of preparation of this report from the SCAQMD.

SO2 oxidizes in the atmosphere, it forms sulfates (SO4). Collectively, these pollutants are referred to as sulfur oxides (SOX).

- Nitrogen Oxides (Oxides of Nitrogen, or NO_x): Nitrogen oxides (NO_x) consist of nitric oxide (NO), nitrogen dioxide (NO_2) and nitrous oxide (N_2O) and are formed when nitrogen (N_2) combines with oxygen (O_2). Their lifespan in the atmosphere ranges from one to seven days for nitric oxide and nitrogen dioxide, to 170 years for nitrous oxide. Nitrogen oxides are typically created during combustion processes, and are major contributors to smog formation and acid deposition. NO_2 is a criteria air pollutant, and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. Of the seven types of nitrogen oxide compounds, NO2 is the most abundant in the atmosphere. As ambient concentrations of NO2 are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO2 than those indicated by regional monitors.

- Ozone (O_3): Is a highly reactive and unstable gas that is formed when volatile organic compounds (VOCs) and nitrogen oxides (NOX), both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.

- PM_{10} (Particulate Matter less than 10 microns): A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. PM_{10} also causes visibility reduction and is a criteria air pollutant.

- $PM_{2.5}$ (Particulate Matter less than 2.5 microns): A similar air pollutant consisting of tiny solid or liquid particles which are 2.5 microns or smaller (which is often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include sulfates formed from SO_2 release from power plants and industrial facilities and nitrates that are formed from NO_X release from power plants, automobiles and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions. $PM_{2.5}$ is a criteria air pollutant.

- Volatile Organic Compounds (VOC): Volatile organic compounds are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through

TABLE 2-2

ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SOUTH COAST AIR BASIN (SCAB)

Criteria Pollutant	State Designation	Federal Designation
Ozone - 1hour standard	Nonattainment	No Standard
Ozone - 8 hour standard	Nonattainment	Extreme Nonattainment[1]
PM_{10}	Nonattainment	Serious Nonattainment
$PM_{2.5}$	Nonattainment	Nonattainment
Carbon Monoxide	Attainment	Attainment/Maintenance
Nitrogen Dioxide	Nonattainment[2]	Attainment/Maintenance
Sulfur Dioxide	Attainment	Attainment
Lead	Attainment/Nonattainment[3]	Attainment/Nonattainment[4]
All others	Attainment/Unclassified	Attainment/Unclassified

Source: California Air Resources Board 2010 (http://www.arb.ca.gov/regact/2010/area10/area10.htm, http://www.arb.ca.gov/desig/feddesig.htm)

[1] The USEPA approved redesignation from Severe 17 to Extreme Nonattainment on May 5, 2010 to be effective June 4, 2010.

[2] The SCAB was reclassified from attainment to nonattainment for nitrogen dioxide on March 25, 2010.

[3] Los Angeles County was reclassified from attainment to nonattainment for lead on March 25, 2010; the remainder of the SCAB is in attainment of the State Standard.

[4] The Los Angeles County portion of the SCAB is classified as nonattainment; the remainder of the SCAB is in attainment of the State Standard.

TABLE 2-3
PROJECT AREA AIR QUALITY MONITORING SUMMARY 2008-2010
NORTH COASTAL (SRA 18) AIR MONITORING STATION DATA

POLLUTANT	STANDARD	YEAR		
		2008	2009	2010
Ozone (O_3)				
Maximum 1-Hour Concentration (ppm)		.094	.087	.097
Maximum 8-Hour Concentration (ppm)		.079	.075	.076
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	0	0	1
Number of Days Exceeding State 8-Hour Standard	> 0.07 ppm	6	3	2
Number of Days Exceeding Federal 1-Hour Standard	> 0.12 ppm	0	0	0
Number of Days Exceeding Federal 8-Hour Standard	> 0.075 ppm	3	0	1
Number of Days Exceeding Health Advisory	≥ 0.15 ppm	0	0	0
Carbon Monoxide (CO)				
Maximum 1-Hour Concentration (ppm)		3	3	2
Maximum 8-Hour Concentration (ppm)		2.0	2.2	2.1
Number of Days Exceeding State 1-Hour Standard	> 20 ppm	0	0	0
Number of Days Exceeding Federal / State 8-Hour Standard	> 9.0 ppm	0	0	0
Number of Days Exceeding Federal 1-Hour Standard	> 35 ppm	0	0	0
Nitrogen Dioxide (NO_2)				
Maximum 1-Hour Concentration (ppm)		.08	.07	70.0
Annual Arithmetic Mean Concentration (ppm)		.0132	.0130	11.3
Number of Days Exceeding State 1-Hour Standard	> 0.18 ppm	0	0	0
Inhalable Particulates (PM_{10})[a]				
Maximum 24-Hour Concentration (µg/m^3)		42	56	34
Number of Samples		55	60	58
Number of Samples Exceeding State Standard	> 50 µg/m^3	0	1	0
Number of Samples Exceeding Federal Standard	> 150 µg/m^3	0	0	0
Fine Particulates ($PM_{2.5}$)[a]				
Maximum 24-Hour Concentration (µg/m^3)		32.6	39.2	19.9
Annual Arithmetic Mean (µg/m^3)		10.4	9.5	8.0
Number of Samples Exceeding Federal 24-Hour Standard	> 35 µg/m^3	0	1	0

[a] Saddleback Monitoring Station used where data not available from North Coastal Orange County.
Source: South Coast AQMD (www.aqmd.gov)

atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form ozone to the same extent when exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Exceptions to the VOC designation include: carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. VOCs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant.

- Reactive Organic Gasses (ROG): Similar to VOC, Reactive Organic Gasses (ROG) are also precursors in forming ozone and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and nitrogen oxides react in the presence of sunlight. ROGs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant.

- Lead (Pb): Lead is a heavy metal that is highly persistent in the environment. In the past, the primary source of lead in the air was emissions from vehicles burning leaded gasoline. As a result of the removal of lead from gasoline, there have been no violations at any of the SCAQMD's regular air monitoring stations since 1982. Currently, emissions of lead are largely limited to stationary sources such as lead smelters. It should be noted that the proposed Project is not anticipated to generate a quantifiable amount of lead emissions. Lead is a criteria air pollutant.

Health Effects of Air Pollutants

Ozone

Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for ozone effects. Short-term exposure (lasting for a few hours) to ozone at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated ozone levels are associated with increased school absences. In recent years, a correlation between elevated ambient ozone levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple sports and live in communities with high ozone levels.

Ozone exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants that includes ozone may be more toxic than exposure to ozone alone. Although lung volume and

resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.

Carbon Monoxide

Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of decreased oxygen supply to the heart. Inhaled CO has no direct toxic effect on the lungs, but exerts its effect on tissues by interfering with oxygen transport and competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (oxygen deficiency) as seen at high altitudes.

Reduction in birth weight and impaired neurobehavioral development have been observed in animals chronically exposed to CO, resulting in COHb levels similar to those observed in smokers. Recent studies have found increased risks for adverse birth outcomes with exposure to elevated CO levels; these include pre-term births and heart abnormalities.

Particulate Matter

A consistent correlation between elevated ambient fine particulate matter (PM10 and PM2.5) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in life-span, and an increased mortality from lung cancer.

Daily fluctuations in PM2.5 concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with longterm exposure to particulate matter.

The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM10 and PM2.5.

Nitrogen Dioxide

Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term

exposure to NO2 at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO2 in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups.

In animals, exposure to levels of NO2 considerably higher than ambient concentrations results in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of ozone exposure increases when animals are exposed to a combination of ozone and NO2.

Sulfur Dioxide

A few minutes of exposure to low levels of SO2 can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO2. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO2.

Animal studies suggest that despite SO2 being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract.

Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO2 levels. In these studies, efforts to separate the effects of SO2 from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.

Lead

Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased Pb levels are associated with increased blood pressure.

Pb poisoning can cause anemia, lethargy, seizures, and death; although it appears that there are no direct effects of Pb on the respiratory system. Pb can be stored in the bone from early age environmental exposure, and elevated blood Pb levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid

gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb because of previous environmental Pb exposure of their mothers.

Odors

The science of odor as a health concern is still new. Merely identifying the hundreds of VOCs that cause odors poses a big challenge. Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, studies have shown that the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.

2.7 REGULATORY BACKGROUND

2.7.1 FEDERAL REGULATIONS

The U.S. EPA is responsible for setting and enforcing the NAAQS for O_3, CO, NO_x, SO_2, PM_{10}, and lead. The U.S. EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The U.S. EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of the CARB.

The Federal Clean Air Act (CAA) was first enacted in 1955, and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance. The CAA also mandates that states submit and implement State Implementation Plans (SIPs) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions).

Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O_3, NO_2, SO_2, PM_{10}, CO, $PM_{2.5}$, and lead. The NAAQS were amended in July 1997 to

include an additional standard for O_3 and to adopt a NAAQS for $PM_{2.5}$. Table 3-1 (previously presented) provides the NAAQS within the basin.

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and nitrogen oxides (NO_x). NO_x is a collective term that includes all forms of nitrogen oxides (NO, NO_2, NO_3) which are emitted as byproducts of the combustion process.

2.7.2 CALIFORNIA REGULATIONS

The CARB, which became part of the California EPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. The California CAA mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. However at this time, hydrogen sulfide and vinyl chloride are not measured at any monitoring stations in the SCAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS.

Local air quality management districts, such as the SCAQMD, regulate air emissions from commercial and light industrial facilities. All air pollution control districts have been formally designated as attainment or non-attainment for each CAAQS.

Serious non-attainment areas are required to prepare air quality management plans that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g. motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;
- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;

- Sufficient control strategies to achieve a five percent or more annual reduction in emissions or 15 percent or more in a period of three years for ROGs, NO_x, CO and PM_{10}. However, air basins may use alternative emission reduction strategy that achieves a reduction of less than five percent per year under certain circumstances.

2.7.3 AIR QUALITY MANAGEMENT PLANNING

Currently, the NAAQS and CAAQS are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of Air Quality Management Plans (AQMPs) to meet the state and federal ambient air quality standards. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy. A detailed discussion on the AQMP and Project consistency with the AQMP is provided in Section 3.7.

2.8 EXISTING PROJECT SITE AIR QUALITY CONDITIONS

The Project site is currently not vacant and the existing land uses are generating emissions, the exact amount of emissions are unknown and not easily quantifiable. Therefore the existing air quality conditions at the Project site would generally reflect ambient monitored conditions as presented previously at Table 2-3 (ambient monitored conditions occur in a generally similar built environment).

3.0 PROJECT AIR QUALITY IMPACT

3.1 INTRODUCTION

The Project has been evaluated to determine if it will violate an air quality standard or contribute to an existing or projected air quality violation. Additionally, the proposed Project has been evaluated to determine if it will result in a cumulatively considerable net increase of a criteria pollutant for which the SCAB is non-attainment under an applicable federal or state ambient air quality standard. The significance of these potential impacts is described in the following section. The City of Newport Beach does not have its own thresholds of significance.

3.2 STANDARDS OF SIGNIFICANCE

The criteria used to determine the significance of potential Project-related air quality impacts are taken from the Initial Study Checklist in Appendix G of the State CEQA Guidelines (14 California Code of Regulations §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to air quality if it would:

(1) Conflict with or obstruct implementation of the applicable air quality plan.

(2) Violate any air quality standard or contribute to an existing or projected air quality violation.

(3) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors).

(4) Expose sensitive receptors to substantial pollutant concentrations.

(5) Create objectionable odors affecting a substantial number of people.

Within the context of the above threshold considerations, based on the SCAQMD's CEQA Air Quality Handbook (1993), project impacts would be significant if they exceed the following California standards for localized CO concentrations:

- 1-hour CO standard of 20.0 parts per million (ppm)
- 8-hour CO standard of 9.0 ppm.

The SCAQMD has also developed regional and localized significance thresholds for other regulated pollutants, as summarized at Table 3-1. The SCAQMD's CEQA Air Quality Significance Thresholds

(March 2009) indicate that any projects in the SCAB with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

TABLE 3-1

MAXIMUM DAILY EMISSIONS THRESHOLDS (REGIONAL THRESHOLDS)		
Pollutant	**Construction**	**Operational**
NO_x	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
SO_x	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day

3.3 PROJECT-RELATED SOURCES OF POTENTIAL IMPACT

Land uses such as the proposed Project impact air quality through emissions associated with short-term construction, and long-term operational activity.

On February 3, 2011, the SCAQMD released the California Emissions Estimator Model™ (CalEEMod™). The purpose of this model is to accurately calculate criteria pollutant (NOx, VOC, PM10, PM2.5, SOx, and CO) and greenhouse gas (GHG) emissions from direct and indirect sources and quantify applicable air quality and GHG reductions achieved from mitigation measures. As such, the latest version of CalEEMod™ has been used for this Project to determine operational air quality impacts. Output from the model runs for operational activity is provided in Appendix "A".

3.4 CONSTRUCTION EMISSIONS

Since no specific development project is proposed at this time and the exact location of proposed development is unknown, a calculation of emissions that may be associated with future construction activities is not possible and is not provided in this analysis. Regardless, construction activities that may be associated with future residential development on the Project site would clearly fall within the scope of analysis provided in the General Plan EIR because the General Plan EIR anticipated the construction of 430 multi-family units within the NNCPC, 15 multi-family units within Newport Center, and 79 hotel units at General Plan Anomaly Location 43. Therefore, the conversion of 79 hotel units to multi-family residential units and the conduct of construction activities to the specific location of San Joaquin Plaza represent the Project's only potential to create new construction-related air quality impacts because construction of the remaining 445 multi-family units in Newport Center were assumed

and previously evaluated by the General Plan EIR. The construction of 79 multi-family residential units instead of 79 hotel units would not represent any measurable difference in construction-related air emissions. The types of construction equipment, material use, and duration of construction activities would be very similar for hotel units or multi-family units. Additionally, the conduct of construction activities in San Joaquin Plaza would not have the potential to generate air emissions that would be different or more severe than the conduct of construction activities in other parts of Newport Center. Accordingly, future Project-related construction emissions would not result in any new impacts or substantially increase the severity of the significant and unavoidable construction-related air quality impact previously disclosed in the General Plan EIR.

3.5 OPERATIONAL EMISSIONS

As previously noted, the Applicant proposes an amendment to the NNCPC Development Plan to increase the allowable residential development intensity by 94 units and to assign those 94 units, along with 430 units already allocated to the NNCCP, to the portion of the NNCCP designated as San Joaquin Plaza. It should be noted that of the 94 units, 15 dwelling units are currently assigned to Newport Center and impacts from these dwelling units were accounted for by the General Plan EIR. The remaining 79 units consist of hotel units that would be converted to multi-family residential units.

In order to provide consistency with the traffic study, this analysis relates to the proposed increase of 94 dwelling units allowed within the San Joaquin Plaza (as is done for the traffic study), and represents a "worst case" (conservative) analysis since there would be no credit taken for reducing by 79 the number of hotel units that can be constructed within Statistical AreaL1, nor would any credit be applied for the 15 MU-H3 units already allowed in Newport Center by the General Plan.

Operational activities associated with the proposed Project will result in emissions of ROG, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. Operational emissions would be expected from the following primary sources:

- Vehicles
- Combustion Emissions Associated with Natural Gas and Electricity
- Fugitive dust related to vehicular travel
- Landscape maintenance equipment
- Emissions from consumer products
- Architectural coatings

3.5.1 VEHICLES

Project operational (vehicular) impacts are dependent on both overall daily vehicle trip generation and the effect of the project on peak hour traffic volumes and traffic operations in the vicinity of the project. The project related operational air quality impact centers primarily on the vehicle trips generated by the

project. Trip characteristics available from the report, North Newport Center San Joaquin Plaza TPO Traffic Analysis (Stantec, May 2012) were utilized in this analysis. The estimated emissions resulting from vehicle operations are summarized in Table 3-2.

3.5.2 COMBUSTION EMISSIONS ASSOCIATED WITH NATURAL GAS AND ELECTRICITY

Electricity and natural gas are used by almost every project. Criteria pollutant emissions are emitted through the generation of electricity and consumption of natural gas. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the SCAB, criteria pollutant emissions from offsite generation of electricity is generally excluded from the evaluation of significance and only natural gas use is considered. The emissions associated with natural gas use were calculated using the CalEEMod™ model. The estimated combustion emissions are provided in Table 3-2 (presented later in this report.) Detailed emission calculations are provided in Appendix "A".

3.5.3 FUGITIVE DUST RELATED TO VEHICULAR TRAVEL

Vehicles traveling on paved roads would be a source of fugitive emissions due to the generation of road dust. The emissions estimates for travel on paved roads were calculated using the CalEEMod™ model. The estimated PM_{10} and $PM_{2.5}$ emissions from vehicles for fugitive dust are summarized in Table 3-2 (presented later in this report.) Detailed emission calculations are provided in Appendix "A".

3.5.4 LANDSCAPE MAINTENANCE EQUIPMENT

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. The emissions associated with landscape maintenance equipment were calculated based on assumptions provided in the CalEEMod™ model. The estimated landscape maintenance emissions are provided in Table 3-2 (presented later in this report.) Detailed emission calculations are provided in Appendix "A".

3.5.5 CONSUMER PRODUCTS

Consumer projects include, but are not limited to detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products contain organic compounds which when released in the atmosphere can react to form ozone and other photochemically reactive pollutants. The estimated emissions from consumer products are provided in Table 3-2 (presented later in this report.) Detailed emission calculations are provided in Appendix "A".

3.5.6 ARCHITECTURAL COATINGS

Over a period of time the buildings that are part of this Project will be subject to emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings as part of Project maintenance. The emissions associated with architectural coatings were calculated

using the CalEEMod™ model. The estimated architectural coating emissions are provided in Table 3-2 (presented later in this report.) Detailed emission calculations are provided in Appendix "A".

3.5.7 OPERATIONAL EMISSIONS SUMMARY

The Project-related operations emissions burdens, along with a comparison of SCAQMD recommended significance thresholds, are shown on Table 3-2.

Detailed operational model outputs are presented in Appendix "A". Results of the analysis indicate that the addition of 94 units to San Joaquin Plaza would not result in any excedances of the SCAQMD regional thresholds during either summer or winter months. Accordingly, Project-related emissions would not violate the SCAQMD standards for criteria pollutants. Furthermore, if Project emissions do not exceed the SCAQMD regional thresholds for NO_X, VOC, PM_{10}, or $PM_{2.5}$, it follows that the emissions would not substantially contribute to a cumulative excedance of a pollutant for which the SCAB is in nonattainment (i.e., ozone, NO_X, PM_{10}, and/or $PM_{2.5}$). Operational impacts were not specifically evaluated in the General Plan EIR because the SCAQMD does not recommend calculation of operational emissions for a planning document, such as a General Plan Update; therefore, long-term operation of the proposed Project would not result in any new impacts or increase the severity of a previously identified significant impact as previously analyzed in the General Plan EIR and no mitigation would be required.

TABLE 3-2

SUMMARY OF PEAK OPERATIONAL EMISSIONS (SUMMER) (POUNDS PER DAY) (WITHOUT MITIGATION)

Operational Activities	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area Source Emissions [a]	12.32	0.55	39.07	0.08	5.01	5.01
Energy Source Emissions [b]	0.07	0.61	0.26	0.00	0.05	0.05
Mobile Emissions [c]	1.92	3.47	18.87	0.04	4.64	0.33
Maximum Daily Emissions	**14.31**	**4.63**	**58.20**	**0.12**	**9.70**	**5.39**
SCAQMD Regional Threshold	55	55	550	150	150	55
Significant?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

SUMMARY OF PEAK OPERATIONAL EMISSIONS (WINTER) (POUNDS PER DAY) (WITHOUT MITIGATION)

Operational Activities	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area Source Emissions [a]	12.32	0.55	39.07	0.08	5.01	5.01
Energy Source Emissions [b]	0.07	0.61	0.26	0.00	0.05	0.05
Mobile Emissions [c]	2.03	3.84	18.37	0.04	4.64	0.33
Maximum Daily Emissions	**14.42**	**5.00**	**57.70**	**0.12**	**9.70**	**5.39**
SCAQMD Regional Threshold	55	55	550	150	150	55
Significant?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Note: Please refer to Appendix A for the CalEEMod™ output files and additional supporting information for the estimated emissions.

[a] Includes emissions of landscape maintenance equipment and architectural coatings emissions

[b] Includes emissions of natural gas consumption

[c] Includes emissions of vehicle emissions and fugitive dust related to vehicular travel

3.6 CO "HOT SPOT" ANALYSIS

A carbon monoxide (CO) "hot spots" analysis is needed to determine whether the change in the level of service (LOS) of an intersection due to the Project would have the potential to result in exceedances of the California or National Ambient Air Quality Standards (CAAQS or NAAQS).

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Vehicle emissions standards have become increasingly more stringent in the last twenty years. Currently, the CO standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels and implementation of control technology on industrial facilities, CO concentrations in the Project vicinity have steadily declined, as shown based on historical data presented on Table 2-3.

Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard.

The analysis prepared for CO attainment in the SCAB by the SCAQMD can be used to assist in evaluating the potential for CO exceedances in the South Coast Air Basin. CO attainment was thoroughly analyzed as part of the SCAQMD's 2003 Air Quality Management Plan (2003 AQMP) and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan). As discussed in the 1992 CO Plan, peak carbon monoxide concentrations in the South Coast Air Basin are due to unusual meteorological and topographical conditions, and not due to the impact of particular intersections. Considering the region's unique meteorological conditions and the increasingly stringent CO emissions standards, CO modeling was performed as part of 1992 CO Plan and subsequent plan updates and air quality management plans.

In the 1992 CO Plan, a CO hot spot analysis was conducted for four busy intersections in Los Angeles County at the peak morning and afternoon time periods. The intersections evaluated included: Long Beach Blvd. and Imperial Highway (Lynwood); Wilshire Blvd. and Veteran Ave. (Westwood); Sunset Blvd. and Highland Ave. (Hollywood); and La Cienega Blvd. and Century Blvd. (Inglewood). The analysis in the 1992CO Plan did not result in a violation of CO standards. The busiest intersection evaluated was that at Wilshire Blvd. and Veteran Ave., which has a daily traffic volume of approximately 100,000 vehicles per day. The Los Angeles County Metropolitan Transportation Authority evaluated the LOS in the vicinity of the Wilshire Blvd. /Veteran Ave. intersection and found it to be Level E at peak morning traffic and Level F at peak afternoon traffic.

This highest Project-area average daily traffic is lower than the values studied in the 1992 CO Plan. Consequently at buildout of the Project, according to the Traffic Impact Analysis, none of the intersections in the vicinity of the Proposed Project Site would have peak hourly traffic volumes exceeding those at the intersections modeled in the 2003 AQMP, nor would there be any reason unique to project area

meteorology to conclude that this intersection would yield higher CO concentrations if modeled in detail. As a result, the South Coast Air Basin has been designated as attainment for CO since 2007 (SCAQMD 2007) and even very busy intersections do not result in exceedances of the CO standard.

3.7 AIR QUALITY MANAGEMENT PLANNING

The Project site is located within the SCAB, which is characterized by relatively poor air quality. The SCAQMD has jurisdiction over an approximately 12,000 square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what use to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control, and works directly with the Southern California Association of Governments (SCAG), county transportation commissions, local governments, as well as state and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet state and federal ambient air quality standards.

Currently, these state and federal air quality standards are exceeded in most parts of the Basin. In response, the SCAQMD has adopted a series of Air Quality Management Plans (AQMPs) to meet the state and federal ambient air quality standards. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

The SCAQMD has published the Draft Final 2007 AQMP, which was adopted by the SCAQMD Governing Board on June 1, 2007. In September 2007, the CARB Board adopted the SCAQMD 2007 AQMP as part of the SIP. The purpose of the 2007 AQMP for the SCAB (and those portions of the Salton Sea Air Basin under the SCAQMD's jurisdiction) is to set forth a comprehensive program that will lead these areas into compliance with federal and state air quality planning requirements for ozone and PM2.5. On September 27, 2007, the CARB Board adopted the State Strategy for the 2007 State Implementation Plan and the 2007 South Coast Air Quality Management Plan as part of the (SIP). On November 22, 2010[2], U.S. EPA published its notice of proposed partial approval and partial disapproval of the 2007 AQMP PM2.5 Plan. The proposed disapproval is primarily due to the fact that the attainment demonstration relies heavily on emissions reductions from several State rules that have not been finalized or submitted to U.S. EPA for approval. No timetable for full adoption of the 2007 AQMP is available at this time.

As part of the 2007 AQMP, the SCAQMD requested, and the U.S. EPA's subsequently approved a "bump-up" to the "extreme" nonattainment classification for ozone in the SCAB, which extends the attainment date to 2024 and allow for the attainment demonstration to rely on emission reductions from measures that anticipate the development of new technologies or improvement of existing control technologies. Although $PM_{2.5}$ plans for nonattainment areas were due in April 2008, the 2007 AQMP also focuses on attainment strategies for the $PM_{2.5}$ standard through stricter control of sulfur oxides, directly-emitted $PM_{2.5}$, NO_X, and VOCs. The need to commence $PM_{2.5}$ control strategies before April 2008 is due to the attainment date for

[2] http://www.aqmd.gov/hb/attachments/2011-2015/2011Jan/2011-Jan7-019.pdf

$PM_{2.5}$ (2015) being much earlier than that for ozone (2021 for the current designation of severe-17 or 2024 for the extreme designation). However, it should be noted that the PM2.5 plans are still in the process of being submitted. Control measures and strategies for $PM_{2.5}$ will also help control ozone generation in the region because $PM_{2.5}$ and ozone share similar precursors (e.g., NO_X). The SCAQMD has integrated $PM_{2.5}$ and ozone reduction control measures and strategies in the 2007 AQMP. In addition, the AQMP focuses on reducing VOC emissions, which have not been reduced at the same rate as NO_X emissions in the past. Hence, the SCAB has not achieved the reductions in ozone as were expected in previous plans.

The 2007 AQMP was based on assumptions on motor vehicles provided by the CARB and on demographics provided by SCAG. These assumptions are reflected in the new EMFAC2007 computer model. The air quality levels projected in the 2007 AQMP are based on several assumptions. For example, the 2007 AQMP has assumed that development associated with general plans, specific plans, residential projects, and wastewater facilities will be constructed in accordance with population growth projections identified by SCAG in its 2004 RTP. The 2007 AQMP also has assumed that such development projects will implement strategies to reduce emissions generated during the construction and operational phases of development. The Project's consistency with the 2007 AQMP is discussed as follows:

Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the SCAQMD's CEQA Air Quality Handbook (1993). These indicators are discussed below:

- Consistency Criterion No. 1: The proposed Project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

Project's Contribution to Air Quality Violations

According to the SCAQMD, the proposed project would be consistent with the AQMP if the project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.

Emissions Associated with Construction Activities

No specific development project is proposed as part of the Project at this time; therefore, it is not possible to calculate specific emission quantities that may be associated with future construction activities. Nevertheless, it is recognized that construction effects would be expected to follow approval of the Project. *See* CEQA Guidelines Section 15146. Construction-related impacts to air quality were previously evaluated as part of the General Plan EIR, which concluded that buildout of the General Plan would result in construction activities that would exceed the SCAQMD's construction-related air quality standards. As

such, the General Plan EIR disclosed construction-related air emissions as a significant and unavoidable impact.

Any future Project-related construction activities would be required to comply with General Plan policies NR 8.1 through 8.5, which when implemented would help to reduce construction-related air pollutant emissions. Further, construction activities that may be associated with future residential development on the proposed Project site would be required to comply with all applicable SCAQMD Rules and current California Building Code requirements (California Code of Regulations, Title 24), some provisions of which are more stringent now than when the General Plan EIR was certified in 2007.

Construction-related air emissions and resulting impacts associated with the proposed allocation of 524 multi-family residential units to San Joaquin Plaza clearly fall within the scope of analysis previously provided in the General Plan EIR. Of the 524 units, the General Plan EIR assumed that 430 of those units would be constructed within the NNCPC and also assumed that an additional 15 multi-family units would be constructed within Statistical Area L1. The remaining 79 units were assumed by the General Plan EIR to consist of hotel units. Therefore, the conversion of 79 hotel units to multi-family residential units and the conduct of construction activities to the specific location of San Joaquin Plaza represent the Project's only potential to create new construction-related air quality impacts because construction of the remaining 445 multi-family units in Newport Center were assumed and previously evaluated by the General Plan EIR. The construction of 79 multi-family residential units instead of 79 hotel units would not represent any measurable difference in construction-related air emissions. The types of construction equipment, material use, and duration of construction activities would be very similar for hotel units or multi-family units. Additionally, the conduct of construction activities in San Joaquin Plaza would not have the potential to generate air emissions that would be different or more severe than the conduct of construction activities in other parts of Newport Center. Accordingly, future Project-related construction emissions would not result in any new impacts or substantially increase the severity of the significant and unavoidable construction-related air quality impact previously disclosed in the General Plan EIR.

Long-Term Operational-Related Emissions

Although the General Plan EIR identified a significant and unavoidable impact due to a conflict with the applicable AQMP, the conflict was related only to the increase in population that would be associated with buildout of the General Plan (and is discussed below under the analysis of Consistency Criterion No. 2). As indicated in the General Plan EIR:

> *"Another measurement tool in determining consistency with the AQMP is to determine how a project accommodates the expected increase in population or employment. Generally, if a project is planned in a way that results in the minimization of vehicle miles traveled (VMT), both within the project area and the surrounding area in which it is located, and consequently the minimization of air pollutant emissions, that aspect of the project is consistent with the AQMP."*

The General Plan EIR determined that VMTs would be reduced through compliance with the General Plan goals and policies, and that the reduction in VMTs would be consistent with the AQMP. For example, the General Plan would "…promote a mixed-use pedestrian-friendly district for Balboa Peninsula, Airport Area, Newport Center/Fashion Island, Mainers Mile, and which would contribute to decreases in vehicle miles traveled." Additionally, the General Plan EIR identifies several other policies, including Policies LU 3.3, LU 6.15.9, 6.14.5, 6.15.9, NR 6.1, NR 6.2, NR 6.3, NR 6.4, and NR 6.5, that would serve to reduce VMTs within the City.

The proposed Project would contribute to the mixed-use nature of Newport Center/Fashion Island by locating multi-family residential uses within the San Joaquin Plaza where commercial and office land uses exist. The Project also would be required to comply with all applicable General Plan goals and policies. Furthermore, and as concluded in the Project's traffic study, the proposed Project would generate 315 fewer daily trips than was assumed under the General Plan EIR, and would therefore result in a net reduction in VMTs. Accordingly, VMTs associated with the proposed Project would be within the scope of analysis as presented in the General Plan EIR, and would not contribute to a substantial increase in the severity of the General Plan's significant and unavoidable impact due to a conflict with the applicable AQMP.

Project-related air quality emissions were calculated and presented previously in Section 3.5. As discussed in Section 3.5 and shown in Table 3-2, air emissions associated with the allocation of 94 additional multi-family units to the San Joaquin Plaza will not violate an air quality standard or contribute substantially to an existing or projected air quality violation. Therefore, it follows that the Project's emissions would not substantially contribute to a cumulative excedance of a pollutant for which the SCAB is in nonattainment (ozone, nitrogen dioxide, PM10, PM2.5). Because Project emissions would not substantially contribute to a cumulative excedance of a pollutant for which the Air Basin is in nonattainment, operation of the proposed Project would not result in any new impacts due to a conflict with the AQMP, nor would the Project's operational emissions create a substantially more severe impact due to conflict with the AQMP than previously disclosed in the General Plan EIR.
On the basis of the preceding discussion, the Project would be consistent with the scope of analysis as presented in the General Plan EIR and is determined to be consistent with the first criterion.

- Consistency Criterion No. 2: The proposed project will not exceed the assumptions in the AQMP or increments based on the years of project build-out phase.

The General Plan EIR identified a significant unavoidable impact due to a conflict with the applicable AQMP because buildout of the General Plan "…would result in population levels above those uses in the 2003 AQMP."

Assumptions of the AQMP used in projecting future emissions levels are based in part on land use data provided by lead agency general plan documentation. Projects that propose general plan amendments and changes of zone may increase the intensity of use and/or result in higher traffic volumes, thereby resulting in increased stationary area source emissions and/or vehicle source emissions when compared to the AQMP assumptions. If however, a project does not exceed the growth projections in the applicable local General Plan, then the project is considered to be consistent with the growth assumptions in the AQMP.

As discussed under the analysis of Consistency Criterion No. 1, construction-related emissions that may be associated with future development at the proposed Project site would be consistent with the assumptions previously evaluated and disclosed in the General Plan EIR. Therefore, the proposed Project would not exceed growth assumptions for construction-related activities.

The proposed Project does not involve a General Plan Amendment, but it does involve a change of zone associated with a proposed amendment to the NNCPC Development Plan, which serves as the controlling zoning ordinance for properties within its geographic boundaries. The amendment proposes to vest a total of 524 multi-family units to the San Joaquin Plaza portion of NNCPC, including 430 units already allowed within the San Joaquin Plaza, the assignment of 15 un-built units to the San Joaquin Plaza, and through the conversion of 79 hotel units to multi-family units and the transfer of those units to the San Joaquin Plaza.

Population growth associated with the 430 multi-family residential units already allowed within the San Joaquin Plaza and the 15 un-assigned and un-built multi-family units within Statistical Area L1 are consistent with the growth projections assumed in the General Plan EIR, and are therefore accounted for as part of the significant and unavoidable conflict with the 2003 AQMP as disclosed by the General Plan EIR. By contrast, the conversion of 79 un-built hotel units to residential units would result in an estimated increase in the City's permanent population by 173 persons (based on a person per household [pph] value of 2.19 cited in the General Plan EIR). It should be noted that the increase in the permanent population would be somewhat off-set by the reduction in transient population (i.e., hotel patrons) due to the reduction in the number of hotel units allowed within the City (79 units).

As evaluated in the San Joaquin Plaza – Trip Generation letter (Stantec, May 2012), the 79 residential units proposed by the Project to be converted from hotel room units would generate 315 fewer daily trips, and thereby fewer operational air emissions than the 79 hotel rooms that were assumed in the General Plan EIR. Accordingly, because the 2007 AQMP relied on land use and demographic data from the General Plan and the proposed Project would generate fewer emissions than assumed for General Plan buildout, the Project would not exceed the growth assumptions in the AQMP. As such, the proposed project is in compliance with Consistency Criterion No. 2 and would not result in greater emissions than what is already included in the General Plan.

Since the project satisfies both of the two aforementioned criterion for determining consistency, the proposed Project would not result in any new impacts due to a Project-specific conflict with the AQMP, nor would the proposed Project result in a substantial increase in the severity of the General Plan's significant and unavoidable conflict with the AQMP. Therefore, implementation of the proposed Project would not result in any new impacts or increase the severity of a previously identified significant impact as previously analyzed in the General Plan EIR..

Additionally, to ensure continued progress toward clean air and compliance with state and federal requirements, the SCAQMD, in conjunction with the CARB and SCAG, is currently preparing the 2012 revision to its 2007 AQMP[3]. The 2012 AQMP will incorporate the latest scientific and technological information and planning assumptions, including the 2012 Regional Transportation Plan/Sustainable Communities Strategy, comprehensive strategy aimed at controlling pollution from all sources, and updated emission inventory methodologies for stationary sources, on-road and off-road mobile sources, and area sources. No timetable for the release of the 2012 AQMP is available at this time, however, since the Project is deemed consistent with the 2007 AQMP it follows that the Project would also remain consistent with the 2012 AQMP, when it is released.

3.8 POTENTIAL IMPACTS TO SENSITIVE RECEPTORS

The potential impact of Project-generated air pollutant emissions at sensitive receptors has also been considered. Sensitive receptors can include uses such as long term health care facilities, rehabilitation centers, and retirement homes. Residences, schools, playgrounds, child care centers, and athletic facilities can also be considered as sensitive receptors.

The Project will not exceed the applicable regional thresholds during long-term operational activity, as such, a less than significant impact to any sensitive receptors in the vicinity of the project is expected.

The proposed Project would not result in a significant CO "hotspot" as a result of Project related traffic during ongoing operations, thus a less than significant impact to sensitive receptors during operational activity is expected.

3.9 ODORS

The potential for the Project to generate objectionable odors has also been considered. Land uses generally associated with odor complaints include:

- Agricultural uses (livestock and farming)
- Wastewater treatment plants

[3] http://www.aqmd.gov/aqmp/2012aqmp/index.htm

- Food processing plants
- Chemical plants
- Composting operations
- Refineries
- Landfills
- Dairies
- Fiberglass molding facilities

The Project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the proposed Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities, and the temporary storage of typical solid waste (refuse) associated with the proposed Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts resulting from construction activity. It should be noted that any construction odor emissions generated would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction activity and is thus considered less than significant. It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the City's solid waste regulations. The proposed Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors associated with the proposed Project construction and operations would be less than significant and no mitigation is required.

3.10 CUMULATIVE IMPACTS

As previously indicated, air quality emissions associated with future construction activities would be consistent with the assumptions made in the General Plan EIR. Accordingly, future construction activities would not result in any new or more severe cumulative impacts to air quality beyond what was previously evaluated and disclosed in the General Plan EIR.

The Project area is designated as an extreme non-attainment area for ozone, and a non-attainment area for PM10 and PM2.5. Germane to this non-attainment status, the Project-specific evaluation of emissions associated with the addition of 94 multi-family units to the San Joaquin Plaza presented in the preceding analysis demonstrates that the Project will not result in an increased impact due to a conflict with the AQMP, which is designed to assist the region in attaining the applicable state and national ambient air quality standards. Furthermore, the Project-related emissions would not exceed the regional thresholds established by the SCAQMD for NO_X, VOC, PM_{10}, or $PM_{2.5}$; as such, it follows that the emissions would not substantially contribute to a cumulative excedance of a pollutant for which the SCAB is in nonattainment (i.e., ozone, NOX, PM10, and/or PM2.5). The Project would comply with SCAQMD's Rule 403 (fugitive dust control) during construction, as well as all other adopted AQMP emissions control measures. Per SCAQMD rule and mandates, as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements would also be imposed

on all projects Basin-wide, which would include all related projects. As such, Project-related criteria pollutant emissions would not result in any new impacts or increase the severity of a previously identified significant impact as analyzed in the General Plan EIR.

THIS PAGE INTENTIONALLY LEFT BLANK

4.0 REFERENCES

1. California Air Resources Board, 2007. *California Air Resources Board Almanac.*

2. California Air Resources Board, 2007. *EMFAC 2007.*

3. EIP Associates, 2006. *City of Newport Beach General Plan 2006 Update Draft Environmental Impact Report.*

4. South Coast Air Quality Management District (SCAQMD), 1993. *CEQA Air Quality Handbook.*

5. South Coast Air Quality Management District (SCAQMD), 2011. *California Emissions Estimator Model (CalEEMod™).*

6. South Coast Air Quality Management District (SCAQMD), March 2009. *CEQA Air Quality Significance Thresholds.*

7. South Coast Air Quality Management District (SCAQMD), 2003. *Final Localized Significance Threshold Methodology.*

8. Stantec, 2012. *North Newport Center San Joaquin Plaza TPO Traffic Analysis.*

THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX A

CalEEMod™ Input/Output
Construction and Operational Emissions

North Newport Center Planned Community Amendment

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Condo/Townhouse High Rise	94	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Southern California Edison
Climate Zone	8	**Precipitation Freq (Days)**	30		

1.3 User Entered Comments

Project Characteristics -

Land Use -

Construction Phase -

Off-road Equipment - the project does not require emissions for the construction phase

Trips and VMT - the project does not require emissions for the construction phase

Vehicle Trips - trip rate data was sourced from Trip Generation 8th Edition, Institute of Transportation Engineers (ITE 232)

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2011	0.00	0.00	0.00	0.00	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	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
2011	0.00	0.00	0.00	0.00	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	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	12.32	0.55	39.07	0.08		0.00	5.01		0.00	5.01	663.33	1,706.13		2.64	0.04	2,437.50
Energy	0.07	0.61	0.26	0.00		0.00	0.05		0.00	0.05		776.28		0.01	0.01	781.00
Mobile	1.92	3.47	18.87	0.04	4.46	0.18	4.64	0.15	0.18	0.33		3,693.29		0.15		3,696.35
Total	**14.31**	**4.63**	**58.20**	**0.12**	**4.46**	**0.18**	**9.70**	**0.15**	**0.18**	**5.39**	**663.33**	**6,175.70**		**2.80**	**0.05**	**6,914.85**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	12.32	0.55	39.07	0.08		0.00	5.01		0.00	5.01	663.33	1,706.13		2.64	0.04	2,437.50
Energy	0.07	0.61	0.26	0.00		0.00	0.05		0.00	0.05		776.28		0.01	0.01	781.00
Mobile	1.92	3.47	18.87	0.04	4.46	0.18	4.64	0.15	0.18	0.33		3,693.29		0.15		3,696.35
Total	**14.31**	**4.63**	**58.20**	**0.12**	**4.46**	**0.18**	**9.70**	**0.15**	**0.18**	**5.39**	**663.33**	**6,175.70**		**2.80**	**0.05**	**6,914.85**

3.0 Construction Detail

3.1 Mitigation Measures Construction

3.2 Demolition - 2011

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	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**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	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
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
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**

3.2 Demolition - 2011

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	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**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	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
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
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**

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	lb/day										lb/day					
Mitigated	1.92	3.47	18.87	0.04	4.46	0.18	4.64	0.15	0.18	0.33		3,693.29		0.15		3,696.35
Unmitigated	1.92	3.47	18.87	0.04	4.46	0.18	4.64	0.15	0.18	0.33		3,693.29		0.15		3,696.35
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
Condo/Townhouse High Rise	392.92	405.14	322.42	1,280,920	1,280,920
Total	392.92	405.14	322.42	1,280,920	1,280,920

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
Condo/Townhouse High Rise	12.70	7.00	9.50	40.20	19.20	40.60

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	lb/day										lb/day					
NaturalGas Mitigated	0.07	0.61	0.26	0.00		0.00	0.05		0.00	0.05		776.28		0.01	0.01	781.00
NaturalGas Unmitigated	0.07	0.61	0.26	0.00		0.00	0.05		0.00	0.05		776.28		0.01	0.01	781.00
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	lb/day										lb/day					
Condo/Townhouse High Rise	6598.36	0.07	0.61	0.26	0.00		0.00	0.05		0.00	0.05		776.28		0.01	0.01	781.00
Total		**0.07**	**0.61**	**0.26**	**0.00**		**0.00**	**0.05**		**0.00**	**0.05**		**776.28**		**0.01**	**0.01**	**781.00**

5.2 Energy by Land Use - NaturalGas

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	lb/day										lb/day					
Condo/Townhouse High Rise	6.59836	0.07	0.61	0.26	0.00		0.00	0.05		0.00	0.05		776.28		0.01	0.01	781.00
Total		**0.07**	**0.61**	**0.26**	**0.00**		**0.00**	**0.05**		**0.00**	**0.05**		**776.28**		**0.01**	**0.01**	**781.00**

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	lb/day										lb/day					
Mitigated	12.32	0.55	39.07	0.08		0.00	5.01		0.00	5.01	663.33	1,706.13		2.64	0.04	2,437.50
Unmitigated	12.32	0.55	39.07	0.08		0.00	5.01		0.00	5.01	663.33	1,706.13		2.64	0.04	2,437.50
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	lb/day										lb/day					
Architectural Coating	0.20					0.00	0.00		0.00	0.00						0.00
Consumer Products	1.86					0.00	0.00		0.00	0.00						0.00
Hearth	10.01	0.46	31.11	0.08		0.00	4.97		0.00	4.97	663.33	1,692.00		2.63	0.04	2,423.06
Landscaping	0.25	0.09	7.96	0.00		0.00	0.04		0.00	0.04		14.13		0.01		14.44
Total	**12.32**	**0.55**	**39.07**	**0.08**		**0.00**	**5.01**		**0.00**	**5.01**	**663.33**	**1,706.13**		**2.64**	**0.04**	**2,437.50**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.20					0.00	0.00		0.00	0.00						0.00
Consumer Products	1.86					0.00	0.00		0.00	0.00						0.00
Hearth	10.01	0.46	31.11	0.08		0.00	4.97		0.00	4.97	663.33	1,692.00		2.63	0.04	2,423.06
Landscaping	0.25	0.09	7.96	0.00		0.00	0.04		0.00	0.04		14.13		0.01		14.44
Total	**12.32**	**0.55**	**39.07**	**0.08**		**0.00**	**5.01**		**0.00**	**5.01**	**663.33**	**1,706.13**		**2.64**	**0.04**	**2,437.50**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

North Newport Center Planned Community Amendment

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Condo/Townhouse High Rise	94	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Southern California Edison
Climate Zone	8	**Precipitation Freq (Days)**	30		

1.3 User Entered Comments

Project Characteristics -

Land Use -

Construction Phase -

Off-road Equipment - the project does not require emissions for the construction phase

Trips and VMT - the project does not require emissions for the construction phase

Vehicle Trips - trip rate data was sourced from Trip Generation 8th Edition, Institute of Transportation Engineers (ITE 232)

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2011	0.00	0.00	0.00	0.00	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	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
2011	0.00	0.00	0.00	0.00	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	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	12.32	0.55	39.07	0.08		0.00	5.01		0.00	5.01	663.33	1,706.13		2.64	0.04	2,437.50
Energy	0.07	0.61	0.26	0.00		0.00	0.05		0.00	0.05		776.28		0.01	0.01	781.00
Mobile	2.03	3.84	18.37	0.04	4.46	0.18	4.64	0.15	0.18	0.33		3,486.56		0.15		3,489.62
Total	**14.42**	**5.00**	**57.70**	**0.12**	**4.46**	**0.18**	**9.70**	**0.15**	**0.18**	**5.39**	**663.33**	**5,968.97**		**2.80**	**0.05**	**6,708.12**

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	lb/day										lb/day					
Area	12.32	0.55	39.07	0.08		0.00	5.01		0.00	5.01	663.33	1,706.13		2.64	0.04	2,437.50
Energy	0.07	0.61	0.26	0.00		0.00	0.05		0.00	0.05		776.28		0.01	0.01	781.00
Mobile	2.03	3.84	18.37	0.04	4.46	0.18	4.64	0.15	0.18	0.33		3,486.56		0.15		3,489.62
Total	**14.42**	**5.00**	**57.70**	**0.12**	**4.46**	**0.18**	**9.70**	**0.15**	**0.18**	**5.39**	**663.33**	**5,968.97**		**2.80**	**0.05**	**6,708.12**

3.0 Construction Detail

3.1 Mitigation Measures Construction

3.2 Demolition - 2011

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	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**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	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
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
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**

3.2 Demolition - 2011

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	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**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	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
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
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**

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	lb/day										lb/day					
Mitigated	2.03	3.84	18.37	0.04	4.46	0.18	4.64	0.15	0.18	0.33		3,486.56		0.15		3,489.62
Unmitigated	2.03	3.84	18.37	0.04	4.46	0.18	4.64	0.15	0.18	0.33		3,486.56		0.15		3,489.62
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
Condo/Townhouse High Rise	392.92	405.14	322.42	1,280,920	1,280,920
Total	392.92	405.14	322.42	1,280,920	1,280,920

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
Condo/Townhouse High Rise	12.70	7.00	9.50	40.20	19.20	40.60

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	lb/day										lb/day					
NaturalGas Mitigated	0.07	0.61	0.26	0.00		0.00	0.05		0.00	0.05		776.28		0.01	0.01	781.00
NaturalGas Unmitigated	0.07	0.61	0.26	0.00		0.00	0.05		0.00	0.05		776.28		0.01	0.01	781.00
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	lb/day										lb/day					
Condo/Townhouse High Rise	6598.36	0.07	0.61	0.26	0.00		0.00	0.05		0.00	0.05		776.28		0.01	0.01	781.00
Total		**0.07**	**0.61**	**0.26**	**0.00**		**0.00**	**0.05**		**0.00**	**0.05**		**776.28**		**0.01**	**0.01**	**781.00**

5.2 Energy by Land Use - NaturalGas

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	lb/day										lb/day					
Condo/Townhouse High Rise	6.59836	0.07	0.61	0.26	0.00		0.00	0.05		0.00	0.05		776.28		0.01	0.01	781.00
Total		**0.07**	**0.61**	**0.26**	**0.00**		**0.00**	**0.05**		**0.00**	**0.05**		**776.28**		**0.01**	**0.01**	**781.00**

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	lb/day										lb/day					
Mitigated	12.32	0.55	39.07	0.08		0.00	5.01		0.00	5.01	663.33	1,706.13		2.64	0.04	2,437.50
Unmitigated	12.32	0.55	39.07	0.08		0.00	5.01		0.00	5.01	663.33	1,706.13		2.64	0.04	2,437.50
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	lb/day										lb/day					
Architectural Coating	0.20					0.00	0.00		0.00	0.00						0.00
Consumer Products	1.86					0.00	0.00		0.00	0.00						0.00
Hearth	10.01	0.46	31.11	0.08		0.00	4.97		0.00	4.97	663.33	1,692.00		2.63	0.04	2,423.06
Landscaping	0.25	0.09	7.96	0.00		0.00	0.04		0.00	0.04		14.13		0.01		14.44
Total	**12.32**	**0.55**	**39.07**	**0.08**		**0.00**	**5.01**		**0.00**	**5.01**	**663.33**	**1,706.13**		**2.64**	**0.04**	**2,437.50**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.20					0.00	0.00		0.00	0.00						0.00
Consumer Products	1.86					0.00	0.00		0.00	0.00						0.00
Hearth	10.01	0.46	31.11	0.08		0.00	4.97		0.00	4.97	663.33	1,692.00		2.63	0.04	2,423.06
Landscaping	0.25	0.09	7.96	0.00		0.00	0.04		0.00	0.04		14.13		0.01		14.44
Total	**12.32**	**0.55**	**39.07**	**0.08**		**0.00**	**5.01**		**0.00**	**5.01**	**663.33**	**1,706.13**		**2.64**	**0.04**	**2,437.50**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation