Air Quality Technical Report

for the

6^{th} and Olive Project

Submitted To:

KLR Planning, Inc.
P.O. Box 882676
San Diego, CA 92186-2676

Prepared By:

Scientific Resources Associated
1328 Kaimalino Lane
San Diego, CA 92109
Dr. Valorie L. Thompson, Principal
(858) 488-2987

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Glossary of Terms and Acronyms

APCD	Air Pollution Control District
ARB	California Air Resources Board
CAA	Clean Air Act (Federal)
CAAQS	California Ambient Air Quality Standard
CALINE4	California Line Source Dispersion Model (Version 4)
Caltrans	California Department of Transportation
CCAA	California Clean Air Act
CO	Carbon Monoxide
EPA	United States Environmental Protection Agency
H_2S	Hydrogen Sulfide
mg/m^3	Milligrams per Cubic Meter
$\mu g/m^3$	Micrograms per Cubic Meter
NAAQS	National Ambient Air Quality Standard
NOx	Oxides of Nitrogen
NO_2	Nitrogen Dioxide
O_3	Ozone
$PM_{2.5}$	Fine Particulate Matter (particulate matter with an aerodynamic diameter of 2.5 microns or less
PM_{10}	Respirable Particulate Matter (particulate matter with an aerodynamic diameter of 10 microns or less
ppm	Parts per million
RAQS	San Diego County Regional Air Quality Strategy
ROCs	Reactive Organic Compounds
ROG	Reactive Organic Gases
SANDAG	San Diego Association of Governments
SDAB	San Diego Air Basin
SDAPCD	San Diego County Air Pollution Control District
SIP	State Implementation Plan
SOx	Oxides of Sulfur
SO_2	Sulfur Dioxide
TACs	Toxic Air Contaminants
T-BACT	Toxics Best Available Control Technology
VOCs	Volatile Organic Compounds

1.0 Introduction

This report presents an assessment of potential air quality impacts associated with the 6th and Olive Project (project) in the City of San Diego. The 6th and Olive proposed project involves an Amendment to the approved *St. Paul's Cathedral and Residences* SDP No. 312733. The proposed project would demolish an existing 16-unit Park Chateau Apartments (21,813 square feet), existing Cathedral administrative offices (4,973 square feet), and a 20-space surface parking lot (4,440 square feet) and construct a new mixed-use, 20-story building containing approximately 262,500 square feet of above-grade gross floor area with 204 multi-family residential units (including 18 affordable housing units), 16,910 gross square feet of Cathedral office space, and 348 automobile parking spaces in a five-level underground parking structure. Access to the garage would be from a driveway on Olive Street. The project would also provide a courtyard shared with St. Paul's Cathedral that includes landscaping, decorative fountains, and benches.

This Air Quality Technical Report includes an evaluation of existing conditions in the project vicinity, an assessment of potential impacts associated with project construction, and an evaluation of project operational impacts.

2.0 Existing Conditions

As discussed in Section 1.0, the site is located at 6th Avenue and Olive Street in the City of San Diego. The site is currently occupied by existing structures totaling 26,786 square feet, along with on-site surface parking (4,440 square feet). The existing structures and surface parking will be demolished to accommodate the development.

The following section provides information about the existing air quality regulatory framework, climate, air pollutants and sources, and sensitive receptors in the project area.

2.1 Regulatory Framework

2.1.1 Federal Regulations

Air quality is defined by ambient air concentrations of specific pollutants identified by the United States Environmental Protection Agency (EPA) to be of concern with respect to health and welfare of the general public. The EPA is responsible for enforcing the Federal Clean Air Act (CAA) of 1970 and its 1977 and 1990 Amendments. The CAA required the EPA to establish National Ambient Air Quality Standards (NAAQS), which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. In response, the EPA established both primary and secondary standards for seven pollutants (called "criteria" pollutants). The seven pollutants regulated under the NAAQS are as follows: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), respirable particulate matter (or particulate matter with an aerodynamic diameter of 10 microns or less, PM_{10}), fine particulate matter (or particulate matter with an aerodynamic diameter of 2.5 microns or less, $PM_{2.5}$), sulfur dioxide (SO_2), and lead (Pb). Primary standards are designed to protect human health with an adequate margin of safety. Secondary standards are designed to protect property and the public welfare from air pollutants in the atmosphere. Areas that do not meet the NAAQS for a particular pollutant are considered to be "non-attainment areas" for that pollutant. The San Diego Air Basin (SDAB) has been designated a marginal non-attainment area for the 8-hour NAAQS for O_3.

The following specific descriptions of health effects for each of the criteria air pollutants associated with project construction and operations are based on EPA (EPA 2017) and the California Air Resources Board (ARB) (ARB 2008).

Ozone. O_3 is considered a photochemical oxidant, which is a chemical that is formed when reactive organic gases (ROG) and oxides of nitrogen (NOx), both by-products of combustion, react in the presence of ultraviolet light. O_3 is considered a respiratory irritant and prolonged exposure can reduce lung function, aggravate asthma and increase susceptibility to respiratory infections. Children and those with existing respiratory diseases are at greatest risk from exposure to O_3.

Carbon Monoxide. CO is a product of combustion, and the main source of CO in the SDAB is from motor vehicle exhaust. CO is an odorless, colorless gas. CO affects red blood cells in the body by binding to hemoglobin and reducing the amount of oxygen that can be carried to the body's organs and tissues. CO can cause health effects to those with cardiovascular disease, and can also affect mental alertness and vision.

Nitrogen Dioxide. NO_2 is also a by-product of fuel combustion, and is formed both directly as a product of combustion and in the atmosphere through the reaction of nitrogen oxide (NO) with oxygen. NO_2 is a respiratory irritant and may affect those with existing respiratory illness, including asthma. NO_2 can also increase the risk of respiratory illness.

Respirable Particulate Matter and Fine Particulate Matter. Respirable particulate matter, or PM_{10}, refers to particulate matter with an aerodynamic diameter of 10 microns or less. Fine particulate matter, or $PM_{2.5}$, refers to particulate matter with an aerodynamic diameter of 2.5 microns or less. Particulate matter in this size range has been determined to have the potential to lodge in the lungs and contribute to respiratory problems. PM_{10} and $PM_{2.5}$ arise from a variety of sources, including road dust, diesel exhaust, combustion, tire and brake wear, construction operations and windblown dust. PM_{10} and $PM_{2.5}$ can increase susceptibility to respiratory infections and can aggravate existing respiratory diseases such as asthma and chronic bronchitis. $PM_{2.5}$ is considered to have the potential to lodge deeper in the lungs.

Sulfur dioxide. SO_2 is a colorless, reactive gas that is produced from the burning of sulfur-containing fuels such as coal and oil, and by other industrial processes. Generally, the highest concentrations of SO_2 are found near large industrial sources. SO_2 is a respiratory irritant that can cause narrowing of the airways leading to wheezing and shortness of breath. Long-term exposure to SO_2 can cause respiratory illness and aggravate existing cardiovascular disease.

Lead. Pb in the atmosphere occurs as particulate matter. Pb has historically been emitted from vehicles combusting leaded gasoline, as well as from industrial sources. With the phase-out of leaded gasoline, large manufacturing facilities are the sources of the largest amounts of lead emissions. Pb has the potential to cause gastrointestinal, central nervous system, kidney and blood diseases upon prolonged exposure. Pb is also classified as a probable human carcinogen.

2.1.2 State Regulations

California Clean Air Act. The California Clean Air Act was signed into law on September 30, 1988, and became effective on January 1, 1989. The Act requires that local air districts implement regulations to reduce emissions from mobile sources through the adoption and enforcement of transportation control measures. The California Clean Air Act required the SDAB to achieve a five percent annual reduction in ozone precursor emissions from 1987 until the standards are attained. If this reduction cannot be achieved, all feasible control measures must be implemented. Furthermore, the California Clean Air Act required local air districts to implement a Best Available Control Technology rule and to require emission offsets for non-attainment pollutants.

The ARB is the state regulatory agency with authority to enforce regulations to both achieve and maintain air quality in the state. The ARB is responsible for the development, adoption, and enforcement of the state's motor vehicle emissions program, as well as the adoption of the California Ambient Air Quality Standards (CAAQS). The ARB also reviews operations and programs of the local air districts, and requires each air district with jurisdiction over a non-attainment area to develop its own strategy for achieving the NAAQS and CAAQS. The CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. The ARB has established the more stringent CAAQS for the six criteria pollutants through the California Clean Air Act of 1988, and also has established CAAQS for additional pollutants, including sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. The SDAB is currently classified as a non-attainment area under the CAAQS for O_3, $PM_{10,}$ and $PM_{2.5}$. It should be noted that the ARB does not differentiate between attainment of the 1-hour and 8-hour CAAQS for O_3; therefore, if an air basin records exceedances of either standard the area is considered a non-attainment area for the CAAQS for O_3. The SDAB has recorded exceedances of both the 1-hour and 8-hour CAAQS for O_3. The following specific descriptions of health effects for the additional California criteria air pollutants are based on the ARB (ARB 2001).

Sulfates. Sulfates are the fully oxidized ionic form of sulfur. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to sulfur dioxide (SO_2) during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features. The ARB's sulfates standard is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and due to fact that they are usually acidic, can harm ecosystems and damage materials and property.

Hydrogen Sulfide. H_2S is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation. Breathing H_2S at levels above the standard would result in exposure to a very disagreeable odor. In 1984, an ARB committee concluded that the ambient standard for H_2S is adequate to protect public health and to significantly reduce odor annoyance.

Vinyl Chloride. Vinyl chloride, a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants and hazardous waste sites, due to microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air causes central nervous system effects, such as dizziness, drowsiness and headaches. Long-term exposure to vinyl chloride through inhalation and oral exposure causes liver damage. Cancer is a major concern from exposure to vinyl chloride via inhalation. Vinyl chloride exposure has been shown to increase the risk of angiosarcoma, a rare form of liver cancer, in humans.

Visibility Reducing Particles. Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt. The CAAQS is intended to limit the frequency and severity of visibility impairment due to regional haze. A separate standard for visibility-reducing particles that is applicable only in the Lake Tahoe Air Basin is based on reduction in scenic quality.

Table 1 presents a summary of the ambient air quality standards adopted by the federal and California Clean Air Acts.

Table 1
Ambient Air Quality Standards

POLLUTANT	AVERAGE TIME	CALIFORNIA STANDARDS		NATIONAL STANDARDS		
		Concentration	**Method**	**Primary**	**Secondary**	**Method**
Ozone (O_3)	1 hour	0.09 ppm (176 $\mu g/m^3$)	Ultraviolet Photometry	--	--	Ethylene Chemiluminescence
	8 hour	0.070 ppm (137 $\mu g/m^3$)		0.070 ppm (137 $\mu g/m^3$)	0.070 ppm (137 $\mu g/m^3$)	
Carbon Monoxide (CO)	8 hours	9.0 ppm (10 mg/m^3)	Non-Dispersive Infrared Spectroscopy (NDIR)	9 ppm (10 mg/m^3)	--	Non-Dispersive Infrared Spectroscopy (NDIR)
	1 hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
Nitrogen Dioxide (NO_2)	Annual Average	0.030 ppm (56 $\mu g/m^3$)	Gas Phase Chemiluminescence	0.053 ppm (100 $\mu g/m^3$)	--	Gas Phase Chemiluminescence
	1 hour	0.18 ppm (338 $\mu g/m^3$)		0.100 ppm (188 $\mu g/m^3$)	--	
Sulfur Dioxide (SO_2)	24 hours	0.04 ppm (105 $\mu g/m^3$)	Ultraviolet Fluorescence	--	--	Pararosaniline
	3 hours	--		--	0.5 ppm (1300 $\mu g/m^3$)	
	1 hour	0.25 ppm (655 $\mu g/m^3$)		0.075 ppm (196 $\mu g/m^3$)	--	
Respirable Particulate Matter (PM_{10})	24 hours	50 $\mu g/m^3$	Gravimetric or Beta Attenuation	150 $\mu g/m^3$	150 $\mu g/m^3$	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 $\mu g/m^3$		--	--	
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 $\mu g/m^3$	Gravimetric or Beta Attenuation	12 $\mu g/m^3$	--	Inertial Separation and Gravimetric Analysis
	24 hours	--		35 $\mu g/m^3$	--	
Sulfates	24 hours	25 $\mu g/m^3$	Ion Chromatography	--	--	--
Lead	30-day Average	1.5 $\mu g/m^3$	Atomic Absorption	--	--	Atomic Absorption
	Calendar Quarter	--		1.5 $\mu g/m^3$	1.5 $\mu g/m^3$	
	3-Month Rolling Average	--		0.15 $\mu g/m^3$	0.15 $\mu g/m^3$	
Hydrogen Sulfide	1 hour	0.03 ppm (42 $\mu g/m^3$)	Ultraviolet Fluorescence	--	--	--
Vinyl Chloride	24 hours	0.010 ppm (26 $\mu g/m^3$)	Gas Chromatography	--	--	--

ppm= parts per million; $\mu g/m^3$ = micrograms per cubic meter ; mg/m^3= milligrams per cubic meter
Source: California Air Resources Board, www.arb.ca.gov, 2018, http://www.arb.ca.gov/research/aaqs/aaqs2.pdf

Toxic Air Contaminants. In 1983, the California Legislature enacted a program to identify the health effects of Toxic Air Contaminants (TACs) and to reduce exposure to these contaminants to protect the public health (AB 1807: Health and Safety Code sections 39650-39674). The Legislature established a two-step process to address the potential health effects from TACs. The first step is the risk assessment (or identification) phase. The second step is the risk management (or control) phase of the process.

The State of California has identified diesel particulate matter as a TAC. Diesel particulate matter is emitted from on- and off-road vehicles that utilize diesel as fuel. Following identification of diesel particulate matter as a TAC in 1998, the ARB has worked on developing strategies and regulations aimed at reducing the emissions and associated risk from diesel particulate matter. The overall strategy for achieving these reductions is found in the *Risk Reduction Plan to Reduce Particulate Matter from Diesel-Fueled Engines and Vehicles* (State of California 2000). A stated goal of the plan is to reduce the cancer risk statewide arising from exposure to diesel particulate matter by 75 percent by 2010 and by 85 percent by 2020. The *Risk Reduction Plan* contains the following three components:

- New regulatory standards for all new on-road, off-road and stationary diesel-fueled engines and vehicles to reduce diesel particulate matter emissions by about 90 percent overall from current levels;
- New retrofit requirements for existing on-road, off-road and stationary diesel-fueled engines and vehicles where determined to be technically feasible and cost-effective; and
- New Phase 2 diesel fuel regulations to reduce the sulfur content levels of diesel fuel to no more than 15 ppm to provide the quality of diesel fuel needed by the advanced diesel particulate matter emission controls.

As an ongoing process, the ARB reviews air contaminants and identifies those that are classified as TACs. The ARB also continues to establish new programs and regulations for the control of TACs, including diesel particulate matter, as appropriate.

The local air pollution control district (APCD) has the primary responsibility for the development and implementation of rules and regulations designed to attain the NAAQS and CAAQS, as well as the permitting of new or modified sources, development of air quality management plans, and adoption and enforcement of air pollution regulations. The San Diego APCD is the local agency responsible for the administration and enforcement of air quality regulations in San Diego County.

The APCD and the San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The San Diego County Regional Air Quality Strategy (RAQS) was initially adopted in 1991, and is updated on a triennial basis. The RAQS was updated in 1995, 1998, 2001, 2004, 2009, and most recently in 2016 (APCD 2016). The RAQS outlines APCD's plans and control measures designed to attain the state air quality standards for O_3. The RAQS does not address the state air quality standards for PM_{10} or $PM_{2.5}$. The APCD has also developed the air basin's input to the State Implementation Plan (SIP), which is required under the Federal Clean Air Act for areas that are out of attainment of air quality standards. The SIP includes the APCD's plans and control measures for attaining the O_3 NAAQS. The SIP is also updated on a triennial basis. The latest SIP update that has been approved by EPA was in 2007. The current SIP is the APCD's *Eight-Hour Ozone Attainment Plan for San Diego County* (hereinafter referred to as the Attainment Plan) (APCD 2007). The Attainment Plan forms the basis for the SIP update, as it contains documentation on emission inventories and trends, the APCD's emission control strategy, and an attainment demonstration that shows that the SDAB will meet the NAAQS for O_3. Emission inventories, projections, and trends in the Attainment Plan are based on the latest O_3 SIP planning emission projections compiled and maintained by ARB. The inventories are based on data submitted by stakeholder agencies, including the San Diego Association of Governments (SANDAG), based on growth projections in municipal General Plans.

The ARB compiles annual statewide emission inventories in its emission-related information database, the California Emission Inventory Development and Reporting System (CEIDARS). Emission projections for past and future years were generated using the California Emission Forecasting System (CEFS), developed by ARB to project emission trends and track progress towards meeting emission reduction goals and mandates. CEFS utilizes the most current growth and emissions control data available and agreed upon by the stakeholder agencies to provide comprehensive projections of anthropogenic (human activity-related) emissions for any year from 1975 through 2030. Local air districts are responsible for compiling emissions data for all point sources and many stationary area-wide sources. For mobile sources, CEFS integrates emission estimates from ARB's EMFAC and OFFROAD models. SANDAG incorporates data regarding highway and transit projects into their Travel Demand Models for estimating and projecting vehicle miles traveled (VMT) and speed. The ARB's on-road emissions inventory in EMFAC relies on these VMT and speed estimates.

Because the ARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and by the County as part of the development of General Plans, projects that propose development that is consistent with the growth anticipated by the general plans would be consistent with the RAQS and the Attainment Plan. In the event that a project would propose development which is less dense than anticipated within the general plan, the project would likewise be consistent with the RAQS and the Attainment Plan. If a project proposes development that is greater than that anticipated in the general plan and SANDAG's growth projections, the project might be in conflict with the RAQS and SIP, and might have a potentially significant impact on air quality.

2.1.3 Local Regulations

In San Diego County, the San Diego APCD is the regulatory agency that is responsible for maintaining air quality, including implementation and enforcement of state and federal regulations. The project site is located in the City of San Diego. The City of San Diego has adopted a General Plan that includes a Conservation Element that adopts policies to reduce air emissions and improve air quality within the City.

2.2 Climate and Meteorology

The project site is located in the SDAB. The climate of the SDAB is dominated by a semi-permanent high pressure cell located over the Pacific Ocean. This cell influences the direction of prevailing winds (westerly to northwesterly) and maintains clear skies for much of the year. The high pressure cell also creates two types of temperature inversions that may act to degrade local air quality.

Subsidence inversions occur during the warmer months as descending air associated with the Pacific high pressure cell comes into contact with cool marine air. The boundary between the two layers of air creates a temperature inversion that traps pollutants. The other type of inversion, a radiation inversion, develops on winter nights when air near the ground cools by heat radiation and air aloft remains warm. The shallow inversion layer formed between these two air masses also can trap pollutants. As the pollutants become more concentrated in the atmosphere, photochemical reactions occur that produce ozone, commonly known as smog.

Figure 1 provides a graphic representation of the prevailing winds in the project vicinity, as measured at MCAS Miramar, which is the closest meteorological monitoring station to the site.

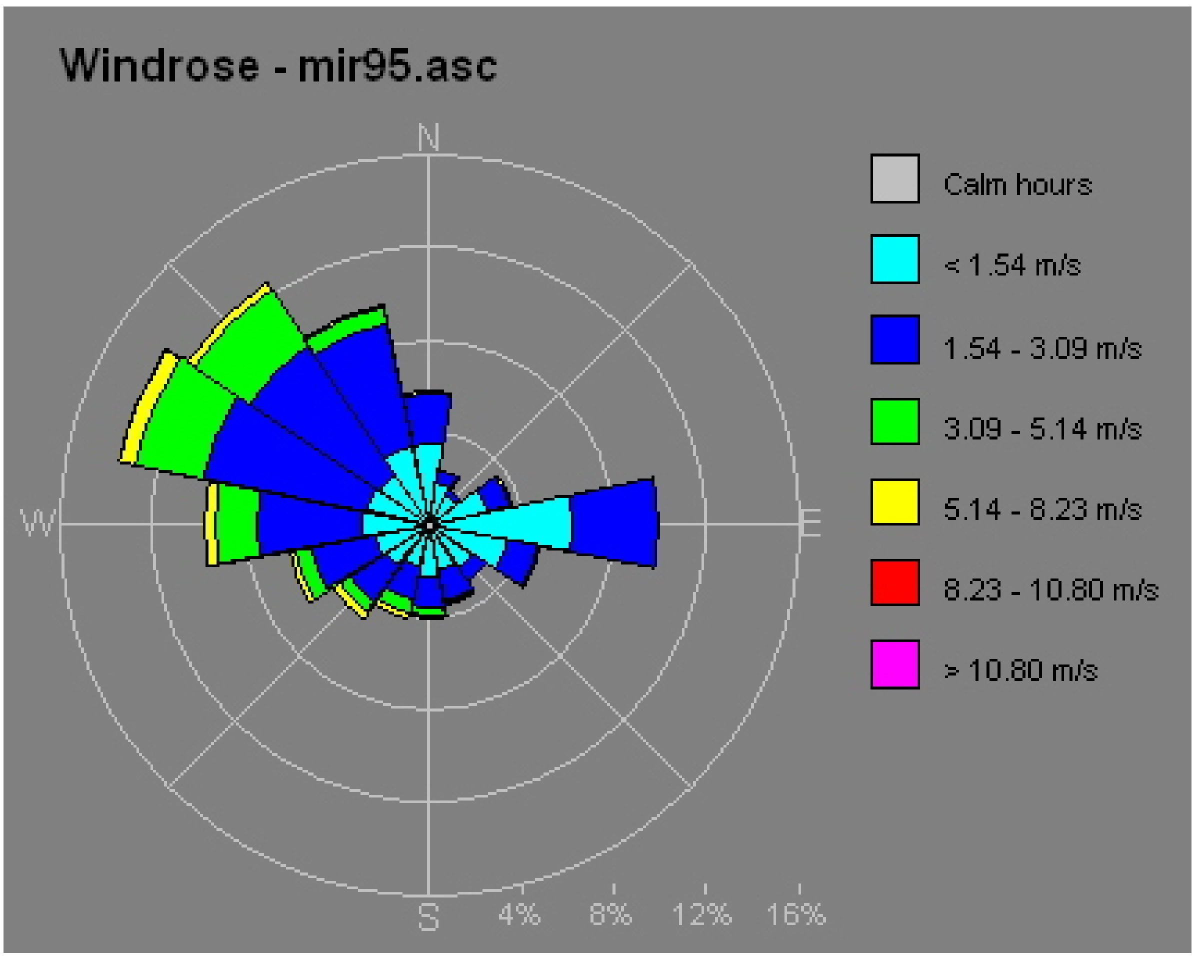

Figure 1. Wind Rose – MCAS Miramar

2.3 Background Air Quality

The APCD operates a network of ambient air monitoring stations throughout San Diego County. The purpose of the monitoring stations is to measure ambient concentrations of the pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. The nearest ambient monitoring station to the project site is the downtown San Diego monitoring station, which measures O_3, NO_2, CO, PM_{10}, and $PM_{2.5}$. Ambient concentrations of pollutants over the last five years are presented in Table 2.

The data from the San Diego monitoring station indicated a single day in which the 8-hour O_3 concentration exceeded the 8-hour CAAQS and NAAQS during the period from 2012 through 2016. However, this value does not constitute an exceedance of the O_3 standard because the standard is defined as the 98th percentile of daily readings over an annual period. Data from the San Diego monitoring station indicates that individual exceedances of the PM2.5 standard were measured, but the 98th percentile did not exceed the standard. Exceedances of the CAAQS for PM10 were recorded in 2013, 2015, and 2016. Air quality measured at that station is in attainment of all other air quality standards.

Table 2
Ambient Background Concentrations

Air Quality Indicator	2012	2013	2014	2015	2016
Ozone (O_3)					
Peak 1-hour value (ppm)	0.071	0.063	0.093	0.089	0.072
Days above state standard (0.09 ppm)	0	0	0	0	0
Peak 8-hour value (ppm)	0.065	0.053	0.072	0.067	0.061
Fourth high 8-hour value (ppm)	0.052	0.052	0.068	0.061	0.058
Days above federal standard (0.070 ppm)(1)	0	0	1	0	0
Days above state standard (0.070 ppm)	0	0	1	0	0
Particulate matter less than or equal to 2.5 microns in diameter ($PM_{2.5}$)					
Peak 24-hour value ($\mu g/m^3$)	39.8	37.4	36.7	33.4	34.4
24-hour 98th percentile value ($\mu g/m^3$)	24.1	19.6	24.8	19.6	NA
Days above federal standard (35 $\mu g/m^3$)	1	1	1	0	0
Annual Average value ($\mu g/m^3$)	11.0	10.3	10.1	9.3	9.6
Particulate matter less than or equal to 10 microns in diameter (PM_{10})					
Peak 24-hour value (federal) ($\mu g/m^3$) (2)	45	90	40	53	49
Peak 24-hour value (state) ($\mu g/m^3$) (2)	45	92	40	54	51
Days above federal standard (150 $\mu g/m^3$)	0	0	0	0	0
Days above state standard (50 $\mu g/m^3$)	0	1	0	1	1
Annual Average value (federal) ($\mu g/m^3$) (2)	21.8	24.9	23.3	23.0	21.9
Annual Average value (state) ($\mu g/m^3$) (2)	22.2	25.4	23.8	23.2	22.0

Table 2
Ambient Background Concentrations

Air Quality Indicator	2012	2013	2014	2015	2016
Carbon Monoxide (CO)					
Peak 1-hour value (ppm)	2.6	3.0	2.7	2.6	2.2
Days above federal and state standard (9 ppm)	0	0	0	0	0
Peak 8-hour value (ppm)	1.9	2.1	1.9	1.9	1.7
Days above federal standard (35 ppm)	0	0	0	0	0
Days above state standard (20 ppm)	0	0	0	0	0
Nitrogen Dioxide (NO_2)					
Peak 1-hour value (ppm)	0.065	0.072	0.075	0.062	0.073
Days above federal standard (0.100 ppm)	0	0	0	0	0
Days above state standard (0.18 ppm)	0	0	0	0	0
Annual Average value (ppm)	0.013	0.014	0.013	0.014	0.011

Notes:

(1) The federal 8-hour O_3 standard was revised downward in 2015 to 0.070 ppm.

(2) State and federal statistics may differ for the following reasons: (1) State statistics are based on California approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods. State and federal statistics may therefore be based on different samplers. (2) State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.

ppm = parts per million; µg/m^3 = micrograms per cubic meter; NA = data not available

Source: ARB http://www.arb.ca.gov/adam/topfour/topfourdisplay.php; Five-Year Summary, http://www.sdapcd.org/info/reports/5-year-summary.pdf.

3.0 Thresholds of Significance

The City of San Diego has adopted its Significance Determination Thresholds (City of San Diego 2016) that are based on Appendix G of the State CEQA Guidelines. According to the Significance Determination Thresholds, a project would have a significant environmental impact if the project would result in:

- A conflict with or obstruct the implementation of the applicable air quality plan;
- A violation of any air quality standard or contribute substantially to an existing or projected air quality violation;
- Exposing sensitive receptors to substantial pollutant concentrations;
- Creating objectionable odors affecting a substantial number of people;
- Exceeding 100 pounds per day of particulate matter (PM) (dust); or
- Substantial alteration of air movement in the area of the project.

In their Significance Determination Thresholds, the City of San Diego has adopted emission thresholds based on the thresholds for an Air Quality Impact Assessment in the San Diego Air Pollution Control District's Rule 20.2. These thresholds are shown in Table 3.

Table 3
Significance Criteria for Air Quality Impacts

Pollutant	Emission Rate		
	Lbs/Hr	Lbs/Day	Tons/Year
Carbon Monoxide (CO)	100	550	100
Oxides of Nitrogen (NOx)	25	250	40
Respirable Particulate Matter (PM_{10})	--	100	15
Oxides of Sulfur (SOx)	25	250	40
Lead and Lead Compounds	--	3.2	0.6
Fine Particulate Matter ($PM_{2.5}$)	--	55	10
Volatile Organic Compounds (VOCs)	--	137	15

In addition to impacts from criteria pollutants, project impacts may include emissions of pollutants identified by the state and federal government as toxic air contaminants (TACs) or Hazardous Air Pollutants (HAPs). If a project has the potential to result in emissions of any TAC or HAP which may expose sensitive receptors to substantial pollutant concentrations, the project would be deemed to have a potentially significant impact. With regard to evaluating whether a project would have a significant impact on sensitive receptors, air quality regulators typically define sensitive receptors as schools (Preschool-12th Grade), hospitals, resident care facilities, or day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality.

With regard to odor impacts, a project that proposes a use which would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of offsite receptors.

Construction and operation emissions of the project were evaluated based on the Federal and State standards as referenced in the City's Significance Determination Thresholds.

4.0 Impacts

The 6th and Olive Project would result in both construction and operational impacts. Construction impacts include emissions associated with the construction of the project. Operational impacts include emissions associated with the project, including traffic, at full buildout. The following sections present the analysis of air quality impacts based on the City's Significance Determination Thresholds.

4.1 Consistency with the RAQS and SIP

The Proposed Project would have a significant impact if it conflicts with or obstructs implementation of the applicable air quality plans (the RAQS and SIP).

As discussed in Section 2.1, the SIP is the document that sets forth the state's strategies for attaining and maintaining the NAAQS. The APCD is responsible for developing the San Diego portion of the SIP, and has developed an attainment plan for attaining the 8-hour NAAQS for O_3. The RAQS sets forth the plans and programs designed to meet the state air quality standards. Through the RAQS and SIP planning processes, the APCD adopts rules, regulations, and programs designed to achieve attainment of the ambient air quality standards and maintain air quality in the SDAB.

Conformance with the RAQS and SIP determines whether a Project will conflict with or obstruct implementation of the applicable air quality plans. Because the CARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the City of San Diego as part of the development of General Plans, projects that propose development that is consistent with the growth anticipated by the general plan would be consistent with the RAQS and SIP. In the event that a project would propose development which is less dense than anticipated within the general plan, the project would likewise be consistent with the RAQS and SIP.

The RAQS and SIP address air emissions and impacts from industrial sources, area-wide sources, and mobile sources. The programs also consider transportation control measures and indirect source review. Industrial sources are typically stationary air pollution sources that are subject to APCD rules and regulations, and over which the APCD has regulatory authority. Area-wide sources include sources such as consumer products use, small utility engines, hot water heaters, and furnaces. Both the ARB and the APCD have authority to regulate these sources and have developed plans and programs to reduce emissions from certain types of area-wide sources. Mobile sources are principally emissions from motor vehicles. The ARB establishes emission standards for motor vehicles and establishes regulations for other mobile source activities including off-road vehicles.

Both the RAQS and SIP address emissions of ozone precursors (ROG and NOx), as the SDAB is classified as a basic non-attainment area for the NAAQS and a non-attainment area for the CAAQS. The RAQS and SIP do not address particulate matter. The California CAA requires an air quality strategy to achieve a 5% average annual ozone precursor emission reduction when implemented or, if that is not achievable, an expeditious schedule for adopting every feasible emission control measure under air district purview (California Health and Safety Code (H&SC) Section 40914). The current RAQS represents an expeditious schedule for adopting feasible control measures, since neither San Diego nor any air district in the State has demonstrated sustained 5% average annual ozone precursor reductions.

Most of the control measures adopted in the RAQS apply to industrial sources and specific source categories. SDAPCD Rule 55 would apply to construction of the project, and requires control of fugitive dust during construction. Should the properties include stationary sources such as boilers or emergency generators, these sources would be subject to SDAPCD rules and would be required to obtain a permit to operate.

As discussed in Section 1.0, the project proposes to replace existing office and housing uses with new multi-family housing and office space. The project would develop under the existing zone and land use designation; therefore, a Rezone and Community Plan Amendment would not be required. Accordingly, the project is consistent with the City's General Plan and would therefore be consistent with the RAQS and SIP. The project would not conflict with or obstruct implementation of the RAQS or SIP, and would not result in a significant impact.

4.2 Violation of an Air Quality Standard

The Proposed Project would have a significant impact if it violates any air quality standard or contributes substantially to an existing or projected air quality violation.

To address this significance threshold, an evaluation of emissions associated with both the construction and operational phases of the Project was conducted.

4.2.1 Construction Impacts

Emissions of pollutants such as fugitive dust and heavy equipment exhaust that are generated during construction are generally highest near the construction site. Emissions from the construction of the project were estimated using the CalEEMod Model (SCAQMD 2016), Version 2016.3.2. The CalEEMod Model provides default assumptions regarding horsepower rating, load factors for heavy equipment, and hours of operation per day. Default assumptions within the CalEEMod Model and assumptions for similar projects were used to represent operation of heavy construction equipment. Construction calculations within the CalEEMod Model utilize the number and type of construction equipment to calculate emissions from heavy construction equipment. Fugitive PM_{10} and $PM_{2.5}$ emissions estimates take into account compliance with Rule 55 requirements for fugitive dust suppression, which require that no visible dust be present beyond the site boundaries.

In addition to calculating emissions from heavy construction equipment, the CalEEMod Model contains calculation modules to estimate emissions of fugitive dust, based on the amount of earthmoving or surface disturbance required; emissions from heavy-duty truck trips or vendor trips during construction activities; emissions from construction worker vehicles during daily commutes; and emissions of ROG during application of architectural coatings. As part of the project design features, it was assumed that standard dust control measures (watering three times daily; reducing speeds to 15 mph on unpaved surfaces) and architectural coatings that comply with SDAPCD Rule 67.0.1 (assumed to meet a VOC content of 50 g/l for interior (flat) painting and 100 g/l for exterior (non-flat) painting) would be used during construction.

Based on information from the project applicant, construction would be conducted in a single phase and would require 24 months to complete. The grading phase of construction would include 58,500 cubic yards of excavation and export of material. Emissions from truck trips associated with export of material are calculated by the CalEEMod model based on the amount exported.

Table 4 provides the detailed construction emission estimates as calculated with the CalEEMod Model. Appendix A provides CalEEMod Model outputs showing the construction calculations. As shown in Table 4, emissions of criteria pollutants during construction would be below the thresholds of significance for all project construction phases for all pollutants. Project criteria pollutant emissions during construction would be temporary and are less than significant.

Table 4
Estimated Maximum Daily Construction Emissions
6th and Olive Project

Emission Source	**ROG**	**NOx**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Demolition						
Fugitive Dust	-	-	-	-	0.28	0.04
Offroad Equipment	2.30	22.68	14.89	0.02	1.29	1.20
Onroad Emissions	0.03	0.99	0.21	0.003	0.06	0.02
Worker Trips	0.05	0.04	0.40	0.001	0.11	0.03
Subtotal	**2.38**	**23.71**	**15.50**	**0.02**	**1.74**	**1.29**
Significance Criteria	137	250	550	250	100	55
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Grading						
Fugitive Dust	-	-	-	-	1.81	0.97
Offroad Equipment	1.42	16.04	6.61	0.01	0.74	0.68
Onroad Emissions	0.74	25.54	5.51	0.07	1.58	0.50
Worker Trips	0.03	0.02	0.25	0.00	0.07	0.02
Subtotal	**2.19**	**41.60**	**12.37**	**0.08**	**4.20**	**2.17**
Significance Criteria	137	250	550	250	100	55
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Paving/Foundations						
Offroad Equipment	0.90	9.17	8.90	0.02	0.52	0.48
Worker Trips	0.05	0.04	0.40	0.001	0.11	0.03
Subtotal	**0.95**	**9.21**	**9.30**	**0.02**	**0.63**	**0.51**
Significance Criteria	137	250	550	250	100	55
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Building Construction						
Offroad Equipment	2.27	15.98	13.49	0.02	0.92	0.88
Vendor Trips	0.23	6.08	1.57	0.01	0.37	0.14
Worker Trips	0.84	0.59	6.62	0.02	1.77	0.48
Subtotal	**3.34**	**22.65**	**21.68**	**0.05**	**3.06**	**1.50**
Significance Criteria	137	250	550	250	100	55
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Architectural Coatings Application						
Architectural Coatings	6.82	-	-	-	-	-
Offroad Equipment	0.24	1.68	1.83	0.003	0.11	0.11
Worker Trips	0.16	0.11	1.22	0.004	0.26	0.10
Subtotal	**7.22**	**1.79**	**3.05**	**0.01**	**0.37**	**0.21**
Significance Criteria	137	250	550	250	100	55
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Maximum Daily Emissions[a]	**11.10**	**41.60**	**32.96**	**0.08**	**4.19**	**2.17**
Significance Criteria	137	250	550	250	100	55
Significant?	*No*	*No*	*No*	*No*	*No*	*No*

[a]Maximum emissions of criteria pollutants occur during simultaneous building construction, paving, and architectural coatings application.

4.2.2 Operational Impacts

Operational impacts associated with the development of the 6th and Olive Project would include impacts associated with vehicular traffic, as well as area sources such as energy use, landscaping, consumer products use, and architectural coatings use for maintenance purposes. Trip generation rates were based on the Transportation Impact Analysis (Kimley-Horn and Associates 2018), which was prepared to evaluate trip generation rates and impacts of the project on traffic in the study area.

Operational impacts associated with vehicular traffic and area sources including energy use, landscaping, and architectural coatings use for maintenance purposes were estimated using the CalEEMod Model, Version 2016.3.2. The CalEEMod Model calculates vehicle emissions based on emission factors from the EMFAC2014 model. It was assumed that the first year of full occupancy would be 2021. Based on the results of the EMFAC2014 model for subsequent years, emissions would decrease on an annual basis from 2021 onward due to phase-out of higher polluting vehicles and implementation of more stringent emission standards that are taken into account in the EMFAC2014 model. Table 5 presents the results of the emission calculations, in lbs/day, for the project.

Based on the estimated emissions associated with Project operations, the emissions of all criteria pollutants are below the significance thresholds for the project. Impacts would be less than significant.

Table 5 Operational Emissions 6th and Olive Project						
	ROG	**NOx**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Maximum Daily Emissions						
Summer Day, Lbs/day						
Area Sources	5.76	0.19	16.80	0.001	0.09	0.09
Energy Use	0.05	0.47	0.24	0.003	0.04	0.04
Vehicular Emissions	2.28	8.72	22.95	0.07	5.77	1.59
TOTAL	**8.09**	**9.39**	**39.98**	**0.08**	**5.90**	**1.72**
Significance Criteria	137	250	550	250	100	55
Significant?	*No*	*No*	*No*	*No*	*No*	*No*
Winter Day, Lbs/day						
Area Sources	5.76	0.19	16.80	0.001	0.09	0.09
Energy Use	0.05	0.47	0.24	0.003	0.04	0.04
Vehicular Emissions	2.21	8.93	23.12	0.07	5.78	1.59
TOTAL	**8.03**	**9.60**	**40.16**	**0.07**	**5.91**	**1.72**
Significance Criteria	137	250	550	250	100	55
Significant?	*No*	*No*	*No*	*No*	*No*	*No*

CO "Hot Spots"

Projects involving traffic impacts may result in the formation of locally high concentrations of CO, known as CO "hot spots." To verify that the project would not cause or contribute to a violation of the CO standard, a screening evaluation of the potential for CO "hot spots" was conducted. Project-related traffic would have the potential to result in CO "hot spots" if project-related traffic resulted in a degradation in the level of service at any intersection to LOS E or F. The Transportation Impact Analysis (Kimley-Horn and Associates 2018) evaluated whether or not there would be a decrease in the level of service at the intersections affected by the Project.

The Transportation Impact Analysis included 17 intersections in the study area. Based on the results of the Transportation Impact Analysis, no significant impacts were predicted at study area intersections for the Existing plus Project or Near Term plus Project scenarios.

For the Horizon Year, the Transportation Impact Analysis indicated that significant delay and/or degradation in LOS to LOS E or F would occur at the following intersection:

- Fifth Avenue and Maple Street

As discussed in the Transportation Impact Analysis, the above-listed intersections is a stop-controlled intersection. Installation of traffic signals would mitigate the project-related impacts and improve intersection operation to LOS D or better at all impacted intersections. The Transportation Impact Analysis indicated that the project would contribute its fair share to the installation of this traffic signal at the impacted intersection. With mitigation, the project's impacts to traffic would be less than significant, and no CO "hot spots" would result.

It is important to note that the San Diego Air Pollution Control District has ceased ambient air quality monitoring for CO at the majority of its monitoring stations throughout the region. The concentrations of CO have steadily decreased due to more stringent vehicle emission standards for CO. Accordingly, it is not anticipated that CO "hot spots" would be an issue in the future.

4.3 Cumulatively Considerable Net Increase of Non-attainment Pollutants

The Proposed Project would have a significant impact if it results 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.

As discussed in Section 2.0, the SDAB is considered a non-attainment area for the 8-hour NAAQS for O_3, and is considered a non-attainment area for the CAAQS for O_3, PM_{10}, and $PM_{2.5}$. An evaluation of emissions of non-attainment pollutants was conducted in Section 4.2. Based on that evaluation, emissions of non-attainment pollutants during construction would be below the significance thresholds for ozone precursors, PM_{10}, and $PM_{2.5}$. Emissions of all pollutants would be below the significance thresholds for operations.

The region surrounding the project is already developed; the project provides infill development and replaces existing development. Because operational emissions for development of the project are below the significance thresholds for nonattainment pollutants, they would not result in a cumulatively considerable impact.

4.4 Exposure of Sensitive Receptors to Substantial Pollutant Concentrations

The Proposed Project would have a significant impact if it exposes sensitive receptors (including, but not limited to, schools, hospitals, resident care facilities, parks, or day-care centers) to substantial pollutant concentrations.

Carbon Monoxide

As discussed in Section 4.2, the project would not result in exposure of sensitive receptors to substantial concentrations of CO, as CO "hot spots" would not result from project-related traffic. Impacts from CO would therefore be less than significant.

Toxic Air Contaminants

The threshold concerns whether the project could expose sensitive receptors to substantial pollutant concentrations of TACs. If a project has the potential to result in emissions of any TAC which result in a cancer risk of greater than 10 in 1 million or substantial non-cancer risk, the project would be deemed to have a potentially significant impact.

Air quality regulators typically define sensitive receptors as schools (Preschool-12th Grade), hospitals, resident care facilities, or day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. Residential land uses may also be considered sensitive receptors. The site is currently surrounded by existing commercial and mixed uses, including residential buildings.

Emissions of TACs are attributable to temporary emissions from construction emissions, and minor emissions associated with diesel truck traffic used for deliveries at the site. Truck traffic may result in emissions of diesel particulate matter, which is characterized by the State of California as a toxic air contaminant (TAC). Certain types of projects are recommended to be evaluated for impacts associated with TACs. In accordance with the SCAQMD's "Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis" (SCAQMD 2003), projects that should be evaluated for diesel particulate emissions include truck stops, distribution centers, warehouses, and transit centers which diesel vehicles would utilize and which would be sources of diesel particulate matter from heavy-duty diesel trucks. The project would not attract a disproportionate amount of diesel trucks and would not be considered a source of TAC emissions. Based on the CalEEMod Model, heavy-duty diesel trucks would account for only 0.9 percent of the total trips associated with the project. Impacts to sensitive receptors from TAC emissions would therefore be less than significant.

Other Criteria Pollutants

Because emissions of all criteria pollutants are below the thresholds set forth in the City's Significance Determination Thresholds, the project would not expose sensitive receptors to substantial pollutant concentrations and impacts from other criteria pollutants would be less than significant.

4.5 Objectionable Odors

The Proposed Project would have a significant impact if it creates objectionable odors affecting a substantial number of people.

Project construction could result in minor amounts of odor compounds associated with diesel heavy equipment exhaust. These compounds would be emitted in various amounts and at various locations during construction. Sensitive receptors located in the vicinity of the construction site include the residences to the south of the site. Odors are highest near the source and would quickly dissipate offsite; any odors associated with construction would be temporary.

The project would not be considered a source of objectionable odors during operations. Thus the potential for odor impacts associated with the project for both construction and operations is less than significant.

5.0 Project Design Features

Standard best management practices to reduce construction emissions will be employed during construction and operation of the project. The Project is subject to the requirements of San Diego APCD Rule 55, which requires that no visible dust be present beyond the site boundaries. Standard dust control measures will be employed during construction. These standard dust control measures include the following:

- Watering active grading sites a minimum of three times daily
- Apply soil stabilizers to inactive construction sites
- Replace ground cover in disturbed areas as soon as possible
- Control dust during equipment loading/unloading (load moist material, ensure at least 12 inches of freeboard in haul trucks
- Reduce speeds on unpaved surfaces

These dust control measures will reduce the amount of fugitive dust generated during construction. In addition to dust control measures, architectural coatings applied to interior and exterior surfaces will be required to meet the ROG limitations of SDAPCD Rule 67.0.1, which limits the ROG content of most coatings to 100 grams/liter. Coatings will also be applied using high volume, low pressure spray equipment to reduce overspray to the extent possible.

Operational emissions would be below the significance thresholds for all pollutants. Air quality impacts are less than significant and no mitigation measures are required.

6.0 Summary and Conclusions

In summary, the project would result in emissions of air pollutants for both the construction phase and operational phase of the project. The air quality impact analysis evaluated the potential for adverse impacts to the ambient air quality due to construction and operational emissions. Construction emissions would include emissions associated with fugitive dust, heavy construction equipment and construction worker commuting to and from the site. The project would employ dust control measures such as watering to control emissions during construction and use of low-ROG paints. Emissions are less than the significance thresholds for all pollutants during construction. Construction impacts are less than significant and would not be cumulatively considerable.

Operational emissions would include emissions associated with residential, office and retail operations, including area sources, energy use, and vehicle traffic. As discussed in Section 4.0, the impacts would be below the significance thresholds for all pollutants. Impacts from project-related traffic were evaluated to assess whether impacts would exceed the ambient air quality standards for CO, and it was demonstrated that emissions of CO would not result in a significant air quality impact or a cumulatively considerable impact.

Emissions of TACs or odors would not result in a significant impact to the project, and project emissions of TACs and odors would be less than significant.

7.0 References

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City of San Diego. 2016. *Significance Determination Thresholds.*

Kimley-Horn and Associates. 2018. *6th and Olive Transportation Impact Analysis*. May.

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Appendix A

CalEEMod Model Output

6th and Olive Project

San Diego Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	16.19	1000sqft	0.37	16,190.00	0
Enclosed Parking with Elevator	348.00	Space	0.36	139,200.00	0
City Park	0.21	Acre	0.21	9,147.60	0
Apartments High Rise	204.00	Dwelling Unit	0.36	204,000.00	583

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on project description

Construction Phase - Based on construction schedule

Grading - Based on excavation requirements

Demolition - Based on existing building

Architectural Coating - Rule 67.0.1 coatings

Vehicle Trips - Based on traffic analysis

Woodstoves - No fireplaces

Area Coating - Rule 67.0.1 coatings

Construction Off-road Equipment Mitigation -

Area Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	50
tblAreaCoating	Area_EF_Residential_Exterior	250	100
tblAreaCoating	Area_EF_Residential_Interior	250	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	262.00
tblConstructionPhase	NumDays	200.00	394.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	4.00	86.00
tblConstructionPhase	NumDays	10.00	197.00
tblConstructionPhase	PhaseEndDate	12/10/2019	12/31/2020
tblConstructionPhase	PhaseEndDate	11/12/2019	12/31/2020
tblConstructionPhase	PhaseEndDate	1/28/2019	2/28/2019
tblConstructionPhase	PhaseEndDate	2/5/2019	6/30/2019
tblConstructionPhase	PhaseEndDate	11/26/2019	3/31/2020
tblConstructionPhase	PhaseStartDate	11/27/2019	1/1/2020
tblConstructionPhase	PhaseStartDate	2/6/2019	7/1/2019
tblConstructionPhase	PhaseStartDate	1/31/2019	3/1/2019

tblConstructionPhase	PhaseStartDate	11/13/2019	7/1/2019
tblFireplaces	NumberGas	112.20	0.00
tblFireplaces	NumberNoFireplace	20.40	204.00
tblFireplaces	NumberWood	71.40	0.00
tblGrading	AcresOfGrading	32.25	1.50
tblGrading	MaterialExported	0.00	58,500.00
tblLandUse	LotAcreage	3.13	0.36
tblLandUse	LotAcreage	3.29	0.36
tblTripsAndVMT	HaulingTripNumber	7,313.00	7,312.00
tblVehicleTrips	ST_TR	4.98	6.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	2.46	9.00
tblVehicleTrips	SU_TR	3.65	6.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	1.05	9.00
tblVehicleTrips	WD_TR	4.20	6.00
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	11.03	9.00
tblWoodstoves	NumberCatalytic	10.20	0.00
tblWoodstoves	NumberNoncatalytic	10.20	0.00

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					

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2019	4.2928	41.5963	30.9817	0.0823	6.1821	1.4939	7.0154	2.9237	1.4188	3.6939	0.0000	8,824.5376	8,824.5376	1.0952	0.0000	8,851.9182
2020	11.1042	31.1161	32.9563	0.0748	2.5497	1.4190	3.9687	0.6838	1.3528	2.0366	0.0000	7,295.7671	7,295.7671	0.9787	0.0000	7,320.2334
Maximum	**11.1042**	**41.5963**	**32.9563**	**0.0823**	**6.1821**	**1.4939**	**7.0154**	**2.9237**	**1.4188**	**3.6939**	**0.0000**	**8,824.5376**	**8,824.5376**	**1.0952**	**0.0000**	**8,851.9182**

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					
2019	4.2928	41.5963	30.9817	0.0823	3.3574	1.4939	4.1907	1.3993	1.4188	2.1694	0.0000	8,824.5376	8,824.5376	1.0952	0.0000	8,851.9182
2020	11.1042	31.1161	32.9563	0.0748	2.5497	1.4190	3.9687	0.6838	1.3528	2.0366	0.0000	7,295.7671	7,295.7671	0.9787	0.0000	7,320.2334
Maximum	**11.1042**	**41.5963**	**32.9563**	**0.0823**	**3.3574**	**1.4939**	**4.1907**	**1.3993**	**1.4188**	**2.1694**	**0.0000**	**8,824.5376**	**8,824.5376**	**1.0952**	**0.0000**	**8,851.9182**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**32.35**	**0.00**	**25.72**	**42.26**	**0.00**	**26.60**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	5.7689	0.1957	16.9237	8.9000e-004		0.0930	0.0930		0.0930	0.0930	0.0000	30.3844	30.3844	0.0298	0.0000	31.1285
Energy	0.0544	0.4704	0.2366	2.9700e-003		0.0376	0.0376		0.0376	0.0376		593.8240	593.8240	0.0114	0.0109	597.3528

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mobile	2.5966	10.6624	30.2773	0.1001	8.1496	0.0962	8.2458	2.1783	0.0903	2.2686		10,151.1757	10,151.1757	0.5335		10,164.5142
Total	**8.4200**	**11.3285**	**47.4375**	**0.1039**	**8.1496**	**0.2268**	**8.3764**	**2.1783**	**0.2209**	**2.3992**	**0.0000**	**10,775.3842**	**10,775.3842**	**0.5747**	**0.0109**	**10,792.9955**

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	5.7616	0.1944	16.8014	8.8000e-004		0.0923	0.0923		0.0923	0.0923	0.0000	30.1104	30.1104	0.0293	0.0000	30.8438
Energy	0.0544	0.4704	0.2366	2.9700e-003		0.0376	0.0376		0.0376	0.0376		593.8240	593.8240	0.0114	0.0109	597.3528
Mobile	2.5966	10.6624	30.2773	0.1001	8.1496	0.0962	8.2458	2.1783	0.0903	2.2686		10,151.1757	10,151.1757	0.5335		10,164.5142
Total	**8.4126**	**11.3273**	**47.3152**	**0.1039**	**8.1496**	**0.2261**	**8.3757**	**2.1783**	**0.2202**	**2.3985**	**0.0000**	**10,775.1101**	**10,775.1101**	**0.5743**	**0.0109**	**10,792.7107**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.09**	**0.01**	**0.26**	**0.01**	**0.00**	**0.32**	**0.01**	**0.00**	**0.33**	**0.03**	**0.00**	**0.00**	**0.00**	**0.07**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	2/28/2019	5	43	
2	Grading	Grading	3/1/2019	6/30/2019	5	86	
3	Building Construction	Building Construction	7/1/2019	12/31/2020	5	394	
4	Paving	Paving	7/1/2019	3/31/2020	5	197	
5	Architectural Coating	Architectural Coating	1/1/2020	12/31/2020	5	262	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0.36

Residential Indoor: 413,100; Residential Outdoor: 137,700; Non-Residential Indoor: 24,285; Non-Residential Outdoor: 8,095; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	142.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Grading	3	8.00	0.00	7,312.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	214.00	49.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	43.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7237	0.0000	0.7237	0.1096	0.0000	0.1096			0.0000			0.0000
Off-Road	2.2950	22.6751	14.8943	0.0241		1.2863	1.2863		1.2017	1.2017		2,360.7198	2,360.7198	0.6011		2,375.7475
Total	**2.2950**	**22.6751**	**14.8943**	**0.0241**	**0.7237**	**1.2863**	**2.0100**	**0.1096**	**1.2017**	**1.3113**		**2,360.7198**	**2,360.7198**	**0.6011**		**2,375.7475**

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	0.0287	0.9919	0.2141	2.6200e-003	0.0577	3.7400e-003	0.0615	0.0158	3.5800e-003	0.0194		285.8073	285.8073	0.0253		286.4396

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0510	0.0356	0.4022	1.1400e-003	0.1068	7.6000e-004	0.1076	0.0283	7.0000e-004	0.0290		113.1260	113.1260	3.6100e-003		113.2163
Total	**0.0797**	**1.0276**	**0.6164**	**3.7600e-003**	**0.1645**	**4.5000e-003**	**0.1690**	**0.0441**	**4.2800e-003**	**0.0484**		**398.9332**	**398.9332**	**0.0289**		**399.6558**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2823	0.0000	0.2823	0.0427	0.0000	0.0427			0.0000			0.0000
Off-Road	2.2950	22.6751	14.8943	0.0241		1.2863	1.2863		1.2017	1.2017	0.0000	2,360.7197	2,360.7197	0.6011		2,375.7475
Total	**2.2950**	**22.6751**	**14.8943**	**0.0241**	**0.2823**	**1.2863**	**1.5686**	**0.0427**	**1.2017**	**1.2445**	**0.0000**	**2,360.7197**	**2,360.7197**	**0.6011**		**2,375.7475**

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	0.0287	0.9919	0.2141	2.6200e-003	0.0577	3.7400e-003	0.0615	0.0158	3.5800e-003	0.0194		285.8073	285.8073	0.0253		286.4396
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0510	0.0356	0.4022	1.1400e-003	0.1068	7.6000e-004	0.1076	0.0283	7.0000e-004	0.0290		113.1260	113.1260	3.6100e-003		113.2163
Total	**0.0797**	**1.0276**	**0.6164**	**3.7600e-003**	**0.1645**	**4.5000e-003**	**0.1690**	**0.0441**	**4.2800e-003**	**0.0484**		**398.9332**	**398.9332**	**0.0289**		**399.6558**

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.6307	0.0000	4.6307	2.4991	0.0000	2.4991			0.0000			0.0000
Off-Road	1.4197	16.0357	6.6065	0.0141		0.7365	0.7365		0.6775	0.6775		1,396.3909	1,396.3909	0.4418		1,407.4359
Total	**1.4197**	**16.0357**	**6.6065**	**0.0141**	**4.6307**	**0.7365**	**5.3671**	**2.4991**	**0.6775**	**3.1767**		**1,396.3909**	**1,396.3909**	**0.4418**		**1,407.4359**

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	0.7380	25.5387	5.5129	0.0675	1.4857	0.0964	1.5821	0.4072	0.0922	0.4994		7,358.5308	7,358.5308	0.6512		7,374.8107
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0314	0.0219	0.2475	7.0000e-004	0.0657	4.7000e-004	0.0662	0.0174	4.3000e-004	0.0179		69.6160	69.6160	2.2200e-003		69.6716
Total	**0.7694**	**25.5606**	**5.7604**	**0.0682**	**1.5514**	**0.0969**	**1.6483**	**0.4246**	**0.0926**	**0.5172**		**7,428.1468**	**7,428.1468**	**0.6534**		**7,444.4823**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.8060	0.0000	1.8060	0.9747	0.0000	0.9747			0.0000			0.0000
Off-Road	1.4197	16.0357	6.6065	0.0141		0.7365	0.7365		0.6775	0.6775	0.0000	1,396.3909	1,396.3909	0.4418		1,407.4359
Total	**1.4197**	**16.0357**	**6.6065**	**0.0141**	**1.8060**	**0.7365**	**2.5424**	**0.9747**	**0.6775**	**1.6522**	**0.0000**	**1,396.3909**	**1,396.3909**	**0.4418**		**1,407.4359**

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	0.7380	25.5387	5.5129	0.0675	1.4857	0.0964	1.5821	0.4072	0.0922	0.4994		7,358.5308	7,358.5308	0.6512		7,374.8107
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0314	0.0219	0.2475	7.0000e-004	0.0657	4.7000e-004	0.0662	0.0174	4.3000e-004	0.0179		69.6160	69.6160	2.2200e-003		69.6716
Total	**0.7694**	**25.5606**	**5.7604**	**0.0682**	**1.5514**	**0.0969**	**1.6483**	**0.4246**	**0.0926**	**0.5172**		**7,428.1468**	**7,428.1468**	**0.6534**		**7,444.4823**

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2721	15.9802	13.4870	0.0220		0.9158	0.9158		0.8846	0.8846		2,018.0224	2,018.0224	0.3879		2,027.7210

Total	**2.2721**	**15.9802**	**13.4870**	**0.0220**		**0.9158**	**0.9158**		**0.8846**	**0.8846**		**2,018.0224**	**2,018.0224**	**0.3879**		**2,027.7210**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2255	6.0754	1.5685	0.0135	0.3317	0.0423	0.3740	0.0955	0.0404	0.1359		1,450.4815	1,450.4815	0.1120		1,453.2811
Worker	0.8403	0.5864	6.6214	0.0187	1.7580	0.0125	1.7705	0.4663	0.0116	0.4778		1,862.2272	1,862.2272	0.0595		1,863.7139
Total	**1.0658**	**6.6618**	**8.1899**	**0.0322**	**2.0897**	**0.0548**	**2.1445**	**0.5618**	**0.0520**	**0.6138**		**3,312.7087**	**3,312.7087**	**0.1715**		**3,316.9950**

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	2.2721	15.9802	13.4870	0.0220		0.9158	0.9158		0.8846	0.8846	0.0000	2,018.0224	2,018.0224	0.3879		2,027.7210
Total	**2.2721**	**15.9802**	**13.4870**	**0.0220**		**0.9158**	**0.9158**		**0.8846**	**0.8846**	**0.0000**	**2,018.0224**	**2,018.0224**	**0.3879**		**2,027.7210**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2255	6.0754	1.5685	0.0135	0.3317	0.0423	0.3740	0.0955	0.0404	0.1359		1,450.4815	1,450.4815	0.1120		1,453.2811
Worker	0.8403	0.5864	6.6214	0.0187	1.7580	0.0125	1.7705	0.4663	0.0116	0.4778		1,862.2272	1,862.2272	0.0595		1,863.7139
Total	**1.0658**	**6.6618**	**8.1899**	**0.0322**	**2.0897**	**0.0548**	**2.1445**	**0.5618**	**0.0520**	**0.6138**		**3,312.7087**	**3,312.7087**	**0.1715**		**3,316.9950**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.1595	2,001.1595	0.3715		2,010.4467
Total	**2.0305**	**14.7882**	**13.1881**	**0.0220**		**0.7960**	**0.7960**		**0.7688**	**0.7688**		**2,001.1595**	**2,001.1595**	**0.3715**		**2,010.4467**

Unmitigated Construction Off-Site

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

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1831	5.5252	1.4076	0.0134	0.3317	0.0270	0.3587	0.0955	0.0259	0.1214		1,440.7964	1,440.7964	0.1063		1,443.4536
Worker	0.7853	0.5291	6.0660	0.0181	1.7580	0.0123	1.7703	0.4663	0.0114	0.4777		1,803.4787	1,803.4787	0.0539		1,804.8250
Total	**0.9684**	**6.0543**	**7.4736**	**0.0315**	**2.0897**	**0.0394**	**2.1290**	**0.5618**	**0.0372**	**0.5990**		**3,244.2751**	**3,244.2751**	**0.1601**		**3,248.2786**

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	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467
Total	**2.0305**	**14.7882**	**13.1881**	**0.0220**		**0.7960**	**0.7960**		**0.7688**	**0.7688**	**0.0000**	**2,001.1595**	**2,001.1595**	**0.3715**		**2,010.4467**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1831	5.5252	1.4076	0.0134	0.3317	0.0270	0.3587	0.0955	0.0259	0.1214		1,440.7964	1,440.7964	0.1063		1,443.4536

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Worker	0.7853	0.5291	6.0660	0.0181	1.7580	0.0123	1.7703	0.4663	0.0114	0.4777		1,803.4787	1,803.4787	0.0539		1,804.8250
Total	**0.9684**	**6.0543**	**7.4736**	**0.0315**	**2.0897**	**0.0394**	**2.1290**	**0.5618**	**0.0372**	**0.5990**		**3,244.2751**	**3,244.2751**	**0.1601**		**3,248.2786**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9038	9.1743	8.9025	0.0135		0.5225	0.5225		0.4815	0.4815		1,325.0953	1,325.0953	0.4112		1,335.3751
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9038**	**9.1743**	**8.9025**	**0.0135**		**0.5225**	**0.5225**		**0.4815**	**0.4815**		**1,325.0953**	**1,325.0953**	**0.4112**		**1,335.3751**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0510	0.0356	0.4022	1.1400e-003	0.1068	7.6000e-004	0.1076	0.0283	7.0000e-004	0.0290		113.1260	113.1260	3.6100e-003		113.2163
Total	**0.0510**	**0.0356**	**0.4022**	**1.1400e-003**	**0.1068**	**7.6000e-004**	**0.1076**	**0.0283**	**7.0000e-004**	**0.0290**		**113.1260**	**113.1260**	**3.6100e-003**		**113.2163**

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	0.9038	9.1743	8.9025	0.0135		0.5225	0.5225		0.4815	0.4815	0.0000	1,325.0953	1,325.0953	0.4112		1,335.3751
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9038**	**9.1743**	**8.9025**	**0.0135**		**0.5225**	**0.5225**		**0.4815**	**0.4815**	**0.0000**	**1,325.0953**	**1,325.0953**	**0.4112**		**1,335.3751**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0510	0.0356	0.4022	1.1400e-003	0.1068	7.6000e-004	0.1076	0.0283	7.0000e-004	0.0290		113.1260	113.1260	3.6100e-003		113.2163
Total	**0.0510**	**0.0356**	**0.4022**	**1.1400e-003**	**0.1068**	**7.6000e-004**	**0.1076**	**0.0283**	**7.0000e-004**	**0.0290**		**113.1260**	**113.1260**	**3.6100e-003**		**113.2163**

3.5 Paving - 2020

Unmitigated Construction On-Site

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

Category	lb/day										lb/day					
Off-Road	0.8402	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328		1,296.9461	1,296.9461	0.4111		1,307.2246
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8402**	**8.4514**	**8.8758**	**0.0135**		**0.4695**	**0.4695**		**0.4328**	**0.4328**		**1,296.9461**	**1,296.9461**	**0.4111**		**1,307.2246**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0477	0.0321	0.3685	1.1000e-003	0.1068	7.5000e-004	0.1075	0.0283	6.9000e-004	0.0290		109.5571	109.5571	3.2700e-003		109.6389
Total	**0.0477**	**0.0321**	**0.3685**	**1.1000e-003**	**0.1068**	**7.5000e-004**	**0.1075**	**0.0283**	**6.9000e-004**	**0.0290**		**109.5571**	**109.5571**	**3.2700e-003**		**109.6389**

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	0.8402	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328	0.0000	1,296.9461	1,296.9461	0.4111		1,307.2246
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Total	**0.8402**	**8.4514**	**8.8758**	**0.0135**		**0.4695**	**0.4695**		**0.4328**	**0.4328**	**0.0000**	**1,296.9461**	**1,296.9461**	**0.4111**		**1,307.2246**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0477	0.0321	0.3685	1.1000e-003	0.1068	7.5000e-004	0.1075	0.0283	6.9000e-004	0.0290		109.5571	109.5571	3.2700e-003		109.6389
Total	**0.0477**	**0.0321**	**0.3685**	**1.1000e-003**	**0.1068**	**7.5000e-004**	**0.1075**	**0.0283**	**6.9000e-004**	**0.0290**		**109.5571**	**109.5571**	**3.2700e-003**		**109.6389**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.8175					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**7.0597**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1578	0.1063	1.2189	3.6400e-003	0.3532	2.4800e-003	0.3557	0.0937	2.2800e-003	0.0960		362.3812	362.3812	0.0108		362.6518
Total	**0.1578**	**0.1063**	**1.2189**	**3.6400e-003**	**0.3532**	**2.4800e-003**	**0.3557**	**0.0937**	**2.2800e-003**	**0.0960**		**362.3812**	**362.3812**	**0.0108**		**362.6518**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.8175					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**7.0597**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1578	0.1063	1.2189	3.6400e-003	0.3532	2.4800e-003	0.3557	0.0937	2.2800e-003	0.0960		362.3812	362.3812	0.0108		362.6518
Total	**0.1578**	**0.1063**	**1.2189**	**3.6400e-003**	**0.3532**	**2.4800e-003**	**0.3557**	**0.0937**	**2.2800e-003**	**0.0960**		**362.3812**	**362.3812**	**0.0108**		**362.6518**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.5966	10.6624	30.2773	0.1001	8.1496	0.0962	8.2458	2.1783	0.0903	2.2686		10,151.1757	10,151.1757	0.5335		10,164.5142
Unmitigated	2.5966	10.6624	30.2773	0.1001	8.1496	0.0962	8.2458	2.1783	0.0903	2.2686		10,151.1757	10,151.1757	0.5335		10,164.5142

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	1,224.00	1,224.00	1224.00	3,494,891	3,494,891
City Park	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	145.71	145.71	145.71	348,211	348,211
Total	1,369.71	1,369.71	1,369.71	3,843,102	3,843,102

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments High Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments High Rise	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
City Park	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Enclosed Parking with Elevator	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
General Office Building	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0544	0.4704	0.2366	2.9700e-003		0.0376	0.0376		0.0376	0.0376		593.8240	593.8240	0.0114	0.0109	597.3528
NaturalGas Unmitigated	0.0544	0.4704	0.2366	2.9700e-003		0.0376	0.0376		0.0376	0.0376		593.8240	593.8240	0.0114	0.0109	597.3528

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments High Rise	4151.95	0.0448	0.3826	0.1628	2.4400e-003		0.0309	0.0309		0.0309	0.0309		488.4651	488.4651	9.3600e-003	8.9600e-003	491.3678
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	895.551	9.6600e-003	0.0878	0.0738	5.3000e-004		6.6700e-003	6.6700e-003		6.6700e-003	6.6700e-003		105.3589	105.3589	2.0200e-003	1.9300e-003	105.9850
Total		**0.0544**	**0.4704**	**0.2366**	**2.9700e-003**		**0.0376**	**0.0376**		**0.0376**	**0.0376**		**593.8240**	**593.8240**	**0.0114**	**0.0109**	**597.3528**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments High Rise	4.15195	0.0448	0.3826	0.1628	2.4400e-003		0.0309	0.0309		0.0309	0.0309		488.4651	488.4651	9.3600e-003	8.9600e-003	491.3678
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0.895551	9.6600e-003	0.0878	0.0738	5.3000e-004		6.6700e-003	6.6700e-003		6.6700e-003	6.6700e-003		105.3589	105.3589	2.0200e-003	1.9300e-003	105.9850
Total		**0.0544**	**0.4704**	**0.2366**	**2.9700e-003**		**0.0376**	**0.0376**		**0.0376**	**0.0376**		**593.8240**	**593.8240**	**0.0114**	**0.0109**	**597.3528**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Mitigated	5.7616	0.1944	16.8014	8.8000e-004		0.0923	0.0923		0.0923	0.0923	0.0000	30.1104	30.1104	0.0293	0.0000	30.8438
Unmitigated	5.7689	0.1957	16.9237	8.9000e-004		0.0930	0.0930		0.0930	0.0930	0.0000	30.3844	30.3844	0.0298	0.0000	31.1285

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Architectural Coating	0.4894					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.7618					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.5177	0.1957	16.9237	8.9000e-004		0.0930	0.0930		0.0930	0.0930		30.3844	30.3844	0.0298		31.1285
Total	**5.7689**	**0.1957**	**16.9237**	**8.9000e-004**		**0.0930**	**0.0930**		**0.0930**	**0.0930**	**0.0000**	**30.3844**	**30.3844**	**0.0298**	**0.0000**	**31.1285**

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	0.4894					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.7618					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.5104	0.1944	16.8014	8.8000e-004		0.0923	0.0923		0.0923	0.0923		30.1104	30.1104	0.0293		30.8438
Total	**5.7616**	**0.1944**	**16.8014**	**8.8000e-004**		**0.0923**	**0.0923**		**0.0923**	**0.0923**	**0.0000**	**30.1104**	**30.1104**	**0.0293**	**0.0000**	**30.8438**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

6th and Olive Project

San Diego Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	16.19	1000sqft	0.37	16,190.00	0
Enclosed Parking with Elevator	348.00	Space	0.36	139,200.00	0
City Park	0.21	Acre	0.21	9,147.60	0
Apartments High Rise	204.00	Dwelling Unit	0.36	204,000.00	583

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on project description

Construction Phase - Based on construction schedule

Grading - Based on excavation requirements

Demolition - Based on existing building

Architectural Coating - Rule 67.0.1 coatings

Vehicle Trips - Based on traffic analysis

Woodstoves - No fireplaces

Area Coating - Rule 67.0.1 coatings

Construction Off-road Equipment Mitigation -

Area Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	50
tblAreaCoating	Area_EF_Residential_Exterior	250	100
tblAreaCoating	Area_EF_Residential_Interior	250	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	262.00
tblConstructionPhase	NumDays	200.00	394.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	4.00	86.00
tblConstructionPhase	NumDays	10.00	197.00
tblConstructionPhase	PhaseEndDate	12/10/2019	12/31/2020
tblConstructionPhase	PhaseEndDate	11/12/2019	12/31/2020
tblConstructionPhase	PhaseEndDate	1/28/2019	2/28/2019
tblConstructionPhase	PhaseEndDate	2/5/2019	6/30/2019
tblConstructionPhase	PhaseEndDate	11/26/2019	3/31/2020
tblConstructionPhase	PhaseStartDate	11/27/2019	1/1/2020
tblConstructionPhase	PhaseStartDate	2/6/2019	7/1/2019
tblConstructionPhase	PhaseStartDate	1/31/2019	3/1/2019

tblConstructionPhase	PhaseStartDate	11/13/2019	7/1/2019
tblFireplaces	NumberGas	112.20	0.00
tblFireplaces	NumberNoFireplace	20.40	204.00
tblFireplaces	NumberWood	71.40	0.00
tblGrading	AcresOfGrading	32.25	1.50
tblGrading	MaterialExported	0.00	58,500.00
tblLandUse	LotAcreage	3.13	0.36
tblLandUse	LotAcreage	3.29	0.36
tblTripsAndVMT	HaulingTripNumber	7,313.00	7,312.00
tblVehicleTrips	ST_TR	4.98	6.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	2.46	9.00
tblVehicleTrips	SU_TR	3.65	6.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	1.05	9.00
tblVehicleTrips	WD_TR	4.20	6.00
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	11.03	9.00
tblWoodstoves	NumberCatalytic	10.20	0.00
tblWoodstoves	NumberNoncatalytic	10.20	0.00

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					

2019	4.4192	41.8607	30.7659	0.0811	6.1821	1.4946	7.0176	2.9237	1.4195	3.6961	0.0000	8,696.4480	8,696.4480	1.1187	0.0000	8,724.4150
2020	11.2442	31.1936	32.6731	0.0730	2.5497	1.4195	3.9692	0.6838	1.3533	2.0371	0.0000	7,119.2748	7,119.2748	0.9817	0.0000	7,143.8168
Maximum	**11.2442**	**41.8607**	**32.6731**	**0.0811**	**6.1821**	**1.4946**	**7.0176**	**2.9237**	**1.4195**	**3.6961**	**0.0000**	**8,696.4480**	**8,696.4480**	**1.1187**	**0.0000**	**8,724.4150**

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					
2019	4.4192	41.8607	30.7659	0.0811	3.3574	1.4946	4.1929	1.3993	1.4195	2.1716	0.0000	8,696.4480	8,696.4480	1.1187	0.0000	8,724.4150
2020	11.2442	31.1936	32.6731	0.0730	2.5497	1.4195	3.9692	0.6838	1.3533	2.0371	0.0000	7,119.2748	7,119.2748	0.9817	0.0000	7,143.8168
Maximum	**11.2442**	**41.8607**	**32.6731**	**0.0811**	**3.3574**	**1.4946**	**4.1929**	**1.3993**	**1.4195**	**2.1716**	**0.0000**	**8,696.4480**	**8,696.4480**	**1.1187**	**0.0000**	**8,724.4150**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**32.35**	**0.00**	**25.71**	**42.26**	**0.00**	**26.59**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	5.7689	0.1957	16.9237	8.9000e-004		0.0930	0.0930		0.0930	0.0930	0.0000	30.3844	30.3844	0.0298	0.0000	31.1285
Energy	0.0544	0.4704	0.2366	2.9700e-003		0.0376	0.0376		0.0376	0.0376		593.8240	593.8240	0.0114	0.0109	597.3528

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mobile	2.5268	10.9898	29.8293	0.0949	8.1496	0.0969	8.2465	2.1783	0.0909	2.2692		9,625.4927	9,625.4927	0.5352		9,638.8714
Total	**8.3501**	**11.6559**	**46.9895**	**0.0987**	**8.1496**	**0.2275**	**8.3771**	**2.1783**	**0.2215**	**2.3998**	**0.0000**	**10,249.7012**	**10,249.7012**	**0.5763**	**0.0109**	**10,267.3528**

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	5.7616	0.1944	16.8014	8.8000e-004		0.0923	0.0923		0.0923	0.0923	0.0000	30.1104	30.1104	0.0293	0.0000	30.8438
Energy	0.0544	0.4704	0.2366	2.9700e-003		0.0376	0.0376		0.0376	0.0376		593.8240	593.8240	0.0114	0.0109	597.3528
Mobile	2.5268	10.9898	29.8293	0.0949	8.1496	0.0969	8.2465	2.1783	0.0909	2.2692		9,625.4927	9,625.4927	0.5352		9,638.8714
Total	**8.3428**	**11.6546**	**46.8672**	**0.0987**	**8.1496**	**0.2267**	**8.3763**	**2.1783**	**0.2208**	**2.3991**	**0.0000**	**10,249.4271**	**10,249.4271**	**0.5759**	**0.0109**	**10,267.0680**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.09**	**0.01**	**0.26**	**0.01**	**0.00**	**0.32**	**0.01**	**0.00**	**0.33**	**0.03**	**0.00**	**0.00**	**0.00**	**0.07**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	2/28/2019	5	43	
2	Grading	Grading	3/1/2019	6/30/2019	5	86	
3	Building Construction	Building Construction	7/1/2019	12/31/2020	5	394	
4	Paving	Paving	7/1/2019	3/31/2020	5	197	
5	Architectural Coating	Architectural Coating	1/1/2020	12/31/2020	5	262	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0.36

Residential Indoor: 413,100; Residential Outdoor: 137,700; Non-Residential Indoor: 24,285; Non-Residential Outdoor: 8,095; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	142.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Grading	3	8.00	0.00	7,312.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	214.00	49.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	43.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7237	0.0000	0.7237	0.1096	0.0000	0.1096			0.0000			0.0000
Off-Road	2.2950	22.6751	14.8943	0.0241		1.2863	1.2863		1.2017	1.2017		2,360.7198	2,360.7198	0.6011		2,375.7475
Total	**2.2950**	**22.6751**	**14.8943**	**0.0241**	**0.7237**	**1.2863**	**2.0100**	**0.1096**	**1.2017**	**1.3113**		**2,360.7198**	**2,360.7198**	**0.6011**		**2,375.7475**

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	0.0295	1.0021	0.2295	2.5800e-003	0.0577	3.8300e-003	0.0615	0.0158	3.6600e-003	0.0195		280.9978	280.9978	0.0262		281.6530

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0577	0.0400	0.3801	1.0700e-003	0.1068	7.6000e-004	0.1076	0.0283	7.0000e-004	0.0290		106.1988	106.1988	3.4300e-003		106.2845
Total	**0.0872**	**1.0421**	**0.6096**	**3.6500e-003**	**0.1645**	**4.5900e-003**	**0.1691**	**0.0441**	**4.3600e-003**	**0.0485**		**387.1966**	**387.1966**	**0.0296**		**387.9375**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2823	0.0000	0.2823	0.0427	0.0000	0.0427			0.0000			0.0000
Off-Road	2.2950	22.6751	14.8943	0.0241		1.2863	1.2863		1.2017	1.2017	0.0000	2,360.7197	2,360.7197	0.6011		2,375.7475
Total	**2.2950**	**22.6751**	**14.8943**	**0.0241**	**0.2823**	**1.2863**	**1.5686**	**0.0427**	**1.2017**	**1.2445**	**0.0000**	**2,360.7197**	**2,360.7197**	**0.6011**		**2,375.7475**

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	0.0295	1.0021	0.2295	2.5800e-003	0.0577	3.8300e-003	0.0615	0.0158	3.6600e-003	0.0195		280.9978	280.9978	0.0262		281.6530
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0577	0.0400	0.3801	1.0700e-003	0.1068	7.6000e-004	0.1076	0.0283	7.0000e-004	0.0290		106.1988	106.1988	3.4300e-003		106.2845
Total	**0.0872**	**1.0421**	**0.6096**	**3.6500e-003**	**0.1645**	**4.5900e-003**	**0.1691**	**0.0441**	**4.3600e-003**	**0.0485**		**387.1966**	**387.1966**	**0.0296**		**387.9375**

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.6307	0.0000	4.6307	2.4991	0.0000	2.4991			0.0000			0.0000
Off-Road	1.4197	16.0357	6.6065	0.0141		0.7365	0.7365		0.6775	0.6775		1,396.3909	1,396.3909	0.4418		1,407.4359
Total	**1.4197**	**16.0357**	**6.6065**	**0.0141**	**4.6307**	**0.7365**	**5.3671**	**2.4991**	**0.6775**	**3.1767**		**1,396.3909**	**1,396.3909**	**0.4418**		**1,407.4359**

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	0.7588	25.8004	5.9080	0.0663	1.4857	0.0986	1.5843	0.4072	0.0944	0.5015		7,234.7040	7,234.7040	0.6748		7,251.5733
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0355	0.0246	0.2339	6.6000e-004	0.0657	4.7000e-004	0.0662	0.0174	4.3000e-004	0.0179		65.3531	65.3531	2.1100e-003		65.4058
Total	**0.7944**	**25.8250**	**6.1419**	**0.0670**	**1.5514**	**0.0991**	**1.6505**	**0.4246**	**0.0948**	**0.5194**		**7,300.0571**	**7,300.0571**	**0.6769**		**7,316.9791**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.8060	0.0000	1.8060	0.9747	0.0000	0.9747			0.0000			0.0000
Off-Road	1.4197	16.0357	6.6065	0.0141		0.7365	0.7365		0.6775	0.6775	0.0000	1,396.3909	1,396.3909	0.4418		1,407.4359
Total	**1.4197**	**16.0357**	**6.6065**	**0.0141**	**1.8060**	**0.7365**	**2.5424**	**0.9747**	**0.6775**	**1.6522**	**0.0000**	**1,396.3909**	**1,396.3909**	**0.4418**		**1,407.4359**

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	0.7588	25.8004	5.9080	0.0663	1.4857	0.0986	1.5843	0.4072	0.0944	0.5015		7,234.7040	7,234.7040	0.6748		7,251.5733
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0355	0.0246	0.2339	6.6000e-004	0.0657	4.7000e-004	0.0662	0.0174	4.3000e-004	0.0179		65.3531	65.3531	2.1100e-003		65.4058
Total	**0.7944**	**25.8250**	**6.1419**	**0.0670**	**1.5514**	**0.0991**	**1.6505**	**0.4246**	**0.0948**	**0.5194**		**7,300.0571**	**7,300.0571**	**0.6769**		**7,316.9791**

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2721	15.9802	13.4870	0.0220		0.9158	0.9158		0.8846	0.8846		2,018.0224	2,018.0224	0.3879		2,027.7210

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Total	**2.2721**	**15.9802**	**13.4870**	**0.0220**		**0.9158**	**0.9158**		**0.8846**	**0.8846**		**2,018.0224**	**2,018.0224**	**0.3879**		**2,027.7210**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2352	6.0803	1.7390	0.0132	0.3317	0.0430	0.3747	0.0955	0.0412	0.1366		1,413.6512	1,413.6512	0.1191		1,416.6295
Worker	0.9503	0.6586	6.2572	0.0176	1.7580	0.0125	1.7705	0.4663	0.0116	0.4778		1,748.1954	1,748.1954	0.0564		1,749.6056
Total	**1.1856**	**6.7389**	**7.9962**	**0.0307**	**2.0897**	**0.0555**	**2.1452**	**0.5618**	**0.0527**	**0.6145**		**3,161.8467**	**3,161.8467**	**0.1755**		**3,166.2352**

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	2.2721	15.9802	13.4870	0.0220		0.9158	0.9158		0.8846	0.8846	0.0000	2,018.0224	2,018.0224	0.3879		2,027.7210
Total	**2.2721**	**15.9802**	**13.4870**	**0.0220**		**0.9158**	**0.9158**		**0.8846**	**0.8846**	**0.0000**	**2,018.0224**	**2,018.0224**	**0.3879**		**2,027.7210**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2352	6.0803	1.7390	0.0132	0.3317	0.0430	0.3747	0.0955	0.0412	0.1366		1,413.6512	1,413.6512	0.1191		1,416.6295
Worker	0.9503	0.6586	6.2572	0.0176	1.7580	0.0125	1.7705	0.4663	0.0116	0.4778		1,748.1954	1,748.1954	0.0564		1,749.6056
Total	**1.1856**	**6.7389**	**7.9962**	**0.0307**	**2.0897**	**0.0555**	**2.1452**	**0.5618**	**0.0527**	**0.6145**		**3,161.8467**	**3,161.8467**	**0.1755**		**3,166.2352**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.1595	2,001.1595	0.3715		2,010.4467
Total	**2.0305**	**14.7882**	**13.1881**	**0.0220**		**0.7960**	**0.7960**		**0.7688**	**0.7688**		**2,001.1595**	**2,001.1595**	**0.3715**		**2,010.4467**

Unmitigated Construction Off-Site

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

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1918	5.5207	1.5621	0.0131	0.3317	0.0275	0.3593	0.0955	0.0264	0.1218		1,403.6649	1,403.6649	0.1130		1,406.4886
Worker	0.8894	0.5941	5.7191	0.0170	1.7580	0.0123	1.7703	0.4663	0.0114	0.4777		1,693.0224	1,693.0224	0.0510		1,694.2967
Total	**1.0812**	**6.1148**	**7.2812**	**0.0301**	**2.0897**	**0.0399**	**2.1296**	**0.5618**	**0.0377**	**0.5995**		**3,096.6872**	**3,096.6872**	**0.1639**		**3,100.7853**

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	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467
Total	**2.0305**	**14.7882**	**13.1881**	**0.0220**		**0.7960**	**0.7960**		**0.7688**	**0.7688**	**0.0000**	**2,001.1595**	**2,001.1595**	**0.3715**		**2,010.4467**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1918	5.5207	1.5621	0.0131	0.3317	0.0275	0.3593	0.0955	0.0264	0.1218		1,403.6649	1,403.6649	0.1130		1,406.4886

Worker	0.8894	0.5941	5.7191	0.0170	1.7580	0.0123	1.7703	0.4663	0.0114	0.4777		1,693.0224	1,693.0224	0.0510		1,694.2967
Total	**1.0812**	**6.1148**	**7.2812**	**0.0301**	**2.0897**	**0.0399**	**2.1296**	**0.5618**	**0.0377**	**0.5995**		**3,096.6872**	**3,096.6872**	**0.1639**		**3,100.7853**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9038	9.1743	8.9025	0.0135		0.5225	0.5225		0.4815	0.4815		1,325.0953	1,325.0953	0.4112		1,335.3751
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9038**	**9.1743**	**8.9025**	**0.0135**		**0.5225**	**0.5225**		**0.4815**	**0.4815**		**1,325.0953**	**1,325.0953**	**0.4112**		**1,335.3751**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0577	0.0400	0.3801	1.0700e-003	0.1068	7.6000e-004	0.1076	0.0283	7.0000e-004	0.0290		106.1988	106.1988	3.4300e-003		106.2845
Total	**0.0577**	**0.0400**	**0.3801**	**1.0700e-003**	**0.1068**	**7.6000e-004**	**0.1076**	**0.0283**	**7.0000e-004**	**0.0290**		**106.1988**	**106.1988**	**3.4300e-003**		**106.2845**

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	0.9038	9.1743	8.9025	0.0135		0.5225	0.5225		0.4815	0.4815	0.0000	1,325.0953	1,325.0953	0.4112		1,335.3751
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9038**	**9.1743**	**8.9025**	**0.0135**		**0.5225**	**0.5225**		**0.4815**	**0.4815**	**0.0000**	**1,325.0953**	**1,325.0953**	**0.4112**		**1,335.3751**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0577	0.0400	0.3801	1.0700e-003	0.1068	7.6000e-004	0.1076	0.0283	7.0000e-004	0.0290		106.1988	106.1988	3.4300e-003		106.2845
Total	**0.0577**	**0.0400**	**0.3801**	**1.0700e-003**	**0.1068**	**7.6000e-004**	**0.1076**	**0.0283**	**7.0000e-004**	**0.0290**		**106.1988**	**106.1988**	**3.4300e-003**		**106.2845**

3.5 Paving - 2020

Unmitigated Construction On-Site

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

Category	lb/day										lb/day					
Off-Road	0.8402	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328		1,296.9461	1,296.9461	0.4111		1,307.2246
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8402**	**8.4514**	**8.8758**	**0.0135**		**0.4695**	**0.4695**		**0.4328**	**0.4328**		**1,296.9461**	**1,296.9461**	**0.4111**		**1,307.2246**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0540	0.0361	0.3474	1.0300e-003	0.1068	7.5000e-004	0.1075	0.0283	6.9000e-004	0.0290		102.8472	102.8472	3.1000e-003		102.9246
Total	**0.0540**	**0.0361**	**0.3474**	**1.0300e-003**	**0.1068**	**7.5000e-004**	**0.1075**	**0.0283**	**6.9000e-004**	**0.0290**		**102.8472**	**102.8472**	**3.1000e-003**		**102.9246**

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	0.8402	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328	0.0000	1,296.9461	1,296.9461	0.4111		1,307.2246
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Total	**0.8402**	**8.4514**	**8.8758**	**0.0135**		**0.4695**	**0.4695**		**0.4328**	**0.4328**	**0.0000**	**1,296.9461**	**1,296.9461**	**0.4111**		**1,307.2246**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0540	0.0361	0.3474	1.0300e-003	0.1068	7.5000e-004	0.1075	0.0283	6.9000e-004	0.0290		102.8472	102.8472	3.1000e-003		102.9246
Total	**0.0540**	**0.0361**	**0.3474**	**1.0300e-003**	**0.1068**	**7.5000e-004**	**0.1075**	**0.0283**	**6.9000e-004**	**0.0290**		**102.8472**	**102.8472**	**3.1000e-003**		**102.9246**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.8175					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**7.0597**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1787	0.1194	1.1492	3.4100e-003	0.3532	2.4800e-003	0.3557	0.0937	2.2800e-003	0.0960		340.1867	340.1867	0.0102		340.4428
Total	**0.1787**	**0.1194**	**1.1492**	**3.4100e-003**	**0.3532**	**2.4800e-003**	**0.3557**	**0.0937**	**2.2800e-003**	**0.0960**		**340.1867**	**340.1867**	**0.0102**		**340.4428**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.8175					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**7.0597**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1787	0.1194	1.1492	3.4100e-003	0.3532	2.4800e-003	0.3557	0.0937	2.2800e-003	0.0960		340.1867	340.1867	0.0102		340.4428
Total	**0.1787**	**0.1194**	**1.1492**	**3.4100e-003**	**0.3532**	**2.4800e-003**	**0.3557**	**0.0937**	**2.2800e-003**	**0.0960**		**340.1867**	**340.1867**	**0.0102**		**340.4428**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.5268	10.9898	29.8293	0.0949	8.1496	0.0969	8.2465	2.1783	0.0909	2.2692		9,625.4927	9,625.4927	0.5352		9,638.8714
Unmitigated	2.5268	10.9898	29.8293	0.0949	8.1496	0.0969	8.2465	2.1783	0.0909	2.2692		9,625.4927	9,625.4927	0.5352		9,638.8714

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	1,224.00	1,224.00	1224.00	3,494,891	3,494,891
City Park	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	145.71	145.71	145.71	348,211	348,211
Total	1,369.71	1,369.71	1,369.71	3,843,102	3,843,102

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments High Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments High Rise	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
City Park	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
Enclosed Parking with Elevator	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271
General Office Building	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0544	0.4704	0.2366	2.9700e-003		0.0376	0.0376		0.0376	0.0376		593.8240	593.8240	0.0114	0.0109	597.3528
NaturalGas Unmitigated	0.0544	0.4704	0.2366	2.9700e-003		0.0376	0.0376		0.0376	0.0376		593.8240	593.8240	0.0114	0.0109	597.3528

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments High Rise	4151.95	0.0448	0.3826	0.1628	2.4400e-003		0.0309	0.0309		0.0309	0.0309		488.4651	488.4651	9.3600e-003	8.9600e-003	491.3678
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	895.551	9.6600e-003	0.0878	0.0738	5.3000e-004		6.6700e-003	6.6700e-003		6.6700e-003	6.6700e-003		105.3589	105.3589	2.0200e-003	1.9300e-003	105.9850
Total		**0.0544**	**0.4704**	**0.2366**	**2.9700e-003**		**0.0376**	**0.0376**		**0.0376**	**0.0376**		**593.8240**	**593.8240**	**0.0114**	**0.0109**	**597.3528**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments High Rise	4.15195	0.0448	0.3826	0.1628	2.4400e-003		0.0309	0.0309		0.0309	0.0309		488.4651	488.4651	9.3600e-003	8.9600e-003	491.3678
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0.895551	9.6600e-003	0.0878	0.0738	5.3000e-004		6.6700e-003	6.6700e-003		6.6700e-003	6.6700e-003		105.3589	105.3589	2.0200e-003	1.9300e-003	105.9850
Total		**0.0544**	**0.4704**	**0.2366**	**2.9700e-003**		**0.0376**	**0.0376**		**0.0376**	**0.0376**		**593.8240**	**593.8240**	**0.0114**	**0.0109**	**597.3528**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Mitigated	5.7616	0.1944	16.8014	8.8000e-004		0.0923	0.0923		0.0923	0.0923	0.0000	30.1104	30.1104	0.0293	0.0000	30.8438
Unmitigated	5.7689	0.1957	16.9237	8.9000e-004		0.0930	0.0930		0.0930	0.0930	0.0000	30.3844	30.3844	0.0298	0.0000	31.1285

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Architectural Coating	0.4894					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.7618					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.5177	0.1957	16.9237	8.9000e-004		0.0930	0.0930		0.0930	0.0930		30.3844	30.3844	0.0298		31.1285
Total	**5.7689**	**0.1957**	**16.9237**	**8.9000e-004**		**0.0930**	**0.0930**		**0.0930**	**0.0930**	**0.0000**	**30.3844**	**30.3844**	**0.0298**	**0.0000**	**31.1285**

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	0.4894					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.7618					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.5104	0.1944	16.8014	8.8000e-004		0.0923	0.0923		0.0923	0.0923		30.1104	30.1104	0.0293		30.8438
Total	**5.7616**	**0.1944**	**16.8014**	**8.8000e-004**		**0.0923**	**0.0923**		**0.0923**	**0.0923**	**0.0000**	**30.1104**	**30.1104**	**0.0293**	**0.0000**	**30.8438**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

SAN DIEGO
COUNTY
REGIONAL
AIRPORT
AUTHORITY

September 21, 2018

Ms. Firouzeh Tirandazi
City of San Diego
Development Services
1222 First Avenue, MS 501
San Diego, CA 92101

Re: Airport Land Use Commission Consistency Determination – Construction of 204 Attached Residential Units with Office Space at 6th Avenue and Olive Street, City of San Diego

Dear Ms. Tirandazi:

As the Airport Land Use Commission (ALUC) for San Diego County, the San Diego County Regional Airport Authority acknowledges receipt of an application for a determination of consistency for the project described above. The area covered by this project lies within Review Area 2 of the Airport Influence Area (AIA) for the San Diego International Airport (SDIA) Airport Land Use Compatibility Plan (ALUCP).

ALUC staff has reviewed your application and accompanying materials and has determined that it meets our requirements for completeness. In accordance with ALUC Policy 8.30 and applicable provisions of the State Aeronautics Act (Cal. Pub. Util. Code §21670-21679.5), ALUC staff has determined that the proposed project is **conditionally consistent** with the SDIA ALUCP based upon the facts and findings summarized below:

(1) The project involves the construction of 204 attached residential units and 16,190 square feet of office space.

(2) The proposed project lies outside the 60 decibel Community Noise Equivalent Level (dB CNEL) noise exposure contour. The ALUCP identifies all uses located outside the 60 dB CNEL noise contour as compatible with airport uses.

(3) The proposed project is located outside the Threshold Siting Surface (TSS). The height of the proposed project structure will be 495 feet above mean sea level, and the height of the proposed construction crane will be 538 feet above mean sea level. The proposed project would be compatible with the ALUCP airspace protection surfaces, provided that the structure is marked and lighted in accordance with a determination of no hazard to air navigation issued by the Federal Aviation Administration (FAA) and an avigation easement for height is recorded with the County Recorder. Therefore, as a condition of project approval, the building must be marked and lit according to FAA procedures and an avigation easement for height must be recorded with the County Recorder.

(4) The proposed project is located outside all Safety Zones.

(5) The proposed project is located within the overflight notification area. The ALUCP requires that a means of overflight notification be provided for new residential land uses. However, in instances when an avigation easement is required, the overflight notification requirement is satisfied.

(6) Therefore, if the proposed project contains the above-required conditions, the proposed project would be consistent with the SDIA ALUCP.

(7) This determination of consistency is not a "project" as defined by the California Environmental Quality Act (CEQA), Cal. Pub. Res. Code §21065, and is not a "development" as defined by the California Coastal Act, Cal. Pub. Res. Code §30106.

This determination will be reported to the ALUC at its public meeting on November 1, 2018. Please contact Garret Hollarn at (619) 400-2788 if you have any questions regarding this letter.

Yours truly,

Ralph Redman
Manager, Airport Planning

cc: Amy Gonzalez, SDCRAA General Counsel
Brendan Reed, SDCRAA Director of Planning & Environmental Affairs
Vickie White, City of San Diego

CLIMATE ACTION PLAN CONSISTENCY CHECKLIST INTRODUCTION

In December 2015, the City adopted a Climate Action Plan (CAP) that outlines the actions that City will undertake to achieve its proportional share of State greenhouse gas (GHG) emission reductions. The purpose of the Climate Action Plan Consistency Checklist (Checklist) is to, in conjunction with the CAP, provide a streamlined review process for proposed new development projects that are subject to discretionary review and trigger environmental review pursuant to the California Environmental Quality Act (CEQA).[1]

Analysis of GHG emissions and potential climate change impacts from new development is required under CEQA. The CAP is a plan for the reduction of GHG emissions in accordance with CEQA Guidelines Section 15183.5. Pursuant to CEQA Guidelines Sections 15064(h)(3), 15130(d), and 15183(b), a project's incremental contribution to a cumulative GHG emissions effect may be determined not to be cumulatively considerable if it complies with the requirements of the CAP.

This Checklist is part of the CAP and contains measures that are required to be implemented on a project-by-project basis to ensure that the specified emissions targets identified in the CAP are achieved. Implementation of these measures would ensure that new development is consistent with the CAP's assumptions for relevant CAP strategies toward achieving the identified GHG reduction targets. Projects that are consistent with the CAP as determined through the use of this Checklist may rely on the CAP for the cumulative impacts analysis of GHG emissions. Projects that are not consistent with the CAP must prepare a comprehensive project-specific analysis of GHG emissions, including quantification of existing and projected GHG emissions and incorporation of the measures in this Checklist to the extent feasible. Cumulative GHG impacts would be significant for any project that is not consistent with the CAP.

The Checklist may be updated to incorporate new GHG reduction techniques or to comply with later amendments to the CAP or local, State, or federal law.

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[1] Certain projects seeking ministerial approval may be required to complete the Checklist. For example, projects in a Community Plan Implementation Overlay Zone may be required to use the Checklist to qualify for ministerial level review. See Supplemental Development Regulations in the project's community plan to determine applicability.

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CAP CONSISTENCY CHECKLIST SUBMITTAL APPLICATION

- The Checklist is required only for projects subject to CEQA review.[2]
- If required, the Checklist must be included in the project submittal package. Application submittal procedures can be found in Chapter 11: Land Development Procedures of the City's Municipal Code.
- The requirements in the Checklist will be included in the project's conditions of approval.
- The applicant must provide an explanation of how the proposed project will implement the requirements described herein to the satisfaction of the Planning Department.

Application Information

Contact Information

Project No./Name: 6th & Olive

Property Address: 6th & Olive, San Diego, CA 92101

Applicant Name/Co.: Greystar; Omar Rawi

Contact Phone: 949.202.3993 Contact Email: orawi@greystar.com

Was a consultant retained to complete this checklist? ■ Yes ☐ No If Yes, complete the following

Consultant Name: JOSEPH O. WONG, FAIA Contact Phone: 619.233.6777

Company Name: JWDA Contact Email: JWONG@JWDAINC.COM

Project Information

1. What is the size of the project (acres)?
2. Identify all applicable proposed land uses:
   - ☐ Residential (indicate # of single-family units):
   - ■ Residential (indicate # of multi-family units): 204
   - ■ Commercial (total square footage): 16,278 GSF
   - ☐ Industrial (total square footage):
   - ☐ Other (describe):
3. Is the project or a portion of the project located in a Transit Priority Area? ■ Yes ☐ No
4. Provide a brief description of the project proposed:

   Demolition of 16 existing Park Chateau apartments, Cathedral admin offices and parking lot. Construct a 204 unit, 262,000 GSF mixed-use residential building w/ use of the affordable housing density bonus; project will include 18 affordable housing units and 186 market rate units. Five levels of subterranean parking to be constructed. 20 story tower will include residential units, Cathedral office space, amenity space for residents, and a ground level courtyard.

[2] Certain projects seeking ministerial approval may be required to complete the Checklist. For example, projects in a Community Plan Implementation Overlay Zone may be required to use the Checklist to qualify for ministerial level review. See Supplemental Development Regulations in the project's community plan to determine applicability.

CAP CONSISTENCY CHECKLIST QUESTIONS

Step 1: Land Use Consistency

The first step in determining CAP consistency for discretionary development projects is to assess the project's consistency with the growth projections used in the development of the CAP. This section allows the City to determine a project's consistency with the land use assumptions used in the CAP.

Step 1: Land Use Consistency		
Checklist Item (Check the appropriate box and provide explanation and supporting documentation for your answer)	Yes	No
A. Is the proposed project consistent with the existing General Plan and Community Plan land use and zoning designations?;[3] OR, B. If the proposed project is not consistent with the existing land use plan and zoning designations, and includes a land use plan and/or zoning designation amendment, would the proposed amendment result in an increased density within a Transit Priority Area (TPA)[4] and implement CAP Strategy 3 actions, as determined in Step 3 to the satisfaction of the Development Services Department?; OR, C. If the proposed project is not consistent with the existing land use plan and zoning designations, does the project include a land use plan and/or zoning designation amendment that would result in an equivalent or less GHG-intensive project when compared to the existing designations?	☑	☐

If "***Yes***," proceed to Step 2 of the Checklist. For question B above, complete Step 3. For question C above, provide estimated project emissions under both existing and proposed designation(s) for comparison. Compare the maximum buildout of the existing designation and the maximum buildout of the proposed designation.

If "***No***," in accordance with the City's Significance Determination Thresholds, the project's GHG impact is significant. The project must nonetheless incorporate each of the measures identified in Step 2 to mitigate cumulative GHG emissions impacts unless the decision maker finds that a measure is infeasible in accordance with CEQA Guidelines Section 15091. Proceed and complete Step 2 of the Checklist.

Proposed project is consistent with the General Plan which identifies the site as commercial and residential use; additionally the project is consistent with the Uptown Community Plan which designates the sites as residential and commercial. and the zoning designations including the uptown community plan. Lastly, the project is consistent with the zoning regulation for the site, CC-3-9 & RM-4-10 zone. The project will be using 3 incentives that are obtained by the affordable housing density bonus.

[3] This question may also be answered in the affirmative if the project is consistent with SANDAG Series 12 growth projections, which were used to determine the CAP projections, as determined by the Planning Department.

[4] This category applies to all projects that answered in the affirmative to question 3 on the previous page: Is the project or a portion of the project located in a transit priority area.

Step 2: CAP Strategies Consistency

The second step of the CAP consistency review is to review and evaluate a project's consistency with the applicable strategies and actions of the CAP. Step 2 only applies to development projects that involve permits that would require a certificate of occupancy from the Building Official or projects comprised of one and two family dwellings or townhouses as defined in the California Residential Code and their accessory structures.[5] All other development projects that would not require a certificate of occupancy from the Building Official shall implement Best Management Practices for construction activities as set forth in the Greenbook (for public projects).

Step 2: CAP Strategies Consistency			
Checklist Item (Check the appropriate box and provide explanation for your answer)	Yes	No	N/A
Strategy 1: Energy & Water Efficient Buildings			
1. *Cool/Green Roofs*. • Would the project include roofing materials with a minimum 3-year aged solar reflection and thermal emittance or solar reflection index equal to or greater than the values specified in the voluntary measures under California Green Building Standards Code (Attachment A)?; OR • Would the project roof construction have a thermal mass over the roof membrane, including areas of vegetated (green) roofs, weighing at least 25 pounds per square foot as specified in the voluntary measures under California Green Building Standards Code?; OR • Would the project include a combination of the above two options? Check "N/A" only if the project does not include a roof component. Yes, the project will include roofing materials with a minimum of 3-year aged solar reflection and thermal emittance or solar reflection index equal to or greater than the values specified in the voluntary measures under CGBSC.	☑	☐	☐

[5] Actions that are not subject to Step 2 would include, for example: 1) discretionary map actions that do not propose specific development, 2) permits allowing wireless communication facilities, 3) special events permits, 4) use permits or other permits that do not result in the expansion or enlargement of a building (e.g., decks, garages, etc.), and 5) non-building infrastructure projects such as roads and pipelines. Because such actions would not result in new occupancy buildings from which GHG emissions reductions could be achieved, the items contained in Step 2 would not be applicable.

2. *Plumbing fixtures and fittings*

With respect to plumbing fixtures or fittings provided as part of the project, would those low-flow fixtures/appliances be consistent with each of the following:

Residential buildings:

- Kitchen faucets: maximum flow rate not to exceed 1.5 gallons per minute at 60 psi;
- Standard dishwashers: 4.25 gallons per cycle;
- Compact dishwashers: 3.5 gallons per cycle; and
- Clothes washers: water factor of 6 gallons per cubic feet of drum capacity?

Nonresidential buildings:

- Plumbing fixtures and fittings that do not exceed the maximum flow rate specified in Table A5.303.2.3.1 (voluntary measures) of the California Green Building Standards Code (See Attachment A); and
- Appliances and fixtures for commercial applications that meet the provisions of Section A5.303.3 (voluntary measures) of the California Green Building Standards Code (See Attachment A)?

Check "N/A" only if the project does not include any plumbing fixtures or fittings.

☑	☐	☐

Yes, the project will be using plumbing fixtures or fittings to be low-flow fixtures/ appliances. Fixtures will have the required flow rate mentioned in the above list.

Strategy 3: Bicycling, Walking, Transit & Land Use			
3. *Electric Vehicle Charging* • Multiple-family projects of 17 dwelling units or less: Would 3% of the total parking spaces required, or a minimum of one space, whichever is greater, be provided with a listed cabinet, box or enclosure connected to a conduit linking the parking spaces with the electrical service, in a manner approved by the building and safety official, to allow for the future installation of electric vehicle supply equipment to provide electric vehicle charging stations at such time as it is needed for use by residents? • Multiple-family projects of more than 17 dwelling units: Of the total required listed cabinets, boxes or enclosures, would 50% have the necessary electric vehicle supply equipment installed to provide active electric vehicle charging stations ready for use by residents? • Non-residential projects: Of the total required listed cabinets, boxes or enclosures, would 50% have the necessary electric vehicle supply equipment installed to provide active electric vehicle charging stations ready for use? Check "N/A" only if the project is a single-family project or would not require the provision of listed cabinets, boxes, or enclosures connected to a conduit linking the parking spaces with electrical service, e.g., projects requiring fewer than 10 parking spaces. The residential use will provide 50% ready to use for the required number of EVCS; of the 9 required, 5 will be ready to use. The non-residential use will provide 50% ready to use for the required number of EVCS; of the required 4, 2 will be ready to use.	☑	☐	☐

Strategy 3: Bicycling, Walking, Transit & Land Use (Complete this section if project includes non-residential or mixed uses)			
4. *Bicycle Parking Spaces* Would the project provide more short- and long-term bicycle parking spaces than required in the City's Municipal Code (Chapter 14, Article 2, Division 5)?[6] Check "N/A" only if the project is a residential project. As a mixed-use project, short-term and long-term bicycle parking spaces will be provided that exceed requirements of SDMC. 101 Bicycle spaces are required, 106 are proposed.	☑	☐	☐

[6] Non-portable bicycle corrals within 600 feet of project frontage can be counted towards the project's bicycle parking requirements.

5. *Shower facilities*

If the project includes nonresidential development that would accommodate over 10 tenant occupants (employees), would the project include changing/shower facilities in accordance with the voluntary measures under the California Green Building Standards Code as shown in the table below?

Number of Tenant Occupants (Employees)	Shower/Changing Facilities Required	Two-Tier (12" X 15" X 72") Personal Effects Lockers Required
0-10	0	0
11-50	1 shower stall	2
51-100	1 shower stall	3
101-200	1 shower stall	4
Over 200	1 shower stall plus 1 additional shower stall for each 200 additional tenant-occupants	1 two-tier locker plus 1 two-tier locker for each 50 additional tenant-occupants

Check "N/A" only if the project is a residential project, or if it does not include nonresidential development that would accommodate over 10 tenant occupants (employees).

The nonresidential development would have 11-50 employees; 1 shower stall would be included w/ space for 2 lockers.

☑ ☐ ☐

6. *Designated Parking Spaces*

If the project includes a nonresidential use in a TPA, would the project provide designated parking for a combination of low-emitting, fuel-efficient, and carpool/vanpool vehicles in accordance with the following table?

Number of Required Parking Spaces	Number of Designated Parking Spaces
0-9	0
10-25	2
26-50	4
51-75	6
76-100	9
101-150	11
151-200	18
201 and over	At least 10% of total

This measure does not cover electric vehicles. See Question 4 for electric vehicle parking requirements.

Note: Vehicles bearing Clean Air Vehicle stickers from expired HOV lane programs may be considered eligible for designated parking spaces. The required designated parking spaces are to be provided within the overall minimum parking requirement, not in addition to it.

Check "N/A" only if the project is a residential project, or if it does not include nonresidential use in a TPA.

Project is in TPA; the portion of the nonresidential use would be required to have 70 spaces. Project is proposing to have 6 low-emitting/ fuel-efficient and carpool/ vanpool spaces.

☑ ☐ ☐

7. *Transportation Demand Management Program* If the project would accommodate over 50 tenant-occupants (employees), would it include a transportation demand management program that would be applicable to existing tenants and future tenants that includes: At least one of the following components: • Parking cash out program • Parking management plan that includes charging employees market-rate for single-occupancy vehicle parking and providing reserved, discounted, or free spaces for registered carpools or vanpools • Unbundled parking whereby parking spaces would be leased or sold separately from the rental or purchase fees for the development for the life of the development And at least three of the following components: • Commitment to maintaining an employer network in the SANDAG iCommute program and promoting its RideMatcher service to tenants/employees • On-site carsharing vehicle(s) or bikesharing • Flexible or alternative work hours • Telework program • Transit, carpool, and vanpool subsidies • Pre-tax deduction for transit or vanpool fares and bicycle commute costs • Access to services that reduce the need to drive, such as cafes, commercial stores, banks, post offices, restaurants, gyms, or childcare, either onsite or within 1,320 feet (1/4 mile) of the structure/use? Check "N/A" only if the project is a residential project or if it would not accommodate over 50 tenant-occupants (employees). n/a- project would not have over 50 employees.	☐	☐	☑

Step 3: Project CAP Conformance Evaluation (if applicable)

The third step of the CAP consistency review only applies if Step 1 is answered in the affirmative under option B. The purpose of this step is to determine whether a project that is located in a TPA but that includes a land use plan and/or zoning designation amendment is nevertheless consistent with the assumptions in the CAP because it would implement CAP Strategy 3 actions. In general, a project that would result in a reduction in density inside a TPA would not be consistent with Strategy 3.The following questions must each be answered in the affirmative and fully explained.

1. **Would the proposed project implement the General Plan's City of Villages strategy in an identified Transit Priority Area (TPA) that will result in an increase in the capacity for transit-supportive residential and/or employment densities?**

   Considerations for this question:
   - Does the proposed land use and zoning designation associated with the project provide capacity for transit-supportive residential densities within the TPA?
   - Is the project site suitable to accommodate mixed-use village development, as defined in the General Plan, within the TPA?
   - Does the land use and zoning associated with the project increase the capacity for transit-supportive employment intensities within the TPA?

2. **Would the proposed project implement the General Plan's Mobility Element in Transit Priority Areas to increase the use of transit?**

   Considerations for this question:
   - Does the proposed project support/incorporate identified transit routes and stops/stations?
   - Does the project include transit priority measures?

3. **Would the proposed project implement pedestrian improvements in Transit Priority Areas to increase walking opportunities?**

   Considerations for this question:
   - Does the proposed project circulation system provide multiple and direct pedestrian connections and accessibility to local activity centers (such as transit stations, schools, shopping centers, and libraries)?
   - Does the proposed project urban design include features for walkability to promote a transit supportive environment?

4. **Would the proposed project implement the City of San Diego's Bicycle Master Plan to increase bicycling opportunities?**

   Considerations for this question:
   - Does the proposed project circulation system include bicycle improvements consistent with the Bicycle Master Plan?
   - Does the overall project circulation system provide a balanced, multimodal, "complete streets" approach to accommodate mobility needs of all users?

5. **Would the proposed project incorporate implementation mechanisms that support Transit Oriented Development?**

   Considerations for this question:
   - Does the proposed project include new or expanded urban public spaces such as plazas, pocket parks, or urban greens in the TPA?
   - Does the land use and zoning associated with the proposed project increase the potential for jobs within the TPA?
   - Do the zoning/implementing regulations associated with the proposed project support the efficient use of parking through mechanisms such as: shared parking, parking districts, unbundled parking, reduced parking, paid or time-limited parking, etc.?

6. **Would the proposed project implement the Urban Forest Management Plan to increase urban tree canopy coverage?**

   Considerations for this question:
   - Does the proposed project provide at least three different species for the primary, secondary and accent trees in order to accommodate varying parkway widths?
   - Does the proposed project include policies or strategies for preserving existing trees?
   - Does the proposed project incorporate tree planting that will contribute to the City's 20% urban canopy tree coverage goal?

CLIMATE ACTION PLAN CONSISTENCY CHECKLIST
ATTACHMENT A

This attachment provides performance standards for applicable Climate Action Pan (CAP) Consistency Checklist measures.

Table 1 **Roof Design Values for Question 1: Cool/Green Roofs supporting Strategy 1: Energy & Water Efficient Buildings of the Climate Action Plan**

Land Use Type	Roof Slope	Minimum 3-Year Aged Solar Reflectance	Thermal Emittance	Solar Reflective Index
Low-Rise Residential	≤ 2:12	0.55	0.75	64
	> 2:12	0.20	0.75	16
High-Rise Residential Buildings, Hotels and Motels	≤ 2:12	0.55	0.75	64
	> 2:12	0.20	0.75	16
Non-Residential	≤ 2:12	0.55	0.75	64
	> 2:12	0.20	0.75	16

Source: Adapted from the California Green Building Standards Code (CALGreen) Tier 1 residential and non-residential voluntary measures shown in Tables A4.106.5.1 and A5.106.11.2.2, respectively. Roof installation and verification shall occur in accordance with the CALGreen Code.

CALGreen does not include recommended values for low-rise residential buildings with roof slopes of ≤ 2:12 for San Diego's climate zones (7 and 10). Therefore, the values for climate zone 15 that covers Imperial County are adapted here.

Solar Reflectance Index (SRI) equal to or greater than the values specified in this table may be used as an alternative to compliance with the aged solar reflectance values and thermal emittance.

Table 2 Fixture Flow Rates for Non-Residential Buildings related to Question 2: Plumbing Fixtures and Fittings supporting Strategy 1: Energy & Water Efficient Buildings of the Climate Action Plan

Fixture Type	Maximum Flow Rate
Showerheads	1.8 gpm @ 80 psi
Lavatory Faucets	0.35 gpm @60 psi
Kitchen Faucets	1.6 gpm @ 60 psi
Wash Fountains	1.6 [rim space(in.)/20 gpm @ 60 psi]
Metering Faucets	0.18 gallons/cycle
Metering Faucets for Wash Fountains	0.18 [rim space(in.)/20 gpm @ 60 psi]
Gravity Tank-type Water Closets	1.12 gallons/flush
Flushometer Tank Water Closets	1.12 gallons/flush
Flushometer Valve Water Closets	1.12 gallons/flush
Electromechanical Hydraulic Water Closets	1.12 gallons/flush
Urinals	0.5 gallons/flush

Source: Adapted from the California Green Building Standards Code (CALGreen) Tier 1 non-residential voluntary measures shown in Tables A5.303.2.3.1 and A5.106.11.2.2, respectively. See the California Plumbing Code for definitions of each fixture type.

Where complying faucets are unavailable, aerators rated at 0.35 gpm or other means may be used to achieve reduction.

Acronyms:
gpm = gallons per minute
psi = pounds per square inch (unit of pressure)
in. = inch

Table 3	**Standards for Appliances and Fixtures for Commercial Application related to Question 2: Plumbing Fixtures and Fittings supporting Strategy 1: Energy & Water Efficient Buildings of the Climate Action Plan**	
Appliance/Fixture Type	**Standard**	
Clothes Washers	Maximum Water Factor (WF) that will reduce the use of water by 10 percent below the California Energy Commissions' WF standards for commercial clothes washers located in Title 20 of the *California Code of Regulations.*	
Conveyor-type Dishwashers	0.70 maximum gallons per rack (2.6 L) (High-Temperature)	0.62 maximum gallons per rack (4.4 L) (Chemical)
Door-type Dishwashers	0.95 maximum gallons per rack (3.6 L) (High-Temperature)	1.16 maximum gallons per rack (2.6 L) (Chemical)
Undercounter-type Dishwashers	0.90 maximum gallons per rack (3.4 L) (High-Temperature)	0.98 maximum gallons per rack (3.7 L) (Chemical)
Combination Ovens	Consume no more than 10 gallons per hour (38 L/h) in the full operational mode.	
Commercial Pre-rinse Spray Valves (manufactured on or after January 1, 2006)	Function at equal to or less than 1.6 gallons per minute (0.10 L/s) at 60 psi (414 kPa) and • Be capable of cleaning 60 plates in an average time of not more than 30 seconds per plate. • Be equipped with an integral automatic shutoff. • Operate at static pressure of at least 30 psi (207 kPa) when designed for a flow rate of 1.3 gallons per minute (0.08 L/s) or less.	

Source: Adapted from the California Green Building Standards Code (CALGreen) Tier 1 non-residential voluntary measures shown in Section A5.303.3. See the California Plumbing Code for definitions of each appliance/fixture type.

Acronyms:
L = liter
L/h = liters per hour
L/s = liters per second
psi = pounds per square inch (unit of pressure)
kPa = kilopascal (unit of pressure)

6th and OLIVE PROJECT

NOISE STUDY

Prepared for:

KLR Planning
San Diego, CA

Prepared by:

BIRDSEYE
PLANNING GROUP

August 2018

6TH and OLIVE PROJECT
SAN DIEGO, CALIFORNIA
Noise Study

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NOISE STUDY

This report is an analysis of the potential noise impacts associated with the proposed 6th and Olive Project (proposed project) in the City of San Diego. This report has been prepared by Birdseye Planning Group (BPG) under contract to KLR Planning to support preparation of environmental documentation pursuant to the California Environmental Quality Act (CEQA). This study analyzes the potential for permanent noise impacts associated with operation of the proposed project and temporary impacts associated with construction activity within proximity to the construction area.

PROJECT DESCRIPTION

The 6th and Olive proposed project involves an Amendment to the approved St. Paul's Cathedral and Residences SDP No. 312733. The proposed project would demolish an existing 16-unit Park Chateau Apartments (21,813 square feet), existing Cathedral administrative offices (4,973 square feet), and a 20-space surface parking lot (4,440 square feet) and construct a new mixed-use, 20-story building containing approximately 262,500 square feet of above-grade gross floor area with 204 multi-family residential units (including 18 affordable housing units), 16,910 gross square feet of Cathedral office space, and 348 automobile parking spaces in a five-level underground parking structure. Access to the garage would be from a driveway on Olive Street. The project would also provide a courtyard shared with St. Paul's Cathedral that includes landscaping and benches. The project site is shown in Figure 1.

SETTING

Overview of Sound Measurement

Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 Hertz). Sound pressure level is measured on a logarithmic scale with the 0 dB level based on the lowest detectable sound pressure level that people can perceive (an audible sound that is not zero sound pressure level). Based on the logarithmic scale, a doubling of sound energy is equivalent to an increase of 3 dBA, and a sound that is 10 dBA less than the ambient sound level has no effect on ambient noise. Because of the nature of the human ear, a sound must be about 10 dBA greater than the reference sound to be judged as twice as loud. In general, a 3 dBA change in community noise levels is noticeable, while 1-2 dB changes generally are not perceived. Quiet suburban areas typically have noise levels in the range of 40-50 dBA, while arterial streets are in the 50-60+ dBA range. Normal conversational levels are in the 60-65

Figure 1—Vicinity Map

dBA range, and ambient noise levels greater than 65 dBA can interrupt conversations. Noise levels typically attenuate (or drop off) at a rate of 6 dBA per doubling of distance from point sources (i.e., industrial machinery). Noise from lightly traveled roads typically attenuates at a rate of about 4.5 dBA per doubling of distance. Noise from heavily traveled roads typically attenuates at about 3 dBA per doubling of distance. Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA. The manner in which older homes in California were constructed (approximately 30 years old or older) generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer residential units and office buildings construction to California Energy Code standards is generally 30 dBA or more (Harris, Miller, Miller and Hanson, 2006).

In addition to the actual instantaneous measurement of sound levels, the duration of sound is important since sounds that occur over a long period of time are more likely to be an annoyance or cause direct physical damage or environmental stress. One of the most frequently used noise metrics that considers both duration and sound power level is the equivalent noise level (Leq). The Leq is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time (essentially, the average noise level). Typically, Leq is summed over a one-hour period. Lmax is the highest RMS (root mean squared) sound pressure level within the measuring period, and Lmin is the lowest RMS sound pressure level within the measuring period.

The time period in which noise occurs is also important since noise that occurs at night tends to be more disturbing than that which occurs during the day. Community noise is usually measured using Day-Night Average Level (Ldn), which is the 24-hour average noise level with a 10-dBA penalty for noise occurring during nighttime (10 p.m. to 7 a.m.) hours, or Community Noise Equivalent Level (CNEL), which is the 24-hour average noise level with a 5 dBA penalty for noise occurring from 7 p.m. to 10 p.m. and a 10 dBA penalty for noise occurring from 10 p.m. to 7 a.m. Noise levels described by Ldn and CNEL usually do not differ by more than 1 dB. Daytime Leq levels are louder than Ldn or CNEL levels; thus, if the Leq meets noise standards, the Ldn and CNEL are also met. Table 1 shows sounds levels of typical noise sources in Leq.

Sensitive Receptors

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with each of these uses. Urban areas contain a variety of land use and development types that are noise sensitive including residences, schools, churches, hospitals and convalescent care facilities. Nearby sensitive receptors are multifamily residences located along Olive Street north of the site, along 5th Avenue on the block north of the site and southwest of the site across 5th Avenue. St. Paul's Cathedral is located adjacent to and west/south of the site. Multifamily housing is located on the south side of Nutmeg but would be separated from the project site by the existing St. Paul's Cathedral. Balboa Park is located across 6th Avenue to the east. The project will also be a sensitive receptor at completion.

Table 1. Sound Levels of Typical Noise Sources and Noise Environments

Noise Source (at Given Distance)	Noise Environment	A-Weighted Sound Level (Decibels)	Human Judgment of Noise Loudness (Relative to Reference Loudness of 70 Decibels*)
Military Jet Takeoff with Afterburner (50 ft)	Carrier Flight Deck	140	128 times as loud
Civil Defense Siren (100 ft)		130	64 times as loud
Commercial Jet Take-off (200 ft)		120	32 times as loud **Threshold of Pain**
Pile Driver (50 ft)	Rock Music Concert Inside Subway Station (New York)	110	16 times as loud
Ambulance Siren (100 ft) Newspaper Press (5 ft) Gas Lawn Mower (3 ft)		100	8 times as loud **Very Loud**
Food Blender (3 ft) Propeller Plane Flyover (1,000 ft) Diesel Truck (150 ft)	Boiler Room Printing Press Plant	90	4 times as loud
Garbage Disposal (3 ft)	Noisy Urban Daytime	80	2 times as loud
Passenger Car, 65 mph (25 ft) Living Room Stereo (15 ft) Vacuum Cleaner (10 ft)	Commercial Areas	70	Reference Loudness **Moderately Loud**
Normal Speech (5 ft) Air Conditioning Unit (100 ft)	Data Processing Center Department Store	60	1/2 as loud
Light Traffic (100 ft)	Large Business Office Quiet Urban Daytime	50	1/4 as loud
Bird Calls (distant)	Quiet Urban Nighttime	40	1/8 as loud **Quiet**
Soft Whisper (5 ft)	Library and Bedroom at Night Quiet Rural Nighttime	30	1/16 as loud
	Broadcast and Recording Studio	20	1/32 as loud **Just Audible**
		0	1/64 as loud **Threshold of Hearing**

Source: Compiled by dBF Associates, Inc., 2016

Project Site Setting

The project area is located in the urbanized Balboa Park community within the City of San Diego. Thus, the most common and primary sources of noise in the project site vicinity are motor vehicles (e.g., automobiles and trucks) on 5th and 6th Avenues and on Olive Street to the north and Nutmeg Street to the south. The project site located on the northwest corner of 5th Avenue and Olive Street and wraps around the block extending mid-block adjacent to the 6th Avenue. The majority of existing and project-related noise will remain traffic noise. Traffic noise is of concern because where a high number of individual events occur, it can create a sustained noise level. Other noise sources in the area are primarily associated with pedestrian activity; however, these sources do not noticeably contribute to the ambient noise environment. The project site and surrounding land use is shown on Figure 2. The scope of proposed improvements are shown in Figure 3.

To gather data on the general noise environment at the project site, weekday morning 15-minute noise measurements were taken on May 1, 2018. Site 1 is located in the parking lot at the northeast corner of Olive Street and 6th Avenues on the proposed project site. Site 2 is located generally at the southwest corner of Nutmeg Street and 5th Avenue. Monitoring locations are shown in Figure 4 and represent the project site as well as noise sensitive multifamily residences located north, west and south of the site. The measurements were taken using an ANSI Type II integrating sound level meter. The predominant noise source was traffic. The temperature during monitoring was 65 degrees Fahrenheit with no cloud cover or perceptible wind.

During monitoring, 215 cars/light trucks, 3 medium (two-axles and six wheels) and zero heavy (18-wheel) trucks passed Site 1. A total of 112 cars/light truck, five medium trucks and three heavy trucks passed Site 2. Background noise at each site included pedestrian activity and nearby construction activity. Measured noise are representative of noise levels occurring at the project site during a typical daytime scenario. Table 2 identifies the noise measurement locations and measured noise levels. As shown, the Leq was 63.7 dBA at Site 1 and 64.0 dBA at Site 2. The monitoring data sheet is provided as Appendix A.

Table 2
Noise Monitoring Results

Measurement Location	Primary Noise Source	Sample Time	Leq (dBA)
1. Parking lot located at northeast corner of project site - Olive Street/6th Avenue.	Traffic and pedestrian activity	Weekday morning	63.7
2. Southwest corner of Nutmeg Street and 5th Avenue.	Traffic	Weekday morning	64.0

Source: Field visit using ANSI Type II Integrating sound level meter.

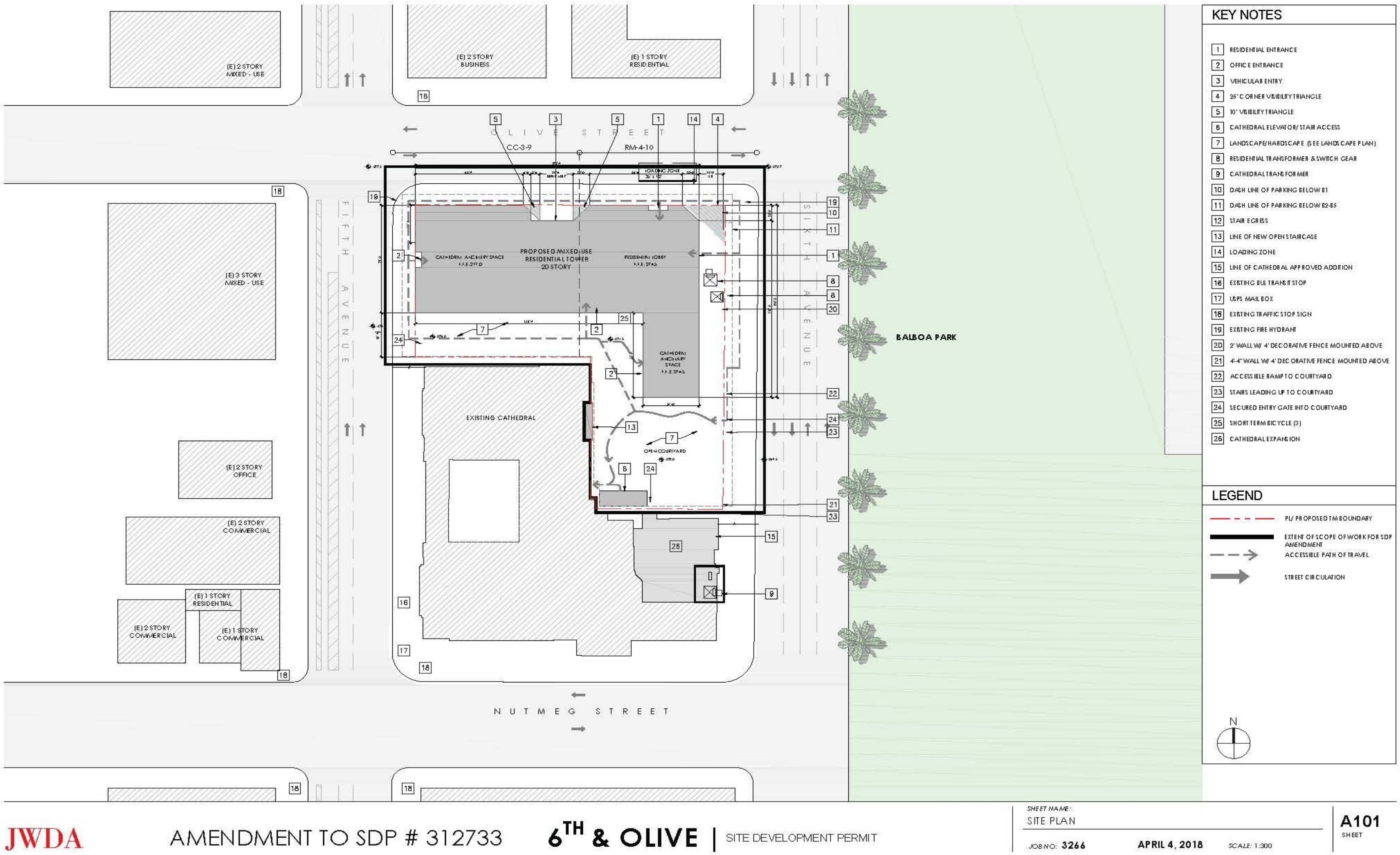


Figure 2—Site Plan

Figure 3—Noise Monitoring Locations

Regulatory Setting

The Federal Noise Control Act (1972) addressed the issue of noise as a threat to human health and welfare. To implement the Federal Noise Control Act, the U.S. Environmental Protection Agency (EPA) undertook a number of studies related to community noise in the 1970s. The EPA found that 24-hour averaged noise levels less than 70 dBA would avoid measurable hearing loss, levels of less than 55 dBA outdoors and 45 dBA indoors would prevent activity interference and annoyance (EPA 1972).

The U.S. Department of Housing and Urban Development (HUD) published a Noise Guidebook for use in implementing the Department's noise policy. In general, HUD's goal is exterior noise levels that are less than or equal to 55 dBA Ldn. The goal for interior noise levels is 45 dBA Ldn. HUD suggests that attenuation be employed to achieve this level, where feasible, with a special focus on sensitive areas of homes, such as bedrooms (HUD 2009).

Title 24 of the California Code of Regulations (CCR) establishes standards governing interior noise levels that apply to all new single-family and multi-family residential units in California. These standards require that acoustical studies be performed before construction at building locations where the existing Ldn exceeds 60 dBA. Such acoustical studies are required to establish mitigation measures that will limit maximum Ldn levels to 45 dBA in any habitable room. Although there are no generally applicable interior noise standards pertinent to all uses, many communities in California have adopted an Ldn of 45 as an upper limit on interior noise in all residential units.

In addition, the State of California General Plan Guidelines (OPR 2003), provides guidance for noise compatibility. The guidelines also present adjustment factors that may be used to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

City of San Diego General Plan Noise Element

The City of San Diego requires new projects to meet exterior noise level standards as established in the Noise Element of the General Plan [City of San Diego 2008, Amended 2015: Policy NE-A.4]. Sound levels up to 60 dBA CNEL are considered compatible with outdoor areas of frequent use (patios, balconies, parks, swimming pools, etc.). The building structure must attenuate exterior noise in occupied areas to 45 dBA CNEL or below. General Plan Noise Element Table NE-3: Land Use – Noise Compatibility Guidelines is presented as Table 3. For purposes of this analysis, the project site and neighboring habitable structures are evaluated herein.

CEQA Significance Thresholds

The California Environmental Quality Act (CEQA) Significance Determination Thresholds (City of San Diego 2016) addresses traffic noise, as specified in Table K-2: Traffic Noise Significance Thresholds (dB(A) CNEL). Relevant portions are reproduced in Table 4.

Noise Ordinance

City of San Diego Municipal Code Section 59.5.0401: Sound Level Limits states:

(a) It shall be unlawful for any person to cause noise by any means to the extent that the one-hour average sound level exceeds the applicable limit given in the following table [reproduced as Table 5], at any location in the City of San Diego on or beyond the boundaries of the property on which the noise is produced. The noise subject to these limits is that part of the total noise at the specified location that is due solely to the action of said person.

(b) The sound level limit at a location on a boundary between two zoning districts is the arithmetic mean of the respective limits for the two districts. Permissible construction noise level limits shall be governed by Section 59.5.0404 of this article.

Table 3
City of San Diego Land Use – Noise Compatibility Guidelines

Land Use Category	Exterior Noise Exposure (dBA CNEL)				
	<60	60–65	65–70	70–75	>75
Parks and Recreational					
Parks, Active and Passive Recreation					
Outdoor Spectator Sports, Golf Courses; Water Recreational Facilities; Indoor Recreation Facilities					
Agricultural					
Crop Raising and Farming; Community Garden, -Aquaculture, Dairies; Horticulture Nurseries & Greenhouses; Animal Raising, Maintain & Keeping; Commercial Stables					
Residential					
Single Dwelling Units; Mobile Homes		45			
Multiple Dwelling Units *For uses affected by aircraft noise, refer to Policies NE-D.2. & NE-D.3.		45	45*		
Institutional					
Hospitals; Nursing Facilities; Intermediate Care Facilities; Kindergarten through Grade 12 Educational Facilities; Libraries; Museums; Child Care Facilities		45			
Other Educational Facilities Including Vocational/Trade Schools; Colleges and Universities		45	45		
Cemeteries					

Land Use Category	**Exterior Noise Exposure (dBA CNEL)**				
	60	**65**	**70**	**75**	
Retail Sales					
Building Supplies/Equipment; Food, Beverages & Groceries; Pets & Pet Supplies; Sundries, Pharmaceutical & Convenience Sales; Wearing Apparel & Accessories			**50**	**50**	
Commercial Services					
Building Services; Business Support; Eating & Drinking; Financial Institutions; Maintenance & Repair; Personal Services Assembly & Entertainment (includes public and religious assembly); Radio & Television Studios; Golf Course Support			**50**	**50**	
Visitor Accommodations		**45**	**45**	**45**	
Offices					
Business & Professional; Government; Medical, Dental & Health Practitioner; Regional & Corporate Headquarters					
Vehicle and Vehicular Equipment Sales and Service Use					
Commercial or Personal Vehicle Repair & Maintenance; Commercial or Personal Vehicle Sales & Rentals; Vehicle Equipment & Supplies Sales & Rentals; Vehicle Parking					
Wholesale, Distribution, Storage Use Category					
Equipment & Materials Storage Yards; Moving & Storage Facilities; Warehouse; Wholesale Distribution					
Industrial					
Heavy Manufacturing; Light Manufacturing; Marine Industry; Trucking & Transportation Terminals; Mining & Extractive Industries					
Research & Development				**50**	

	Compatible	**Indoor Uses**	Standard constructions methods should attenuate exterior noise to an acceptable indoor noise level. Refer to Section I.
		Outdoor Uses	Activities associated with the land use may be carried out.
45, 50	**Conditionally Compatible**	**Indoor Uses**	Building structure must attenuate exterior noise to the indoor noise level indicated by the number (45 or 50) for occupied areas. Refer to Section I.
		Outdoor Uses	Feasible noise mitigation techniques should be analyzed and incorporated to make the outdoor activities acceptable. Refer to Section I.
	Incompatible	**Indoor Uses**	New construction should not be undertaken.
		Outdoor Uses	Sever noise interference makes outdoor activities unacceptable.

Source: General Plan Noise Element Table NE-3: Land Use – Noise Compatibility Guidelines as amended 2015

City of San Diego Municipal Code Section 59.5.0404: Construction Noise (b) states:

> … it shall be unlawful for any person… to conduct any construction activity so as to cause, at or beyond the property lines of any property zoned residential, an average

sound level greater than 75 decibels during the 12-hour period from 7:00 a.m. to 7:00 p.m. (City of San Diego 2010).

Construction is prohibited on legal holidays and Sundays as specified in Section 21.04 of the San Diego Municipal Code.

Table 4
City of San Diego Traffic Noise Significance Thresholds (dBA CNEL)

Structure or Proposed Use that would be impacted by Traffic Noise	Interior Space	Exterior Useable Space[1]
Single-family detached	45 dB	65 dB
Multi-family, schools, libraries, hospitals, day care, hotels, motels, parks, convalescent homes	Development Services Department (DSD) ensures 45 dB pursuant to Title 24	65 dB
Offices, Churches, Business, Professional Uses	n/a	70 dB
Commercial, Retail, Industrial, Outdoor Spectator Sports Uses	n/a	75 dB

Source: City of San Diego Traffic Noise Significance Thresholds, 2016

[1] If a project is currently at or exceeds the significance thresholds for traffic noise described above and noise levels would result in less than a 3-dB increase, then the impact is not considered significant.

Table 5
City of San Diego Applicable Limits

Land Use	Time of Day	One-Hour Average Sound Level (decibels)
1. Single Family Residential	7:00 a.m. to 7:00 p.m 7:00 p.m. to 10:00 p.m 10:00 p.m. to 7:00 a.m.	50 45 40
2. Multi-Family Residential (Up to a maximum density of 1/2000)	7:00 a.m. to 7:00 p.m 7:00 p.m. to 10:00 p.m 10:00 p.m. to 7:00 a.m.	55 50 45
3. All other Residential	7:00 a.m. to 7:00 p.m 7:00 p.m. to 10:00 p.m 10:00 p.m. to 7:00 a.m.	60 55 50
4. Commercial	7:00 a.m. to 7:00 p.m 7:00 p.m. to 10:00 p.m 10:00 p.m. to 7:00 a.m.	65 60 60
5. Industrial or Agricultural	any time	75

Source: City of San Diego Municipal Code Section 59.5.0401, 2010

Vibration Standard

Vibration is a unique form of noise as the energy is transmitted through buildings, structures and the ground whereas audible noise energy is transmitted through the air. Thus, vibration is generally felt rather than heard. The ground motion caused by vibration is measured as particle velocity in inches per second and is referenced as vibration decibels (VdB). The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels.

The City of San Diego General Plan Noise Element and municipal code do not provide vibration standards. The Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment* (May 2006) uses a threshold of 65 VdB for buildings where low ambient vibration is essential for interior operations. These buildings include hospitals and recording studios. A threshold of 72 VdB is used for residences and buildings where people normally sleep (i.e., hotels and rest homes). A threshold of 75 VdB is used for institutional land uses where activities occur primarily during the daytime (i.e., churches and schools). The threshold used for the proposed project is 72 VdB.

Construction activities such as blasting, pile driving, demolition, excavation or drilling have the potential to generate ground vibrations near structures. With respect to ground-borne vibration impacts on structures, the FTA states that ground-borne vibration levels in excess of 100 VdB would damage fragile buildings and levels in excess of 95 VdB would damage extremely fragile historic buildings. The building to be demolished is not considered historic. However, elements of the St. Paul's Cathedral which is located adjacent to the construction site, are considered historic. Further, the Abbey building located at 2825 5th Avenue, adjacent to and north of the site across Olive Street, is a historic structure. Thus, 95 VdB is used to quantify potential vibration impacts to neighboring structures. While excavation would be required for the parking garage and building foundation, no blasting or pile driving is proposed. Thus, to provide information for use in completing the CEQA evaluation, construction-related vibration impacts are evaluated using the above referenced criteria.

IMPACT ANALYSIS

Methodology and Significance Thresholds

Construction noise estimates are based upon noise levels reported by the FTA, Office of Planning and Environment, and the distance to nearby sensitive receptors. Reference noise levels from that document were used to estimate noise levels at nearby sensitive receptors based on a standard noise attenuation rate of 6 dB per doubling of distance (line-of-sight method of sound attenuation).

The proposed improvements would demolish the existing 16-unit apartment building, existing Cathedral administrative offices, and a 20-space surface parking lot and construct a new mixed-use building containing 204 multi-family residential units, 16,910 gross square feet of Cathedral office space, and 348 automobile parking spaces in a five-level underground parking structure. These improvements would generate approximately 1,478 Average Daily Trips, 108 AM peak hour trips and 130 PM peak hour trips (Kimley-Horn and Associates, May 2018).

Traffic volumes would be concentrated on Olive Street and disperse primarily to 5th and 6th Avenues. Traffic related impacts are addressed herein based on the difference in volumes between existing conditions and the proposed use referenced above. A doubling of traffic volumes would be required to cause a noticeable increase (3 dBA) in the Leq associated with traffic noise.

Temporary Construction Noise

The main sources of noise during construction activities would include heavy machinery used during clearing the site, as well as equipment used for construction. Table 6 shows the typical noise levels associated with heavy construction equipment. As shown, average noise levels associated with the use of heavy equipment at construction sites can range from about 81 to 95 dBA at 25 feet from the source, depending upon the types of equipment in operation at any given time and phase of construction.

As referenced above, the City of San Diego limits the average sound level from construction noise to 75 decibels at any property zoned residential during the 12-hour period from 7:00 a.m. to 7:00 p.m. Noise-sensitive uses near the project site are existing multifamily residences north of Olive Street and west across 5th Avenue. The distance from the center of the site to the closest receiver (north side of Olive Street) is approximately 120 feet. It is assumed demolition, grading and site preparation work would require the use of heavy equipment. Building construction and finishing would utilize hand tools; however, equipment would also be required to deliver materials to the project site and work areas.

Table 6
Typical Construction Equipment Noise Levels

Equipment Onsite	Typical Level (dBA) 25 Feet from the Source	Typical Level (dBA) 50 Feet from the Source	Typical Level (dBA) 100 Feet from the Source
Air Compressor	84	78	64
Backhoe	84	78	64
Bobcat Tractor	84	78	64
Concrete Mixer	85	79	73
Bulldozer	88	82	76
Jack Hammer	95	89	83
Pavement Roller	86	80	74

Table 6
Typical Construction Equipment Noise Levels

Equipment Onsite	Typical Level (dBA) 25 Feet from the Source	Typical Level (dBA) 50 Feet from the Source	Typical Level (dBA) 100 Feet from the Source
Street Sweeper	88	82	76
Man Lift	81	75	69
Dump Truck	82	76	70

Source: Hanson, Towers and Meister, May 2006
Noise levels based on FHWA Roadway Construction Noise Model (2006) Users Guide Table 1.
Noise levels based on actual maximum measured noise levels at 50 feet (Lmax).
Noise levels assume a noise attenuation rate of 6 dBA per doubling of distance.

Based on EPA noise emissions, empirical data and the amount of equipment needed for construction of the proposed project, worst-case noise levels from the construction equipment would occur during demolition and grading activities. The anticipated equipment used on-site would include a dozer, backhoe/tractor and a grader. Due to size of the site (i.e., 0.37 acre) and related physical constraints and normal site preparation operations, the equipment will be spread out over the site and likely only used for specific operations. Based upon the site plan, the construction operations would occur near the northern property line (approximately 50 feet to the nearest receptor) while other operations could occur as far as 170 feet from the same property line along the west side of the site. This would result in an average distance of 110 feet from the center of the construction operations to the property lines.

Demolition Noise Levels
Not all equipment will operate continuously over the 12-hour period from 7:00 a.m. to 7:00 p.m. Equipment would be used as-needed basis depending on the activity. For example, cut saws will be used to weaken structural components of the buildings and then an excavator would be used to remove that section of the structure. A loader will then be used to place the debris into the haul trucks. Noise levels from the demolition activities can reach short-term peak levels exceeding of 90 dBA but will be periodic rather than constant. Based on empirical data referenced from other noise studies, the worst case hourly construction noise level was found to be 80.8 dBA Leq at an average distance of 25 feet (Ldn Consulting 2016). The daily, or 8-hour average, was measured to be 76 dBA at a distance of 25 feet. This results from the phased use of equipment. Assuming this work occurs on the exterior of the building near the middle of the site, the distance to the nearest receiver would be approximately 50 feet from the receiver. Assuming a reference level of 76 dBA at 25 feet and a 6 dBA decrease per doubling of distance, the average noise level over an 8-hour period would be approximately 70 dBA. This would be within the acceptable limits required by the City of San Diego.

Construction Noise Levels
The project site is 0.37 acre in size which limits the amount and type of equipment that can operate on the site at any one time. If during site preparation and grading, a bobcat tractor (78 dBA), a backhoe (78 dBA) and a dump truck (82 dBA) were working simultaneously generally in the center of the site over an 8-hour work day, the 8-hour Leq would be approximately 85

dBA at 50 feet. This would exceed the 75-dBA average at the sensitive properties located east of the site. For reference purposes, noise levels associated with the above construction scenario are shown at varying distances in Table 7.

Table 7
Typical Maximum Construction Noise Levels at Various Distances from Project Construction

Distance from Construction	Maximum Noise Level at Receptor (dBA)
25 feet	88
50 feet	85
100 feet	72
250 feet	66
500 feet	60
1,000 feet	54

As shown, noise levels at 100 feet or more from the active construction site would attenuate to below the 75-dBA threshold. No construction noise impacts are anticipated.

Temporary Construction-Related Vibration

Activities associated with residential facilities do not generate vibration. Thus, this discussion focuses on temporary vibration caused by construction. As referenced, the closest multifamily residences to the site are located along the north side of Olive Street approximately 50 feet from the northern property line. Based on the information presented in Table 8, vibration levels from operation of a loaded truck or bulldozer bobcat/backhoe would attenuate to 87 VdB or less at 25 feet. As discussed below, 95 VdB is the threshold where minor damage can occur in fragile and/or historic buildings. Vibration levels are projected to be under this threshold; thus, structural damage is not expected to occur as a result of construction activities associated with the proposed project.

As referenced, 72 VdB is the vibration threshold for residences and/or buildings where people sleep. Table 8 shows construction equipment, with the exception of a small bulldozer could exceed 72 VdB at varying distances across the site. Construction activities would occur during daytime hours which would minimize sleep disturbance; however, to minimize vibration impacts, it is recommended that small dozers and similar equipment be used in proximity to the receivers north of the site. Construction activities that cause vibration would be temporary; however, they may be perceptible at adjacent receivers. Temporary vibration impacts would be **less than significant.**

Table 8
Vibration Source Levels for Construction Equipment

Equipment	Approximate VdB				
	25 Feet	50 Feet	60 Feet	75 Feet	100 Feet
Large Bulldozer	87	81	79	77	75
Loaded Trucks	86	80	78	76	74
Jackhammer	79	73	71	69	67
Small Bulldozer	58	52	50	48	46

Source: Federal Railroad Administration, 1998

Long-Term Operational Noise Exposure

Long-term operation of the proposed project was evaluated for potential exterior traffic related impacts caused by increased traffic volumes associated with the project as well as interior noise levels caused by traffic. In addition, a discussion regarding potential noise levels associated with roof top Heating, Ventilation and Air Conditioning (HVAC) is provided.

Exterior Traffic Noise. Traffic is the primary noise source that would be generated by the proposed project. Existing measured noise levels in the project area are lower than the residential standard. As referenced, the highest measured noise level is 64.0 dBA at the southwest corner of Nutmeg Avenue and 5th Street (Site 2). Measured noise levels at Site 1 (63.7 dBA) are not noticeably different than Site 2; thus, ambient conditions in the project area currently meet City standards. Whether a traffic-related noise impact would occur is based on whether project traffic, when added to the existing traffic, would cause the Leq to noticeably increase (+3 dBA) or exceed the 65-dBA exterior standard referenced in Table 4 above.

The roadway network adjacent to the project site (Nutmeg Street, Olive Street, 5th Avenue and 6th Avenue) was modeled using the Federal Highway Administration Traffic Noise Model (TNM) version 2.5 software (see Appendix A). The model calculates traffic noise at receiver locations based on traffic volumes, travel speed, mix of vehicle types operating on the roadways (i.e., cars/trucks, medium trucks and heavy trucks) and related factors. Traffic volumes and vehicle mix used to calibrate TNM were based on vehicle counts obtained during the monitoring period. The 15 minute counts were multiplied by four to obtain hourly traffic counts. The model was calibrated to calculate noise levels that are +/- 2 dBA those measured on-site and reported in Table 2.

Traffic volumes for peak hour existing and project operation were obtained from the Traffic Impact Assessment (Kimley-Horn and Associates, May 2018). Evening (PM) peak hour project trips for existing conditions were modeled to determine baseline noise conditions. Project trips were then added to the baseline trips to determine whether the Leq at neighboring receivers would noticeably change or exceed 65 dBA as a result of project-related traffic.

As referenced, the project would generate approximately 1,478 Average Daily Trips, 108 AM peak hour trips (28 in and 80 out) and 130 PM peak hour trips (87 in and 43 out) (Kimley-Horn and Associates, May 2018). Noise levels were calculated at the following receivers and are intended to represent conditions at multiple receivers within proximity to these locations:

1. Multifamily residences at southeast corner of Nutmeg Street and 5th Avenue;
2. Multifamily Residences at northwest corner of Olive Street and 6th Avenue;
3. Vue Condominiums at 4029 5th Avenue (west side fronts 5th Avenue);
4. Project residences located near southeast corner of Olive Street and 5th Avenue; and
5. Project residences located mid-block along 6th Avenue between Olive and Nutmeg Streets.

The receiver locations are shown in Figure 4. As shown in Table 9, the evening peak hour Leq exceeds the 65-dBA standard at four of the six receiver locations modeled under baseline conditions.

Table 9
Modeled Noise Levels

Receptor	Existing Leq	Exceed Standard?	With Project Leq	dBA Change	Significant Impact
Site 1	68.7	Yes	69.1	+0.4	No
Site 2	66.9	Yes	67.2	+0.3	No
Site 3	64.7	No	65.0	+0.2	No
Site 4	64.7	No	64.9	+0.2	No
Site 5	67.7	Yes	67.8	+0.1	No
Site 6	67.1	Yes	67.2	+0.1	No

The highest existing noise level is at Receiver 1. This receiver is located at the southeast corner of 5th Avenue and Nutmeg Street. Traffic departing northbound from the stop- controlled intersection likely contributes to the higher modeled noise level at this location.

To cause a significant noise impact, project related traffic would have to cause the existing Leq at one or more receivers to exceed the 65-dBA standard or increase by 3 or more dBA. As shown in Table 9, traffic associated with the project would have the greatest effect at Receiver 1; however, the increase would not be noticeable. Similarly, noise levels at all the other receivers would not noticeably change nor would the project cause noise levels that are currently below 65-dBA to exceed that standard. Operation of the proposed project would have no adverse impact on sound levels at receivers in proximity to the site.

Exterior Use Noise (HVAC). The HVAC system proposed for use on the site has not been specified and noise levels vary depending on the system size. However, it is assumed that one or more HVAC compressor units will be installed on the roof-top of the proposed building. HVAC noise levels can be expected to range from 60 to 70 dBA at 5 feet from the roof top equipment and ventilation openings (Illingsworth & Rodkin, 2011). Assuming HVAC units are installed at the center of the roof top, or approximately 100 feet south of the closest receivers (Receiver 2), a 70-dBA reference noise level would attenuate to 52 dBA at 40 feet from the source. HVAC noise would be less than the 65 dBA criteria at the project property line.

Figure 4—Receiver Locations

Interior Traffic Noise. California Energy Code Title 24 standards specify construction methods and materials that result in energy efficient structures and up to a 30-dBA reduction in exterior noise levels (assuming windows are closed). This includes operation of mechanical ventilation (e.g. heating and air conditioning), in combination with standard building construction that includes dual-glazed windows with a minimum Sound Transmission Class (STC) rating of 26 or higher. When windows are open, the insertion loss drops to about 10 dBA. Assuming windows are closed, interior noise levels at residences along Olive Street (i.e., the proposed project and Receiver 2) would be approximately 37 dBA and less at receivers located along 5th Avenue. This would be below the 45 dBA interior standard. In all cases modeled, the existing interior noise levels would not noticeably change with the addition of project traffic.

Airport Land Use Compatibility Plan Compatibility. The San Diego International Airport is located approximately 1.0 mile southwest of the project site. Based on the noise contour maps provided in the San Diego International Airport Land Use Compatibility Plan (County of San Diego County 2014) the project site is located within the 65 dBA CNEL contour; thus, airport noise may be audible at this location. As referenced, the project site is part of the St. Paul's Cathedral and Residences Project (DSD Project No. 96101) approved per Site Development Permit (SDP) No. 312733 which was approved by the San Diego City Council in 2011. In addition to the SDP, approved actions for the St. Paul's Cathedral and Residences project included a Vesting Tentative Map (VTM No. 851727), Neighborhood Development Permit (NDP No. 534371), and a public right-of-way encroachment. All discretionary actions were analyzed in a certified Environmental Impact Report (EIR) (SCH No. 2009101036). Compatibility with the adopted Airport Land Use Compatibility Plan was addressed in the EIR. Impacts associated with the proposed project are not greater than or different from what was disclosed in the certified EIR.

Mitigation from Previous Environmental Review

As stated under Project Description, the proposed 6th and Olive Project site is part of the St. Paul's Cathedral and Residences Project, which was approved by the San Diego City Council in 2011. Environmental effects of the St. Paul's Cathedral and Residences Project were analyzed in a certified Environmental Impact Report (EIR) (SCH No. 2009101036). The St. Paul's Cathedral and Residences EIR found that project would result in temporary and permanent noise impacts. Construction activities associated with improvements at the project site were concluded to generate short-term, temporary, and intermittent noise at or near individual noise-sensitive locations in the project area. Noise generated by short-term construction activities was identified as a significant project noise impact, resulting in the need for mitigation measures to reduce impacts to below a level of significance. Relative to a permanent increase in ambient noise levels, the St. Paul's Cathedral and Residences Project determined that noise generated by stationary HVAC systems could increase ambient noise levels at adjacent sensitive receptors by more than 3-dBA; and therefore, would be a significant project noise impact, resulting in the need for mitigation to reduce impacts to below a level of significance.

The 6th and Olive project would be subject to the same mitigation measures as the original St. Paul's Cathedral and Residences Project. Therefore, the following mitigation measures would be required as applicable based on the project specific findings presented herein:

Mitigation Measure NOI-1a*: The project proponent shall require any construction activities and contractors to adopt the following measures to control noise generated by construction activities:*

- *Construction equipment shall be properly maintained per manufacturers' specifications and fitted with the best available noise-suppression devices (e.g., mufflers, silencers, wraps).*
- *The project proponent and contractors shall not allow heavy-duty construction equipment to operate within 15 feet of adjacent structures to prevent structural damage from construction generated vibration.*
- *If heavy-duty construction equipment must be operated within 15 feet of adjacent structures, a before and after survey of cracks in the adjacent buildings shall be taken of all structures adjacent to construction activities. If any damage occurs to adjacent structures from heavy equipment operations, the project proponent shall repair all damages.*
- *All impact tools shall be shrouded or shielded and all intake and exhaust ports on power equipment shall be muffled or shielded.*
- *Heavy-duty construction equipment shall be staged and used at the farthest distance feasible from adjacent sensitive receptors.*
- *Construction equipment shall not be idled for extended periods.*
- *Fixed/stationary equipment (such as generators, compressors, rock crushers, and cement mixers) shall be located as far as possible from noise-sensitive receptors.*
- *An on-site coordinator shall be employed by the project applicant/contractor and his or her telephone number along with instructions on how to file a noise complaint shall be posted conspicuously around the project site during construction phases. The coordinator's duties shall include fielding and documenting noise complaints, determining the source of the complaint (e.g., piece of construction equipment), determining whether noise levels are within acceptable limits and according to City standards, and reporting complaints to the City. The coordinator shall contact nearby noise-sensitive receptors, advising them of the construction schedule.*
- *Project construction and related activities shall be limited to daytime hours (7 a.m. to 7 p.m.).*

Mitigation Measure NOI-1b*: The above mitigation measures would reduce construction noise levels by 10 to 15 dBA at ground level, but would be ineffective for adjacent residences on the second floor or higher and for any actions within 50 feet of adjacent property lines. The following additional mitigation would ensure that all adjacent residences are not exposed to noise levels exceeding 75 dBA Leq or noise that exceeds 10 dB above existing ambient noise levels:*

- *Construction equipment operating at noise levels exceeding 75 dBA Leq shall not actively operate for more than 30 minutes of each 1-hour period within 30 feet of adjacent sensitive receptors.*
- *Noise barriers shall be erected along the eastern boundary of the project site. Noise barriers during shoring activities shall be 14 feet in height. Noise barrier heights during excavation shall be 14 feet in height until the site is excavated to a depth of 7 feet, when the barrier height*

may be reduced to 12 feet. At an excavation depth of 14 feet or greater the barrier may be reduced to 8 feet. A minimum 8-foot-high barrier shall be maintained along the eastern boundary of the Nutmeg site throughout excavation and foundation activities. The noise barriers should be constructed of material with a minimum weight of 4 pounds per square foot with no gaps or perforations. Noise barriers may be constructed of, but are not limited to, 5/8-inch plywood and 5/8-inch oriented strand board.

- *Due to shading effects on adjacent residences, lower vertical wall height maybe desired. Wall heights may be lowered 6 inches or more by creating a cantilevered extension at the top of the wall. Effectively, a 10-foot high wall with an approximate 2-foot cantilevered portion angled 45 degrees toward the project site would be as effective as a 12-foot barrier vertical barrier with a height of a little over 11 feet. To use cantilevered walls, the cantilever length would depend on the vertical wall height. Table 4.6-8 of the St. Paul's Cathedral and Residences EIR provides the of the required cantilever length for various wall heights.*

Mitigation Measure NOI-2*: The project proponent shall ensure that design and installation of stationary noise sources for the project meet the measures described below:*

- *Implement best design considerations and shielding, including installing stationary noise sources associated with HVAC systems indoors in mechanical rooms.*
- *Prior to the issuance of a building permit, the applicant or its designee shall prepare an acoustical study(s) of proposed mechanical equipment, which shall identify all noise- generating equipment, predict noise level property lines from all identified equipment, and recommended mitigation to be implemented (e.g., enclosures, barriers, site orientation), as necessary, to comply with the City of San Diego noise ordinance.*

CONCLUSION

The proposed project may have temporary adverse noise impacts associated with construction. However, with implementation of mitigation measures NOI-1a, NOI-1b and NOI-2 from the St. Paul's Cathedral and Residences EIR, construction noise levels that could exceed the City of San Diego 75-dBA 12-hour average standard could be avoided. The existing 65-dBA Leq exterior standard is exceeded under existing conditions at four of the six receivers modeled. Operation of the proposed project would have no noticeable effect on exterior noise levels at any of the receivers modeled. Assuming a 30-dBA reduction between exterior and interior noise levels, the interior standard would be met at all residential receivers modeled with operation of the proposed project. Assuming HVAC units are installed at the center of the roof top, or approximately 100 feet south of the closest receivers (Receiver 2), a 70-dBA reference noise level would attenuate to 52-dBA at 40 feet from the source. HVAC noise would be less than the 65-dBA criteria at the project property line. Thus, a **less than significant** operational noise impact would occur.

REFERENCES

California Office of Planning and Research. *OPR General Plan Guidelines*, 2003.

City of San Diego Municipal Code, *Section 59.5.0401*, 2010.

City of San Diego. *Municipal Code Section 59.5.0404: Construction Noise*, 2010

City of San Diego. *General Plan Noise Element Policy NE-A.4*. 2008, amended 2015.

City of San Diego. *California Environmental Quality Act Traffic Noise Significance Thresholds*, July, 2016

City of San Diego. *California Environmental Quality Act (CEQA) Significance Determination Thresholds*, Diego 2016.

County of San Diego Regional Airport Authority, *San Diego International Airport, Airport Land Use Compatibility Plan*, May 1, 2014.

County of San Diego Regional Airport Authority, *Montgomery Field Airport Land Use Compatibility Plan*, January 25, 2010.

dBF & Associates, Inc., Reference Noise Level Compilation Table, 2016.

Federal Highway Administration. *Roadway Construction Noise Model. 2006.* Users Guide Table 1.

Federal Highway Administration, Transportation Noise Model Version 2.5, 2004.

Federal Transit Administration. *Transit Noise and Vibration Impact Assessment*. May 2006.

Federal Rail Administration (FRA) *Guidelines (Report Number 293630-1),* December 1998.

Hanson, Carl E., Towers, David A., and Meister, Lance D. (2006, May). *Transit Noise and Vibration Impact Assessment.* Federal Transit Administration, Office of Planning and Environment. http://www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf

Harris Miller Miller & Hanson Inc. T*ransit Noise and Vibration Impact Assessment, Final Report*. May 2006.

Ldn Consulting, Inc. *Point Loma High School Environmental Impact Report Noise Study*, February 2016
.

Kimley-Horn and Associates, Inc., *6th and Olive Transportation Impact Analysis*, May 2018.

United States Environmental Protection Agency. *Federal Noise Control Act of 1972, 42 U.S.C. §4901 et seq.*, 1972

United States Department of Housing and Urban Development. *Noise Control Guidebook*, 2009.

Appendix A

Monitoring Data Sheet and Modeling Results

FIELD NOISE MEASUREMENT DATA

Project Name: 6TH / OLIVE   Page 1 of

Project #:   Day / Date MAY 3   My Name.

Sound Level Meter	Calibrator	Weather Meter
Model #: Rion	Model #	Model # Serial #
Serial #	Serial #	
Weighting: A / C / Flat	Pre-Test: dBA SPL	Terrain: Hard / Soft / Mixed
Response: Slow / Fast / Impl	Post-Test: dBA SPL	Topo: Flat / Hilly (describe)
Windscreen: Yes / No		Wind: Steady / Gusty

ID	Time Start	Time Stop	Leq	Lmin	Lmax	L10	L50	L90	Wind Spd/ Dir (mph)	Temp (°F)	RH (%)	Bar Psr (in Hg)	Cloud Cover (%)
1	7:08	7:23	63.7	51.1	73.2	67.6	61.4	55.2	0	65			0%
2	7:32	7:48	64.0	50.6	78.7	66.4	60.1	54.9	0	65			0%

			Location(s) / GPS Reading(s):
Roadway Name	6th	5th/Nutmeg	
Speed (post/obs)	30	25	
Number of Lanes	4	2	
Width (pave/row)	48	36	
1- or 2- way	2	1	
Grade	0%	0%	
Bus Stops	NO	YES	
Stoplights	NO	YES (Stop Sign)	
Street Parking	YES	~~YES~~ YES	
Automobiles	215	112	
Medium Trucks	3	5	
Heavy Trucks	0	3	

NOTES: Site 2 exposed to multiple background sources from neighboring construction site, ~~and~~ 4th street to the west

Other Noise Sources: distant aircraft / roadway traffic / trains / landscaping / rustling leaves / children playing / dogs barking / birds vocalizing

Notes and Sketches on Reverse

<Organization?>
<Analysis By?>

10 May 2018
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: With Project
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	No Barrier LAeq1h Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
1 - SE Corner of 5th & Nutmeg	1	1	0.0	68.7	66	68.7	10	Snd Lvl	68.7	0.0	8	-8.0
2 - NE Corner of 6th & Olive	2	1	0.0	66.9	66	66.9	10	Snd Lvl	66.9	0.0	8	-8.0
3 - Multifamily Mid Block 5th	3	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0
4 - NW Corner of 5th & Olive	4	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0
5 - NW Corner of Project Site	5	1	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0
6 - SE Corner of Project Site	6	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	6	0.0	0.0	0.0
All Impacted	4	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

<Organization?>
<Analysis By?>

10 May 2018
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: <Project Name?>
RUN: With Project
BARRIER DESIGN: INPUT HEIGHTS

ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	No Barrier LAeq1h Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
1 - SE Corner of 5th & Nutmeg	1	1	0.0	69.1	66	69.1	10	Snd Lvl	69.1	0.0	8	-8.0
2 - NE Corner of 6th & Olive	2	1	0.0	67.2	66	67.2	10	Snd Lvl	67.2	0.0	8	-8.0
3 - Multifamily Mid Block 5th	3	1	0.0	65.0	66	65.0	10	----	65.0	0.0	8	-8.0
4 - NW Corner of 5th & Olive	4	1	0.0	64.9	66	64.9	10	----	64.9	0.0	8	-8.0
5 - NW Corner of Project Site	5	1	0.0	67.8	66	67.8	10	Snd Lvl	67.8	0.0	8	-8.0
6 - SE Corner of Project Site	6	1	0.0	67.2	66	67.2	10	Snd Lvl	67.2	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	6	0.0	0.0	0.0
All Impacted	4	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

SAN DIEGO COUNTY
REGIONAL AIRPORT AUTHORITY

P.O. BOX 82776, SAN DIEGO, CA 92138-2776
619.400.2400 WWW.SAN.ORG

September 20, 2007

Mr. Dan Stricker
City of San Diego
Development Services Department
1222 First Avenue, Mail Stop 501
San Diego, California 92101-4155

Re: St. Paul's Development Project

Dear Mr. Stricker:

The Airport Authority received your letter of August 13, 2007 requesting the Authority's input on the proposed condominium projects on Nutmeg and Olive Streets at Fifth Avenue. As your letter indicated, the project is located outside of the Airport Influence Area of San Diego International Airport (SDIA) and thus is not subject to review by the Authority for a determination of consistency with the adopted SDIA Airport Land Use Compatibility Plan.

Nonetheless, the Authority appreciates the notification and opportunity to provide input on this project. The proposed project was analyzed for any obstructions to operations at San Diego International Airport. Based upon independent review by Ricondo & Associates, the Authority concurs that the proposed development is a significant penetration of the 14 CFR Part 77 horizontal surface and the Airport Approach Overlay Zone. The proposed penetration will not be an operational hazard for the Airport. In addition, the proposed buildings do not penetrate the obstacle clearance surfaces.

As noted in the enclosed technical report in Table 11, concern is urged regarding the elevation of temporary construction structures such as the use of cranes during the project's construction. Since the cranes are usually covered under separate Part 77 airspace obstruction determinations, the current determinations from the FAA do not cover this subject. Table 11 provides the heights allowed for temporary structures.

Thank you again for the invitation to provide Authority input on this project. If you have any questions regarding this letter, please contact Linda Johnson at (619) 400-2463 or ljohnson@san.org.

Sincerely,

Angela Shafer-Payne
Vice President, Strategic Planning

ASP/SS/nas

Enclosure

cc: Amy Gonzalez, SDCRAA, General Counsel
Keith Wilschetz, SDCRAA, Director, Airport Planning
Linda Johnson, SDCRAA, Manager, Airport Planning

SAN DIEGO
INTERNATIONAL
AIRPORT

February 21, 2018

Tait Galloway
City of San Diego Planning Department
9485 Aero Dr. M.S. 413
San Diego, CA 92123

Re: Airport Land Use Commission Review of Projects within Terrain Penetrations of Part 77 Airspace Surfaces

Dear Mr Galloway:

Recently, a proposed development located on the corner of 5th Avenue and Olive Street in Bankers Hill has been brought to the attention of the Airport Land Use Commission (ALUC). The proposed development falls within Review Area 2 of the Airport Influence Area (AIA) for the San Diego International Airport (SDIA) Airport Land Use Compatibility Plan (ALUCP). As a reminder, proposed developments located within Review Area 2 require ALUC consistency review under the following conditions referenced in Section 1.9.2 of the SDIA ALUCP.

> "ALUC review is required for land use plans and regulations within Review Area 2 proposing increases in height limits and for land use projects that:
>
> Have received from the FAA a Notice of Presumed Hazard, a Determination of Hazard or a Determination of No Hazard subject to conditions, limitations or marking and lighting requirements."

From our records a Notice of Proposed Construction or Alteration (Form 7460-1) was filed with the Federal Aviation Administration (FAA) in October 2016 and received a Determination of No Hazard with the condition that the building be marked/lighted in accordance with FAA standards. It is our understanding that the developer has now proposed to increase the height of the building which will require them to refile a Form 7460-1 at the estimated new height.

Due to potential impacts to aircraft arrival and departure procedures (e.g., increase in the ceiling or visibility minimums) at SDIA, submission of a separate Form 7460-1 may be required if a crane used in the construction of the building would exceed the estimated building height indicated on the Form 7460-1. The FAA notice of determination letter for both the building and construction crane will need to be included with the consistency application.

The proposed building is also located in an area in which the existing terrain penetrates Code of Federal Regulations (CFR) Part 77 surfaces (see Exhibit 4-1 of the SAN ALUCP). As noted in Policy A.8 of the ALUCP, structures built within this area require that an avigation easement be dedicated to the San Diego County Regional Airport Authority. Notice of this requirement will be included in the ALUC consistency determination letter.

To facilitate identification of land which naturally penetrates Part 77 surfaces, and hence upon which any projects so located would need to be referred to the ALUC for consistency determination, please refer to the SDIA layer called "SAN_Avig_Easements" in the ALUCP Mapping Tool at http://aviation.csengineers.com/ALUCP/SanDiego/.

Please contact me at (619) 400-2464 if you have any questions regarding this letter.

Yours truly,

Ralph Redman
Manager, Airport Planning

cc: Amy Gonzalez, SDCRAA General Counsel
Brendan Reed, SDCRAA Planning & Environmental Affairs

San Diego Unified
SCHOOL DISTRICT

Instructional Facilities Planning Department
Sarah Hudson/Demographer
TEL.: (619) 725-7369
shudson@sandi.net

July 18, 2018

Mr. Joseph Villapando
KLR Planning
P.O. Box 882676
San Diego, CA 92168
Submitted via email to: Joseph@klrplanning.com

Subject: 6TH AND OLIVE PROJECT (ST PAUL'S CATHEDRAL AND RESIDENCES)
204 multi-family residential units (including 18 affordable units) and office space to replace 16 existing apartment units, offices, and a parking lot
The northern portion of the city block bounded by 6th Avenue to the east; 5th Avenue to the west; Olive Street to the north; and Nutmeg Street to the south; San Diego, CA 92101.

Dear Mr. Villapando:

We are in receipt of your July 5, 2018 letter requesting school information for the above referenced development. In this letter we address your questions and provide requested information.

1. *The following schools currently serve the project site:*

School	Address	Estimated Program Capacity	2017-18 Enrollment	2018-19 Projected Enrollment
Florence Elementary	3914 1st Avenue San Diego, CA 92103	302	244	244
Roosevelt Middle	3366 Park Boulevard San Diego, CA 92103	1,435	986	998
San Diego High	1405 Park Boulevard San Diego, CA 92101	2,981	2,458	2,505

Capacities are approximate and calculated using current class size ratios; if class sizes ratios change, additional or less capacity may be available. Attendance boundaries are reviewed annually and subject to change.

2. *How many portables/relocatable classrooms are utilized at these schools? Are there any identified deficiencies in school services and facilities?*

Florence Elementary has 6 portable and 12 permanent classrooms. Roosevelt Middle has 16 portable and 42 permanent classrooms. San Diego High has 8 portable and 119 permanent classrooms. There are no identified deficiencies at these schools at this time.

3. *Has the district implemented reduced class sizes?*

Not at this time.

4. *According to the district's generation rates, how many students would the project generate? What are the generation rates?*

Student generation rates vary based on the type of project, number of units, bedroom mix, neighborhood, perceived quality of assigned schools, and other factors. There are not district standard rates. The information available indicates this project will include 204 multi-family residential units. In order to estimate the number of students generated by new residential development, we typically reference existing residential development of similar size in the same neighborhood as the proposed project. The assumption is that the new project will 'behave' in a manner similar to existing developments in terms of the number of students generated.

However, there are no recent multifamily residential developments of similar size to the proposed project in the vicinity that generate meaningful student enrollment. There is, of course, much existing housing of the multifamily type. Multifamily is a broad category which encompasses different types of housing (apartments, condominiums, work/live lofts, townhouses, etc.). Most multifamily developments in the vicinity are smaller than the proposed project, so they are not comparable for this purpose.

Therefore, we look to more distant developments in order to capture meaningful student generation figures for large, recently built multifamily projects. This is a less desirable strategy as developments in other neighborhoods may 'behave' differently due to locational factors such as neighborhood character, freeway proximity, cost of living, school quality, and so on.

TABLE 1. Existing Large, Recently Built Multifamily Developments

Existing Development	Address (Neighborhood)	Number of Units	Year Built	2017-18 students (K-5, 6-8, 9-12, and K-12 total)	Student Generation Rate
Vantage Pointe Apartments	1281 Ninth Avenue San Diego, CA 92101 (Cortez Hill)	679	2009	K-5: 9 6-8: 4 9-12: 12 **K-12: 25**	K-5: 0.013 6-8: 0.006 9-12: 0.018 **K-12: 0.038**
Pinnacle at the Park Apartments	424 15th Street San Diego, CA 92101 (East Village)	484	2015	K-5: 12 6-8: 3 9-12: 3 **K-12: 18**	K-5: 0.025 6-8: 0.006 9-12: 0.006 **K-12: 0.037**
Presidio View Apartments	1440 Hotel Circle North San Diego, CA 92108 (Mission Valley)	350	2006	K-5: 6 6-8: 1 9-12: 4 **K-12: 11**	K-5: 0.017 6-8: 0.003 9-12: 0.011 **K-12: 0.031**
Circa 37 Apartments	7750-7860 Westside Dr. San Diego, CA 92108 (Mission Valley)	306	2012	K-5: 9 6-8: 2 9-12: 3 **K-12: 14**	K-5: 0.029 6-8: 0.007 9-12: 0.010 **K-12: 0.046**
West Park Apartments	7777 & 7845 Westside Dr. San Diego, CA 92108 (Mission Valley)	612	2014	K-5: 10 6-8: 0 9-12: 0 **K-12: 10**	K-5: 0.016 6-8: 0 9-12: 0 **K-12: 0.016**

Based on the above information in Table 1, proposed student generation rates for the project that is the subject of this letter, 6th and Olive, are shown in Table 2. The student generation rates are the average from the existing developments, with a low and high range.

TABLE 2. Estimated Generation Rates for 6th and Olive project		
Number of Units	**Estimated Student Generation Rate**	**Estimated Number of Students**
204	K-5: 0.020-0.040 6-8: 0.004-0.009 9-12: 0.009-0.018 **K-12: 0.033-0.067**	K-5: 4-8 6-8: 1-2 9-12: 2-4 **K-12: 7-14**

5. *Based on the district's calculation of the project's student generation, would the project result in a need for additional school facilities?*

   Based on the above information, the number of students generated by the proposed project can likely be accommodated by existing district facilities at all levels.

6. *Please describe any developer fee assessment program which has been implemented by the district. Who is responsible, how is the amount determined, and what is the payment method?*

   For information on developer fees please visit this website:
   https://www.sandiegounified.org/developer-fees

7. *Please describe any agreements the district has with the city regarding use of school fields and game courts by the public.*

   For information on Joint Use please visit this website: https://www.sandiegounified.org/joint-use

8. *Does the district anticipate or expect any long term (10 year, 20 year, 30 year or longer) impacts associated with school services due to anticipated development within the Uptown community? If so, please describe the nature of these impacts and how this project may contribute to those impacts. If impact would occur, what suggestions do you have to minimize their effects?*

   The largest project in this area that this office is aware of is the proposed redevelopment of the UCSD Hillcrest hospital campus to include up to 1,000 multifamily residential units. The same schools would be impacted as this project. This office will continue to assess the district's facilities to ensure that additional students resulting from new residential development will be accommodated, using measures such as reduction of non-resident students and adjustments to attendance boundaries.

   Please keep this office appraised of revisions to the development plan as new information may result in changes to the information stated in this letter. Thank you.

Sincerely,

Sarah Hudson
Demographer

M:\IFPD - 5494A\Demographics\New Housing and Redev\Uptown\6th and Olive (St Pauls Cathedral and Residences).docx

SUMMER SOLSTICE (6/21) | WINTER SOLSTICE (12/21) | EQUINOX (3/21) (9/21)

9:00 AM

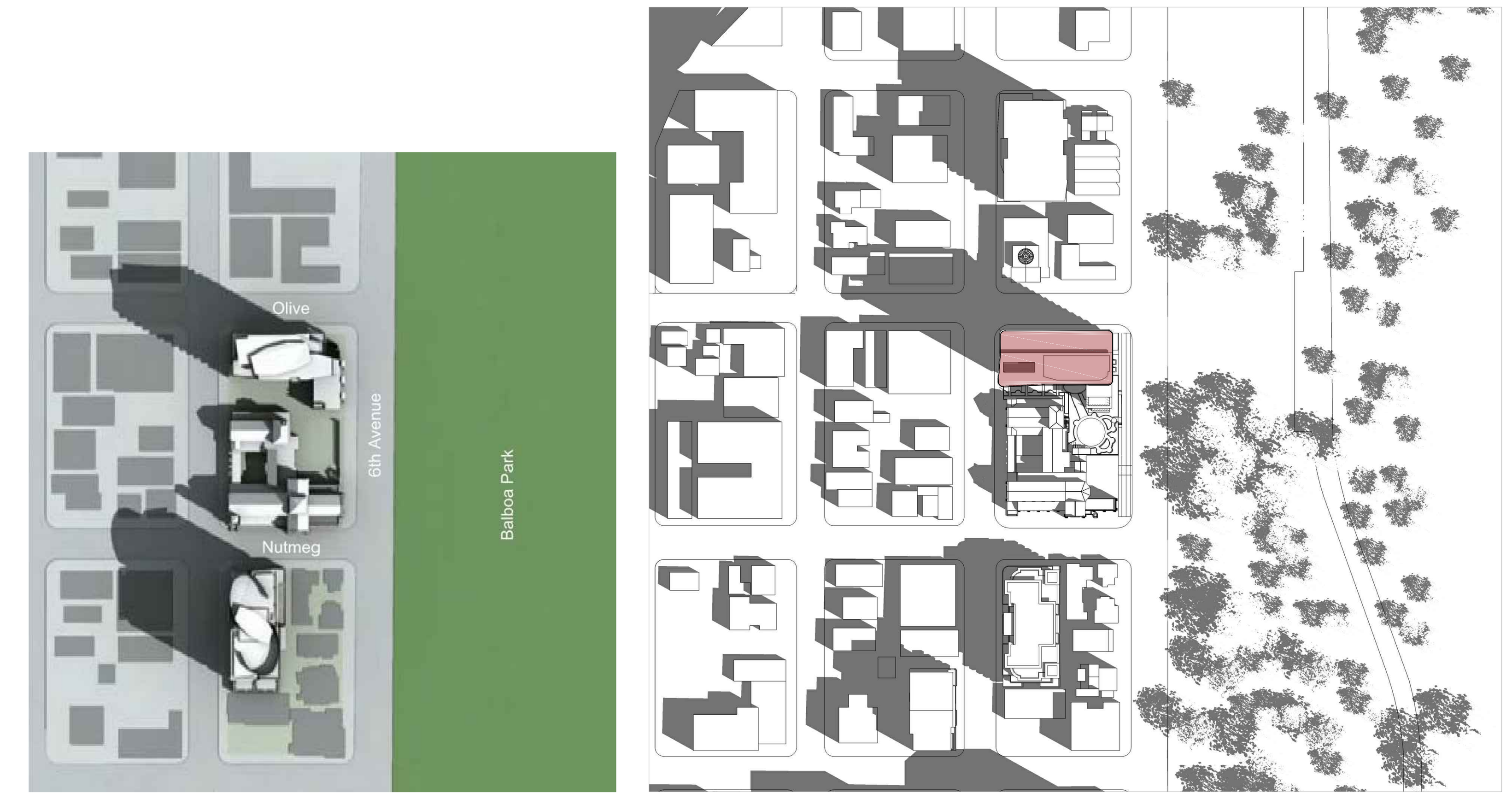
SUMMER SOLSTICE (6/21)

PER EIR STUDY — PROPOSED

WINTER SOLSTICE (12/21)

PER EIR STUDY — PROPOSED

EQUINOX (3/21) (9/21)



PER EIR STUDY — PROPOSED

12:00 PM

SUMMER SOLSTICE (6/21)

PER EIR STUDY — PROPOSED

WINTER SOLSTICE (12/21)

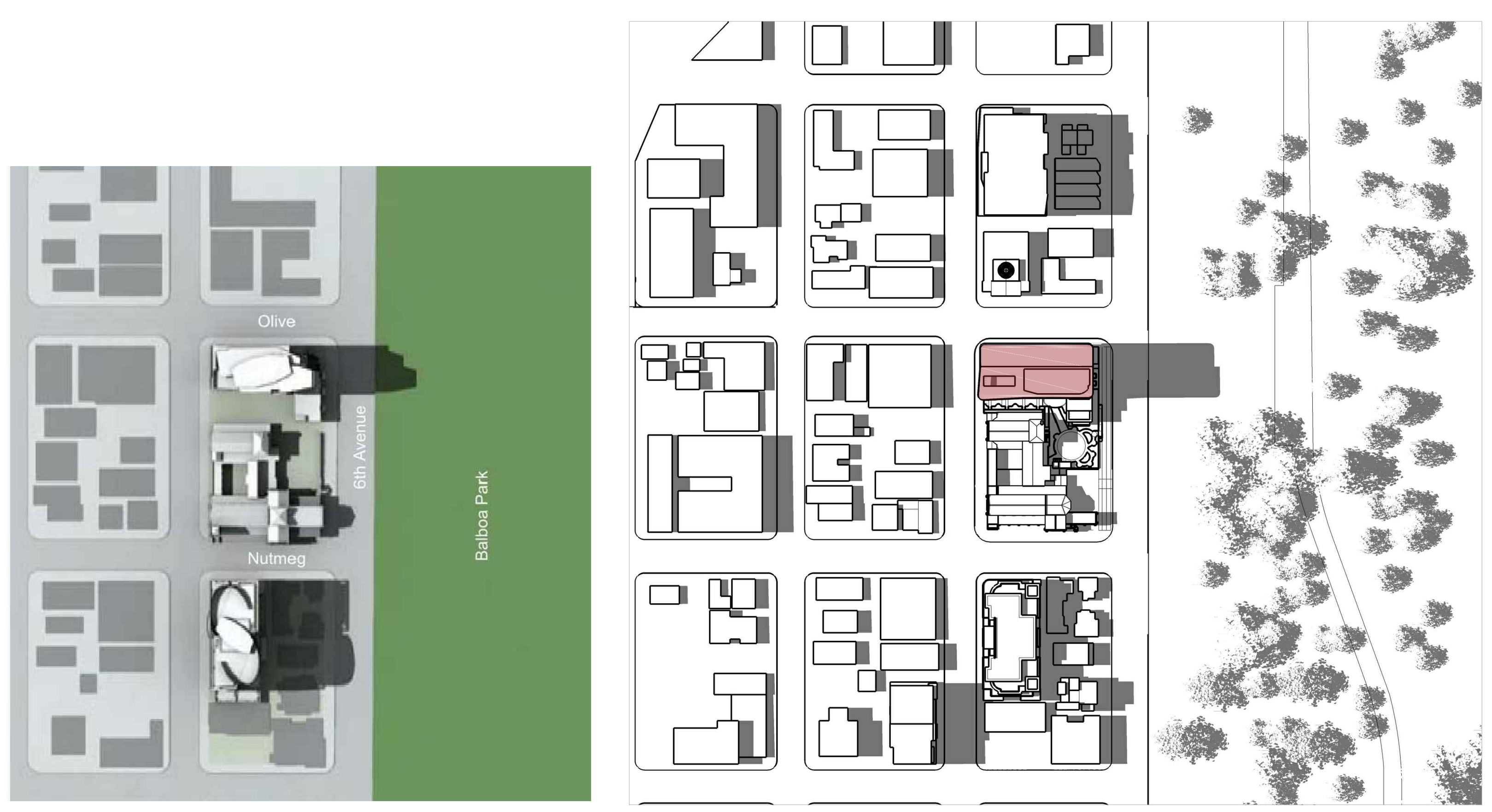
PER EIR STUDY — PROPOSED

EQUINOX (3/21) (9/21)

PER EIR STUDY — PROPOSED

3:00 PM

SUMMER SOLSTICE (6/21)



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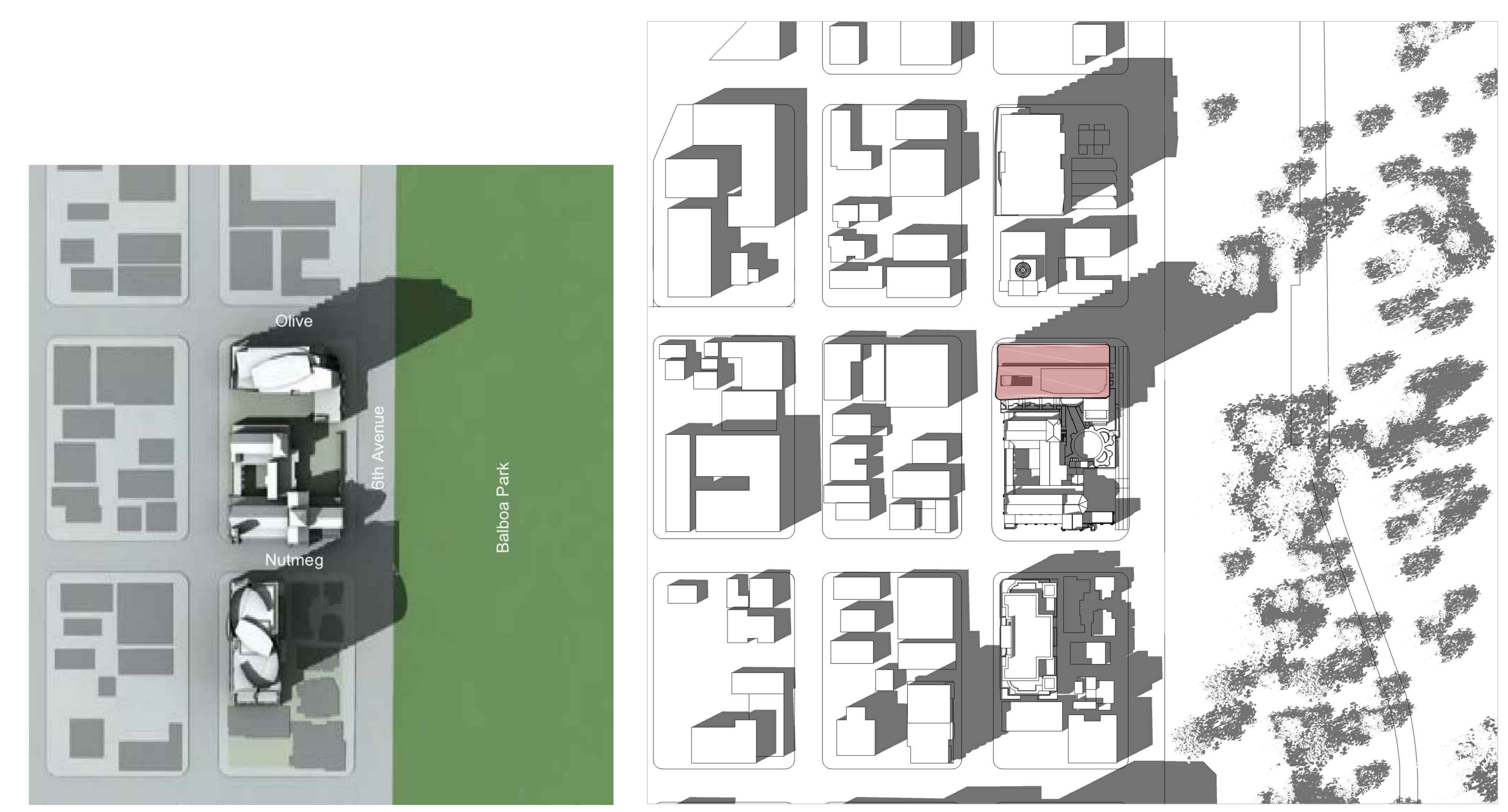
WINTER SOLSTICE (12/21)

PER EIR STUDY — PROPOSED

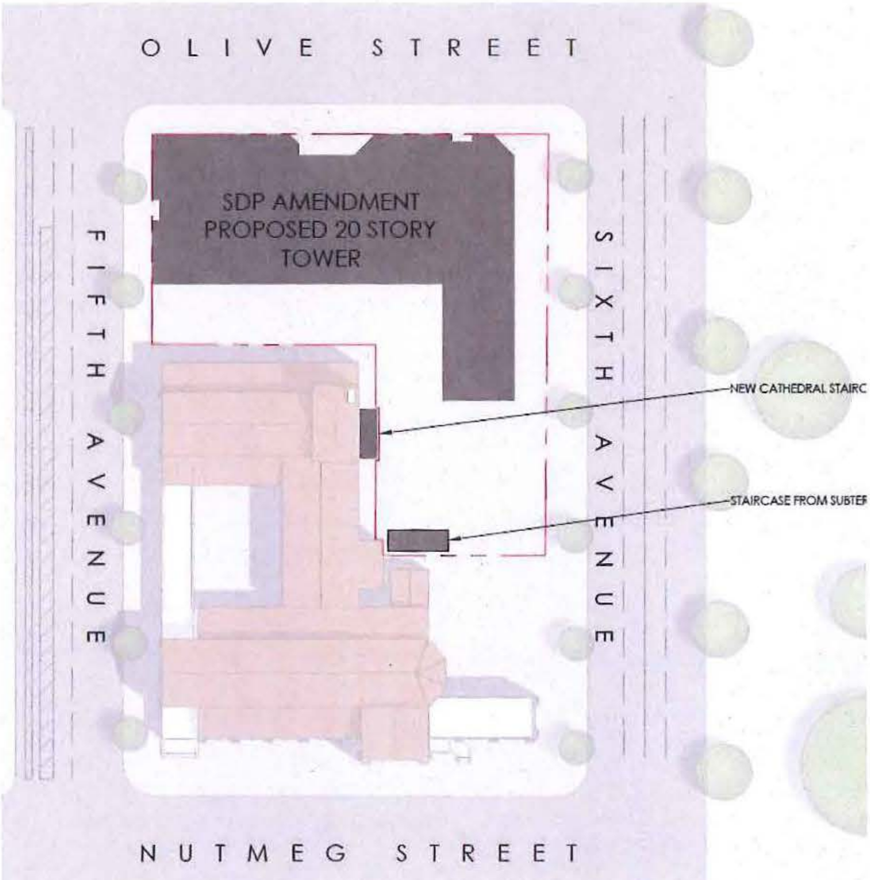
EQUINOX (3/21) (9/21)



PER EIR STUDY — PROPOSED

6TH AND OLIVE

TRANSPORTATION IMPACT ANALYSIS



SEPTEMBER 2018

Prepared For:

Greystar, Inc.

REGISTERED PROFESSIONAL ENGINEER
DAVID K. SORENSON
No. 1548
Exp. 9/2020
TRAFFIC
STATE OF CALIFORNIA

Prepared By:

Kimley»Horn

EXECUTIVE SUMMARY

This study evaluates the potential traffic impacts associated with the proposed 6th and Olive project. The project applicant, Greystar, Inc., has made an application for an Amendment to the *St. Paul's Cathedral and Residences* Site Development Permit No. 312733 in order to replace the Olive Site component of existing approvals to construct a mixed-use development with multi-family residential, cathedral office space and underground parking within the Uptown Community of the City of San Diego.

The proposed site is located on the block bounded by Olive Street, Sixth Avenue, Nutmeg Street and Fifth Avenue. The site is currently the Park Chateau Apartments, the cathedral administrative offices and the cathedral parking lot.

Project Information

The proposed project would construct 204 multi-family residential dwelling units and 16,910 square feet of cathedral office space. The proposed project would demolish the existing 16 dwelling units (Park Chateau Apartments) and 4,973 square feet of cathedral administrative offices.

Trip Generation

Using the driveway weekday trip generation rate of 6 trips per dwelling units for *Multiple Dwelling Unit – Over* 20 *dwelling units/acre* and 15 trips per KSF for *House of Worship - General*, the project is expected to generate a total of 1,478 daily trips with 108 morning peak-hour trips (28 in, 80 out) and 130 afternoon peak-hour trips (87 in, 43 out). The resulting net trip generation on the network (proposed minus existing) would be equal to a total of 1,307 daily trips with 97 morning peak-hour trips (24 in, 73 out) and 115 afternoon peak-hour trips (78 in, 37 out).

Analysis Scenarios

Six scenarios were analyzed as part of this analysis, listed below:

- Existing Conditions
- Existing Conditions Plus Project
- Near Term (2021) Conditions
- Near Term (2021) Conditions Plus Project
- Horizon Year (2035) Conditions
- Horizon Year (2035) Conditions Plus Project

Study Area

The study area was primarily determined based on the previous study area defined in the traffic analysis prepared for the *St. Paul's Cathedral and Residences Environmental Impact Report (EIR)* by Kimley-Horn, dated October 2010, and adjusted slightly to include Olive Street intersections and roadway segments near the project site. When looking at the project's trip assignment, the study area intersections would each have 50 trips or less during each peak hour.

Freeway ramps and segments are not included in the study area, consistent with the analysis performed in the *St. Paul's Cathedral and Residences EIR* traffic study.

Volume Projections

Existing volumes were collected in Spring of 2018.

Near Term (2021) volumes were estimated by adding traffic from the following four approved but not yet constructed cumulative projects:

1) The Regent on 5th (41 multiple family dwelling units)
2) 4th Avenue Apartments (36 multiple family dwelling units)
3) 6th and Hawthorn (21 multiple family dwelling units)
4) Cathedral Site Expansion (9,000 square feet)

Horizon Year (2035) volumes were estimated by calculating an annual growth rate for the roadways, established between Year 2008 and Year 2050 volumes from SANDAG's Series 12 model, and applying the annual growth rate to existing volumes for 17 years to achieve a forecast for Year 2035.

Using the trip generation and trip distribution established, project traffic was added to the baseline conditions to determine the change in delay at intersections and change in volume-to-capacity ratio at roadway segments.

Impact and Mitigation Summary

Table E-1 displays the intersection delay and LOS at all the study intersections for the different scenarios analyzed. As shown in the table, all intersections would operate at LOS D or better until Horizon Year (2035) conditions. Based on the City of San Diego's project impacts significance criteria, the 6th and Olive project would be considered to have a cumulative significant impact at the intersection of Fifth Avenue and Maple Street. This finding is consistent with the findings of the previous *St. Paul's Cathedral and Residences* approval. Mitigation of the project impact established as part of the *St. Paul's Cathedral and Residences* project approval was fair share payment towards a traffic signal at the intersection of Nutmeg Street and Fifth Avenue. Therefore, prior to issuance of the first building permit, the Owner/Permittee shall make a fair share contribution of 22.4% toward the construction of a traffic signal at the intersection of Nutmeg Street and Fifth Avenue. No additional mitigation is required.

Table E-2 displays the daily traffic volumes and LOS at all the study roadway segments for the different scenarios analyzed. As shown in the table, all study roadway segments would operate at LOS C or better under all scenarios except the segments of Sixth Avenue between Upas Street and Quince Street and between Laurel Street and Kalmia Street which operate at LOS E. Based on the City of San Diego's project impact significance criteria, the 6th and Olive project would not have any significant impacts to roadway segments.

No additional impacts or mitigations beyond those identified in the original *St. Paul's Cathedral and Residences EIR* were found as a result of the proposed 6th and Olive project.

Parking

The proposed project exceeds parking requirements for its land use types and densities.

Alternative Modes of Transportation

The project is located in the Uptown community of San Diego and re-develops an existing property. There is already pedestrian, bicycle, and transit service provided to the project site and the surrounding area. The proposed project would not change existing facilities. The proposed project increases density of residences in an area that is accommodating to alternative modes of transportation.

Table E-1 Intersection Level of Service Analysis Summary

	INTERSECTION	PEAK HOUR	EXISTING		EXISTING BASELINE PLUS PROJECT			NEAR TERM (2021) BASELINE		NEAR TERM (2021) BASELINE PLUS PROJECT			HORIZON YEAR (2035) BASELINE		HORIZON YEAR (2035) BASELINE PLUS PROJECT		
			DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	Δ (c)	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	Δ (c)	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	Δ (c)
1	Fourth Ave & Walnut Ave	AM	8.3	A	8.3	A	0.0	8.3	A	8.3	A	0.0	8.6	A	8.6	A	0.0
		PM	10.2	B	10.3	B	0.1	10.2	B	10.3	B	0.1	11.1	B	11.1	B	0.0
2	Fifth Ave & Upas St	AM	13.5	B	13.6	B	0.1	13.5	B	13.6	B	0.1	13.7	B	13.0	B	-0.7
		PM	14.6	B	14.6	B	0.0	14.6	B	14.6	B	0.0	14.7	B	14.8	B	0.1
3	Sixth Ave & Upas St/Balboa Dr	AM	12.6	B	12.6	B	0.0	12.6	B	12.6	B	0.0	12.6	B	12.0	B	-0.6
		PM	12.6	B	12.6	B	0.0	12.6	B	12.6	B	0.0	12.7	B	12.7	B	0.0
4	Sixth Ave & Quince St	AM	4.1	A	4.1	A	0.0	4.1	A	4.1	A	0.0	4.3	A	3.8	A	-0.5
		PM	7.3	A	7.3	A	0.0	7.3	A	7.3	A	0.0	8.4	A	8.4	A	0.0
5	Fifth Ave & Olive St	AM	12.8	B	14.3	B	1.5	13.0	B	14.3	B	1.3	13.5	B	15.1	C	1.6
		PM	19.2	C	21.0	C	1.8	19.4	C	21.2	C	1.8	24.5	C	27.7	D	3.2
6	Site Driveway & Olive St	AM	Intersection does not exist in this scenario		9.1	A	N/A	Intersection does not exist in this scenario		9.1	A	N/A	Intersection does not exist in this scenario		9.1	A	N/A
		PM			9.9	A	N/A			9.9	A	N/A			10.0	B	N/A
7	Sixth Ave & Olive St	AM	15.3	C	23.7	C	8.4	15.2	C	23.9	C	8.7	17.6	C	29.3	D	11.7
		PM	17.0	C	21.0	C	4.0	17.3	C	21.7	C	4.4	22.6	C	31.9	D	9.3
8	Fifth Ave & Nutmeg St	AM	11.4	B	11.5	B	0.1	11.4	B	11.6	B	0.2	13.2	B	13.3	B	0.1
		PM	16.8	C	17.8	C	1.0	16.8	C	17.9	C	1.1	23.3	C	25.7	D	2.4
9	Sixth Ave & Nutmeg St	AM	17.0	C	17.3	C	0.3	17.2	C	17.4	C	0.2	19.2	C	19.6	C	0.4
		PM	19.5	C	19.8	C	0.3	20.4	C	20.6	C	0.2	27.8	D	28.4	D	0.6
10	Fifth Ave & Nutmeg Site Dwy	AM	Intersection not evaluated in this study														
		PM															
11	First Ave & Laurel St	AM	12.7	B	12.7	B	0.0	12.7	B	12.7	B	0.0	13.2	B	12.7	B	-0.5
		PM	13.8	B	13.8	B	0.0	13.8	B	13.8	B	0.0	14.8	B	14.9	B	0.1
12	Fourth Ave & Laurel St	AM	11.3	B	11.3	B	0.0	11.3	B	11.4	B	0.1	11.5	B	10.9	B	-0.6
		PM	13.2	B	13.3	B	0.1	13.4	B	13.5	B	0.1	15.6	B	15.7	B	0.1
13	Fifth Ave & Laurel St	AM	10.6	B	10.6	B	0.0	10.6	B	10.6	B	0.0	11.0	B	10.4	B	-0.6
		PM	11.3	B	11.3	B	0.0	11.3	B	11.4	B	0.1	12.5	B	12.6	B	0.1
14	Sixth Ave & Laurel St/El Prado	AM	10.6	B	10.6	B	0.0	10.6	B	10.6	B	0.0	11.6	B	10.8	B	-0.8
		PM	13.7	B	13.8	B	0.1	13.8	B	13.9	B	0.1	15.7	B	15.8	B	0.1
15	Fifth Ave & Maple St	AM	15.9	C	16.0	C	0.1	15.9	C	16.0	C	0.1	17.6	C	17.8	C	0.2
		PM	24.2	C	25.4	D	1.2	24.2	C	25.4	D	1.2	33.9	D	36.7	**E**	**2.8**
16	Sixth Ave & Maple St	AM	20.6	C	20.9	C	0.3	20.6	C	20.9	C	0.3	25.1	D	25.8	D	0.7
		PM	17.6	C	17.9	C	0.3	17.6	C	17.9	C	0.3	22.4	C	22.9	C	0.5
17	Fourth Ave & Olive St	AM	11.7	B	11.7	B	0.0	11.6	B	11.5	B	-0.1	12.0	B	11.9	B	-0.1
		PM	13.5	B	13.6	B	0.1	13.9	B	14.3	B	0.4	14.8	B	15.3	C	0.5

Notes:

Bold values indicate intersections operating at LOS E or F. **Bold and shaded** values indicate project significant impact.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the *2010 Highway Capacity Manual* and performed using Synchro 9

(c) Change in delay due to addition of project traffic measured in seconds per vehicle. **Bold and shaded** values indicate project significant impact.

K:\SND_TPTO\195120001_6TH_OLIVE\ANALYSIS\EXCEL\[17 195120001IN05 - Series 12.xlsm]Summary

Table E-2 Roadway Segment Level of Service Analysis Summary

ROADWAY SEGMENT	ROADWAY CLASSIFICATION	CAPACITY (a)	EXISTING ADT / LOS		EXISTING + PROJECT ADT / LOS		EXISTING + PROJECT Δ in V/C	ROADWAY CLASSIFICATION	CAPACITY (a)	NEAR TERM (2021) ADT / LOS		NEAR TERM (2021) + PROJECT ADT / LOS		NEAR TERM (2021) + PROJECT Δ in V/C	ROADWAY CLASSIFICATION	CAPACITY (a)	HORIZON YEAR (2035) ADT / LOS		HORIZON YEAR (2035) + PROJECT ADT / LOS		HORIZON YEAR (2035) + PROJECT Δ in V/C
Fourth Ave																					
Walnut Ave to Olive St	3 Lane Collector (one-way)	26,000	6,150	A	6,181	A	0.001	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,177	A	6,208	A	0.002	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,702	A	6,733	A	0.002
Olive St to Nutmeg St	3 Lane Collector (one-way)	26,000	6,410	A	6,626	A	0.008	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,423	A	6,639	A	0.012	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,985	A	7,201	A	0.012
Nutmeg St to Maple St	3 Lane Collector (one-way)	26,000	6,401	A	6,617	A	0.009	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,414	A	6,630	A	0.012	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,975	A	7,191	A	0.012
Maple St to Laurel St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,575	A	6,791	A	0.012	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,625	A	6,841	A	0.012	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,282	A	7,498	A	0.012
Laurel St to Kalmia St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,813	A	7,017	A	0.012	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,986	A	7,190	A	0.012	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,546	B	7,750	B	0.012
Fifth Ave																					
Upas St to Quince St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,581	B	7,674	B	0.006	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,610	B	7,703	B	0.005	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,225	B	8,318	B	0.005
Quince St to Olive St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,436	B	8,529	B	0.005	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,465	B	8,558	B	0.005	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	9,343	B	9,436	B	0.005
Olive St to Nutmeg St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,218	B	8,434	B	0.012	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,227	B	8,443	B	0.012	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	9,102	B	9,318	B	0.012
Nutmeg St to Maple St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,916	B	8,132	B	0.013	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,938	B	8,154	B	0.012	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,901	B	9,117	B	0.012
Maple St to Laurel St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,585	B	8,801	B	0.012	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,644	B	8,860	B	0.012	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	9,243	B	9,459	B	0.013
Laurel St to Kalmia St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,813	B	8,017	B	0.012	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,881	B	8,085	B	0.012	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,785	B	8,989	B	0.012
Sixth Ave																					
Upas St to Quince St[b]	4 Lane Collector (no center lane)	22,500	17,631	D	18,063	D	0.019	4 Lane Collector (no center lane)	22,500	17,909	D	18,341	D	0.019	4 Lane Collector (no center lane)	22,500	19,222	**E**	19,654	**E**	0.020
Quince St to Olive St[b]	4 Lane Collector (no center lane)	22,500	16,373	D	16,836	D	0.02	4 Lane Collector (no center lane)	22,500	16,651	D	17,114	D	0.021	4 Lane Collector (no center lane)	22,500	17,240	D	17,703	D	0.021
Olive St to Nutmeg St[b]	4 Lane Collector (no center lane)	22,500	16,075	D	16,291	D	0.01	4 Lane Collector (no center lane)	22,500	16,448	D	16,664	D	0.01	4 Lane Collector (no center lane)	22,500	16,916	D	17,132	D	0.009
Nutmeg St to Maple St[b]	4 Lane Collector (no center lane)	22,500	15,950	D	16,166	D	0.009	4 Lane Collector (no center lane)	22,500	16,255	D	16,471	D	0.01	4 Lane Collector (no center lane)	22,500	16,812	D	17,028	D	0.010
Maple St to Laurel St[b]	4 Lane Collector (no center lane)	22,500	15,954	D	16,170	D	0.01	4 Lane Collector (no center lane)	22,500	16,203	D	16,419	D	0.01	4 Lane Collector (no center lane)	22,500	17,939	D	18,155	D	0.010
Laurel St to Kalmia St	2 Lane Collector (continuous left-turn lane)	15,000	13,737	**E**	13,953	**E**	0.014	2 Lane Collector (continuous left-turn lane)	15,000	13,921	**E**	14,137	**E**	0.014	2 Lane Collector (continuous left-turn lane)	15,000	14,110	**E**	14,326	**E**	0.014
Olive St																					
Fourth Ave to Fifth Ave	2 Lane Sub-Collector	2,200	965	C	1,212	C	0.112	2 Lane Sub-Collector	2,200	979	C	1,226	C	0.112	2 Lane Sub-Collector	2,200	1,052	C	1,299	C	0.112
Fifth Ave to Project Driveway	2 Lane Sub-Collector	2,200	1,004	C	1,592	C	0.268	2 Lane Sub-Collector	2,200	1,031	C	1,619	C	0.267	2 Lane Sub-Collector	2,200	1,112	C	1,700	C	0.268
Project Driveway to Sixth Ave	2 Lane Sub-Collector	2,200	1,004	C	1,723	C	0.327	2 Lane Sub-Collector	2,200	1,031	C	1,750	C	0.326	2 Lane Sub-Collector	2,200	1,112	C	1,831	C	0.327
Laurel St																					
Third Ave to Fourth Ave	2 Lane Collector (continuous left-turn lane)	15,000	7,812	C	7,837	C	0.001	2 Lane Collector (continuous left-turn lane)	15,000	7,878	C	7,903	C	0.002	2 Lane Collector (continuous left-turn lane)	15,000	8,403	C	8,428	C	0.002
Fourth Ave to Fifth Ave	2 Lane Collector (continuous left-turn lane)	15,000	7,791	C	7,803	C	0.001	2 Lane Collector (continuous left-turn lane)	15,000	7,857	C	7,869	C	0.001	2 Lane Collector (continuous left-turn lane)	15,000	8,550	C	8,562	C	0.001
Fifth Ave to Sixth Ave	2 Lane Collector (continuous left-turn lane)	15,000	6,543	B	6,543	B	0.000	2 Lane Collector (continuous left-turn lane)	15,000	6,609	B	6,609	B	0.000	2 Lane Collector (continuous left-turn lane)	15,000	7,019	C	7,019	C	0.000

Notes:
Bold values indicate roadway segments operating at LOS E or F.
(a) LOS E capacity is shown, except for the 2-Lane Sub-Collector classification which represents LOS C capacity
(b) Along Sixth Avenue, the 4 Lane Collector (no center lane) capacity was modified because there are minimal opportunities for southbound left turns due to Balboa Park.
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Appendix G Excerpts from the *Uptown, North Park, and Golden Hill Community Plan Update Traffic Impact Study*

Appendix H Previous Traffic Study for *St. Paul's Cathedral and Residences*

1 INTRODUCTION

The following transportation impact study has been prepared to determine and evaluate potential traffic impacts associated with the 6th and Olive project and to recommend mitigation measures for any impacts due to the project. **Figure 1-1** depicts the project location in a regional context.

1.1 PROJECT DESCRIPTION

The proposed project is in the Uptown community of San Diego and is located on the block bounded by Olive Street, Sixth Avenue, Nutmeg Street and Fifth Avenue. The project site is currently St Paul's Episcopal Cathedral and the Park Chateau Apartments that contains sixteen (16) residential units. The 6th and Olive project is proposing the construction of a mixed-use development (approximately 262,500 square feet of above grade gross floor area) with multi-family residential, cathedral office space and underground parking. The project would be 20 stories in height and would have 204 residential units, including 18 affordable residential units, and 16,190 gross square feet of cathedral office space. A total of 348 automobile parking spaces would be provided in a five-level underground parking structure. Access to the parking garage would be from a driveway on Olive Street. Figure **1-2** shows the proposed project layout.

The project requires an Amendment to the *St. Paul's Cathedral and Residences* Site Development Permit No. 312733 (PTS # 96101) in order to replace the Olive Site component of existing approvals. This action requires Process Four review with approval by the City of San Diego Planning Commission.

The project location is within the Uptown Community, which recently completed a Community Plan Update (CPU). The Uptown Community Plan and associated zoning went into effect in February 2017. The site is zoned RM-4-10 and CC-3-9. The proposed project would be consistent with the Community Plan land designations and the underlying zones.

As part of the *St. Paul's Cathedral and Residences* project approved in 2011, the 6th and Olive site was entitled to develop a 15-story building that would include 65 dwelling units, and 5 commercial units with 14,209 gross square feet of office space, 924 square feet of retail space, and three levels of underground parking. The proposed 6th and Olive project would replace existing approvals for the "Olive Site" portion of the *St. Paul's Cathedral and Residences*. The *St. Paul's Cathedral and Residences* also included development of the "Nutmeg" site, which is now constructed and operational, and expansion of the "Cathedral" site, which has not occurred and is not being changed by the proposed project.

The existing traffic scenario used in this analysis represents current, 2018, conditions which include the constructed Nutmeg site. The cathedral expansion is included as a cumulative project since it is approved but not yet built. Consistency with the previous environmental document for the *St. Paul's Cathedral and Residences* is maintained to the extent possible by defining a similar study area, but revisions are made to certain aspects of the traffic study for the previous approval to reflect current roadway conditions and assumptions specific to the Olive site.

Excerpts from the *Uptown, North Park, and Golden Hill Community Plan Update Traffic Impact Study* are provided in **Appendix G**. The previous *St. Paul's Cathedral and Residences* traffic study is provided in **Appendix H**.

1.2 ANALYSIS SCENARIOS

Six scenarios were analyzed as part of this analysis, listed below:

- ***Existing Conditions****:* Represents the traffic conditions of the existing street network in place in early 2018. Traffic counts and intersection geometry information were collected in February, May, and March 2018.
- ***Existing Conditions Plus Project:*** Represents the traffic conditions on the existing street network with the addition of the proposed project. Comparison of this scenario to the Existing Conditions scenario determines direct project impacts.
- ***Near Term (2021) Conditions:*** Represents the traffic conditions on the existing street plus the addition of volumes associated with cumulative projects in the area. This scenario represents project's opening day and is used as a baseline without project to compare Near Term (2021) Plus Project Conditions against to determine potential impacts.
- ***Near Term (2021) Plus Project Conditions:*** Represents the Near Term (2021) conditions with the addition of the proposed project. Comparison of this scenario to the Near Term (2021) Conditions scenario determines direct impacts associated with the proposed project.
- ***Horizon Year (2035) Conditions:*** Represents the traffic conditions of the street network assumed to be in place in year 2035. Traffic volumes were estimated by calculating an annual growth rate for the roadways, established between Year 2008 and Year 2050 volumes from SANDAG's Series 12 model, and applying the annual growth rate to existing volumes for 17 years to achieve a forecast for Year 2035.
- ***Horizon Year (2035) Plus Project Conditions:*** Represents the traffic conditions under the Horizon Year with the addition of the proposed project. Comparison of this scenario to the Horizon Year (2035) Baseline Conditions determines cumulative project impacts associated with the project.

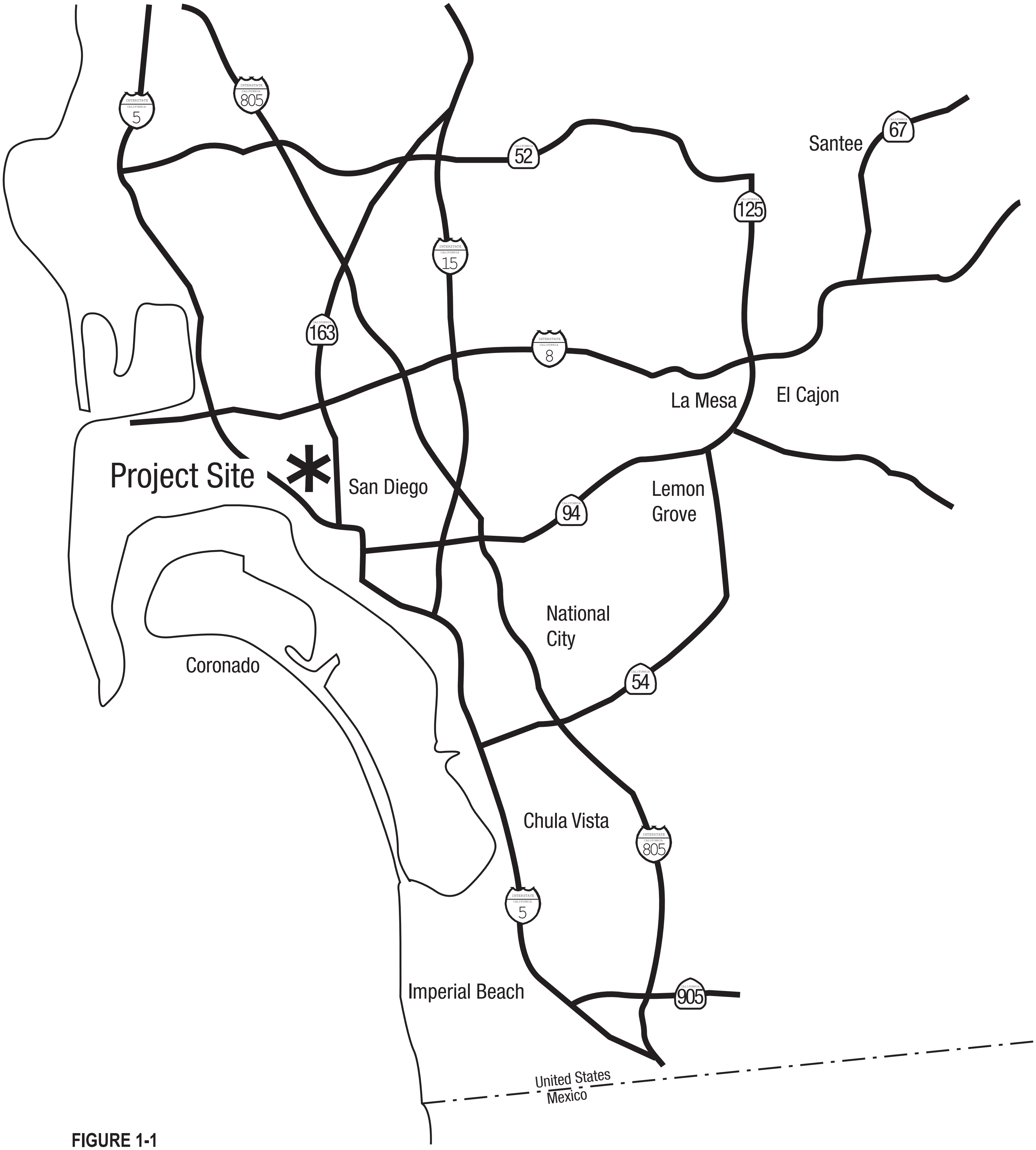

FIGURE 1-1
Regional Vicinity Map

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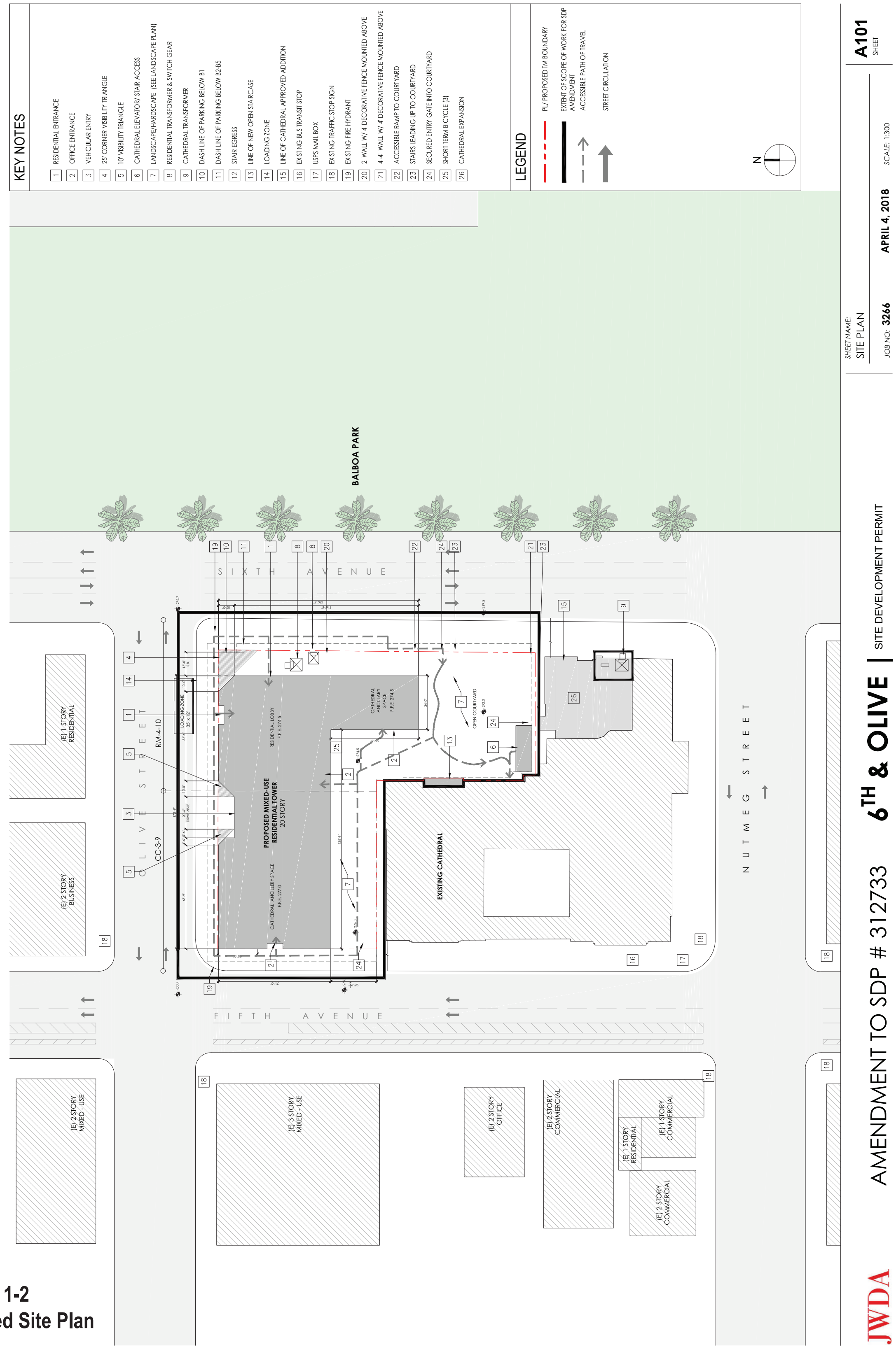

FIGURE 1-2
Proposed Site Plan

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2 METHODOLOGY

The following section describes the methodology used to determine study intersections, analyze study area conditions, and determine significant traffic impacts.

2.1 STUDY AREA

The study area was primarily determined based on the previous study area defined in the traffic study prepared for the *St. Paul's Cathedral and Residences EIR*. One additional intersection, Olive Street and Fourth Avenue, and two roadway segments, one on Fourth Avenue and one on Olive Street, were added to the study area because they captured locations where project traffic would turn to get to or from the site using the intersection of Olive Street and Fourth Avenue. These locations were selected as Fourth Avenue is a one-way southbound connection to get to the project access on Olive Street. When looking at the project's resulting trip assignment, each intersection in the study area would have 50 trips or less during each peak hour. City of San Diego *Traffic Impact Study Manual* (July 1998) requires the study area to include locations where project traffic will add 50 or more peak hour trips in either direction. The study area analyzed in this report is more robust that that requirement to align with the previous study area defined in the traffic study prepared for the *St. Paul's Cathedral and Residences EIR.*

Freeway ramps and segments are not included in the study area, consistent with the analysis performed in the prior *St. Paul's Cathedral and Residences* traffic study. Looking at the trip generation for the project and location of freeway access points relative to the project site, it is not anticipated that the project would generate significant traffic to any freeway ramp or segment. The project is in the urban community of Uptown and over half-mile to any freeway.

The seventeen (17) intersections identified for evaluation are shown in **Table 2-1**. The intersection of Fifth Avenue and the driveway to the Nutmeg Site that was part of the overall *St. Paul's Cathedral and Residences* project (intersection #10) was not evaluated in detail in this study. That intersection is the existing private driveway to the residences at the Nutmeg site and was evaluated during that effort to determine appropriate control. There would be no substantial change to that driveway as part of the proposed project and evaluation of private driveways beyond the site access is not needed. The driveway was maintained in the tables for consistency with the previous study for *St. Paul's Cathedral and Residences.*

Table 2–1 Study Intersections

INTERSECTION		TRAFFIC CONTROL (a)
1	Fourth Ave & Walnut Ave	AWSC
2	Fifth Ave & Upas St	Signal
3	Sixth Ave & Upas St/Upas St/ Balboa Dr	Signal
4	Sixth Ave & Quince St	Signal
5	Fifth Ave & Olive St	TWSC
6	Site Driveway & Olive St	Future SSSC
7	Sixth Ave & Olive St	SSSC
8	Fifth Ave & Nutmeg St	AWSC
9	Sixth Ave & Nutmeg St	SSSC
10**	Fifth Ave & Nutmeg Site Dwy	Intersection not evaluated in this study
11	First Ave & Laurel St	Signal
12	Fourth Ave & Laurel St	Signal
13	Fifth Ave & Laurel St	Signal
14	Sixth Ave & Maple St	Signal
15	Fifth Ave & Maple St	TWSC
16	Sixth Ave & Maple St	SSSC
17*	Fourth Ave & Olive St	TWSC

Note:

*Intersection was not evaluated in the prior *St. Paul's Cathedral and Residences* traffic study.

**Intersection is a driveway to the Nutmeg residential site and is not carried into this project's evaluation of private driveways to a site on a separate block is beyond the need of this traffic study

(a) Signal = Traffic Signal;
SSSC = Side Street Stop Control;
AWSC = All Way Stop Control;
Future SSSC = Side Street Stop Control Intersection built as project feature

The twenty-three (23) roadway segments identified for evaluation include:

- **Fourth Avenue** between Walnut Avenue and Olive Street;
- **Fifth Avenue** between Upas Street and Quince Street;
- **Sixth Avenue** between Upas Street and Quince Street;
- **Fifth Avenue** between Quince Street and Olive Street;
- **Sixth Avenue** between Quince Street and Olive Street;
- **Fourth Avenue** between Olive Street and Nutmeg Street;
- **Fifth Avenue** between Olive Street and Nutmeg Street;
- **Sixth Avenue** between Olive Street and Nutmeg Street;
- **Fourth Avenue** between Nutmeg Street and Maple Street;
- **Fifth Avenue** between Nutmeg Street and Maple Street;
- **Sixth Avenue** between Nutmeg Street and Maple Street;
- **Fourth Avenue** between Maple Street and Laurel Street;
- **Fifth Avenue** between Maple Street and Laurel Street;
- **Sixth Avenue** between Maple Street and Laurel Street;
- **Fourth Avenue** between Laurel Street and Kalmia Street*;
- **Fifth Avenue** between Laurel Street and Kalmia Street;
- **Sixth Avenue** between Laurel Street and Kalmia Street;
- **Olive Street** between Fourth Avenue and Fifth Avenue*;
- **Olive Street** between Fifth Avenue and Project Driveway;
- **Olive Street** between Project Driveway and Sixth Avenue;
- **Laurel Street** between Third Avenue and Fourth Avenue;
- **Laurel Street** between Fourth Avenue and Fifth Avenue; and
- **Laurel Street** between Fifth Avenue and Sixth Avenue;

Note: *Roadway segment was not evaluated in the prior *St. Paul's Cathedral and Residences* traffic study.

Figure 2-1 illustrates the study area.

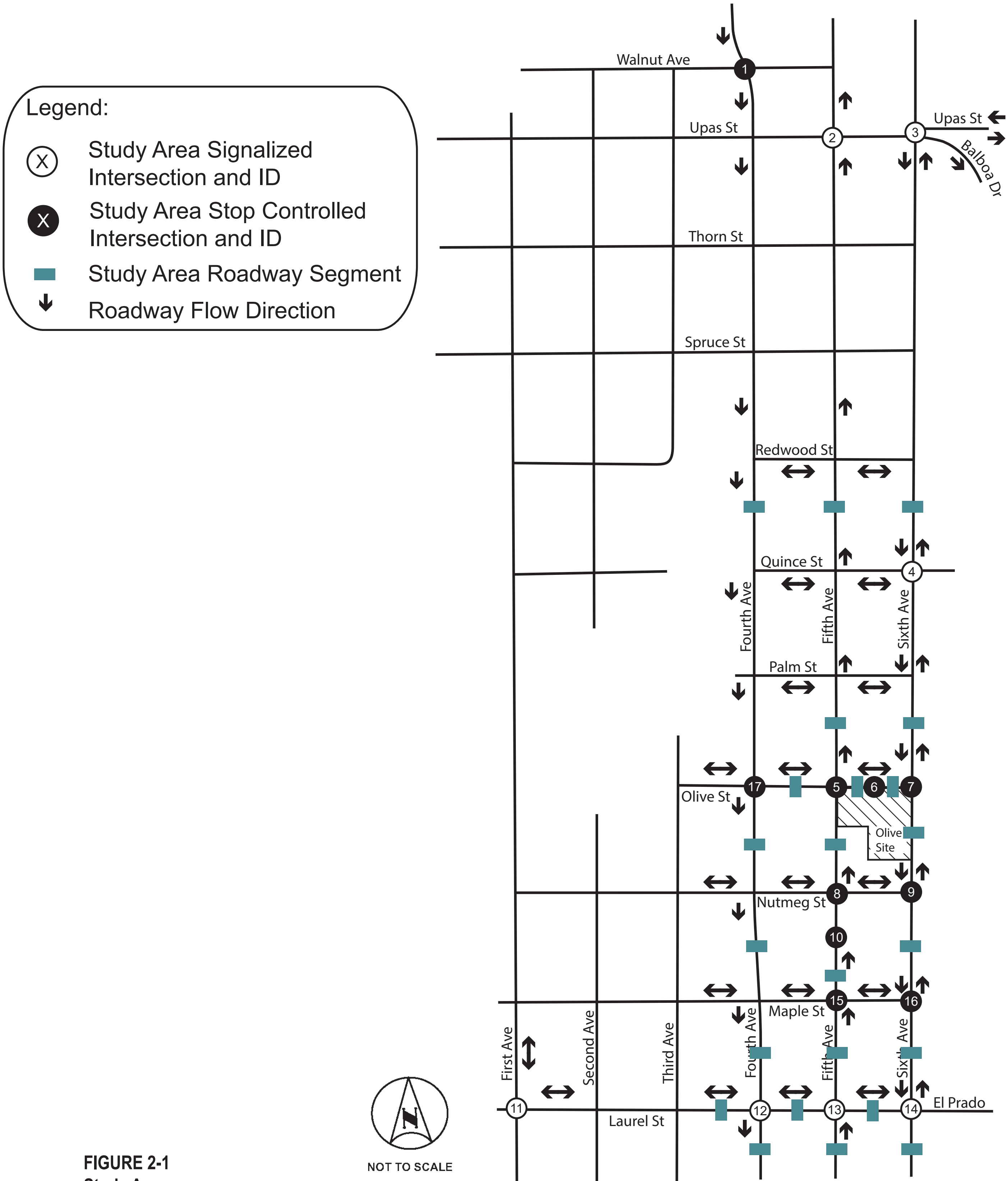

FIGURE 2-1
Study Area

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2.2 ANALYSIS PROCESS

The City of San Diego Traffic Impact Study (TIS) Manual provides guidelines for preparing a traffic impact analysis. The analysis process includes determining the operations at the study intersections for the AM and PM peak periods and operations along the roadway segments. Intersection analyses were measured and quantified using Synchro 9 software. Roadway segments were measured and quantified by the applicable roadway classifications' planning-level capacity and ADT volume. Analysis results were compared to the City's standards for significance to determine if the project has any significant impacts.

2.2.1 ANALYSIS SOFTWARE

To analyze the operations of both signalized and unsignalized intersections, Synchro 9 (Trafficware) was used for the analysis with methodologies outlined in the *2010 Highway Capacity Manual* (HCM). No special software was utilized for roadway segment analyses.

2.2.2 SIGNALIZED AND UNSIGNALIZED INTERSECTIONS

The Highway Capacity Manual (*HCM)* published by the Transportation Research Board establishes procedures to evaluate highway facilities and rate their ability to process traffic volumes. The terminology "level of service" is used to provide a qualitative evaluation based on certain quantitative calculations, which are related to empirical values. The criteria for the various levels of service designations for intersections are given in **Table 2-2**.

Level of service (LOS) is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and loss of travel time. Specifically, LOS criteria for signalized intersections are stated in terms of the average control delay per vehicle for the peak 15-minute period within the hour analyzed. The average control delay includes initial deceleration delay, queue move-up time, and final acceleration time in addition to the stop delay.

LOS for unsignalized intersections is determined by the computed or measured control delay and is defined for each movement. At an all-way stop control intersection, the delay reported is the average control delay of all movements at the intersection. At a one-way or two-way stop control intersection, the delay reported represents the worst movement, which is typically the left-turn from the minor street approach.

Synchro 9 (Trafficware) software was used to analyze the operations of both signalized and unsignalized intersections using the methodologies outlined in the 2010 HCM.

The following list contains the assumptions used for the intersection analyses:

- HCM 2010 methodology
- Peak-hour factor (PHF) = Measured in field PHFs were used for existing and near-term scenarios, a network-wide 0.92 was used for Horizon Year (2035)
- Signal Timing = Existing signal timing were modeled for each signalized intersection

The acceptable LOS standard for intersections in the City of San Diego is LOS D. Signal timing sheets are provided in **Appendix F**.

Table 2–2 LOS Criteria for Intersections

LOS	CONTROL DELAY (sec/veh)		DESCRIPTION
	SIGNALIZED INTERSECTIONS (a)	UNSIGNALIZED INTERSECTIONS (b)	
A	≤10.0	≤10.0	Operations with very low delay and most vehicles do not stop.
B	>10.0 and ≤20.0	>10.0 and ≤15.0	Operations with good progression but with some restricted movement.
C	>20.0 and ≤35.0	>15.0 and ≤25.0	Operations where a significant number of vehicles are stopping with some backup and light congestion.
D	>35.0 and ≤55.0	>25.0 and ≤35.0	Operations where congestion is noticeable, longer delays occur, and many vehicles stop. The proportion of vehicles not stopping declines
E	>55.0 and ≤80.0	>35.0 and ≤50.0	Operations where there is significant delay, extensive queuing, and poor progression.
F	>80.0	>50.0	Operations that is unacceptable to most drivers, when the arrival rates exceed the capacity of the intersection.

Notes:

(a) 2010 Highway Capacity Manual, Chapter 18, Page 6, Exhibit 18-4

(b) 2010 Highway Capacity Manual, Chapter 19, Page 2, Exhibit 19-1 and Chapter 20, Page 3, Exhibit 20-2

2.2.3 ROADWAY SEGMENTS

To determine the impacts on the study area roadway segments, capacity thresholds and associated LOS documented in the City of San Diego *Traffic Impact Study Manual* supplemented with additional information from the *Uptown, North Park and Golden Hill Community Plan Update Traffic Impact Study* were utilized and are shown in **Table 2-3**. The segment traffic volumes under LOS E as shown in this table are considered at capacity because at LOS E the v/c Ratio is equal to 1.0.

Table 2–3 City of San Diego Roadway Segment Capacity and LOS

ROAD		LEVEL OF SERVICE (LOS)				
CLASS	**LANES**	**A**	**B**	**C**	**D**	**E**
Expressway	6	30,000	42,000	60,000	70,000	80,000
Prime Arterial	6	25,000	35,000	50,000	55,000	60,000
Major Arterial	6	20,000	28,000	40,000	45,000	50,000
Major Arterial	4	15,000	21,000	30,000	35,000	40,000
Collector	4	10,000	14,000	20,000	25,000	30,000
Collector (Continuous left-turn lane)	2	5,000	7,000	10,000	13,000	15,000
Collector (One-way)*	3	11,000	14,000	19,000	22,500	26,000
Collector (One-way)*	2	7,500	9,500	12,500	15,000	17,500
Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)*	3	7,500	9,500	12,500	15,000	17,500
Collector (No fronting property)	2	4,000	5,500	7,500	9,000	10,000
Collector (Commercial/Industrial fronting)	2	2,500	3,500	5,000	6,500	8,000
Collector (Multi-family)	2	2,500	3,500	5,000	6,500	8,000
Sub-Collector (Single family)	2	---	---	2,200	---	---

Notes:
XXXX = Approximate recommended ADT based on the City of San Diego Street Design Manual.
The volumes and the average daily level of service listed above are only intended as a general planning guideline.
Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic.
Levels of service normally apply to roads carrying through traffic between major trip generators and attractors.

Source:
City of San Diego Traffic Impact Study Manual, Table 2, Page 8, July 1998.
*Information taken from *Uptown, North Park, and Golden Hill Community Plan Update Traffic Impact Study*, Table 2-3

2.3 SIGNIFICANCE DETERMINATION

The City of San Diego and Caltrans have developed acceptable threshold standards to determine the significance of project impacts to intersections and roadway segments. At intersections, the measurement of effectiveness (MOE) is based on allowable increases in delay. Along roadway segments and freeway segments, the MOE is based on allowable increases in the v/c ratio.

LOS F is not acceptable for any approach leg except for side streets on an interconnected arterial system. If vehicle trips from a project cause an intersection approach leg to operate at LOS F, except in the cases of side streets on an interconnected arterial system, this would be considered a significant project traffic impact that requires mitigation. At intersections that are expected to operate at LOS E or F without the project, the allowable increase in delay is two seconds at LOS E and one second at LOS F with the addition of the project. If vehicle trips from a project cause the delay at an intersection to increase by more than the allowable threshold, this would be considered a significant project impact that requires mitigation. Also, if the project causes an intersection that was operating at an acceptable LOS to operate at LOS E or F, this would be considered a significant project impact that requires mitigation.

For roadway segments that are forecasted to operate at LOS E or F with the project, the allowable increase in v/c ratio is 0.02 at LOS E and 0.01 at LOS F. If vehicle trips from a project cause the v/c ratio to increase by more than the allowable threshold, this would be considered a significant project traffic impact that requires mitigation.

Table 2-4 summarizes the criteria for determining levels of significance for the different facilities in the study area.

Table 2–4 Significance Criteria for Facilities in the Study Area

FACILITY	MEASUREMENT OF EFFECTIVENESS (MOE)	SIGNIFICANCE THRESHOLD (a)
Intersection	Seconds of delay	>2.0 seconds at LOS E or >1.0 seconds at LOS F
Roadway Segment	ADT, v/c ratio	>0.02 at LOS E or >0.01 at LOS F

Note: If a project adds any increment of delay to cause the operations of an intersection or segment to go from LOS D to either LOS E or LOS F, then the project is considered to cause a significant impact.

(a) Significance threshold applies only when the type of facility operates at LOS E or F.

Source: City of San Diego Significance Determination Thresholds, page 71, January 2011.

3 EXISTING CONDITIONS

This section summarizes the existing roadway circulation network, daily and peak-hour traffic volumes, and operations at the study intersections and roadway segments.

3.1 ROAD NETWORK

The following provides a description of the existing street system as of May 2018, within the vicinity of the project area.

First Avenue provides north-south connectivity through the community and currently functions as a two-lane collector in the study area. The posted speed limit is 25 miles per hour (mph) and parking is allowed for all segments in the study area.

Fourth Avenue provides north-south connectivity through the community and currently functions as a three-lane, one-way southbound collector between Walnut Avenue and Laurel Street, and as a two-lane with one lane dedicated buffered bike lane facility, one-way southbound collector south of Laurel Street in the study area. The posted speed limit is 30 mph and parking is allowed on both sides of the street in the study area; some of which are metered. Fourth Avenue currently provides either a Class III Bicycle Route north of Laurel Street and Class II Bicycle Lane south of Laurel Street.

Fifth Avenue provides north-south connectivity through the community and currently functions as a two-lane with one lane dedicated buffered bike lane facility, one-way northbound collector in the study area. The posted speed limit is 30 mph and metered parking is allowed on both sides of the street in the study area. Fifth Avenue currently functions as a Class II Bicycle Lane.

Sixth Avenue provides a north-south connectivity through the community and currently functions as a four-lane collector in the study area. The posted speed limit is 30 mph and parking is allowed on both sides of the street in the study area. Sixth Avenue currently functions and ultimately is planned as a Class III Bicycle Route.

Walnut Avenue is classified and functions as an east-west two-lane collector street in the study area and has parking on both sides with metered parking on the north side. No speed limit is posted.

Upas Street is classified and functions as an east-west two-lane collector street in the study area and has parking on both sides. No speed limit is posted. Upas Street is currently and ultimately is planned as a Class III Bicycle Route.

Quince Street is classified and functions as an east-west two-lane local street in the study area and has parking on both sides; some metered. East of Sixth Avenue, Quince Street is a one-way westbound street that is an exit ramp from SR-163 combined with some access to Balboa Park parking areas. No speed limit is posted.

Olive Street is classified and functions as an east-west two-lane local residential street in the study area and has parking on both sides. No speed limit is posted. The proposed project would have access off the south side of Olive Street between Fifth Avenue and Sixth Avenue.

Nutmeg Street is classified and functions as an east-west two-lane local residential street in the study area and has parking on both sides. No speed limit is posted.

Maple Street is classified and functions as an east-west two-lane local residential street in the study area and has parking on both sides. No speed limit is posted.

Laurel Street is classified and functions as an east-west two-lane collector with a continuous two-way left-turn lane in the study area and has parking on both sides; some metered. The posted speed limit is 30 mph. Laurel Street currently functions and ultimately is planned as a Class III Bicycle Route.

Figure 3-1 & **Figure 3-2** shows the existing geometrics of the study intersections and functional classification of the roadways within the study area.

3.2 TRAFFIC VOLUMES

Peak-Hour intersection turning movement counts were collected by National Data and Surveying Services (NDS) and Field Data Services of Arizona, Inc. at the study intersections on Tuesday, February 13, 2018, Wednesday, May 16, 2018, and Wednesday, May 23, 2018. 48-Hour roadway segment data along Fourth, Fifth, and Sixth Avenues was collected by NDS on Tuesday, February 13, 2018 and Wednesday, February 14, 2018. 48-Hour roadway segment data along Laurel Street was collected by NDS and Field Data Services of Arizona, Inc. on Tuesday, May 22, 2018 and Wednesday, May 23, 2018. 24-hour roadway segment data along Olive Street and 6th Avenue was collected on Thursday, March 1, 2018, and Wednesday, May 16, 2018. **Appendix A** contains the existing traffic volume data at the study intersections and the existing ADT volume data for the roadway segments.

Figure 3-3 & **Figure 3-4** illustrates the existing traffic volumes at the study intersections and ADT volumes along the roadway segments.

3.3 INTERSECTION ANALYSIS

Table 3-1 displays the LOS analysis results for the study intersections under Existing Conditions. As shown in the table, all intersections currently operate at LOS D or better during both peak periods.

Appendix B contains the intersections LOS calculation worksheets.

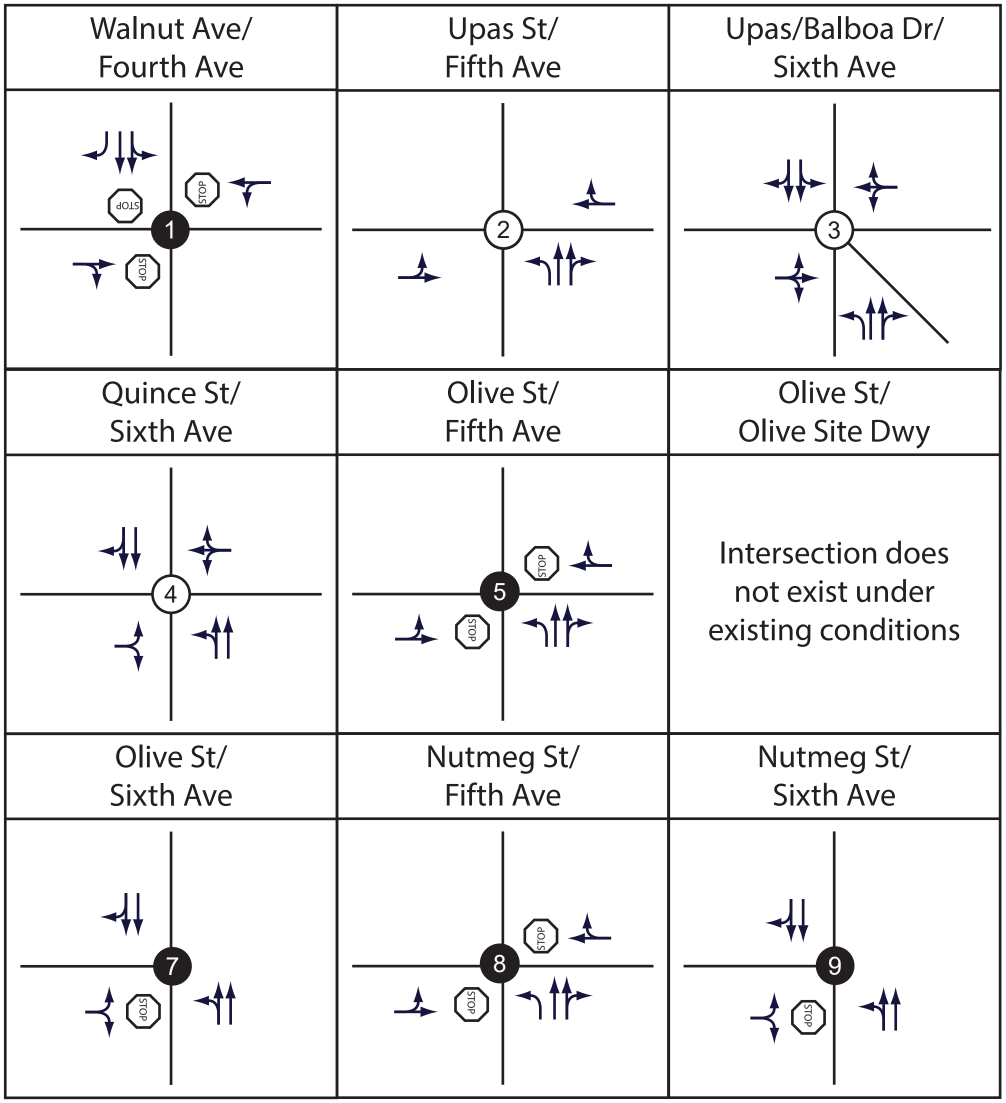
3.4 ROADWAY SEGMENT ANALYSIS

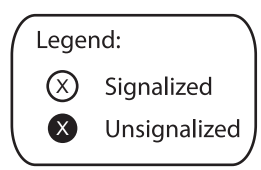
Table 3-2 displays the roadway segments analysis under Existing Conditions. As shown in the table, all roadway segments within the study area function at LOS C or better under Existing Conditions except the segment of Sixth Avenue between Laurel Street and Kalmia Street which operates at LOS E.

It should be noted that the following changes to roadway classifications and capacities were made when compared to the prior *St. Paul's Cathedral and Residences* traffic study:

- Portions of Fourth Avenue and Fifth Avenue were modified as buffered bike lanes replaced a travel lane. This reduced the capacity from 26,000 to 17,500 ADT.
- Sixth Avenue between Upas Street and Laurel Street was modified. A lower capacity on Sixth Avenue was established due to lack of left-turn lanes. Left-turn lanes at intersections allow vehicles to get out of the through lanes and maintain roadway capacity. Along this stretch, the east side fronts Balboa Park and there is no access. Capacity for southbound traffic is therefore not affected by left-turn vehicles, similar to a 4 Lane collector with a center lane (15,000 directional). Capacity northbound would be affected by left-turn vehicles waiting to turn left to head west and would operate similar to a 4 Lane Collector with no center lane (7,500 directional). A resulting modified 4 Lane Collector capacity of 22,500 was used for the analysis to account for these operations.
- Olive Street was modified to be a sub-collector with a LOS C capacity of 2,200 instead of a collector with a LOS E capacity of 8,000.

These changes are reflected in all roadway segment analyses in this report.





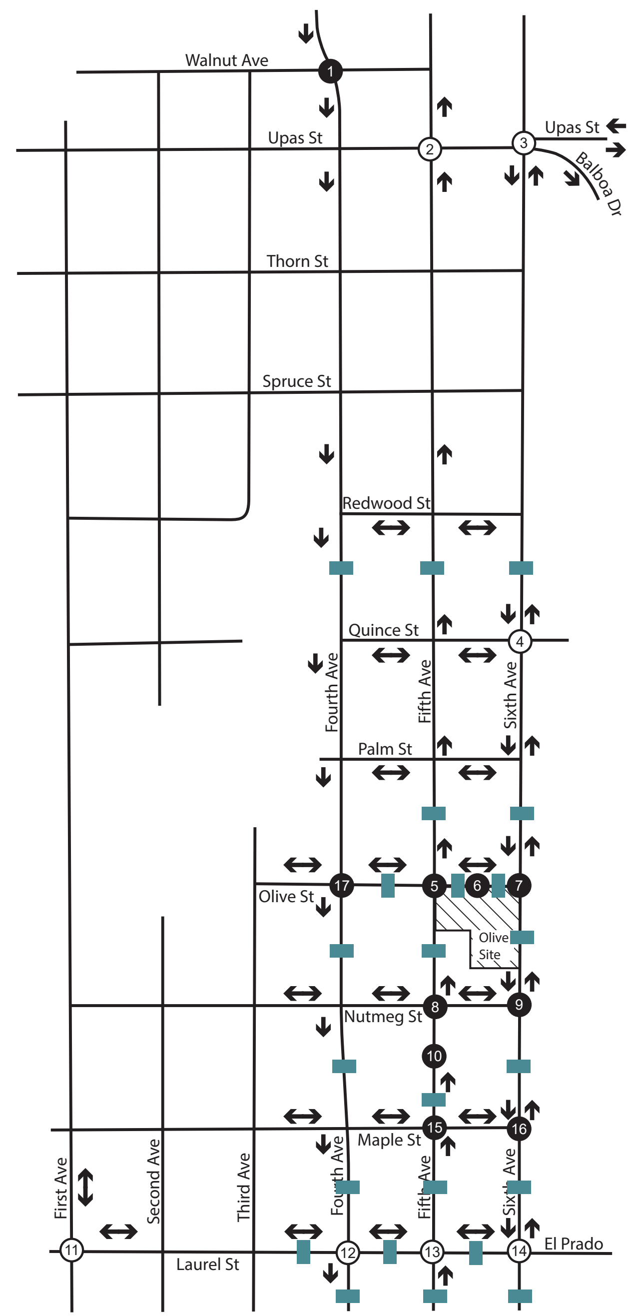


FIGURE 3-1
Existing Intersection Geometrics

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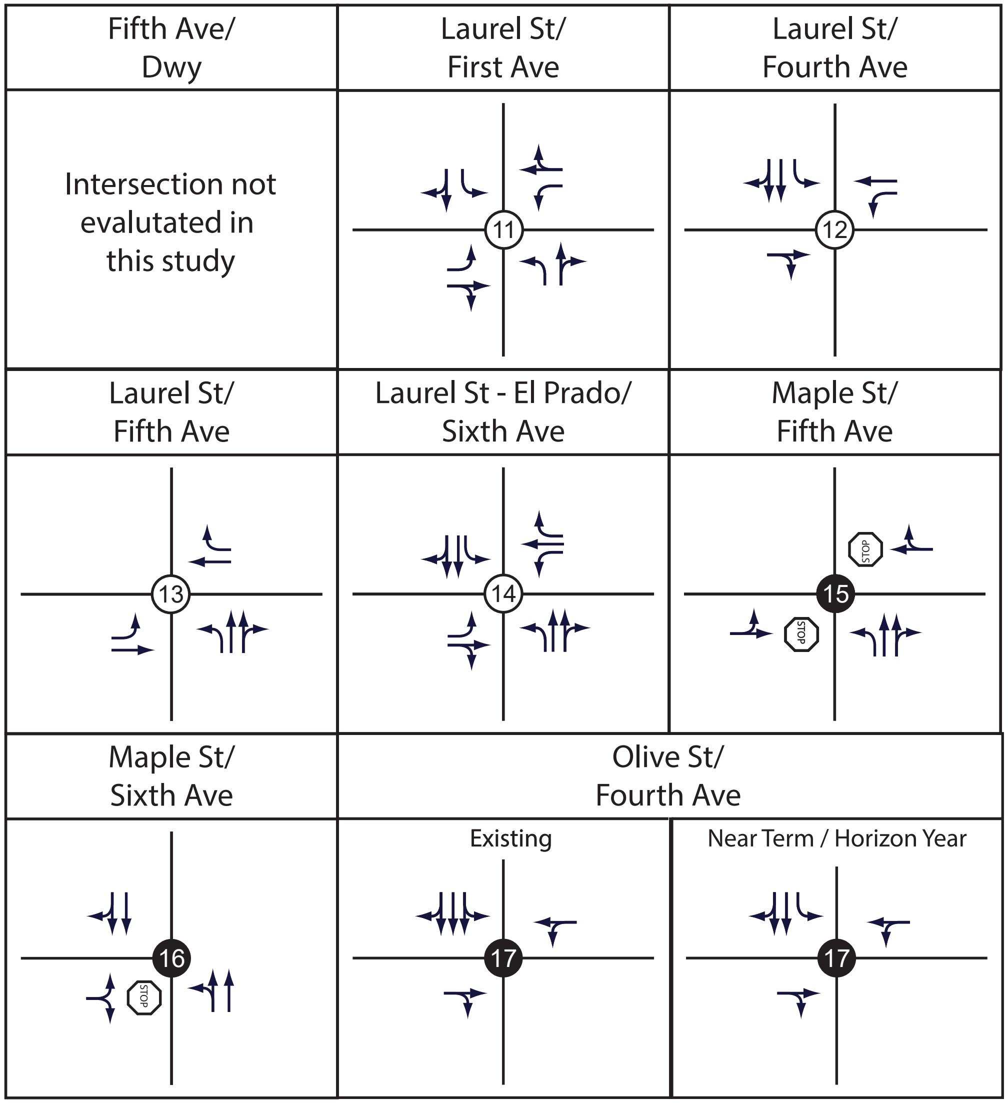

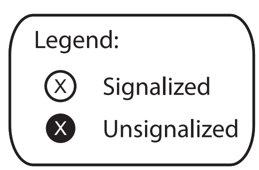

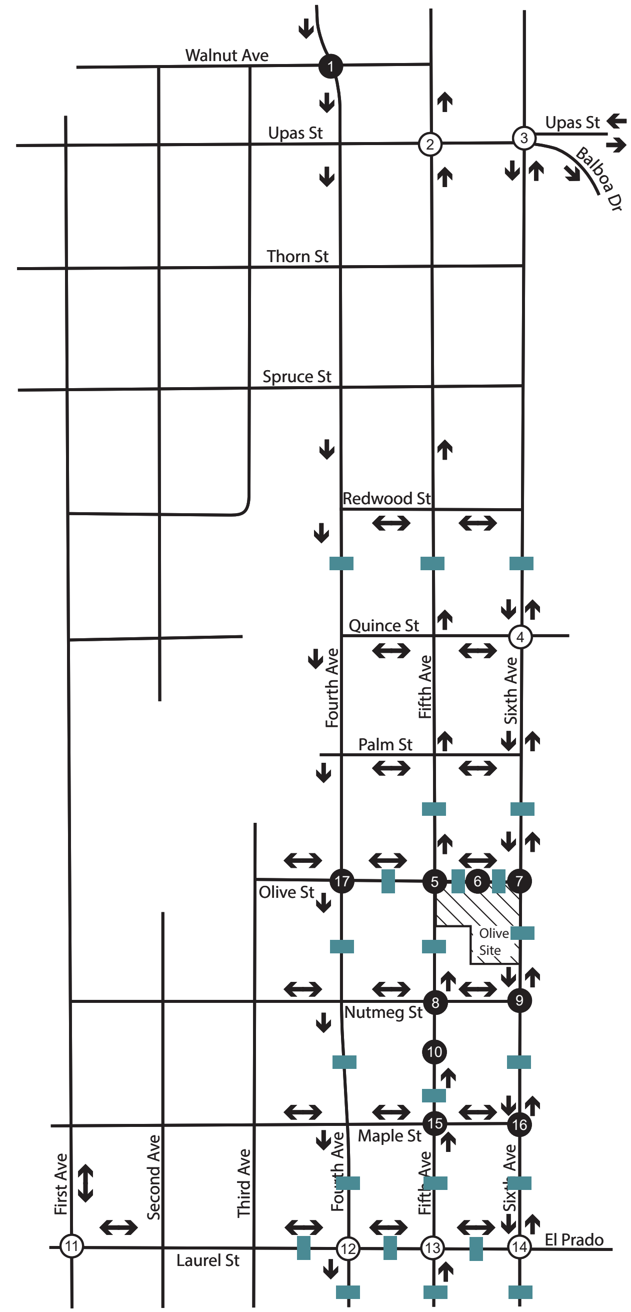

FIGURE 3-1 (continued)
Existing Intersection Geometrics

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Legend:

4-C 4 Lane Collector
3-C(1) 3 Lane Collector (one-way)
3-C(1b) 3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)
2-C(a) 2 Lane Collector
2-C(c) 2 Lane Collector (continuous left-turn lane)

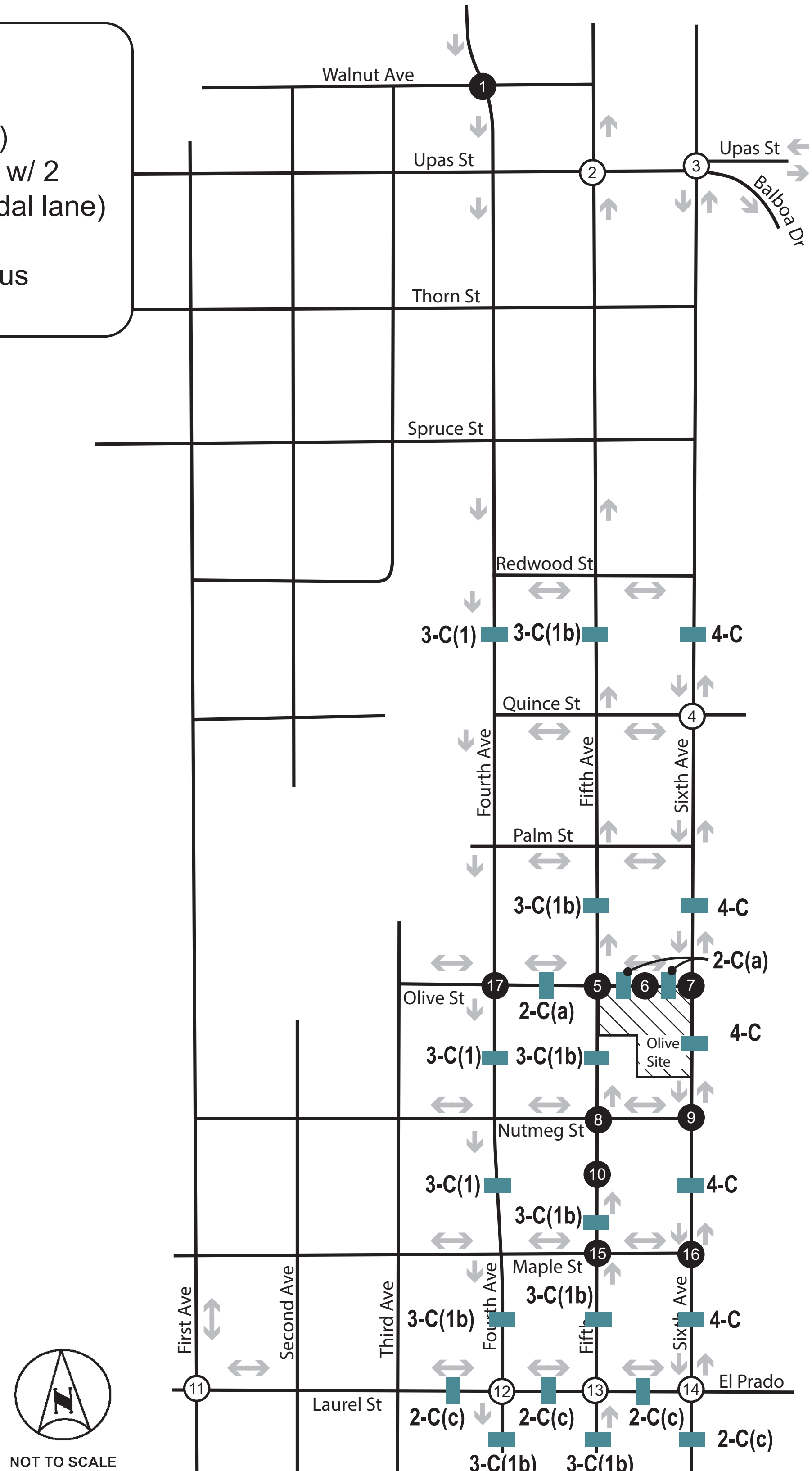

FIGURE 3-2
Existing Roadway Segment Geometrics

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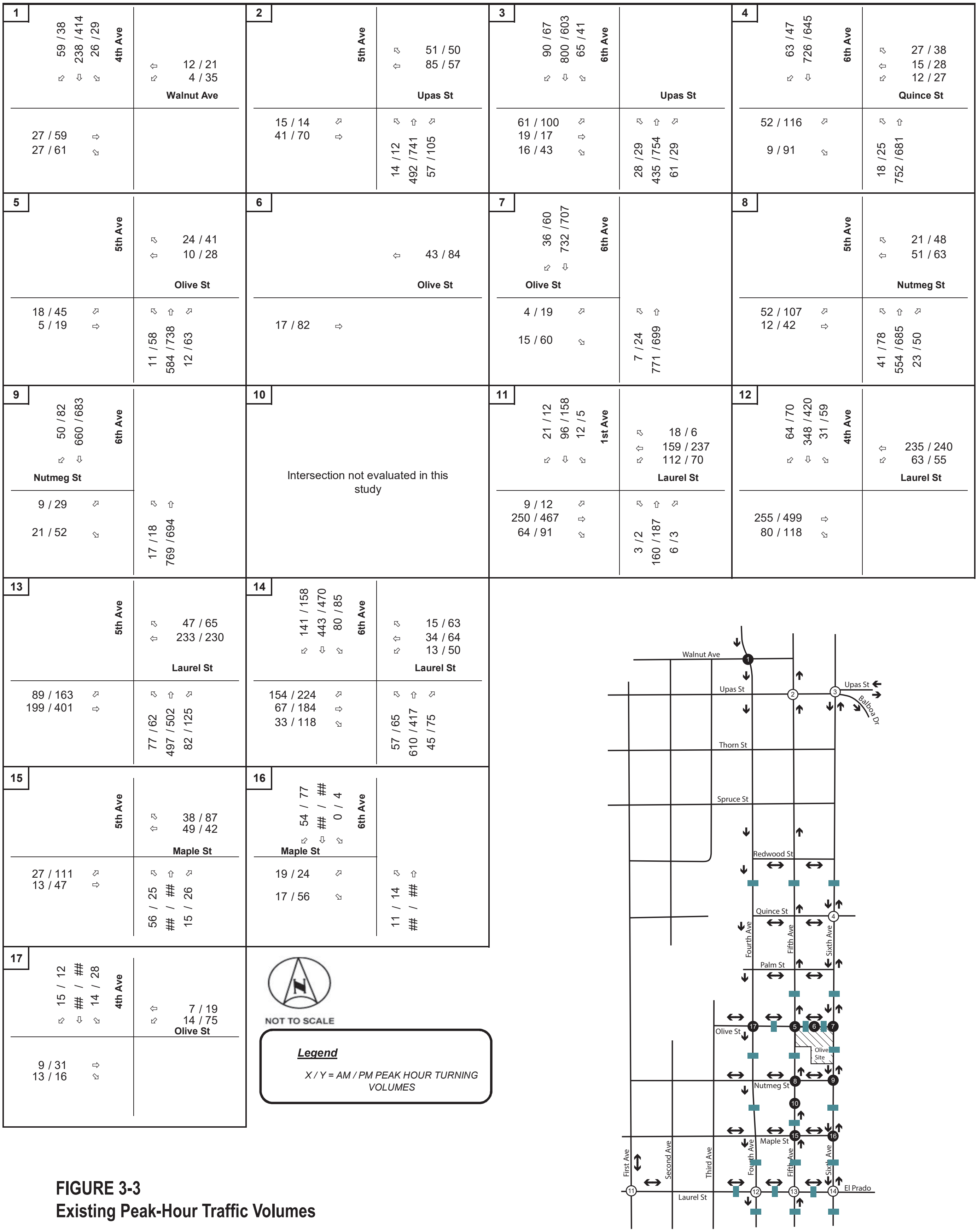

FIGURE 3-3
Existing Peak-Hour Traffic Volumes

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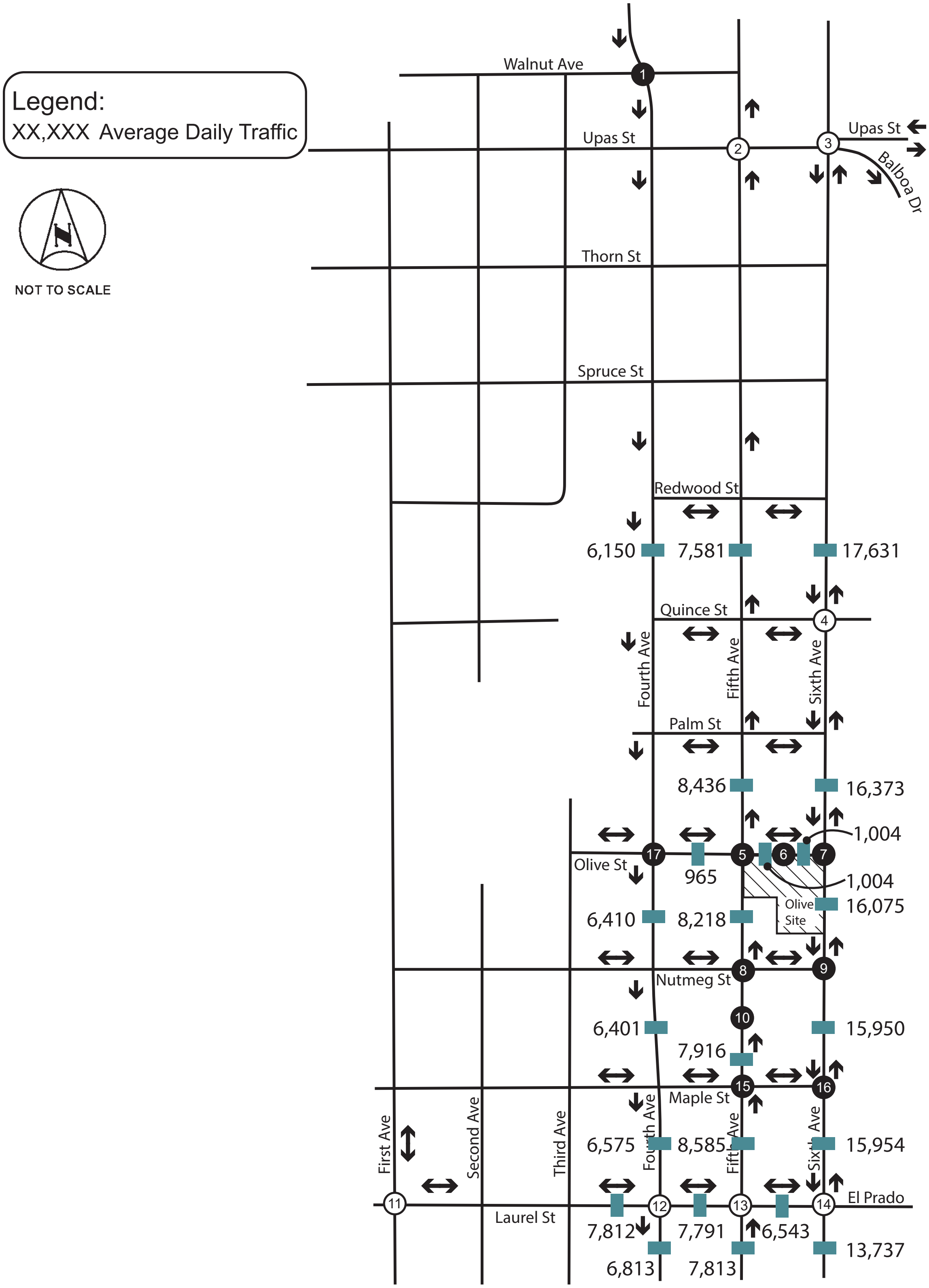

FIGURE 3-4
Existing ADT Volumes

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Table 3-1 Existing Conditions Intersection LOS Summary

	INTERSECTION	TRAFFIC CONTROL	PEAK HOUR	EXISTING	
				DELAY (a)	LOS (b)
1	Fourth Ave & Walnut Ave	All-Way Stop	AM	8.3	A
			PM	10.2	B
2	Fifth Ave & Upas St	Signal	AM	13.5	B
			PM	14.6	B
3	Sixth Ave & Upas St/Balboa Dr	Signal	AM	12.6	B
			PM	12.6	B
4	Sixth Ave & Quince St	Signal	AM	4.1	A
			PM	7.3	A
5	Fifth Ave & Olive St	Two-Way Stop	AM	12.8	B
			PM	19.2	C
6	Site Driveway & Olive St	One-Way Stop	AM	Intersection does not exist in this scenario	
			PM		
7	Sixth Ave & Olive St	One-Way Stop	AM	15.3	C
			PM	17.0	C
8	Fifth Ave & Nutmeg St	All-Way Stop	AM	11.4	B
			PM	16.8	C
9	Sixth Ave & Nutmeg St	One-Way Stop	AM	17.0	C
			PM	19.5	C
10	Fifth Ave & Nutmeg Site Dwy	One-Way Stop	AM	Intersection not evaluated in this study	
			PM		
11	First Ave & Laurel St	Signal	AM	12.7	B
			PM	13.8	B
12	Fourth Ave & Laurel St	Signal	AM	11.3	B
			PM	13.2	B
13	Fifth Ave & Laurel St	Signal	AM	10.6	B
			PM	11.3	B
14	Sixth Ave & Laurel St/El Prado	Signal	AM	10.6	B
			PM	13.7	B
15	Fifth Ave & Maple St	Two-Way Stop	AM	15.9	C
			PM	24.2	C
16	Sixth Ave & Maple St	One-Way Stop	AM	20.6	C
			PM	17.6	C
17	Fourth Ave & Olive St	Two-Way Stop	AM	11.7	B
			PM	13.5	B

Notes:

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the *2010 Highway Capacity Manual* and performed using Synchro 9.0

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Table 3-2 Existing Conditions Roadway Segment LOS Summary

ROADWAY SEGMENT	ROADWAY CLASSIFICATION (a)	CAPACITY (b)	ADT (d)	V/C RATIO (e)	LOS
Fourth Ave					
Walnut Ave to Olive St	3 Lane Collector (one-way)	26,000	6,150	0.237	A
Olive St to Nutmeg St	3 Lane Collector (one-way)	26,000	6,410	0.247	A
Nutmeg St to Maple St	3 Lane Collector (one-way)	26,000	6,401	0.246	A
Maple St to Laurel St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,575	0.376	A
Laurel St to Kalmia St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,813	0.389	A
Fifth Ave					
Upas St to Quince St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,581	0.433	B
Quince St to Olive St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,436	0.482	B
Olive St to Nutmeg St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,218	0.470	B
Nutmeg St to Maple St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,916	0.452	B
Maple St to Laurel St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,585	0.491	B
Laurel St to Kalmia St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,813	0.446	B
Sixth Ave					
Upas St to Quince St[c]	4 Lane Collector (no center lane)	22,500	17,631	0.784	D
Quince St to Olive St[c]	4 Lane Collector (no center lane)	22,500	16,373	0.728	D
Olive St to Nutmeg St[c]	4 Lane Collector (no center lane)	22,500	16,075	0.714	D
Nutmeg St to Maple St[c]	4 Lane Collector (no center lane)	22,500	15,950	0.709	D
Maple St to Laurel St[c]	4 Lane Collector (no center lane)	22,500	15,954	0.709	D
Laurel St to Kalmia St	2 Lane Collector (continuous left-turn lane)	15,000	13,737	0.916	**E**
Olive St					
Fourth Ave to Fifth Ave	2 Lane Sub-Collector	2,200	965	0.439	C
Fifth Ave to Project Driveway	2 Lane Sub-Collector	2,200	1,004	0.456	C
Project Driveway to Sixth Ave	2 Lane Sub-Collector	2,200	1,004	0.456	C
Laurel St					
Third Ave to Fourth Ave	2 Lane Collector (continuous left-turn lane)	15,000	7,812	0.521	C
Fourth Ave to Fifth Ave	2 Lane Collector (continuous left-turn lane)	15,000	7,791	0.519	C
Fifth Ave to Sixth Ave	2 Lane Collector (continuous left-turn lane)	15,000	6,543	0.436	B

Notes:

Bold values indicate roadway segments operating at LOS E or F.

(a) Existing roads street classification is based on field observations.

(b) LOS E capacity is shown, except for the 2-Lane Sub-Collector classification which represents LOS C capacity

(c) Along Sixth Avenue, the 4 Lane Collector (no center lane) capacity was modified because there are minimal opportunities for southbound left turns due to Balboa Par

(d) Average daily traffic (ADT) volumes were collected by National Data and Surveying Services in 2018.

(e) The v/c Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

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4 PROJECT TRAFFIC

The following section describes the trip generation, distribution and assignment related to the proposed 6th and Olive project. The proposed project includes the construction of 262,500 square feet of above-grade gross floor area of mixed-use development with 204 multi-family residential dwelling units and 16,910 square feet of cathedral office space in the Uptown area of San Diego. Underground parking will be provided.

4.1 TRIP GENERATION

The City of San Diego *Trip Generation Manual* (May 2003) was referenced to calculate the estimated trip generation for the proposed project. The “Multiple Dwelling Unit – Over 20 dwelling units/acre” and “House of Worship – General” land uses were used to forecast daily and peak-hour trips for the project. Due to the land use type and the location of the site, no pass-by trips, internal capture, nor transit, bicycle, or pedestrian credits were applied.

The proposed project would construct 204 multi-family residential dwelling units and 16,910 square feet of cathedral office space. Using the driveway trip generation rate of 6 trips per dwelling units for *Multiple Dwelling Unit – Over 20 dwelling units/acre* and 15 trips per KSF for *House of Worship - General*, the project is expected to generate a total of 1,478 daily trips with 108 morning peak-hour trips (28 in, 80 out) and 130 afternoon peak-hour trips (87 in, 43 out).

The proposed project would demolish the existing Park Chateau Apartments that includes 16 dwelling units, and 4,973 square feet of existing cathedral administrative offices. Using the driveway trip generation rate of 6 trips per dwelling units for *Multiple Dwelling Unit – Over 20 dwelling units/acre* and 15 trips per KSF for *House of Worship - General*, the existing land use to be demolished is expected to currently generate a total of 171 daily trips with 11 morning peak-hour trips (4 in, 7 out) and 15 afternoon peak-hour trips (9 in, 6 out).

The resulting net trip generation on the network (proposed minus existing) would be equal to a total of 1,307 daily trips with 97 morning peak-hour trips (24 in, 73 out) and 115 afternoon peak-hour trips (78 in, 37 out).

Using the cumulative trip generation rates of 6 trips per dwelling units for *Multiple Dwelling Unit – Over 20 dwelling units/acre* and 9 trips per KSF for *House of Worship - General*, the project is expected to generate a net total of 1,235 new daily trips with 94 morning peak-hour trips (22 in, 72 out) and 109 afternoon peak-hour trips (75 in, 34 out). These values are used in the trip assignment to the roadway network beyond the driveway access.

Table 4-1 summarizes the driveway trip generations for the site. **Table 4-2** summarizes the cumulative trip generation for the site.

Table 4-1 Driveway Trip Generation Summary

Land Use	Land Use as listed in SanDiego	Units[1]	Trip Rate[2]	Daily Trips	AM Peak-Hour % of ADT[2]	AM In:Out Ratio[2]	AM In	AM Out	AM Total	PM Peak-Hour % of ADT[2]	PM In:Out Ratio[2]	PM In	PM Out	PM Total
Driveway Trips [3]														
Proposed														
	Multiple Dwelling Unit - Over 20 dwelling units/acre	204 du	6 / du	1,224	8%	2.00 : 8.00	20	78	98	9%	7.00 : 3.00	77	33	110
	House of Worship - General	16.910 ksf	15 / ksf	254	4%	8.00 : 2.00	8	2	10	8%	5.00 : 5.00	10	10	20
Proposed Total				**1,478**			**28**	**80**	**108**			**87**	**43**	**130**
Existing														
	Multiple Dwelling Unit - Over 20 dwelling units/acre	16 du	6 / du	96	8%	2.00 : 8.00	2	6	8	9%	7.00 : 3.00	6	3	9
	House of Worship - General	4.973 ksf	15 / ksf	75	4%	8.00 : 2.00	2	1	3	8%	5.00 : 5.00	3	3	6
Existing Total				**171**			**4**	**7**	**11**			**9**	**6**	**15**
NET TRIP GENERATION =				**1,307**			**24**	**73**	**97**			**78**	**37**	**115**

Note:

1. du - dwelling unit; ksf = Thousand Square Feet
2. Trip rates referenced from the City of San Diego Land Development Code - Trip Generation Manual, May 2003.
3. Driveway trips are the total number of trips generated by a site.

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Table 4-2 Cumulative Trip Generation Summary

Land Use	Land Use as listed in SanDiego	Units[1]	Trip Rate[2]	Daily Trips	AM Peak-Hour % of ADT[2]	AM In:Out Ratio[2]	AM In	AM Out	AM Total	PM Peak-Hour % of ADT[2]	PM In:Out Ratio[2]	PM In	PM Out	PM Total
Cumulative Trips [3]														
Proposed														
	Multiple Dwelling Unit - Over 20 dwelling units/acre	204 du	6 / du	1,224	8%	2.00 : 8.00	20	78	98	9%	7.00 : 3.00	77	33	110
	House of Worship - General	16.910 ksf	9 / ksf	152	4%	8.00 : 2.00	5	1	6	8%	5.00 : 5.00	6	6	12
Proposed Total				**1,376**			**25**	**79**	**104**			**83**	**39**	**122**
Existing														
	Multiple Dwelling Unit - Over 20 dwelling units/acre	16 du	6 / du	96	8%	2.00 : 8.00	2	6	8	9%	7.00 : 3.00	6	3	9
	House of Worship - General	4.973 ksf	9 / ksf	45	4%	8.00 : 2.00	1	1	2	8%	5.00 : 5.00	2	2	4
Existing Total				**141**			**3**	**7**	**10**			**8**	**5**	**13**
NET TRIP GENERATION =				**1,235**			**22**	**72**	**94**			**75**	**34**	**109**

Note:

1. du - dwelling unit; ksf = Thousand Square Feet
2. Trip rates referenced from the City of San Diego Land Development Code - Trip Generation Manual, May 2003.
3. Cumulative trips are the total trips generated by the site exclusive of pass-by trips already on the roadway.

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4.2 TRIP DISTRIBUTION

The project traffic distribution was estimated based on the project access locations, freeway access and roadway network within the study area.

The following is the resulting general project traffic distribution assumed for this study:

- 5% to/from community attractions to the north
  - 5% from the north along Fourth Avenue;
  - 5% to the north along Fifth Avenue;
- 40% to/from SR-163 to the north
  - 40% from the north along Sixth Avenue;
  - 10% to the north along Fifth Avenue;
  - 30% to the north along Sixth Avenue;
- 2% to/from the west along Laurel Street;
- 18% to/from the north via **I**-5
  - 18% to **I**-5 northbound via Hawthorn Street-Fourth Ave
  - 18% from **I**-5 southbound via Second Avenue-Cedar Street-Fifth Avenue
- 15% to/from downtown
  - 15% to the south along Fourth Avenue
  - 15% from the south along Fifth Avenue
- 20% to/from the south via **I**-5
  - 20% to the south along Sixth Avenue
  - 15% from the south along Sixth Avenue
  - 5% from the south using SR-163 to Quince

Figure 4-1 shows the general project traffic distribution within the study area and throughout the study intersections.

4.3 TRIP ASSIGNMENT

Based on the project trip generation and trip distribution, AM and PM project trips were assigned to the local roadway network and through the study intersections. The net cumulative trips were used at all locations except the project driveway and the roadway segment of Olive Street between Fifth Avenue and Sixth Avenue to show the net increase in trips as a result of the project. Total driveway trips were used at the project driveway and adjacent Olive Street segment locations to show the full project traffic that would access the driveway.

Figures 4-2 & **Figure 4-3** show the trip assignment for the project at the study intersections and roadway segments within the study area.

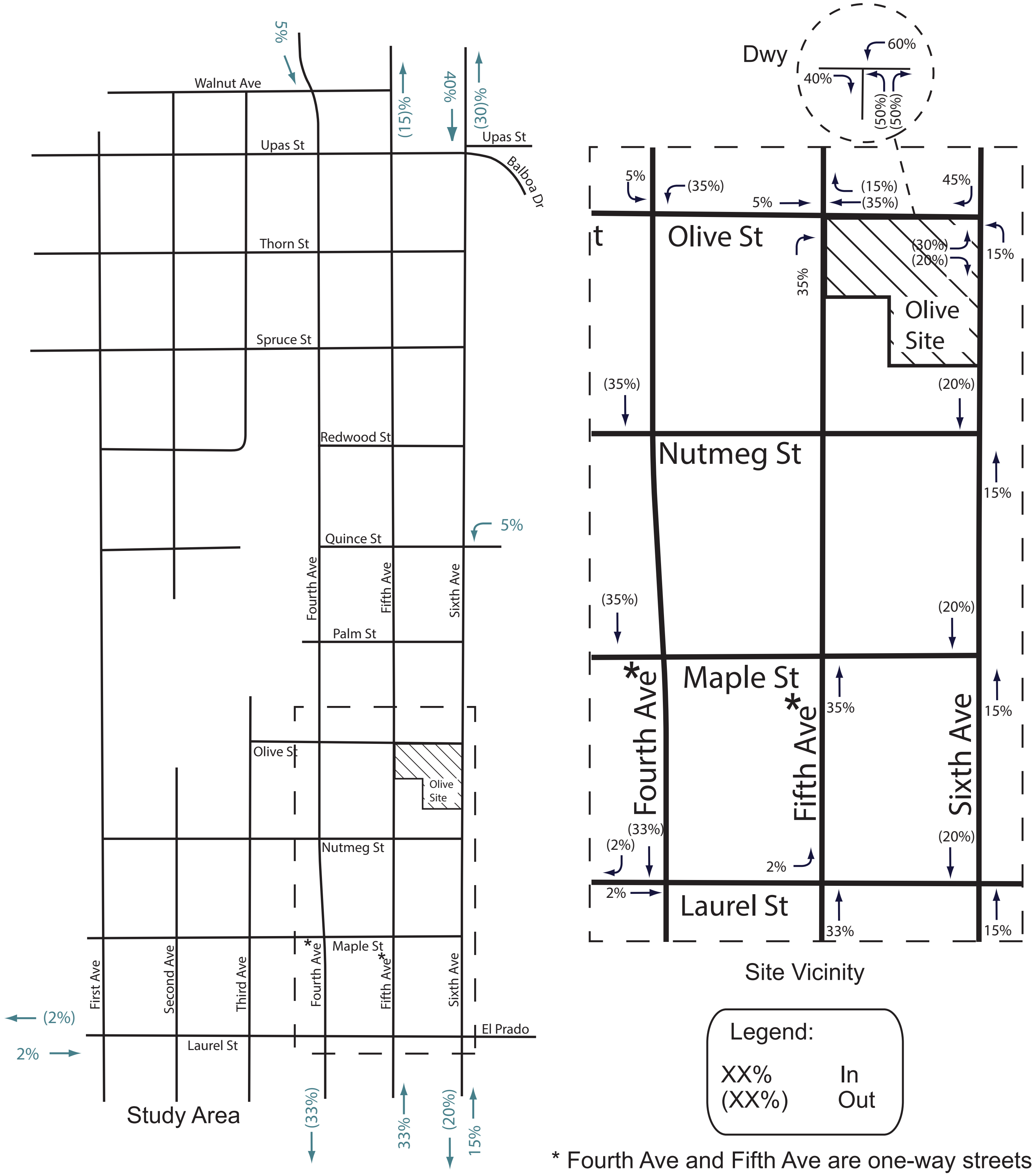

FIGURE 4-1
Project Distribution in the Study Area

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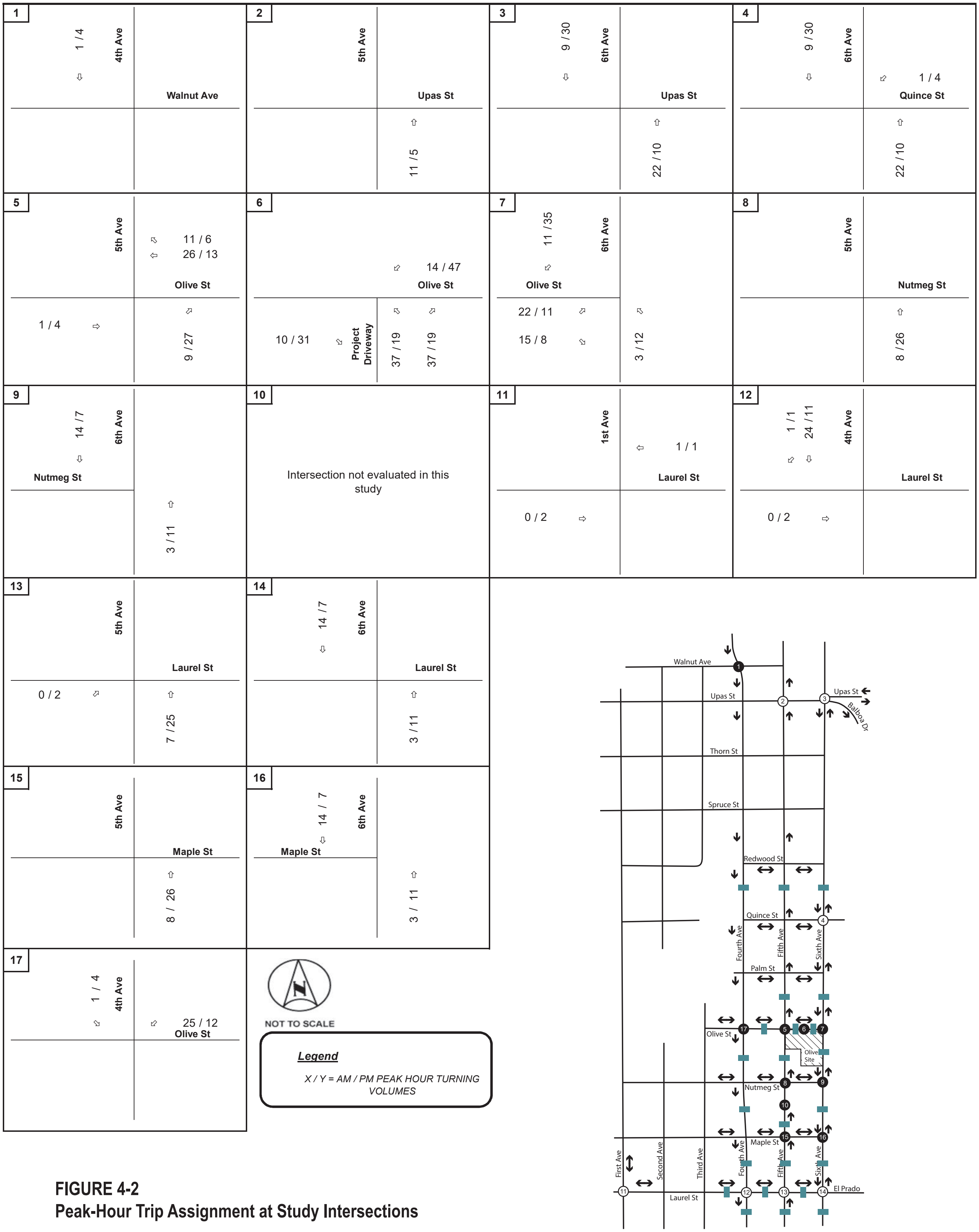

FIGURE 4-2
Peak-Hour Trip Assignment at Study Intersections

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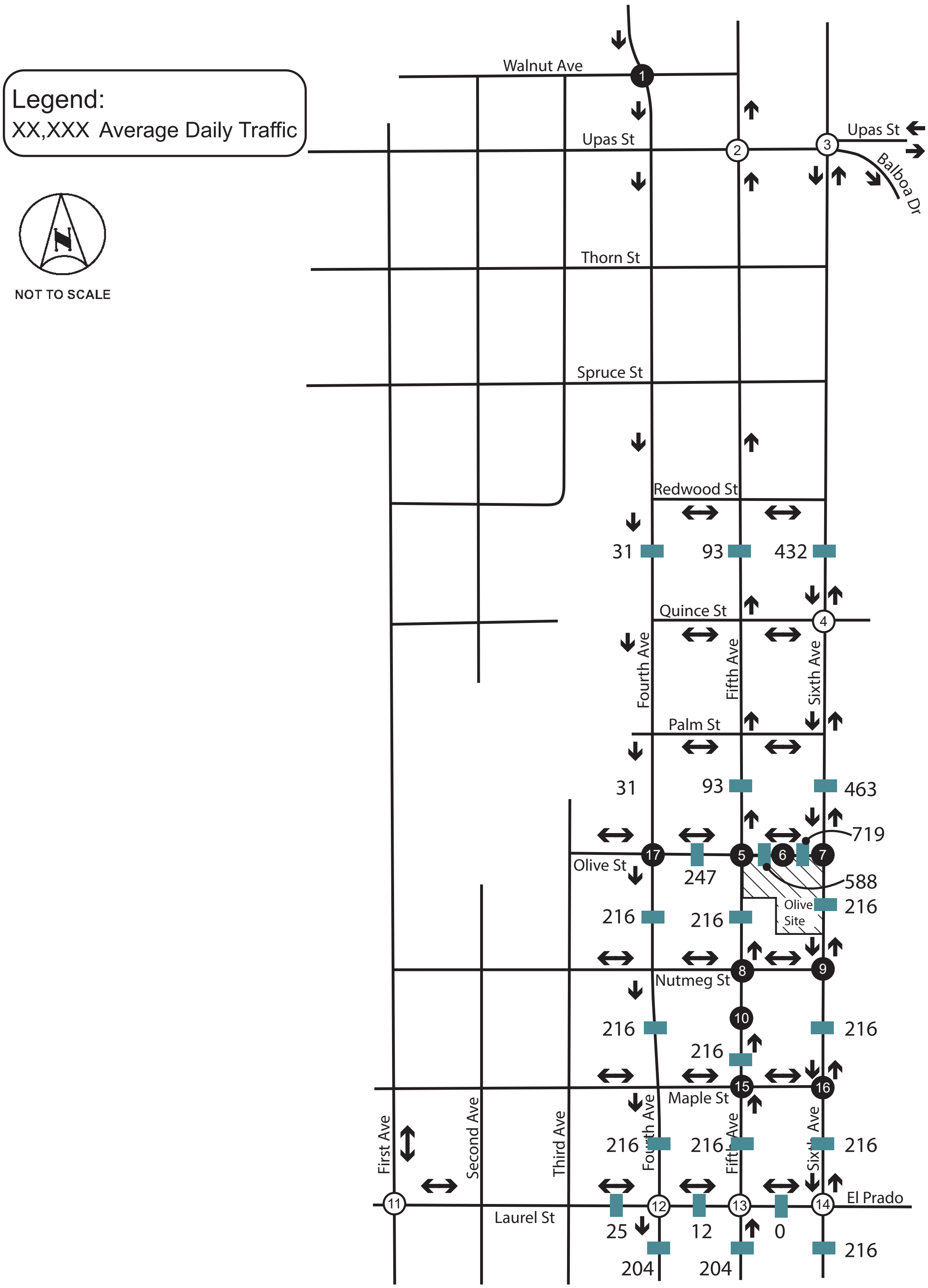

FIGURE 4-3
ADT Trip Assignment at Roadway Segments

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5 EXISTING WITH PROJECT CONDITIONS

This section provides a description of the Existing Conditions with the addition of the 6th and Olive project traffic, which proposes the construction of a mixed-use development with multi-family residential, cathedral office space and underground parking. Primary access to the project would be from a driveway on Olive Street.

5.1 TRAFFIC VOLUMES

Existing with Project Conditions volumes were determined by adding the project traffic to the Existing Conditions volumes and are shown in **Figures 5-1** & **5-2**.

5.2 INTERSECTION ANALYSIS

Table 5-1 displays the LOS analysis results for the study intersections under the Existing with Project Conditions. As shown in the table, all intersections within the study area would operate at LOS D or better with the addition of the proposed project. No direct significant impacts to the intersections in the study area as a result of the proposed project were found under existing conditions.

Appendix B contains the intersections LOS calculation worksheets.

5.3 ROADWAY SEGMENT ANALYSIS

Table 5-2 displays the roadway segments analysis under the Existing with Project Conditions. As shown in the table, all study roadway segments would continue to operate at LOS C or better with the addition of the proposed project except the segment of Sixth Avenue between Laurel Street and Kalmia Street which currently operates at LOS E. No direct significant impacts to the roadway segments in the study area as a result of the proposed project were found under existing conditions.

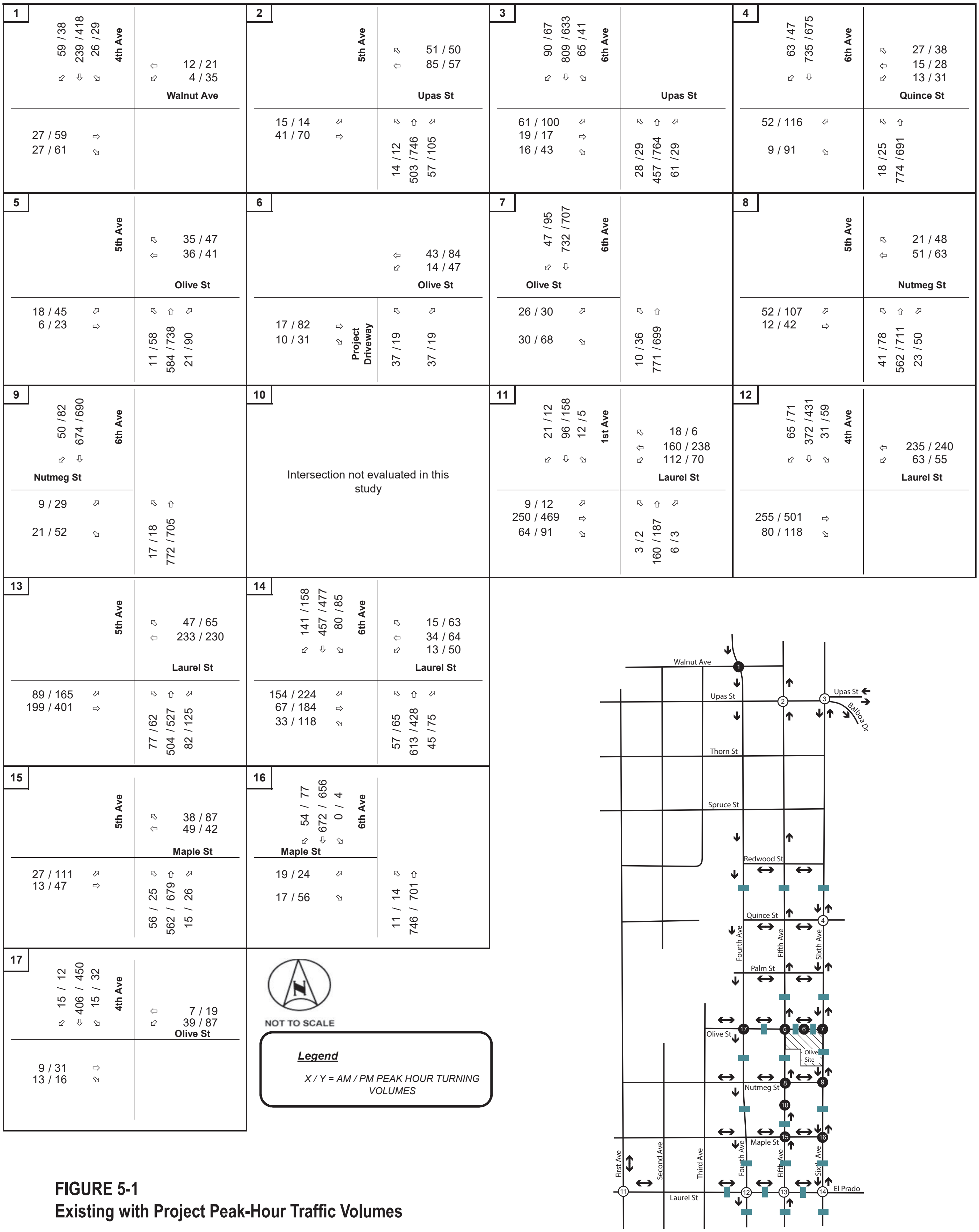

FIGURE 5-1
Existing with Project Peak-Hour Traffic Volumes

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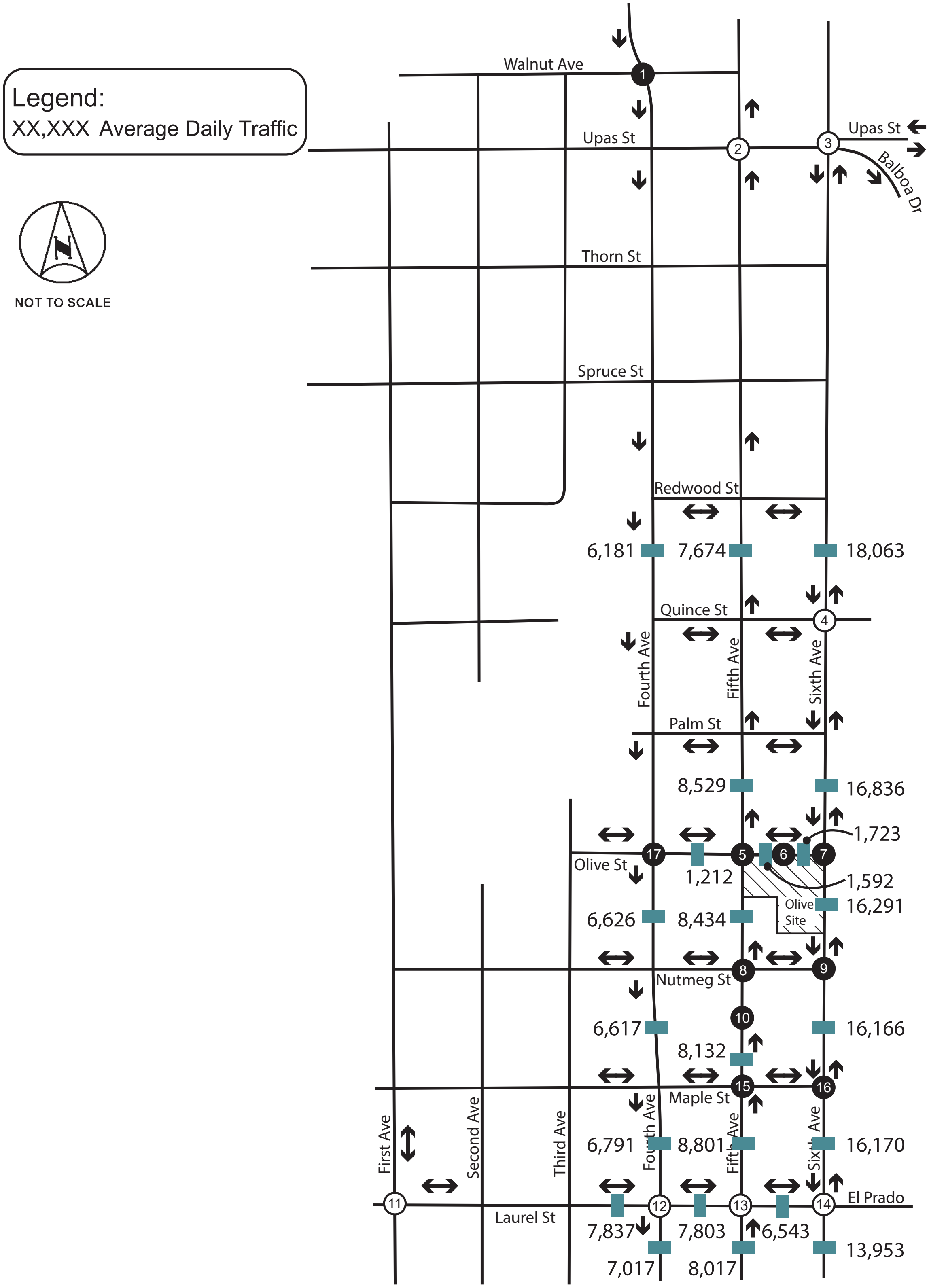

FIGURE 5-2
Existing with Project ADT Volumes

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Table 5-1 Existing with Project Conditions Intersection LOS Summary

	INTERSECTION	TRAFFIC CONTROL	PEAK HOUR	EXISTING BASELINE		EXISTING BASELINE PLUS PROJECT			
				DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	Δ (c)	SIGNIFICANT?
1	Fourth Ave & Walnut Ave	All-Way Stop	AM	8.3	A	8.3	A	0.0	NO
			PM	10.2	B	10.3	B	0.1	NO
2	Fifth Ave & Upas St	Signal	AM	13.5	B	13.6	B	0.1	NO
			PM	14.6	B	14.6	B	0.0	NO
3	Sixth Ave & Upas St/Balboa Dr	Signal	AM	12.6	B	12.6	B	0.0	NO
			PM	12.6	B	12.6	B	0.0	NO
4	Sixth Ave & Quince St	Signal	AM	4.1	A	4.1	A	0.0	NO
			PM	7.3	A	7.3	A	0.0	NO
5	Fifth Ave & Olive St	Two-Way Stop	AM	12.8	B	14.3	B	1.5	NO
			PM	19.2	C	21.0	C	1.8	NO
6	Site Driveway & Olive St	One-Way Stop	AM	Intersection does not exist in this scenario		9.1	A	N/A	NO
			PM			9.9	A	N/A	NO
7	Sixth Ave & Olive St	One-Way Stop	AM	15.3	C	23.7	C	8.4	NO
			PM	17.0	C	21.0	C	4.0	NO
8	Fifth Ave & Nutmeg St	All-Way Stop	AM	11.4	B	11.5	B	0.1	NO
			PM	16.8	C	17.8	C	1.0	NO
9	Sixth Ave & Nutmeg St	One-Way Stop	AM	17.0	C	17.3	C	0.3	NO
			PM	19.5	C	19.8	C	0.3	NO
10	Fifth Ave & Nutmeg Site Dwy	One-Way Stop	AM	Intersection not evaluated in this study					
			PM						
11	First Ave & Laurel St	Signal	AM	12.7	B	12.7	B	0.0	NO
			PM	13.8	B	13.8	B	0.0	NO
12	Fourth Ave & Laurel St	Signal	AM	11.3	B	11.3	B	0.0	NO
			PM	13.2	B	13.3	B	0.1	NO
13	Fifth Ave & Laurel St	Signal	AM	10.6	B	10.6	B	0.0	NO
			PM	11.3	B	11.3	B	0.0	NO
14	Sixth Ave & Laurel St/El Prado	Signal	AM	10.6	B	10.6	B	0.0	NO
			PM	13.7	B	13.8	B	0.1	NO
15	Fifth Ave & Maple St	Two-Way Stop	AM	15.9	C	16.0	C	0.1	NO
			PM	24.2	C	25.4	D	1.2	NO
16	Sixth Ave & Maple St	One-Way Stop	AM	20.6	C	20.9	C	0.3	NO
			PM	17.6	C	17.9	C	0.3	NO
17	Fourth Ave & Olive St	Two-Way Stop	AM	11.7	B	11.7	B	0.0	NO
			PM	13.5	B	13.6	B	0.1	NO

Notes:

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the *2010 Highway Capacity Manual* and performed using Synchro 9.0

(c) Change in delay due to addition of project traffic measured in seconds per vehicle

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Table 5-2 Existing with Project Conditions Roadway Segment Level of Service Analysis Summary

ROADWAY SEGMENT	ROADWAY CLASSIFICATION	CAPACITY (a)	EXISTING BASELINE ADT	EXISTING BASELINE V/C RATIO (c)	EXISTING BASELINE LOS	EXISTING PLUS PROJECT ADT	EXISTING PLUS PROJECT V/C RATIO (c)	EXISTING PLUS PROJECT LOS	Δ in ADT	Δ in V/C	SIGNIFICANT?
Fourth Ave											
Walnut Ave to Olive St	3 Lane Collector (one-way)	26,000	6,150	0.237	A	6,181	0.238	A	31	0.001	NO
Olive St to Nutmeg St	3 Lane Collector (one-way)	26,000	6,410	0.247	A	6,626	0.255	A	216	0.008	NO
Nutmeg St to Maple St	3 Lane Collector (one-way)	26,000	6,401	0.246	A	6,617	0.255	A	216	0.009	NO
Maple St to Laurel St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,575	0.376	A	6,791	0.388	A	216	0.012	NO
Laurel St to Kalmia St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,813	0.389	A	7,017	0.401	A	204	0.012	NO
Fifth Ave											
Upas St to Quince St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,581	0.433	B	7,674	0.439	B	93	0.006	NO
Quince St to Olive St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,436	0.482	B	8,529	0.487	B	93	0.005	NO
Olive St to Nutmeg St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,218	0.47	B	8,434	0.482	B	216	0.012	NO
Nutmeg St to Maple St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,916	0.452	B	8,132	0.465	B	216	0.013	NO
Maple St to Laurel St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,585	0.491	B	8,801	0.503	B	216	0.012	NO
Laurel St to Kalmia St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,813	0.446	B	8,017	0.458	B	204	0.012	NO
Sixth Ave											
Upas St to Quince St[b]	4 Lane Collector (no center lane)	22,500	17,631	0.784	D	18,063	0.803	D	432	0.019	NO
Quince St to Olive St[b]	4 Lane Collector (no center lane)	22,500	16,373	0.728	D	16,836	0.748	D	463	0.020	NO
Olive St to Nutmeg St[b]	4 Lane Collector (no center lane)	22,500	16,075	0.714	D	16,291	0.724	D	216	0.010	NO
Nutmeg St to Maple St[b]	4 Lane Collector (no center lane)	22,500	15,950	0.709	D	16,166	0.718	D	216	0.009	NO
Maple St to Laurel St[b]	4 Lane Collector (no center lane)	22,500	15,954	0.709	D	16,170	0.719	D	216	0.010	NO
Laurel St to Kalmia St	2 Lane Collector (continuous left-turn lane)	15,000	13,737	0.916	**E**	13,953	0.930	**E**	216	0.014	NO
Olive St											
Fourth Ave to Fifth Ave	2 Lane Sub-Collector	2,200	965	0.439	C	1,212	0.551	C	247	0.112	NO
Fifth Ave to Project Driveway	2 Lane Sub-Collector	2,200	1,004	0.456	C	1,592	0.724	C	588	0.268	NO
Project Driveway to Sixth Ave	2 Lane Sub-Collector	2,200	1,004	0.456	C	1,723	0.783	C	719	0.327	NO
Laurel St											
Third Ave to Fourth Ave	2 Lane Collector (continuous left-turn lane)	15,000	7,812	0.521	C	7,837	0.522	C	25	0.001	NO
Fourth Ave to Fifth Ave	2 Lane Collector (continuous left-turn lane)	15,000	7,791	0.519	C	7,803	0.520	C	12	0.001	NO
Fifth Ave to Sixth Ave	2 Lane Collector (continuous left-turn lane)	15,000	6,543	0.436	B	6,543	0.436	B	0	0.000	NO

Notes:

Bold values indicate roadway segments operating at LOS E or F.

(a) LOS E capacity is shown, except for the 2-Lane Sub-Collector classification which represents LOS C capacity

(b) Along Sixth Avenue, the 4 Lane Collector (no center lane) capacity was modified because there are minimal opportunities for southbound left turns due to Balboa Park.

(c) The v/c Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

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6 NEAR TERM (2021) CONDITIONS

This section summarizes the Near Term (2021) Conditions. This scenario establishes a baseline to compare against the Near Term (2021) with Project Conditions scenario to determine direct project impacts. Year 2021 was selected as the anticipated opening year of the project.

6.1 TRAFFIC VOLUMES

Near Term baseline traffic volumes were calculated by adding cumulative project traffic from nearby projects. Cumulative Projects are listed below in **Table 6-1** and are displayed in **Figure 6-1**.

The cumulative projects identified are estimated to generate 723 daily trips with 52 morning peak-hour trips and 63 afternoon peak-hour trips. Additional information on the cumulative projects is included in **Appendix C**.

The resulting Near Term (2021) traffic volumes are shown in **Figures 6-2** & **6-3**.

Table 6–1 Cumulative Project List

PROJECT		LAND USE	ADT	AM Peak Trips	PM Peak Trips
A	The Regent on 5th	41 Multiple Dwelling Units	246	20	22
B	4th Avenue Apartments	36 Multiple Dwelling Units	216	17	19
C	6th & Hawthorn	21 Multiple Dwelling Units	126	10	11
D	Cathedral Site Expansion	9,000 SQ Church Space	135	5	11
		TOTAL	723	52	63

6.2 ROADWAY NETWORK CHANGES

Fourth Avenue north of Maple Street was modified to have two lanes of travel instead of three to reflect the addition of a buffered bike lane that is currently being designed by San Diego Association of Governments (SANDAG) and is funded for construction by 2021. Changes to the existing roadway network assumed for this scenario include roadway capacity modifications along Fourth Avenue and intersection geometry changes at the intersection of Fourth Avenue and Olive Street.

6.3 INTERSECTION ANALYSIS

Table 6-2 displays the LOS analysis results for the study intersections under the Near Term (2021) Conditions. As shown in the table, all intersections within the study area would operate at LOS D or better. **Appendix B** contains the intersections LOS calculation worksheets.

6.4 ROADWAY SEGMENT ANALYSIS

Table 6-3 displays the roadway segments analysis under the Near Term (2021) Conditions. As shown in the table, all study roadway segments would operate at LOS C or better except the segment of Sixth Avenue between Laurel Street and Kalmia Street which continue to operate at LOS E in the near term.

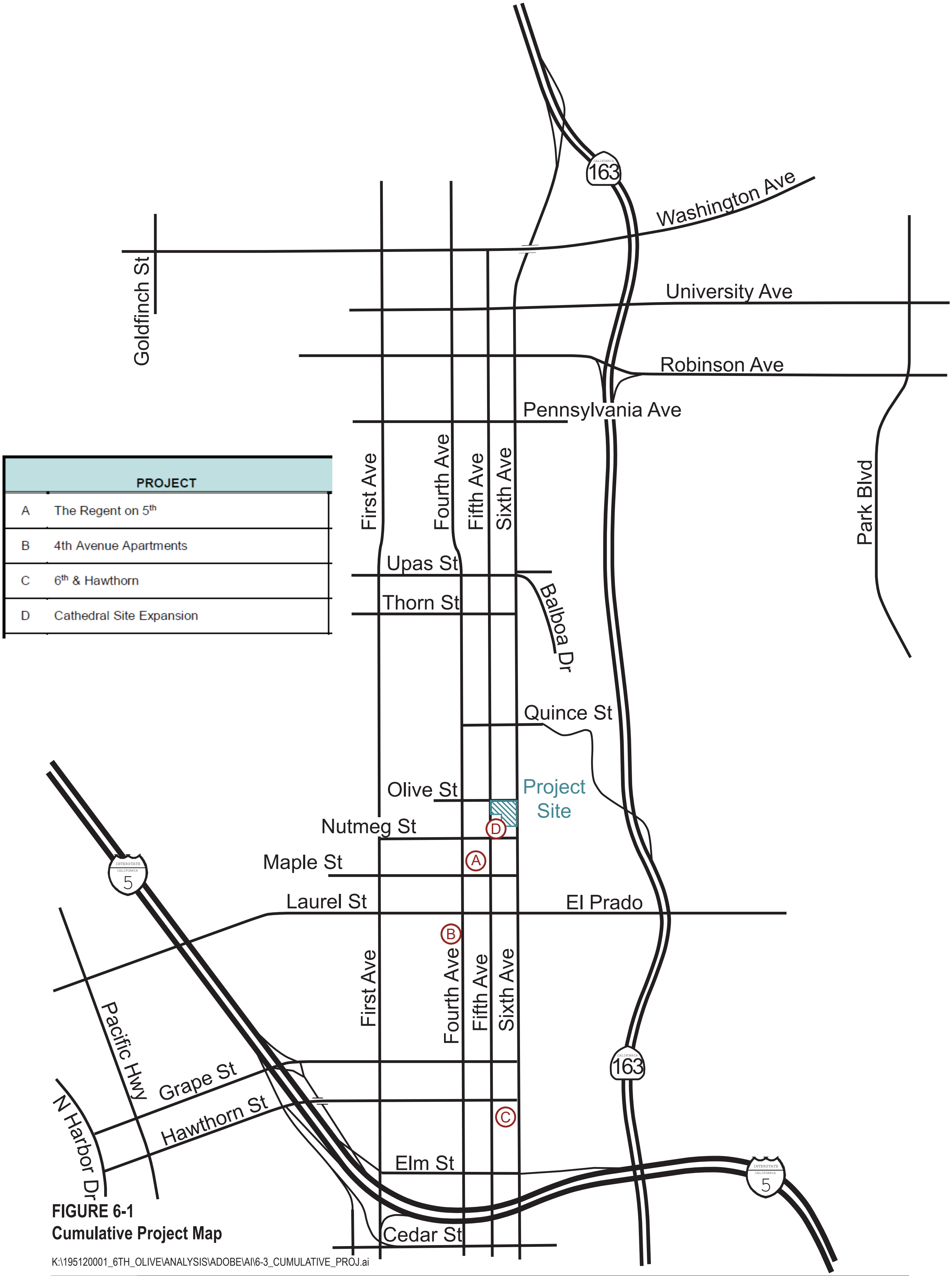

FIGURE 6-1
Cumulative Project Map

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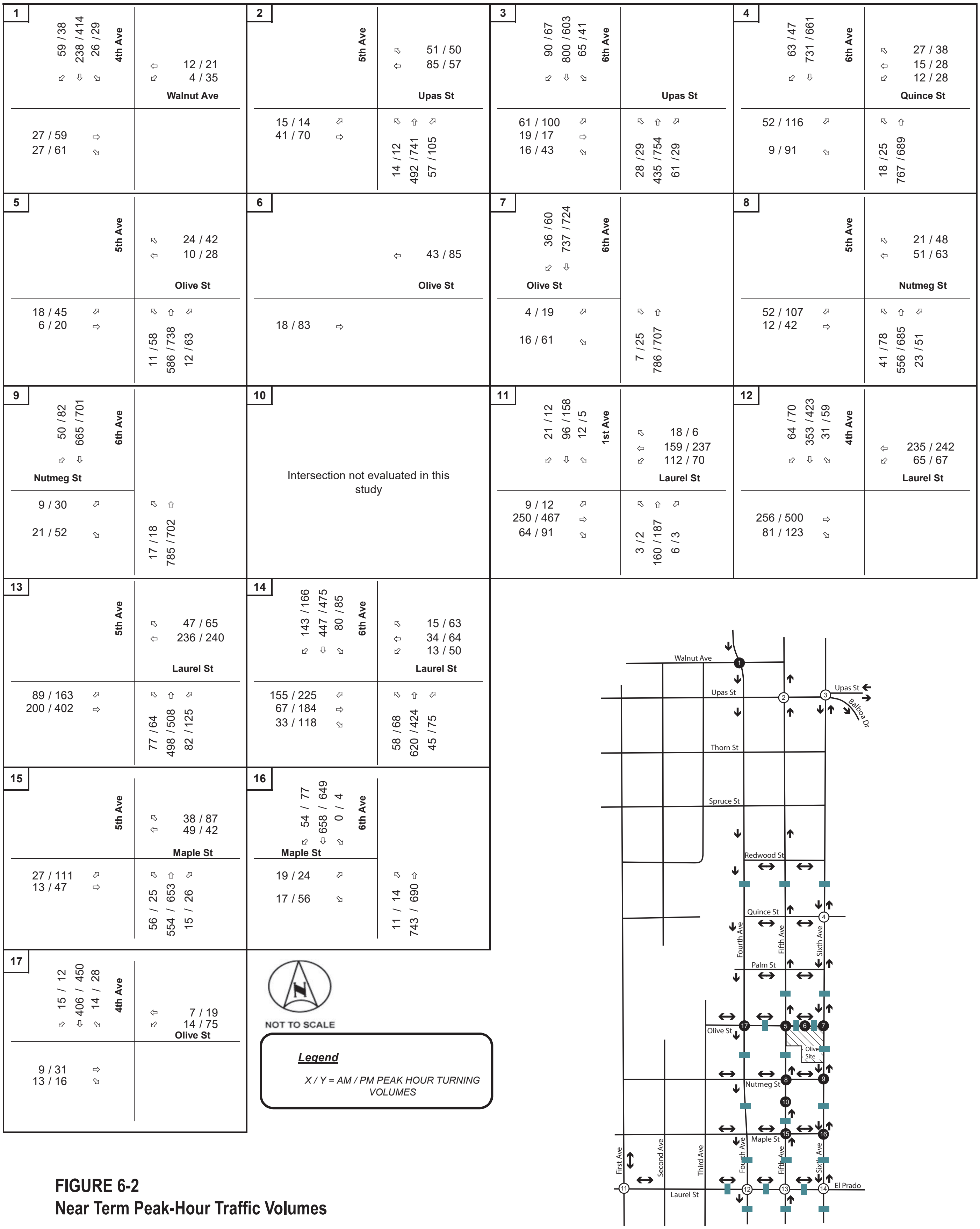

FIGURE 6-2
Near Term Peak-Hour Traffic Volumes

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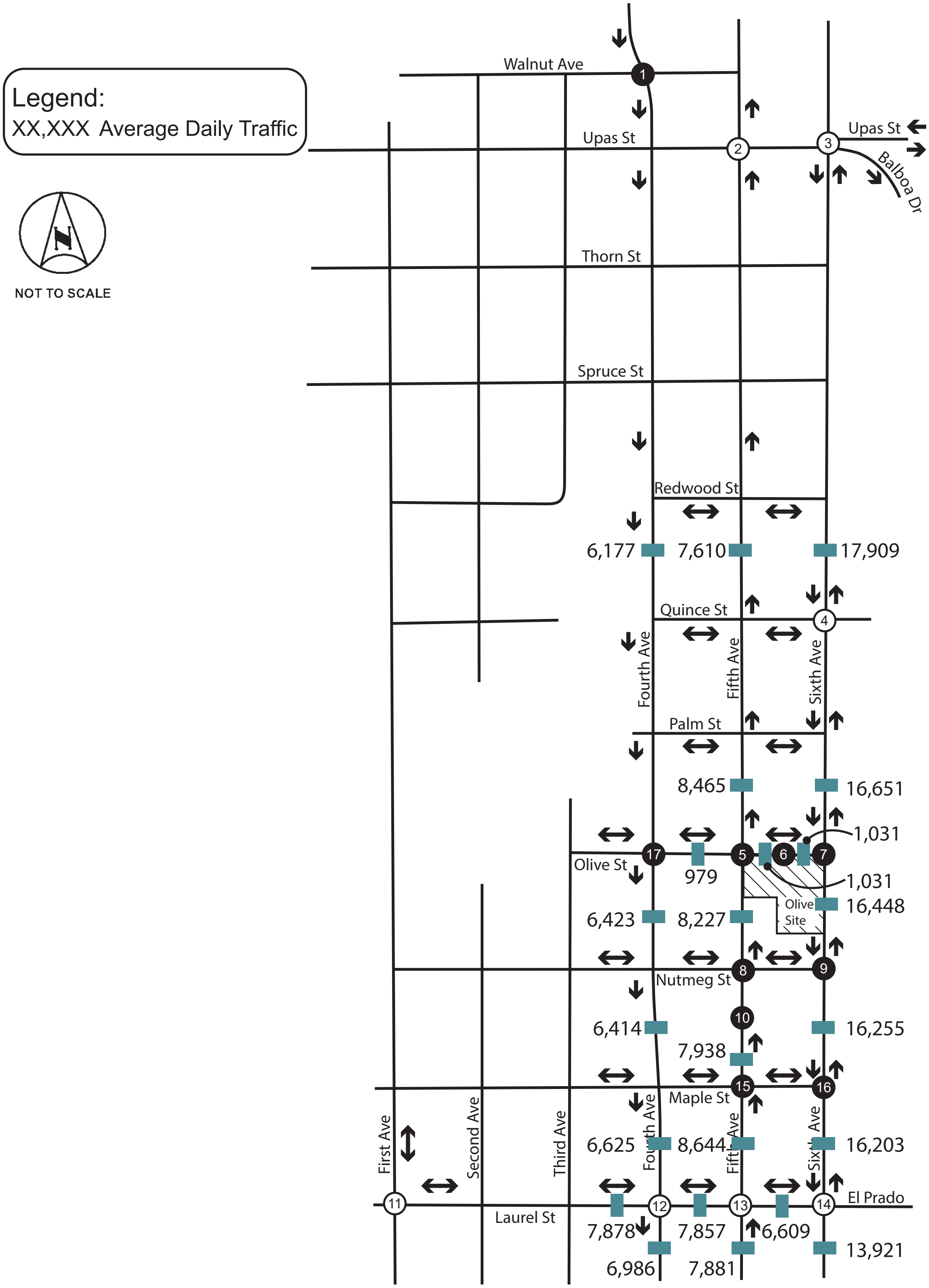

FIGURE 6-3
Near Term ADT Volumes

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Table 6-2 Near Term (2021) Conditions Intersection LOS Summary

INTERSECTION		TRAFFIC CONTROL	PEAK HOUR	NEAR TERM (2021) BASELINE	
				DELAY (a)	LOS (b)
1	Fourth Ave & Walnut Ave	All-Way Stop	AM	8.3	A
			PM	10.2	B
2	Fifth Ave & Upas St	Signal	AM	13.5	B
			PM	14.6	B
3	Sixth Ave & Upas St/Balboa Dr	Signal	AM	12.6	B
			PM	12.6	B
4	Sixth Ave & Quince St	Signal	AM	4.1	A
			PM	7.3	A
5	Fifth Ave & Olive St	Two-Way Stop	AM	13.0	B
			PM	19.4	C
6	Site Driveway & Olive St	One-Way Stop	AM	Intersection does not exist in this scenario	
			PM		
7	Sixth Ave & Olive St	One-Way Stop	AM	15.2	C
			PM	17.3	C
8	Fifth Ave & Nutmeg St	All-Way Stop	AM	11.4	B
			PM	16.8	C
9	Sixth Ave & Nutmeg St	One-Way Stop	AM	17.2	C
			PM	20.4	C
10	Fifth Ave & Nutmeg Site Dwy	One-Way Stop	AM	Intersection not evaluated in this study	
			PM		
11	First Ave & Laurel St	Signal	AM	12.7	B
			PM	13.8	B
12	Fourth Ave & Laurel St	Signal	AM	11.3	B
			PM	13.4	B
13	Fifth Ave & Laurel St	Signal	AM	10.6	B
			PM	11.3	B
14	Sixth Ave & Laurel St/El Prado	Signal	AM	10.6	B
			PM	13.8	B
15	Fifth Ave & Maple St	Two-Way Stop	AM	15.9	C
			PM	24.2	C
16	Sixth Ave & Maple St	One-Way Stop	AM	20.6	C
			PM	17.6	C
17	Fourth Ave & Olive St	Two-Way Stop	AM	11.6	B
			PM	13.9	B

Notes:

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the *2010 Highway Capacity Manual* and performed using Synchro 9.0

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Table 6-3 Near Term (2021) Conditions Roadway Segment LOS Summary

ROADWAY SEGMENT	ROADWAY CLASSIFICATION	CAPACITY (a)	NEAR TERM (2021) BASELINE		
			ADT	V/C RATIO (c)	LOS
Fourth Ave					
Walnut Ave to Olive St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,177	0.353	A
Olive St to Nutmeg St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,423	0.367	A
Nutmeg St to Maple St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,414	0.367	A
Maple St to Laurel St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,625	0.379	A
Laurel St to Kalmia St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,986	0.399	A
Fifth Ave					
Upas St to Quince St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,610	0.435	B
Quince St to Olive St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,465	0.484	B
Olive St to Nutmeg St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,227	0.47	B
Nutmeg St to Maple St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,938	0.454	B
Maple St to Laurel St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,644	0.494	B
Laurel St to Kalmia St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,881	0.45	B
Sixth Ave					
Upas St to Quince St[b]	4 Lane Collector (no center lane)	22,500	17,909	0.796	D
Quince St to Olive St[b]	4 Lane Collector (no center lane)	22,500	16,651	0.74	D
Olive St to Nutmeg St[b]	4 Lane Collector (no center lane)	22,500	16,448	0.731	D
Nutmeg St to Maple St[b]	4 Lane Collector (no center lane)	22,500	16,255	0.722	D
Maple St to Laurel St[b]	4 Lane Collector (no center lane)	22,500	16,203	0.72	D
Laurel St to Kalmia St	2 Lane Collector (continuous left-turn lane)	15,000	13,921	0.928	**E**
Olive St					
Fourth Ave to Fifth Ave	2 Lane Sub-Collector	2,200	979	0.445	C
Fifth Ave to Project Driveway	2 Lane Sub-Collector	2,200	1,031	0.469	C
Project Driveway to Sixth Ave	2 Lane Sub-Collector	2,200	1,031	0.469	C
Laurel St					
Third Ave to Fourth Ave	2 Lane Collector (continuous left-turn lane)	15,000	7,878	0.525	C
Fourth Ave to Fifth Ave	2 Lane Collector (continuous left-turn lane)	15,000	7,857	0.524	C
Fifth Ave to Sixth Ave	2 Lane Collector (continuous left-turn lane)	15,000	6,609	0.441	B

Notes:

Bold values indicate roadway segments operating at LOS E or F.

(a) LOS E capacity is shown, except for the 2-Lane Sub-Collector classification which represents LOS C capacity

(b) Along Sixth Avenue, the 4 Lane Collector (no center lane) capacity was modified because there are minimal opportunities for southbound left turns due to Balboa Park.

(c) The v/c Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

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7 NEAR TERM (2021) WITH PROJECT CONDITIONS

This section provides a description of the Near Term (2021) Conditions with the addition of the 6th and Olive project traffic, which proposes the construction of a mixed-use development with multi-family residential, cathedral office space and underground parking. Primary access to the project would be from a driveway on Olive Street. Year 2021 was selected as the anticipated opening year of the project.

7.1 TRAFFIC VOLUMES

Near Term (2021) with Project Conditions volumes were determined by adding the project traffic to the Near Term (2021) Conditions volumes and are shown in **Figures 7-1** & **7-2**.

7.2 ROADWAY NETWORK CHANGES

Fourth Avenue north of Maple Street was modified to have two lanes of travel instead of three to reflect the addition of a buffered bike lane that is currently being designed by SANDAG and is funded for construction by 2021. Changes to the existing roadway network assumed for this scenario include roadway capacity modifications along Fourth Avenue and intersection geometry changes at the intersection of Fourth Avenue and Olive Street.

7.3 INTERSECTION ANALYSIS

Table 7-1 displays the LOS analysis results for the study intersections under the Near Term (2021) with Project Conditions. As shown in the table, all intersections within the study area would operate at LOS D or better with the addition of the proposed project. No direct significant impacts to the intersections in the study area as a result of the proposed project were found under Near Term (2021) conditions.

Appendix B contains the intersections LOS calculation worksheets.

7.4 ROADWAY SEGMENT ANALYSIS

Table 7-2 displays the roadway segments analysis under the Near Term (2021) with Project Conditions. As shown in the table, all study roadway segments would continue to operate at LOS C or better with the addition of the proposed project except the segment of Sixth Avenue between Laurel Street and Kalmia Street which would continue to operate at LOS E. No direct significant impacts to the roadway segments in the study area as a result of the proposed project were found under Near Term (2021) conditions.

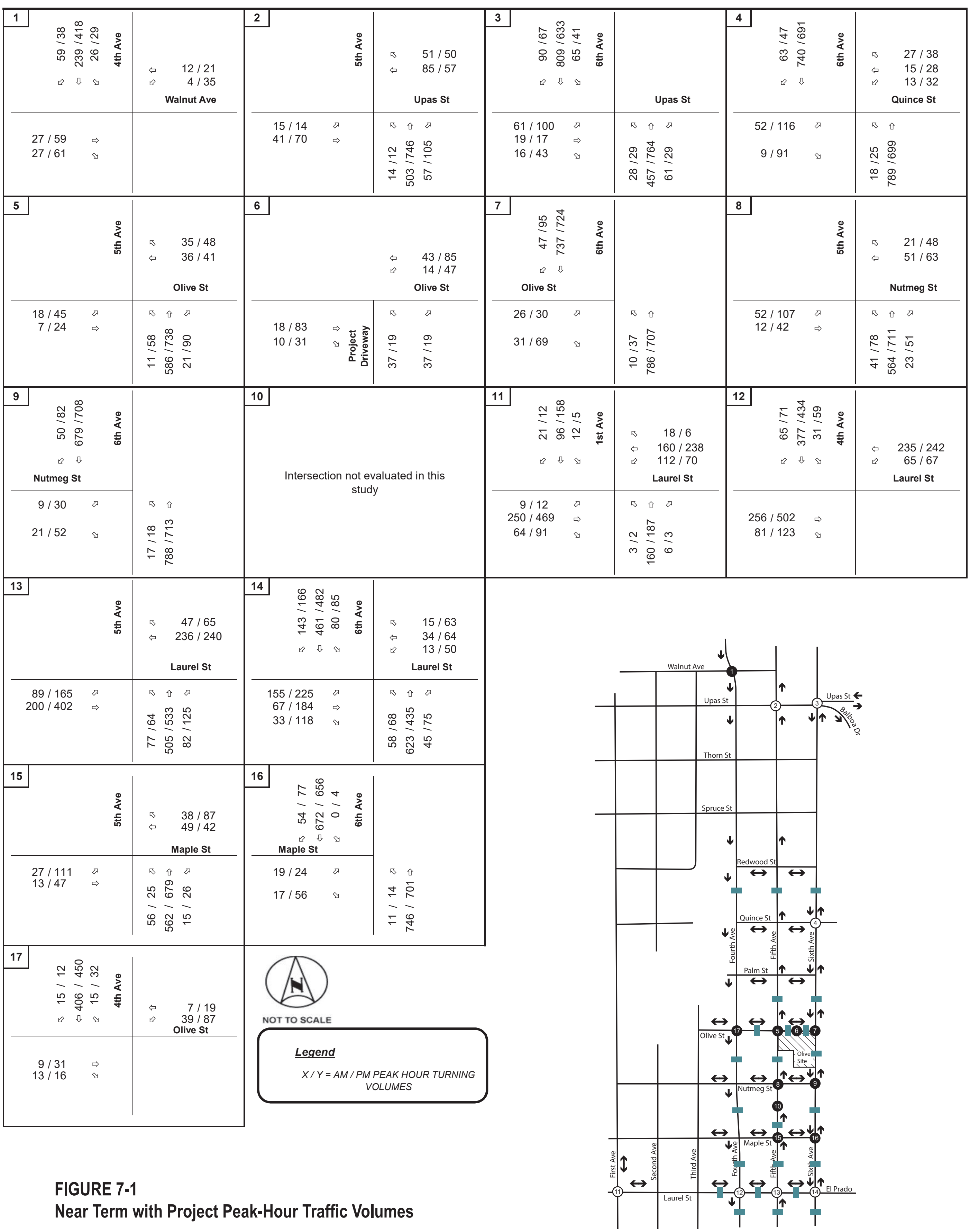

FIGURE 7-1
Near Term with Project Peak-Hour Traffic Volumes

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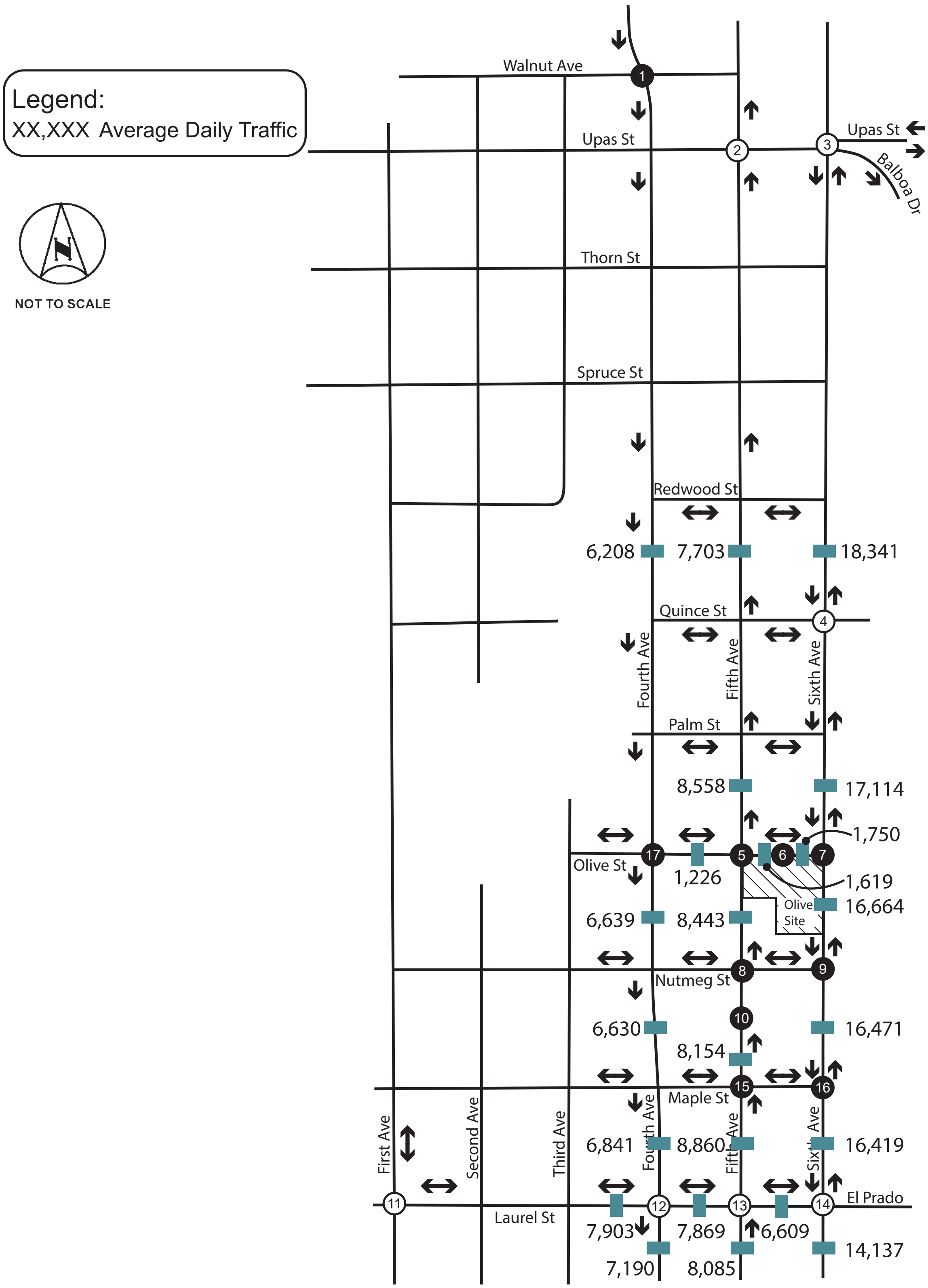

FIGURE 7-2
Near Term with Project ADT Volumes

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Table 7-1 Near Term (2021) with Project Conditions Intersection LOS Summary

	INTERSECTION	TRAFFIC CONTROL	PEAK HOUR	NEAR TERM (2021) BASELINE DELAY (a)	NEAR TERM (2021) BASELINE LOS (b)	NEAR TERM (2021) BASELINE PLUS PROJECT DELAY (a)	NEAR TERM (2021) BASELINE PLUS PROJECT LOS (b)	Δ (c)	SIGNIFICANT?
1	Fourth Ave & Walnut Ave	All-Way Stop	AM	8.3	A	8.3	A	0.0	NO
			PM	10.2	B	10.3	B	0.1	NO
2	Fifth Ave & Upas St	Signal	AM	13.5	B	13.6	B	0.1	NO
			PM	14.6	B	14.6	B	0.0	NO
3	Sixth Ave & Upas St/Balboa Dr	Signal	AM	12.6	B	12.6	B	0.0	NO
			PM	12.6	B	12.6	B	0.0	NO
4	Sixth Ave & Quince St	Signal	AM	4.1	A	4.1	A	0.0	NO
			PM	7.3	A	7.3	A	0.0	NO
5	Fifth Ave & Olive St	Two-Way Stop	AM	13.0	B	14.3	B	1.3	NO
			PM	19.4	C	21.2	C	1.8	NO
6	Site Driveway & Olive St	One-Way Stop	AM	Intersection does not exist in this scenario		9.1	A	N/A	NO
			PM			9.9	A	N/A	NO
7	Sixth Ave & Olive St	One-Way Stop	AM	15.2	C	23.9	C	8.7	NO
			PM	17.3	C	21.7	C	4.4	NO
8	Fifth Ave & Nutmeg St	All-Way Stop	AM	11.4	B	11.6	B	0.2	NO
			PM	16.8	C	17.9	C	1.1	NO
9	Sixth Ave & Nutmeg St	One-Way Stop	AM	17.2	C	17.4	C	0.2	NO
			PM	20.4	C	20.6	C	0.2	NO
10	Fifth Ave & Nutmeg Site Dwy	One-Way Stop	AM	Intersection not evaluated in this study					
			PM						
11	First Ave & Laurel St	Signal	AM	12.7	B	12.7	B	0.0	NO
			PM	13.8	B	13.8	B	0.0	NO
12	Fourth Ave & Laurel St	Signal	AM	11.3	B	11.4	B	0.1	NO
			PM	13.4	B	13.5	B	0.1	NO
13	Fifth Ave & Laurel St	Signal	AM	10.6	B	10.6	B	0.0	NO
			PM	11.3	B	11.4	B	0.1	NO
14	Sixth Ave & Laurel St/El Prado	Signal	AM	10.6	B	10.6	B	0.0	NO
			PM	13.8	B	13.9	B	0.1	NO
15	Fifth Ave & Maple St	Two-Way Stop	AM	15.9	C	16.0	C	0.1	NO
			PM	24.2	C	25.4	D	1.2	NO
16	Sixth Ave & Maple St	One-Way Stop	AM	20.6	C	20.9	C	0.3	NO
			PM	17.6	C	17.9	C	0.3	NO
17	Fourth Ave & Olive St	Two-Way Stop	AM	11.6	B	11.5	B	-0.1	NO
			PM	13.9	B	14.3	B	0.4	NO

Notes:

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the *2010 Highway Capacity Manual* and performed using Synchro 9.0

(c) Change in delay due to addition of project traffic measured in seconds per vehicle

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Table 7-2 Near Term (2021) with Project Conditions Roadway Segment LOS Summary

ROADWAY SEGMENT	ROADWAY CLASSIFICATION	CAPACITY (a)	NEAR TERM (2021) BASELINE			NEAR TERM (2021) PLUS PROJECT			Δ in ADT	Δ in V/C	SIGNIFICANT?
			ADT	V/C RATIO (c)	LOS	ADT	V/C RATIO (c)	LOS			
Fourth Ave											
Walnut Ave to Olive St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,177	0.353	A	6,208	0.355	A	31	0.002	NO
Olive St to Nutmeg St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,423	0.367	A	6,639	0.379	A	216	0.012	NO
Nutmeg St to Maple St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,414	0.367	A	6,630	0.379	A	216	0.012	NO
Maple St to Laurel St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,625	0.379	A	6,841	0.391	A	216	0.012	NO
Laurel St to Kalmia St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,986	0.399	A	7,190	0.411	A	204	0.012	NO
Fifth Ave											
Upas St to Quince St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,610	0.435	B	7,703	0.44	B	93	0.005	NO
Quince St to Olive St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,465	0.484	B	8,558	0.489	B	93	0.005	NO
Olive St to Nutmeg St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,227	0.47	B	8,443	0.482	B	216	0.012	NO
Nutmeg St to Maple St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,938	0.454	B	8,154	0.466	B	216	0.012	NO
Maple St to Laurel St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,644	0.494	B	8,860	0.506	B	216	0.012	NO
Laurel St to Kalmia St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,881	0.45	B	8,085	0.462	B	204	0.012	NO
Sixth Ave											
Upas St to Quince St[b]	4 Lane Collector (no center lane)	22,500	17,909	0.796	D	18,341	0.815	D	432	0.019	NO
Quince St to Olive St[b]	4 Lane Collector (no center lane)	22,500	16,651	0.74	D	17,114	0.761	D	463	0.021	NO
Olive St to Nutmeg St[b]	4 Lane Collector (no center lane)	22,500	16,448	0.731	D	16,664	0.741	D	216	0.010	NO
Nutmeg St to Maple St[b]	4 Lane Collector (no center lane)	22,500	16,255	0.722	D	16,471	0.732	D	216	0.010	NO
Maple St to Laurel St[b]	4 Lane Collector (no center lane)	22,500	16,203	0.72	D	16,419	0.73	D	216	0.010	NO
Laurel St to Kalmia St	2 Lane Collector (continuous left-turn lane)	15,000	13,921	0.928	**E**	14,137	0.942	**E**	216	0.014	NO
Olive St											
Fourth Ave to Fifth Ave	2 Lane Sub-Collector	2,200	979	0.445	C	1,226	0.557	C	247	0.112	NO
Fifth Ave to Project Driveway	2 Lane Sub-Collector	2,200	1,031	0.469	C	1,619	0.736	C	588	0.267	NO
Project Driveway to Sixth Ave	2 Lane Sub-Collector	2,200	1,031	0.469	C	1,750	0.795	C	719	0.326	NO
Laurel St											
Third Ave to Fourth Ave	2 Lane Collector (continuous left-turn lane)	15,000	7,878	0.525	C	7,903	0.527	C	25	0.002	NO
Fourth Ave to Fifth Ave	2 Lane Collector (continuous left-turn lane)	15,000	7,857	0.524	C	7,869	0.525	C	12	0.001	NO
Fifth Ave to Sixth Ave	2 Lane Collector (continuous left-turn lane)	15,000	6,609	0.441	B	6,609	0.441	B	0	0.000	NO

Notes:

Bold values indicate roadway segments operating at LOS E or F.

(a) LOS E capacity is shown, except for the 2-Lane Sub-Collector classification which represents LOS C capacity

(b) Along Sixth Avenue, the 4 Lane Collector (no center lane) capacity was modified because there are minimal opportunities for southbound left turns due to Balboa Park.

(c) The v/c Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

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8 HORIZON YEAR (2035) CONDITIONS

This section provides a description of the Horizon Year (2035) Conditions. This scenario establishes a baseline to compare against the Horizon Year (2035) with Project Conditions to determine cumulative project impacts.

8.1 TRAFFIC VOLUMES

The Horizon Year volumes were forecast by applying an annual growth rate to the existing traffic volumes for 17 years to estimate Year 2035. The annual growth rate was calculated using volumes documented in the SANDAG Series 12 model runs for 2008 and 2050. Volumes on the main corridors that have documented volume information in the Year 2008 and the Year 2050 models were obtained and a resulting annual growth rate was calculated. **Table 8-1** summarizes the volumes and growth rate calculations.

At roadways, the appropriate annual growth rate was directly applied. For Olive Street roadways, no volume information was available, so the daily volume was increased using the highest of nearby north-south corridor growth rates, which was equal to 0.60% per year.

At intersections, the growth for each leg of the intersection with information available was averaged to establish an average growth for the intersection.

Figures 8-1 & **8-2** illustrate the resulting Horizon Year (2035) Baseline conditions peak-hour and daily traffic volumes in the study area.

8.2 ROADWAY NETWORK

Fourth Avenue north of Maple Street was modified to have two lanes of travel instead of three to reflect the addition of a buffered bike lane that is currently being designed by SANDAG and is funded for construction by 2021. Changes to the existing roadway network assumed for this scenario include roadway capacity modifications along Fourth Avenue and intersection geometry changes at the intersection of Fourth Avenue and Olive Street.

8.3 INTERSECTION ANALYSIS

Table 8-2 displays the LOS analysis results for the study intersections under the Horizon Year (2035) Conditions. As shown in the table, all intersections within the study area would operate at LOS D or better. **Appendix B** contains the intersections LOS calculation worksheets.

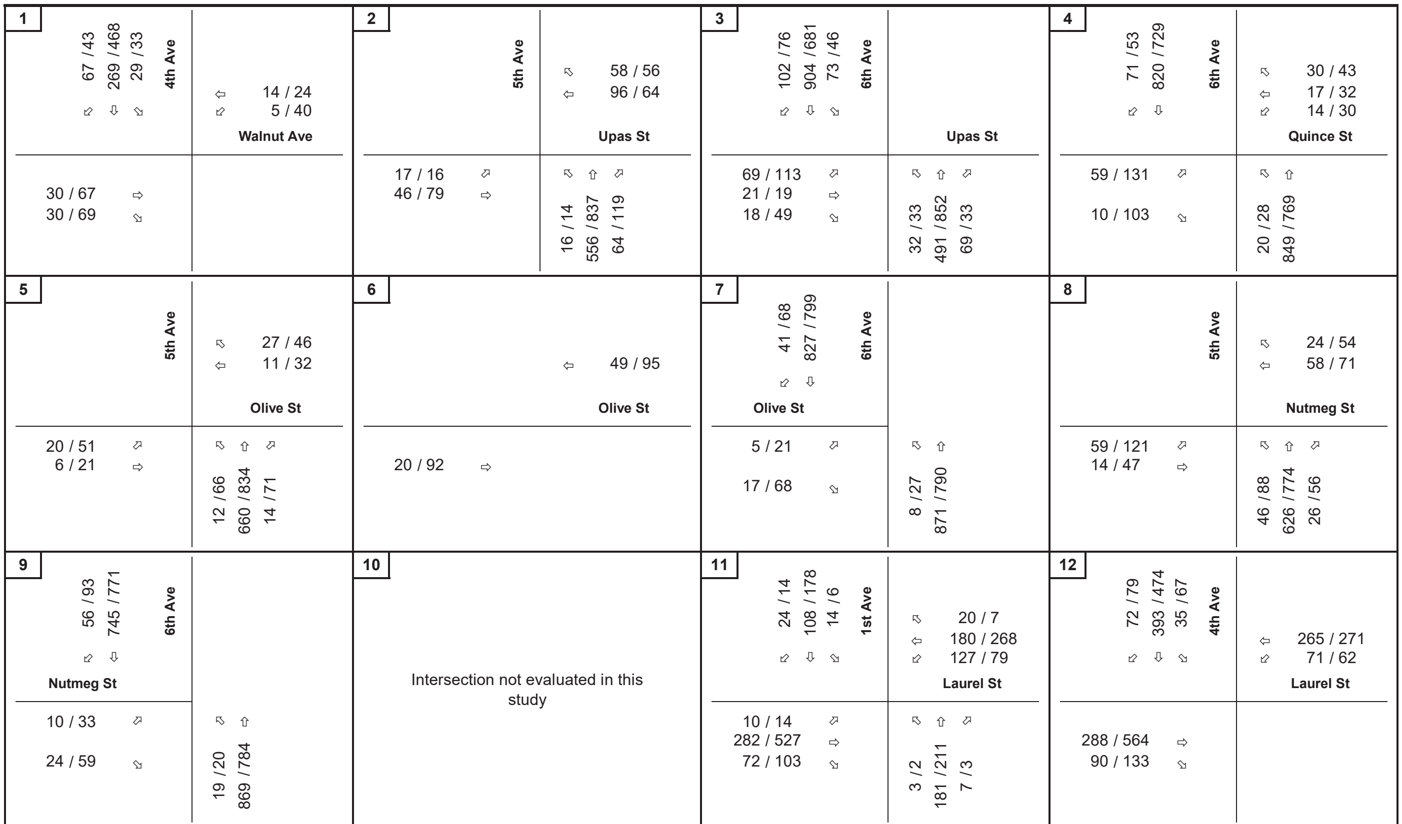
8.4 ROADWAY SEGMENT ANALYSIS

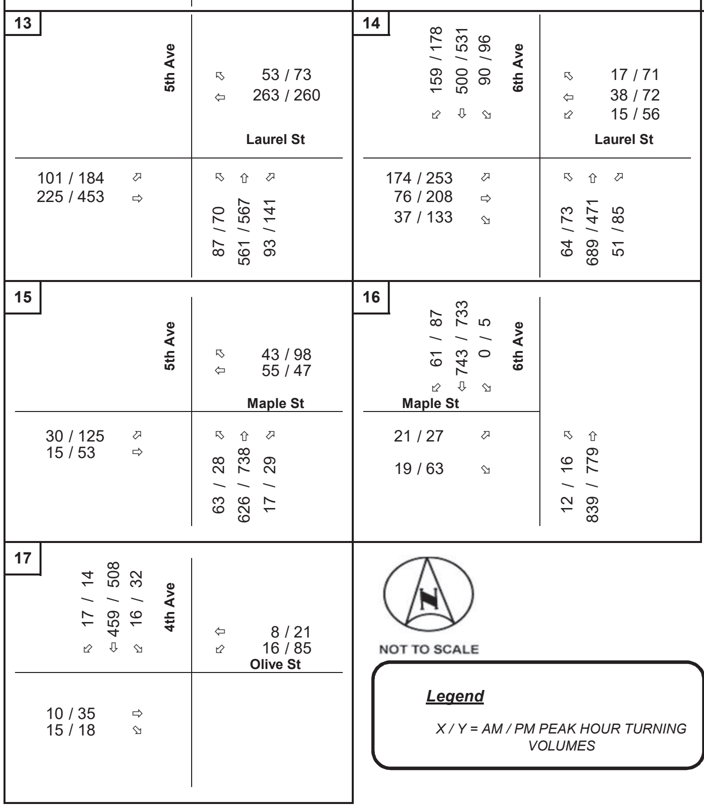
Table 8-3 displays the roadway segments analysis under the Horizon Year (2035) Conditions. As shown in the table, all study roadway segments would operate at LOS C or better except the segments of Sixth Avenue between Upas Street and Quince Street and between Laurel Street and Kalmia Street, both of which would operate at LOS E in the horizon year.

Table 8-1 Horizon Year (2035) Conditions – Growth By Intersection

INTERSECTION		NORTH LEG			SOUTH LEG			EAST LEG			WEST LEG		
		2008 Model ADT	2050 Model ADT	Annual Growth Rate	2008 Model ADT	2050 Model ADT	Annual Growth Rate	2008 Model ADT	2050 Model ADT	Annual Growth Rate	2008 Model ADT	2050 Model ADT	Annual Growth Rate
1	Fourth Ave & Walnut Ave	6,600	10,100	1.02%	6,500	10,000	1.03%	0	0	-	0	0	-
2	Fifth Ave & Upas St	13,900	17,000	0.48%	11,700	15,100	0.61%	2,600	4,900	1.5%	4,000	4,600	0.3%
3	Sixth Ave & Upas St/Upas St/ Balboa Dr	22,900	29,300	0.59%	20,600	25,500	0.51%	1,300	2,600	1.7%	2,600	4,900	1.5%
4	Sixth Ave & Quince St	22,600	27,000	0.42%	20,600	23,400	0.30%	0	0	-	0	0	-
5	Fifth Ave & Olive St	11,500	14,800	0.60%	11,500	14,800	0.60%	0	0	-	0	0	-
6	Site Driveway & Olive St	0	0	-	0	0	-	0	0	-	0	0	-
7	Sixth Ave & Olive St	20,600	23,400	0.30%	21,600	24,500	0.30%	0	0	-	0	0	-
8	Fifth Ave & Nutmeg St	11,500	14,800	0.60%	12,200	16,300	0.69%	0	0	-	0	0	-
9	Sixth Ave & Nutmeg St	21,600	24,500	0.30%	21,600	24,600	0.31%	0	0	-	0	0	-
11	First Ave & Laurel St	6,700	12,700	1.53%	5,800	14,100	2.14%	9,400	17,100	1.4%	6,200	13,200	1.8%
12	Fourth Ave & Laurel St	10,100	13,000	0.60%	7,900	6,300	-0.54%	10,000	13,100	0.6%	12,400	18,900	1.0%
13	Fifth Ave & Laurel St	12,200	16,300	0.69%	9,000	10,800	0.44%	9,300	11,100	0.4%	10,000	13,100	0.6%
14	Sixth Ave & Laurel St/El Prado	21,600	24,600	0.31%	21,900	23,400	0.16%	6,900	9,500	0.8%	9,300	11,100	0.4%
15	Fifth Ave & Maple St	12,200	16,300	0.69%	12,200	16,300	0.69%	0	0	-	0	0	-
16	Sixth Ave & Maple St	21,600	24,600	0.31%	21,600	24,600	0.31%	0	0	-	0	0	-
17	Fourth Ave & Olive St	9,300	11,500	0.51%	9,300	11,500	0.51%	0	0	-	0	0	-
	System Average	0.72%											

Notes: Yellow shaded cells are individual segment growth rates used to calculated the system average. Red shaded cells are duplicates and not included in calculation of average.





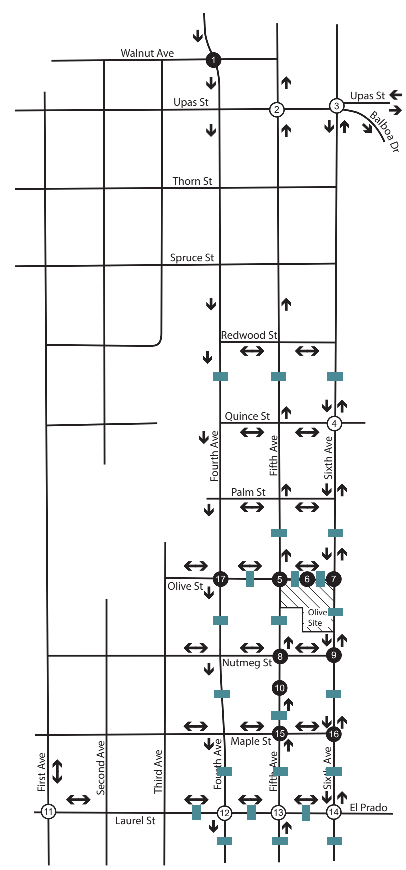


FIGURE 8-1
Horizon Year Peak-Hour Traffic Volumes

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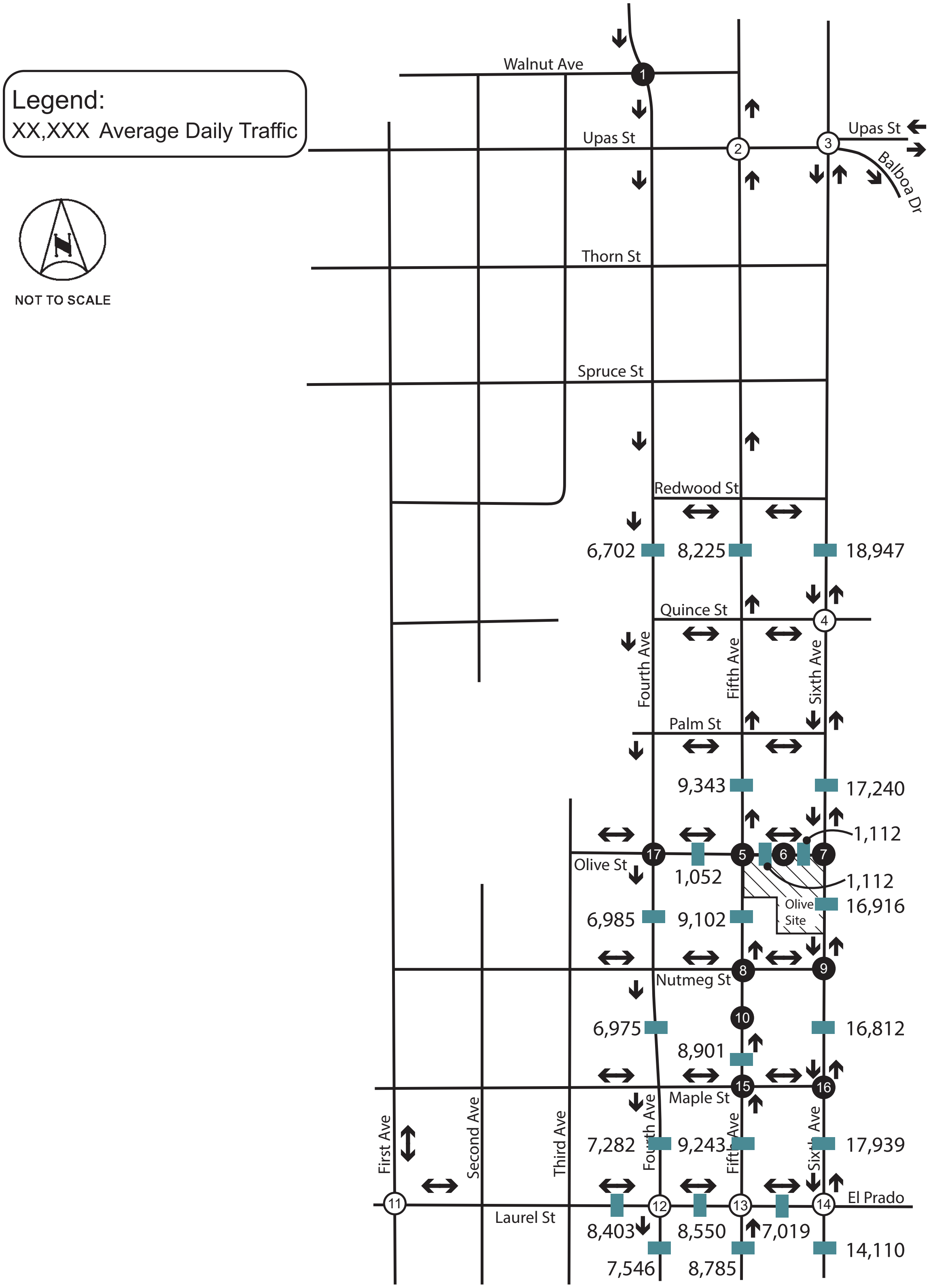

FIGURE 8-2
Horizon Year (2035) ADT Volumes

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Table 8-2 Horizon Year (2035) Conditions Intersection LOS Summary

INTERSECTION		TRAFFIC CONTROL	PEAK HOUR	BUILD OUT (2035) BASELINE	
				DELAY (a)	LOS (b)
1	Fourth Ave & Walnut Ave	All-Way Stop	AM	8.6	A
			PM	11.1	B
2	Fifth Ave & Upas St	Signal	AM	13.7	B
			PM	14.7	B
3	Sixth Ave & Upas St/Balboa Dr	Signal	AM	12.6	B
			PM	12.7	B
4	Sixth Ave & Quince St	Signal	AM	4.3	A
			PM	8.4	A
5	Fifth Ave & Olive St	Two-Way Stop	AM	13.5	B
			PM	24.5	C
6	Site Driveway & Olive St	One-Way Stop	AM	Intersection does not exist in this scenario	
			PM		
7	Sixth Ave & Olive St	One-Way Stop	AM	17.6	C
			PM	22.6	C
8	Fifth Ave & Nutmeg St	All-Way Stop	AM	13.2	B
			PM	23.3	C
9	Sixth Ave & Nutmeg St	One-Way Stop	AM	19.2	C
			PM	27.8	D
10	Fifth Ave & Nutmeg Site Dwy	One-Way Stop	AM	Intersection not evaluated in this study	
			PM		
11	First Ave & Laurel St	Signal	AM	13.2	B
			PM	14.8	B
12	Fourth Ave & Laurel St	Signal	AM	11.5	B
			PM	15.6	B
13	Fifth Ave & Laurel St	Signal	AM	11.0	B
			PM	12.5	B
14	Sixth Ave & Laurel St/El Prado	Signal	AM	11.6	B
			PM	15.7	B
15	Fifth Ave & Maple St	Two-Way Stop	AM	17.6	C
			PM	33.9	D
16	Sixth Ave & Maple St	One-Way Stop	AM	25.1	D
			PM	22.4	C
17	Fourth Ave & Olive St	Two-Way Stop	AM	12.0	B
			PM	14.8	B

Notes:

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the *2010 Highway Capacity Manual* and performed using Synchro 9.0

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Table 8-3 Horizon Year (2035) Conditions Roadway Segment LOS Summary

ROADWAY SEGMENT	ROADWAY CLASSIFICATION	CAPACITY (a)	HORIZON YEAR (2035) BASELINE		
			ADT	V/C RATIO (C)	LOS
Fourth Ave					
Walnut Ave to Olive St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,702	0.383	A
Olive St to Nutmeg St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,985	0.399	A
Nutmeg St to Maple St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,975	0.399	A
Maple St to Laurel St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,282	0.416	A
Laurel St to Kalmia St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,546	0.431	B
Fifth Ave					
Upas St to Quince St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,225	0.470	B
Quince St to Olive St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	9,343	0.534	B
Olive St to Nutmeg St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	9,102	0.520	B
Nutmeg St to Maple St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,901	0.509	B
Maple St to Laurel St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	9,243	0.528	B
Laurel St to Kalmia St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,785	0.502	B
Sixth Ave					
Upas St to Quince St[b]	4 Lane Collector (no center lane)	22,500	19,222	0.854	**E**
Quince St to Olive St[b]	4 Lane Collector (no center lane)	22,500	17,240	0.766	D
Olive St to Nutmeg St[b]	4 Lane Collector (no center lane)	22,500	16,916	0.752	D
Nutmeg St to Maple St[b]	4 Lane Collector (no center lane)	22,500	16,812	0.747	D
Maple St to Laurel St[b]	4 Lane Collector (no center lane)	22,500	17,939	0.797	D
Laurel St to Kalmia St	2 Lane Collector (continuous left-turn lane)	15,000	14,110	0.941	**E**
Olive St					
Fourth Ave to Fifth Ave	2 Lane Sub-Collector	2,200	1,052	0.478	C
Fifth Ave to Project Driveway	2 Lane Sub-Collector	2,200	1,112	0.505	C
Project Driveway to Sixth Ave	2 Lane Sub-Collector	2,200	1,112	0.505	C
Laurel St					
Third Ave to Fourth Ave	2 Lane Collector (continuous left-turn lane)	15,000	8,403	0.560	C
Fourth Ave to Fifth Ave	2 Lane Collector (continuous left-turn lane)	15,000	8,550	0.570	C
Fifth Ave to Sixth Ave	2 Lane Collector (continuous left-turn lane)	15,000	7,019	0.468	C

Notes:

Bold values indicate roadway segments operating at LOS E or F.

(a) LOS E capacity is shown, except for the 2-Lane Sub-Collector classification which represents LOS C capacity

(b) Along Sixth Avenue, the 4 Lane Collector (no center lane) capacity was modified because there are minimal opportunities for southbound left turns due to Balboa Park.

(c) The v/c Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

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9 HORIZON YEAR (2035) WITH PROJECT CONDITIONS

This section provides a description of the Horizon Year (2035) Conditions with the addition of the 6th and Olive project traffic.

9.1 TRAFFIC VOLUMES

Horizon Year (2035) with Project Conditions volumes were determined by adding the project traffic to the Horizon Year (2035) Conditions volumes and are shown in **Figures 9-1** & **9-2**.

9.2 ROADWAY NETWORK

Fourth Avenue north of Maple Street was modified to have two lanes of travel instead of three to reflect the addition of a buffered bike lane that is currently being designed by SANDAG and is funded for construction by 2021. Changes to the existing roadway network assumed for this scenario include roadway capacity modifications along Fourth Avenue and intersection geometry changes at the intersection of Fourth Avenue and Olive Street.

9.3 INTERSECTION ANALYSIS

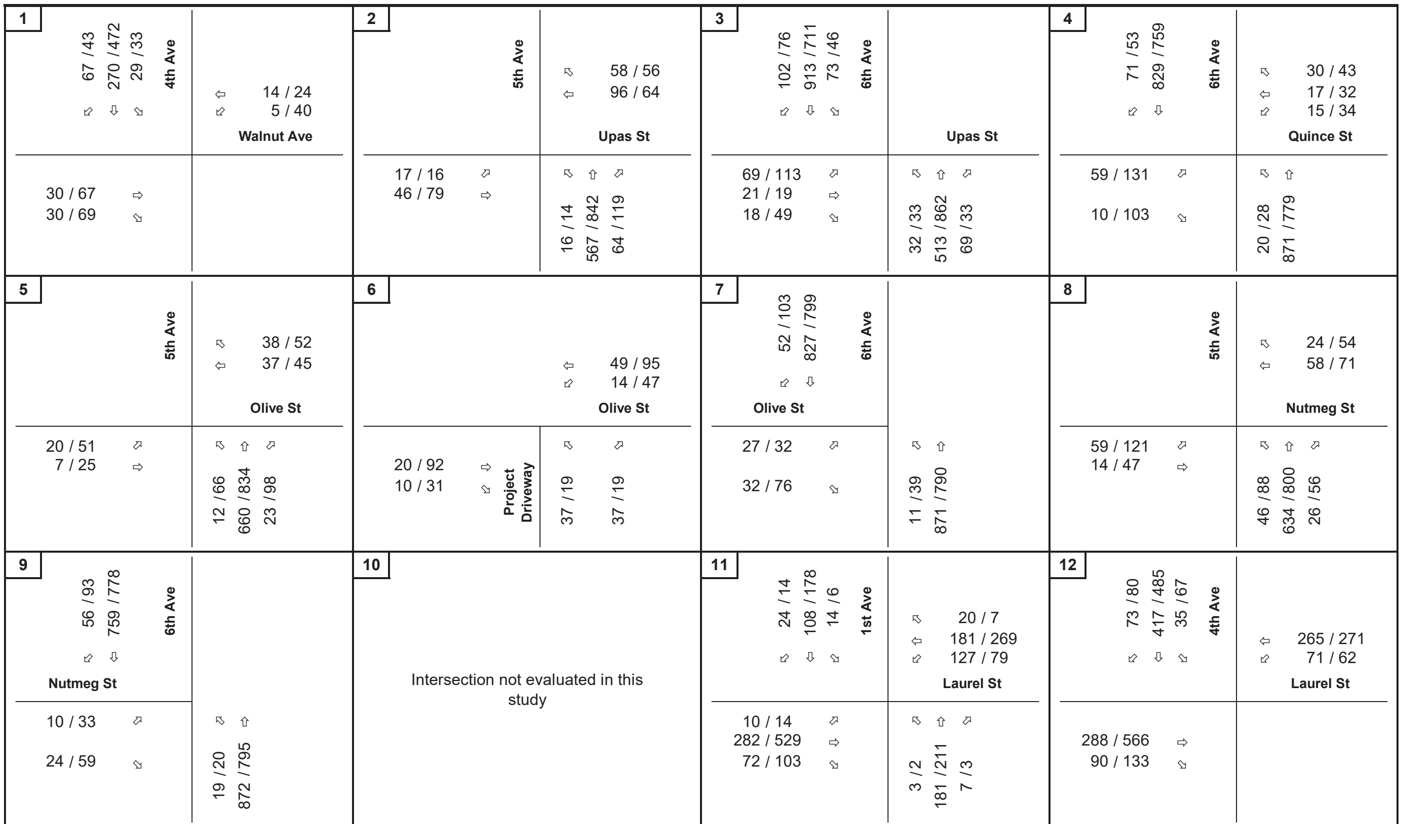
Table 9-1 displays the LOS analysis results for the study intersections under the Horizon Year (2035) with Project Conditions. As shown in the table, the intersection of Fifth Avenue and Maple Street would operate at LOS E during the PM peak period. This intersection would meet thresholds of significant impacts for the project and would be considered a significant cumulative impact.

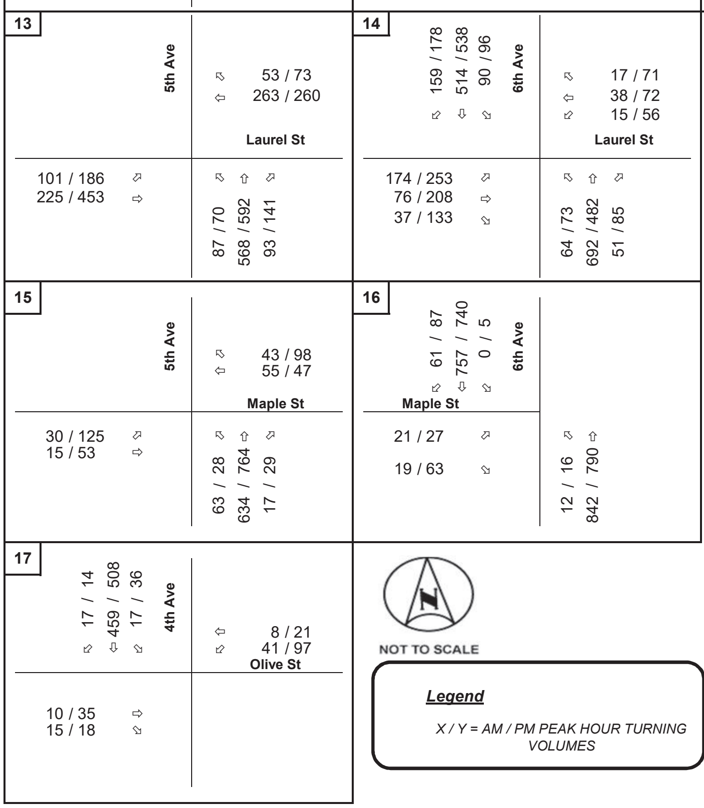
This finding is consistent with the previous *St. Paul's Cathedral and Residences* approval. Mitigation of the project impact was completed by a 22.4% fair share payment towards a traffic signal at the intersection of Nutmeg and Fifth Avenue as part of the *St. Paul's Cathedral and Residences* project approval. Applicant is to provide evidence of payment towards fair share contributions for the *St. Paul's Cathedral and Residences* project prior to issuance of project approval.

Appendix B contains the intersections LOS calculation worksheets.

9.4 ROADWAY SEGMENT ANALYSIS

Table 9-2 displays the roadway segments analysis under the Horizon Year (2035) with Project Conditions. As shown in the table, all study roadway segments would continue to operate at LOS C or better with the addition of the proposed project except the segments of Sixth Avenue between Upas Street and Quince Street and between Laurel Street and Kalmia Street which would continue to operate at LOS E. The increase in volume-to-capacity from project traffic for these segments is 0.20 or less. No significant cumulative impacts to the roadway segments in the study area as a result of the proposed project were found in the Horizon Year (2035) conditions.





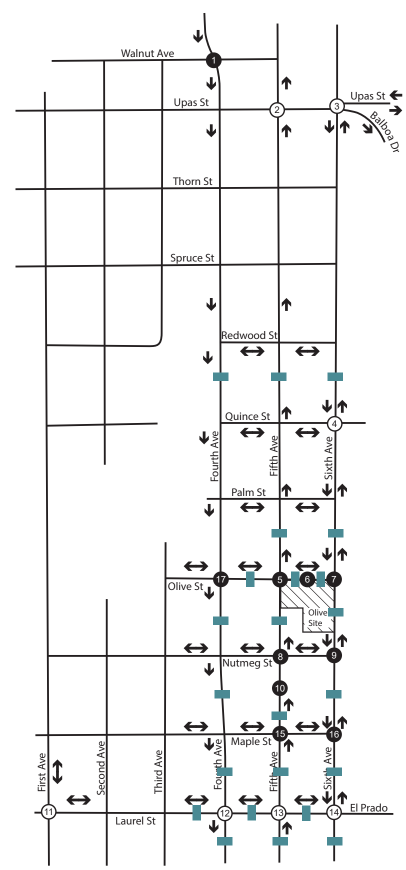


FIGURE 9-1
Horizon Year with Project Peak-Hour Traffic Volumes

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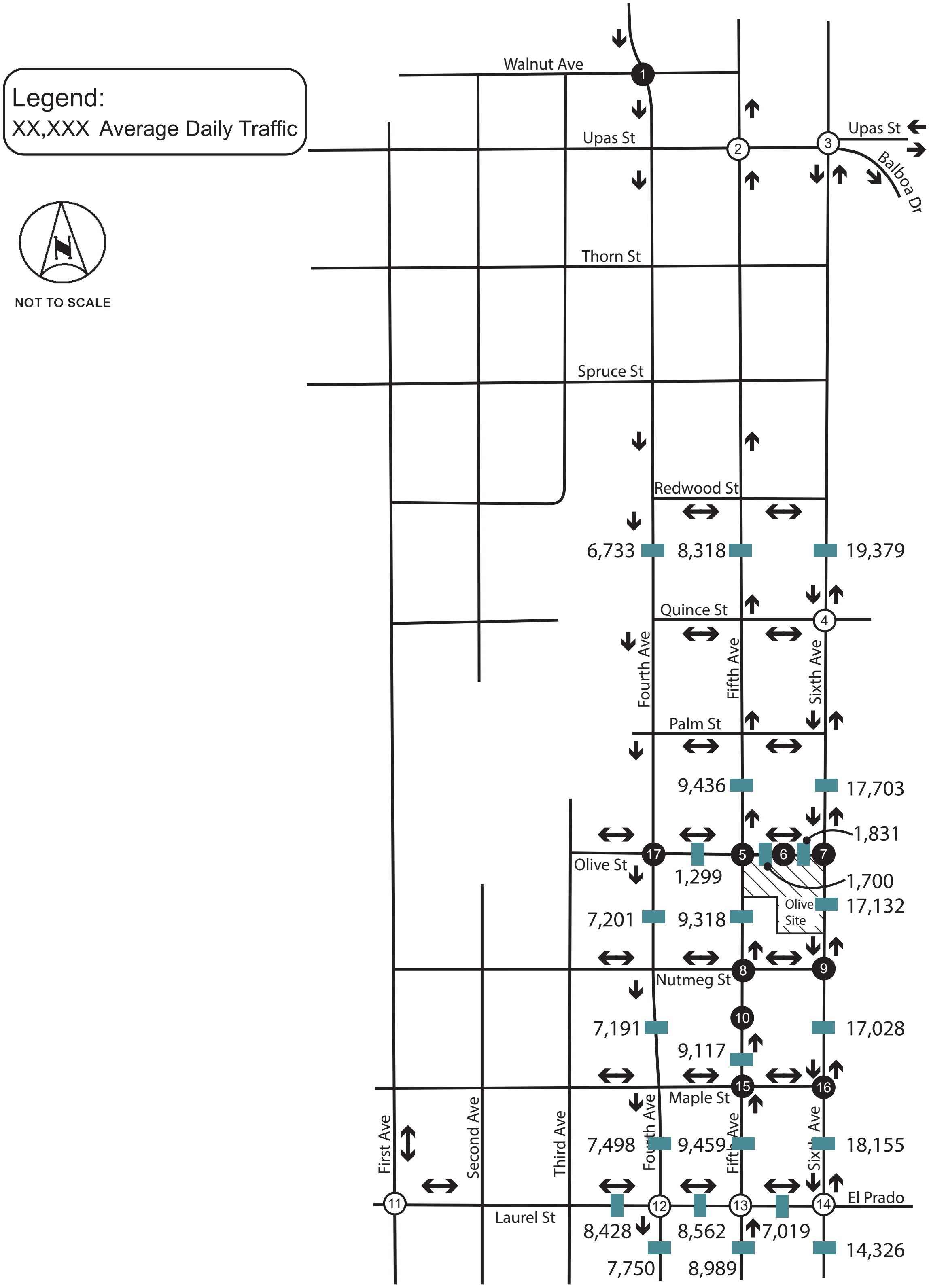

FIGURE 9-2
Horizon Year (2035) with Project ADT Volumes

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Table 9-1 Horizon Year (2035) with Project Conditions Intersection LOS Summary

	INTERSECTION	TRAFFIC CONTROL	PEAK HOUR	HORIZON YEAR (2035) BASELINE		HORIZON YEAR (2035) BASELINE PLUS PROJECT			
				DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	Δ (c)	SIGNIFICANT?
1	Fourth Ave & Walnut Ave	All-Way Stop	AM	8.6	A	8.6	A	0.0	NO
			PM	11.1	B	11.1	B	0.0	NO
2	Fifth Ave & Upas St	Signal	AM	13.7	B	13.0	B	-0.7	NO
			PM	14.7	B	14.8	B	0.1	NO
3	Sixth Ave & Upas St/Balboa Dr	Signal	AM	12.6	B	12.0	B	-0.6	NO
			PM	12.7	B	12.7	B	0.0	NO
4	Sixth Ave & Quince St	Signal	AM	4.3	A	3.8	A	-0.5	NO
			PM	8.4	A	8.4	A	0.0	NO
5	Fifth Ave & Olive St	Two-Way Stop	AM	13.5	B	15.1	C	1.6	NO
			PM	24.5	C	27.7	D	3.2	NO
6	Site Driveway & Olive St	One-Way Stop	AM	Intersection does not exist in this scenario		9.1	A	N/A	NO
			PM			10.0	B	N/A	NO
7	Sixth Ave & Olive St	One-Way Stop	AM	17.6	C	29.3	D	11.7	NO
			PM	22.6	C	31.9	D	9.3	NO
8	Fifth Ave & Nutmeg St	All-Way Stop	AM	13.2	B	13.3	B	0.1	NO
			PM	23.3	C	25.7	D	2.4	NO
9	Sixth Ave & Nutmeg St	One-Way Stop	AM	19.2	C	19.6	C	0.4	NO
			PM	27.8	D	28.4	D	0.6	NO
10	Fifth Ave & Nutmeg Site Dwy	One-Way Stop	AM	Intersection not evaluated in this study					
			PM						
11	First Ave & Laurel St	Signal	AM	13.2	B	12.7	B	-0.5	NO
			PM	14.8	B	14.9	B	0.1	NO
12	Fourth Ave & Laurel St	Signal	AM	11.5	B	10.9	B	-0.6	NO
			PM	15.6	B	15.7	B	0.1	NO
13	Fifth Ave & Laurel St	Signal	AM	11.0	B	10.4	B	-0.6	NO
			PM	12.5	B	12.6	B	0.1	NO
14	Sixth Ave & Laurel St/El Prado	Signal	AM	11.6	B	10.8	B	-0.8	NO
			PM	15.7	B	15.8	B	0.1	NO
15	Fifth Ave & Maple St	Two-Way Stop	AM	17.6	C	17.8	C	0.2	NO
			PM	33.9	D	36.7	**E**	2.8	**YES**
16	Sixth Ave & Maple St	One-Way Stop	AM	25.1	D	25.8	D	0.7	NO
			PM	22.4	C	22.9	C	0.5	NO
17	Fourth Ave & Olive St	Two-Way Stop	AM	12.0	B	11.9	B	-0.1	NO
			PM	14.8	B	15.3	C	0.5	NO

Notes:

Bold values indicate intersections operating at LOS E or F. **Bold and shaded** values indicate project significant impact.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the *2010 Highway Capacity Manual* and performed using Synchro 9.0

(c) Change in delay due to addition of project traffic measured in seconds per vehicle

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Table 9-2 Horizon Year (2035) with Project Conditions Roadway Segment LOS Summary

ROADWAY SEGMENT	ROADWAY CLASSIFICATION	CAPACITY (a)	HORIZON YEAR (2035) BASELINE			HORIZON YEAR (2035) PLUS PROJECT			Δ in ADT	Δ in V/C	SIGNIFICANT?
			ADT	V/C RATIO (C)	LOS	ADT	V/C RATIO (C)	LOS			
Fourth Ave											
Walnut Ave to Olive St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,702	0.383	A	6,733	0.385	A	31	0.002	NO
Olive St to Nutmeg St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,985	0.399	A	7,201	0.411	A	216	0.012	NO
Nutmeg St to Maple St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,975	0.399	A	7,191	0.411	A	216	0.012	NO
Maple St to Laurel St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,282	0.416	A	7,498	0.428	A	216	0.012	NO
Laurel St to Kalmia St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,546	0.431	B	7,750	0.443	B	204	0.012	NO
Fifth Ave											
Upas St to Quince St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,225	0.470	B	8,318	0.475	B	93	0.005	NO
Quince St to Olive St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	9,343	0.534	B	9,436	0.539	B	93	0.005	NO
Olive St to Nutmeg St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	9,102	0.520	B	9,318	0.532	B	216	0.012	NO
Nutmeg St to Maple St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,901	0.509	B	9,117	0.521	B	216	0.012	NO
Maple St to Laurel St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	9,243	0.528	B	9,459	0.541	B	216	0.013	NO
Laurel St to Kalmia St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,785	0.502	B	8,989	0.514	B	204	0.012	NO
Sixth Ave											
Upas St to Quince St[b]	4 Lane Collector (no center lane)	22,500	19,222	0.854	**E**	19,654	0.874	**E**	432	0.020	NO
Quince St to Olive St[b]	4 Lane Collector (no center lane)	22,500	17,240	0.766	D	17,703	0.787	D	463	0.021	NO
Olive St to Nutmeg St[b]	4 Lane Collector (no center lane)	22,500	16,916	0.752	D	17,132	0.761	D	216	0.009	NO
Nutmeg St to Maple St[b]	4 Lane Collector (no center lane)	22,500	16,812	0.747	D	17,028	0.757	D	216	0.010	NO
Maple St to Laurel St[b]	4 Lane Collector (no center lane)	22,500	17,939	0.797	D	18,155	0.807	D	216	0.010	NO
Laurel St to Kalmia St	2 Lane Collector (continuous left-turn lane)	15,000	14,110	0.941	**E**	14,326	0.955	**E**	216	0.014	NO
Olive St											
Fourth Ave to Fifth Ave	2 Lane Sub-Collector	2,200	1,052	0.478	C	1,299	0.59	C	247	0.112	NO
Fifth Ave to Project Driveway	2 Lane Sub-Collector	2,200	1,112	0.505	C	1,700	0.773	C	588	0.268	NO
Project Driveway to Sixth Ave	2 Lane Sub-Collector	2,200	1,112	0.505	C	1,831	0.832	C	719	0.327	NO
Laurel St											
Third Ave to Fourth Ave	2 Lane Collector (continuous left-turn lane)	15,000	8,403	0.560	C	8,428	0.562	C	25	0.002	NO
Fourth Ave to Fifth Ave	2 Lane Collector (continuous left-turn lane)	15,000	8,550	0.570	C	8,562	0.571	C	12	0.001	NO
Fifth Ave to Sixth Ave	2 Lane Collector (continuous left-turn lane)	15,000	7,019	0.468	C	7,019	0.468	C	0	0.000	NO

Notes:

Bold values indicate roadway segments operating at LOS E or F.

(a) LOS E capacity is shown, except for the 2-Lane Sub-Collector classification which represents LOS C capacity

(b) Along Sixth Avenue, the 4 Lane Collector (no center lane) capacity was modified because there are minimal opportunities for southbound left turns due to Balboa Park.

(c) The v/c Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

9.5 IMPACTS AND MITIGATIONS

Based on the current City's guidelines, there would be a significant cumulative project traffic impact at the following intersection under the Horizon Year (2035) scenario:

- Fifth Avenue & Maple Street

This finding is consistent with the findings of the previous *St. Paul's Cathedral and Residences* approval. Mitigation of the project impact established as part of the *St. Paul's Cathedral and Residences* project approval was fair share payment towards a traffic signal at the intersection of Nutmeg Street and Fifth Avenue. With a traffic signal at that location, it is anticipated that the traffic going through the intersection of Maple Street and Fifth Avenue would decrease and the intersection would return to acceptable LOS. Therefore, prior to issuance of the first building permit, the Owner/Permittee shall make a fair share contribution of 22.4% toward the construction of a traffic signal at the intersection of Nutmeg Street and Fifth Avenue.

Based on the current City's guidelines, there would be no significant traffic impacts at the study area roadway segments under the Horizon Year (2035) scenario.

10 ADDITIONAL TOPICS

This section discusses on-site parking for the proposed project.

10.1 PARKING

Per section 142.0525 through section 142.0530 of the City of San Diego's Municipal Code and applying the affordable housing parking requirements to the project, the proposed project is required to provide at least 214 automobile parking spaces, including 6 carpool/zero emissions vehicles, 8 total handicap spaces and 2 van accessible handicap space, 24 motorcycle spaces, and 101 bicycle spaces. The proposed site plan provides 348 automobile parking spaces, including 6 carpool/zero emissions vehicles, 10 total handicap spaces and 3 van accessible handicap spaces, 25 motorcycle spaces and 116 proposed bicycle spaces. With the factors assumed shown in **Table 10-1** below, the site plan exceeds City requirements.

Table 10–1 Project Parking Summary

RESIDENTIAL										
		AUTOMOBILE SPACES			MOTORCYCLE SPACES			BICYCLE SPACES		
TYPE	DU	FACTOR	R	P	FACTOR	R	P	FACTOR	R	P
Studio (>400SF)	30	0.5	15	278	0.1	3	21	0.4	12	102
1 Bedroom	93	0.5	47		0.1	9		0.4	37	
2 Bedroom	79	1.0	79		0.1	8		0.5	40	
3 Bedroom	2	1.5	3		0.1	0		0.6	1	
		Total	**144**	**278**	**Total**	**20**	**21**	**Total**	**90**	**102**
COMMERCIAL – CC-3-9 ZONE										
		AUTOMOBILE SPACES			MOTORCYCLE SPACES			BICYCLE SPACES		
TYPE	KSF	FACTOR	R	P	FACTOR	R	P	FACTOR	R	P
Cathedral Office Space	33.1	2.1	70	70	2% of Automobile Required Spaces	4	4	0.1 Short Term + 0.05 Long Term	11	14
		Total	**70**	**70**	**Total**	**4**	**4**	**Total**	**11**	**14**

PARKING SUMMARY										
		AUTOMOBILE SPACES			MOTORCYCLE SPACES			BICYCLE SPACES		
TYPE	UNIT	FACTOR	R	P	FACTOR	R	P	FACTOR	R	P
Residential	204 DU	-	144	278	-	20	21	-	90	102
Commercial	33.1 KSF	-	70	70	-	4	4	-	11	14
		Total	**214**	**348**	**Total**	**24**	**25**	**Total**	**101**	**116**

OTHER AUTOMOBILE PARKING REQUIREMENTS			
TYPE	FACTOR	R	P
Carpool/Zero Emissions Vehicles	Non-residential uses only	6	6
Accessible Spaces	For 301-400 total spaces, required 8 HC spaces	8	10
Van Accessible HC Spaces	2 out of 8 HC	2	3

R = Minimum Required; P = Provided

10.2 SITE ACCESS AND ON-SITE CIRCULATION

The primary access location for the proposed project site is located on Olive Street and serves the underground parking. The driveway would provide full access (left in, right in, left out, right out). Volumes on Olive Street are currently around 1,000 daily trips and would continue to be less than 2,000 daily trips with the proposed project and growth projections. Driveway analyses performed in the study show minimal expected delays at the driveway. Queuing is not anticipated to be an issue turning into the site.

A passenger loading area and commercial loading area are provided along Olive Street. These loading areas provide a space for people or goods to load and unload without having to use the underground parking. There is not anticipated to be any peak loading or unloading time that would result in special considerations.

The repurposing of Olive Street for the loading areas and project access would result in a loss of one general purpose on-street parking space.

10.3 PEDESTRIAN FACILITIES

Sidewalks will continue to be provided along the property frontage. There are no impacts to the pedestrian facilities in the area as a result of the proposed project.

10.4 BICYCLE FACILITIES

Fifth Avenue currently has a buffered bicycle lane on the western side of the street adjacent to the project. Sixth Avenue is currently a Class III bike route. The proposed project would not impact the existing or proposed bicycle network.

10.5 TRANSIT

The project site is currently served by Metropolitan Transit Service (MTS) Route 3 and Route 120.

Route 3 connects to the Fifth Avenue Trolley Station, and provides service from Hillcrest (north of the site) to downtown and Southeast San Diego. Route 3 provides primarily 10-15 minute headways during the weekdays between 5:00 am and midnight. It also operates on Saturdays and Sundays with 30-60 minute headways.

There is an existing bus stop for northbound service on the Route 3 line at the northeast corner of Fifth Avenue and Nutmeg Street that is less than a block from the proposed project. Access to this bus stop is provided by the existing sidewalk and there would be no need to cross a street to get to it.

There is an existing bus stop for southbound service on the Route 3 line at the southwest corner of Fourth Avenue and Nutmeg Street that is approximately 700 feet from the proposed project. Access to this bus stop would require crossing Fourth Avenue and Fifth Avenue along Nutmeg Street. These are both currently all-way stop-controlled intersections that would allow for controlled pedestrian crossings. Alternatively, there is an existing bus stop for southbound bus service at the southwest corner of Fourth Avenue and Palm Street that is approximately 600 feet from the proposed project. Access to this bus stop would require crossing Fourth Avenue and Fifth Avenue along Olive Street; both of which are currently side-street stop-controlled intersections and have less protection for pedestrian crossings.

Route 120 provides limited stops between downtown and Linda Vista, and carries on to the Kearny Mesa area of San Diego. The closest stops to the site for Route 120 are at Laurel Street, approximately 1,200 feet away from the site. Northbound access is provided at the bus stop located at Fifth Avenue and Laurel Street; southbound access is provided at the bus stop located at Fourth Avenue and Laurel Street. Route 120 provides 15 minute headways during weekdays between 6:00 am and 11:00 pm. It also operates on Saturdays and Sundays with 30-60 minute headways.

The site is well served by the existing transit network. No additional improvements related to transit access are needed.

Appendix E contains a copy of the current schedules for MTS Route 3 and Route 120.

11 FINDINGS & CONCLUSIONS

The following section provides a summary of the key findings and study recommendations and includes a summary table that compares the results from the different scenarios.

11.1 SUMMARY OF INTERSECTION ANALYSES

Table 11-1 displays the intersection delay and LOS at all the study intersections for the different scenarios analyzed. As shown in the table, all intersections would operate at LOS D or better until Horizon Year (2035) conditions. Based on the City of San Diego's project impacts significance criteria, the 6th and Olive project would have a cumulative significant impact at the following intersection:

- Fifth Avenue & Maple Street

This finding is consistent with the findings of the previous *St. Paul's Cathedral and Residences* approval. Mitigation of the project impact established as part of the *St. Paul's Cathedral and Residences* project approval was fair share payment towards a traffic signal at the intersection of Nutmeg Street and Fifth Avenue. Therefore, prior to issuance of the first building permit, the Owner/Permittee shall make a fair share contribution of 22.4% toward the construction of a traffic signal at the intersection of Nutmeg Street and Fifth Avenue. No additional impacts were found as a result of the proposed project.

11.2 SUMMARY OF ROADWAY SEGMENT ANALYSES

Table 11-2 displays the daily traffic volumes and LOS at all the study roadway segments for the different scenarios analyzed. As shown in the table, all study roadway segments would operate at LOS C or better under all scenarios except the segments of Sixth Avenue between Upas Street and Quince Street and between Laurel Street and Kalmia Street. Both of these segments would operate at LOS E under at least one scenario. The project would increase the volume-to-capacity ratio on these locations by 0.20 or less. Based on the City of San Diego's project impact significance criteria, the 6th and Olive project would not have any significant impacts to roadway segments.

11.3 PARKING

The final site plan will provide adequate off-street parking for its proposed uses based on the City of San Diego Municipal Code requirements total.

11.4 ALTERNATIVE MODES OF TRANSPORTATION

The project is located in the Uptown community of San Diego and re-develops an existing property. Pedestrian, bicycle, and transit service are currently provided to the project site and the surrounding area. The proposed project would not change existing facilities. The proposed project increases density of residences in an area that is accommodating to alternative modes of transportation.

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Table 11-1 Summary of Intersection Level of Service Analysis

	INTERSECTION	PEAK HOUR	EXISTING		EXISTING BASELINE PLUS PROJECT			NEAR TERM (2021) BASELINE		NEAR TERM (2021) BASELINE PLUS PROJECT			HORIZON YEAR (2035) BASELINE		HORIZON YEAR (2035) BASELINE PLUS PROJECT		
			DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	Δ (c)	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	Δ (c)	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	Δ (c)
1	Fourth Ave & Walnut Ave	AM	8.3	A	8.3	A	0.0	8.3	A	8.3	A	0.0	8.6	A	8.6	A	0.0
		PM	10.2	B	10.3	B	0.1	10.2	B	10.3	B	0.1	11.1	B	11.1	B	0.0
2	Fifth Ave & Upas St	AM	13.5	B	13.6	B	0.1	13.5	B	13.6	B	0.1	13.7	B	13.0	B	-0.7
		PM	14.6	B	14.6	B	0.0	14.6	B	14.6	B	0.0	14.7	B	14.8	B	0.1
3	Sixth Ave & Upas St/Balboa Dr	AM	12.6	B	12.6	B	0.0	12.6	B	12.6	B	0.0	12.6	B	12.0	B	-0.6
		PM	12.6	B	12.6	B	0.0	12.6	B	12.6	B	0.0	12.7	B	12.7	B	0.0
4	Sixth Ave & Quince St	AM	4.1	A	4.1	A	0.0	4.1	A	4.1	A	0.0	4.3	A	3.8	A	-0.5
		PM	7.3	A	7.3	A	0.0	7.3	A	7.3	A	0.0	8.4	A	8.4	A	0.0
5	Fifth Ave & Olive St	AM	12.8	B	14.3	B	1.5	13.0	B	14.3	B	1.3	13.5	B	15.1	C	1.6
		PM	19.2	C	21.0	C	1.8	19.4	C	21.2	C	1.8	24.5	C	27.7	D	3.2
6	Site Driveway & Olive St	AM	Intersection does not exist in this scenario		9.1	A	N/A	Intersection does not exist in this scenario		9.1	A	N/A	Intersection does not exist in this scenario		9.1	A	N/A
		PM			9.9	A	N/A			9.9	A	N/A			10.0	B	N/A
7	Sixth Ave & Olive St	AM	15.3	C	23.7	C	8.4	15.2	C	23.9	C	8.7	17.6	C	29.3	D	11.7
		PM	17.0	C	21.0	C	4.0	17.3	C	21.7	C	4.4	22.6	C	31.9	D	9.3
8	Fifth Ave & Nutmeg St	AM	11.4	B	11.5	B	0.1	11.4	B	11.6	B	0.2	13.2	B	13.3	B	0.1
		PM	16.8	C	17.8	C	1.0	16.8	C	17.9	C	1.1	23.3	C	25.7	D	2.4
9	Sixth Ave & Nutmeg St	AM	17.0	C	17.3	C	0.3	17.2	C	17.4	C	0.2	19.2	C	19.6	C	0.4
		PM	19.5	C	19.8	C	0.3	20.4	C	20.6	C	0.2	27.8	D	28.4	D	0.6
10	Fifth Ave & Nutmeg Site Dwy	AM	Intersection not evaluated in this study														
		PM															
11	First Ave & Laurel St	AM	12.7	B	12.7	B	0.0	12.7	B	12.7	B	0.0	13.2	B	12.7	B	-0.5
		PM	13.8	B	13.8	B	0.0	13.8	B	13.8	B	0.0	14.8	B	14.9	B	0.1
12	Fourth Ave & Laurel St	AM	11.3	B	11.3	B	0.0	11.3	B	11.4	B	0.1	11.5	B	10.9	B	-0.6
		PM	13.2	B	13.3	B	0.1	13.4	B	13.5	B	0.1	15.6	B	15.7	B	0.1
13	Fifth Ave & Laurel St	AM	10.6	B	10.6	B	0.0	10.6	B	10.6	B	0.0	11.0	B	10.4	B	-0.6
		PM	11.3	B	11.3	B	0.0	11.3	B	11.4	B	0.1	12.5	B	12.6	B	0.1
14	Sixth Ave & Laurel St/El Prado	AM	10.6	B	10.6	B	0.0	10.6	B	10.6	B	0.0	11.6	B	10.8	B	-0.8
		PM	13.7	B	13.8	B	0.1	13.8	B	13.9	B	0.1	15.7	B	15.8	B	0.1
15	Fifth Ave & Maple St	AM	15.9	C	16.0	C	0.1	15.9	C	16.0	C	0.1	17.6	C	17.8	C	0.2
		PM	24.2	C	25.4	D	1.2	24.2	C	25.4	D	1.2	33.9	D	36.7	**E**	**2.8**
16	Sixth Ave & Maple St	AM	20.6	C	20.9	C	0.3	20.6	C	20.9	C	0.3	25.1	D	25.8	D	0.7
		PM	17.6	C	17.9	C	0.3	17.6	C	17.9	C	0.3	22.4	C	22.9	C	0.5
17	Fourth Ave & Olive St	AM	11.7	B	11.7	B	0.0	11.6	B	11.5	B	-0.1	12.0	B	11.9	B	-0.1
		PM	13.5	B	13.6	B	0.1	13.9	B	14.3	B	0.4	14.8	B	15.3	C	0.5

Notes:

Bold values indicate intersections operating at LOS E or F. **Bold and shaded** values indicate project significant impact.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the *2010 Highway Capacity Manual* and performed using Synchro 9

(c) Change in delay due to addition of project traffic measured in seconds per vehicle. **Bold and shaded** values indicate project significant impact.

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Table 11-2 Summary of Roadway Segment Level of Service Analysis

ROADWAY SEGMENT	ROADWAY CLASSIFICATION	CAPACITY (a)	EXISTING		EXISTING + PROJECT			ROADWAY CLASSIFICATION	CAPACITY (a)	NEAR TERM (2021)		NEAR TERM (2021) + PROJECT			ROADWAY CLASSIFICATION	CAPACITY (a)	HORIZON YEAR (2035)		HORIZON YEAR (2035) + PROJECT		
			ADT / LOS		ADT / LOS		Δ in V/C			ADT / LOS		ADT / LOS		Δ in V/C			ADT / LOS		ADT / LOS		Δ in V/C
Fourth Ave																					
Walnut Ave to Olive St	3 Lane Collector (one-way)	26,000	6,150	A	6,181	A	0.001	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,177	A	6,208	A	0.002	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,702	A	6,733	A	0.002
Olive St to Nutmeg St	3 Lane Collector (one-way)	26,000	6,410	A	6,626	A	0.008	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,423	A	6,639	A	0.012	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,985	A	7,201	A	0.012
Nutmeg St to Maple St	3 Lane Collector (one-way)	26,000	6,401	A	6,617	A	0.009	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,414	A	6,630	A	0.012	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,975	A	7,191	A	0.012
Maple St to Laurel St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,575	A	6,791	A	0.012	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,625	A	6,841	A	0.012	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,282	A	7,498	A	0.012
Laurel St to Kalmia St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,813	A	7,017	A	0.012	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	6,986	A	7,190	A	0.012	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,546	B	7,750	B	0.012
Fifth Ave																					
Upas St to Quince St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,581	B	7,674	B	0.006	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,610	B	7,703	B	0.005	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,225	B	8,318	B	0.005
Quince St to Olive St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,436	B	8,529	B	0.005	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,465	B	8,558	B	0.005	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	9,343	B	9,436	B	0.005
Olive St to Nutmeg St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,218	B	8,434	B	0.012	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,227	B	8,443	B	0.012	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	9,102	B	9,318	B	0.012
Nutmeg St to Maple St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,916	B	8,132	B	0.013	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,938	B	8,154	B	0.012	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,901	B	9,117	B	0.012
Maple St to Laurel St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,585	B	8,801	B	0.012	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,644	B	8,860	B	0.012	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	9,243	B	9,459	B	0.013
Laurel St to Kalmia St	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,813	B	8,017	B	0.012	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	7,881	B	8,085	B	0.012	3 Lane Collector (one-way w/ 2 vehicular lanes, 1 multimodal lane)	17,500	8,785	B	8,989	B	0.012
Sixth Ave																					
Upas St to Quince St[b]	4 Lane Collector (no center lane)	22,500	17,631	D	18,063	D	0.019	4 Lane Collector (no center lane)	22,500	17,909	D	18,341	D	0.019	4 Lane Collector (no center lane)	22,500	19,222	**E**	19,654	**E**	0.020
Quince St to Olive St[b]	4 Lane Collector (no center lane)	22,500	16,373	D	16,836	D	0.02	4 Lane Collector (no center lane)	22,500	16,651	D	17,114	D	0.021	4 Lane Collector (no center lane)	22,500	17,240	D	17,703	D	0.021
Olive St to Nutmeg St[b]	4 Lane Collector (no center lane)	22,500	16,075	D	16,291	D	0.01	4 Lane Collector (no center lane)	22,500	16,448	D	16,664	D	0.01	4 Lane Collector (no center lane)	22,500	16,916	D	17,132	D	0.009
Nutmeg St to Maple St[b]	4 Lane Collector (no center lane)	22,500	15,950	D	16,166	D	0.009	4 Lane Collector (no center lane)	22,500	16,255	D	16,471	D	0.01	4 Lane Collector (no center lane)	22,500	16,812	D	17,028	D	0.010
Maple St to Laurel St[b]	4 Lane Collector (no center lane)	22,500	15,954	D	16,170	D	0.01	4 Lane Collector (no center lane)	22,500	16,203	D	16,419	D	0.01	4 Lane Collector (no center lane)	22,500	17,939	D	18,155	D	0.010
Laurel St to Kalmia St	2 Lane Collector (continuous left-turn lane)	15,000	13,737	**E**	13,953	**E**	0.014	2 Lane Collector (continuous left-turn lane)	15,000	13,921	**E**	14,137	**E**	0.014	2 Lane Collector (continuous left-turn lane)	15,000	14,110	**E**	14,326	**E**	0.014
Olive St																					
Fourth Ave to Fifth Ave	2 Lane Sub-Collector	2,200	965	C	1,212	C	0.112	2 Lane Sub-Collector	2,200	979	C	1,226	C	0.112	2 Lane Sub-Collector	2,200	1,052	C	1,299	C	0.112
Fifth Ave to Project Driveway	2 Lane Sub-Collector	2,200	1,004	C	1,592	C	0.268	2 Lane Sub-Collector	2,200	1,031	C	1,619	C	0.267	2 Lane Sub-Collector	2,200	1,112	C	1,700	C	0.268
Project Driveway to Sixth Ave	2 Lane Sub-Collector	2,200	1,004	C	1,723	C	0.327	2 Lane Sub-Collector	2,200	1,031	C	1,750	C	0.326	2 Lane Sub-Collector	2,200	1,112	C	1,831	C	0.327
Laurel St																					
Third Ave to Fourth Ave	2 Lane Collector (continuous left-turn lane)	15,000	7,812	C	7,837	C	0.001	2 Lane Collector (continuous left-turn lane)	15,000	7,878	C	7,903	C	0.002	2 Lane Collector (continuous left-turn lane)	15,000	8,403	C	8,428	C	0.002
Fourth Ave to Fifth Ave	2 Lane Collector (continuous left-turn lane)	15,000	7,791	C	7,803	C	0.001	2 Lane Collector (continuous left-turn lane)	15,000	7,857	C	7,869	C	0.001	2 Lane Collector (continuous left-turn lane)	15,000	8,550	C	8,562	C	0.001
Fifth Ave to Sixth Ave	2 Lane Collector (continuous left-turn lane)	15,000	6,543	B	6,543	B	0.000	2 Lane Collector (continuous left-turn lane)	15,000	6,609	B	6,609	B	0.000	2 Lane Collector (continuous left-turn lane)	15,000	7,019	C	7,019	C	0.000

Notes:

Bold values indicate roadway segments operating at LOS E or F.

(a) LOS E capacity is shown, except for the 2-Lane Sub-Collector classification which represents LOS C capacity

(b) Along Sixth Avenue, the 4 Lane Collector (no center lane) capacity was modified because there are minimal opportunities for southbound left turns due to Balboa Park.

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WASTE MANAGEMENT PLAN

FOR

Sixth and Olive

San Diego, California

Project No. 591198

Prepared for:

City of San Diego Environmental Services Department

9601 Ridgehaven Court, Suite 320

San Diego, California 92123-1636

Prepared by:

KLR Planning

P. O. Box 882676

San Diego, California 92168-2676

Telephone: 619-578-9505

Facsimile: 619-692-4243

March 2018

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1.0 INTRODUCTION

The purpose of this Waste Management Plan (WMP) for the *Sixth and Olive Project* in the City of San Diego is to provide analysis of the solid waste impacts anticipated for the *Sixth and Olive Project*. The goal of this WMP is to identify sufficient measures to minimize potential impacts of the *Sixth and Olive Project* on solid waste services such that significant impacts are avoided. Two acceptable approaches to managing waste are to reduce the tons disposed to 60 tons or less, or to provide diversion of 75 percent or more, thus meeting the goal established by Assembly Bill 341.

The 16,540-square-foot *Sixth and Olive Project* site is in the southwest corner of Sixth Avenue and Olive Street, San Diego, California 92101. The project site is situated west of Sixth Avenue, east of Fifth Avenue, north of Nutmeg Street, and south of Olive Street and is within the Uptown Community Plan area. (See Figure 1, *Sixth and Olive Project Location Map and Aerial*.) The project site is currently a developed two apartment buildings (6,970 square feet and 7,102 square feet), 10,746 square feet of commercial office, and surface parking. Balboa Park is located east of the project site. To the south of the project site is St. Paul's Episcopal Cathedral. A mix of commercial retail and commercial office space is located west of the project site. To the north of the project site are The Abbey on Fifth Avenue and multi-family residential. The site is zoned RM-4-10 and CC-3-9.

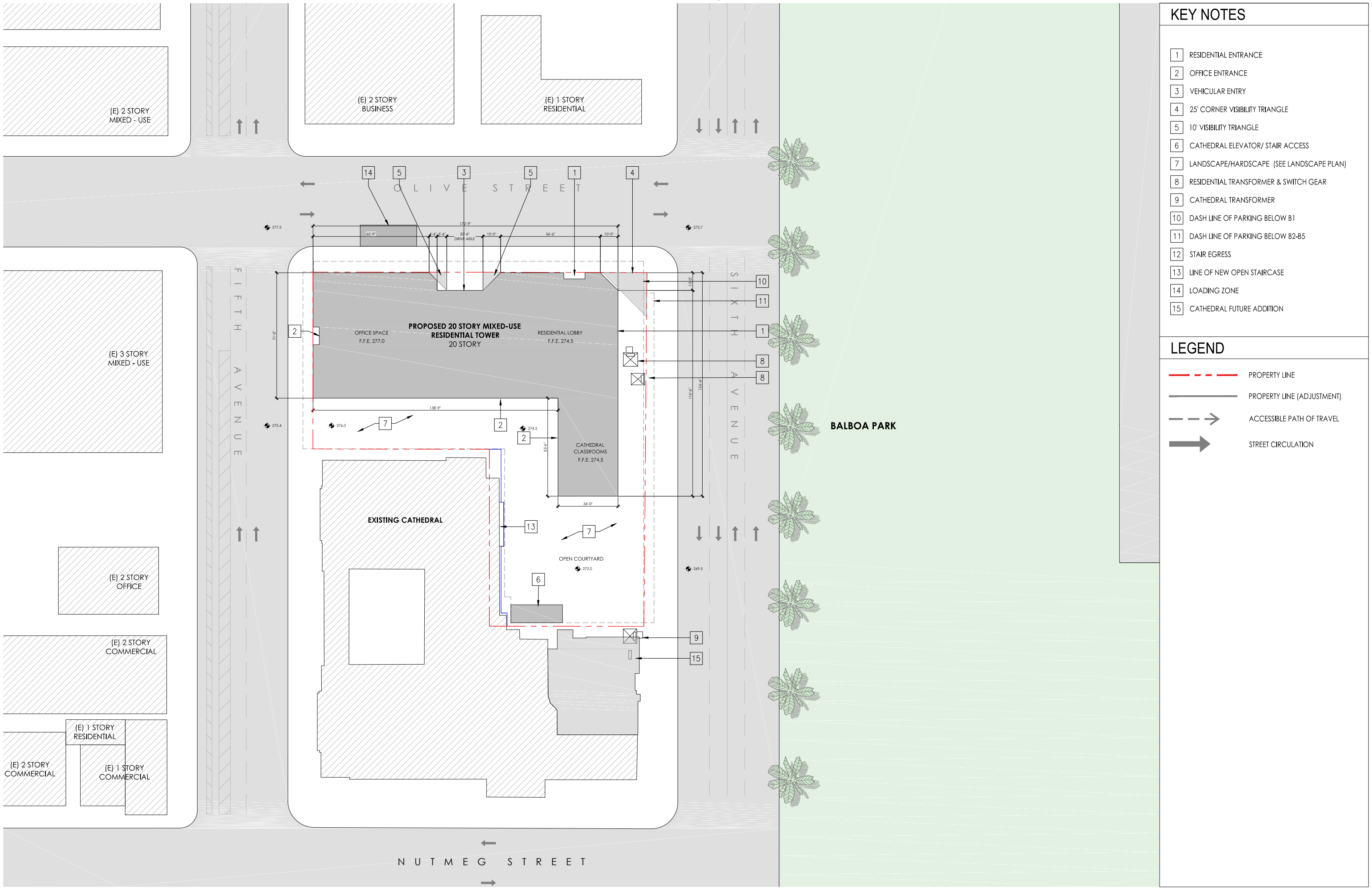
The proposed project involves demolition of the existing surface parking (4,440 square feet) and existing buildings (24,818 total square feet) and construction of a mixed-use development (approximately 196,837 square feet net floor area) with multi-family residential, commercial office, and underground parking. The project would be a maximum of 20 stories in height and would have a total of 204 residential units and 11,982 net square feet of commercial office space. A total of 348 parking spaces would be provided in a five-level underground parking structure. The project is being designed to comply with Cal-Green standards. (See Figure 2, *Sixth and Olive Project Site Plan*.)

This WMP consists of two sections corresponding to the implementation of site development: the *Construction Phase* (to include demolition) and the *Occupancy Phase* (post-construction). The WMP addresses the projected amount of waste that could be generated by the project based on current City generation rates and estimates; waste reduction goals; and recommended techniques to achieve the waste reduction goals, such as recycling. Construction of the project (including demolition) is anticipated to take approximately 24 months. Construction would take place in one phase and is estimated to begin January 2019.

Waste disposal sites and recycling methods and opportunities may change from those available today; however, it is not expected that waste diversion and disposal sites listed in Table 3, *Minimum On-site Refuse and Recyclable Material Storage Areas for Commercial Development,* would change by the time the project is anticipated to begin construction. This WMP includes the following general information known at the time the WMP was prepared:

Figure 1
Sixth and Olive - Project Location Map and Aerial

Figure 2
Sixth and Olive Project Site Plan



- Projected waste generation calculations and identification of types of waste materials generated;
- Source separation techniques for waste generated;
- How materials will be re-used on-site;
- Name and location of current recycling, re-use, and landfill facilities where waste will be disposed of if not re-used on-site;
- A "buy recycled" program;
- Measures to be implemented directed at reducing construction debris;
- Method(s) for communicating waste reduction and recycling goals to subcontractors;
- A general time line for construction and development; and
- A list of required progress and inspections by City staff, based on current ordinances.

2.0 BACKGROUND

In 1989, the California Legislature passed Assembly Bill (AB) 939: Integrated Waste Management Act, which mandated that all cities reduce waste disposed in landfills from generators within their borders by 50 percent by the year 2000. AB 939 required all local governments to prepare a Source Reduction and Recycling Element, which incorporates waste management policies and programs to achieve the mandated waste reduction. Since 1990, the City has diverted more than 50 percent of its generated waste stream from disposal. This bill specified that solid waste should be considered by the equation GENERATED = DISPOSED + DIVERTED. "Diverted" materials are put into a *hierarchy* in the law, as follows:

- First *source reduction*, such as using a reusable bag, making double-sided copies, or other measure that stops waste at the source.
- Secondary measures include *recycling* and *composting*. Because these measures often have transportation and processing impacts, they are considered less preferable than source reduction.
- In the Public Resources Code, various methods of *transformation* for energy production are limited to ten percent of the total waste reduction target.

In 2008, SB 1016 was chaptered. Known as the Solid Waste Disposal Measurement Act, SB 1016 maintained the 50 percent diversion requirement, but changed to a disposal-based measurement system, expressed as the 50 percent Equivalent Per Capita Disposal Target. This built upon AB 939 by implementing a simplified and timelier indicator of jurisdiction performance that focuses on reported disposal at Board-permitted disposal facilities. This established a goal of not recycling more, but disposing of less. AB 341: Jobs and Recycling, chaptered in 2011, was intended to create green jobs by expanding recycling to every multi-family dwelling and business. It charged CalRecycle with responsibility for ensuring that the State is diverting at least 75 percent of solid waste that is generated within the State by 2020. SB 1016 establishes that compliance with State law is measured by reducing the amount of waste material requiring disposal, and AB 341 increases the diversion target to 75 percent.

Additional local regulation pertaining to solid waste management includes the City of San Diego's Municipal Code Ch.14 Art. 2 Div. 8: §142.0810, §142.0820, Ch. 6 Art. 6 Div. 7; §66.0706, §66.0709, §66.0710; and Ch. 6 Art. 6 Div. 6; §66.0711, §66.0604, §66.0606. These statues designate refuse and recycling space allocation requirements for:

- on-site refuse and recyclable material storage requirements,
- diversion of construction and demolition debris regulations, and
- diversion of recyclable materials generated from residential facilities, businesses, commercial/institutional facilities, apartments, condominiums, and special events requiring a City permit.

The City of San Diego has established a threshold of 40,000 square feet of development as generating sufficient waste (60 tons) to have a potentially cumulatively significant impact on solid waste services. *Sixth and Olive Project* as proposed exceeds this threshold. The purpose of this WMP is to identify measures that would be implemented to reduce this potential solid waste impacts such that significant impacts are avoided.

The City Recycling Ordinance is found in Municipal Code section 66.0701 et. seq. It requires the provision of recycling service for all single-family residences; and commercial facilities and multifamily residences with service for four cubic yards or more. In addition, the ordinance also requires development of educational materials to ensure occupants are informed about the City's ordinance and recycling services including information on types of recyclable materials accepted.

Construction and Demolition (C&D) Debris Diversion Deposit Program applies to all applicants for building, demolition, and removal permits. This ordinance requires that the applicant post a deposit (Table 1, *C&D Debris Deposit Table*). The deposit is not returned until the applicant demonstrates that a minimum amount of the material generated has been diverted from disposal in landfills. Mixed construction debris recycling facilities in San Diego are evaluated quarterly to determine how much of the throughput is recycled, and how much is a "residual" material requiring disposal. Facilities that accept mixed debris typically achieve a 68 percent or less diversion rate. Single materials recyclers, such as metal recyclers, often achieve a nearly 100 percent diversion rate. When comingled materials are sent to a mixed facility, the 75 percent diversion goal established by AB 341 will not be met. Depending on the project, to ensure that the overall diversion goal is attained, some materials must often be separated and trucked to facilities with higher diversion rates, such as aggregate and metal recyclers.

2.1 On-Site Refuse and Recyclable Material Storage Area Requirements

The *Sixth and Olive Project* would be developed in one phase over an approximate 24-month period. Development is anticipated to begin January 2019. Because the *Sixth and Olive Project* includes residential and nonresidential development, on-site refuse and recyclable material storage areas will be provided.

Table 1
C&D Debris Deposit Table

Building Category	Sq. Ft. Subject to Ordinance*	Deposit per Sq. Ft.	Range of Deposits
Residential New Construction	500-125,000 detached 500-100,000 attached	$0.40	$200-$50,000 $200-$40,000
Non-residential New Construction	1,000-25,000 commercial 1,000-75,000 industrial	$0.20	$200-$5,000 $200-$15,000
Non-residential Alterations	286 with no maximum	$0.70	$200 and up
Residential Demolition	286 with no maximum	$0.70	$200 and up
Non-residential Demolition	1,000 with no maximum	$0.20	$200 and up
Roof Tear-off	All projects	-	$200
Residential Alterations	500 and above	-	$1,000

* Projects under the minimum square footage subject to the ordinance are exempt from the C&D debris recycling deposit.

2.2 On-Site Refuse and Recyclable Material Storage Areas for *Sixth and Olive Project*

Sixth and Olive Project would develop a mixed-use project with a total of 204 residential units and 11,982 net square feet of commercial office space. Table 2, *Minimum On-site Refuse and Recyclable Material Storage Areas for Residential Development*, shows the required amount of refuse and recyclable storage areas for the project's residential element. As shown in Table 2, the project would be required to provide 432 square feet each of exterior refuse and recyclable material storage area, for a total of 864 square feet of material storage area. Table 3, *Minimum On-site Refuse and Recyclable Material Storage Areas for Commercial Development*, shows the required amount of refuse and recyclable storage areas for the project's commercial retail element. As shown in Table 3, the project would be required to provide 48 square feet each of refuse and recyclable material storage area, for a total of 96 square feet of material storage area.

The project's refuse and recyclable material storage areas will be located interior to the building, as is typical for high-rise urban buildings. The property owner will contract with a waste collector who will collect recyclable materials and sort the materials at an off-site sorting yard.

3.0 EXISTING CONDITIONS

The *Sixth and Olive Project* site encompasses approximately 16,549 square feet of previously graded and developed land. The project site is bordered by Olive Street to the north, Nutmeg Street to the south, Balboa Park to the east, and Fifth Avenue to the east. The project site is currently developed with 4,440 square feet of surface parking and 24,818 square feet of multi-family residential and commercial office space.

Table 2
Minimum On-site Refuse and Recyclable Material Storage Areas for Residential Development

Number of Dwelling Units per Development	Minimum Refuse Storage Area per Development (square feet)	Minimum Recyclable Material Storage Area per Development (square feet)	Total Minimum Storage Area per Development (square feet)
2-6	12	12	24
7-15	24	24	48
16-25	48	48	96
26-50	96	96	192
51-75	144	144	288
76-100	192	192	384
101-125	240	240	480
126-150	288	288	576
151-175	336	336	672
176-200	384	384	768
201+	384 plus 48 square feet for every 25 dwelling units above 201	384 plus 48 square feet for every 25 dwelling units above 201	768 plus 96 square feet for every 25 dwelling units above 201

Source: City of San Diego Municipal Code, Chapter 14, Article 2, Division 8: Refuse and Recyclable Material Storage Regulations, §142.0820, Table 142-08B, effective January 1, 2000.

Table 3
Minimum On-site Refuse and Recyclable Material Storage Areas for Commercial Development

Gross Floor Area per Development (square feet)	Minimum Refuse Storage Area per Development (square feet)	Minimum Recyclable Material Storage Area per Development (square feet)	Total Minimum Storage Area per Development (square feet)
0 – 5,000	12	12	24
5,001 – 10,000	24	24	48
10,001 – 25,0000	48	48	96
25,001 – 50,000	96	96	192
50,001 – 75,000	144	144	288
75,001 – 100,000	192	192	384
100, 001+	192 plus 48 square feet for every 25,000 square feet of building area above 100,001	192 plus 48 square feet for every 25,000 square feet of building area above 100,001	384 plus 96 square feet for every 25,000 square feet of building area above 100,001

Source: City of San Diego Municipal Code, Chapter 14, Article 2, Division 8: Refuse and Recyclable Material Storage Regulations, §142.0830, Table 142-08C, effective January 1, 2000.

4.0 PROPOSED CONDITIONS

The proposed project involves demolition of existing surface parking (4,440 square feet) and building space (24,818 square feet) and construction of a mixed-use development (approximately 196,837 square feet net floor area) consisting of residential, commercial office, and underground parking. The project would be a maximum of 20 stories in height and would have a total of 204 residential units and 11,982 net square feet of commercial retail space. A total of 348 parking spaces would be provided in a five-level underground parking structure. The project is being designed to comply with Cal-Green standards. (See Figure 2, *Sixth and Olive Project Site Plan.*)

Construction will be completed in one phase over a 24-month period with construction anticipated to begin in January 2019. Construction practices will comply with local, State, and Federal regulations regarding handling of building materials to ensure waste minimization requirements are met.

5.0 CONSTRUCTION WASTE

Construction activities would generate packaging materials and unpainted wood, including wood pallets, and other miscellaneous debris. Construction debris would be separated on-site into material-specific containers to facilitate reuse and recycling and to increase the efficiency of waste reclamation and/or would be collected by a contracted waste hauler and separated at the facility. Source separation of materials at the construction site is essential to (1) ensure appropriate waste diversion rate, (2) minimize costs associated with transportation and disposal, and (3) facilitate compliance with the C&D ordinance. The types of construction waste anticipated to be generated include:

- Asphalt and Concrete
- Brick/Masonry/Tile
- Cardboard
- Carpet, Padding/Foam
- Drywall
- Landscape Debris
- Mixed C&D Debris
- Roofing Materials
- Scrap Metal
- Unpainted Wood and Pallets
- Garbage/Trash

Materials to be recycled would be redirected to appropriate recipients selected from ESD's directory of facilities that recycle construction materials, scrap metal, and yard waste.

5.1 Recycled Construction Materials

The *Sixth and Olive Project* will implement a target of 20 percent post-consumer recycled material content.

5.2 Managing Construction Material

Demolition and construction would occur over a period of approximately 24 months. ESD staff would be present for an early pre-construction meeting to evaluate waste segregation, signage, and salvage.

The project site is the location of an existing commercial development. The demolition phase will include the deconstruction/demolition and removal of the existing surface parking and buildings. Approximately 1,365 tons of waste is expected to be generated during demolition. Approximately 1,209.72 tons of material (88 percent) would be recycled, to include landscaping, concrete, asphalt, and non-useable lumber. Approximately five tons of debris would be disposed in a landfill, to include non-useable asphaltic paving that becomes contaminated with the underlying subgrade soils. Table 4, *Sixth and Olive Project Waste Generation – Demolition*, summarizes the type and amount of demolition materials, as well as diversion/disposal.

Table 4
Sixth and Olive Project Waste Generation – Demolition

Material Type	Estimated Waste Quantity (tons)	Handling	Estimated Diversion (tons)	Estimated Disposal (tons)
DEMOLITION WASTE				
Asphalt and Concrete	505	**Hanson Aggregates** 9229 Harris Plant Road San Diego, CA 92126 (100% diversion)	505	0
Foundations/ Building Structure	420	**Vulcan Carroll Canyon Landfill and Recycle Site** 10051 Black Mountain Road San Diego, CA 92126 (100% diversion)	420	0
Landscape Materials	40	**Miramar Greenery** 5180 Convoy Street San Diego, CA 92111 (100% diversion)	40	0
Floor Tile	20	**Otay C&D/Inert Debris Processing Facility** 1700 Maxwell Road Chula Vista, CA 91913 (76% diversion)	15.2	4.8
Glass	2	**Otay C&D/Inert Debris Processing Facility** 1700 Maxwell Road Chula Vista, CA 91913 (76% diversion)	1.52	0.48
Non-Useable Lumber	300	**Otay C&D/Inert Debris Processing Facility** 1700 Maxwell Road Chula Vista, CA 91913 (76% diversion)	228	72
Garbage/Trash	78	**Miramar Landfill** 5180 Convoy Street San Diego, CA 92111 (0% diversion)	0	78
TOTAL	1,365		1,209.72	155.28

In accordance with State diversion targets, a minimum of 75 percent of construction materials will be recycled. Materials to be recycled would be redirected to appropriate recipients selected from ESD's directory of facilities that recycle demolition materials, scrap metal, and yard waste.

To facilitate management of construction materials, the developer shall identify one person or agency connected with the proposed development to act as Solid Waste Management Coordinator, whose responsibility it becomes to work with all contractors and subcontractors to ensure material separation and coordinate proper disposal and diversion of waste generated. The Solid Waste Management Coordinator will help to ensure all diversion practices outlined in this Waste Management Plan are upheld and communicate goals to all contractors involved efficiently.

The responsibilities of the Solid Waste Management Coordinator, include, but are not limited to, the following:

- Review the Solid Waste Management Plan including responsibilities of Solid Waste Management Coordinator.
- Review and update procedures as needed for material separation and verify availability of containers and bins needed to avoid delays.

- Review and update procedures for periodic solid waste collection and transportation to recycling and disposing facilities.
- The authority to issue stop work orders if proper procedures are not being allowed.

The contractors will perform daily inspections of the construction site to ensure compliance with the requirements of the Waste Management Plan and all other applicable laws and ordinances and report directly to Solid Waste Management Coordinator. Daily inspections will include verifying the availability and number of dumpsters based on amount of debris being generated, correct labeling of dumpsters, proper sorting and segregation materials, and salvaging of excess materials. Additionally, the following apply:

- Solid waste management coordinator will be responsible for educating contractors and subcontractors regarding waste management plan requirements and ensuring that contractors and subcontractors carry out the measures described in the WMP.
- Solid waste management coordinator will ensure ESD attendance at a Precon and assure compliance with segregation requirements, and verification of recycled content in base materials.
- Recycling areas will be clearly identified with large signs, approved by ESD, and sufficient amounts of material-specific bins will be provided for necessary segregation.
- Recycling bins will be placed in areas that are readily accessible to contractors/subcontractors and in areas that will minimize misuse or contamination by employees and the public.
- Solid waste management coordinator will be responsible for ensuring that contamination rates in bins remain below 5 percent by weight of the bin.

Table 5, *Sixth and Olive Project Waste Generation – Construction*, is included below to summarize the types of waste generated, the approximately amount of each waste type diverted, and the approximate overall amount remaining to be disposed of in landfills. Construction waste processing facilities that may be used for the construction phase include but are not limited to those facilities listed in Table 5. Because certified diversion rates and authorized facilities are updated quarterly and the decision on which facility will be contracted for waste hauling will be made at the time of construction based on market conditions and the facility's certified rate, the developer reserves the right to select any authorized facility as long as the facility is City-certified to meet minimum diversion requirements.

Construction debris will be separated onsite into material-specific containers, corresponding to the materials types in Table 5, to facilitate reuse and recycling and to increase the efficiency of waste reclamation. The *Sixth and Olive Project* will implement a target of 20 percent recycled material and 75 percent for landfill diversion. As shown in Table 5, the applicant has the goal of 89 percent diversion rate of the construction materials generated by the project are expected to be diverted from landfills.

Table 5
Sixth and Olive Project Waste Generation – Construction

Material Type	Estimated Waste Quantity (tons)	Handling	Estimated Diversion (tons)	Estimated Disposal (tons)
CONSTRUCTION WASTE				
Asphalt and Concrete	187.24	**Hanson Aggregates** 9229 Harris Plant Road San Diego, CA 92126 (100% diversion)	187.24	0
Brick/Masonry/ Tile	53.5	**Vulcan Carroll Canyon Landfill and Recycle Site** 10051 Black Mountain Road San Diego, CA 92126 (100% diversion)	53.5	0
Cardboard	5.26	**Allan Company** 6733 Consolidated Way San Diego, CA 92121 (100% diversion)	3.68	1.58
Carpet, Padding/Foam	2.67	**DFS Flooring** 10178 Willow Creek Road San Diego, CA 92131 (100% diversion)	2.67	0
Drywall	37.45	**EDCO Station Transfer and Buy Back Center** 8184 Commercial Street La Mesa, CA 91942 (70% diversion)	26.21	11.24
Landscape Debris	5.35	**Miramar Greenery** 5180 Convoy Street San Diego, CA 92111 (100% diversion)	5.35	0
Mixed C&D Debris	160.49	**Otay C&D/Inert Debris Processing Facility** 1700 Maxwell Road Chula Vista, CA 91913 (76% diversion)	120.37	40.12
Roofing Materials	2.71	**LEED Recycling** 8725 Miramar Place San Diego, CA 92121 (100% diversion)	2.71	0
Scrap Metal	13	**Allan Company** 6733 Consolidated Way San Diego, CA 92121 (100% diversion)	8.99	4.01
Unpainted Wood & Pallets	64.19	**Miramar Greenery** 5180 Convoy Street San Diego, CA 92111 (100% diversion)	64.19	0
Garbage/Trash	2.71	**Miramar Landfill** 5180 Convoy Street San Diego, CA 92111 (0% diversion)	0	2.71
TOTAL	**534.57**		**474.91**	**59.66**

6.0 OCCUPANCY PHASE

While the construction phase for the *Sixth and Olive Project* occurs as a one-time waste generation event as construction of the project proceeds, tenant/owner occupancy requires an on-going plan to manage waste disposal to meet the waste reduction goals established by the City and State.

6.1 Solid Waste Recycling

The following table expresses the anticipated refuse and recyclable storage requirements based on Table 142-08B and 142.08C of the City of San Diego Municipal Code.

Table 6
Minimum On-site Recyclable Material Storage Areas for the Sixth and Olive Project

Land Use	Gross Floor Area/Units	Minimum Refuse Storage Area (square feet)	Minimum Recyclable Material Storage Area (square feet)	Total Minimum Storage Area (square feet)
Residential	204 units	432	432	864
Commercial Office	11,982 sq. ft.	48	48	96
TOTAL		480	480	960

As shown in Table 7, *Estimated Solid Waste Generation from the Sixth and Olive Project*, during occupancy, the expected generated waste per year from the *Sixth and Olive Project* when fully occupied would be approximately 278.4 tons.

Table 7
Estimated Solid Waste Generation from the Sixth and Olive Project – Occupancy Phase

Use	Intensity	Waste Generation Rate	Estimated Waste Generated (tons/year)
Existing to be Demolished			
Residential	16 units	1.2 tons/year/unit	19.2
		SUBTOTAL	19.2
Proposed Project			
Residential	204 units	1.2 tons/year/unit	244.8
Commercial Office	11,982 sq. ft.	0.0028 tons/year/sq ft	33.6
		SUBTOTAL	278.4
		NET TOTAL	259.2

On-site recycling services shall be provided to all tenants/residents within *Sixth and Olive Project*. Tenants/residents within *Sixth and Olive Project* that receive solid waste collection service shall participate in a recycling program by separating recyclable materials from other solid waste and depositing the recyclable materials in the recycling container provided for the occupants. Recycling services are required by Section 66.0707 of the City of San Diego Land Development Code. Based on current requirements, these services shall include the following:

- Collection of recyclable materials as frequently as necessary to meet demand;
- Collection of plastic bottles and jars, paper, newspaper, metal containers, cardboard, and glass

containers;
- Collection of other recyclable materials for which markets exist, such as scrap metal, wood pallets
- Collection of food waste for recycling by composting, where available (prior to issuance of building and occupancy permits, the project proponent will meet with representatives from ESD to ensure that their educational materials and haulers can comply with the requirements for this service);
- Use of recycling receptacles or containers which comply with the standards in the Container and Signage Guidelines established by the City of San Diego Environmental Services Department;
- Designated recycling collection and storage areas; and
- Signage on all recycling receptacles, containers, chutes, and/or enclosures which complies with the standards described in the Container and Signage Guidelines established by the City of San Diego Environmental Services Department

As required by Section 66.0707 of the City of San Diego Land Development Code, the building management or other designated personnel shall ensure that occupants are educated about the recycling services as follows:

- Information, including the types of recyclable materials accepted, the location of recycling containers, and the occupants responsibility to recycle shall be distributed to all occupants annually;
- All new occupants shall be given information and instructions upon occupancy; and
- All occupants shall be given information and instructions upon any change in recycling service to the commercial facility.

6.2 Landscaping and Green Waste Recycling

Plant material selection will be guided by the macro-and micro-climate characteristics of the project site and surrounding region to encourage long-term sustainability without the excessive use of water pesticides and fertilizers. Irrigation of these areas, where practical, will utilize reclaimed water applied via low precipitation rate spray heads, drip emitters, or other highly efficient systems. Landscape maintenance would include the collection of green waste and disposal of green waste at recycling centers that accept green waste. This will help further reduce the waste generated by developments within *Sixth and Olive Project* during the occupancy phases.

7.0 CONCLUSION

The City of San Diego Development Services Department is requiring that this WMP be prepared and submitted to the City of San Diego's ESD. Since the project is in the design phase, this is only a preliminary plan, which specifies the intent to meet the requirements of PRC 939 and City ordinances. This WMP will be implemented to the fullest degree of accuracy and efficiency. Additionally, the project will be required to adhere to City ordinances, including the *Construction and Demolition Debris Diversion Deposit Program*, the City's *Recycling Ordinance*, and the *Refuse and Recyclable Materials Storages Regulations*. The WMP plan for the *Sixth and Olive Project* is designed to implement and adhere to all city ordnance and regulations with regards to waste management. The measures in the WMP would ensure that significant impacts relative to solid waste are avoided.

Prior to the issuance of any grading or construction permits, the Solid Waste Coordinator will ensure ESD's attendance at a precon. The Solid Waste Coordinator will ensure that 1) the proposed approach to contractor education is approved, 2) the written specifications for base materials, concrete pavers, decomposed granite, and mulch, is approved, and 3) that the ESD inspector approves the separate waste containers, signage, and hauling contract(s) for the following materials:

- Asphalt/concrete
- Brick/masonry/tile
- Cardboard
- Carpet/padding/foam
- Drywall
- Landscape debris
- Mixed C&D debris
- Scrap metal
- UNTREATED woodwaste
- Refuse

The project would be designed to achieve 75+ percent of construction waste to be source reduced and/or recycled. While diversion activities during occupancy will achieve only 40 percent diversion and will not achieve the State target of 75 percent, the project incorporates several measures above and beyond the requirements of local ordinance.

- First, the project exceeds ordinance requirements and even the State waste reduction target during construction.
- Second, the project includes landscaping that will reduce yardwaste, and will provide transportation to a composting facility for the yard waste that is produced. The project proponent will ensure that ESD reviews the landscaping plans and hauling contract for the facility to verify that waste reduction goals are met.
- Third, the project would include Cal-Green measures to reduce waste, including separate Rubbish and Recycle chutes.

The project would target 20 percent of solid waste to be recycled material and 75 percent for landfill diversion.

These measures ensure that the waste generated by the project will be properly managed and that solid waste services will not be impacted.

The following measures apply to the project to reduce cumulative impacts on solid waste to below a level of significance:

1.0 Prior to Permit Issuance or Bid opening/Bid award

A. LDR Plan check

1. Prior to the issuance of any construction permit, including but is not limited to, demolition, grading, building or any other construction permit, the Assistant Deputy Director (ADD) Environmental Designee shall verify that the all the requirements of the Refuse & Recyclable Materials Storage Regulations and all of the requirements of the waste management plan are shown and noted on the appropriate construction documents. All requirements, notes and graphics shall be in substantial conformance with the conditions and exhibits of the associated discretionary approval.

The construction documents shall include a waste management plan.

Notification shall be sent to:

MMC Environmental Review Specialist
Development Service Department
9601 Ridgehaven Court
Ste. 220, MS 1102 B
San Diego, California 92123 1636
(619) 980 7122

Environmental Services Department (ESD)
9601 Ridgehaven Court
Ste. 210, MS 1102 A
San Diego, California 92123 1636
(858) 573-1236

II. Prior to Start of Construction

A. Grading and Building Permit - Prior to issuance of any grading or building permit, the permittee shall be responsible to arrange a preconstruction meeting to coordinate the implementation of the WMP. The Precon Meeting that shall include: the Construction Manager, Building/Grading Contractor; MMC; and ESD and the Building Inspector and/or the RE (whichever is applicable) to verify that implementation of the waste management plan shall be performed in compliance with the plan approved by LDR and the San Diego ESD, to ensure that impacts to solid waste facilities are below a level of significance.

1. At the Precon Meeting, the Permittee shall submit reduced copies (11" x 17") of the approved waste management plan, the RE, BI, MMC, and ESD.
2. Prior to the start of construction, the Permittee/Construction Manager shall submit a construction schedule to the RE, BI, MMC, and ESD.

III. During Construction

The Permittee/Construction Manager shall call for inspections by the RE/BI and both MMC and ESD, who will periodically visit the demolition/construction site to verify implementation of the waste management plan. The Consultant Site Visit Record (CSVR) shall be used to document the Daily Waste Management Activity/progress.

IV. Post Construction

A. For any demolition or construction permit, a final results report shall be submitted to both MMC and ESD for review and approval to the satisfaction of the City. MMC will coordinate the approval with ESD and issue the approval notification. ESD will review/approve City Recycling Ordinance-required educational materials prior to occupancy.

City of San Diego
Development Services
ENTITLEMENTS DIVISION
(619) 446-5460

ENVIRONMENTAL IMPACT REPORT

Project No. 96101
SCH No. 2009101036

SUBJECT: ST. PAUL'S CATHEDRAL AND RESIDENCES. VESTING TENTATIVE MAP, NEIGHBORHOOD DEVELOPMENT PERMIT, SITE DEVELOPMENT PERMIT AND PUBLIC RIGHT-OF-WAY ENCROACHMENT for construction of two mixed-use buildings with a total of 110 dwelling units, 20,027 square feet of office use, and 6,109 square feet of retail and restaurant uses. The project also includes improvements for additional religious use facilities on the 30,612-square-foot site of St. Paul's Cathedral. Various site improvements, which include associated hardscape and landscaping, would also be constructed. The project is located in the Park West neighborhood of Uptown San Diego, between Fifth and Sixth avenues and with frontage on the south side of Olive Street and on both sides of Nutmeg Street. The 17-story the Olive Building proposes a total overall height of 180 feet, which requires approval of a deviation from the 150-foot height limit of the MR-400 and CV-1 zones. It is located on a 25,805-square-foot parcel on the south side of Olive Street and would contain 65 dwelling units (including 6 affordable units), 14,209 square feet of offices, and 924 square feet of retail space, and underground parking. The 13-story Nutmeg Building, (with a total overall height of 150 feet), is on a 20,075-square-foot parcel on the southeast corner of Olive Street and Fifth Avenue and would contain 45 dwelling units (including 5 affordable units), 5,818 square feet of offices, and 5,185 square feet of retail and/or restaurant space, and underground parking. The project is located in the MR-400 (Residential) and CV-1 (Commercial Village) zones within the Mid-City Planned District of the Uptown Community Plan area. (LEGAL Lots A, B, C, D in Block 305 of Horton's Addition; and Lots A, B, C, D, E, F, G, H, I, J, K, L in Block 306 of Horton's Addition). Applicants: Nutmeg and Olive, LLC.

UPDATE: **September 20, 2011. Revisions and/or minor corrections have been made to this document, in response to comments submitted, when compared to the draft Environmental Impact Report. In accordance with the California Environmental Quality Act, Section 15088.5, the addition of new information that clarifies, amplifies, or makes insignificant modifications does not require recirculation as there are no new impacts and no new mitigation identified. An environmental document need only be recirculated when there is the**

identification of new significant environmental impacts or the addition of a new mitigation measure required to avoid a significant environmental impact. The modifications within the final environmental document do not affect the analysis or conclusions of the Environmental Impact Report. All revisions are shown in a ~~strikethrough~~ and/or underline format.

CONCLUSIONS:

This Environmental Impact Report (EIR) analyzes the environmental impacts of the St. Paul's Cathedral and Residences project. During the Initial Study review of the project, it was determined that significant impacts would not occur to Agricultural Resources, Biological Resources, and Mineral Resources. Therefore these issue areas are not discussed in detail in the EIR. During preparation of the EIR, it was concluded that the project would not have significant impacts to Land Use; Visual Quality/Community Character; Air Quality; Geology and Soils; Health and Public Safety; Hydrology and Drainage; Population and Housing; Public Utilities; Water Quality; Light/Glare/Shading; Public Services and Facilities; Solid Waste Disposal; Energy Conservation; and Greenhouse Gas Emissions.

Therefore, these Conclusions focus on the project issues that the EIR concluded could have potentially significant impacts: Traffic/Circulation/Parking; Historical Resources; Noise; and Paleontological Resources.

The project site presently contains a 16-unit apartment building on the Olive Building site, which would be demolished, and the Nutmeg Building site is vacant. The improvements to St. Paul's Cathedral would require demolition of a 1968 addition. A total of 206 automobile parking spaces would be provided for the Olive Building on 4 levels of underground parking; and 120 automobile parking spaces would be provided for the Nutmeg Building on 3 levels of underground parking. The underground parking for both buildings would include parking for the offices and the retail and restaurant space. In aggregate, the total number of parking spaces exceeds by 39 the number required by code. Motorcycle parking and bicycle storage facilities would also be provided in both buildings. Access to the Olive Building parking garage is provided from Olive Street and access to the Nutmeg Building is provided from Fifth Avenue.

The renovations for St. Paul's Cathedral would expand the building footprint by approximately 3,630 square feet. Two new bell towers would be constructed on the Fifth Avenue frontage and a new lantern tower would be constructed, all within the existing Cathedral footprint. The improvements would be consistent with the original Gothic Revival style from the plans that architect Philip Frohman prepared for the original 1928 construction and his subsequent design for an expansion in 1951 that was never completed. Seventy parking spaces would be reserved in the Olive Building for the Cathedral and office parking, and 15 parking spaces would be reserved for the Cathedral's offices in the Nutmeg Building.

Implementation of the Mitigation Monitoring and Reporting Program (MMRP), which is included in the EIR as Chapter 10, would reduce the environmental effects of the project to below a level of significance. No significant impacts would remain for the project after mitigation measures are implemented in the following areas: traffic, circulation, and parking;

historical resources (archaeology, historical, and landscape); noise; and paleontological resources.

SIGNIFICANT UNMITIGATED IMPACTS:

Implementation of the project with the associated MMRP would not result in any significant unmitigated impacts; therefore no Findings of Fact or Statement of Overriding Considerations have been developed or are required.

ALTERNATIVES FOR REDUCING SIGNIFICANT IMPACTS:

The project would have no significant unmitigated impacts. However, alternatives were reviewed to determine if any alternative would incrementally reduce environmental impacts.

NO PROJECT ALTERNATIVE

The No Project Alternative assumes the vacant Nutmeg Site would remain vacant; there would be no demolition of existing structures on the Olive Site and no new construction of residential or commercial facilities. However, it is noted that the Nutmeg and Olive project sites could potentially be developed at a future time consistent with existing multi-family residential and commercial zoning. The No Project Alternative would also not preclude expansion of the Cathedral as it is a permitted land use and, therefore, would not be a discretionary project and would not be subject to CEQA review. This alternative would not fulfill the objectives of the project of providing housing at a density consistent with the Uptown Community Plan and office space to accommodate the Cathedral's operations and programs.

REDUCED RESIDENTIAL UNITS/REDUCED BUILDING HEIGHT PROJECT ALTERNATIVE

This alternative would develop the Olive Site with a mixed-use project that would be reduced in height from 180 feet with the project to the 150-foot height limit of the CV-1 Zone, for which a height deviation is requested for the project. The 11 proposed affordable housing units would be eliminated with this alternative and the total project would be reduced from 110 units to 96 units. The Nutmeg Building would remain at 150 feet in height and both buildings would include the same commercial and office space as the project. Off-street parking in the Olive building would be reduced consistent with the reduced number of dwelling units and the 39 surplus parking spaces under the proposed project would be eliminated. Architectural design and landscape elements would remain the same as the project. There would be no change in the development plans for the Cathedral under this alternative.

MITIGATION MONITORING AND REPORTING PROGRAM INCORPORATED INTO THE PROJECT:

Following is a summary of the mitigation measures that have been incorporated into the project to avoid those impacts identified as potentially significant with implementation of the project.

TRAFFIC, CIRCULATION, AND PARKING (DIRECT)

Under year 2030 conditions, the project would increase the delay at the level of service (LOS) F intersection at Maple Street and Fifth Avenue by more than the City's threshold of 1 second. Mitigation Measure TRF-1 would require the project to contribute its fair share (22.4%) of the cost for installation of a traffic signal at the Nutmeg Street and Fifth Avenue intersection. Installation of the traffic signal is identified in the Hillcrest Corridor Mobility Plan and would be anticipated to divert traffic from the Fifth Avenue intersections at Maple Street and Olive Street, to the signalized intersection at Nutmeg Street and improve operations at all three impacted intersections to acceptable LOS. Implementation of Mitigation Measure TRF-1 would reduce potential direct traffic impacts to below a level of significance.

HISTORICAL RESOURCES/ARCHEOLOGICAL RESOURCES (DIRECT)

Archaeological resources are known to be present in the project area; therefore, the site is presumed to have the potential for on-site resources that would be impacted by the planned excavation for construction of the project buildings. Due to the extent of existing development and surface disturbance of the project site, it was determined to be be infeasible to conduct archaeological surveys at this time. Mitigation Measure AR-1 would require that the applicant retain a qualified archaeological and Native American monitor to implement a monitoring program for archaeological resources during excavation of the project sites. Implementation of Mitigation Measure AR-1 would reduce potential direct impacts to archaeological resources to below a level of significance.

HISTORICAL RESOURCES/HISTORICAL ARCHITECTURAL RESOURCES (DIRECT)

Architectural plans for the improvements to the Cathedral as submitted to City Plan-Historic staff have been determined to comply with the Secretary of the Interior's Standards for Treatment of Historic Properties and related Guidelines. Mitigation Measure HR-1 requires that the applicant submit construction plans for modifications to the Cathedral that demonstrate conformance with the U.S. Secretary of the Interior's Standards to the satisfaction of City Plan-Historic staff. Implementation of Mitigation Measure HR-1 would reduce potential direct impacts to historic architectural resources to below a level of significance.

HISTORICAL RESOURCES/HISTORICAL LANDSCAPE RESOURCES (DIRECT)

Twelve Queen Palms planted in pairs and two additional single plantings along the project frontage on Sixth Avenue, represent an important part of the City's landscape history due to their association with Kate Sessions, an important figure in the community's landscape development, and their association with landscape improvements made for the Panama–California Exposition held in Balboa Park during 1915 and 1916. Mitigation Measure HR-2 requires that any Queen Palms to be removed for construction of the Olive Building and the Cathedral improvements shall be boxed, stored during construction, and replaced. Any Queen Palms to remain during construction shall be protected by temporary fencing. Any Queen Palms that fail to survive transplanting or construction shall be replaced on-site with Queen Palms with a minimum 20-foot brown trunk height; and two additional Queen Palms for each damaged palm are to be planted along the Sixth Avenue frontage or elsewhere in Balboa Park at locations identified by the

City Street Division-Urban Forestry. Implementation of Mitigation Measure HR-2 would reduce potential direct impacts to historic landscape resources to below a level of significance.

NOISE (DIRECT)

The project would cause noise during excavation and construction that would be a potential impact to residents adjacent to the east of the Nutmeg Building. Mitigation Measure NOI-1 would require that construction noise levels not exceed City noise standards by constructing a temporary noise barrier on the east property line, restricting the number and location of construction equipment that would be operating at any time, and locating excavation and truck loading equipment on the Fifth Avenue side of the site. Implementation of Mitigation Measure NOI-1 would enable construction activities to comply with the City noise standards and reduce the potential noise impact to less than significant. In addition, Mitigation Measure NOI-2 would require that noise generated by stationary HVAC equipment during occupancy of the project to be located and shielded as necessary to comply with the City noise ordinance, which would reduce the potential noise impact to less than significant.

PALEONTOLOGICAL RESOURCES (DIRECT)

The project would involve excavation within a potential fossil-bearing geologic formation to prepare the site for development, which may result in significant impacts to paleontological resources. Mitigation Measure PR-1 requires the applicant to retain a qualified paleontologist and/or paleontological monitor to implement a monitoring program. The monitor would be present full-time during excavation activities that could result in impacts to formations with high and moderate resource sensitivity. Any discovered fossil sites would be recorded by the paleontologist at the San Diego Natural History Museum. Implementation of the actions contained in Mitigation Measure PR-1, would reduce potential direct impacts to paleontological resources to below a level of significance.

PUBLIC REVIEW:

The following individuals, organizations, and agencies received a copy or notice of the draft EIR and were invited to comment on its accuracy and sufficiency.

Distribution:

FEDERAL
Federal Aviation Administration (1)

STATE OF CALIFORNIA
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Bankers Hill/Park West Community Association
Nutmeg/Olive LLC, Applicant
Tom Delaney, Springline Associates, Inc., Consultant

RESULTS OF PUBLIC REVIEW:

( ) No Comments were received during the public input period.

( ) Comments were received but did not address the accuracy or completeness of the Environmental Impact Report findings or the accuracy/completeness of the Initial Study. No response is necessary and the letters are attached.

(X) Comments addressing the findings of the draft Environmental Impact Report and/or accuracy or completeness of the Initial Study were received during the public input period. The letters and responses follow.

Copies of the Environmental Impact Report and any Initial Study material are available in the office of the Entitlements Division for review or for purchase at the cost of the reproduction.

Cecilia Gallardo, AICP
Assistant Deputy Director
Entitlements Division

June 30, 2011
Date of Draft Report

September 20, 2011
Date of Final Report

Analyst: E. SHEARER-NGUYEN

Index of Comment Letters Received During Public Review for the St. Paul's Cathedral and Residences Environmental Impact Report

Letters of comment on the Environmental Impact Report (EIR) were received from the following agencies and groups:

A.	8/15/11	California State Clearinghouse and Planning Unit
B.	8/10/11	California Department of Toxic Substances Control
C.	7/16/11	San Diego County Archaeological Society, Inc.
D.	6/30/11	Native American Heritage Commission
E.	8/13/11	Bankers Hill/Park West Community Association

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex
Director

August 15, 2011

Elizabeth Shearer-Nguyen
City of San Diego
1222 First Avenue, MS-501
San Diego, CA 92101

Subject: St. Paul's Cathedral and Residences
SCH#: 2009101036

Dear Elizabeth Shearer-Nguyen:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on August 12, 2011, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. 1

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

CALIFORNIA STATE CLEARINGHOUSE AND PLANNING UNIT (August 15, 2011)

1. Comment noted.

Document Details Report
State Clearinghouse Data Base

SCH#	2009101036
Project Title	St. Paul's Cathedral and Residences
Lead Agency	San Diego, City of

Type	EIR Draft EIR
Description	The project consists of 110 dwelling units in two mixed-use residential buildings, both with underground parking: one with 65 dwelling units, 924 s.f. of commercial/retail, and 14,209 s.f. of offices; and the other with 45 dwelling units, 5,185 s.f. of commercial/retail, and 5,818 s.f. of offices. Eleven of the dwelling units would be reserved as affordable units for occupancy by income-qualified households. The project would also include improvements for additional religious use facilities at St. Paul's Cathedral.

Lead Agency Contact

Name	Elizabeth Shearer-Nguyen				
Agency	City of San Diego				
Phone	(619) 446-5369	***Fax***			
email					
Address	1222 First Avenue, MS-501				
City	San Diego	***State***	CA	***Zip***	92101

Project Location

County	San Diego						
City							
Region							
Lat / Long	32° 44' 3.89" N / 117° 09' 36.64" W						
Cross Streets	5th Ave, 6th Ave, Maple Street, Olive Street						
Parcel No.	452-713-01;452-714-01 and 02; 452-713-11						
Township		***Range***		***Section***		***Base***	

Proximity to:

Highways	I-5, SR163; I-8
Airports	San Diego Intl
Railways	BNSF
Waterways	No
Schools	Yes San Diego Unified
Land Use	16-unit apartment and church/Residential (MR) 400; Commercial Village (CV)-1 zones/Multiple Use general plan designation

Project Issues	Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Geologic/Seismic; Noise; Population/Housing Balance; Public Services; Schools/Universities; Sewer Capacity; Solid Waste; Traffic/Circulation; Water Quality; Landuse; Aesthetic/Visual; Other Issues

Reviewing Agencies	Resources Agency; Department of Fish and Game, Region 5; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 11; Regional Water Quality Control Board, Region 9; Department of Toxic Substances Control; Native American Heritage Commission

Date Received	06/29/2011	***Start of Review***	06/29/2011	***End of Review***	08/12/2011

Note: Blanks in data fields result from insufficient information provided by lead agency.

Department of Toxic Substances Control

Matthew Rodriquez
Secretary for
Environmental Protection

Deborah O. Raphael, Director
5796 Corporate Avenue
Cypress, California 90630

Edmund G. Brown Jr.
Governor

clear
8/12/2011
e

RECEIVED
AUG 12 2011
STATE CLEARING HOUSE

August 10, 2011

Ms. E. Shearer-Nguyen, Environmental Planner
City of San Diego Development Services Center
1222 First Avenue, MS 501
San Diego, California 92101

NOTICE OF COMPLETION & ENVIRONMENTAL IMPACT REPORT (EIR) FOR ST. PAUL'S CATHEDRAL AND RESIDENCES (SCH# 2009101036)

Dear Ms. Shearer-Nguyen:

The Department of Toxic Substances Control (DTSC) has received your submitted Notice of Preparation of the Environmental Impact Report for the above-mentioned project. The following project description is stated in your document: "The project involves the construction of two mixed-use buildings with a total of 110 dwelling units. Each building would also contain offices and retail or neighborhood commercial services. The project also includes improvements for additional religious use facilities at St. Paul's Cathedral. The project site is located in the Park West neighborhood of San Diego, between Fifth and Sixth avenues and with frontage on the south side of Olive Street and on both sides of Nutmeg Street. The 17-story Olive Building is on a 25,805-square-foot parcel on the south side of Olive Street, extending between Fifth and Sixth avenues. It would contain 65 dwelling units, 14,209 square feet of offices, 924 square feet of retail space, and 4 levels of underground parking. The 13-story Nutmeg Building is on a 20,075-square-foot parcel on the southwest corner of Nutmeg Street and Sixth Avenue. It would contain 45 dwelling units, 5,818 square feet of offices, 5,185 square feet of retail and/or restaurant space, and 3 levels of underground parking. An existing 16-unit apartment building on the Olive site would be demolished. St. Paul's Cathedral is on a 30,612- square-foot site located on the north side of Nutmeg Street and extending between Fifth and Sixth avenues."

Based on the review of the submitted document DTSC has the following comments:

1) The EIR should evaluate whether conditions within the project area may pose a threat to human health or the environment. Following are the databases of some of the regulatory agencies: 2

CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL (August 10, 2011)

2. The letter submitted by the Department of Toxic Substances Control is a standard form letter that is used to provide guidance regarding the remediation of potentially contaminated sites. For this project, a Phase I Environmental Site Assessment (ESA) Report was conducted for the project. The results of that study are described in Section 8.1.4 of the EIR. The ESA included a review of federal, state, and local regulatory databases and properties of potential concern were not identified within or in proximity to the site nor is the project site listed by any of these agencies. Inspections for asbestos and lead-based paints were also conducted and both materials were identified within the project buildings. These materials are to be removed by an approved hazardous materials contractor and disposed of in accordance with all local, state, and federal regulations.

Ms. E. Shearer-Nguyen
August 10, 2011
Page 2

- National Priorities List (NPL): A list maintained by the United States Environmental Protection Agency (U.S.EPA).

- Envirostor (formerly CalSites): A Database primarily used by the California Department of Toxic Substances Control, accessible through DTSC's website (see below).

- Resource Conservation and Recovery Information System (RCRIS): A database of RCRA facilities that is maintained by U.S. EPA.

- Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS): A database of CERCLA sites that is maintained by U.S.EPA.

- Solid Waste Information System (SWIS): A database provided by the California Integrated Waste Management Board which consists of both open as well as closed and inactive solid waste disposal facilities and transfer stations.

- GeoTracker: A List that is maintained by Regional Water Quality Control Boards.

- Local Counties and Cities maintain lists for hazardous substances cleanup sites and leaking underground storage tanks.

- The United States Army Corps of Engineers, 911 Wilshire Boulevard, Los Angeles, California, 90017, (213) 452-3908, maintains a list of Formerly Used Defense Sites (FUDS).

2 Cont.

2) The EIR should identify the mechanism to initiate any required investigation and/or remediation for any site that may be contaminated, and the government agency to provide appropriate regulatory oversight. If necessary, DTSC would require an oversight agreement in order to review such documents.

3

3) Any environmental investigations, sampling and/or remediation for a site should be conducted under a Workplan approved and overseen by a regulatory agency that has jurisdiction to oversee hazardous substance cleanup. The findings of any investigations, including any Phase I or II Environmental Site Assessment Investigations should be summarized in the document. All sampling results in which hazardous substances were found above regulatory standards should be clearly summarized in a table. All closure, certification or remediation approval reports by regulatory agencies should be included in the EIR.

4

3. See response No. 2. Based on the Phase I ESA, properties of potential environmental concern were not identified within or in close proximity to the site. In addition, no releases of hazardous substances and/or wastes are anticipated to occur during the construction of the project. Additionally, inspections for asbestos and lead-based paints were also conducted and both materials were identified within the project buildings. These materials are to be removed by an approved hazardous materials contractor and disposed of in accordance with all local, state, and federal regulations.

4. See response No. 2.

4) If buildings, other structures, asphalt or concrete-paved surface areas are being planned to be demolished, an investigation should also be conducted for the presence of other hazardous chemicals, mercury, and asbestos containing materials (ACMs). If other hazardous chemicals, lead-based paints (LPB) or products, mercury or ACMs are identified, proper precautions should be taken during demolition activities. Additionally, the contaminants should be remediated in compliance with California environmental regulations and policies. 5

5) Future project construction may require soil excavation or filling in certain areas. Sampling may be required. If soil is contaminated, it must be properly disposed and not simply placed in another location onsite. Land Disposal Restrictions (LDRs) may be applicable to such soils. Also, if the project proposes to import soil to backfill the areas excavated, sampling should be conducted to ensure that the imported soil is free of contamination. 6

6) Human health and the environment of sensitive receptors should be protected during any construction or demolition activities. If necessary, a health risk assessment overseen and approved by the appropriate government agency should be conducted by a qualified health risk assessor to determine if there are, have been, or will be, any releases of hazardous materials that may pose a risk to human health or the environment. 7

7) If it is determined that hazardous wastes are, or will be, generated by the proposed operations, the wastes must be managed in accordance with the California Hazardous Waste Control Law (California Health and Safety Code, Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (California Code of Regulations, Title 22, Division 4.5). If it is determined that hazardous wastes will be generated, the facility should also obtain a United States Environmental Protection Agency Identification Number by contacting (800) 618-6942. Certain hazardous waste treatment processes or hazardous materials, handling, storage or uses may require authorization from the local Certified Unified Program Agency (CUPA). Information about the requirement for authorization can be obtained by contacting your local CUPA. 8

8) DTSC can provide cleanup oversight through an Environmental Oversight Agreement (EOA) for government agencies that are not responsible parties, or a Voluntary Cleanup Agreement (VCA) for private parties. For additional information on the EOA or VCA, please see www.dtsc.ca.gov/SiteCleanup/Brownfields, or contact Ms. Maryam Tasnif-Abbasi, DTSC's Voluntary Cleanup Coordinator, at (714) 484-5489. 9

5. See response No. 2.

6. It is not anticipated that contaminated soils would be present. However, if contaminated soils are encountered during site grading, appropriate studies and agency oversight would be applied in the event hazardous substances are found to be present. Additionally, these materials would be removed by an approved hazardous materials contractor and disposed of in accordance with all local, state, and federal regulations.

7. See responses No. 2 and No. 6.

8. See response No. 2.

9. Comment noted.

If you have any questions regarding this letter, please contact me at ashami@dtsc.ca.gov, or by phone at (714) 484-5472.

Sincerely,

Al Shami
Project Manager
Brownfields and Environmental Restoration Program

cc: Governor's Office of Planning and Research
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044
state.clearinghouse@opr.ca.gov

CEQA Tracking Center
Department of Toxic Substances Control
Office of Environmental Planning and Analysis
P.O. Box 806
Sacramento, California 95812
nritter@dtsc.ca.gov

CEQA # 3298

STATE OF CALIFORNIA Edmund G. Brown, Jr., *Governor*

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net

June 30, 2011

Ms. E. Shearer-Nguyen, Environmental Planner
City of San Diego Development Services Department
1222 First Avenue, MS 501
San Diego, CA 92101

Re: SCH#2009101036; CEQA Notice of Completion; draft Environmental Impact Report (DEIR) for the **"St. Paul's Cathedral and Residences Project; (City of San diego No. 96101)"** located in Downtown San Diego; San Diego County, California

Dear Ms. Shearer-Nguyen:

The Native American Heritage Commission (NAHC), the State of California 'Trustee Agency' for the protection and preservation of Native American cultural resources. The NAHC wishes to comment on the above-referenced proposed Project.

This letter includes state and federal statutes relating to Native American historic properties of religious and cultural significance to American Indian tribes and interested Native American individuals as 'consulting parties' under both state and federal law. State law also addresses the freedom of Native American Religious Expression in Public Resources Code §5097.9.

The California Environmental Quality Act (CEQA – CA Public Resources Code 21000-21177, amendments effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ...objects of historic or aesthetic significance." In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE), and if so, to mitigate that effect. The NAHC Sacred Lands File (SLF) search resulted in; **Native American cultural resources were not identified** within the 'area of potential effect (APE), based on the USGS coordinates of the project location provided. The absence of archaeological items at the surface level does not preclude their existence at the subsurface level once ground-breaking activity is underway. **10**

The NAHC "Sacred Sites,' as defined by the Native American Heritage Commission and the California Legislature in California Public Resources Code §§5097.94(a) and 5097.96. Items in the NAHC Sacred Lands Inventory are confidential and exempt from the Public Records Act pursuant to California Government Code §6254.10. **11**

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries of cultural resources or burial sites once a project is underway. Culturally affiliated tribes and individuals may have knowledge of the religious and cultural

NATIVE AMERICA HERITAGE COMMISSION (June 30, 2011)

10. Comment noted. Native American cultural resources were not identified within the project's APE.

11. Comment noted. The EIR was sent to all of the individuals identified on the recommended "California Native American Contact List" from NAHC.

significance of the historic properties in the project area (e.g. APE). We strongly urge that you make contact with the list of Native American Contacts on the attached list of Native American contacts, to see if your proposed project might impact Native American cultural resources and to obtain their recommendations concerning the proposed project. Pursuant to C"A Public Resources Code § 5097.95, the NAHC requests that the Native American consulting parties be provided pertinent project information. Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e). Pursuant to CA Public Resources Code §5097.95, the NAHC requests that pertinent project information be provided consulting tribal parties. The NAHC recommends *avoidance* as defined by CEQA Guidelines §15370(a) to pursuing a project that would damage or destroy Native American cultural resources and Section 2183.2 that requires documentation, data recovery of cultural resources. **11**

Furthermore we recommend, also, that you contact the California Historic Resources Information System (CHRIS) California Office of Historic Preservation for pertinent archaeological data within or near the APE, at (916) 445-7000 for the nearest Information Center in order to learn what archaeological fixtures may have been recorded in the APE. **12**

Consultation with tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA (42 U.S.C 4321-43351) and Section 106 and 4(f) of federal NHPA (16 U.S.C. 470 *et seq*), 36 CFR Part 800.3 (f) (2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 *et seq.* and NAGPRA (25 U.S.C. 3001-3013) as appropriate. The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. **13**

Furthermore, Public Resources Code Section 5097.98, California Government Code §27491 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery'. **14**

To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. Regarding tribal consultation, a relationship built around regular meetings and informal involvement with local tribes will lead to more qualitative consultation tribal input on specific projects. **15**

The response to this search for Native American cultural resources is conducted in the NAHC Sacred Lands Inventory, established by the California Legislature (CA Public Resources Code 5097.94(a) and is exempt from the CA Public Records Act (c.f. California Government Code 6254.10) although Native Americans on the attached contact list may wish to reveal the nature of identified cultural resources/historic properties. Confidentiality of "historic properties of religious and cultural significance" may also be protected under Section 304 of he NHPA or at the Secretary of the Interior discretion if not eligible for listing on the National Register of Historic Places and there may be sites within the APE eligible for listing on the California Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision on whether or not to disclose items of religious **16**

2

12. City staff conducted the CHRIS search and determined that archaeological resources were located within a mile of the project's APE.

13. Comment noted.

14. As identified within the EIR, Historical Resources chapter, appropriate mitigation measures for historical resources are in place in the event of discovery of human remains and archaeological resources during grading and construction operations. These measures in the EIR would ensure compliance with Public Resources Code Section 5097.98, California Government Code Section 27491, and Health and Safety Code Section 7050.5.

15. Comment noted.

16. Comment noted.

and/or cultural significance identified in or near the APEs and possibility threatened by proposed project activity. **16 Cont.**

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton
Program Analyst

Cc: State Clearinghouse

Attachment: Native American Contact List

California Native American Contact List
San Diego County
June 30, 2011

Barona Group of the Capitan Grande
Edwin Romero, Chairperson
1095 Barona Road — Dieguono
Lakeside , CA 92040
sue@barona-nsn.gov
(619) 443-6612
619-443-0681

Sycuan Band of the Kumeyaay Nation
Danny Tucker, Chairperson
5459 Sycuan Road — Dieguono/Kumeyaay
El Cajon , CA 92021
ssilva@sycuan-nsn.gov
619 445-2613
619 445-1927 Fax

La Posta Band of Mission Indians
Gwendolyn Parada, Chairperson
PO Box 1120 — Dieguono/Kumeyaay
Boulevard , CA 91905
gparada@lapostacasino.
(619) 478-2113
619-478-2125

Viejas Band of Kumeyaay Indians
Anthony R. Pico, Chairperson
PO Box 908 — Dieguono/Kumeyaay
Alpine , CA 91903
jrothauff@viejas-nsn.gov
(619) 445-3810
(619) 445-5337 Fax

San Pasqual Band of Mission Indians
Allen E. Lawson, Chairperson
PO Box 365 — Dieguono
Valley Center, CA 92082
allenl@sanpasqualband.com
(760) 749-3200
(760) 749-3876 Fax

Kumeyaay Cultural Historic Committee
Ron Christman
56 Viejas Grade Road — Dieguono/Kumeyaay
Alpine , CA 92001
(619) 445-0385

Iipay Nation of Santa Ysabel
Virgil Perez, Spokesman
PO Box 130 — Dieguono
Santa Ysabel, CA 92070
brandietaylor@yahoo.com
(760) 765-0845
(760) 765-0320 Fax

Campo Kumeyaay Nation
Monique LaChappa, Chairperson
36190 Church Road, Suite 1 — Dieguono/Kumeyaay
Campo , CA 91906
(619) 478-9046
miachappa@campo-nsn.gov
(619) 478-5818 Fax

This list is current only as of the date of this document.
Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2009101036; CEQA Notice of Completion; draft Environmental Impact Report (DEIR) for the St. Paul's Cathedral and Residences Project; located in downtown San Diego; San Diego County, California.

California Native American Contact List
San Diego County
June 30, 2011

Jamul Indian Village
Kenneth Meza, Chairperson
P.O. Box 612 — Dieguéno/Kumeyaay
Jamul, CA 91935
jamulrez@sctdv.net
(619) 669-4785
(619) 669-48178 - Fax

Inaja Band of Mission Indians
Rebecca Osuna, Spokesperson
2005 S. Escondido Blvd. — Diegueno
Escondido, CA 92025
(760) 737-7628
(760) 747-8568 Fax

Mesa Grande Band of Mission Indians
Mark Romero, Chairperson
P.O Box 270 — Diegueno
Santa Ysabel, CA 92070
mesagrandeband@msn.com
(760) 782-3818
(760) 782-9092 Fax

Kumeyaay Cultural Repatriation Committee
Steve Banegas, Spokesperson
1095 Barona Road — Diegueno/Kumeyaay
Lakeside, CA 92040
(619) 742-5587 - cell
(619) 742-5587
(619) 443-0681 FAX

Kumeyaay Cultural Heritage Preservation
Paul Cuero
36190 Church Road, Suite 5 — Diegueno/ Kumeyaay
Campo, CA 91906
(619) 478-9046
(619) 478-9505
(619) 478-5818 Fax

Ewiiaapaayp Tribal Office
Will Micklin, Executive Director
4054 Willows Road — Diegueno/Kumeyaay
Alpine, CA 91901
wmicklin@leaningrock.net
(619) 445-6315 - voice
(619) 445-9126 - fax

Kwaaymii Laguna Band of Mission Indians
Carmen Lucas
P.O. Box 775 — Diegueno -
Pine Valley, CA 91962
(619) 709-4207

Ewiiaapaayp Tribal Office
Michael Garcia, Vice Chairperson
4054 Willows Road — Diegueno/Kumeyaay
Alpine, CA 91901
michaelg@leaningrock.net
(619) 445-6315 - voice
(619) 445-9126 - fax

This list is current only as of the date of this document.
Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2009101036; CEQA Notice of Completion; draft Environmental Impact Report (DEIR) for the St. Paul's Cathedral and Residences Project; located in downtown San Diego; San Diego County, California.

California Native American Contact List
San Diego County
June 30, 2011

Ipai Nation of Santa Ysabel
Clint Linton, Director of Cultural Resources
P.O. Box 507 Dieguenо/Kumeyaay
Santa Ysabel, CA 92070
cjlinton73@aol.com
(760) 803-5694
cjlinton73@aol.com

Kumeyaay Cultural Repatriation Committee
Bernice Paipa, Vice Spokesperson
P.O. Box 1120 Dieguenо/Kumeyaay
Boulevard , CA 91905
(619) 478-2113

Manzanita Band of the Kumeyaay Nation
Leroy J. Elliott, Chairperson
P.O. Box 1302 Dieguenо/Kumeyaay
Boulevard , CA 91905
(619) 766-4930
(619) 766-4957 - FAX

Kumeyaay Diegueno Land Conservancy
M. Louis Guassac, Executive Director
P.O. Box 1992 Dieguenо/Kumeyaay
Alpine , CA 91903
guassacl@onebox.com
(619) 952-8430

Viejas Kumeyaay Indian Reservation
Frank Brown
240 Brown Road Dieguenо/Kumeyaay
Alpine , CA 91901
FIREFIGHTER69TFF@AOL.
619) 884-6437

This list is current only as of the date of this document.
Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2009101036; CEQA Notice of Completion; draft Environmental Impact Report (DEIR) for the St. Paul's Cathedral and Residences Project; located in downtown San Diego; San Diego County, California.

San Diego County Archaeological Society, Inc.
Environmental Review Committee

16 July 2011

To: Ms. Elizabeth Shearer-Nguyen
Development Services Department
City of San Diego
1222 First Avenue, Mail Station 501
San Diego, California 92101

Subject: Draft Environmental Impact Report
St. Paul's Cathedral and Residences
Project No. 96101

Dear Ms. Shearer-Nguyen:

I have reviewed cultural resources aspects of the subject DEIR on behalf of this committee of the San Diego County Archaeological Society.

Based on the information contained in the DEIR and its cultural resources appendix, we concur with the impact analysis and mitigation measures. 17

Thank you for including SDCAS in the public review of this DEIR.

Sincerely,

James W. Royle, Jr., Chairperson
Environmental Review Committee

cc: SDCAS President
File

P.O. Box 81106 • San Diego, CA 92138-1106 • (858) 538-0935

SAN DIEGO COUNTY ARCHAEOLOGICAL SOCIETY, INC. (July 16, 2011)

17. Comment noted.

Bankers Hill/Park West Community Association

August 13, 2011

Re: St. Paul's Cathedral & Residences: Project:
Comments for draft EIR: Project No. 96101/SCH No. 2009101036

Dear Ms. Shearer-Nguyen:

Below are the comments submitted on behalf of the Bankers Hill/Park West Community Association regarding the draft EIR for the St. Paul's Cathedral & Residences ("hereinafter referred to as the "St. Paul's Project").

1. **The Draft EIR's Discussion of Airport Flight Path/ Safety Issues Is Inadequate:**

The discussion contained in the draft environmental impact report regarding the impacts of the height deviation requested for the St. Paul's Project's Olive Street building upon the airport flight path/ and airport safety issues is inadequate. It fails to discuss the full range of issues that arise as a result of the 30-foot height deviation request.

CEQA requires a full discussion of all potential impacts, as well as all reasonable alternatives that will avoid or substantially lessen any substantial impacts. This required full discussion is not contained in the draft EIR; which instead limits its comments about potential airport flight path/ safety impacts to advocating the use the more permissive TERPS standard of analysis as proposed in the Williams Aviation Report, which was prepared by one of the applicant's consultants. It should be noted it is the same company that prepared the aviation report for the controversial Sunroads project in Kearney Mesa. **18**

The draft EIR fails to indicate the level of the actual FAA fight path over the project's Olive Street building; referred to as the "CFR FAR 77 Horizontal Surface". It begins at approximately 167 feet. The Olive Street building therefore intrudes into the horizontal FAA flight path. This significant impact should have been the subject of a detailed discussion; the draft EIR evades this necessary discussion and instead engages in advocacy by focusing solely on the use of a TERPS analysis to determine air safety. **19**

Likewise, the draft EIR does not provide information regarding actual aircraft use of the airspace above the proposed project. This above airspace is recognized both as a "circling approach" and often utilized by larger aircraft, and also is the regular flight path for the vast majority of **20**

1

BANKERS HILL/PARK WEST COMMUNITY ASSOCIATION (August 13, 2011)

18. The EIR addresses compatibility with the San Diego International Airport (SDIA) in Chapter 4.1, Land Use, under Issue 4: Would the project result in land uses that are not compatible with an adopted Airport Land Use Compatibility Plan (ALUCP)?

The project was submitted to the San Diego County Regional Airport Authority (SDCRAA) as the operator of SDIA since the Nutmeg building is within the AAOZ. The Airport Authority had Ricondo and Associates conduct an independent study for both project buildings and determined that the project would not impact operation at SDIA. Also, as stated in the EIR, the height of the Nutmeg building does not encroach within 50 feet of the FAA-established approach paths to the Airport as delineated by the AAOZ.

The Ricondo and Associates study prepared for the SDCRAA states: "FAA policy on protection of airspace from hazards to air navigation is defined in Title 14 of the Code of Federal Regulations (14 CFR), Part 77, Objects Affecting Navigable Airspace; and FAA Order 8260.3B, United States Standards for Terminal Instrument Procedures (TERPS). 14 CFR Part 77 defines generalized imaginary surfaces to be applied to airports, intended to protect airspace in the vicinity of the airport for all potential air navigation procedures. Obstacles which penetrate Part 77 surfaces are classified as obstructions to air navigation, but are not necessarily hazards to air navigation. FAA generally conducts an aeronautical study for objects that are obstructions to air navigation and issues a determination of hazard or no hazard, as applicable. Aeronautical studies assess the height and location of the object relative to TERPS obstacle clearance surfaces defined for each published en route, arrival and departure procedure, for Visual Flight Rules (VFR) and Instrument Flight Rules (IFR) in the vicinity of the object."

The Olive Site is at an elevation of approximately 274 feet AMSL and the height of the Olive Building would be 180 feet above ground level, which would result in the maximum obstruction extending to 454 feet AMSL. The Nutmeg Site is at a ground elevation of approximately 266 feet AMSL and the height of the Nutmeg Building would be 150 feet above ground level, which would result in the maximum obstruction extending to 416 feet AMSL. Based on the Ricondo and Associates study, the SDCRAA determined that the project (both the Nutmeg and Olive buildings sites) would not be an operational hazard for the airport and would not penetrate the obstacle clearance surface. In addition, based on its own aeronautical studies, the FAA issued a Determination of No Hazard to Air Navigation (FAA 2011) for both buildings. These determination letters are included in Appendix J of the EIR.

19. As stated in the EIR, the Project buildings would exceed the CFR Part 77 Horizontal Surface; however, terrain and other structures in the area also penetrate this surface. The Horizontal Surface as defined by CFR 77.28(a) is a surface that is established 150 feet above the airport elevation. The airport elevation is 17 feet above mean sea level, so the Horizontal Surface for SDIA is 167 feet AMSL which is below the ground level of the existing terrain for both sites. The ground elevation for the Nutmeg site is 266 feet AMSL and Olive site is 274 feet AMSL; therefore, any structure on this site would exceed the horizontal surface. The TERPS obstacle clearance surfaces are defined for each published en route, arrival and departure procedure, for Visual Flight Rules (VFR) and Instrument Flight Rules (IFR) in the vicinity of the object being evaluated. The FAA conducted an aeronautical study of the proposed project buildings and determined that: "there would be no significant adverse effect upon Visual Flight Rules (VFR) operations, or upon instrument flight rules (IFR) operations, or upon the operation of an air

navigation aid (NAVAID), if the structure, at this point, were built only to the maximum proposed height. Application of standard VFR traffic pattern criteria finds that although the site underlies traffic pattern airspace, because of terrain, the structure height does not impact traffic pattern operations." The FAA determined and issued letters of No Hazard to Air Navigation to the project (FAA 2011). As a condition of this determination, the structures are required to be marked and/or lighted in accordance with FAA Advisory Circular 70/7460-1K Change 2, Obstruction Marking and Lighting, Red Lights, in Chapters 4, 5, and 12. The comment is incorrect in stating that the "FAA flight path over the project's Olive Street building begins at approximately 167 feet." The ground surface at the Olive Site is at an elevation of approximately 274 feet AMSL.

20. The project was submitted to the FAA, who conducted an aeronautical study that assessed the height and location of the project buildings relative to obstacle clearance surfaces defined for each published arrival, departure, and en route procedures for aircraft approaching and departing SDIA. The FAA evaluation found that there would be no significant adverse effect upon aircraft operations. Application of standard traffic pattern criteria found that although the site underlies traffic pattern airspace, due to the buildings' ground surface elevations, the structure heights would not impact traffic pattern operations. Therefore, FAA issued the project a determination of no hazard to air navigation (FAA 2011). This determination was confirmed by the SDCAA based on the evaluation conducted by Ricondo and Associates.

smaller aircraft that descend and land at San Diego International Airport. The volume and nature of the air traffic that travels over the project site should have been stated in the draft EIR; as well as the altitude at which aircraft transverse the flight path above the project. All possible impacts, including those which would result from a disabled aircraft, should have been analyzed.

Instead of engaging in the necessary full discussion, the draft EIR in effect incorporated by references the advocacy and suppositions contained in the Williams Aviation Report. It thus represents only one biased viewpoint. Other views, including those raised by licensed pilots (one of whom spoke at the August 2, 2011 Uptown Planners meeting) are not addressed. **20 Cont.**

Given the above, the discussion regarding the height deviation and its impact on the flight path and air safety are clearly inadequate.

2. The Draft EIR fails to discuss the Cumulative Impact of the Excessive Set-Back Deviations of the Proposed Project:

The draft EIR does not contain a meaningful discussion of the impacts of the proposed project on the existing land-use patterns and neighborhood character of the adjacent Bankers Hill/Park West community of Uptown.

As city staff pointed out in an assessment letter in 2008: **21**

> "One of the findings requires that the proposed development will be compatible with existing and planned land use on adjoining properties and will not constitute a disruptive element to the neighborhood and community. In addition, architectural harmony with the surrounding neighborhood will be achieved as far as practicable. It does not appear this finding can be made."

A major omission of the draft EIR is that it does not discuss the cumulative impact of the multiple deviations requested by the applicant. The full extent of the proposed deviations was pointed out in detail in a letter submitted by the Bankers Park/ West Community Association to Uptown Planners dated June 2, 2008:

> "Only small portion of the St. Paul's Cathedral project does not deviate; – otherwise, all the street sides of both buildings indicate substantial setback deviations:
>
> (1.) Along Fifth Avenue, the Nutmeg building encroaches up to 13–8 feet into the required setback; **22**
>
> (2.) Along Nutmeg Street, the Nutmeg building encroaches up to 13 – 10 feet into the required setback, with balconies at the north east corner extending 18 feet beyond the required setback and three feet beyond the street wall below;
>
> (3.) Along Fifth Avenue, the Olive Street building encroaches up to 8 feet into the required setback, with balconies extending 15 feet beyond the required setback;
>
> (4.) Along Olive Street, the Olive Street building encroaches up to 12 feet into the required setback;

2

21. The EIR addresses consistency with existing land use patterns and neighborhood character in Chapter 4.1, Land Use, and Chapter 4.2, Visual Quality/Community Character. Section 4.1.8 of the EIR addresses land use compatibility and finds that the project is not located in an area that is characterized by a single, unified architectural theme or land use designation. Rather, it is located within a mixed-use neighborhood characterized by buildings with various uses, architectural styles, residential densities, and building heights. In addition, Section 4.2.5 of the EIR addresses height, bulk, and architectural character and determined that the Park West neighborhood does not contains a common architectural theme, but rather exhibits a wide variety of architectural styles. An analysis of the height and bulk of the project buildings is also provided in the EIR and finds that the proposed 13-story and 17-story buildings would not be out of character with the densely urbanized Park West neighborhood that contains a wide variety of residential and commercial buildings, including high rises of up to 16 stories. The two towers of Park Laurel in the block to the south of the project site are both 14 stories and rise to an elevation of 158 feet. The height of the proposed 13-story and 17-story buildings would not cause the project to be a substantially different visual feature in a neighborhood that currently contains buildings of similar height. Per the City's Significance Determination Thresholds, an impact to neighborhood compatibility is whether the project would "severely contrast with the surrounding neighborhood character by exceeding the allowable height or bulk regulations and the height and bulk of existing patterns of development in the project vicinity, or by having an architectural style or use building materials in stark contrast to the adjacent development where the adjacent development follows a common theme." The EIR determined that the project would be consistent with existing patterns of development in an area that contains varied architectural themes and styles and is consistent with existing zoning of the site.

22. The EIR analyzes the impact of all the deviations as a whole in Section 4.1.2 (Land Use chapter of the EIR) and Section 4.2.5 (Visual Quality/Community Character chapter of the EIR) and concludes that the deviations are reasonable and appropriate for an urban scale mixed-use development. The deviations are justified by the provision of on-site affordable housing per SDMC Section 1512.0203(b)(4) and by the preservation and enhancement of historic resources. For the Olive site, the deviation to reduce the side street setback on Olive Street is justified by the desirability of providing adequate separation between the modern architecture of Olive Building and the historic architecture of the Cathedral. The applicable threshold for a significant land use impact is whether the deviations result in secondary physical impacts. The applicable threshold for a significant visual quality/community character impact is whether the Project would severely contrast with the surrounding neighborhood character. The EIR determined that the project did not result in any significant land use (Section 4.1.3) or visual quality/community character (Section 4.2.6) impacts. No additional alternatives analysis is necessary because there were no potentially significant land use or community character impacts caused by the Project and its requested deviations. In addition, the EIR did analyze the Reduced Residential Units/Reduced Building Height Alternative, which eliminated the height deviation (see EIR Section 9.4). Both the proposed Project and the reduced density/height alternative were determined to have a less than significant impact.

Theses significant setback deviations are what make the mass of each of the two buildings overwhelm the surrounding neighborhood. They create real negative visual impacts."

Rather than discussing the cumulative impact of all the proposed deviations upon the urban environment, architectural integrity, and pedestrian experience of the Bankers Hill/Park West community, the draft EIR attempts to isolate each proposed deviation and individually justify them. The draft EIR fails to discuss project alternatives that would minimize the need for the excessive amount of deviations. At the very least, an alternative with limited deviations should have been considered as one of the possible project alternatives.

The draft EIR erroneously claims many of the deviations are permitted for the purpose of providing affordable housing. However, no nexus has been established between the excessive deviations requested and the provision of affordable housing. The actual reason for the deviation requests appears to be to provide enough space for the overly-large size of the vast majority of housing units incorporated into the project. These units appear likely to be targeted for sale to very affluent buyers. The proposed project only consists of 110 housing units; this low density results from the large and bulky size the majority of the housing units in the project. The need for the excessive deviations would be removed if the units were reduced to a less excessive size. There would be no effect on the 11-unit affordable housing component. **22 Cont.**

The draft EIR should be revised to include a more thorough discussion of the cumulative impacts of the multiple deviations in the proposed project, and a project alternative should be included which has a significantly less deviations, other than those required for fire and public safety.

There has also been concerns raised by planning staff in the past over the :"(l)arge uniformly flat, repetitive glass facades are not characteristic of the development in the nearly vicinity." Although subsequent redesigns of the project have providing some mitigation of this impact, the draft EIR should discuss potential additional mitigation measures. **23**

3. Sixth Avenue Setback Require of 30 Feet: Uptown Community Plan Requirement:

The Uptown Community Plan requires a minimum 30-foot setback from the curb on Sixth Avenue (Uptown Community Plan, p 112):

"12. Establish a 10-foot setback from the property line for landscaping along the west side of Sixth Avenue with palm trees planted adjacent to the sidewalks. This will result in a 30-foot setback from the curb. " **24**

The project does not conform to this requirement. Since it is in the Uptown Community Plan, any deviation from the setback may require a community plan amendment. The draft EIR should include a discussion of this requirement.

The draft EIR should also address the potential shading impacts of the Olive Street building on Balboa Park; which may result from the height and setback deviations.

3

23. The architectural use of glass panels is analyzed in Section 4.2.5 of the EIR. Per the City's Significance Determination Thresholds, impacts to visual quality/community character would be significant if the project would: "Severely contrast with the surrounding neighborhood character due to height, bulk, architectural style, or building materials in stark contrast to the common theme of adjacent development." The requested deviation would increase the use of reflective glass from a maximum of 50% on each façade to an average of 59% on the Olive Building and 53% on the Nutmeg Building. Justification for the deviation is that the architectural design the building is for transparency and lightness to complement rather than compete with the solidity and mass of the Cathedral, to design the building to be attractive to buyers and assist in the sale of the market rate units, and to provide natural lighting that would reduce energy use. The EIR concludes that the project would be consistent with existing patterns of development in an area that contains varied architecture, rather than a common architectural theme or style.

24. The Uptown Community Plan recommends establishing a 10-foot setback from the property line with the intent of providing landscaping along the west side of Sixth Avenue and with palm trees planted adjacent to the sidewalk, resulting in an overall setback of 30 feet from the curb. This intent of this policy is to provide sufficient space to provide a consistent street level character along Sixth Avenue consisting of landscaping, non-contiguous sidewalk, and palm trees along both sides of the sidewalk that would complement the park along the east side of Sixth Avenue. The project would meet this intent and, therefore, would not adversely impact the goals of the community plan. As shown in EIR Figure 3.5a, Landscape Development Plan, the project proposes to restore the twin Queen Palm plantings along the project frontage and replace the existing lawn within the setback with a pattern of large and small accent plants, shrubs, and groundcover. The townhomes and commercial space will provide an articulated setback from the sidewalk of 15 to 17 feet and the landscaped areas would vary from 5 feet to 15 feet. The landscaped area along the Cathedral frontage on Sixth Avenue would maintain the existing setback of approximately 10 feet from the wall of the Cathedral. The landscape concept would meet the intent of the Uptown Community Plan by providing public landscape enhancements within the private yard areas and by retaining the historic Queen Palm planting plan. Existing conditions for recent projects along nearby portions of Sixth Avenue show a similar use of the 10-foot setback from the sidewalk for a combination of landscaping and private improvements.

Summary:

The proposed project is one of the tallest and most massive in size and scale ever proposed in Uptown, and has a large number of setback deviations. The 30-foot deviation above the 150-foot height limit raises legitimate questions about impacts to airspace safety. There also are potential negative impacts on Balboa Park, as well as to some of the most historically and architecturally distinct neighborhoods in San Diego. It is important that the draft EIR adequately address all potential impacts; the current draft is deficient in this regard. **25**

Sincerely yours,

Leo Wilson,

Chair
Bankers Hill/ Park West Community Association
eucalyptusalert@sbcglobal.net

4

25. As stated in response to comments 18 through 24, the FAA has issued the project a determination of No Hazard to Air Navigation (FAA 2011). Impact to Balboa Park is addressed in Chapter 4.2, Visual Quality/Community Character, of the EIR and includes photo simulations of the project buildings as would be viewed from three locations within the park. In addition, Chapter 4.8, Light/Glare/Shading, contains a shadow study showing the portions of the park that would be shaded in March, June, September, and December. The EIR concludes that the project would have no significant visual quality or shading impacts on Balboa Park.

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LIST OF ACRONYMS

AAOZ	Airport Approach Overlay Zone
AB	Assembly Bill
AC	asbestos cement
ADA	Americans with Disabilities Act
ADD	Assistant Deputy Director
ADRP	Archaeological Data Recovery Program
ADT	average daily trips
AIA	Airport Influence Area
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
AME	Archaeological Monitoring Exhibit
AMI	Area Median Income
AMSL	above mean sea level
APS	Alternative Planning Strategy
AQMP	air quality management plan
ARB	Air Resources Board
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
ATCM	Airborne Toxics Control Measure
BACT	best available control technology
BI	Building Inspector
BMP	best management practice
Btu	British thermal unit
Btu/hr	British thermal units per hour
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CAAQS	California Ambient Air Quality Standards
CalEPA	California Environmental Protection Agency
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CC&Rs	Conditions, Covenants, and Restrictions

CCAA	California Clean Air Act
CCAR	California Climate Action Registry
CCAT	California Climate Action Team
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act (Superfund)
CFR	Code of Federal Regulations
cfs	cubic feet per second
CH_4	methane
CHHSL	California Human Health Screening Level
CI	cast iron
City DSD	City Development Services Department
City	City of San Diego
CLUP	Comprehensive Land Use Plan
CM	Construction Manager
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	CO_2 equivalent
COC	constituent of concern
COPC	chemicals of principal concern
CP	concrete pipe
CPED	Crime Prevention through Environmental Design
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CSVR	Consultant Site Visit Record
CWA	Clean Water Act
CWRCB	California Water Resources Control Board
dB	decibel
dBA	A-weighted decibel
DEH	Department of Environmental Health
DHS	Department of Health Services
DIF	Development Impact Fee
DPR	Department of Park and Recreation
EAS	Environmental Analysis Section

EDU	equivalent dwelling unit
EIA	Energy Information Administration
EIR	Environmental Impact Report
EMT	emergency medical technician
EPA	Environmental Protection Agency
ERMS	Emergency Response Management System
°F	degrees Fahrenheit
FAA	Federal Aviation Administration
FAR	floor-area ratio
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIP	Federal Implementation Plan
FIRM	Federal Insurance Rate Map
FSC	Forest Stewardship Council
FY	fiscal year
GHG	greenhouse gases
gWh	gigawatt-hour
GWP	global warming potential
H&SC	Health and Safety Code
HA	Hydrologic Area
HAP	hazardous air pollutant
HCH	hexachlorocyclohexane
HCM	Highway Capacity Manual
HMD	Hazardous Materials Division
HP	horsepower
HRB	Historical Resources Board
HRG	Historical Resources Guidelines
HSWA	Hazardous and Solid Waste Amendments
HU	Hydrologic Unit
HWCL	Hazardous Waste Control Law
JURMP	Jurisdictional Urban Runoff Management Plan
Km	kilometers
kW	kilowatts
LBP	lead-based paint
LCFS	Low Carbon Fuel Standards
LDC	Land Development Code
LDR	Land Development Review

LEA	Local Enforcement Agency
LEED	Leadership in Energy and Environmental Design
LID	low-impact development
LOS	level of service
MACT	maximum available control technology
MCCPD	Mid-City Communities Planned District
MEI	Maximally Exposed Individual
mg/m^3	milligrams per cubic meter
MHPA	Multi-Habitat Planning Area
MLD	Most Likely Descendent
MMC	Mitigation Monitoring Coordination
MMRP	mitigation monitoring and reporting program
MMT	million metric tons
mpg	miles per gallon
mph	miles per hour
MPO	Metropolitan Planning Organization
MS4	Municipal Separate Storm Sewer System
MSCP	Multiple Species Conservation Program
MT	metric tons
mW	megawatts
mWh	megawatt-hour
MWD	Metropolitan Water District
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NDP	Neighborhood Development Permit
NEA	National Energy Act of 1978
NEPA	National Environmental Policy Act
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NFIP	National Flood Insurance Program
NFPA	National Fire Protection Association
NO_2	nitrogen dioxide
NOI	Notice of Intent
NOP	Notice of Preparation
NO_X	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List

NPS	National Park Service
NTP	Notice to Proceed
OAL	Office of Administrative Law
OEHHA	Office of Environmental Health Hazard Assessment
OPR	California Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PAH	Polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCW	Project Clean Water
PDC	Project Design Consultants
PDO	Planned District Ordinance
PI	Principal Investigator
PM	particulate matter
PM_{10}	fine particulate matter
$PM_{2.5}$	fine particulate matter
PME	Paleontological Monitoring Exhibit
ppm	part per million
PRC	Public Resource Code
PRG	Preliminary Remediation Goal
PRP	Paleontological Recovery Program
PUC	California Public Utilities Commission
PVC	polyvinylchloride
RAQS	regional air quality strategy
RCP	Regional Comprehensive Plan
RCRA	Resource Conservation and Recovery Act
RE	Resident Engineer
ROG	reactive organic gases
RPZ	Runway Protection Zone
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SAM	Site Assessment and Mitigation
SANDAG	San Diego Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDFD	San Diego Fire-Rescue Department

SDG&E	San Diego Gas & Electric
SDIA	San Diego International Airport
SDMC	San Diego Municipal Code
SDMSE	San Diego Medical Services Enterprise
SDMTS	San Diego Metropolitan Transit System
SDP	Site Development Permit
SDP	Site Development Permit
SDPD	San Diego Police Department
SDRAA	San Diego County Regional Airport Authority
SDUSD	San Diego Unified School District
SFHA	Special Flood Hazard Area
SIP	State Implementation Plan
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO_2	sulfur dioxide
STC	Sound Transmission Class
SUSMP	Standard Urban Storm Water Mitigation Plan
SWIS	Solid Waste Information System
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Containment
TCM	Transportation Control Measure
TDS	total dissolved solids
TERPS	Terminal Instrument Procedures
TM	Tentative Map
TMDL	Total Maximum Daily Load
TNM	Traffic Noise Model
tpy	tons per year
TRU	transportation refrigeration storage unit
TSS	total suspended solids
UBC	Uniform Building Code
UFC	Uniform Fire Code
$\mu g/m^3$	micrograms per cubic meter
UST	underground storage tank
UWMP	Urban Water Management Plan
v/c	volume-to-capacity ratio
VMT	vehicle miles traveled

VOC	volatile organic compound
vph	vehicles per hour
WPCP	Water Pollution Control Plan

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EXECUTIVE SUMMARY

This summary provides a brief synopsis of the St. Paul's Cathedral and Residences project, the results of the environmental analysis contained in this Environmental Impact Report (EIR), and project alternatives. Detailed information on the rationale for the conclusions of significant and less than significant project impacts is not included in this section; therefore, the reader should review the entire document to fully understand the project and its environmental consequences.

ES-1 PROJECT LOCATION AND DESCRIPTION

The project involves the construction of two mixed-use buildings with a total of 110 dwelling units. Each building would also contain offices and retail or neighborhood commercial services. The project also includes improvements for additional religious use facilities at St. Paul's Cathedral. The project site is located in the Park West neighborhood of San Diego, between Fifth and Sixth avenues and with frontage on the south side of Olive Street and on both sides of Nutmeg Street.

The 17-story Olive Building is on a 25,805-square-foot parcel on the south side of Olive Street, extending between Fifth and Sixth avenues. It would contain 65 dwelling units, 14,209 square feet of offices, 924 square feet of retail space, and 4 levels of underground parking. The 13-story Nutmeg Building is on a 20,075-square-foot parcel on the southwest corner of Nutmeg Street and Sixth Avenue. It would contain 45 dwelling units, 5,818 square feet of offices, 5,185 square feet of retail and/or restaurant space, and 3 levels of underground parking. An existing 16-unit apartment building on the Olive site would be demolished. St. Paul's Cathedral is on a 30,612-square-foot site located on the north side of Nutmeg Street and extending between Fifth and Sixth avenues.

ES-2 ENVIRONMENTAL ANALYSIS

The EIR contains an environmental analysis of the potential impacts associated with development of the proposed project. The issues that are addressed in detail in this document are: land use; visual quality/community character; traffic, circulation, and parking; air quality; historical resources; noise; paleontological resources; light/glare/shading; public services and facilities; solid waste; energy conservation; and greenhouse gas emissions.

The analysis concluded that potentially significant direct impacts would occur to traffic and circulation, archaeological and historical resources, paleontological resources, and noise. Mitigation measures identified in Chapter 4.0 of the EIR would reduce these impacts to below a level of significance. Significant cumulative impacts would occur to solid waste disposal and mitigation measures for this impact are identified in Chapter 7.0.

The analysis contained in the EIR determined that the project would not have any significant impacts to: land use; visual quality/community character; air quality; light/glare/shading; public services and facilities; energy conservation; and greenhouse gas emissions. In addition, the initial environmental study conducted for the project by the City determined that no impacts would occur to agricultural resources, biological resources, or mineral resources.

Table ES-1 summarizes the proposed project's significant environmental impacts, the proposed mitigation measures for each environmental issue, and the level of significance after implementation of recommended mitigation measures.

ES-3 PROJECT ALTERNATIVES

An alternative to the proposed project, the Reduced Residential Units/Reduced Building Height Project Alternative, is addressed in Section 9.0 of the EIR in terms of its ability to meet some but not all of the project objectives and eliminate or further reduce significant environmental effects of the proposed project. As required by the California Environmental Quality Act (CEQA), the No Project Alternative is also addressed in Chapter 9.0, which is based on no development at the project site.

From the available data and the analysis provided in Section 9.0 of the EIR, the Reduced Residential Units/Reduced Building Height Project Alternative would be an environmentally superior alternative to the proposed project in that it would reduce project-generated traffic, which would also reduce potential project impacts to air quality and GHG emissions to a greater degree than would the project. The Year 2030 traffic impacts would remain significant and a traffic signal at the Fifth Avenue and Nutmeg Street intersection would still be required under the Reduced Residential Units/Reduced Building Height Project Alternative.

<u>No Project Alternative</u>

The CEQA Guidelines require that a No Project Alternative be included in all EIRs. The No Project Alternative assumes that there would be no residential or commercial development at the project site and the existing conditions would remain as described in the EIR. The No Project Alternative would not preclude expansion of the church since it is a permitted use and, therefore, would not be a discretionary project and would not be subject to CEQA review.

Reduced Residential Units/Reduced Building Height Project Alternative

This alternative would develop the Olive Site with a mixed-use project that would be reduced in height from 180 feet with the project to the 150-foot height limit of the CV-1 Zone. The on-site affordable housing units would be eliminated from both the Olive and Nutmeg sites and the total project would be reduced from 110 units to 96 units. The Nutmeg Building would remain at 150 feet in height and both buildings would include the same commercial and office space as the project. Off-street parking in the Olive building would be reduced consistent with the reduced number of dwelling units and the surplus parking spaces would also be eliminated. Architectural design and landscape elements would remain the same as the project.

ES-4 AREAS OF CONTROVERSY/ISSUES TO BE RESOLVED

The City, as Lead Agency for the project, prepared a Notice of Preparation (NOP) on October 7, 2009, distributed it to the public and governmental agencies, and began a 30-day comment period. All Responsible and Trustee Agencies, which are public agencies other than the City and state agencies, respectively, that have responsibility for carrying out the project such as through issuance of permits or other reviews, were also notified during the comment period. A scoping meeting was held on October 27, 2009, to inform the public about the project and receive comments. A total of three comments were received during this time, one from the California Department of Transportation (Caltrans) and two from the same private citizen representing the Bankers Hill/Park West Community Association, and were considered in preparation of the Draft EIR. The NOP and comment letters are included in this document as Appendix A.

The concerns raised during the NOP and scoping meeting process were related to airspace safety associated with aircraft approaching to land at San Diego International Airport (SDIA), land use and community character issues related to proposed project architecture, potential impacts to Balboa Park, and potential impacts to historical resources.

Table ES-1
Project Impacts and Proposed Mitigation

<table>
<tr><th>Impact</th><th>Mitigation Measures</th><th>Level of Significance After Mitigation</th></tr>
<tr><td colspan="3" align="center">Traffic, Circulation, and Parking</td></tr>
<tr><td>Impact TRF-1: Under year 2030 conditions, the project would increase the delay at the LOS F intersection at Maple Street and Fifth Avenue by more than the City's threshold of 1 second; and would cause PM operations at Olive Street and Fifth Avenue, and at Nutmeg Street and Fifth Avenue, to change from LOS D to LOS E.</td><td>Mitigation Measure TRF-1: Prior to issuance of any building permit for construction of either of the Olive Site or Nutmeg Site structures, the applicant shall pay to the City the project's fair share (22.4%) of the cost for installation of a traffic signal at the Nutmeg Street and Fifth Avenue intersection.</td><td>Less than Significant</td></tr>
<tr><td>Impact TRF-2: The project's increase in the v/c ratio on Laurel Street between First and Fourth avenues by more than the City's threshold of 0.01 for segments operating at LOS F.</td><td>Impact TRF-2 would not require mitigation because this segment of Laurel Street meets all three special conditions to not require mitigation for some roadway segments operating at LOS E or F.</td><td>Less than Significant</td></tr>
<tr><td colspan="3" align="center">Historical Resources</td></tr>
<tr><td>Impact AR-1: Damage or destruction of archaeological resources, including human remains, would be a significant project impact.</td><td>Mitigation Measure AR-1:
I. Prior to Permit Issuance
A. Entitlements Plan Check
1. Prior to issuance of any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits or a Notice to Proceed for Subdivisions, but prior to the first preconstruction meeting, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Archaeological Monitoring and Native American monitoring have been noted on the applicable construction documents through the plan check process.
B. Letters of Qualification have been submitted to ADD
1. The applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the project and the names of all persons involved in the archaeological monitoring program, as defined in the City of San Diego Historical Resources Guidelines (HRG).</td><td>Less than Significant</td></tr>
</table>

Impact	Mitigation Measures	Level of Significance After Mitigation
	If applicable, individuals involved in the archaeological monitoring program must have completed the 40-hour HAZWOPER training with certification documentation. 2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the archaeological monitoring of the project meet the qualifications established in the HRG. 3. Prior to the start of work, the applicant must obtain written approval from MMC for any personnel changes associated with the monitoring program. **II. Prior to Start of Construction** A. Verification of Records Search 1. The PI shall provide verification to MMC that a site specific records search (1/4 mile radius) has been completed. Verification includes, but is not limited to a copy of a confirmation letter from South Coastal Information Center, or, if the search was in-house, a letter of verification from the PI stating that the search was completed. 2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities. 3. The PI may submit a detailed letter to MMC requesting a reduction to the ¼ mile radius. B. PI Shall Attend Precon Meetings 1. Prior to beginning any work that requires monitoring; the Applicant shall arrange a Precon Meeting that shall include the PI, Native American consultant/monitor (where Native American resources may be impacted), Construction Manager (CM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified Archaeologist and Native American Monitor shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Archaeological Monitoring program with the Construction Manager and/or Grading Contractor.	

Impact	Mitigation Measures	Level of Significance After Mitigation
	a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring. 2. Identify Areas to be Monitored a. Prior to the start of any work that requires monitoring, the PI shall submit an Archaeological Monitoring Exhibit (AME) (with verification that the AME has been reviewed and approved by the Native American consultant/monitor when Native American resources may be impacted) based on the appropriate construction documents (reduced to 11x17) to MMC identifying the areas to be monitored including the delineation of grading/excavation limits. b. The AME shall be based on the results of a site specific records search as well as information regarding existing known soil conditions (native or formation). 3. When Monitoring Will Occur a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur. b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate site conditions such as depth of excavation and/or site graded to bedrock, etc., which may reduce or increase the potential for resources to be present. **III. During Construction** A. Monitor(s) Shall be Present During Grading/Excavation/Trenching	

Impact	Mitigation Measures	Level of Significance After Mitigation
	1. The Archaeological Monitor shall be present full-time during all soil disturbing and grading/excavation/trenching activities which could result in impacts to archaeological resources as identified on the AME. **The Construction Manager is responsible for notifying the RE, PI, and MMC of changes to any construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances OSHA safety requirements may necessitate modification of the AME.** 2. The Native American consultant/monitor shall determine the extent of their presence during soil disturbing and grading/excavation/trenching activities based on the AME and provide that information to the PI and MMC. If prehistoric resources are encountered during the Native American consultant/monitor's absence, work shall stop and the Discovery Notification Process detailed in Section III.B-C and IV.A-D shall commence. 3. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as modern disturbance post-dating the previous grading/trenching activities, presence of fossil formations, or when native soils are encountered that may reduce or increase the potential for resources to be present. 4. The archaeological and Native American consultant/monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVR's shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion)**, and in the case of ANY discoveries. The RE shall forward copies to MMC. B. Discovery Notification Process 1. In the event of a discovery, the Archaeological Monitor shall direct the contractor to temporarily divert all soil disturbing activities, including but not	

Impact	Mitigation Measures	Level of Significance After Mitigation
	limited to digging, trenching, excavating or grading activities in the area of discovery and in the area reasonably suspected to overlay adjacent resources and immediately notify the RE or BI, as appropriate. 2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery. 3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible. 4. No soil shall be exported off-site until a determination can be made regarding the significance of the resource specifically if Native American resources are encountered. C. Determination of Significance 1. The PI and Native American consultant/monitor, where Native American resources are discovered shall evaluate the significance of the resource. If Human Remains are involved, follow protocol in Section IV below. a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required. b. If the resource is significant, the PI shall submit an Archaeological Data Recovery Program (ADRP) which has been reviewed by the Native American consultant/monitor, and obtain written approval from MMC. Impacts to significant resources must be mitigated before ground disturbing activities in the area of discovery will be allowed to resume. **Note: If a unique archaeological site is also an historical resource as defined in CEQA, then the limits on the amount(s) that a project applicant may be required to pay to cover mitigation costs as indicated in**	

Impact	Mitigation Measures	Level of Significance After Mitigation
	CEQA Section 21083.2 shall not apply. c. If the resource is not significant, the PI shall submit a letter to MMC indicating that artifacts will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that that no further work is required. **IV. Discovery of Human Remains** If human remains are discovered, work shall halt in that area and no soil shall be exported off-site until a determination can be made regarding the provenance of the human remains; and the following procedures as set forth in CEQA Section 15064.5(e), the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) shall be undertaken: A. Notification 1. Archaeological Monitor shall notify the RE or BI as appropriate, MMC, and the PI, if the Monitor is not qualified as a PI. MMC will notify the appropriate Senior Planner in the Environmental Analysis Section (EAS) of the Development Services Department to assist with the discovery notification process. 2. The PI shall notify the Medical Examiner after consultation with the RE, either in person or via telephone. B. Isolate discovery site 1. Work shall be directed away from the location of the discovery and any nearby area reasonably suspected to overlay adjacent human remains until a determination can be made by the Medical Examiner in consultation with the PI concerning the provenance of the remains. 2. The Medical Examiner, in consultation with the PI, will determine the need for a field examination to determine the provenance. 3. If a field examination is not warranted, the Medical Examiner will determine with input from the PI, if the remains are	

Impact	Mitigation Measures	Level of Significance After Mitigation
	or are most likely to be of Native American origin. C. If Human Remains **ARE** determined to be Native American 1. The Medical Examiner will notify the Native American Heritage Commission (NAHC) within 24 hours. By law, **ONLY** the Medical Examiner can make this call. 2. NAHC will immediately identify the person or persons determined to be the Most Likely Descendent (MLD) and provide contact information. 3. The MLD will contact the PI within 24 hours or sooner after the Medical Examiner has completed coordination, to begin the consultation process in accordance with CEQA Section 15064.5(e), the California Public Resources and Health & Safety Codes. 4. The MLD will have 48 hours to make recommendations to the property owner or representative, for the treatment or disposition with proper dignity, of the human remains and associated grave goods. 5. Disposition of Native American Human Remains will be determined between the MLD and the PI, and, if: a. The NAHC is unable to identify the MLD, OR the MLD failed to make a recommendation within 48 hours after being notified by the Commission; OR; b. The landowner or authorized representative rejects the recommendation of the MLD and mediation in accordance with PRC 5097.94 (k) by the NAHC fails to provide measures acceptable to the landowner, THEN, c. In order to protect these sites, the Landowner shall do one or more of the following: (1) Record the site with the NAHC; (2) Record an open space or conservation easement on the site;	

Impact	Mitigation Measures	Level of Significance After Mitigation
	(3) Record a document with the County. d. Upon the discovery of multiple Native American human remains during a ground disturbing land development activity, the landowner may agree that additional conferral with descendants is necessary to consider culturally appropriate treatment of multiple Native American human remains. Culturally appropriate treatment of such a discovery may be ascertained from review of the site utilizing cultural and archaeological standards. Where the parties are unable to agree on the appropriate treatment measures the human remains and buried with Native American human remains shall be reinterred with appropriate dignity, pursuant to Section 5.c., above. D. If Human Remains are **NOT** Native American 1. The PI shall contact the Medical Examiner and notify them of the historic era context of the burial. 2. The Medical Examiner will determine the appropriate course of action with the PI and City staff (PRC 5097.98). 3. If the remains are of historic origin, they shall be appropriately removed and conveyed to the San Diego Museum of Man for analysis. The decision for internment of the human remains shall be made in consultation with MMC, EAS, the applicant/landowner, any known descendant group, and the San Diego Museum of Man. **V. Night and/or Weekend Work** A. If night and/or weekend work is included in the contract 1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the precon meeting. 2. The following procedures shall be followed.	

Impact	Mitigation Measures	Level of Significance After Mitigation
	a. No Discoveries In the event that no discoveries were encountered during night and/or weekend work, the PI shall record the information on the CSVR and submit to MMC via fax by 8AM of the next business day. b. Discoveries All discoveries shall be processed and documented using the existing procedures detailed in Sections III - During Construction, and IV – Discovery of Human Remains. Discovery of human remains shall always be treated as a significant discovery. c. Potentially Significant Discoveries If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction and IV-Discovery of Human Remains shall be followed. d. The PI shall immediately contact MMC, or by 8AM of the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made. B. If night and/or weekend work becomes necessary during the course of construction 1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin. 2. The RE, or BI, as appropriate, shall notify MMC immediately. C. All other procedures described above shall apply, as appropriate. **VI. Post Construction** A. Preparation and Submittal of Draft Monitoring Report 1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Historical Resources Guidelines (Appendix C/D) which describes the results, analysis, and conclusions of all phases of the Archaeological Monitoring	

Impact	Mitigation Measures	Level of Significance After Mitigation
	Program (with appropriate graphics) to MMC for review and approval within 90 days following the completion of monitoring. **It should be noted that if the PI is unable to submit the Draft Monitoring Report within the allotted 90-day timeframe resulting from delays with analysis, special study results or other complex issues, a schedule shall be submitted to MMC establishing agreed due dates and the provision for submittal of monthly status reports until this measure can be met.** a. For significant archaeological resources encountered during monitoring, the Archaeological Data Recovery Program shall be included in the Draft Monitoring Report. b. Recording Sites with State of California Department of Parks and Recreation. The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) any significant or potentially significant resources encountered during the Archaeological Monitoring Program in accordance with the City's Historical Resources Guidelines, and submittal of such forms to the South Coastal Information Center with the Final Monitoring Report. 2. MMC shall return the Draft Monitoring Report to the PI for revision or, for preparation of the Final Report. 3. The PI shall submit revised Draft Monitoring Report to MMC for approval. 4. MMC shall provide written verification to the PI of the approved report. 5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals. B. Handling of Artifacts 1. The PI shall be responsible for ensuring	

Impact	Mitigation Measures	Level of Significance After Mitigation
	that all cultural remains collected are cleaned and catalogued 2. The PI shall be responsible for ensuring that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate. 3. The cost for curation is the responsibility of the property owner. C. Curation of artifacts: Accession Agreement and Acceptance Verification 1. The PI shall be responsible for ensuring that all artifacts associated with the survey, testing and/or data recovery for this project are permanently curated with an appropriate institution. This shall be completed in consultation with MMC and the Native American representative, as applicable. 2. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC. 3. When applicable to the situation, the PI shall include written verification from the Native American consultant/monitor indicating that Native American resources were treated in accordance with state law and/or applicable agreements. If the resources were reinterred, verification shall be provided to show what protective measures were taken to ensure no further disturbance occurs in accordance with Section IV – Discovery of Human Remains, Subsection 5. D. Final Monitoring Report(s) 1. The PI shall submit one copy of the approved Final Monitoring Report to the RE or BI as appropriate, and one copy to MMC (even if negative), within 90 days after notification from MMC that the draft report has been approved. 2. The RE shall, in no case, issue the Notice of Completion and/or release of the Performance Bond for grading until receiving a copy of the approved Final	

Impact	Mitigation Measures	Level of Significance After Mitigation
	Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.	
Impact HR-1: Any deviation from the plans reviewed by City Plan-Historic staff could result in a significant impact to a Historic Resource.	***Mitigation Measure HR-1:*** Prior to the issuance of any construction permits, including but not limited to, the first grading permit, demolition plans/permits, and building plans/permits for St. Paul's Cathedral, the applicant shall submit construction plans for proposed modifications to St. Paul's Cathedral consistent with the approved project, which has been determined to be in conformance with the U.S. Secretary of the Interior's Standards for Treatment of Historic Properties and related Guidelines.	Less than Significant
Impact HR-2: Destruction or alteration of the historic Queen Palms landscape element would be a significant project impact.	***Mitigation Measure HR-2.1:*** Prior to issuance of any construction permits, including but not limited to, the first grading permit, demolition plans/permits, and building plans/permits for construction of the Olive Building or for demolition and/or construction of the proposed Cathedral improvements along the Sixth Avenue frontage, the existing Queen Palms that are to be removed for project construction shall be boxed for replanting. If any of these existing palms fail to survive after replanting; each shall be replaced with a Queen Palm with a minimum 20-foot brown trunk height in locations consistent with the Sixth Avenue streetscape and to the satisfaction of the City Street Division-Urban Forestry. A surety bond in an amount sufficient to purchase and install replacement trees shall be provided to guarantee the survival of the trees for 3 years. The City Street Division-Urban Forestry staff shall inspect the trees to determine that they are in a healthy and thriving condition prior to release of the bond. If any trees are determined to need additional care or replacement, action as determined by the City Street Division-Urban Forestry prior to the release of the bond shall be taken and the bond shall not be released for an additional 3 years, but may be replaced with a bond to cover only the trees requiring additional care or replacement. ***Mitigation Measure HR-2.2:*** Prior to issuance of any construction permits, including but not limited to, the first grading permit, demolition plans/permits, and building plans/permits for construction on the Olive Site, project plans shall show the locations of the palms to be removed and those to be protected from damage during construction. The palms that are to be protected shall be provided with bright yellow or orange temporary fencing or other protection to be shown on the project plans to the satisfaction of the Development Services Department. Stockpiling, topsoil disturbance, construction material storage, vehicle use, foot traffic,	Less than Significant

Impact	Mitigation Measures	Level of Significance After Mitigation
	and storage of any kind is prohibited within the fenced area. The protection shall be installed and remain in an unaltered and undamaged condition during the entire period of construction until authorized to be removed by the Development Services Department. Should any of the protected palms be damaged to the extent that a Registered Arborist determines that they should be removed, the applicant for the grading or building permit shall be responsible for replacement of the palms in accordance with Mitigation Measure HR-2.1 and for two additional palms for each damaged palm, to be planted along the Sixth Avenue frontage or elsewhere in Balboa Park, at locations identified by the City Street Division-Urban Forestry.	
	Noise	
Impact NOI-1: Temporary construction noise would be a significant project impact.	***Mitigation Measure NOI-1a:*** The project proponent shall require any construction activities and contractors to adopt the following measures to control noise generated by construction activities: • Construction equipment shall be properly maintained per manufacturers' specifications and fitted with the best available noise-suppression devices (e.g., mufflers, silencers, wraps). • The project proponent and contractors shall not allow heavy-duty construction equipment to operate within 15 feet of adjacent structures to prevent structural damage from construction generated vibration. • If heavy-duty construction equipment must be operated within 15 feet of adjacent structures, a before and after survey of cracks in the adjacent buildings shall be taken of all structures adjacent to construction activities. If any damage occurs to adjacent structures from heavy equipment operations, the project proponent shall repair all damages. • All impact tools shall be shrouded or shielded and all intake and exhaust ports on power equipment shall be muffled or shielded. • Heavy-duty construction equipment shall be staged and used at the farthest distance feasible from adjacent sensitive receptors. • Construction equipment shall not be idled for extended periods. • Fixed/stationary equipment (such as generators, compressors, rock crushers, and cement mixers)	Less than Significant

Impact	Mitigation Measures	Level of Significance After Mitigation
	shall be located as far as possible from noise-sensitive receptors. • An on-site coordinator shall be employed by the project applicant/contractor and his or her telephone number along with instructions on how to file a noise complaint shall be posted conspicuously around the project site during construction phases. The coordinator's duties shall include fielding and documenting noise complaints, determining the source of the complaint (e.g., piece of construction equipment), determining whether noise levels are within acceptable limits and according to City standards, and reporting complaints to the City. The coordinator shall contact nearby noise-sensitive receptors, advising them of the construction schedule. • Project construction and related activities shall be limited to daytime hours (7 a.m. to 7 p.m.). ***Mitigation Measure NOI-1b*****:** The above mitigation measures would reduce construction noise levels by 10 to 15 dBA at ground level, but would be ineffective for adjacent residences on the second floor or higher and for any actions within 50 feet of adjacent property lines. The following additional mitigation would ensure that all adjacent residences are not exposed to noise levels exceeding 75 dBA L_{eq} or noise that exceeds 10 dB above existing ambient noise levels: • Construction equipment operating at noise levels exceeding 75 dBA L_{eq} shall not actively operate for more than 30 minutes of each 1 hour period within 30 feet of adjacent sensitive receptors. • Noise barriers shall be erected along the eastern boundary of the project site. Noise barriers during shoring activities shall be 14 feet in height. Noise barrier heights during excavation shall be 14 feet in height until the site is excavated to a depth of 7 feet, when the barrier height may be reduced to 12 feet. At an excavation depth of 14 feet or greater the barrier may be reduced to 8 feet. A minimum 8-foot-high barrier shall be maintained along the eastern boundary of the Nutmeg site throughout excavation and foundation activities. The noise barriers should be constructed of material with a minimum weight of 4 pounds per square foot with no gaps or perforations. Noise barriers may be constructed of, but are not limited to, 5/8-inch plywood and 5/8-inch oriented strand board.	

Impact	Mitigation Measures	Level of Significance After Mitigation
	• Due to shading effects on adjacent residences, lower vertical wall height maybe desired. Wall heights may be lowered 6 inches or more by creating a cantilevered extension at the top of the wall. Effectively, a 10-foot high wall with an approximate 2-foot cantilevered portion angled 45 degrees toward the project site would be as effective as a 12-foot barrier vertical barrier with a height of a little over 11 feet. To use cantilevered walls, the cantilever length would depend on the vertical wall height. Table 4.6-8 provides the of the required cantilever length for various wall heights.	
Impact NOI-2: Noise from stationary HVAC equipment would be a significant project impact.	***Mitigation Measure NOI-2:*** The project proponent shall ensure that design and installation of stationary noise sources for the project meet the measures described below: • Implement best design considerations and shielding, including installing stationary noise sources associated with HVAC systems indoors in mechanical rooms. • Prior to the issuance of a building permit, the applicant or its designee shall prepare an acoustical study(s) of proposed mechanical equipment, which shall identify all noise-generating equipment, predict noise level property lines from all identified equipment, and recommended mitigation to be implemented (e.g., enclosures, barriers, site orientation), as necessary, to comply with the City of San Diego noise ordinance.	Less than Significant
	Paleontological Resources	
Impact PR-1: Damage or destruction of a paleontological resource would be a significant project impact.	***Mitigation Measure PR-1:*** **I. Prior to Permit Issuance** A. Entitlements Plan Check 1. Prior to issuance of any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits or a Notice to Proceed for Subdivisions, but prior to the first preconstruction meeting, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Paleontological Monitoring have been noted on the appropriate construction documents.	Less than Significant

Impact	Mitigation Measures	Level of Significance After Mitigation
	B. Letters of Qualification have been submitted to ADD 1. The applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the project and the names of all persons involved in the paleontological monitoring program, as defined in the City of San Diego Paleontology Guidelines. 2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the paleontological monitoring of the project. 3. Prior to the start of work, the applicant shall obtain approval from MMC for any personnel changes associated with the monitoring program. **II. Prior to Start of Construction** A. Verification of Records Search 1. The PI shall provide verification to MMC that a site specific records search has been completed. Verification includes, but is not limited to a copy of a confirmation letter from San Diego Natural History Museum, other institution or, if the search was in-house, a letter of verification from the PI stating that the search was completed. 2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities. B. PI Shall Attend Precon Meetings 1. Prior to beginning any work that requires monitoring; the Applicant shall arrange a Precon Meeting that shall include the PI, Construction Manager (CM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified paleontologist shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Paleontological Monitoring program with the Construction Manager and/or Grading Contractor.	

Impact	Mitigation Measures	Level of Significance After Mitigation
	a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring. 2. Identify Areas to be Monitored Prior to the start of any work that requires monitoring, the PI shall submit a Paleontological Monitoring Exhibit (PME) based on the appropriate construction documents (reduced to 11x17) to MMC identifying the areas to be monitored including the delineation of grading/excavation limits. The PME shall be based on the results of a site specific records search as well as information regarding existing known soil conditions (native or formation). 3. When Monitoring Will Occur a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur. b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate conditions such as depth of excavation and/or site graded to bedrock, presence or absence of fossil resources, etc., which may reduce or increase the potential for resources to be present. **III. During Construction** A. Monitor Shall be Present During Grading/Excavation/Trenching 1. The monitor shall be present full-time during grading/excavation/trenching activities as identified on the PME that could result in impacts to formations with high and moderate resource sensitivity. **The Construction Manager is responsible for notifying the RE, PI, and MMC of changes to any**	

Impact	Mitigation Measures	Level of Significance After Mitigation
	construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances OSHA safety requirements may necessitate modification of the PME. 2. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as trenching activities that do not encounter formational soils as previously assumed, and/or when unique/unusual fossils are encountered, which may reduce or increase the potential for resources to be present. 3. The monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVRs shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion)**, and in the case of ANY discoveries. The RE shall forward copies to MMC. B. Discovery Notification Process 1. In the event of a discovery, the Paleontological Monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and immediately notify the RE or BI, as appropriate. 2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery. 3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible. C. Determination of Significance 1. The PI shall evaluate the significance of the resource. a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional	

Impact	Mitigation Measures	Level of Significance After Mitigation
	mitigation is required. The determination of significance for fossil discoveries shall be at the discretion of the PI. b. If the resource is significant, the PI shall submit a Paleontological Recovery Program (PRP) and obtain written approval from MMC. Impacts to significant resources must be mitigated before ground disturbing activities in the area of discovery will be allowed to resume. c. If resource is not significant (e.g., small pieces of broken common shell fragments or other scattered common fossils) the PI shall notify the RE, or BI as appropriate, that a non-significant discovery has been made. The Paleontologist shall continue to monitor the area without notification to MMC unless a significant resource is encountered. d. The PI shall submit a letter to MMC indicating that fossil resources will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that no further work is required. **IV. Night and/or Weekend Work** A. If night and/or weekend work is included in the contract 1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the precon meeting. 2. The following procedures shall be followed. a. No Discoveries In the event that no discoveries were encountered during night and/or weekend work, The PI shall record the information on the CSVR and submit to MMC via fax by 8 a.m. on the next business day. b. Discoveries All discoveries shall be processed and documented using the existing procedures detailed in Sections III -	

Impact	Mitigation Measures	Level of Significance After Mitigation
	During Construction. c. Potentially Significant Discoveries If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction shall be followed. d. The PI shall immediately contact MMC, or by 8 a.m. on the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made. B. If night work becomes necessary during the course of construction 1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin. 2. The RE, or BI, as appropriate, shall notify MMC immediately. C. All other procedures described above shall apply, as appropriate. **V. Post Construction** A. Preparation and Submittal of Draft Monitoring Report 1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Paleontological Guidelines which describes the results, analysis, and conclusions of all phases of the Paleontological Monitoring Program (with appropriate graphics) to MMC for review and approval within 90 days following the completion of monitoring, a. For significant paleontological resources encountered during monitoring, the Paleontological Recovery Program shall be included in the Draft Monitoring Report. b. Recording Sites with the San Diego Natural History Museum The PI shall be responsible for recording (on the appropriate forms) any significant or potentially significant fossil resources encountered during the Paleontological Monitoring Program	

Impact	Mitigation Measures	Level of Significance After Mitigation
	in accordance with the City's Paleontological Guidelines, and submittal of such forms to the San Diego Natural History Museum with the Final Monitoring Report. 2. MMC shall return the Draft Monitoring Report to the PI for revision or, for preparation of the Final Report. 3. The PI shall submit revised Draft Monitoring Report to MMC for approval. 4. MMC shall provide written verification to the PI of the approved report. 5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals. B. Handling of Fossil Remains 1. The PI shall be responsible for ensuring that all fossil remains collected are cleaned and catalogued. 2. The PI shall be responsible for ensuring that all fossil remains are analyzed to identify function and chronology as they relate to the geologic history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate C. Curation of fossil remains: Deed of Gift and Acceptance Verification 1. The PI shall be responsible for ensuring that all fossil remains associated with the monitoring for this project are permanently curated with an appropriate institution. 2. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC. D. Final Monitoring Report(s) 1. The PI shall submit two copies of the Final Monitoring Report to MMC (even if negative), within 90 days after notification from MMC that the draft report has been approved. 2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the	

Impact	Mitigation Measures	Level of Significance After Mitigation
	Acceptance Verification from the curation institution.	
Cumulative Impact SW-1: Construction, demolition, or renovation of projects of 50 or more dwelling units would have a potentially significant cumulative impact to solid waste disposal during site demolition, excavation, and construction.	***Mitigation Measure SW-1***: In order to avoid cumulative impacts to public services (waste management), the following mitigation measures shall be implemented by the project applicant: I. Entitlements Division Plan Check 1. Prior to the issuance of any construction permit, including but is not limited to, demolition, grading, building or any other construction permit, the Assistant Deputy Director (ADD) Environmental Designee shall verify that all the requirements of the Refuse & Recyclable Materials Storage Regulations and all of the requirements of the waste management plan are shown and noted on the appropriate construction documents. All requirements, notes and graphics shall be in substantial conformance with the conditions and exhibits of the associated discretionary approval. 2. The construction documents shall include a Waste Management Plan that addresses the following information and elements for demolition, construction, and occupancy phases of the project as applicable: a. tons of waste anticipated to be generated, b. material type of waste to be generated, c. source separation techniques for waste generated, d. how materials will be reused on site, e. name and location of recycling, reuse, or landfill facilities where waste will be taken if not reused on site, f. a “buy recycled” program, g. how the project will aim to reduce the generation of construction/ demolition debris, h. a plan of how waste reduction and recycling goals will be communicated to subcontractors,	Less than Significant

Impact	Mitigation Measures	Level of Significance After Mitigation
	i. a time line for each of the three main phases of the project as stated above, j. a list of required progress and final inspections by City staff. 3. The plan shall strive for a goal of 50% waste reduction. 4. The plan shall include specific performance measures to be assessed upon the completion of the project to measure success in achieving waste minimization goals. 5. The Plan shall include notes requiring the Permittee/Applicant to notify Mitigation Monitoring Coordination (MMC) and Environmental Services Department (ESD) when: a. a demolition permit is issued, b. demolition begins on site, c. inspections are needed. The Permittee/Applicant shall arrange for progress inspections, and a final inspection, as specified in the plan and shall contact both MMC and ESD to perform these periodic site visits during demolition and construction to inspect the progress of the project's waste diversion efforts. 6. When Demolition ends, notification shall be sent to the following: Mitigation Monitoring Coordination (MMC), 9601 Ridgehaven Court, Ste. 320, MS 1102 B, San Diego, CA 92123-1636, (619) 980 7122 Environmental Services Department (ESD), 9601 Ridgehaven Court, Ste. 320, MS 1103 B, San Diego, CA 92123-1636, (858) 627-3303 II. Prior to the issuance of any grading or building permit, the Permittee/Applicant shall receive approval, in writing, from the ADD Environmental Designee (MMC) that the Waste Management Plan has been prepared, approved, and implemented. Also, prior to the issuance of any grading or building permit, the Permittee/Applicant shall submit written evidence to the ADD Environmental Designee that the final Demolition/Construction report has been approved by MMC and ESD. This	

Impact	Mitigation Measures	Level of Significance After Mitigation
	report shall summarize the results of implementing the above Waste Management Plan elements, including: the actual waste generated and diverted from the project, the waste reduction percentage achieved, and how that goal was achieved, etc. 1. Pre-Construction (Precon) Meeting a. Demolition Permit - Prior to issuance of any demolition permit, the Permittee/Applicant shall be responsible to obtain written verification from MMC indicating that the Permittee/Applicant has arranged a Preconstruction (Precon) Meeting to coordinate the implementation of the MMRP. The Precon Meeting that shall include: the Construction Manager, Demolition/Building/Grading Contractor, MMC, ESD, and the Building Inspector and/or the Resident Engineer (whichever is applicable) to verify that implementation of the Waste Management Plan shall be performed in compliance with the plan approved by Entitlements Division and ESD, to ensure that impacts to solid waste facilities are mitigated to below a level of significance. b. At the Precon Meeting, the Permittee/Applicant shall submit three (3) reduced copies (11x17 inches) of the approved Waste Management Plan; two (2) to MMC and one (1) to ESD. c. Prior to the start of demolition, the Permittee/the Construction Manager shall submit a construction/ demolition schedule to MMC and ESD. i. Grading and Building Permit - Prior to issuance of any grading or building permit, the permittee shall be responsible to arrange a preconstruction meeting to coordinate the implementation of the MMRP. The Precon Meeting that shall include: the Construction Manager,	

Impact	Mitigation Measures	Level of Significance After Mitigation
	Building/Grading Contractor, MMC, ESD, and the Building Inspector and/or the Resident Engineer (whichever is applicable) to verify that implementation of the Waste Management Plan shall be performed in compliance with the plan approved by Entitlements Division and ESD. d. At the Precon Meeting, the Permittee/Applicant shall submit reduced copies (11x17 inches) of the approved Waste Management Plan to the Resident Engineer, Building Inspector, MMC and ESD. III. Prior to the start of construction, the Permittee/Construction Manager shall submit a construction schedule to the Resident Engineer, Building Inspector, MMC and ESD. 1. The Permittee/Applicant and Construction Manager shall call for inspections by the Resident Engineer, Building Inspector, MMC, and ESD who will periodically visit the demolition/construction site to verify implementation of the Waste Management Plan. The Consultant Site Visit Record (CSVR) shall be used to document the Daily Waste Management Activity/progress. 2. Within 30 days after the completion of the implementation of the MMRP, for any demolition or construction permit, a final results report shall be submitted to both MMC and ESD for review and approval to the satisfaction of the ADD Environmental Designee/City. MMC will coordinate the approval with ESD and issue the approval notification. 3. Prior to final clearance of any demolition permit, issuance of any grading or building permit, release of the grading bond and/or issuance of any Certificate of Occupancy, the Permittee/Applicant shall provide documentation to the ADD Environmental Designee that the Waste Management Plan has been effectively implemented.	

CHAPTER 1.0
INTRODUCTION

1.1 PROJECT SUMMARY

This EIR has been prepared as a project-level EIR to evaluate the environmental effects of the proposed St. Paul's Cathedral and Residences project (Project No. 96101) that was filed with the City of San Diego by Nutmeg & Olive, LLC. The project site is located in the Park West neighborhood of the Uptown Community Plan (City of San Diego 1988) on two adjacent blocks bounded by Fifth and Sixth avenues on the west and east, respectively, and by Olive Street on the north. The south boundary is approximately 100 feet north of Maple Street. Existing zoning is Residential (MR)-400 and Commercial Village (CV)-1 per the Mid-City Communities Planned District Ordinance (PDO).

The project consists of 110 dwelling units in two mixed-use residential buildings: one with 65 dwelling units (referred to herein as the Olive Site) and the other with 45 dwelling units (the Nutmeg Site), both of which also include commercial/retail uses, office space, and underground parking. Eleven of the dwelling units would be reserved as affordable units for occupancy by income-qualified households. The project would also include improvements for additional religious use facilities at St. Paul's Cathedral. Table 1-1 provides a summary of the project.

Table 1-1
Project Summary

Site	Use	DU/SF*	Parking Spaces	Bicycle Spaces	Motorcycle Spaces
Olive Site	Residential	65 DU	134	40	11
	Commercial/Retail	924 SF	2		
	Office	14,209 SF	30		
	Cathedral	49,200 SF	40	N/A*	N/A
Nutmeg Site	Residential	45 DU	94	32	10
	Commercial/Retail	5,185 SF	11		
	Office	5,818 SF	15		
Total	Residential	110 DU	228	72	21
	Commercial/Retail	6,109 SF	13		
	Office	20,027 SF	45		
	Cathedral	49,200 SF	40	N/A	N/A
	Total Spaces	---	326	72	21

*DU: Dwelling Units; SF: Square Feet; N/A: Not Applicable

1.2 ENVIRONMENTAL REVIEW PROCESS – CEQA COMPLIANCE

An EIR is an informational document used by the Lead Agency (in this case, the City of San Diego) when considering approval of a project. The purpose of an EIR is to provide public agencies and members of the general public with detailed information concerning the environmental effects associated with the implementation of a project. An EIR should analyze the environmental effects of a project, indicate ways to reduce or avoid potential environmental effects resulting from the project (i.e., mitigation measures), and identify alternatives to the project that are capable of avoiding or reducing impacts. CEQA requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority. This EIR provides information that is to be used in the planning and decision-making process. It is not the purpose of an EIR to recommend approval or denial of a project.

Prior to approval of the project, the City, as Lead Agency and decision-making entity, is required to certify that the EIR has been completed in compliance with CEQA, that the information in this EIR has been considered, and that the EIR reflects the independent judgment of the City. CEQA requires decision makers to balance the benefits of a project against its unavoidable environmental consequences. If environmental impacts are identified as significant and unavoidable, the City may still approve the project if it believes that social, economic, or other benefits outweigh the unavoidable impacts. The City would then be required to state in writing the specific reasons for approving the project based on information in the EIR and other information sources in the administrative record. This reasoning is called a "statement of overriding considerations" (Public Resources Code (PRC) Section 21081 and CEQA Guidelines Section 15093).

In addition, the City as lead agency must adopt a mitigation monitoring and reporting program (MMRP) describing the measures that were made a condition of project approval in order to avoid or mitigate significant effects on the environment (PRC Section 21081.6; CEQA Guidelines Section 15097). The MMRP is adopted at the time of project approval and is designed to ensure compliance with the project description and mitigation measures of the EIR during and after project implementation. If the City decides to approve the project, it would be responsible for verifying that implementation of the MMRP for this project occurs.

The EIR would primarily be used by the City during approval of the discretionary actions and permits listed in Section 3.3 of the EIR and by City DSD staff during review and issuance of grading and building permit applications submitted by the applicants.

Notice of Preparation and Scoping Meeting

Consistent with the requirements of CEQA, a good faith effort has been made during the preparation of the EIR to contact all responsible and trustee agencies, organizations, persons who may have an interest in the project, and all government agencies, including the State Clearinghouse. This includes the circulation of a NOP on October 7, 2009, which began a 30-day comment period. A scoping meeting was held on October 27, 2009, to inform the public about the project and receive comments. A total of three comments were received during this time, and were considered in preparation of the EIR. The NOP and comment letters are included in this document as Appendix A.

As Lead Agency, the City identified potentially significant environmental impacts associated with the following issues:

- Land Use
- Visual Quality/Community Character
- Traffic, Circulation, and Parking
- Air Quality
- Historical Resources
- Noise
- Paleontological Resources
- Light/Glare/Shading
- Public Services and Facilities
- Solid Waste Disposal
- Energy Conservation
- Greenhouse Gas Emissions
- Hydrology and Drainage
- Water Quality
- Geology and Soils
- Health and Public Safety
- Population and Housing
- Public Utilities

Public Review

The City filed a Notice of Completion with the Governor's Office of Planning and Research, State Clearinghouse, indicating that this EIR has been completed and is available for review and comment by the public. A Notice of Availability of the EIR has been published concurrently with distribution of this document. This EIR is being circulated for a 45-day public review and comment period. During this period, comments from the general public, organizations, and agencies regarding environmental issues identified in the EIR and concerning the EIR's accuracy and completeness may be submitted to the Lead Agency at the following address:

E. Shearer-Nguyen, Development Services Department
City of San Diego
1222 First Avenue, MS 501
San Diego, CA 92101

Comments may be made on the EIR in writing before the end of the comment period. The City would prepare written responses to comments made in writing. Upon completion of the public review period, a Final EIR would be prepared and would include the comments on the EIR received during the formal public review period and responses to those comments.

1.3 SCOPE AND STRUCTURE OF THE EIR

Issues of potential environmental concern to be addressed in this EIR were initially identified by the City DSD in a letter to the project applicant (City of San Diego 2008a). As such, the EIR contains the following chapters:

Executive Summary. This section summarizes the environmental consequences that would result from the project, provides a summary table that lists the project's anticipated significant environmental impacts, describes recommended mitigation measures, and indicates the level of significance of impacts after implementation of recommended mitigation measures.

Chapter 1: Introduction. This chapter provides an introduction and overview of the project and describes the purpose of the EIR and the CEQA process.

Chapter 2: Environmental Setting. This chapter describes the existing project site conditions and land uses in the project area, community plan designations, and existing zoning.

Chapter 3: Project Description. This chapter details the project components, including the project's purpose and objectives, project features, proposed construction activities, and intended uses of the EIR.

Chapter 4: Environmental Impacts. This chapter describes the existing conditions for each of the environmental topics, states the environmental issues identified for the project by City DSD, and evaluates the potential significant environmental impacts of the project and recommended mitigation measures to avoid or reduce the significance of potential impacts.

Chapter 5: Significant Irreversible Environmental Changes. This chapter identifies the changes in the local environment that would result from implementation of the project.

Chapter 6: Growth Inducement. As required by the CEQA Guidelines, this chapter provides an analysis of the ways in which the project could foster economic or population growth, either directly or indirectly, in the surrounding area.

Chapter 7: Cumulative Impacts. This chapter analyzes the potential significant project effects that when considered with other closely related past, present, and reasonably foreseeable future projects, could compound or increase environmental impacts.

Chapter 8: Effects Found Not to Be Significant. This chapter analyzes potential environmental effects identified by City DSD that, after detailed analysis, were determined to not be significant.

Chapter 9: Alternatives to the Proposed Project. This chapter considers alternatives to the project that could reduce one or more of the significant environmental impacts identified in Chapter 4. This chapter includes the No Project Alternative and a Reduced Residential Units/Reduced Building Height Project Alternative. In addition, alternatives that were considered but rejected from more detailed analysis are also identified.

Chapter 10: Mitigation Monitoring and Reporting Program (MMRP). CEQA requires that this chapter list all the mitigation measures required to be implemented by the project, the entity required to monitor the satisfactory completion of the MMRP, and at what point in the process the mitigation measures are to be accomplished.

Chapter 11: References. This chapter provides a list of the sources referenced in the EIR.

Chapter 12: Individuals and Agencies Consulted. This chapter identifies the persons and organizations that participated in the preparation of the EIR.

Appendices: The NOP and each of the EIR technical studies that were prepared for the project are provided for public review.

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CHAPTER 2.0
ENVIRONMENTAL SETTING

2.1 REGIONAL STATE LOCATION AND ACCESS

As shown in Figures 2-1 and 2-2, the project site is located north of Downtown San Diego in the City's Park West neighborhood of the Uptown Community Plan. The Park West neighborhood is an older urban area that is primarily composed of various commercial uses, professional offices, and multi-family residences, many of which exist within mixed-use residential/commercial buildings. Balboa Park borders the Park West neighborhood on the east. Regional access is generally provided by Interstate 5 (I-5) via Laurel Street and Sixth Avenue; and by using the north/south streets of Fourth and Fifth avenues. State Route 163 (SR-163) is located approximately 0.25-mile to the east, but provides only one-way access from northbound SR-163 to westbound Quince Street.

2.2 EXISTING PROJECT SITE AND SURROUNDING LAND USES

The project site consists of three separate building sites and a non-buildable easement with a total area, exclusive of street rights-of-way, of approximately 1.76 acres. The northern parcel (Olive Site) contains a total of 25,805 square feet that consists of a 16,549-square-foot proposed residential building site and a 9,256-square-foot proposed non-buildable easement that would contain a landscaped courtyard. The Olive Site is owned by Nutmeg and Olive, LLC, and presently contains the 16-unit Park Chateau Apartments (2761 Fifth Avenue) located at the southeast corner of Fifth Avenue and Olive Street, and a 20-space parking lot used by the church at the southwest corner of Sixth Avenue and Olive Street. The southern parcel (Nutmeg Site), also owned by Nutmeg and Olive, LLC, consists of 20,075 square feet and is currently vacant, fenced and locked, mostly covered in gravel, and with a small paved former parking area that is no longer used. No active land use exists on this parcel.

The church parcel is owned by the Cathedral Church of Saint Paul and contains the existing Cathedral Church of St. Paul in San Diego (Cathedral) (2728 Sixth Avenue), located on a 30,612-square-foot parcel that extends between Fifth and Sixth avenues on the north side of Nutmeg Street. This portion of the project site is fully developed with church buildings, landscaped courtyards, and a 7-space parking lot. The history and architectural character of the Cathedral is described in Section 4.5 of the EIR.

Topographic conditions of the project site are shown on the Tentative Map, Figure 3-6. The total site varies slightly in elevation from approximately 266 feet above mean sea level (AMSL) at its southwest corner to 274 feet AMSL at its northeast corner. Drainage from the project site flows to curb inlets and into the City's storm water system. No natural drainage systems for storm water conveyance exist within or adjacent to the project site.

The project site is improved with sidewalks along all street frontages, with the Sixth Avenue frontage also containing a grass parkway strip. A prominent feature of the Sixth Avenue frontage north of Nutmeg Street are paired rows of Queen Palms that retain the historic planting plan for Sixth Avenue that also exists along the Balboa Park frontage on the east side of Sixth Avenue. Other features include curbside parking along the entire project frontage, which includes diagonal parking along the south sides of Nutmeg and Olive streets. Fifth Avenue is a one-way, three-lane northbound street. Sixth Avenue is a four-lane, two-way road. A bus stop is located at the northeast corner of Fifth Avenue and Nutmeg Street.

The area surrounding the site has experienced an increase in redevelopment activity during the last several years, which has been centered along the Fourth Avenue, Fifth Avenue, and Sixth Avenue corridors between Kalmia Street and Upas Street. There are several new or pending multi-family development projects in the vicinity of the two sites. Existing land uses in the project area consist primarily of residential uses along the west side of Sixth Avenue and includes the two-story Le Moderne Apartments at the southwest corner of Sixth Avenue and Nutmeg Street, which was built in 1930 and has been designated as Historical Landmark No. 811 by the City Historical Resources Board. The Le Moderne Apartments are not a part of the project. Three multi-family residential buildings are located to the south of the Le Moderne Apartments. Two of these buildings are four stories and one is six stories. Balboa Park is located along the east side of Sixth Avenue. Commercial uses are located along both sides of Fifth Avenue, including a market that adjoins the Nutmeg Site to the south and several restaurants and commercial buildings located on the west side of Fifth Avenue. Land uses on the north side of Olive Street include The Abbey, a former church built in 1910 that is now used as a private special events facility for activities such as weddings and reunions. Adjacent to The Abbey is a single-story bungalow courtyard apartment complex. Other land uses adjacent to the project site are predominantly commercial, some with second-floor residences. In addition, the project area contains a variety of multi-family buildings that range from older two-story walk-up apartment buildings, two- and three-story buildings with residential over commercial, and more recent developments of high-rise multi-family and mixed-use projects of up to 16 stories.

2.3 PLANNING CONTEXT

2.3.1 City General Plan, Community Plan, and Zoning

The City of San Diego General Plan (City of San Diego 2008d) shows the project site to be within an area shown to have a "high propensity" for development as an urban village site per the Village Propensity Map of the General Plan, which "illustrates existing areas that already exhibit village characteristics and areas that may have a propensity to develop as village areas." The Uptown Community Plan (City of San Diego 1988) designates the site as Very High Residential and Commercial/Residential with a maximum permitted density range of 73 to 110 dwelling units per acre (see Figure 4.1-1). The existing land use designations, zoning, and permitted densities are shown below:

	Community Plan	Zone
Olive Site		
East half:	Residential Very High 73–110 du/ac	MR-400 Residential 1 du/400 square feet
West half:	Commercial/Residential Very High 73–110 du/ac	CV-1 Commercial Village 1 du/600 square feet*
Nutmeg Site	Commercial/Residential Very High 73–110 du/ac	CV-1 Commercial Village 1 du/600 square feet*

du/ac=dwelling units per acre
*Density is based on lot size of less than 30,000 square feet

Mixed use commercial, residential, or office land uses are permitted along the Fifth Avenue corridor. Zoning for the project site is established by the Mid-City Communities Planned District (MCCPD) ordinance contained in Article 12 of Chapter 15 of the San Diego Municipal Code (SDMC). Existing zoning is split north-south, with the west half of both blocks zoned MCCPD-CV-1 and the east half zoned MCCPD-MR-400. The MR-400 zone allows primarily multi-family residential use at a maximum density of one dwelling unit per 400 square feet and allows commercial uses "within a mixed commercial/residential structure." The CV-1 zone allows commercial, residential, and mixed-use development at a maximum density of one dwelling unit per 400 square feet of lot area, but with permitted density reduced to one dwelling unit per 600 square feet for lots of less than 30,000 square feet.

Mid-City Communities Planned District Ordinance

The City Council established Planned Districts in areas that have been defined as having historical significance, serve an established community, or are developing a phased growth plan. The Mid-City Communities Planned District Ordinance (PDO) has been adopted to assist in implementing the goals and objectives of the adopted community plans and the General Plan. The PDO accommodates mixed-use neighborhoods with commercial establishments that provide a full range of consumer goods and services, quality multi-family residences that are compatible in scale and design to the surrounding neighborhood, and attractive street environments. The PDO also requires that adequate public facilities are available to meet the demands created by new development. Additional information related to existing plans and zoning and project consistency with applicable plans and development regulations is provided in Section 4.1 of the EIR.

Transit Area and Residential Tandem Parking Overlay Zones

The project site is also located within the Transit Area Overlay Zone and the Residential Tandem Parking Overlay Zones. The Transit Area Overlay Zone (defined in SDMC Chapter 13, Article 2, Division 10) reduces off-street parking requirements in areas that receive a high level of transit service. Properties within the Transit Area Overlay Zone are subject to supplemental parking regulations contained in Chapter 14, Article 2, Division 5 of the SDMC. The Residential Tandem Parking Overlay Zone (Chapter 13, Article 2, Division 9 of the SDMC) allows tandem parking spaces to be counted as two parking spaces provided at least one of the two spaces is in a completely enclosed structure and both spaces are assigned to the same dwelling unit.

Airport Approach ~~and Airport Environs~~ Overlay Zones

SDMC Chapter 13, Article 2, Division 2 delineates an Airport Approach Overlay Zone (AAOZ) in the vicinity of SDIA. The AAOZ is intended to ensure that Federal and State requirements are satisfied for all development, and that minimum vertical buffers are provided between FAA approach paths and structures constructed within the AAOZ. The regulations establish an Airport Approach Path Buffer that prohibits construction of any permanent encroachment within 50 feet of the FAA-established approach paths to the Airport as delineated by the AAOZ (San Diego County Regional Airport Authority 2007). The Nutmeg site is located within the AAOZ but the height does not penetrate the 50-foot buffer. The Olive site is not located within the AAOZ.

Airport Environs Overlay Zone

The project sites are not located within the Airport Environs Overlay Zone (defined in SDMC Chapter 13, Article 2, Division 3). The AEOZ is intended to ensure that the Airport Land Use Compatibility Plans (ALUCPs) are implemented, provide information regarding the noise impacts and safety hazards associated a property’s proximity to aircraft operations, and to ensure that provisions of the California Administrative Code Title 21 for incompatible land uses are satisfied. In addition, the sites are not located within the Runway Approach Zone, Runway Protection Zone, or within the 65 decibel (dB) or 60 dB Community Noise Equivalent Level (CNEL) noise contour, as identified in the San Diego General Plan Program EIR.

SDIA Land Use Compatibility Plan

The San Diego County Regional Airport Authority (SDRAA), as the Airport Land Use Commission (ALUC) for San Diego County, has adopted Airport Land Use Compatibility Plans (ALUCPs) for five urban, six rural, and two military airports, including for SDIA. The ALUCPs are intended to provide notification to local agencies and provide for review of general and specific plans, zoning and building regulations, and individual development proposals for a determination of consistency with the ALUCP. The current ALUCP for SDIA was originally adopted in February 1992 and most recently amended on October 4, 2004. In the project area, the ALUCP shows the nearest point of the SDIA approach zone to be located approximately 900 feet south of the project site (SDRAA 2004). An ALUCP focuses on a defined area around each airport known as the Airport Influence Area (AIA). The SDIA ALUCP (SDCRAA 2004) states that the AIA is delineated by the 60 dB CNEL noise contour. The project sites are located outside of the 60 dB CNEL as shown in the ALUCP for SDIA; and, therefore, are not located within the AIA.

Regional Air Quality Strategy

At the federal level, the Clean Air Act (CAA) required EPA to establish National Ambient Air Quality Standards (NAAQS). The CAA also required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The federal Clean Air Act Amendments of 1990 (CAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The San Diego Air Basin (SDAB) is designated as a nonattainment area for ozone for both national and state standards. In compliance with the California Clean Air Act (CCAA), a regional air quality strategy (RAQS) has been prepared and adopted by the San Diego Air Pollution Control District (SDAPCD) and identifies feasible emission control measures to provide expeditious progress in San Diego County toward attaining the state ozone standard. The pollutants addressed are volatile organic compounds (VOC) and oxides of nitrogen (NO_X), precursors to the photochemical formation of ozone.

Water Quality Regulations

The Federal Clean Water Act of 1972 (CWA) is the basic federal law dealing with surface water quality control and protection of beneficial uses of water and the Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act) is the basic water quality control law for California. The State Water Resources Control Board (SWRCB) has adopted Water Quality Order 2009-0009-DWQ/NPDES General Permit CAS000002 for construction activity (Construction General Permit), which regulates construction site storm water management for projects that disturb 1 or more acres of soil. Compliance with the Construction General Permit requires that applicants submit a Notice of Intent (NOI) to the SWRCB and prepare a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP identifies best management practices (BMPs) that must be implemented to reduce construction effects on receiving water quality based on potential pollutants.

The San Diego Regional Water Quality Control Board (RWQCB) Order No. R9-2007-0001 renewed the Municipal Separate Storm Sewer Systems (MS4) Permit (Municipal Permit), which requires that all jurisdictions within the San Diego region prepare Jurisdictional Urban Runoff Management Plans (JURMPs). Each of these JURMPs must contain a component addressing construction activities and a component addressing existing development. The City's JURMP was adopted by the City Council on January 22, 2008 (City of San Diego 2008b).

The City JURMP and the City Municipal Code Land Development Manual – Storm Water Standards (City of San Diego 2008c) establish a series of source control, site design, and treatment control BMPs that are to be implemented by all priority projects. Priority project categories that would subject the project to the City's JURMP are those with more than 10 dwelling units and those that have the potential for use of a project's retail space for a restaurant, lunch counter, or refreshment stand selling prepared foods and drinks for immediate consumption.

The City of San Diego's Storm Water Management and Discharge Control Ordinance requires that all new development and redevelopment activities comply with the storm water pollution prevention requirements in Chapter 4, Article 2, Division 1 (Grading Regulations), and Chapter 14, Article 2, Division 2 (Storm Water Runoff Control and Drainage Regulations) of the Land Development Code. On February 5, 2008, the City amended its Storm Water Management and Discharge Control Ordinance (San Diego Municipal Code Section 43.0301 et seq.) via Ordinance No. 19716 to conform to the requirements of the 2007 Municipal Permit (Order No. R9-2007-0001).

2.3.2 <u>Police and Fire Protection Services</u>

Police Protection

Police services for the project area are provided by the San Diego Police Department (SDPD) Central Division, located at 2501 Imperial Avenue, which is staffed with 177 sworn personnel and two civilian personnel. The current patrol strength is 161 patrol officers. The SDPD's citywide goal is to maintain 1.45 officers per 1,000 population. The project site is located within police Beat 529. The 2009 average response times for Beat 529 were 5.99 minutes for emergency calls, 10.72 minutes for priority one calls, 19.70 minutes for priority two calls, 53.04 minutes for priority three calls, and 39.98 minutes for priority four calls. The SDPD response time goals are seven minutes for emergency calls, twelve minutes for priority one calls, 30 minutes for priority two calls, 90 minutes for priority three calls, and 90 minutes for priority four calls.

Fire Protection and Emergency Medical Services

The project area is primarily served by resources at Fire Station 3, located at 725 West Kalmia Street, approximately 0.8 mile southwest of the project site. Backup response is provided from Fire Station 8 (3974 Goldfinch Street, 1.7 miles), Fire Station 5 (3902 Ninth Avenue, 1.2 miles), Fire Station 14 (4011 32nd Street, 3.1 miles), and other stations that are available to provide services to the project area. The response time from Fire Station 3 is 3.0 minutes. The response time from Fire Station 4 is also 3.0 minutes (City of San Diego 2009d).

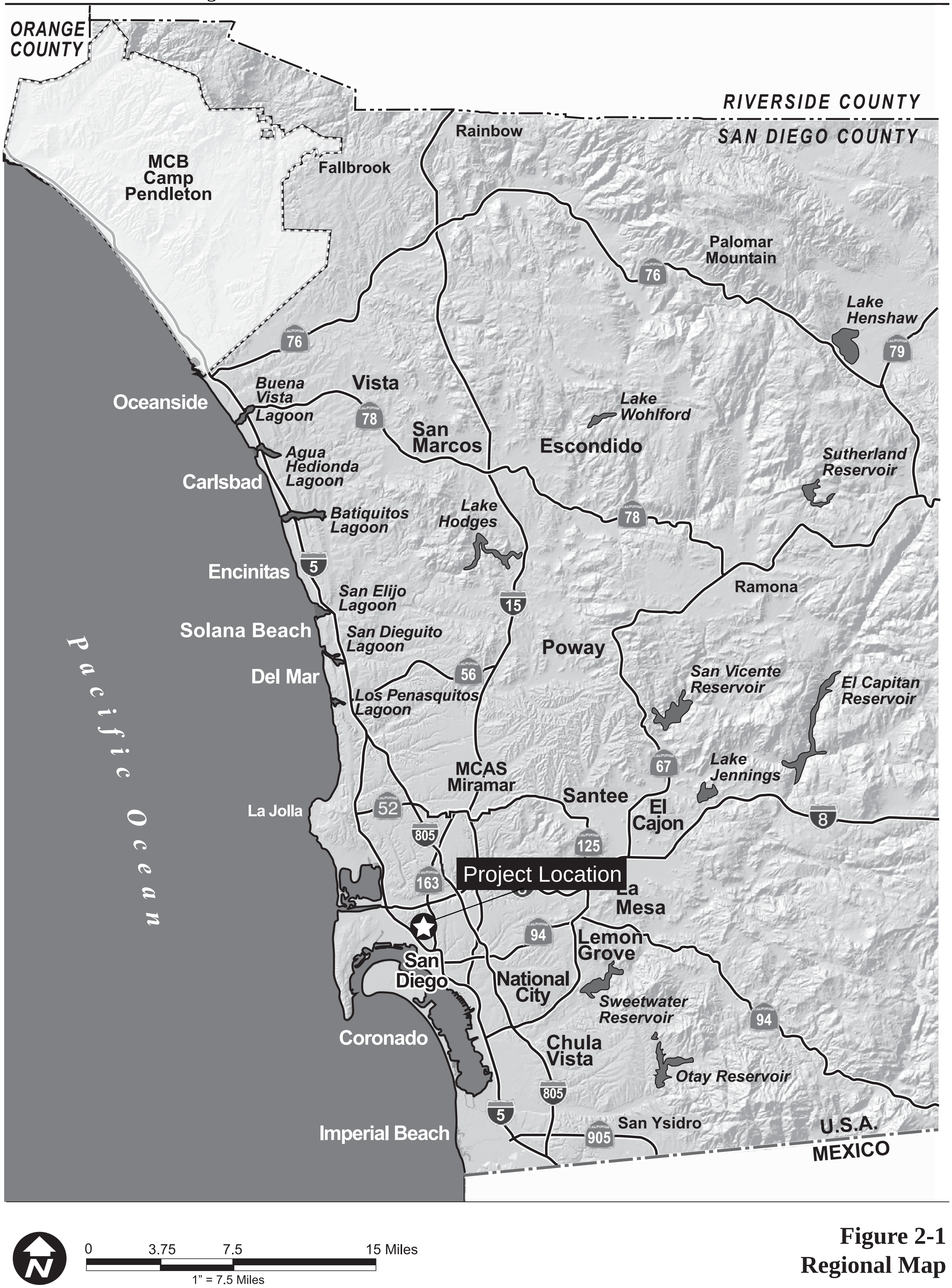

Figure 2-1
Regional Map

No Scale

Figure 2-2
Site Vicinity Map

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CHAPTER 3.0
PROJECT DESCRIPTION

3.1 PROJECT PURPOSE AND OBJECTIVES

The purpose of the project is to provide improved facilities for the Cathedral's religious services, fellowship, and community outreach, and to develop mixed-use residential, office, and retail buildings in accordance with the land use designations of the project site per the Uptown Community Plan.

The project has the following objectives:

- Provide needed housing at a density consistent with the Uptown Community Plan.
- Optimize the St. Paul's Cathedral congregation's land assets to meet their revenue and civic goals.
- Provide sufficient office space to accommodate the Cathedral's operations and programs.
- Generate an ongoing revenue stream to endow the Cathedral programs and ministries.
- Finish the Cathedral construction in the spirit of the original design.
- Renovate the existing St. Paul's Cathedral to include Americans with Disabilities Act (ADA)-compliant restrooms, ramps, and lifts, and other improvements to better serve the congregation.
- Retain the existing historic Queen Palms located along Sixth Avenue.
- Provide on-site affordable housing as part of the project.
- Implement the following recommendations of the Uptown Community Plan:
    - Provide floor-area-ratio bonuses to encourage high-intensity mixed-use development in the Hillcrest commercial core and along major transportation corridors.
    - Enhance the existing pedestrian orientation of commercial areas through controls on the design of development.

  - o Improve the design of multi-family development by requiring offsetting building walls, screened or underground parking, minimal curb cuts, private open space, and improved landscaping.

- Provide pedestrian-oriented retail uses and commercial services.
- Make a significant commitment to incorporating environmental sustainability into the master plan by pursuing LEED (Leadership in Energy and Environmental Design) certification.

3.2 PROJECT FEATURES

As described and illustrated in Chapter 1.0 of the EIR, the project site contains a total of 1.76 acres and the applicants propose to construct a total of 110 dwelling units in two high-rise mixed-use residential buildings that would each also contain offices, retail or neighborhood commercial services, and common use areas for residents. The project also includes improvements for additional religious use facilities at St. Paul's Cathedral. Table 1-1 in Chapter 1.0 provides a summary of the project's proposed residential, office, retail, and Cathedral uses, and the number of parking spaces to be provided for each use.

Project plans are attached, as follows:

Figure 3-1	Olive and Nutmeg Site Plans
Figure 3-2a	Fifth Avenue Site Elevations
Figure 3-2b	Sixth Avenue Site Elevations
Figure 3-3a	Olive Site Rendering – View from Balboa Park
Figure 3-3b	Nutmeg Site Rendering – View from Fifth Avenue
Figure 3-3c	Cathedral Site Rendering – View from Fifth Avenue
Figure 3-4	Site Sections
Figure 3-5a	Landscape Development Plan
Figure 3-5b	Landscape Notes and Legend
Figure 3-6	Tentative Map

A site plan of the proposed Site Development Permit for the Olive and Nutmeg sites is shown in Figure 3-1. Following are detailed descriptions of the improvements proposed for the Olive and Nutmeg sites and for the Cathedral.

3.2.1 Olive Site

The 16,549-square-foot Olive Site is proposed to be developed with 65 dwelling units (see summary in Table 3-1), which includes six affordable units. Development will require demolition of the 1968 Hatch Building (Cathedral administrative offices) on the Sixth Avenue side of the Cathedral; and new office space to be used by the church would be located on the first and second floors of the new Olive Building totaling 14,209 square feet (gross area). A 924-square-foot retail or coffee shop space would be provided on the southwest corner of Olive Street and Sixth Avenue. Three levels of below-grade parking would provide 134 spaces allocated to the 65 residences, 32 spaces for the office and retail uses, and 40 spaces for Cathedral use, for a total of 206 spaces. The number of parking spaces provided exceeds the City's minimum parking requirement by 23 spaces. Motorcycle and bicycle spaces are also provided in compliance with the requirements of the SDMC. Access to homeowner and tenant parking would be controlled by a security gate within the parking structure, with additional spaces allocated to visitors and commercial customers outside the gated portion of the garage. Total building gross square footage, including residential, office, retail, and underground parking, is 291,033 square feet.

Table 3-1
Olive Site Dwelling Units

Unit Type	No. of Units	Approximate SF
Affordable 2 Bed/2 Bath	5	960 to 1,108 SF
Affordable 3 Bed/2 Bath	1	1,570 SF
2 Bed/2 Bath	2	1,360 to 1,425 SF
2 Bed/2-1/2 Bath	54	1,815 to 2,833 SF
3 Bed/3-1/2 Bath	3	2,916 to 3,200 SF
Total	65	---

SF = Square Feet

The Olive Building is proposed to consist of 17 stories above-grade with a total overall height of 180 feet, which will require approval of a deviation from the 150-foot height limit of the MR-400 and CV-1 zones. Architectural elevations from Fifth and Sixth avenues are provided in Figures 3-2a and 3-2b, respectively. An artist's rendering in Figure 3-3a shows that the project would have three townhome units with patio access on Sixth Avenue and two additional units facing Sixth Avenue on the third floor. A common-use deck overlooking Balboa Park is provided on the fourth floor. Additional descriptions of the building architecture, as well as visual simulations of the project, are provided in Chapter 4.2.

The Olive Site would share a common 9,256-square-foot passive-use courtyard open space with the Cathedral that would include landscaping, decorative fountains, and benches. This 31-foot-wide courtyard and an 80-foot-wide landscaped plaza along Sixth Avenue are intended to provide adequate visual and land use separation between the Olive Building and the Cathedral. The landscape plan also shows the extensive landscaping along Sixth Avenue, patio access for the townhome units, and exterior seating for the coffee shop. Also shown are tree grates and landscape plantings along Olive Street and Fifth Avenue and non-contiguous sidewalks. In addition to the ground floor landscape improvements, a rooftop garden is proposed on the fourth floor of the building.

3.2.2 Nutmeg Site

The 20,075-square-foot Nutmeg Site is proposed to be developed with 45 dwelling units (see summary in Table 3-2), which includes five affordable units. Offices for church use would be located on the first floor, with a total of 5,818 square feet, and a 5,185-square-foot retail or restaurant space would be provided along the Fifth Avenue project frontage. The mezzanine and three levels of below-grade parking would provide 94 spaces allocated to the 45 residences, and 26 spaces would be provided for office and retail uses, for a total of 120 spaces. The number of parking spaces provided exceeds the City's minimum parking requirement by 16 spaces. Motorcycle and bicycle spaces would also be provided in compliance with the requirements of the SDMC. Access to tenant parking would be controlled by a security gate within the parking structure, with additional spaces allocated to visitors and commercial customers outside the gated portion of the garage. Total building gross floor area, including residential, office, retail, and underground parking, is 219,492 square feet.

Table 3-2
Nutmeg Site Dwelling Units

Unit Type	No. of Units	Approximate SF
Affordable 2 Bed/2 Bath	5	1,145 to 1,390 SF
2 Bed/2-1/2 Bath	36	1,985 to 2,970 SF
2 Bed/3 Bath	1	1,665 SF
3 Bed/3-1/2 Bath	3	3,000 to 3,900 SF
Total	45	---

SF = Square Feet

The Nutmeg Site building would consist of 13 stories above grade with a total overall height of approximately 150 feet. Architectural elevations from Fifth and Sixth avenues are provided in

Figures 3-2a and 3-2b, respectively. The artist's rendering in Figure 3-3b shows the expansive windows along the Fifth Avenue frontage that provide the opportunity for a very visible and lively interaction between the interior commercial space and exterior public space. A fitness room and a common-area balcony on the second floor would also overlook Fifth Avenue. An additional common area at the south side of the building would include a swimming pool. Additional descriptions of the building architecture and visual simulations are provided in Section 4.2 of the EIR.

3.2.3 Cathedral Site

The Cathedral Site contains 30,612 square feet and is proposed for a multiple-phase renovation of St. Paul's Cathedral, which would involve expanding the building footprint by approximately 3,630 square feet. This expansion would increase the total Cathedral floor area by a total of approximately 9,000 square feet on two levels. Two new bell towers would be constructed on the Fifth Avenue frontage and a new lantern tower would be constructed, all within the existing Cathedral footprint. A rendering of the proposed Cathedral is shown in Figure 3-3c and an architectural elevation is provided in Figure 4.5-2. Church offices would occupy the 14,209 square feet of office space in the Olive Building and the 5,818 square feet of the Nutmeg Building. Seventy parking spaces would be reserved in the Olive Building for Cathedral and office parking, and 15 parking spaces would be reserved for the Cathedral's offices in the Nutmeg Building.

The Cathedral improvements would be constructed in several phases. Phase I would reconfigure non-historic parts of the interior to provide new restrooms, stairs, Americans with Disabilities Act (ADA) ramps and lifts, and a new arcade and entry pavilion on the eastern side of the parcel, where the non-historic 1968 Hatch Building would be demolished. Phase I would also add 2,690 square feet to the Cathedral complex, which would consist of a new elevator, balustrade, walkway, and ramp on the east side of the building; and a new light well area on the north end of the building. Phase II would remove the wood-frame 1951 sanctuary and sacristy and replace it with a new sanctuary/choir area, organ loft, sacristy, north transept, and basement below. The Phase II improvements would add 6,313 square feet of space by extending to the north the existing 2-story Chapel located on Sixth Avenue per the 1957 Frohman plan. Phase III would construct a new lantern tower above the east end of the Cathedral Nave, but no additional floor area would be added. Phase IV would add two bell towers to the Fifth Avenue façade, but no additional floor area would be added. Phases III and IV are also per the 1957 Frohman plan.

3.2.4 Construction of Olive and Nutmeg Buildings

Project construction for the Olive and Nutmeg buildings would involve demolition of the Park Chateau apartments, excavation of approximately 58,000 cubic yards to a depth of approximately 43 feet for the Olive Site, and excavation of approximately 31,000 cubic yards to a depth of approximately 32 feet for the Nutmeg Site.

Excavation for the Nutmeg Site would extend into the public road easements on Fifth Avenue and Nutmeg Street to provide for underground parking below the street rights-of-way in areas where the fee ownership of the project site extends to the centerline of both streets. The parking garage would extend approximately 22 feet into the right-of-way on Fifth Avenue, which would be approximately 8 feet beyond the existing curb. On Nutmeg Street, the garage would extend approximately 17 feet into the right-of-way, which would be approximately 3 feet beyond the existing curb. Excavation for the Olive Building garage would extend into the public road easements approximately to the existing curb on Fifth and Sixth avenues and 3 feet beyond the existing curb on Olive Street. Approval of the City Council for these encroachments would be required as identified in Section 3.3 of the EIR.

All construction would be conducted during daylight hours and would comply with the construction noise levels and working hours specified in SDMC Section 59.5.0404. During excavation and construction of the buildings, the adjacent portions of Nutmeg and Olive streets are expected to be closed during working hours for construction staging. This would normally extend only to the centerline of both streets, though maneuvering of construction equipment and delivery of pre-mixed concrete may require posting of temporary closure signs on Nutmeg and Olive streets and with traffic control personnel stationed to direct traffic. Once the exterior walls of the buildings have been completed, construction staging is expected to only occupy the parking lanes adjacent to both buildings to facilitate delivery of materials. Traffic control signage and personnel would be present to direct traffic during significant material deliveries.

3.2.5 Off-site Improvements

Off-site project improvements would be limited to connections to existing water, sewer, gas, and electrical lines located adjacent to the project frontage. A 16-inch water main on Fifth Avenue would be relocated by the project approximately 26 feet to the west between Maple and Nutmeg streets. No other off-site improvements, such as for road or drainage improvements, are anticipated to be required for completion of the project.

3.2.6 Landscaping

As shown on the landscape plan in Figures 3-5a and 3-5b, the Olive Site would share a common 9,256-square-foot passive-use courtyard open space with the Cathedral that would contain landscaping, decorative fountains, and benches. This 31-foot-wide courtyard and an 80-foot-wide landscaped plaza along Sixth Avenue are intended to provide adequate visual and land use separation between the Olive Building and the Cathedral. The landscape plan also shows the extensive landscaping along Sixth Avenue, patio access for the townhome units, and exterior seating for the coffee shop. Also shown are tree grates and landscape plantings along Olive Street and Fifth Avenue, and non-contiguous sidewalks. In addition to the ground floor landscape improvements, a rooftop garden is proposed on the fourth floor of the building.

The landscape plan for the Nutmeg Site is shown in Figures 3-5a and 3.5b, and includes exterior seating for the retail space along the Fifth Avenue frontage and tree grate plantings along Nutmeg Street and Fifth Avenue. In addition to the ground floor landscape improvements, rooftop gardens are proposed on the second, third, fourth, and 13th floors of the building.

3.2.7 Sustainable Design Features

The project would be a mixed-use residential and ground-floor commercial development within the urban village setting of the Park West neighborhood where commercial, cultural, and recreational amenities are all within a convenient walking distance. Thus, the project supports City and regional growth policies by providing a high-density residential component and integration of commercial uses in areas where transit services, pedestrian access, and neighborhood services are available. Specific design features have been incorporated into the project that are intended to assist in the implementation of the City of Villages strategy by the following:

- Providing a variety of housing types, sizes, and prices in residential and village developments (one to four bedrooms, with allocated low-income housing);
- Reducing the amount and visual impact of surface parking lots by providing underground parking that is masked by ground-floor uses;
- Exceeding the required number of motorcycle and bicycle spaces;
- Creating street frontages with architectural and landscape interest for both pedestrians and neighboring residents by integrating varied setbacks and unique façades;
- Providing a mix of uses to create a vibrant, active commercial core; and

- Recognizing and complementing the unique qualities of the Park West neighborhood by activating the street front, maintaining the historic feel of the architecture, and providing attractive landscape elements.

In addition to these project design features, the applicant proposes to incorporate the following sustainable, energy efficient, and/or heat reflective design features into the final design:

- Natural ventilation and daylight penetration in normally-occupied spaces;
- Energy-efficient heating and cooling systems, appliances, and control systems;
- Energy-efficient lighting and control systems;
- Non-CFC (chlorofluorocarbon) refrigerants in the cooling system;
- Limited hours of operation of outdoor lighting, with the exception of security and safety lighting; and use motion-sensor, light-emitting diode (LED) lights for outdoor lighting;
- Thermal-efficient glazing and provide operable windows for natural ventilation;
- Energy Star reflective roof material and roof gardens;
- 100% underground parking to reduce heat island effects;
- Water-efficient landscapes and irrigation systems and include soil moisture sensitive irrigation controls;
- Mandatory recycling of green waste by the landscape contractor;
- Interior storage areas and containers for recyclables on each floor of the buildings;
- Tenant education regarding recycling;
- Changing rooms and showers for bicycle riding office tenants and bicycle storage areas

In addition, the applicant intends to explore the feasibility of using construction materials that are made or supplied locally to reduce the distance of trips made by trucks; and to use low-emitting volatile organic compounds (VOC) in products and building materials.

Based on these project features, it is anticipated that the project can achieve LEED credits in the following categories:

- Sustainable Sites;
- Water Efficiency;
- Energy & Atmosphere;
- Materials & Resources;
- Indoor Environmental Quality; and
- Innovation and Design Process.

3.3 DISCRETIONARY ACTIONS AND PERMITS

The project would require City of San Diego (City) approval of the following discretionary actions.

- A Site Development Permit (SDP) for development of more than 38 dwelling units in the CV-1 and MR-400 zones of the Mid-City Communities PDO; with deviations to increase the percentage of visions glass on the building façades from 50% to 53% for the Nutmeg Building and to 59% for the Olive Building, and to transfer 12 permitted dwelling units from the Olive Site to increase the permitted number of dwelling units on the Nutmeg Site from 33 to 45 units;

- An SDP for encroachments in the public right-of-way when the applicant is not the record owner of the property on which the proposed encroachment would be located;

- A Neighborhood Development Permit (NDP) for construction of a privately owned structure in the public right-of-way;

- A Tentative Map (TM) for condominium development (see Figure 3-6);

- A parking garage encroachment into the public right-of-way;

- Deviations from the following development regulations of the SDMC:

  - SDMC Section 1512.0310(b)(7)(B) to allow the street wall setback above 36 feet building height to be less than 15 feet;

  - SDMC Section 1512.0303(d)(1) to allow the street side yard on Olive Street to be less than 10 feet;

  - SDMC Section 1512.0307(a) to allow required off-street loading areas to be located on-street;

- SDMC Section 1512.0312(b)(2) to allow the maximum 50% façade vision glass to be increased to 53% for the Nutmeg building and to 59% for the Olive building;
- SDMC Section 1512.0303(e) and 1512.0310(b)(3) to allow the height of the Olive building to be increased from 150 feet to 180 feet;
- SDMC Section 1512.0303(d)(3) to allow the Cathedral to reduce the front yard setback from 5 feet to 0 feet;
- SDMC Section 1512.0303(f)(6) to increase the maximum permitted floor area ratio (FAR) above a height of 100 feet from a 1.0 FAR to a 1.24 FAR; and
- SDMC Section 113.0273 to provide mirrors in lieu of visibility triangle setbacks at the project driveways.

- Approval and Certification of a Final EIR.

Additional information regarding the requested deviations and the rationale provided by the applicant to justify the deviations is provided in Section 4.1 of the EIR.

3.4 HISTORY OF PROJECT CHANGES

During the early review cycles of the project, City DSD staff expressed concerns with the proposed height of the buildings, the extent of glass and other architectural features, and extent of the planned garage encroachment in the street right-of-way. In response to these concerns the Nutmeg Building was reduced from a total height of approximately 177 feet to approximately 150 feet, which resulted in the elimination of three floors from the building. The overall height of the Olive Building was reduced approximately 7.5 feet, though no floors were eliminated.

Deviations were originally requested to allow 66.5% vision glass for the Nutmeg building and 89% vision glass for the Olive building. SDMC Section 1512.0312(b)(2) specifies that no more than a combined total of 50% of each of the façades shall be vision glass above the ground floor. The reduced deviation request is to allow 53% vision glass on the Nutmeg building and by 59% on the Olive building. Other architectural refinements were also made per City staff comments. The requested right-of-way encroachments were reduced from 28 feet on Fifth Avenue to 22 feet; from 21 feet to 13 feet on Olive Street; and from 35 feet to 17 feet on Nutmeg Street.

The project was also changed to preserve the Le Moderne Apartments, which have been designated as an historical resource by the City Historical Resources Board. This apartment complex is no longer a part of the project.

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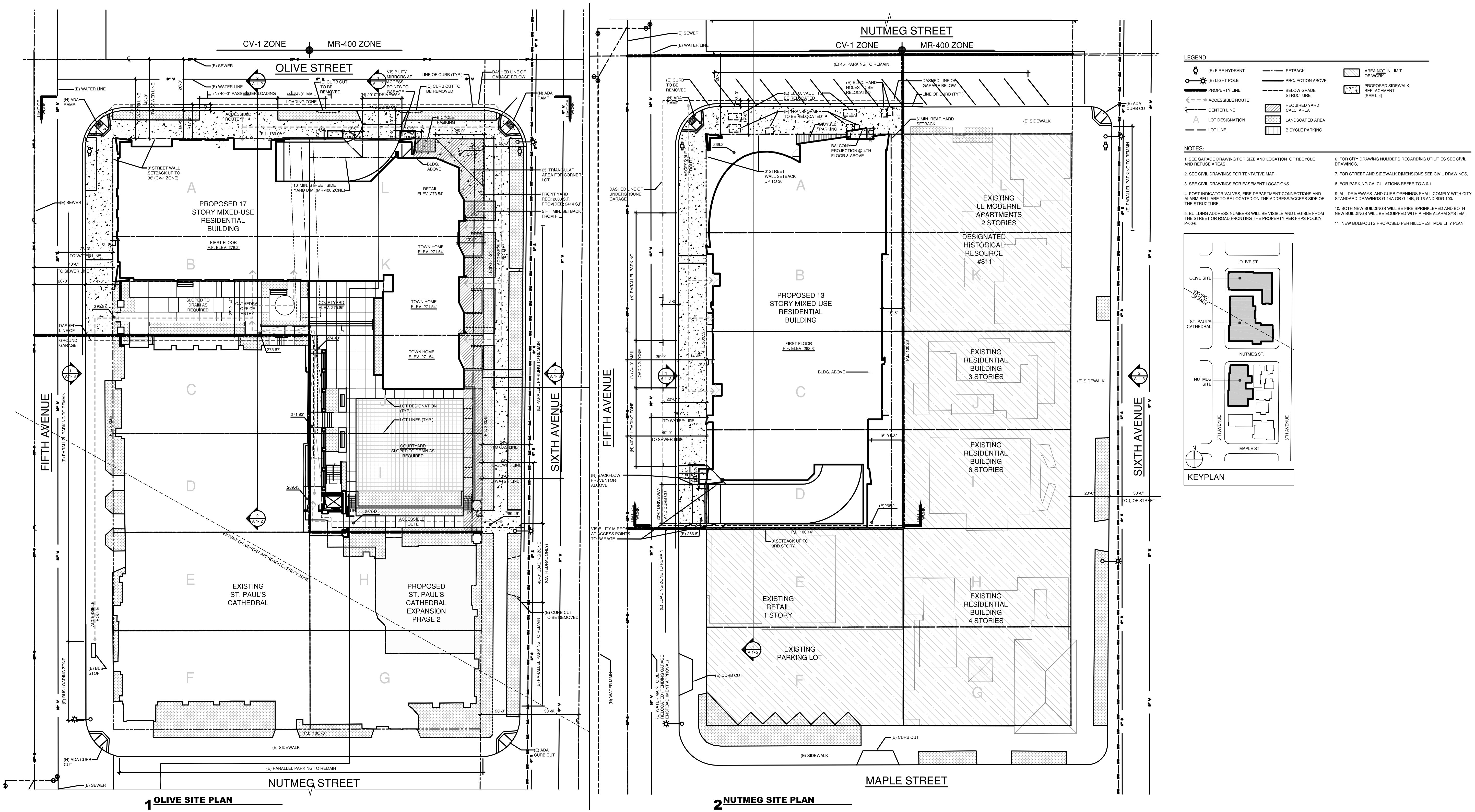

Source: Tucker Sadler 2011

Not to Scale

Figure 3-1
Olive Street and Nutmeg Street Site Plans

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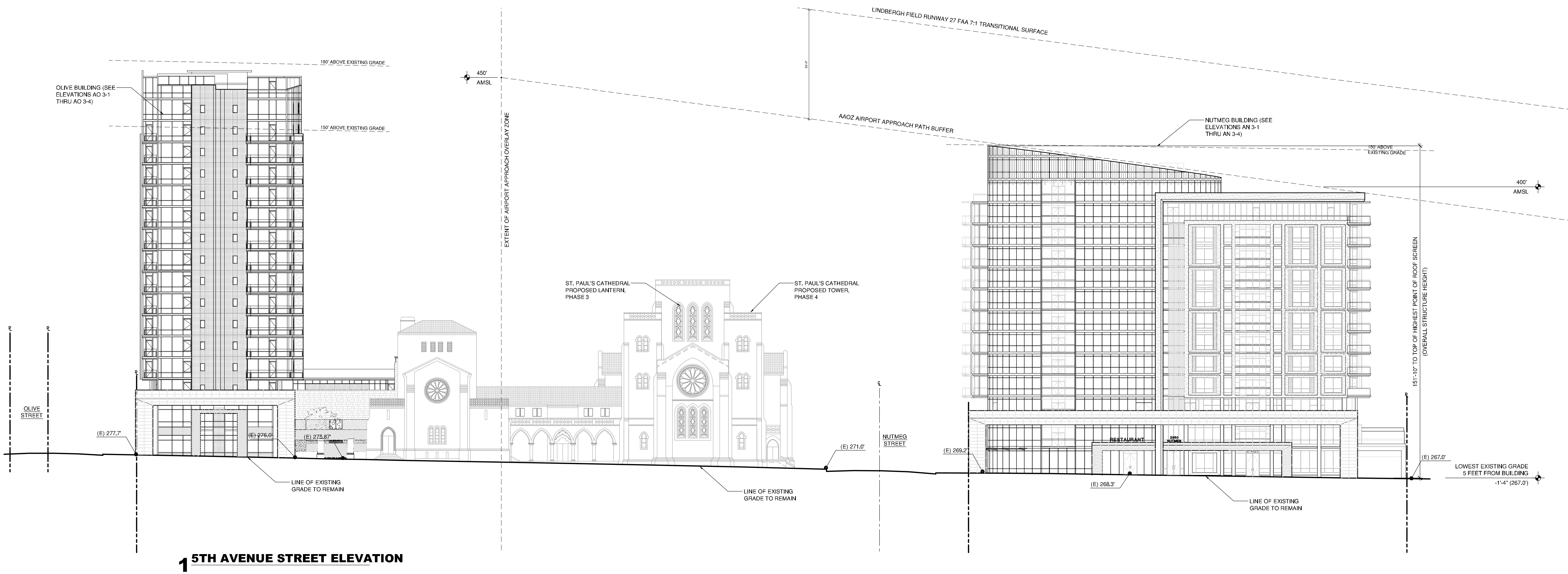

Source: Tucker Sadler 2007

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Figure 3-2a
5th Avenue Site Elevations

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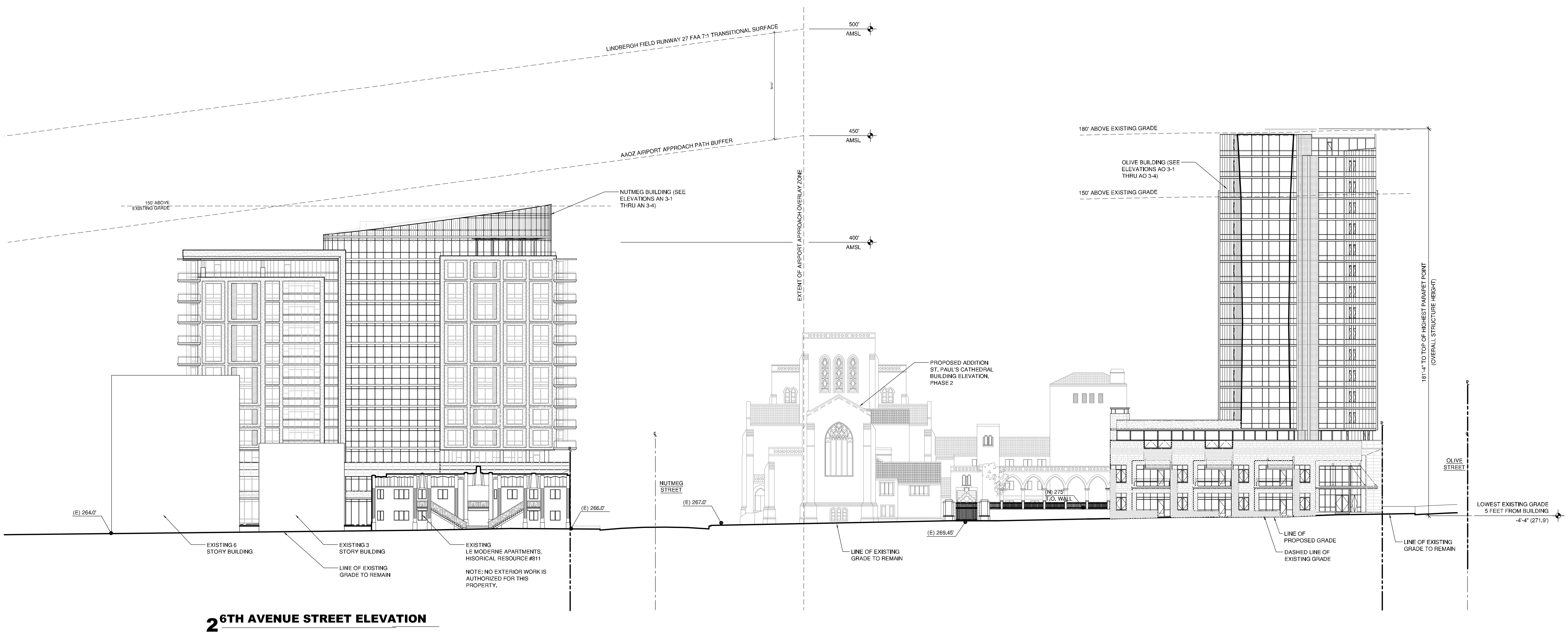

Source: Tucker Sadler 2007

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Figure 3-2b
6th Avenue Site Elevations

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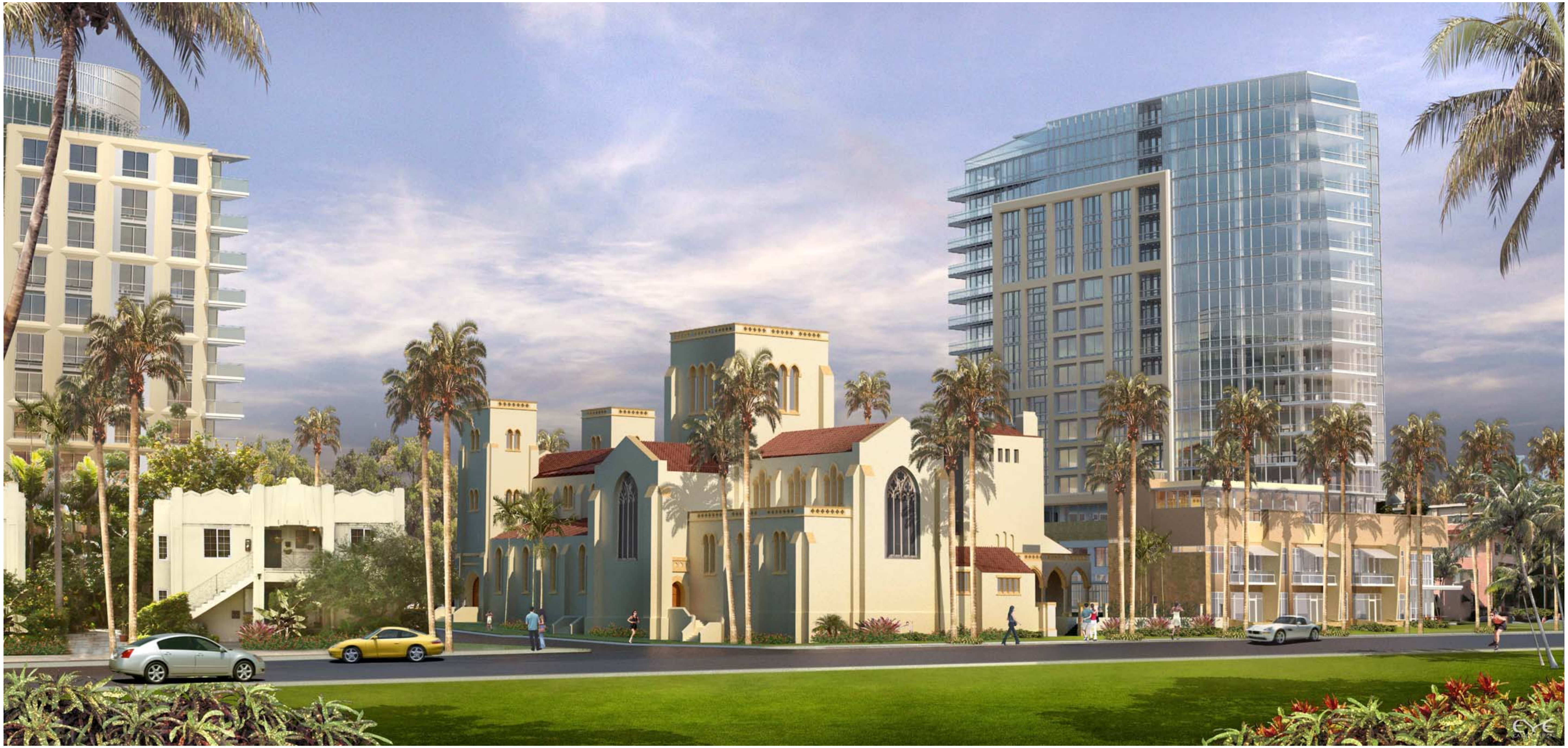

Source: Eye Candy Design 2010

Figure 3-3a
Olive Site Rendering
- View from Balboa Park

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Source: Eye Candy Design 2010

Figure 3-3b
Nutmeg Site Rendering
- View from 5th Avenue

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Source: Eye Candy Design 2010

Figure 3-3c
Cathedral Site Rendering
- View from 5th Avenue

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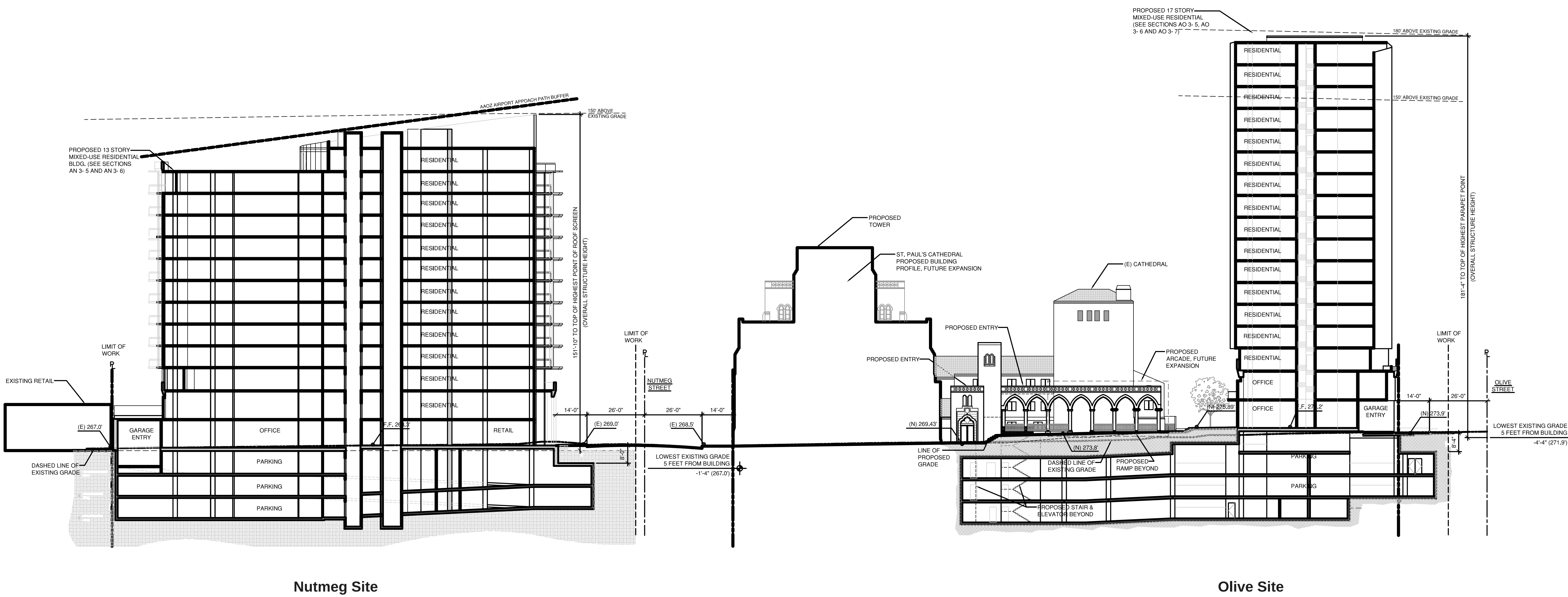

Source: Tucker Sadler 2007

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Figure 3-4
Site Sections

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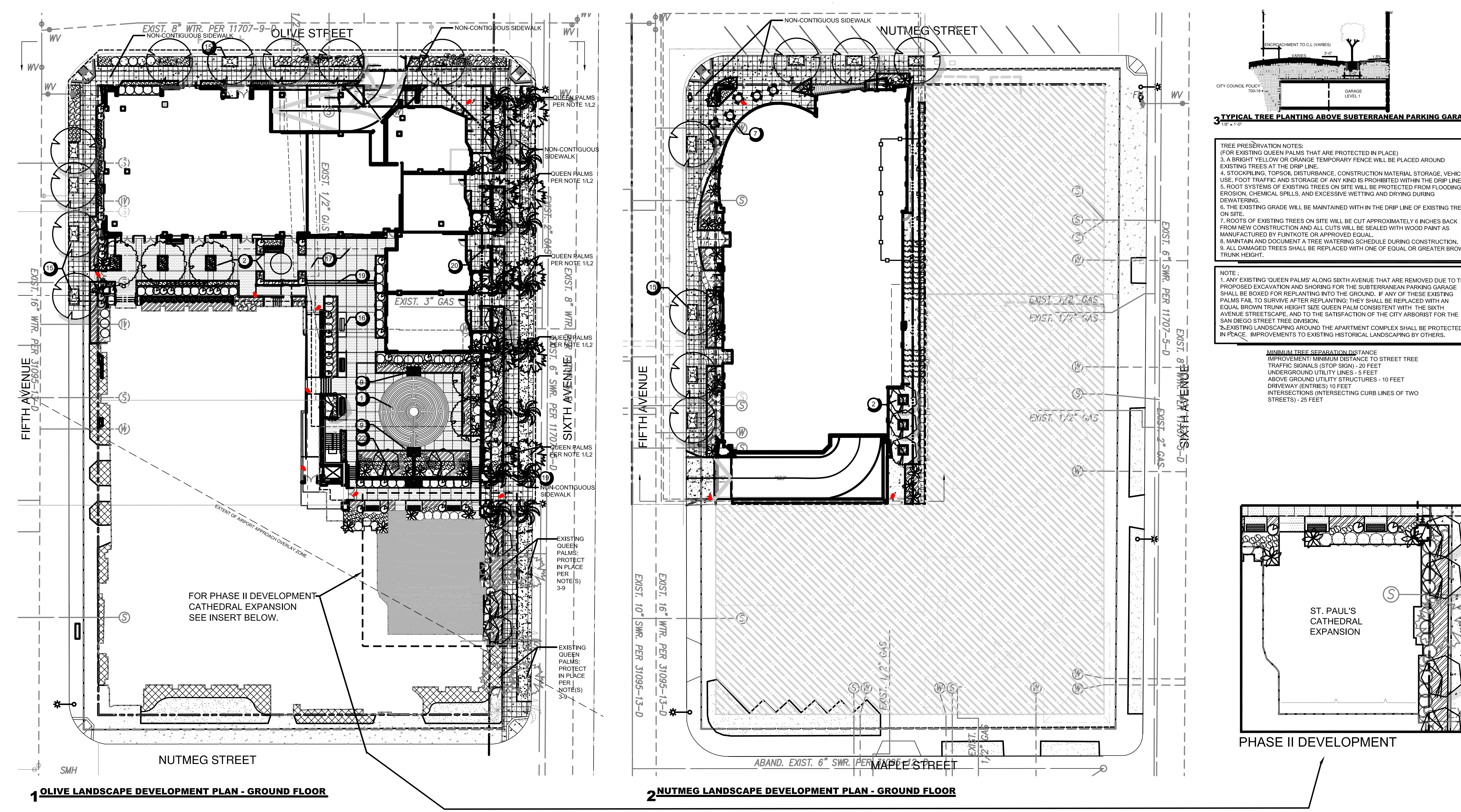

Source: Tucker Sadler 2007

Not to Scale

Figure 3-5a
Landscape Development Plan

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DESIGN CONCEPT

Retail and office space occupy the first level of the "Olive" development, providing amenities for residents and cathedral staff. The design concept embraces the Moorish style of the cathedral by including a centralized courtyard divided by two axes, two water features, and Moorish influenced planting schemes. A labyrinth was added to be the central focus of the courtyard paving design. Design considerations were also made for the third story rooftop area of the "Olive" building (accessible only to residents), including an outdoor fire pit, barbeque, tables, and spa. Raised planters on this level contain accent shrubs and vines that cascade over the side of the building.

The first floor of the "Nutmeg" building contains retail, restaurant, and office space. The design elements for the outdoor spaces includes raised planters, outdoor seating, and a small courtyard on the east side that is shaded by overhead vines. The second level of the building accommodates residents with a swimming pool, outdoor fire place and seating. This level contains raised planters with accent plant material that is visible from the street. The third level of "Nutmeg" also contains a raised planters containing accent plants.

LANDSCAPE REGULATIONS

SUMMARY OF LANDSCAPE REGULATIONS
FOR: ST. PAUL'S CATHEDRAL DEVELOPMENT
"OLIVE" BUILDING
Single Dwelling Unit in RM Zones
Multiple Dwelling Unit development in all Zones
(single structure on a single lot)

STREET TREES:
Total Linear Feet of Street Frontage: 597'
Trees required: 23 Trees provided: 23

STREET YARD
Total Area: 3,596 s.f.
Planting Area required: 1,798 s.f. provided: 1,989 s.f. Excess area provided: 191 s.f.
Plant Points required: 180 provided: 1,228 Excess points provided: 1,048
Planting Area as hardscape: 0 s.f. Points achieved through Trees: 250

Note: Street Trees and Street Yard requirements for the St. Paul's Cathedral Expansion will be met during Phase I development.

REMAINING YARD:
Plant Points required = **60** provided: 2,086 Points achieved through trees: 820

VEHICULAR USE AREA (Less 6,000 s.f.: N/A)

SUMMARY OF LANDSCAPE REGULATIONS
FOR: ST. PAUL'S CATHEDRAL DEVELOPMENT
"NUTMEG BUILDING"
Single Dwelling Unit in RM Zones
Multiple Dwelling Unit development in all Zones
(single structure on a single lot)

STREET TREES:
Total Linear Feet of Street Frontage: 223'
Trees required: 7 Trees provided: 6
Note: Due to constraints of 25' required vehicular sight line and underground utility conflicts; 6 trees are proposed.

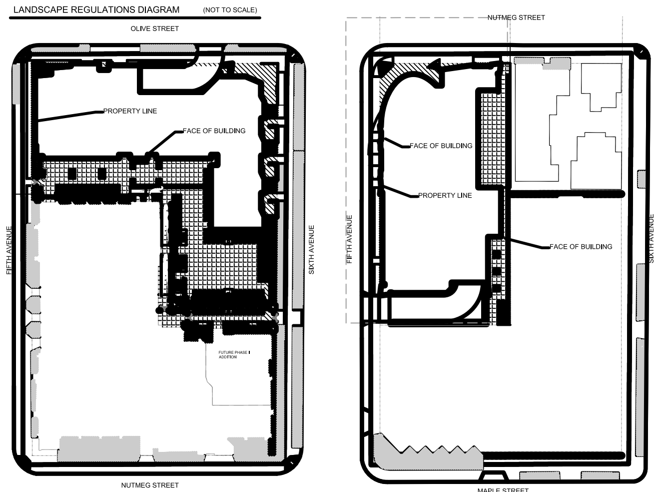
STREET YARD
Total Area: 1,028 s.f.
Planting Area required: 514 s.f. provided: 525 s.f. Excess area provided: 11 s.f.
Plant Points required: 51 provided: 213 Excess points provided: 262
Planting Area as hardscape: 0 s.f. Points achieved through Trees: 121 (palms)

REMAINING YARD:
Plant Points required = 60 provided: 1,085 Points achieved through trees: 780

VEHICULAR USE AREA (Less 6,000 s.f.: N/A)

ADDITIONAL YARD REQUIREMENTS FOR PROJECTS ABUTTING RESIDENTIAL ZONES
Planting Area buffer between Zones:
Length of Property Line(s) abutting residential zone: 100 l.f. x 5'= 500 s.f. Planting Area required
Planting Area provided: 190 s.f. Excess area provided: 0 s.f.
Plant Points required: 25 provided: 320 (achieved with Trees only) Excess points provided: 295

LANDSCAPE REGULATIONS DIAGRAM (NOT TO SCALE)



LANDSCAPE REGULATIONS LEGEND

- STREET YARD AREA (4,624 s.f. TOTAL)
- STREET YARD PLANTING AREA (2,635 s.f. TOTAL)
- REMAINING YARD AREA (181,212 s.f. TOTAL)
- REMAINING YARD PLANTING AREA (45,243 s.f. TOTAL)

CONSTRUCTION LEGEND

SYMBOL	DESCRIPTION
	CONCRETE PAVING TO MATCH THE HISTORIC DESIGN OF SIDEWALKS ON ADJACENT PROPERTIES INCLUDING LOCATION, WIDTH, ELEVATION, SCORING PATTERN, TEXTURE, AND COLOR. CONTRACTOR DATE STAMPS SHOULD BE PRESERVED IN PLACE OR RELOCATED AND SET NEARBY.
	EXISTING CONCRETE SIDEWALKS TO REMAIN, PROTECT IN PLACE.
1	LABYRINTH DESIGN IN COURTYARD PAVEMENT
2	RAISED PLANTERS, TYP.
3	3' DIAMETER, 36" HEIGHT 'MEDITERRANEAN' ROUND PLANTER THROUGH DURA ART STONE. COLOR; TERRA COTTA.
4	(NOT USED)
5	(NOT USED)
6	LOUNGE CHAIR, MODEL AND COLOR TO BE DETERMINED
7	OUTDOOR DINING TABLES, MODEL AND COLOR TO BE DETERMINED
8	6' TUBULAR STEEL FENCE, TYP, COLOR; BLACK.
9	DECORATIVE FOUNTAINS, MANUFACTURER AND COLOR TO BE DETERMINED.
10	POOL, 12' x 36', TYP.
11	SPA, 8.5' x 8.5', TYP.
12	GAS FIRE PIT
13	OUTDOOR SEATING WITH CUSHIONS, MODEL AND COLOR TO BE DETERMINED.
14	(NOT USED)
15	TREE GRATE, 5' x 8', TYP.
16	BENCH, MODEL AND COLOR TO BE DETERMINED
17	CONCRETE COURTYARD / PATIO SPACE, SCORELINES PER PLAN. INTEGRAL COLOR CONCRETE, COLOR TO BE DETERMINED.
18	GAS BBQ GRILL WITH BUILT-IN COUNTER SPACE, MANUFACTURER AND COLOR TO BE DETERMINED
19	CONCRETE STAIRS
20	PRIVATE PATIO FENCE
21	(NOT USED)
22	RETAINING WALL

PLANTING LEGEND

SYMBOL	BOTANICAL NAME/COMMON NAME	SIZE	QUANTITY
	SPECIMEN TREES such as:		
	OLEA EUROPAEA / FRUITLESS OLIVE QUERCUS AGRIFOLIA / COAST LIVE OAK BRACHYCHITON ACERIFOLIUS / FLAME TREE	36" BOX	5
	SMALL ACCENT TREES such as:		
	LAGERSTROEMIA INDICA / CRAPE MYRTLE ELAEAGNUS ANGUSTIFOLIA / RUSSIAN OLIVE CRATAEGUS LAEVIGATA / ENGLISH HAWTHORN	24" BOX	14
	VERTICAL ACCENT TREES such as:		
	JUNIPERUS V. 'SKYROCKET' / SKYROCKET JUNIPER CUPRESSUS SEMPERVIRENS / ITALIAN CYPRESS	24" BOX	38
	STREET TREES such as:		
	JACARANDA MIMOSIFOLIA / JACARANDA	36" BOX	16
	SYAGRUS ROMANZOFFIANUM / QUEEN PALM (SEE NOTE 1 ON SHEET L2)	15' BTH.	10
	EXISTING SYAGRUS ROMANZOFFIANUM / QUEEN PALM TO REMAIN	15' BTH.	4
	PHOENIX ROEBELENII / PYGMY DATE PALM - MULTI TRUNK (MIN. 3 TRUNKS, TALLEST TRUNK MIN. 5' BTH., SHORTEST TRUNK MIN. 2' BTH)	10.5' TOTAL BTH.	37
	SCREENING TREE such as:		
	PHYLLOSTACHYS AUREA / GOLDEN BAMBOO	24" BOX	36
	LARGE ACCENT PLANTS such as:		
	PHORMIUM TENAX / NEW ZEALAND FLAX STRELITZIA REGINAE / BIRD OF PARADISE	15 GAL 5 GAL	10 31
	SMALL-MEDIUM ACCENT PLANTS such as:		
	DIETES BICOLOR / FORTNIGHT LILY CLIVIA MINIATA / KAFFIR LILY HEMEROCALLIS SP. / DAYLILY	75% 5 GAL 25% 1 GAL	401
	SMALL-MEDIUM SHRUBS such as:		
	BUXUS SEMPERVIRENS / ENGLISH BOXWOOD ABELIA GRANDIFLORA / GLOSSY ABELIA RHAPHIOLEPIS INDICA / INDIA HAWTHORN JASMINUM MESNYI / PRIMROSE JASMINE LAVANDULA ANGUSTIFOLIA / ENGLISH LAVENDER RHODODENDRON SP. / AZALEA BOUGAINVILLEA 'LA JOLLA' / BOUGAINVILLEA PITTOSPORUM TOBIRA / MOCK ORANGE	75% 5 GAL 25% 1 GAL	253
	ESPALIER PANEL such as:		
	BOUGAINVILLEA 'SAN DIEGO RED' / BOUGAINVILLEA GREWIA CAFFRA / LAVENDER STARFLOWER	5 GAL @ 24" O.C.	32
	VINES ON WIRE OVER NUTMEG COURTYARD such as:		
	DISTICTIS BUCCINATORIA / BLOOD-RED TRUMPET VINE	5 GAL	36
	VINES such as:		
	PARTHENOCISSUS QUINQUEFOLIA / VIRGINIA CREEPER BOUGAINVILLEA 'SAN DIEGO RED' / BOUGAINVILLEA JASMINUM GRANDIFLORUM / SPANISH JASMINE ROSA SP. / CLIMBING ROSE	5 GAL @ 24" O.C.	
	JASMINUM MESNYI / PRIMROSE JASMINE	5 GAL @ 24" O.C.	
	GROUNDCOVER such as:		
	THYMUS VULGARIS / COMMON THYME ROSMARINUS OFFICINALIS / ROSEMARY HEUCHERA SANGUINEA / CORAL BELLS TRACHELOSPERMUM JASMINOIDES / STAR JASMINE	1 GAL @ 18" O.C.	
	EXISTING SHRUBS & TREES TO REMAIN:		
	TURF:		
	LAWN-TALL FESCUE		
	EXISTING TURF TO REMAIN:		

ROOTBARRIER (PLASTIC OR FABRIC)

NOTE: SHRUBS AND GROUNDCOVER WILL BE PLANTED AT 3' O.C. AVERAGE IN THE VEHICULAR USE AREA AND STREET YARD AND AT 6' O.C. AVERAGE IN THE REMAINING YARD.

CONSTRUCTION, IRRIGATION & PLANTING NOTES

1. DIMENSIONS INDICATED ON PLANS SHALL PREVAIL OVER PLAN SCALE. DIMENSIONS ARE TO FACES OF, AND PERPENDICULAR TO FACE OF BUILDING WALLS UNLESS SHOWN OTHERWISE. ALL ANGLES AND CONNECTIONS ARE (90) DEGREES UNLESS NOTED OTHERWISE.

2. CONTRACTOR SHALL REVIEW PLANS AND DETAILS TO ASCERTAIN LOCATIONS NECESSARY TO PROVIDE ELECTRICAL CONNECTIONS TO POWER IRRIGATION, LIGHTING, ETC.

3. CONTRACTOR SHALL DETERMINE THE LOCATION AND DEPTH OF ALL SITE UTILITIES PRIOR TO CONSTRUCTION. NOTIFY OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES IMMEDIATELY.

4. CONTRACTOR SHALL SECURE ALL PERMITS AND PAY ALL APPLICABLE FEES TO CONSTRUCT THE PLANS HEREIN.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY CLEANUP OF THE SITE AND PROVIDE ADEQUATE SAFETY MEASURES DURING CONSTRUCTION ON A 24 HOUR BASIS.

6. THE MAINTENANCE PERIOD SHALL BE 60 DAYS FROM FINAL WALK THROUGH. IT SHALL COMMENCE UPON WRITTEN NOTICE BY OWNER'S REPRESENTATIVE.

7. OWNER'S REPRESENTATIVE SHALL APPROVE ALL FINISH GRADING PRIOR TO PLACEMENT OF ANY PLANT MATERIAL.

8. PLANT SYMBOLS TAKE PRECEDENCE OVER PLANT QUANTITIES SPECIFIED.

9. SHRUB AND GROUNDCOVER MASS QUANTITIES AND/OR SPACING ARE SHOWN ON PLANS. PLANTS SHALL BE INSTALLED WITH TRIANGULAR SPACING.

10. PRIOR TO PLANTING, ALL SPRAY IRRIGATION SYSTEMS SHALL BE FULLY FUNCTIONAL. ALL PLANTING AREAS SHALL BE THOROUGHLY WATERED TO A UNIFORM DEPTH OF 6 INCHES IMMEDIATELY FOLLOWING PLANTING.

11. PLANT MATERIAL MAY BE REJECTED AT ANY TIME DURING THE CONTRACT AND MAINTENANCE PERIOD BY OWNER'S REPRESENTATIVE DUE TO CONDITION, FORM OR DAMAGE.

12. TREE ROOT BARRIERS SHALL BE INSTALLED WHERE TREES ARE PLACED WITHIN 5 FEET OF PUBLIC IMPROVEMENTS INCLUDING WALKS, CURBS, OR STREET PAVEMENTS OR WHERE NEW PUBLIC IMPROVEMENTS ARE PLACED ADJACENT TO EXISTING TREES. THE ROOT BARRIER WILL NOT WRAP AROUND THE ROOT BALL. [142.0403]

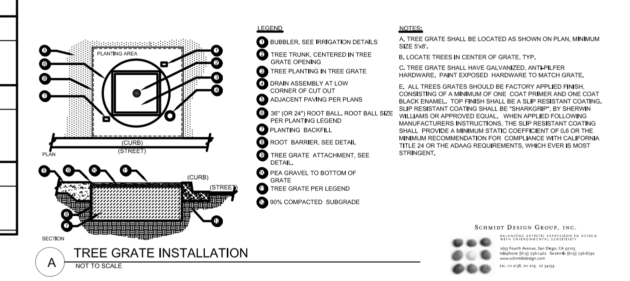
13. ALL LANDSCAPE AND IRRIGATION SHALL CONFORM TO THE CITY OF SAN DIEGO LANDSCAPE REGULATIONS AND THE LAND DEVELOPMENT MANUAL LANDSCAPE STANDARDS, THE MID CITY COMMUNITIES PLANNED DISTRICT, AND ALL OTHER CITY AND REGIONAL STANDARDS.

14. MAINTENANCE: ALL LANDSCAPE AREAS SHALL BE MAINTAINED FREE OF DEBRIS AND LITTER AND ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY GROWING CONDITION. DISEASED OR DEAD PLANT MATERIAL SHALL BE SATISFACTORILY TREATED OR REPLACED PER THE CONDITIONS OF THE PERMIT.

15. MINIMUM TREE SEPARATION DISTANCE IMPROVEMENT / MINIMUM DISTANCE TO STREET TREE:
TRAFFIC SIGNALS (STOP SIGN) - 20 FEET
UNDERGROUND UTILITY LINES - 5 FEET
ABOVE GROUND UTILITY STRUCTURES - 10 FEET
DRIVEWAY (ENTRIES) - 10 FEET
INTERSECTIONS (INTERSECTING CURB LINES OF TWO STREETS) - 25 FEET
SEWER LINES - 10 FEET

16. IRRIGATION: AN AUTOMATIC, ELECTRICALLY CONTROLLED IRRIGATION SYSTEM SHALL BE PROVIDED AS REQUIRED FOR PROPER IRRIGATION, DEVELOPMENT, AND MAINTENANCE OF THE VEGETATION IN A HEALTHY, DISEASE-RESISTANT CONDITION. THE DESIGN OF THE SPRAY SYSTEM SHALL PROVIDE ADEQUATE SUPPORT FOR THE VEGETATION SELECTED.

17. ALL PROPOSED IRRIGATION SYSTEMS WILL USE AN APPROVED RAIN SENSOR SHUTOFF DEVICE. [142.0403].



Source: Tucker Sadler 2011

Not to Scale

Figure 3-5b
Landscape Notes and Legend

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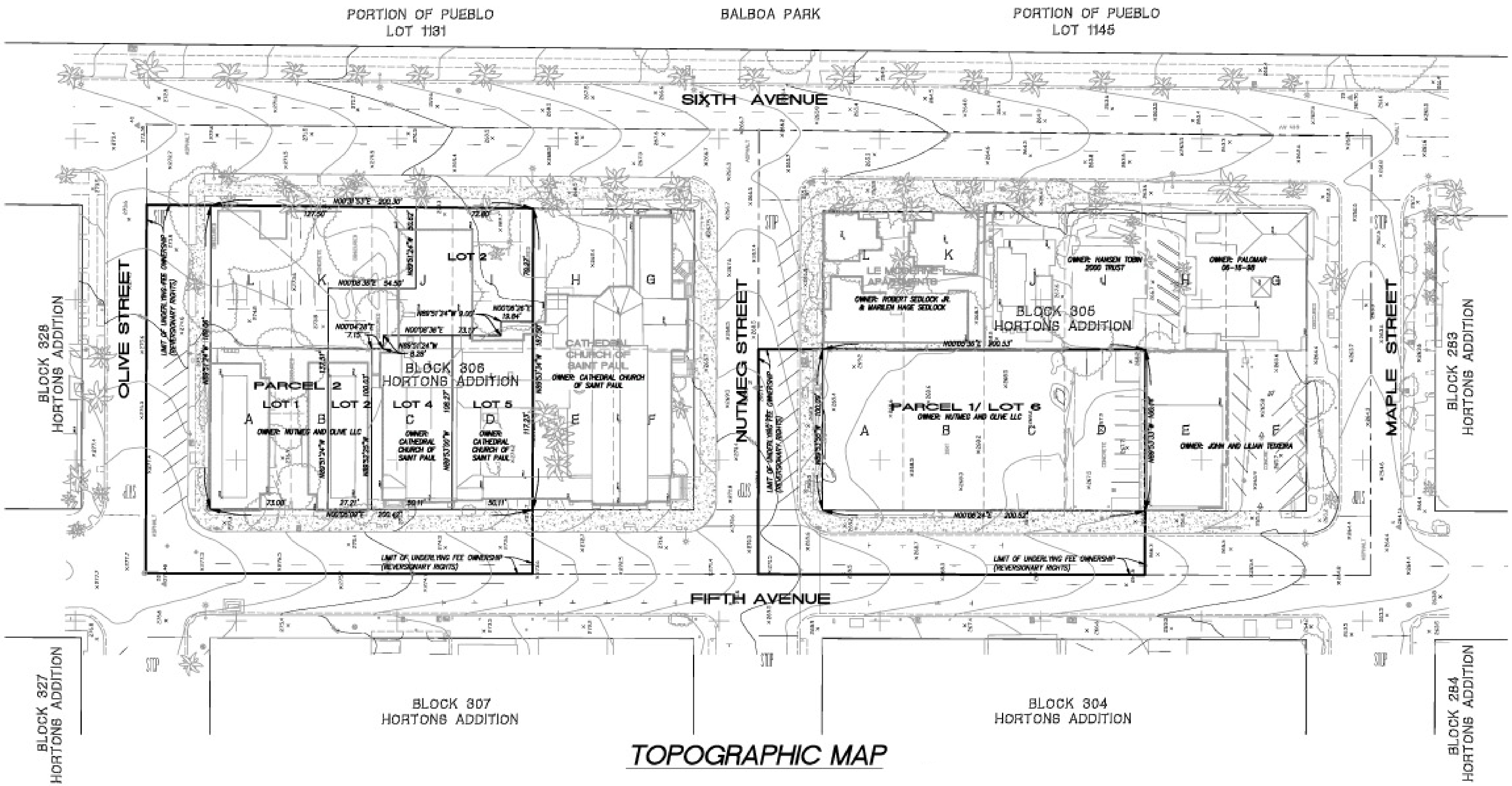

Source: Project Design Consultants 2009

Not to Scale

Figure 3-6
Tentative Map

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CHAPTER 4.0
ENVIRONMENTAL IMPACTS

4.1 LAND USE

This chapter provides information on the current land use policies and designations applicable to the project and describes existing land uses at the project site. The project is assessed for consistency with the City of San Diego General Plan, City of San Diego Zoning Ordinance and Land Development Code (LDC), Uptown Community Plan, Mid-City Communities Planned District Ordinance (PDO), Airport Land Use Compatibility Plans, Interim Height Ordinance, and SANDAG Regional Comprehensive Plan (RCP). The project is also evaluated for compatibility with the existing land uses in the area.

4.1.1 Existing Conditions

Project Area Land Uses

The project site is located within the Park West neighborhood of the Uptown Community Plan, which is an older urban area of San Diego that is primarily composed of various commercial uses, professional offices, and multi-family residences, many of which exist within mixed-use residential/commercial buildings. The area surrounding the site has experienced an increase in redevelopment activity during the last several years, centered along the Fourth Avenue, Fifth Avenue, and Sixth Avenue corridor between Kalmia Street and Upas Street. There are several new, under construction, or pending multi-family development projects in the vicinity of the project site.

Adjacent Land Uses

In addition to Balboa Park to the east, other existing land uses in the project area consist primarily of residential uses along the west side of Sixth Avenue and commercial uses along both sides of Fifth Avenue. Adjoining the project site is a market south of the Nutmeg Site and several restaurants and commercial buildings to the west. Land uses on the north side of Olive Street include a private special events facility for such activities as weddings and reunions and a one-story bungalow courtyard complex. Other prominent land uses in the project area are offices, small retail or commercial service businesses, and several restaurants.

Land Uses in the Uptown Community Plan-Park West Neighborhood

The community planning area is approximately 4.2 square miles and has five designated neighborhoods and a medical complex area. The Park West neighborhood contains a wide range of residential opportunities in a distinctly urban setting. Several high-rise residential and commercial buildings date from prior to the 1990s and more recent development has resulted in the area along Fourth, Fifth, and Sixth streets between Kalmia and Upas streets, becoming a high-intensity mixed-use neighborhood with medium to high density multi-family residential uses, retail facilities, restaurants, and offices, commonly located within mixed-use buildings. The vision of the Uptown Community Plan complements the anticipated high-density growth in the area by prescribing more pedestrian-oriented, urban village characteristics and vertical mixed-used developments.

Residential structures in the neighborhood are relatively older than those found in the City as a whole, including historic buildings that exemplify a variety of unique architectural styles and other more modest commercial and residential buildings. The community currently has little vacant developable land and, therefore, recent redevelopment trends of increased residential densities and improved neighborhood commercial services would be expected to result in the removal of existing, lower density residential structures and redevelopment with medium and higher density residential structures on these sites, consistent with the Community Plan and existing zoning.

Adopted Plans, Policies, and Ordinances

San Diego General Plan/City of Villages Strategy

The City's General Plan provides policy guidance to balance the needs of the growing City and enhance the quality of life. The most recent update to the General Plan, adopted on March 10, 2008, concluded a 6-year planning effort and brought many pressing local issues into a contemporary framework for action. A core strategy, the "City of Villages," provides for how the City can enhance its many communities and neighborhoods as growth occurs over the next 20 to 50 years. The City of Villages strategy promotes redevelopment in compact, mixed-use, and walkable villages that are connected to an improved regional transit system. A village is defined as the mixed-use heart of a community where residential, commercial, employment, and civic uses are all present and integrated. This growth strategy is predicated on regional planning to identify transit-oriented growth areas, which is accomplished through the Regional Comprehensive Plan (discussed further in this section).

The General Plan Land Use Map designates the project area as Multiple Use, a designation that requires a residential component, but may incorporate commercial, office, civic, and/or other uses. A significant portion of the Uptown planning area is considered to have some of the highest potential within the City for land use development with higher density, intensive neighborhood commercial, pedestrian- and transit-oriented features as identified in Figure LU-1 in the General Plan (City of San Diego 2008d).

Uptown Community Plan and Existing Zoning

The Uptown Community Plan was adopted on February 2, 1988, to present a focused vision for all neighborhoods of the community planning area. It states, "The Park West neighborhood was identified as south of Upas Street, east of Reynard Way, west of Balboa Park, and north of Interstate 5, including the areas known as Bankers Hill, Crescent Knoll, and Reynard Hills. This area serves as a pedestrian-oriented commercial/retail center, and acts as a central point of community activity for Uptown with a myriad of mixed uses. While landscaping, awnings, and large window facades along the street frontage assist in creating a stimulating pedestrian-scale ambiance, upper-story residential uses are prevalent in this commercial area" (City of San Diego 1988).

The existing land use designations, zoning, and permitted densities are shown below:

	Community Plan	Zone
Olive Site		
East half:	Residential Very High 73–110 du/ac	MR-400 Residential 1 du/400 square feet
West half:	Commercial/Residential Very High 73–110 du/ac	CV-1 Commercial Village 1 du/600 square feet*
Nutmeg Site	Commercial/Residential High 73–110 du/ac	CV-1 Commercial Village 1 du/600 square feet*

du/ac=dwelling units per acre
*Density is based on lot size of less than 30,000 square feet

Goals of the Uptown Community Plan include encouraging redevelopment of the abundant and underused commercially zoned areas by also permitting residential development in those areas, encouraging transit use with the placement of residential units adjacent to transit routes, and fostering pedestrian activity by intensifying residential use within commercial areas. The Community Plan states in its summary of recommendations as follows: "The overall concept of the plan is to shift higher residential density away from the more isolated lower scale neighborhoods and focus development instead on the major transportation corridors." Figure 2, Development Intensity, of the Community Plan designates a corridor along Fifth and Sixth avenues as a “High Intensity Node/Corridor” with potential building heights of High Rise (12 to 14 stories) or Mid Rise (four to 12 stories) (City of San Diego 1988).

The Uptown Community Land Use Plan is illustrated in Figure 4.1-1 of the EIR and shows permitted land uses at the project site and surrounding vicinity. The community plan includes a number of recommendations to achieve the goals of the plan, as identified below:

- Limiting large-scale developments to areas where they are more compatible with existing development patterns;
- Encouraging redevelopment of the abundant and underutilized commercially zoned areas by permitting residential uses;
- Encouraging transit use by the placement of residential units adjacent to transit routes;
- Fostering pedestrian activity by intensifying residential use within commercial areas;
- Providing floor-area-ratio bonuses to encourage high-intensity mixed-use development along major transportation corridors;
- Enhancing the pedestrian orientation of commercial areas through controls on the design of development;
- Improving the design of multi-family development by requiring offsetting building walls, screened or underground parking, minimal curb cuts, private open space, and improved landscaping; and
- Encouraging commercial services to locate on the transit corridors that link Uptown with Centre City.

Parking objectives for the Uptown community planning are as follows:

- Screen off-street parking facilities;
- Minimize the loss of on-street parking caused by curb cuts;
- Reduce conflicts between pedestrians and auto traffic entering parking facilities;
- Concentrate parking on the periphery of commercial districts and/or above street-level retail; and
- Develop off-street parking facilities.

The Residential and Urban Design elements offer more specific streetscape design, landscaping, and pedestrian and vehicular circulation recommendations for redevelopment in the project area. These are as follows:

- Concentrate medium and high-density housing on upper floors as part of mixed-use development in commercial areas, adjacent to commercial areas, and near transit and higher volume traffic corridors;
- Locate higher density residential development in appropriate areas that are situated to promote safer and livelier commercial districts;
- Maintain and reinforce mixed-use commercial cores that are urban in character and pedestrian in orientation;
- Incorporate wall texture variations, façade off-sets, upper floor setbacks, and varied roof forms into multi-family development;
- Enhance the urban quality in commercial and retail activity nodes by encouraging individual buildings to be designed to contain a mixture of land uses and larger projects to be designed with physical linkages between structures to help integrate the building functions;
- Provide street trees and preserve existing trees for all new development, as appropriate; replace trees that must be removed;
- Enrich the pedestrian quality of all areas by increasing sidewalk widths when appropriate, identifying street tree themes, providing cohesive street furniture, unifying signage, increasing lighting, varying pavement materials, and providing nodal points at strategic locations;
- Minimize curb cuts and entrances to off-street parking areas and design them so that conflicts between pedestrian and vehicular traffic are minimized;
- Provide open space in the form of widened sidewalks and usable plazas visible from adjacent streets for large developments in high-activity areas; plazas should respect the established street wall in commercial areas; and
- Encourage both daytime and nighttime activities to extend the usage of the commercial activity areas.

City Land Development Code and Mid-City Communities Planned District Ordinance

The City LDC, which is part of the SDMC, sets forth land use regulations and the procedures to be followed in the use and development of land. Base zones regulate uses, density, and intensity of development within an area; the height of buildings; and floor-area ratios regulate the bulk of buildings through a relationship between lot area and permitted interior floor area.

The City Council established Planned Districts in areas that have been defined as having historical significance, serve an established community, or are developing a phased growth plan. The project site is located in the Mid-City Communities Planned District, which includes the Uptown and Greater North Park communities and is governed by the Mid-City Communities PDO (SDMC Chapter 15, Article 12) (City of San Diego 2007).

The PDO has been adopted to assist in implementing the goals and objectives of the adopted community plans and the General Plan. The PDO accommodates mixed-use neighborhoods with commercial establishments that provide a full range of consumer goods and services, quality multi-family residences that are compatible in scale and design to the surrounding neighborhood, and attractive street environments. The PDO also requires that adequate public facilities are available to meet the demands created by new development.

As discussed earlier in this section, the Olive Site is divided by the MR-400 Residential Zone and CV-1 Commercial Village Zone. The Nutmeg Site is entirely within the CV-1 Zone.

Additional development regulations in the CV-1 zone are as follows:

- Where the property abuts residentially zoned property, a 6-foot-wide yard shall be provided adjacent to that property. The third story requires a 9-foot setback and additional stories require a 15-foot setback.
- Portions of structures exceeding 36 feet in height stories shall be set back at least 15 feet from all property lines that are shared with another parcel.
- Per Table 1512-03T, there is a height limitation of 150 feet.
- There shall be a minimum floor-area ratio (FAR) of 20% coverage. The FAR permitted for commercial development is 1.50.
- Building street walls shall not exceed 36 feet in height, with additional height of the structure set back at least 15 feet from the base of the street wall, except as may be required on one side for fire or safety access.

Additional development regulations in the MR-400 zone are as follows:

- The combined gross floor area of all accessory uses, excluding outdoor recreational facilities, on any premises shall occupy not more than 20% of the gross floor area occupied by the principal permitted uses.
- The FAR for that portion of the building above a height of 100 feet shall be limited to 1.0.
- No building shall be developed on the interior property line in the front 50% of the depth of the lot. Up to 60 linear feet of the interior side wall may be on an interior property line, provided no single plane exceeds 30 feet in length with a minimum 6-foot separation between multiple places. Any second story shall be set back at least 6 feet in the front 50% of the lot; the third story shall be set back 6 feet and each story above the third requires an additional 3-foot setback per story.
- The maximum setback for 65% of the street frontage shall be 15 feet.

The project site is also located within the Transit Area and Residential Tandem Parking Overlay zones. The Transit Area Overlay Zone (defined in SDMC Chapter 13, Article 2, Division 10) applies to areas that receive a high level of transit service with the intent of identifying areas with reduced parking demands where off-street parking requirements could be reduced. Properties within the Transit Area Overlay Zone are subject to supplemental parking regulations contained in Chapter 14, Article 2, Division 5 of the SDMC.

Required Site Development Permit Findings

Approval of the project would require that the findings in SDMC Section 126.0504(a) and 1512.0204(a) are made, as follows:

> **§126.0504 Findings for Site Development Permit Approval**
>
> A Site Development Permit may be approved or conditionally approved only if the decision maker makes all of the findings in Section 126.0504(a) and the supplemental findings in Section 126.0504(b)–(o) that are applicable to the proposed development as specified in this section.
>
> (a) Findings for all Site Development Permits
>
> (1) The proposed development will not adversely affect the applicable land use plan;

(2) The proposed development will not be detrimental to the public health, safety, or welfare; and

(3) The proposed development will comply with the applicable regulations of the Land Development Code.

The supplemental findings for issuance of a Neighborhood Development Permit applicable to the project in Section 125.0504(o) for the proposed encroachment into the public right-of-way on Sixth Avenue where the requestor does not own the underlying fee, as follows:

(o) Supplemental Findings- *Public Right-of-Way* Encroachments.

A Site Development Permit in accordance with Section 126.0502(d)(6) for any e*ncroachment* or object which is erected, placed, constructed, established or maintained in the *public right-of-way* when the *applicant* is not the *record owner* of the property on which the proposed *encroachment* will be located may be approved or conditionally approved only if the decision maker makes the following supplemental *findings* in addition to the *findings* in Section 126.0504(a):

(1) The proposed *encroachment* is reasonably related to public travel, or benefits a public purpose, or all *record owners* have given the applicant written permission to maintain the *encroachment* on their property;

(2) The proposed *encroachment* does not interfere with the free and unobstructed use of the *public right-of-way* for public travel;

(3) The proposed *encroachment* will not adversely affect the aesthetic character of the community; and

(4) The proposed *encroachment* does not violate any other Municipal Code provisions or other local, state, or federal law; and

(5) For *coastal development* in the *coastal overlay zone*, the *encroachment* is consistent with Section 132.0403 (Supplemental Use Regulations of the Coastal Overlay Zone).

§1512.0204 Findings for Site Development Permit Approval

(a) Process Three Mid-City Communities Development Permit Findings. The Hearing Officer may approve or conditionally approve a Mid-City Communities Development Permit as required by Section 1512.0203(b), if the Hearing Officer determines that the application is complete and conforms with all City regulations, policies, guidelines, design standards, and density, and the Hearing Officer makes all of the following findings:

(1) Conformance With Community Plan and Design Manuals. The proposed use and project design meet the purpose and intent of the Mid-City Communities Planned District (Section 1512.0101), and the following documents, as applicable to the site: the Mid-City Community Plan, the Greater North Park Community Plan, the State University Community Plan, the Uptown Community Plan, the Mid-City Design Plan (California State Polytechnic University, Pomona; Graduate studies in Landscape Architecture; June, 1983), Design Manual for the Normal Heights Demonstration Area and the City Heights Demonstration Area (HCH Associates and Gary Coad; April, 1984), The Design Study for the Commercial Revitalization of El Cajon Boulevard (Land Studio, Rob Quigley, Kathleen McCormick), The North Park Design Study, Volume 1, Design Concept and Volume 2, Design Manual (The Jerde Partnership, Inc. and Lawrence Reed Moline, Ltd.), Sears Site Development Program (Gerald Gast and Williams-Kuebelbeck and Assoc.; 1987) and will not adversely affect the Greater North Park Community Plan, the Uptown Community Plan or the General Plan of the City of San Diego;

(2) Compatibility with surrounding development. The proposed development will be compatible with existing and planned land use on adjoining properties and will not constitute a disruptive element to the neighborhood and community. In addition, architectural harmony with the surrounding neighborhood and community will be achieved as far as practicable;

(3) No Detriment to Health, Safety and Welfare. The proposed use, because of conditions that have been applied to it, will not be detrimental to the health, safety and general welfare of persons residing or working in the area, and will not adversely affect other property in the vicinity;

(4) Adequate Public Facilities. For residential and mixed residential/commercial projects within the park-deficient neighborhoods shown on Map Number B-4104 that are not exempted by Section 1512.0203(b)(1)(A) or (B), the proposed development provides a minimum of 750 square feet of on-site usable recreational open space area per dwelling unit. The on-site usable recreational open space area shall not be located within any area of the site used for vehicle parking, or ingress and egress, and shall be configured to have a minimum of 10

feet in each dimension. The area will be landscaped and may also include hardscape and recreational facilities;

(5) Adequate Lighting. In the absence of a street light within 150 feet of the property, adequate neighborhood-serving security lighting consistent with the Municipal Code is provided on-site; and

(6) The proposed use will comply with the relevant regulations in the San Diego Municipal Code.

Interim Height Ordinance

A portion of the Uptown Community is subject to an interim height limitation per SDMC Section 1512.0205. Most properties south of Upas Street in which the project is located, are designated as Area B (per SDMC Figure 1512-03A), which requires that structure height shall not exceed 65 feet without approval of a Process Four (Planning Commission hearing) Mid-City Communities Development Permit in accordance with Section 1512.0204(b). However, the St. Paul's Cathedral and Residences project's permit application was deemed complete by City DSD on July 24, 2007, prior to the adoption of the Interim Height Ordinance on July 29, 2008, and is not subject to the interim height limitation. The Interim Height Ordinance was to expire on January 29, 2011, but was extended for 180 days by the City Council. The existing ordinance limits the City Council to not more than two 180-day extensions.

Regional Comprehensive Plan (RCP)

The RCP was prepared by SANDAG, the San Diego region's comprehensive planning organization, to serve as the long-term planning framework for the region (SANDAG 2004). The plan balances regional population, housing, and employment growth with conservation, industry, transportation, and infrastructure needs, and improves the sustainability of regional growth. The RCP strengthens connections between land use and transportation; links local and regional plans; provides connections for needed infrastructure; identifies a preferred direction for regional growth; and supports "smart growth" concepts for compact, efficient, and environmentally sensitive patterns of development. The RCP is intended to provide people with additional travel, housing, and employment choices by focusing future growth away from rural areas and closer to existing and planned job centers and public facilities, while preserving open space and natural resources and making more efficient use of existing urban infrastructure.

One of the first implementation measures of the RCP was to develop the Smart Growth Concept Map to use as a planning tool to communicate where smart growth should happen. The map illustrates several categories of land use intensity: the metropolitan center, urban center, town center, community center, transit corridor, special use center, and rural community. The project site is within the Fourth Avenue and Fifth Avenue mixed-use transit corridors that connect Downtown San Diego to a two-hospital medical complex in Hillcrest, 3 miles north of downtown, and continues to Mission Valley.

The Uptown Community Plan in the project area is consistent with the Smart Growth Concept Map in that it designates the area from Maple Street to Pennsylvania Street for office and high-density residential at 44 to 73 dwelling units per acre along Fourth Avenue, and commercial and very high-density residential uses at 73 to 110 dwelling units per acre along Fifth Avenue.

Regional Transportation Plan

Prepared by SANDAG, "MOBILITY 2030" is the County's Regional Transportation Plan (RTP) and is intended to be a blueprint to address the mobility challenges created by the region's growth. It is a long-range plan that contains an integrated set of public policies, strategies, and investments to maintain, manage, and improve the transportation system in the San Diego region. The goals of MOBILITY 2030 are to improve the mobility, accessibility, reliability, and efficiency of the transportation system; to promote the livability of communities and sustainability; and to ensure equity (SANDAG 2003).

Airport Land Use Planning and Regulations

SDIA (also referred to as Lindbergh Field) is located approximately 1 mile southeast of the project site and at an elevation of approximately 250 feet below the project site. Protection of airspace in the vicinity of SDIA is governed by regulations issued by the FAA, the City of San Diego, San Diego County Regional Airport Authority, and Caltrans.

Federal Aviation Administration

All proposed structures that may affect navigable airspace must file a Notice of Proposed Construction or Alteration (Form 7460-1) with the FAA as required by Title 14 Code of Federal Regulations, Part 77, Objects Affecting Navigable Airspace. Once Form 7460-1 is filed, FAA conducts aeronautical studies for objects that may become obstructions to air navigation~~ and has~~. Based on the aeronautical study, the FAA could issue~~d~~ a determination of no hazard or presumed hazard for a proposed structure~~the project (FAA 2011)~~. The City of San Diego, as stated in City DSD Information Bulletin 520, will not approve a ministerial permit or recommend approval for a discretionary permit for any project without a valid final FAA Determination of No Hazard to Air Navigation for the project. For both the Nutmeg and Olive sites, a Determination of No Hazard to Air Navigation has been issued by the FAA (FAA 2011). As a condition of this determination, the structures are required to be marked and/or lighted in accordance with FAA Advisory Circular 70/7460-1K Change 2, Obstruction Marking and Lighting, Red Lights, in Chapters 4, 5, and 12. FAA ~~policy~~ Part 77 requirements on protection of airspace from hazards to air navigation and its evaluation of the project are detailed in Section 8.1-4, Health and Public Safety, of the EIR.

City of San Diego

Airport Approach Overlay Zone (AAOZ). City of San Diego Chapter 13, Article 2, Division 2 of the SDMC delineates an AAOZ in the vicinity of SDIA. The AAOZ is intended to ensure that federal and state requirements are satisfied for all development, and that minimum vertical buffers are provided between FAA approach paths and structures constructed within the zone. The Nutmeg building site is within the AAOZ and ~~complies with the buffer requirement of the~~ does not penetrate the AAOZ surfaces, as further detailed in Section 8.1-4 of the EIR. The Olive Building site is not within the AAOZ. On August 13, 2007, the City requested SDCRAA's input on the project as the airport operator for SDIA and as required by the AAOZ. On September 20, 2007, the SDCRAA responded that the project (both the Nutmeg and Olive buildings sites) would not be an operational hazard for the SDIA. The letter also noted that the project would not penetrate the obstacle clearance surface. The SDCRAA determination was based on an independent study conducted by Ricondo and Associates. The SDCRAA letter and the Ricondo and Associates report, both dated September 20, 2007, are included in Appendix J of the EIR.

Airport Environs Overlay Zone~~.~~ (AEOZ). City of San Diego Chapter 13, Article 2, Division 3 of the SDMC delineates an AEOZ in the vicinity of SDIA. The AEOZ is intended to ensure that the Airport Land Use Compatibility Plans (ALUCPs) are implemented, provide information regarding the noise impacts and safety hazards associated with a property's proximity to aircraft operations, and to ensure that provisions of the California Administrative Code Title 21 for incompatible land uses are satisfied. As illustrated in the SDMC Section 133.0302, the project site (Nutmeg and Olive buildings sites) is not located within the Airport Environs Overlay Zone and is not within the Runway Approach Zone or Runway Protection Zone. As shown in Figure 4.6-2, the project site is also not within the 65- or 60-decibel CNEL aircraft noise contour.

San Diego County Regional Airport Authority (SDCRAA)

The SDCRAA was created on January 1, 2003, as an independent agency to manage the day-to-day operations of SDIA and address the region's long-term air transportation needs. It also serves as San Diego County's Airport Land Use Commission (ALUC), responsible for protecting public health and safety surrounding all 16 of the County's public-use and military airports. It accomplishes this by adopting ALUCPs to ensure the orderly development of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards around airports.

An ALUCP focuses on a defined area around each airport known as the Airport Influence Area (AIA). The AIA is composed of noise, safety, airspace protection, and overflight factors, in accordance with guidance from the California Airport Land Use Planning Handbook published by Caltrans, Division of Aeronautics. The SDIA ALUCP (SDRAA 2004) states that the AIA is delineated by the 60 dB CNEL noise contour. As shown in Figure 4.6-2, the 60 dB CNEL noise contour does include the project site. By letter to the City of San Diego on September 20, 2007, the SDCRAA confirmed that the project is outside of the Airport Influence Area as adopted in the ALUCP, and thus is not subject to review by the ALUC for a consistency determination with the ALUCP for SDIA.

The ALUC has no jurisdiction over the operation of airports or over existing land uses, regardless of whether or not such uses are incompatible with airport activities. Once ALUCPs have been adopted by the ALUC, local agencies with land located within the AIA boundary for any of the airports must, by law, amend their planning documents to conform to the applicable ALUCP. By providing direction to local agencies in their land use decisions, ALUCPs help maintain the nation's air transportation infrastructure by protecting airports from encroachment by incompatible land uses that could restrict their operations (SDRAA 2004).

California Department of Transportation

Caltrans protects navigable airspace through applicable provisions of the California Public Utilities Code Section 21659. The Utilities Code specifies that obstructions as defined in Title 14 of CFR, Part 77, Subpart C shall not be permitted unless FAA issues a determination of no hazard. For both the Nutmeg and Olive sites, a Determination of No Hazard to Air Navigation has been issued. As a condition of this determination, the structures are required to be marked and/or lighted in accordance with FAA Advisory circular 70/7460-1K Change 2, Obstruction Marking and Lighting, Red Lights, in Chapters 4, 5, and 12.

4.1.2 Impact Analysis

Issue 1: **Would the project require a deviation or variance, and would the deviation or variance then, in turn, result in a secondary physical impact on the environment?**

Per the City's Significance Determination Thresholds, impacts to land use may be significant if:

- The project would require a deviation or variance, and the deviation or variance would then in turn result in a secondary physical impact on the environment.

Deviations

Section 65915 et seq. of the California Government Code requires local agencies to provide "concessions or incentives" for projects that provide at least 10% of the dwelling units affordable to low and moderate income households. Accordingly, the SDMC allows deviation requests "to provide flexibility in the application of development regulations for projects providing affordable shelter and a balance of housing opportunities for all economic segments of the community" and "to provide an additional incentive to facilitate the development of affordable/in-fill housing." The following deviations have been requested as incentives for the project. The applicant's rationale for each request is provided below:

1. Per SDMC Section 1512.0310(b)(7)(B): The street wall shall not exceed 36 feet in height, with additional height of the structure set back at least 15 feet from the base of the street wall. The project proposes a varying street wall setback above 36 feet in height, whereas a minimum 15-foot setback is required above 36 feet in height in the CV-1 zone.

   Rationale for Request: At a meeting early in the processing of this project, the SDFD determined that aerial ladder access could more effectively be accomplished with the proposed varied street wall setbacks than would a 15-foot street wall setback at 36 feet. The new buildings are designed with multiple horizontal offsets, architectural articulation, balconies, softened curvilinear building corners, and detailed façades. The variable setbacks integrated into the design of the buildings would meet the purpose and intent of the regulations by breaking up the buildings' bulk and scale while still maintaining fire and safety access as required. Additionally, meeting the setback requirement would significantly impact the project's ability to provide a high-density development as called for in the community plan because it would result in a lower number of units or significantly reduced sizes of units. This would impact the project enough to either require other deviations to recapture the lost units/square footage or jeopardize the economic viability of the project. For all these reasons, a deviation is being requested to allow a street wall setback on the Nutmeg Street tower to vary from a minimum of one foot two inches up to fifteen feet or more and to allow a street wall setback on the Olive Street tower to vary from a minimum of three feet up to fifteen feet or more where a fifteen foot setback above thirty-six feet in the CV-1 zone is required.

2. Per SDMC Section 1512.0303(d)(1): The required minimum size of the street side yard (on Olive Street) in the MR-400 Zone is 10 feet. The project proposes a varying street side yard of less than 10 feet.

   Rationale for Request: New development on the Olive Street block is limited to a 16,549-square-foot footprint. The remainder is developed with the Cathedral complex and a 9,256-square-foot courtyard/plaza that separates the new mixed-use structure from the Cathedral complex. The eastern half of the lot is zoned MR-400, which requires prescribed setbacks from the property lines, while the western half of the block is zoned CV-1, which allows for zero lot line development.

   To respect the Cathedral, the site plan locates the high-rise structure along the Olive Street frontage and provides a 31-foot-wide landscaped courtyard to separate the building from the Cathedral. Additionally, the project locates the retail space and three stories of townhouse units along the Sixth Avenue frontage. Organizing the site plan in this way places lower scale development along Sixth Avenue which is adjacent to Balboa Park to the east. This satisfies both the Cathedral's desire for a lower scale development along Sixth Avenue and the community planning group members, who said they did not want the project to wall off the park.

   The width of the new Olive Street structure is 78 feet and the length of the CV-1 zone along Olive Street is only 100 feet. To achieve the proposed density of the Olive Site building and economies in construction, the residential structure observes the same zero lot line as in the CV-1 zone and does not step back 10 feet to comply with the street side yard of the MR-400 zone lot facing Olive Street.

   The overall and specific quality of the project is not diminished by the mixed-use structure observing a zero lot line along only a 54-foot length of the MR-400 zone property line. Development within both zones is supposed to be high density and urban in character. The front street yard area requirement per SDMC Section 1512.0303(d)(1) is observed for the length of the low-rise retail/townhouse units on the Sixth Avenue project frontage.

It is also infeasible to avoid encroachment into the 10-foot street side yard setback unless the parking entrance/ramp is located on Fifth or Sixth avenues. However, Olive Street carries a much lower traffic volume than Fifth or Sixth avenues and locating parking ingress and egress on Olive Street minimizes potential traffic impacts. Furthermore, the topography of the site and the lot dimensions make it infeasible to locate the parking entrance/ramp on Fifth or Sixth avenues. Moreover, locating the parking garage entrance onto Fifth or Sixth avenues would be more of an obstruction to pedestrians and an obtrusive design element conflicting with the architecture of the Cathedral. For all these reasons a deviation is being requested to allow a street side yard setback to vary from a minimum of two feet seven inches up to ten feet or more where ten feet is required for this location and would result in a more desirable project than would be achieved if designed in strict conformance with the development regulations of the applicable zone.

3. Per SDMC Section 1512.0407(a): An on-site loading area is required in the CV-1 Zone for each of the Nutmeg and Olive residential buildings. The project proposes a deviation to allow these loading areas to be on-street.

   Rationale for Request: The SDMC requires loading areas for residential uses in the CV-1 zone. No loading areas are required for the office and retail uses. The new buildings' sites have very small footprints. The project is a combination of preserving existing historic buildings and construction of new buildings. The available area for new buildings is very limited. Providing off-street loading areas at the ground levels would essentially require constructing loading docks, additional driveways, and removal of approximately 10 to 20% of the pedestrian-oriented commercial space at the ground level, which is contrary to the goals of the Uptown Community Plan and would result in severe impacts to the architectural quality of the buildings and the pedestrian quality of the development. Providing an off-street loading area in the below-grade parking structure would result in an even greater loss of pedestrian-oriented commercial space at the ground level because a much longer ramp would be needed to accommodate commercial vehicles, such as residential moving vans, which require almost twice the overhead clearance of a passenger-vehicle-only ramp. The small sites could not accommodate such a solution and be developed at the density proposed by the project.

   Considering that the average San Diegan moves once every 8 years (San Diego Association of Realtors 2010) and that there are 45 and 65 residential units in the two buildings, that means approximately seven moves would occur per building each year (an average of roughly one residential move every 2 months). The intent of the loading area regulations is to provide areas where large commercial vehicles can park and provide the services necessary to facilitate resident's relocation needs while minimizing ~~minimize~~ disruption of traffic flow on adjacent streets and ~~to~~ minimize impacts to vehicular and pedestrian circulation. The loss of on-street parking as a result of the on-street loading areas would be negligible because the project is providing more than the minimum required off-street parking, and is removing vehicles that currently use on-street parking (the existing Park Chateau Apartments to be demolished as part of this development have 16 units with no off-street parking). The on-street loading areas are a simple and economical solution that makes the project viable and does not affect the project's ability to meet the purpose and intent of the PDO and the goals of the Uptown Community Plan. For all these reasons, a deviation is being requested to allow loading areas for both the Nutmeg Street and Olive Street towers to be situated within the public right-of-way where loading zones are required to be located on private property.

4. Per SDMC Section 1512.0312(b)(2): No more than a combined total of 50% of each of the facades shall be vision glass above the ground floor. The vision glass would exceed the maximum permitted area by 3% on the Nutmeg building and by 9% on the Olive building.

   Rationale for Request: The Mid-City Communities Planned District requires that a portion of all facades above the ground floor, no more than a combined total of 50 percent of each of the facades, shall be vision glass or reflective spandrel construction. All vision glass and reflective spandrel construction shall be of material which is no more than 30 percent in reflectivity. The project as designed meets the intent of the Mid-City Communities PDO and Uptown Community Plan by providing a variety of attractive, functional, and affordable housing types and styles, and a street-friendly pedestrian orientation by providing active and accessible streets and, on Sixth Avenue, street yards. The glass skin of buildings provide the architectural features necessary to differentiate from, yet complement the Cathedral, the natural light and sense of openness afforded by the glass is attractive to buyers in the current market and would assist in the sale of the market rate units at prices essential to financially justify inclusion of the affordable units in the project. Natural lighting in the units due to the glass skin is also a desirable green building feature.

   Photo simulations of the project are provided in Section 4.2 and show how the visual quality and neighborhood character are not impacted as a result of the glazing. By having the structure as glass, it allows it to fit into the community as a more "transparent" structure rather than a contrast from the surrounding environment (Tucker Sadler 2009).

The contemporary building designs were chosen to differentiate the new structures from the adjacent Cathedral, thus enhancing its historic characteristics. The Olive building, being on the same block as the Cathedral, is designed for transparency and lightness to complement rather than compete with the solidity and mass of the Cathedral. An overabundance of architectural detail on the Olive building would compete with the simplicity of the Cathedral. Hence, the Olive building is designed with a simple, low reflectivity glass skin surrounding an inset frame that suggests solidity yet does not give the impression of mass that would overpower the Cathedral. In addition to the inset frame, architectural detail is provided by balconies, exposed floor slab edges, multiple offsets, variable setbacks, and opaque panels at the east and west façades.

Materials at the first and second floors of both condominium buildings, as well as the townhomes on Sixth Avenue, are high-quality stone, different from the upper floors' building materials so to emphasize the pedestrian scale of their bases and compatibility with the Cathedral's materials and scale.

The Nutmeg building recedes from the corner of Fifth Avenue and Nutmeg Street in a graceful elliptical arc so to maintain views to the Cathedral while walking or driving on Fifth Avenue. The simple "drum" façade, which emphasizes the geometric strength of the Nutmeg building, is complementary to the Cathedral's economical use of detail. As in the Olive building, exposed slab edges, inset balconies, and the curvilinear shape itself provide articulation of the elliptical drum façade. Again, like the restrained solidity of the Olive building, these features are meant to subtly recall the Cathedral details, and not to mimic them. The percentage of each of the Nutmeg building façades composed of low-reflective glass or reflective spandrel is a combined total of 53%.

SDMC Section 142.0730 specifies that no more than "50% of the exterior of a building may be comprised of reflective material that has a light reflectivity factor greater than 30%." The project architect has identified the glazing for both buildings to be comprised of a PPG Industries architectural glass product, Solarban 70XL that reduces light emissions while also reducing interior heat gain and heat loss. The reflectivity factor of Solarban 70XL windows is 12% and the Solexia + Solarban 70XL also to be use for the project has a reflectivity factor of 11%. In addition, for energy efficiency, windows with a low solar heat gain coefficient, typically less than 0.40 for southern climates, reduces the energy needed for air-conditioning; and windows with a low rate of heat loss (indicated in terms of a U-factor), preferably less than 0.60 for southern climates, reduces the energy needed for heating. The selected Solarban 70XL glass types have a solar heat gain coefficient of 0.27 to 0.32 and a U-factor of 0.26 (summer daytime) to 0.28 (winter nighttime) (PPG Industries 2010). The design of the project would enhance

<u>the historic St. Paul's Cathedral and create a complimentary architecture, would provide a residential project with a lively, activated street level, and would add to the affordable housing units in the community. For all these reasons, the glazing deviation is being requested.</u>

5. <u>Per SDMC Sections 1512.0303(e) and 1512.0310(b)(3)</u>: There is a 150-foot height limit in the MR-400 and CV-1 zones. The Olive building height would exceed the maximum height permitted in the zones by 30 feet.

   <u>Rationale for Request</u>: A number of factors exist at this location and as a part of the proposed project that make this request for a deviation from the height limit necessary to make the project economically viable and responsive to the requirements of the Community Plan:

   - The preservation and completion of St. Paul's Cathedral—a significant cultural, architectural, and community resource—and perpetuation of its community-serving ministry;
   - Inclusion of eleven on-site affordable housing units;
   - Compliance with the Airport Approach Overlay Zone height restriction, which eliminates more than one-and–a-half floors of potential development from the Nutmeg building;
   - Conformance with the Uptown Community Plan's requirement to develop urban character, high-density/high-rise mixed-use buildings, respect community character, and provide a pedestrian orientation; and
   - Development of low-rise town houses along a portion of Sixth Avenue and separating the Olive building development from the Cathedral complex with a 31-foot-wide landscaped courtyard and 80-foot-wide landscaped plaza along Sixth Avenue to further mitigate the contrast between the new and existing development.
   - The provision of off-street parking well beyond that required by Code.

   For this project to be economically viable and to be able to provide affordable housing and an abundance of off-street parking in such a desirable location, it is necessary to optimize the gross square footage in an attractive architectural package. To design the project without deviations would require shorter and bulkier buildings.

The MR-400 zone allows buildings up to 150 feet in height with an allowable FAR of 3.75 up to 100 feet in height, and 1.0 FAR above 100 feet. If overall project height is limited to 150 feet, then 200 feet of street frontage on Sixth Avenue would need to be built to the maximum 150-foot-tall bulk and scale allowed by zoning to achieve the density necessary to finance the project's affordable housing and historic preservation efforts. Instead, the project as designed deviates in height to provide a much better design to achieve the same density. The Olive Building maintains a very slender profile and presents this elevation to Balboa Park. The building's height makes possible a lower FAR in the MR-400 zone and, importantly, low-rise townhomes on only 120 feet of the Sixth Avenue frontage with more than 80 feet of frontage as landscaped open space. This allows the project to maintain a pedestrian scale and orientation on Sixth Avenue and to separate the new development from the historic Cathedral complex.

The photomontages produced for this project show how the structures fit into the urban context and are compatible with the community character (Tucker Sadler 2009). There are several high rises in the area that further support the project's compatibility with building heights in the neighborhood. Seen from a distance, the structure fits into the urban context with the other tall structures in the project vicinity (see photo simulations in Section 4.2 of the EIR). In addition, per SDMC Section 1512.0205(b)(c), exceptions to the structure height limitations are allowed when "sustainable development features such as green roofs or solar power devices" are used. As such, the project is intended to be submitted for LEED certification and to use on-site renewable energy when possible.

A shade and shadow study analysis was conducted for the project (see Figure 4.8-1 in Section 4.8 of the EIR). For the purpose of the shadow analysis, shadows cast by the proposed building were simulated for the summer solstice (June 21), fall equinox (September 21), winter solstice (December 21), and spring equinox (March 21) at 9 a.m., noon, and 3 p.m. Shadows cast on December 21 would be the longest shadows and would be directed primarily toward the businesses west of the project site. None of the adjacent structures would be shaded for the entire day when the shadows are the longest, nor would the shadows in the afternoon (shown as 3 p.m.) be cast on the residences or businesses. The shadows at this time would be onto Balboa Park. As a result of the project, some structures adjacent to the project site would be in the shadow during the winter, particularly around the equinox. The shadow study shows that while there is a potential for some shading of other properties, the timing and duration of shading would not preclude solar use on nearby properties. <u>The design of the project would enhance the historic St. Paul's Cathedral and create a complimentary architecture, would provide a residential project with a lively, activated street level, and would add to the affordable</u>

housing units in the community. For all these reasons, the height deviation of 180 feet zero inches is being requested.

For potential secondary height impacts to airport operations, see Section 8.1.4, Health and Public Safety.

6. Per SDMC Section 1512.0303(d)(3) for the Cathedral Phase 2 Addition: There must be a minimum 5-foot front yard dimension in the MR-400 zone. The project proposes a 0-foot minimum front yard for the Cathedral on Sixth Avenue.

   Rationale for Request: The project would be consistent with the existing street side yard setback for the St. Paul's Cathedral. The existing cathedral is non-conforming with an approximate setback of one foot three inches. The project as designed is faithful to the original design concept for Cathedral completion envisioned by its historic architect, Philip Frohman. Frohman's conceptual design documents place the Cathedral sanctuary, sacristies, and south chapel walls within 3 feet of the Sixth Avenue property line, with buttresses less than 11 inches from the property line. Approval was granted in 1959 to construct the Chapel and south transept with a 0-foot setback when a 12-foot, 6-inch setback was required by the zone. Although the project as designed deviates from the current minimum setback, the minimum required yard area would be observed. Only the buttresses come within 1 foot of the property line. The façade is approximately 3 feet from the property line on Sixth Avenue. The building is set back on the Nutmeg Street side and the interior side so that the resultant 1,433-square-foot yard area is more than the minimum required 1,000 square feet (10 feet times the lot frontage). The design of the project would enhance the historic St. Paul's Cathedral and create a complimentary architecture, would provide a residential project with a lively, activated street level, and would add to the affordable housing units in the community. For all these reasons, the zero-foot street side setback deviation is being requested.

7. Per SDMC Section 113.0273(c): A visibility triangle at the intersection of a street and a driveway is to extend for 10 feet along the property line. The project plan would locate obstructions within the visibility triangle and instead would provide mirrors and landscape planters at the driveway exit of both buildings to provide drivers with visibility of pedestrians.

   Rationale for Request: The deviation is necessary because the Mid-City Communities PDO calls for street walls in the project area. The vertical structural support necessary to comply with the PDO requirement for street walls necessitates the requested visibility triangle deviation. The building wall would be located 14 feet from the curb, which would allow adequate space for installation of planters that would extend 4 feet from the building façade into the sidewalk immediately adjacent to the driveway to redirect pedestrians a minimum of 4 feet away from the driveway exit; and a mirror would be installed at the driveway exit for driver visibility of the sidewalk approaches. The drive is two-way, so visibility would be adequate to an exiting driver's left, the side of oncoming vehicular traffic. The design of the project would enhance the historic St. Paul's Cathedral and create a complimentary architecture, would provide a residential project with a lively, activated street level, and would add to the affordable housing units in the community. For all these reasons, the visibility triangle deviation is being requested.

8. Per SDMC Section 1512.0303(f)(6): The FAR in the MR-400 Zone above a height of 100 feet shall be limited to 1.0. The project proposes an FAR above a height of 100 feet of 1.24.

   Rationale for Request: This deviation is a result of providing an integral building form rather than a distinctly altered structure at the 100-foot level. For this project to be economically viable and to be able to provide affordable housing in such a desirable location, it is necessary to maximize the allowable density. The project is designed to achieve maximum density to provide such a significant public benefit. If the project were designed to provide the reduced FAR above 100 feet, for the same total floor area to be economically viable, there would be a slight reduction in building mass above 100 feet, but much more building mass along Sixth Avenue where the low-rise townhomes are proposed to be located.

   To achieve a 1.0 FAR above 100 feet, 6,359 square feet of floor area would be removed, or just less than 800 square feet per floor. This requirement applies only in the MR-400 Zone and would not reduce bulk and scale in the CV-1 Zone, which applies to nearly two-thirds of the building area above 100 feet and does not require a reduction in FAR. The change in floor area would be less than 8% of the total floor area above 100 feet. In addition, the portion of the building in the MR-400 Zone provides a reduced footprint at the fourth floor to lessen the building mass when viewed from Balboa Park. To compensate for the loss of floor area above 100 feet would require extending the low-rise townhomes along Sixth Avenue at least two additional floors, for which no deviation would be required. The requested deviation makes possible a lower overall FAR in the MR-400 Zone and a very important design element of low-rise townhomes on only 120 feet of the Sixth Avenue frontage, with more than 80 feet of frontage left as landscaped open space. This allows the project to maintain a pedestrian scale and orientation on Sixth Avenue and to separate the new development from the historic Cathedral complex.

4.1.3 Significance of Impacts

The requested deviations are reasonable and appropriate for an urban scale mixed-use development. The deviations are requested to compensate for the split-zone requirements on the Olive Site and to respond to community input on project design as viewed from Balboa Park. The deviations are also justified by the provision of on-site affordable housing per SDMC Section 1512.0203(b)(4); and by the preservation and enhancement of historic resources. For this project to be economically viable and to provide affordable housing on-site, it is necessary to maximize the allowable density. The project is designed to achieve maximum density to provide a significant public benefit.

4.1.4 Mitigation, Monitoring, and Reporting

No mitigation would be required.

4.1.5 Impact Analysis

Issue 2: **Would the project result in a conflict with the environmental goals, objectives, or recommendations of the community plan in which it is located?**

Per the City's Significance Determination Thresholds, land use impacts may be significant if:

- The project would result in a conflict with the environmental goals, objectives, and recommendations of the community plan in which it is located.
- The project would conflict with the provisions of the City's Multiple Species Conservation Program Subarea Plan or other approved local, regional, or state habitat conservation plan.

Consistency with Adopted Plans and Policies

The environmental goals, objectives, and guidelines of the City General Plan are intended to implement the City of Villages strategy for neighborhood redevelopment with compact, mixed-use, and walkable villages that are connected to an improved regional transit system. Recommendations of the Uptown Community Plan also support the environmental goals of walkable neighborhoods, mixed-use residential and commercial building, and access to transit. No Multiple Species Conservation Plan or other habitat conservation plan exists in the project area.

Consistency with the San Diego General Plan

The project would be a mixed-use high-intensity residential and ground-floor commercial development. In an urban village setting like Park West, a residential component is required by the City General Plan in all proposed developments that are designated for multiple-use. The project also supports regional growth policies by providing a high-intensity residential component and integration of commercial uses in areas where transit services, pedestrian access, and neighborhood services are available.

The General Plan includes a number of goals and policies designed to promote the overall vision for growth and the City of Villages strategy. The proposed high-density, mixed-use project in the Park West neighborhood would assist in the implementation of the City of Villages strategy by the following:

- Providing a variety of housing types, sizes, and prices in residential and village developments (one to four bedrooms, with allocated low-income housing);
- Reducing the amount and visual impact of surface parking lots by providing underground parking that is masked by ground-floor uses;
- Exceeding the required number of motorcycle and bicycle spaces;
- Creating street frontages with architectural and landscape interest for both pedestrians and neighboring residents by integrating varied setbacks and unique façades;
- Providing a mix of uses to create a vibrant, active commercial core; and
- Recognizing and complementing the unique qualities of the Park West neighborhood by activating the street front, maintaining the historic feel of the architecture, and providing attractive landscape elements.

Consistency with the Uptown Community Plan

The project site is located within a designated mixed-use residential/commercial area, which calls for development of higher intensity and specialized commercial uses and allows high-rise buildings. The project would create additional pedestrian vitality to this portion of the Park West neighborhood by including ground-floor commercial uses and by enhancing the pedestrian streetscape.

According to the Community Plan (page 49), for “Projects within Both Commercial and Residential Designations,” it “may be appropriate for a portion of a mixed-use commercial project to be permitted to be located in an area designated for residential use.… Examples of such areas are between Fifth and Sixth avenues adjacent to Balboa Park.” Both the Olive and Nutmeg sites proposes ground floor retail or restaurant use, as well as office use and would conform to the four limitations placed on such inclusion of commercial use as follows:

1. The project would be mixed-use with a residential component.
2. The project site currently includes church use and, therefore, would not intrude into an exclusively residential area.
3. Traffic generated by commercial uses would not impact neighboring residential uses. The project would provide more parking than is required and would not rely on on-street parking.
4. Commercial uses would be compatible in character with surrounding office and sit-down restaurant uses. A restaurant or coffee shop is proposed on the ground level because they would provide neighborhood services and encourage pedestrian activity. Office space would also be provided on the ground levels of both the Nutmeg and Olive sites.

The project also preserves and rehabilitates the historic St. Paul’s Cathedral, satisfying one of the overall goals of the Community Plan: “Preserve and enhance the rich and varied cultural and heritage resources of the Uptown Community.” The congregation’s intent is to invest its return on the development of the remainder of their property by rehabilitating the existing Cathedral property, making it ADA compliant and other improvements, and completing the original intent of the Cathedral design by building the north transept, choir, north chapel, sacristy, new lantern crossing, and bell towers.

The project would also be consistent with the following Community Plan recommendations and guidelines (numbering is per the Community Plan):

<u>Summary of Recommendations</u>

1. Provide floor-area-ratio bonuses to encourage high-intensity mixed-use development in the Hillcrest commercial core and along major transportation corridors.

5. Improve the design of multi-family development by requiring offsetting building walls, screened or underground parking, minimal curb cuts, private open space, and improved landscaping.

7. Provide public right-of-way improvements in designated areas, including street trees, street furniture, widened sidewalks, decorative paving, and pedestrian pathways.

Urban Design Guidelines

3. Multi-family development should incorporate wall texture variations, façade off-sets, upper floor setbacks, and the utilization of varied roof forms.
4. Patios, balconies, courtyards, pools, or other recreational amenities should be required for all residential projects to maximize usable open space.
5. Individual buildings should be designed to contain a mixture of land uses to enhance the urban quality in commercial and retail activity nodes, and larger projects should be designed with physical linkages between structures to help integrate the building functions.
7. The design of buildings should be articulated so that they relate to the form and scale of surrounding structures through the use of compatible setbacks, building coverage, and floor-area ratios.
8. New construction and improvements to existing structures should be compatible with the color, texture, architectural detail, and overall appearance of the historically significant and/or higher quality buildings in the surrounding neighborhood.
10. Visually distracting rooftop appendages such as stairway towers and mechanical equipment should be screened from public view.

The project also complies with the Community Plan's Urban Design Element by preserving existing Queen Palm trees along Sixth Avenue by removing, boxing, and replanting them as a condition of approval; by constructing mixed-use commercial and high-density residential development along Fifth and Sixth Avenues; increasing off-street parking; providing landscaping and pedestrian-scale amenities; and by increasing the residential density of the neighborhood in accordance with the community plan.

Consistency with the City LDC, Zoning Ordinance, and Mid-City Communities PDO

The purpose of the Mid-City Communities PDO as stated in SDMC Section 1512.0101 is to assist in implementing the goals and objectives of the Uptown Community Plan; accommodate commercial establishments that provide a full range of consumer goods and services and that are of a scale and design that are compatible with surrounding and planned development; and provide for distinctive nodes of high-intensity, pedestrian-oriented development zones, interspersed with linear areas of multiple (commercial and residential) uses.

The project would result in the construction of 110 new dwelling units (94 net new), 45 of which would be located on the 20,075-square-foot Nutmeg Site in the CV-1 Zone. The site is less than 30,000 square feet and, therefore, would be allowed a maximum of one dwelling unit per 600 square feet of lot area, which results in a yield of 33 dwelling units under both the existing zoning and the Commercial/Residential High community plan designation. The Olive Site, which includes the entire block containing both the Olive Building and the proposed Cathedral improvements, contains 56,417 square feet (half in the CV-1 Zone and half in the MR-400 zone) that would yield a total of 117 dwelling units. Therefore, the proposal for a total of 110 dwelling units on the two sites and consolidated into a single SDP, would not exceed the allowed total yield of 150 dwelling units from the overall 76,492-square-foot project site.

It is important to note that the City is currently looking for ways to increase both affordable housing and the overall housing supply. Additionally, the City of Villages General Plan Framework Plan encourages higher densities around transit corridors and in older urbanized areas of the City. The Park West area is identified as one of the City's village sites and is along a transit corridor serving Downtown San Diego.

The project site is located in a portion of the Community Plan that permits up to 110 dwelling units per acre, and the MR-400 and CV-1 zones allow maximum building heights of 150 feet. The proposed SDP includes a deviation to permit a height increase for the Olive Building to 180 feet (a 20% increase). A number of factors exist at this location that the applicant has identified to justify this request for a height limit deviation:

- Inclusion of 11 income-restricted, affordable units, 10 of which would be for-sale two-bedroom units ranging from 960 to 1,390 square feet, and one would be a for-sale three-bedroom unit of 1,570 square feet.
- The preservation and completion of St. Paul's Cathedral, a significant cultural, architectural, and community resource.
- Reduction in height of the Nutmeg building to comply with the Airport Approach Overlay Zone height restriction, which eliminates more than one-and-a-half floors of potential development from the Nutmeg building.

- Conformance with the Uptown Community Plan's requirement to develop high-density/high-rise mixed-use buildings, respect community character, and provide a pedestrian orientation.
- Developing low-rise townhouses along a portion of Sixth Avenue and separating the Olive Building from the Cathedral complex with a 31-foot-wide joint-use landscaped courtyard and 80-foot-wide landscaped plaza along Sixth Avenue to further mitigate the contrast between the new and existing development.
- Make a significant commitment to incorporating environmental sustainability into the master plan by pursuing LEED certification.

The site plan for the Olive building is designed to provide an adequate separation from the Cathedral and courtyard amenities to enhance the setback between the two buildings. These design elements results in a smaller than typical footprint for the construction of the Olive building because the development would preserve and respect the historic resources, provide sufficient density and intensity to comply with the Community Plan, and provide the economic return to the Cathedral that makes the project feasible.

Consistency with the Interim Height Ordinance

The Mid-City Communities PDO contains an interim height limitation of 65 feet in the project area per SDMC Section 1512.0205, and requires that buildings proposing additional height be processed in accordance with Process Four (Planning Commission hearing). As stated above, the project application was deemed complete prior to adoption of the Interim Height Ordinance and, therefore, is not subject to the interim height limitation of SDMC Section 1512.0205.

Consistency with the Regional Comprehensive Plan

As described in the existing conditions above, the project proposes infill redevelopment of the Park West neighborhood and offers a variety of housing units and home ownership opportunities available to a range of income levels. As discussed below in Sections 4.9 and 8.1.6 of the EIR, adequate existing public services, facilities, and utilities are available to serve the project. The project supports the Smart Growth model established through the RCP and community development characteristics expressed in the Smart Growth Concept Map by locating housing and commercial uses along major transit routes and facilitating new development in a designated Urban Center. This further allows potential residents of the project to use public transportation, bicycles, or walking to employment within a reasonable commute distance, as is already observed by greater numbers of Uptown residents relative to city-wide averages.

The project includes many features that are smart-growth oriented by providing high-density housing and pedestrian-oriented design, which are consistent with City and regional land use goals. These features include a mix of land uses accompanied by pleasant, tree-lined sidewalks and design that emphasizes human scale. The result would be opportunities for reduced trips for employment, food service, recreation, and other services that would be located within the neighborhood.

Consistency with the Regional Transportation Plan

At the core of Mobility 2030 are seven policy goals, including mobility, efficiency, livability, sustainability, and equity. The project, by incorporating elements of LEED criteria for certification, would contribute to a more sustainable environment. In addition, the Nutmeg property would use a vacant lot to create additional housing and mixed-use amenities. The project would also contribute to housing equity by providing 11 affordable family housing units, one of which would be a for-sale unit. Through the development of a mixed-use community located near public transit and neighborhood services, the project would promote livability and land use efficiency.

4.1.6 Significance of Impacts

The project would have *no significant land use impacts* that would result in a conflict with the environmental goals, objectives, or recommendations of the Uptown Community Plan or the City General Plan in that the project would be consistent with adopted plans, policies, and zoning regulations. Although various deviations from specific requirements of the City LDC are being requested, the deviations would not conflict with environmental goals of the community plan.

4.1.7 Mitigation, Monitoring, and Reporting

No mitigation would be required.

4.1.8 Impact Analysis

Issue 3: **Would the project physically divide an established community?**

Per the City's Significance Determination Thresholds, land use impacts may be significant if:

- The project would physically divide an established community.

Compatibility with Adjacent Land Uses

The addition of new residential units in a designated mixed-use neighborhood is encouraged by the Uptown Community Plan as they serve to support street-level commercial development and neighborhood pedestrian activity. An increase in residential density in this area would promote transit use and help generate and sustain an even richer diversity of commercial and cultural amenities. The zoning for the surrounding area allows for medium- and high-density uses, and recent trends in residential development have resulted in numerous high-density high-rise buildings along Fifth and Sixth avenues between Kalmia and Upas streets. The project would be consistent with this development trend and would not create a physical separation within the Park West community.

The general commercial, residential, and office mix of land uses surrounding the project site contribute to the vision of the Uptown Community Plan. The project is not located in an area that is characterized by a single, unified architectural theme or land use designation. Rather, it is located within a mixed-use neighborhood characterized by buildings with various uses, architectural styles, residential densities, and building heights. The residential nature of the surrounding area is predominantly medium- and high-density residential integrated with a mix of other land use types, and with generally higher residential densities than most other areas of the City outside downtown. The zoning for the surrounding area allows for medium- and high-density uses, and recent trends in residential development have resulted in numerous high-density high-rise buildings along Fifth and Sixth avenues between Kalmia and Upas streets.

Although the height of the Olive Building exceeds the height of other nearby buildings, the project's height or density would not cause a land use inconsistency or operational conflict with other similar high-density developments or with medium-density developments. The existing presence of medium- and high-density buildings and varied building heights in the project area does not exhibit any evidence of conflicts in daily activities or lifestyles that could result in land use incompatibility. The proximity of the open space and recreational opportunities provided by Balboa Park is a fortunate neighborhood element that serves to ameliorate the stresses and tensions that might otherwise occur within a high-density urban environment.

The accessibility and mixed-use character of area development also supports transit-oriented development, and development that encourages walking or biking to work, or working at home, more so than is the case with most areas of the City. The proposed project would support these lifestyle choices and is designed and sited to promote smart growth principles of locating residential density near areas of transit and in walk-able neighborhoods. Therefore, the project would be compatible with the existing land use/transportation relationships found in the surrounding neighborhood.

The proposed ground floor commercial uses would be consistent with adjacent street-level commercial uses. Multi-family residential structures and mixed-use residential-over-retail uses are also predominant in the project vicinity and the proposed land uses would be compatible with the existing land uses adjacent to the project site and in the general vicinity. The project does not propose any land uses that would be unsuitable on this site or incompatible with surrounding existing or planned land uses.

Additional focused discussion of the project's consistency with neighborhood character, including aesthetic and visual impacts, is found in Section 4.2 of the EIR. The Cathedral also contributes positively to the neighborhood character due to its historic architecture, its link to the neighborhood's past, and its involvement with spiritual, cultural, and community services.

4.1.9 Significance of Impacts

The project would have *no significant land use impacts* that would physically divide an established community in that the project would be located in a mixed-use area characterized by a variety of land uses, architectural styles and building heights, and residential densities and building types. In addition, the project would be in conformance with existing zoning and land use designations.

4.1.10 Mitigation, Monitoring, and Reporting

No mitigation would be required.

4.1.11 Impact Analysis

Issue 4: Would the project result in land uses that are not compatible with an adopted Airport Land Use Compatibility Plan (ALUCP)?

Per the City's Significance Determination Thresholds, land use impacts may be significant if:

- The project would result in land uses that are not compatible with an adopted Airport Land Use Compatibility Plan (ALUCP).

The project is outside of the Airport Influence Area as shown in the adopted Airport Land Use Compatibility Plan for SDIA, and thus is not subject to review by the ALUC for a consistency determination with the ALUCP for SDIA as stated in the SDCRAA September 20, 2007, letter. Nevertheless, the EIR does address the project's consistency with adopted regulations and standards for airspace protection and noise compatibility.

Consistency with Airport Land Use Planning

The FAA has determined and issued letters of No Hazard to Air Navigation to the project (FAA 2011). As a condition of this determination, the structures are required to be marked and/or lighted in accordance with FAA Advisory Circular 70/7460-1K Change 2, Obstruction Marking and Lighting, Red Lights, in Chapters 4, 5, and 12.

The structures would exceed the CFR Part 77 Horizontal Surface; however, terrain and other structures in the area also penetrate this surface. Therefore, a Terminal Instrument Procedures (TERPS) analysis of the project was performed by Williams Aviation Consultants to determine safe maximum structure heights (EIR Appendix J). This analysis was conducted when height of the Nutmeg building was proposed to be 181 feet and the Olive building was proposed to be 189 feet. The analysis determined that permitted maximum TERPS height for the Nutmeg building would be 243 feet above ground level and the maximum TERPS height for the Olive building would be 238 feet above ground level. Revisions to the project have reduced the Nutmeg and Olive buildings to 150 feet and 180 feet, respectively. The proposed structure heights do not penetrate any TERPS surfaces. ~~and a Determined of No Hazard to Air Navigation has been issued to the project by the FAA (2010).~~

The SDCRAA determined that the project (both the Nutmeg and Olive buildings sites) would not be an operational hazard for the airport and would not penetrate the obstacle clearance surface. The SDCRAA determination was based on an independent study conducted by Ricondo and Associates (September 20, 2007). The report reviewed and analyzed the published TERPS procedures for SDIA and identified those that would require obstacle clearance surfaces to the east of SDIA. Ricondo and Associates identified and evaluated the following TERPS surfaces for SDIA and determined that neither building would penetrate the TERPS surfaces: Runway 27

RNAV (GPS); Runway 9 ILS Missed Approach; Runway 9 Departure; Runway 9 RNAV (GPS) Missed Approach. Ricondo and Associates also determined that the buildings are located outside the footprint of the Runway 27 Localizer Approach (LOC) Surface, and therefore, do not impact the airspace required for this approach procedure. All of the aviation-related studies and approval are included in Appendix J of the EIR.

The structures are also well outside the 65 CNEL noise contour per California Building Code Section 1208A.8.2. The projected CNEL noise contours map for SDIA shows the project site to be outside of the 60-dB CNEL contour for aircraft noise (see EIR Figure 4.6-2). The project is also outside of the AEOZ boundaries. According to established standards set by the City General Plan Noise Element, ALUCP for SDIA, California Administrative Code Title 21, ~~by~~ FAA (Part 150 noise/land use criteria), these structures would be compatible with noise generated by aircraft using SDIA.

Consistency with the Airport Approach Overlay Zone

The City of San Diego Municipal Code defines ~~an~~ the AAOZ ~~in the vicinity of an airport.~~ as providing supplemental regulations for the property surrounding the approach path for SDIA. The AAOZ limits the height of structures to protect the airspace for approaches to the ~~airport~~SDIA. The AAOZ footprint and associated height restrictions were provided by the City of San Diego. One of the two proposed buildings, the Nutmeg building, is located within the footprint of the AAOZ and ~~would observe~~ does not exceed the 50-foot (15-meter) buffer of the AAOZ. The Olive building falls outside the AAOZ boundary. ~~The~~ Both project buildings have ~~has~~ received a determination of No Hazard to Air Navigation issued by the FAA (20~~09~~11) ~~and the SDRAA Airport Authority issued a letter of concurrence~~. Based on the FAA determination of no hazard and the Nutmeg building's compliance with the City's 50-foot AAOZ buffer, it would not impact operations at SDIA. In-depth supporting documentation to this effect is provided in the Williams Aviation Consultant's report (2007), Ricondo and Associates report (2007), and the FAA No Hazard Determination Letters (2011) included as Appendix J of the EIR.

San Diego Airport Land Use Compatibility Plan

The project is outside of the Airport Influence Area as shown in the adopted Airport Land Use Compatibility Plan for SDIA, and thus is not subject to review by the ALUC for a consistency determination with the ALUCP for SDIA as stated in the SDCRAA September 20, 2007 letter.~~According to the San Diego Airport Land Use Compatibility Plan, these structures would be compatible with the proposed criteria for areas surrounding the airport. The structures would,~~

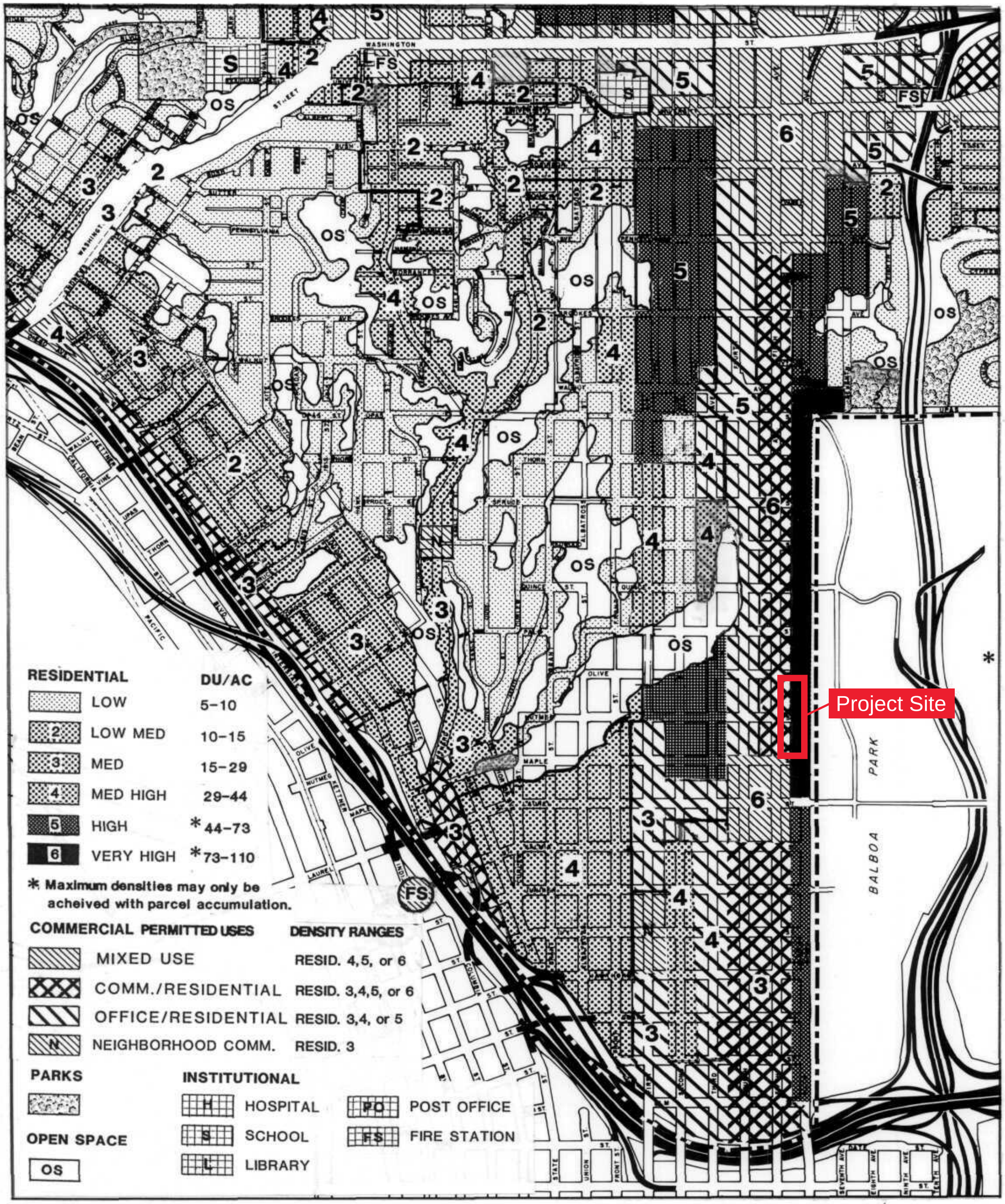
~~however, slightly exceed the heights set forth in the San Diego Airspace Protection Map. The structures at the proposed heights would not exceed FAA standards, which incorporate a minimum 250-foot (76-meter) buffer of protection at the project location. Structures proposed to be built at the project sites were evaluated and the proposed heights were determined to not constitute a real or potential hazard to aircraft operations at SDIA, nor would aircraft operations pose a hazard to those individuals who would reside within these structures if structure are kept below the maximum TERPS height. As stated above and evaluated in the Williams Aviation Consultant's report, both building comply with the TERPS height regulations.~~

4.1.12 Significance of Impacts

The proposed structure heights do not penetrate any TERPS surfaces and, therefore, have been determined to be no hazard to aircraft operations by FAA (2011). The structures are also well outside the 65 CNEL noise contour per California Building Code Section 1208A.8.2. According to established standards set by FAA, the SDCRAA, the State, and the City, the location and height of these structures would be compatible with aircraft using SDIA. The project is outside of the Airport Influence Area as shown in the adopted Airport Land Use Compatibility Plan for SDIA, and thus is not subject to review by the ALUC for a consistency determination with the ALUCP for SDIA as stated in the SDCRAA letter of September 20, 2007. Therefore, the project would have *no significant land use impact* that would be incompatible with the SDIA ALUCP

4.1.13 Mitigation, Monitoring, and Reporting

No mitigation would be required.



No Scale

Figure 4.1-1
Uptown Community Land Use Plan

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4.2 VISUAL QUALITY/COMMUNITY CHARACTER

This section evaluates the visual aspects of the project, including its height, bulk, and scale, architectural design, and landscape impacts, and consistency with relevant City development standards of the Uptown Community Plan Design Element and existing patterns of development in the surrounding area. An analysis of the project's light, glare, and shading impacts are addressed in Chapter 4.8 of the EIR.

4.2.1 Existing Conditions

The project site is located adjacent to Balboa Park and within a densely urbanized area of the Park West neighborhood of the Uptown Community Plan. The area exhibits a wide variety of residential and commercial establishments, including medical and other professional offices, retail uses, restaurants, banks, and other commercial services, and numerous multi-family residences. The variety of multi-family buildings ranges from older two-story walk-up apartment buildings, two- and three-story buildings with residential over commercial, and more recent developments of high-rise multi-family and mixed-use projects of up to 16 stories. A project area visual assessment conducted on February 3, 2010, to identify the presence of buildings exceeding four stories in the area between Second and Sixth avenues and from Kalmia to Upas streets yielded the following results, proceeding from south to north:

- Kalmia Street between Fifth and Sixth Avenues: 10- and 12-story residential buildings
- North Side of Laurel Street between Fourth and Sixth Avenues: Two 14-story residential buildings (Park Laurel) and 12-story office building (Mr. A's)
- Laurel Street between First Avenue and Front Street: Nine-story residential building
- Maple Street between Second and Third Avenues: 11- and 12-story residential buildings
- Sixth Avenue South of Nutmeg Street: Six-story residential building
- Fifth Avenue at Palm Street: Eight-story office building
- Fifth Avenue at Redwood Street: 14-story residential/commercial building
- Sixth Avenue at Redwood Street: 10-story residential/commercial building
- Sixth Avenue at Spruce Street: Eight-story hotel building
- Sixth Avenue at Upas Street: 14- and 16-story residential buildings

Most of the existing buildings are monolithic in appearance, in that they are rectangular in shape and primarily built to their full height without any differentiation in appearance, such as variation in height or façade design elements. The only exceptions typically occur at the first- or second-story level, where an increased setback to the building wall may occur, and at the top-floor level, where an additional setback to the building wall may occur. Park Laurel and Mr. A's are examples of these step-back designs and are an exception rather than a common architectural feature found in the area.

Existing On-site Land Uses

The project site consists of two separate high-rise development sites divided by Nutmeg Street. The Olive Site parcel presently contains the two-story, 16-unit, Park Chateau Apartments located at the southeast corner of Fifth Avenue and Olive Street and a parking lot used by St. Paul's Cathedral. The Cathedral and a small paved parking lot for the church are located adjacent to the Olive Site. The highest existing structure on the Cathedral Site is a tower that is approximately 62 feet high. The Nutmeg Site is currently vacant. Additional visual elements at the Olive Site are 12 Queen Palms planted in pairs and two single Queen Palms (see Figure 4.5-2) along both sides of the sidewalk. All but one of the palms are approximately 50 to 60 feet in height and are believed to have been planted around 1915. A description of the historic context of the paired planting of Queen Palms, which extends along both sides of Sixth Avenue from Elm to Upas streets, is provided in Section 4.5 of the EIR.

Existing Adjacent Land Uses

Existing land uses bordering the Nutmeg Site to the east consist of the two-story historic Le Moderne Apartments, two newer four- and six-story condominium buildings and an older five-story apartment building; a one-story market is to the south. Across Fifth Avenue to the west are a one-story restaurant and two 2-story commercial buildings, all of older vintage, and a three-story restaurant and office building. Balboa Park lawn areas and tree groves are to the east. The Park Laurel and Mr. A's high-rises are prominent visual features to the south.

The existing land uses adjacent to the Olive Site on the north side of Olive Street are The Abbey, which is a former church now used as a special event venue, and a one-story apartment building. An eight-story office building is also located in the block to the north. Across Fifth Avenue to the west are a restaurant, several two-story office buildings, and a three-story office and restaurant building; to the northwest are older two-story apartment buildings to which commercial storefronts have been added, and a four-story office building. To the east is Balboa Park.

Visual Quality/Community Character Guidelines

The Uptown Community Plan (City of San Diego 1988) and its Urban Design Element contain the goals, recommendations, and urban design objectives that relate to visual issues and community character. Following are excerpts of goals, recommendations, and objectives that are relevant to the project:

<u>Uptown Community Plan</u>

<u>Residential</u>:

- Retain the character of residential neighborhoods.

<u>Urban Design</u>:

- Enhance the diverse and unique character of the community.
- Encourage the design of buildings and circulation systems to be sensitive to the needs of the pedestrian.

<u>Summary of Recommendations</u>:

- Large-scale developments are limited to areas where they are more compatible with existing development patterns.
- Pedestrian activity is fostered by intensifying residential use within commercial areas.
- Provide floor area ratio bonuses to encourage high-intensity mixed-use development in the Hillcrest commercial core and along major transportation corridors.
- Improve the design of multi-family development by requiring offsetting of building walls, screened or underground parking, minimal curb cuts, private open space, and improved landscaping.

<u>Development Intensity</u>:

Figure 2 of the Community Plan designates a corridor along Fifth and Sixth avenues as a “High Intensity Node/Corridor” with potential building heights of High Rise (12 to 14 stories) or Mid Rise (four to 12 stories).

Urban Design Element

Objectives:

- Preserve the diverse and unique character of each neighborhood in the Uptown community.
- Develop design standards and guidelines with incentives that will maximize quality development that is compatible in both character and scale.

Site Planning and Architecture:

2. New construction and improvements to existing structures should be compatible with the existing architectural detail and overall appearance of the quality development in the surrounding neighborhood.
3. Multi-family development should incorporate wall texture variations, facade off-sets, upper floor setbacks, and the utilization of varied roof forms.
4. Patios, balconies, courtyards, pools, or other recreational amenities should be required for all residential projects to maximize usable open space.
7. Articulate the design of buildings so they relate to the form and scale of surrounding structures through the use of compatible setbacks, building coverage, and floor area ratios.
8. New construction and improvements to existing structures should be compatible with the color, texture, architectural detail, and overall appearance of the historically significant and/or higher quality buildings in the surrounding neighborhood.
10. Visually distracting rooftop appendages such as stairway towers and mechanical equipment should be screened from public view.

Specific to Park West, the Urban Design Element includes the following recommendations:

9. Create a pedestrian boulevard atmosphere and minimize view obstructions to Balboa Park from the west side of Sixth Avenue by requiring façade articulation through the use of balconies, terraces and/or upper-story setbacks on high-rise buildings.

10. Maintain and enhance pedestrian and auto views of Balboa Park from Fifth Avenue through the articulation of building facades, variations in setbacks and utilization of varied roof forms.

Existing Project Viewshed

The project site is located on a mesa that includes the northwestern portion of Balboa Park. The mesa slopes gently to the south toward Downtown San Diego and more steeply to the west toward Lindbergh Field and San Diego Bay. The mesa continues to the north and expands to encompass residential neighborhoods and mixed-use commercial districts in Hillcrest.

Balboa Park to the east is at the same elevation as the project site and its lawn areas provide direct views of the project site. Beyond the adjacent lawn areas, most views of the project site from Balboa Park are obscured by trees. Other direct views from public spaces are limited to roadways and sidewalks in close proximity to the project site and from residences and offices in nearby high-rise buildings. Beyond a few blocks, site visibility is obscured or blocked by existing high rise development or by the declining elevation of viewpoints to the south and west. The upper floors of the proposed buildings would be seen from canyon overlooks to the west, such as from the First Avenue Bridge. More distant views are available from public parks and recreational areas on Harbor Island and Shelter Island.

4.2.2 Impact Analysis

Issue 1: Would the project result in a substantial obstruction of any vista or scenic view from a public viewing area?

Per the City's Significance Determination Thresholds, impacts to visual quality/community character would be significant if the project would:

- Substantially obstruct any vista or scenic view from a public viewing area.

Identification of Public Views

As stated in the Uptown Community Plan Urban Design Element, the primary public view objectives are to maintain and enhance pedestrian and auto views of Balboa Park and require façade articulation through the use of balconies, terraces and/or upper-story setbacks on high-rise buildings. The project site is primarily viewed from Balboa Park, from adjacent and nearby residential and commercial properties, and from travelers on Fifth and Sixth avenues. Users of Balboa Park currently experience views of numerous high-rise buildings along Sixth Avenue and views to the west do not provide any opportunity for scenic overlooks into natural areas or San Diego Bay. Balboa Park provides ample opportunity for visual enjoyment within the park's natural and landscaped areas, with glimpses of the California Tower to the east and views of downtown and San Diego Bay to the south. The project would maintain existing pedestrian and auto views along Olive and Nutmeg streets and provide the articulation and façade variation desired by the Uptown Community Plan. It would also enhance the Sixth Avenue boulevard atmosphere along the Olive Building frontage by providing three two-story townhome units and retail space at the corner of Sixth Avenue and Olive Street as shown in Figure 3-3a. Therefore, the project would not obstruct or diminish the enjoyment of the scenic public views and pedestrian corridors associated with Balboa Park.

Travelers on Fifth and Sixth avenues would have peripheral views of the site, with motorists travelling quickly past the project site and pedestrians experiencing a variety of urban architecture and activities. These urban views would be complemented, rather than negatively affected, by the project buildings, street-level commercial activities, and architectural amenities, including the Cathedral improvements. Residents of the area primarily occupy mid-rise and high-rise buildings with views of Balboa Park, downtown, and San Diego Bay. Although private views are not protected as part of the City's environmental review process, existing private views toward Balboa Park from west of Fifth Street would also view the project buildings, though these views would not be substantially obstructed by the project.

The visual impact and community character of the project is based primarily on the two main buildings: the 17-story Olive Building and the 13-story Nutmeg Site building (approximately 150 feet in height). Improvements to the Cathedral are relatively modest in scale and would include two bell tower additions that would be 68-feet in height and a lantern tower that would be 91 feet in height. Architectural renderings of the proposed Olive and Nutmeg buildings and the Cathedral are shown in Figures 3-3a, 3-3b, and 3-3c.

Figure 4.2-1 is a location map of viewpoints from which photographs of the project site were taken and simulations of the proposed buildings were added. A description of the viewpoints follows:

- Figure 4.2-2: Viewpoint A – Balboa Park Lawn Area. View from Northeast. A short range view of the project would be available from this viewpoint. The Olive Building would be prominent from this viewpoint. The Nutmeg Building would be obscured by trees within the Park. The Olive building would be a prominent feature in the view due to its proximity and architectural character.

- Figure 4.2-3: Viewpoint B – Balboa Park Lawn Area; View from Southeast. A short range view of the project would be available from this viewpoint. The project buildings would be prominent. Not shown in Figure 4.2-4 are the Park Laurel buildings and other high-rise buildings to the south. The project buildings would also be prominent features in the view due to their proximity and architectural character.

- Figure 4.2-4: Viewpoint C – Balboa Park; View from Cabrillo Bridge. A mid-range view of the upper floors of the project buildings would be available from this viewpoint. Trees within the park would block views of the full building height from this and other park viewpoints to the east, north, and south. The project buildings would be seen as similar to other high-rise buildings along Fifth and Sixth avenues in terms of height, bulk, and scale.

- Figure 4.2-5: Viewpoint D – Sixth Avenue at Redwood Street; View from the North. A mid-range view of the Olive Building would be available from this viewpoint. A full view of the building would be obscured by the Queen Palms along Sixth Avenue. A 10-story residential/commercial building is in the foreground of this view.

- Figure 4.2-6: Viewpoint E – Sixth Avenue at Juniper; View from the South. A mid-range view of the Olive Building would be available from this viewpoint. The Nutmeg Building would be blocked by the 10- and 12-story residential buildings at Kalmia Street and by the 14-story Park Laurel building in the foreground of this view.

- Figure 4.2-7: Viewpoint F – Fifth Avenue North of Redwood Street; View from the North. A mid-range view of the Olive Building would be available from this viewpoint. The 8-story office building at Palm Street would block the lower floors of the Olive Building. A 14-story residential/commercial building is in the foreground of this view.

- Figure 4.2-8: Viewpoint G – Fifth Avenue South of Kalmia Street; View from the South. A mid-range view of the Nutmeg Building would be available from this viewpoint. A full view of the Nutmeg Building would be blocked by the 14-story Park Laurel buildings.

- Figure 4.2-9: Viewpoint H – First Street Bridge; View from the West. A mid-range view of both buildings would be available from this viewpoint. The Olive Building would be a prominent feature on the skyline from this view. The Nutmeg Building would appear similar in height to other buildings in the project area. Similar skyline views of the project and of the 14-story Park Laurel buildings and 10- to 16-story buildings at

Redwood and Upas streets are also available from other First Street viewpoints overlooking the Maple Canyon open space.

- Figure 4.2-10: Viewpoint I – Harbor Island; View from the Southwest. A long-range view of the project buildings would be visible from this and other northwestern San Diego Bay public viewpoints. Other high rise buildings along Fifth and Sixth avenues are also distant skyline features from this viewpoint. The building located between the two project buildings is a 12-story residential building located at Second Avenue and Maple Street.

The primary public view of the project site is from Balboa Park, from which views of numerous high-rise buildings along Sixth Avenue and views to the west do not provide any opportunity for scenic overlooks into natural areas or San Diego Bay. Motorists on Fifth and Sixth avenues would have peripheral and short-term views of the site. Pedestrians would experience a variety of urban architecture and engage in activities that would be complemented, rather than negatively affected, by the additional high-rise buildings, street-level commercial activities, and architectural amenities of the project's design elements, including the Cathedral improvements.

4.2.3 Significance of Impacts

The project impact to scenic views from a public viewing area would be *less than significant* in that existing view corridors along Olive and Nutmeg streets and Sixth Avenue would continue to enable views to and from Balboa Park.

4.2.4 Mitigation, Monitoring, and Reporting

No mitigation would be required.

4.2.5 Impact Analysis

Issue 2: Would the project severely contrast with the surrounding neighborhood character by exceeding the allowable height or bulk regulations and the height and bulk of existing patterns of development in the project vicinity, or by having an architectural style or use building materials in stark contrast to the adjacent development where the adjacent development follows a common theme?

Per the City's Significance Determination Thresholds, impacts to visual quality/community character would be significant if the project would:

- Severely contrast with the surrounding neighborhood character due to height, bulk, architectural style, or building materials in stark contrast to the common theme of adjacent development.

Visual Quality/Community Character

The most obvious difference in the architectural design of the Olive and Nutmeg buildings from other buildings in the Park West neighborhood is their extensive use of glass. The Park West neighborhood contains a wide variety of architectural designs and does not exhibit a common architectural theme.

Height and Bulk. As described above, the project neighborhood between Kalmia and Upas streets is a densely urbanized area that contains a wide variety of residential and commercial buildings, included high rises of up to 16 stories. The two towers of Park Laurel in the block to the south of the project site are both 14 stories, and the relative difference in height of proposed 13-story and 17-story buildings would not cause the project to be a substantially different visual feature in a neighborhood that currently contains 11 buildings of 10 stories or greater. The perception of building "bulk" relates to the ratio of total floor area to the building's "footprint" or land area on which it is located. The St. Paul's Cathedral provides a visual separation of the Olive and Nutmeg buildings, which does not occur with the adjacent Park Laurel twin high-rise buildings, which project a greater overall bulk than would the two project residential towers. In the MR-400 zone of the Mid-City Communities PDO, the permitted residential floor-area ratio (FAR) is 3.75 up to 100 feet elevation and is reduced to 1.0 FAR above 100 feet. The project's FAR is 3.24 below 100 feet and a deviation is requested for the portion above 100 feet to permit a 1.24 FAR. This minor increase in FAR above 100 feet would not cause a visual impact since the street-level perception of the bulk of the buildings would be consistent with the PDO. The descriptions of the architectural design concepts for both buildings, the rationale for extensive use of glass, and the façade treatments that have been incorporated into the designs for compatibility with the neighborhood character is provided below.

Analysis of Olive Building. Site elevations of the Olive Building as viewed from Fifth and Sixth avenues are shown in Figures 3-2a and 3-2b, respectively. An architectural rendering is shown in Figure 3-3a looking northwest from Balboa Park. The 17-story Olive Building extends to a maximum height of 180 feet and is oriented with its long axis running east-west. The tower portion has an overall maximum width of approximately 73 feet. Its east façade is vertically curved, resulting in a maximum east-west building length at the 10th floor of approximately 185 feet.

The Olive Building features extensive use of glass panels and exceeds the Mid-City Communities PDO SDMC Section 1512.0312(b)(2) requirement that reflective glass be limited to 50% of each façade. The building's proposed glazing on each façade ranges from 45% to 65.8%, with the average being 59%. A deviation from this requirement has been requested and is addressed in EIR Section 4.1, Land Use. Justification for the deviation includes the desire of the architect and the Cathedral applicants that the building be designed for transparency and lightness to complement rather than compete with the solidity and mass of the Cathedral. The natural light and sense of openness afforded by the glass is also attractive to buyers in the current market and would assist in the sale of the market rate units at prices essential to financially justify inclusion of the affordable units in the project. Natural lighting in the units due to the glass skin is also a desirable green building feature.

While the tower portion is primarily glass, it includes three types of glass panels (clear, spandrel, colored), as well as use of metal panels. The east façade uses more tradition architectural elements for the lower three floors, with the fourth floor and above being nearly all glass and metal. The north, west, and south façades also include stucco, travertine, and sandstone wall treatments. Building plane offsets are incorporated into the building façades, including a 17-foot offset in the east façade. Balconies on the north and south elevations are recessed within the building façade. Balconies on the west elevation extend out from the west façade.

As shown in Figures 3-2b and 3-3a, the Olive Building provides three two-story townhome units fronting on Sixth Avenue and also includes retail space at the corner of Sixth Avenue and Olive Street. Two additional units face Sixth Avenue on the third floor. This three-story portion of the Olive Building features primarily travertine and sandstone façades and provides patios or balconies on Sixth Avenue. A common-area deck overlooking Balboa Park is provided on the fourth floor.

The Olive Building would be a prominent visual feature from most viewpoints in the area, including from the eastern portions of Balboa Park and from northwestern San Diego Bay. At 17 stories, it would be the highest building on the mesa, though in comparison to the nearby 14-story twin towers at Park Laurel, its height would not be a dominant visual element. In addition, as can be seen from Figure 4.2-10, its width is less than most other buildings along the mesa and would not be a negative visual feature in comparison to other nearby buildings.

Analysis of Nutmeg Building. Site elevations of the Nutmeg Building as viewed from Fifth and Sixth avenues are shown in Figures 3-2a and 3-2b, respectively. An architectural rendering of the Nutmeg building is shown in Figure 3-3b as viewed from Fifth Avenue looking southeast. It is oriented with its long axis running north-south along Fifth Avenue, which includes first-floor retail and/or restaurant space, similar to other existing buildings in the area. As can be seen in Figures 3-2a and 3-3b, the building elevations on all four sides feature much more use of stucco, travertine, and sandstone than does the Olive building. The design was intended to capture some of the horizontal and vertical elements of the Cathedral, while still being a distinctly modern building.

The northwest corner of the building features a large expanse of horizontally curved, floor-to-ceiling glass that extends from the ground floor to the top floor. A smaller area of horizontally curved, floor-to-ceiling glass is featured on the east elevation. The use of vision glass and reflective spandrel construction exceeds the 50% limitation of the Mid-City Communities PDO. The building's proposed glazing on each façade ranges from 36% to 60%, with the average being 53%. A deviation from this requirement has been requested and is addressed in EIR Section 4.1, Land Use. Justification for the deviation for the Nutmeg Building is the same as for the Olive Site, which is to design the building for transparency and lightness to complement rather than compete with the solidity and mass of the Cathedral, to design the building to be attractive to buyers and assist in the sale of the market rate units, and to provide natural lighting would reduce energy use.

The Nutmeg building recedes from the corner of Fifth Avenue and Nutmeg Street in a graceful elliptical arc that maintains views to the Cathedral while walking or driving on Fifth Avenue. The elliptical "drum" façade, which emphasizes the geometric strength of the Nutmeg building, complements the Cathedral's economical use of detail. As in the Olive building, exposed slab edges, inset balconies, and the curvilinear shape provide articulation of the drum façade.

Numerous building plane offsets, angled glass treatments, and varied balcony shapes and locations also provide differentiation in the visual character of the Nutmeg building. It features an angled roof line that mimics the flight pattern of airplanes approaching to land at Lindbergh Field. Two 2-story penthouse units occupy the west half of the 12th and 13th floors and distinctive design elements provide visual separation from the floors below. The 13th floor also contains large areas of roof garden plantings, which also occurs on the second and third floors.

Cathedral Renovation and Expansion

The Cathedral would also be expanded, primarily with a two-story addition on the Sixth Street side of the Cathedral, two new bell towers to frame the Fifth Avenue façade of the Cathedral, and a new lantern tower above the east end of the Cathedral Nave that would extend to a height of approximately 91 feet. The 1968 Guild Hall and library on Sixth Avenue would be demolished and a new outdoor gathering space and landscaping would be installed. Architectural elevations are shown in Figure 4.5-2 and a rendering is shown in Figure 3-3c. The highest element would be the lantern tower. The proposed improvements would be consistent with the architectural character of the existing Cathedral, would not obstruct any scenic views, and would not negatively impact the neighborhood character.

4.2.6 Significance of Impacts

The project would be consistent with existing patterns of recent development in an area that contains varied architectural themes and styles; and is consistent with existing zoning of the site. Therefore, the project would not have a significant visual impact to the surrounding neighborhood.

4.2.7 Mitigation, Monitoring, and Reporting

No mitigation would be required.

4.2.8 Impact Analysis

Issue 3: Would the project cause a substantial alteration to the existing or planned character of the area, the loss of any distinctive or landmark tree(s), or stand of mature trees?

Per the City's Significance Determination Thresholds, impacts to visual quality/community character would be significant if the project would:

- Cause a substantial alteration to the existing or planned character of the area, including the loss of any distinctive or landmark trees.

Removal of Queen Palms

The 12 Queen Palms planted in pairs and two additional single plantings along the project frontage on Sixth Avenue are important landscape features that extend along both sides of Sixth Avenue from Elm Street near Interstate 5 to Upas Street. All but one of the palms along the project frontage are approximately 50 to 60 feet in height and appear to be among the original Queen Palms planted around 1915 for the Panama–California Exposition held in Balboa Park during 1915 and 1916. Figure 4.5-1 shows the location of the existing palms and the 13 that would be impacted during construction. Mitigation Measure HR-2 requires that all Queen Palms that would be impacted during construction of the Olive Building or the Cathedral expansion be boxed and replanted to the satisfaction of the City Street Division-Urban Forestry. In addition, Queen Palms not directly impacted by construction would be protected by temporary fencing during construction.

4.2.9 Significance of Impacts

Implementation of Mitigation Measure HR-2 requires that the impacted Queen Palms along the project's Sixth Avenue frontage would be boxed and replanted. Additionally, those trees not directly impacted would be fenced during construction. Therefore, impacts would be *less than significant.*

4.2.10 Mitigation, Monitoring, and Reporting

Mitigation for potential visual impacts to the Queen Palms is provided by Mitigation Measure HR-2 in Section 4.5.7 of the EIR.

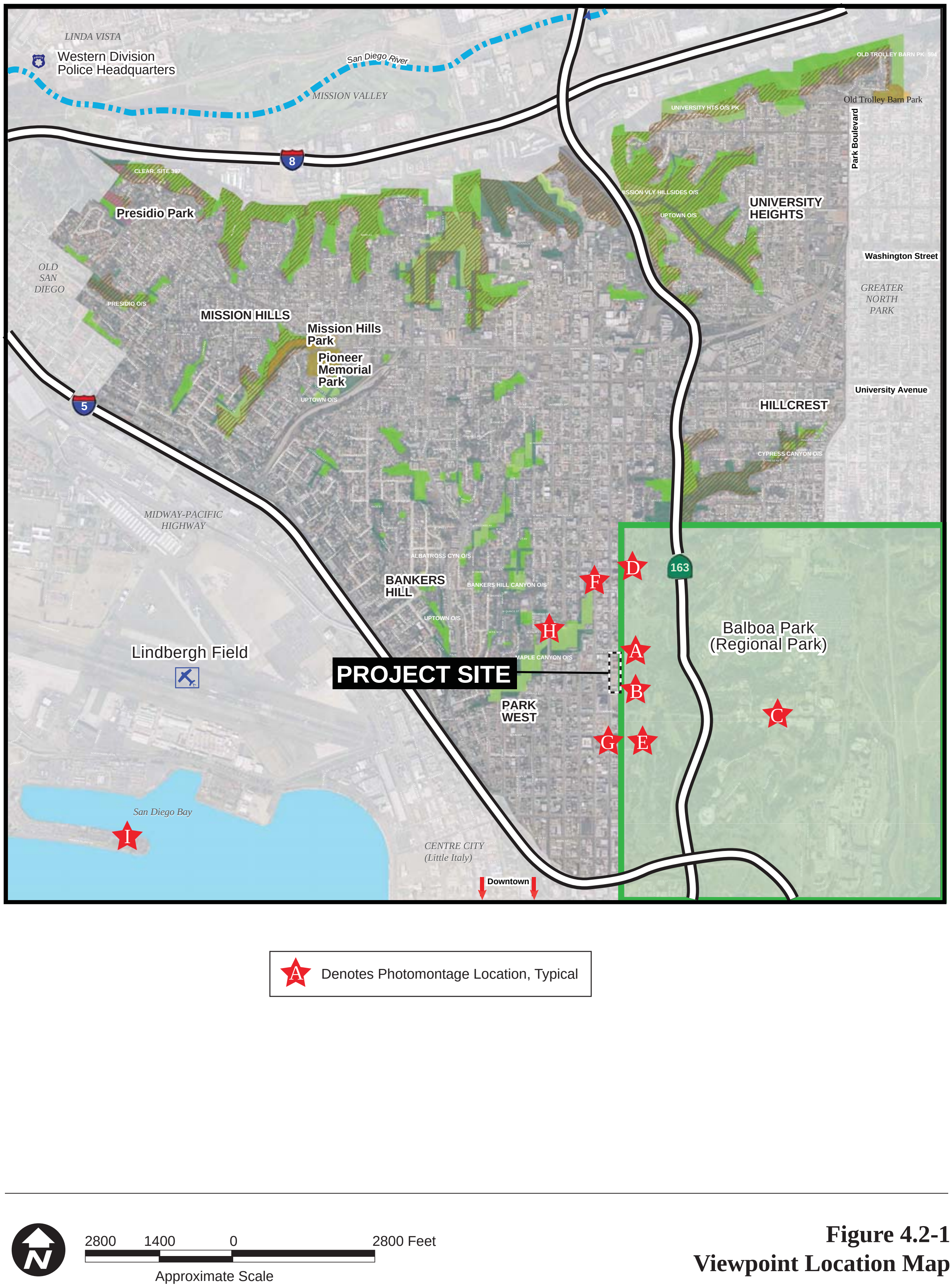

Figure 4.2-1
Viewpoint Location Map

Existing View

View with Project

Figure 4.2-2
Viewpoint A – Balboa Park Lawn Area;
View from Northeast

Existing View

View with Project

Figure 4.2-3
Viewpoint B – Balboa Park Lawn Area; View from Southeast

Existing View

View with Project

Figure 4.2-4
Viewpoint C – Balboa Park;
View from Cabrillo Bridge

Existing View

View with Project

Figure 4.2-5
Viewpoint D – Sixth Avenue at Redwood Street; View from North

Existing View

View with Project

Figure 4.2-6
Viewpoint E – Sixth Avenue at Juniper;
View from South

Existing View

View with Project

Figure 4.2-7
Viewpoint F – Fifth Avenue North of Redwood Street;
View from North

Existing View

View with Project

Figure 4.2-8
Viewpoint G – Fifth Avenue South of Kalmia Street; View from South

Existing View

View with Project

Figure 4.2-9
Viewpoint H – First Street Bridge;
View from West

Existing View

View with Project

Figure 4.2-10
Viewpoint I – Harbor Island;
View from Southwest

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4.3 TRAFFIC, CIRCULATION, AND PARKING

The Traffic Impact Analysis that was prepared for the project by Kimley-Horn and Associates (2010) is attached as Appendix G. The following analysis is based on that report.

4.3.1 Existing Conditions

The project site is located between Fifth and Sixth avenues north of Laurel Street in the Park West neighborhood of the City of San Diego. This area is typically considered to have high traffic volumes, due to the high intensity of uses within the community and the significant amount of through-traffic generated by nearby downtown San Diego and Balboa Park (City of San Diego 1988). The major roadways in the vicinity of the project site are Fourth, Fifth, and Sixth avenues, Laurel Street, Maple Street, Olive Street, and Nutmeg Street. Existing traffic volumes are shown in Table 4.3-1 of the EIR.

Existing Roadway System

Fourth Avenue is a southbound one-way street that is classified and functions as a three-lane collector in the study area. The intersections of Fourth Avenue and Laurel Street is controlled by a traffic signal. It has a curb, gutter, and sidewalk, and parking on both sides.

Fifth Avenue is a northbound one-way street that is classified and functions as a three-lane collector in the study area. It has a curb, gutter, and sidewalk, and parking on both sides. The intersection of Fifth Avenue and Laurel Street is controlled by a traffic signal. The intersection of Fifth Avenue and Nutmeg Street is controlled by a stop sign. Along the project frontages are 10 parking spaces north of Nutmeg Street and four parking spaces and a loading space south of Nutmeg Street. The project's Nutmeg Site driveway would take access from the east side of Fifth Avenue between Maple Street and Nutmeg Street.

Sixth Avenue is classified and functions as a four-lane collector in the study area. It has a curb, gutter, and sidewalk, and parking on both sides. The median is a painted double-yellow line. The intersection of Sixth Avenue and Laurel Street is controlled by a traffic signal. Along the project frontage are approximately 12 parallel parking spaces.

Laurel Street from First Avenue to Sixth Avenue is classified and functions as a two-lane collector with a continuous two-way left-turn lane. It has a curb, gutter, and sidewalk, and parking on both sides.

Olive Street from Fifth Avenue to Sixth Avenue is classified and functions as a two-lane local street. It has a curb, gutter, and sidewalk, and parking on both sides, with 10 angled parking spaces and three loading spaces along the project frontage. The project's Olive Site driveway would take access from the south side of Olive Street between Fifth and Sixth avenues.

Nutmeg Street from Fifth Avenue to Sixth Avenue is classified and functions as a two-lane local street. It has a curb, gutter, and sidewalk, and parking on both sides, with seven angled parking spaces along the Nutmeg Site frontage and approximately nine parallel parking spaces along the Cathedral frontage.

Existing On-site Uses

The project site is currently occupied by a church, a 16-unit apartment building, and a vacant lot.

Project Study Area

The Traffic Impact Analysis assessed the operation of key intersections and street segments in the project area. The traffic study area was determined based on the anticipated distribution of project-related traffic and future driveways that would serve the project site. Fourteen area intersections, two future project driveways, and 23 street segments were analyzed. The study area intersections are shown in Figure 4.3-1 and the study area segments are listed in Table 4.3-1.

Level of Service Descriptor

Level of service (LOS) is used to describe the different operating conditions that occur at intersections and on roadway segments. It is a qualitative measure that takes into account factors such as roadway geometries, signal phasing, speed, travel delay, freedom to maneuver, and safety. Signalized intersection operations are evaluated using methodologies provided in the 2000 Highway Capacity Manual (HCM). These methodologies assess average control delays and assign a corresponding letter grade that represents the overall condition of the intersection. These grades range from LOS A (minimal delay) to LOS F (excessive congestion). Table 4.3-2 documents the relationship between the LOS for signalized and unsignalized intersections and delay times, and a description of operational conditions. For road segments, Table 4.3-3 has been developed by the City to show LOS capacities based on roadway classifications, number of lanes, and average daily trips (ADT). In most circumstances, contribution of more than a minor volume of project traffic to intersections and roadways that operate at LOS E or F would be considered to be a significant impact.

Existing Traffic Operations

Intersections. Traffic counts were collected in November 2009 for the intersections and road segments that are included in this traffic impact analysis. Traffic counts were taken between the hours of 7:00 and 9:00 a.m. (AM peak hours) and 4:00 and 6:00 p.m. (PM peak hours). Table 4.3-4 shows existing peak hour, average delay (in seconds), and LOS at the project area intersections. As shown, all of the intersections evaluated for this study currently operate at LOS A, B, or C during both AM and PM peak hours, except for LOS D conditions during the PM peak hour at Maple Street and Fifth Avenue.

Road Segments. Table 4.3-1 shows existing daily traffic volumes on 23 project area street segments, their roadway classifications, LOS E capacity, volume-to-capacity (v/c) ratio, and LOS. These are based on 24-hour machine counts collected in November 2009. The v/c ratio is the ratio of the volume of traffic that is using a road to the volume of traffic it could be expected to carry, and reflects how all the factors of a roadway section work together (i.e., traffic volumes, traffic composition, traffic characteristics, geometrics, and physical features). A v/c ratio of 1.0 or greater represents a congested LOS F condition. As shown in Table 4.3-1, all project area road segments currently operate at acceptable LOS and v/c ratio standards.

Existing Bus Transit Facilities

San Diego Metropolitan Transit System (SDMTS) routes 3 and 10 circulate northbound on Fifth Avenue and southbound on Fourth Avenue. Route 3 provides service between the Hillcrest area (including the University of California at San Diego Medical Center) and Downtown San Diego, and continues to the Euclid Avenue Trolley Station. Route 10 provides service from Downtown San Diego to the Fashion Valley and Kearny Mesa transit centers. The northbound stop for both routes is at the northeast corner of Fifth Avenue and Nutmeg Street, and the southbound stop is at the southwest corner of Fourth Avenue and Nutmeg Street.

Existing Parking and Loading Spaces

A total of 24 on-site parking spaces are provided on the church property, and on-street parking is provided along the frontage of the two project sites, as follows:

Fifth Avenue

- Four parking spaces and two loading spaces between Maple and Nutmeg streets
- Nine parking spaces between Nutmeg and Olive streets

Sixth Avenue

- Ten parking spaces between Nutmeg and Olive streets on Sixth Avenue

Nutmeg Street

- Nine parallel parking spaces on the north side and 13 diagonal spaces on the south side of Nutmeg Street

Olive Street

- Eight diagonal spaces and two parallel spaces on the south side of Olive Street

Existing Balboa Park Parking Spaces

The portion of Balboa Park on the east side of Sixth Avenue between El Prado/Laurel Street and Quince Street is provided with parking along Balboa Drive, with a total of 55 spaces in two parking bays and with room for approximately 140 parallel parking spaces on Balboa Drive. The east side of Sixth Avenue between El Prado/Laurel Street and Quince Street also provides room for approximately 85 parallel parking spaces. These parking spaces primarily provide access to the lawn bowling greens, a children's play lot, picnicking, relaxing, and hiking trails. This area is also used for organized holiday events such as St. Patrick's Day entertainment and other gatherings.

Existing Pedestrian/Bicycle Network

All of the roadways within the study area have sidewalks, and marked crosswalks to cross Fifth Avenue are located on the south side of Nutmeg Street and to cross Nutmeg Street on the east side of Fifth Avenue. Signalized pedestrian crossings are located on Laurel Street at Fourth, Fifth, and Sixth avenues. There are designated Class III bicycle routes (provide only signage/no striped lanes) on Fourth and Sixth avenues, and Fifth Avenue is designated as a "Top Priority Proposed Class III Bikeway" (City of San Diego 2002a). No bike lane striping or signage currently exists on Fifth Avenue in the project area.

4.3.2 Impact Analysis

Issue 1: Would the project generate traffic in excess of specific Uptown Community Plan allocation?

Per the City's Significance Determination Thresholds, traffic, circulation, and parking impacts may be significant if the project would:

- Generate traffic in excess of specific community plan allocation.

Project Trip Generation

As shown in Table 4.3-5, the project would add 1,340 new daily trips from the proposed residential, commercial, and church uses on the Nutmeg and Olive sites, and would remove 147 daily trips from removal of the 16-unit apartment building and miscellaneous church uses on the Olive Site, for a total net project increase of 1,193 daily trips. Table 4.3-5 also shows that the project would cause a net increase of 68 trips during the AM peak hour and 104 trips during the PM peak hour. Figure 4.3-2 shows the volume of total ADT from the project on each of the study area road segments.

4.3.3 Significance of Impacts

The project is consistent with the permitted dwelling unit density allocated to the project site by the Uptown Community Plan as stated in Section 4.1.1 and, therefore, traffic generation would not be in excess of the Community Plan allocation. The project would have *no significant vehicle trip generation impact*.

4.3.4 Mitigation, Monitoring, and Reporting

No mitigation would be required.

4.3.5 Impact Analysis

Issue 2: Would the project result in an increase in projected traffic that is substantial in relation to the existing traffic load and capacity of the street system?

Per the City Significance Determination Thresholds, traffic, circulation, and parking impacts may be significant if the project would:

- Result in an increase in project traffic which is substantial in relation to the existing traffic load and capacity of the street system.

Project Trip Distribution

The distribution of vehicle trips to and from the project site reflects the likely approach and departure routes to the project, as determined through analysis of the location of complementary land uses and traffic volumes on study area roadways. As shown in Figure 4.3-3, approximately 55% of the trips would be outbound to the south using Sixth Avenue, Fourth Avenue, and Laurel Street, and 45% would be outbound to the north using Fifth and Sixth avenues; inbound trips would be the opposite, with 45% inbound from the south and 55% inbound from the north.

Near-Term Impacts

Discussions with City staff and research of other on-going traffic studies in the project vicinity identified six projects that were analyzed for near-term traffic conditions in the project area (Kimley-Horn and Associates 2010). These projects, listed below, would generate a total of 4,586 ADT, with 333 AM peak-hour trips and 408 PM peak-hour trips:

- ***Fifth and Thorn:*** This project consists of 96 multi-family dwelling units to be located on the southwest corner of the Thorn Street and Fifth Avenue intersection. The traffic generation for this cumulative project is calculated at 576 ADT, with 46 AM and 52 PM peak-hour trips.
- ***Second and Laurel:*** This project consists of 150 residential multi-family dwelling units to be located on the east side of Second Avenue between Maple Street and Laurel Street. The traffic generation for this cumulative project is calculated at 804 ADT, with 64 AM and 72 PM peak-hour trips. This project is currently under construction.
- ***St. Paul CCRC:*** This project consists of 199 senior/older adult dwelling units, with 7,500 square feet of specialty retail to be located on the west side of Fourth Avenue between Nutmeg Street and Maple Street. The traffic generation for this cumulative project is calculated at 1,096 ADT, with 49 AM and 83 PM peak-hour trips.
- ***Paseo de Mission Hills:*** This project consists of 69 multi-family dwelling units with 8,000 square feet of office space and 13,400 square feet of commercial retail to be located on the northeast corner of Washington Avenue and Goldfinch Street. The net traffic generation for this cumulative project is calculated at 427 ADT, with 53 AM and 51 PM peak-hour trips.
- ***Fifth and Penn:*** This project consists of 185 multi-family dwelling units with 4,500 square feet of specialty retail to be located on the south side of Pennsylvania Avenue between Fourth Avenue and Fifth Avenue. The traffic generation for this cumulative project is calculated at 1,290 ADT, with 94 AM and 116 PM peak-hour trips.

- ***Park and Robinson:*** This project consists of 37 multi-family dwelling units with 2,621 square feet of retail and 505 square feet of sidewalk café to be located on the southwest corner of Robinson Avenue and Park Boulevard. The traffic generation for this cumulative project is calculated at 392 ADT, with 26 AM and 34 PM peak-hour trips.

In addition to these potential future projects, the historical growth rate of 2% per year was assumed and added to the existing traffic counts for a period of 2 years (2010 and 2011). This results in the "Near Term with Project" conditions identified in Tables 4.3-6 and 4.3-7.

Intersections. Table 4.3-6 shows near-term baseline conditions without the project and conditions with the project, including peak-hour average delay (in seconds) and LOS at project area intersections. As was shown in Table 4.3-4, all of the intersections evaluated for this study currently operate at LOS A, B, C, or D during AM and PM peak hours. As shown in Table 4.3-6, all project area intersections would continue to operate at LOS D or better conditions in the near term with project.

Road Segments. Table 4.3-7 shows road segment ADT, v/c ratio, and LOS for the near-term condition with the cumulative projects and projected growth through year 2011, without and with the project. In comparison to the existing conditions in Table 4.3-1, the near-term baseline for year 2011 would add 497 ADT and all project area road segments would continue to operate at LOS C or better, with exception of the segments on Laurel Street, which would continue to operate at the existing LOS D level with the addition of project traffic.

Year 2030 Impacts

Intersections. Table 4.3-8 shows intersection peak hour delay and LOS with projected growth through year 2030, without and with the project, based on SANDAG's 2030 Regional Transportation Plan (SANDAG 2003) and Final 2030 Regional Growth Forecast (SANDAG 2006). As was shown in Table 4.3-4, all of the intersections evaluated for this study currently operate at LOS A, B, C, or D during both AM and PM peak hours. As shown in Table 4.3-8, year 2030 baseline (without project) conditions would result in LOS D (PM) operations at Olive Street and Fifth Avenue, and Nutmeg Street and Fifth Avenue; and at LOS E (AM) and LOS F (PM) at Maple Street and Fifth Avenue. Addition of project traffic would cause a significant impact at both Olive Street and Fifth Avenue and Nutmeg Street and Fifth Avenue, which would both change from LOS D to LOS E during the PM peak hour; and would cause a significant impact due to an increase in the LOS F conditions at Maple Street and Fifth Avenue during the PM peak hour.

As stated in the City Significance Determination Thresholds for Transportation/Circulation and Parking, a project would have a significant impact if it would cause an increase in delay greater than 2.0 seconds at an intersection that would operate at LOS E with the project; or cause an increase in delay greater than 1.0 seconds at an intersection that would operate at LOS F with the project. This threshold would be exceeded during the PM peak hour at Maple Street and Fifth Avenue and would be a significant project impact. As shown in Table 4.3-8 the increase in the LOS E delay at the Maple Street and Fifth Avenue intersection during the AM peak hour would be only 0.1 second and, therefore, would not be a significant project impact.

Road Segments. Figure 4.3-4 shows year 2030 with project ADT on each of the study area road segments. Table 4.3-9 shows road segment ADT, v/c ratio, and LOS with projected growth through year 2030, without and with the project. As shown, the project impact would increase the LOS F v/c ratio on Laurel Street between First and Fourth avenues, the LOS E v/c ratio on Laurel Street between Fourth and Fifth avenues, and the LOS E v/c ratio on Sixth Avenue between Upas and Quince streets. All other road segments would operate at LOS D or better with the project in year 2030.

As stated in the City Significance Determination Thresholds for Transportation/Circulation and Parking, a project would have a significant impact if it would cause a change in the v/c ratio greater than 0.02 or a reduction in traffic speed greater than 1.0 mph on a roadway segment that would operate at LOS E with the project; or cause a change in the v/c ratio greater than 0.01 or a reduction in traffic speed greater than 0.5 mph on a roadway segment that would operate at LOS F with the project. The project would cause the v/c ratio increase to exceed the significance threshold only on Laurel Street between First and Fourth avenues.

4.3.6 Significance of Impacts

Year 2030 Impacts

Intersections. As shown in Table 4.3-6, no significant near term intersection impacts would result from the project. As shown in Table 4.3-8, under year 2030 conditions, the project would increase the delay at the LOS F intersection at Maple Street and Fifth Avenue by more than the City's threshold of 1 second; and would cause PM operations at the intersections of Olive Street and Fifth Avenue, and at Nutmeg Street and Fifth Avenue, to change from LOS D to LOS E **(Impact TRF-1)**. Thus, the project would be considered to have a *significant impact* at these intersections. The increase in the delay for LOS E conditions at Maple Street and Fifth Avenue during the AM peak hour would be less than the City's threshold of 2 seconds and the impact at this intersection would be *less than significant*.

Road Segments. As shown in Table 4.3-7, no significant near term roadway segment impacts would result from the project. As shown in Table 4.3-9, under year 2030 conditions the project would increase the v/c ratio on Laurel Street between First and Fourth avenues by more than the City's threshold of 0.01 for segments operating at LOS F. Thus, the project would have a *significant impact* along this failing roadway segment **(Impact TRF-2)**. However, this segment of Laurel Street meets all three special conditions established by City DSD for which some roadway segments operating at LOS E or F would not require mitigation:

1. The roadway is built to its ultimate classification per the community plan;
2. The intersections on both ends of the failing segment operate at an acceptable LOS; and
3. An HCM arterial analysis indicates an acceptable LOS D or better on the segment for both peak periods in both directions (see Table 4.3-10).

Under year 2030 conditions the project would not increase the v/c ratio on Sixth Avenue between Upas and Quince streets, nor on Laurel Street between Fourth and Fifth avenues, by more than the City's threshold of 0.02 for segments operating at LOS E. Thus, the project would have a *less than significant impact* on these roadway segments. All other roadway segments in the project area would operate at LOS D or getter under year 2030 conditions.

Project Transportation Development Impact Fee

The project would be required to pay the Development Impact Fee (DIF) for the Uptown Community Plan for transportation improvements in the Uptown Community.

4.3.7 Mitigation, Monitoring, and Reporting

Impact TRF-1: Fifth Avenue Intersections at Nutmeg Street and Maple Street

Mitigation Measure TRF-1: Prior to issuance of any building permit for construction of either of the Olive Site or Nutmeg Site structures, the applicant shall pay to the City the project's fair share (22.4%) of the cost for installation of a traffic signal at the Nutmeg Street and Fifth Avenue intersection.

Implementation of Mitigation Measure TRF-1 for installation of a traffic signal at the Nutmeg Street and Fifth Avenue intersection is in accordance with *Hillcrest Corridor Mobility Plan* and would be anticipated to divert traffic from the Maple Street and Fifth Avenue intersection to the signalized intersection at Nutmeg Street and improve operations at the Maple Street and Fifth Avenue intersection to an acceptable LOS.

Table 4.3-11 displays the LOS analysis results for the three failing intersections along Fifth Avenue under the 2030 Horizon Year with mitigation. As shown in Table 4.3-11, by installing a traffic signal at the Nutmeg Street and Fifth Avenue intersection, the operations of the three impacted intersections would improve to an acceptable LOS.

Impact TRF-2: Laurel Street Road Segment between First and Fourth Avenues

The project's increase in the v/c ratio on Laurel Street between First and Fourth avenues by more than the City's threshold of 0.01 for segments operating at LOS F would not require mitigation because this segment of Laurel Street meets all three special conditions to not require mitigation for some roadway segments operating at LOS E or F.

4.3.8 Impact Analysis

Issue 3: Would the project result in effects on existing parking or an increased demand for off-site parking?

Per the City Significance Determination Thresholds, traffic, circulation, and parking impacts may be significant if the project would:

- Result in effects on existing parking or an increased demand for off-site parking.

Parking Impacts

As shown in Figure 4.3-5, the project's street frontage currently provides 55 on-street parking spaces. For the Olive Site, all 10 parking spaces on the Olive Street frontage would be removed and replaced by passenger loading and mail loading spaces and the Olive Site driveway. All existing parking spaces on Nutmeg Street and Fifth and Sixth avenues would be retained. Total reduction in on-street parking would be 10 spaces; however the demand for street parking would be reduced by demolition of the 16-unit Park Chateau apartment building, for which no off-street parking is currently provided. In addition, 27 on-site church parking spaces would be removed and replaced by 40 underground parking spaces within the Olive Building garage. These additional church spaces would reduce the Cathedral's demand for on-street parking, thereby freeing up spaces for other users. The project would provide 39 on-site parking spaces beyond the requirements of the City Municipal Code, as follows:

	Parking Spaces Required	**Parking Spaces Provided**
Nutmeg Site		
Residential	80	94
Commercial	24	26
Subtotal	***104***	***120***
Olive Site		
Residential	115	134
Commercial	32	32
Church	36	40
Subtotal	***183***	***206***
Total	287	326
Surplus		***39***

The project would also exceed the required 16 motorcycle spaces by providing five extra spaces, and would exceed the required 62 bicycle spaces by providing 10 extra spaces.

In conclusion, the project would not have a significant parking impact; it would provide more than the required number of on-site parking spaces to compensate for the loss of 10 on-street spaces; and would actually increase the availability of parking in an adjacent residential area. The project would not impede accessibility to a public facility, such as a park or beach.

4.3.9 Significance of Impacts

The project would exceed the on-site parking requirements of the City Municipal Code. In addition, substantial public parking exists within the adjacent portion of Balboa Park and along the east side of Sixth Avenue. The impact from removal of 10 on-street parking spaces would not impede accessibility of Balboa Park facilities, and the project impact on existing parking would be *less than significant*.

4.3.10 Mitigation, Monitoring, and Reporting

No mitigation would be required.

4.3.11 Impact Analysis

Issue 4: Would the project result in a substantial impact on existing or planned transportation systems or conflict with any adopted policies, plans, or programs supporting alternative transportation?

Per the City Significance Determination Thresholds, traffic, circulation, and parking impacts may be significant if the project would:

- Result in a substantial impact upon existing or planned transportation systems or conflict with any adopted polices, plans or programs supporting alternative transportation.

Alternative Transportation Modes

The project is consistent with the permitted dwelling unit density allocated to the project site by the Uptown Community Plan, does not propose roadway improvements inconsistent with the City's roadway classifications, would not conflict with existing or planned bicycle route designations, and would maintain the existing bus stop at the northeast corner of Fifth Avenue and Nutmeg Street.

4.3.12 Significance of Impacts

The project would have *no impact* on existing or planned transportation systems or policies, plans, or programs supporting alternative transportation.

4.3.13 Mitigation, Monitoring, and Reporting

No mitigation would be required.

Table 4.3-1
Roadway Segments – Existing Conditions

Roadway Segment	Roadway Classification[1]	LOS E Capacity	ADT[2]	V/C Ratio[3]	LOS
Fourth Ave					
Walnut Ave to Olive St	3 Lane Collector (one-way)	22,500	8,124	0.361	B
Olive St to Nutmeg St	3 Lane Collector (one-way)	22,500	8,124	0.361	B
Nutmeg St to Maple St	3 Lane Collector (one-way)	22,500	8,970	0.399	B
Maple St to Laurel St	3 Lane Collector (one-way)	22,500	8,970	0.399	B
Fifth Ave					
Upas St to Quince St	3 Lane Collector (one-way)	22,500	13,689	0.608	C
Quince St to Olive St	3 Lane Collector (one-way)	22,500	13,689	0.608	C
Olive St to Nutmeg St	3 Lane Collector (one-way)	22,500	12,298	0.547	C
Nutmeg St to Nutmeg Site Dwy	3 Lane Collector (one-way)	22,500	12,298	0.547	C
Nutmeg Site Dwy to Maple St	3 Lane Collector (one-way)	22,500	12,298	0.547	C
Maple St to Laurel St	3 Lane Collector (one-way)	22,500	12,298	0.547	C
Laurel St to Kalmia St	3 Lane Collector (one-way)	22,500	11,285	0.502	C
Sixth Ave					
Upas St to Quince St	4 Lane Collector	30,000	15,504	0.517	C
Quince St to Olive St	4 Lane Collector	30,000	13,910	0.464	B
Olive St to Nutmeg St	4 Lane Collector	30,000	13,180	0.439	B
Nutmeg St to Maple St	4 Lane Collector	30,000	13,180	0.439	B
Maple St to Laurel St	4 Lane Collector	30,000	13,180	0.439	B
Laurel St to Kalmia St	4 Lane Collector	30,000	10,890	0.363	B
Olive St					
Fifth Ave to Olive St Dwy	2 Lane Collector (multi-family)	8,000	740	0.093	A
Olive St Dwy to Sixth Ave	2 Lane Collector (multi-family)	8,000	740	0.093	A
Nutmeg St					
Fifth Ave to Sixth Ave	2 Lane Collector (multi-family)	8,000	951	0.119	A
Laurel St					
First Ave to Fourth Ave	2 Lane Collector (continuous left-turn lane)	15,000	10,934	0.729	D
Fourth Ave to Fifth Ave	2 Lane Collector (continuous left-turn lane)	15,000	9,967	0.664	C
Fifth Ave to Sixth Ave	2 Lane Collector (continuous left-turn lane)	15,000	9,967	0.664	C

1 The classifications of existing roadways are based on field observations and Table 2 of the City of San Diego's *Traffic Impact Study Manual, July 1998*.
2 ADT volumes for the roadway segments were provided by National Data and Surveying Services and measured in November 2009 except where noted.
3 The v/c ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.
Note: **Bold** values indicate roadway segments operating at LOS E or F.

Table 4.3-2
Intersection LOS Criteria

LOS	Average Control Delay (sec/veh)[1]	Description
Signalized Intersections		
A	<10.0	Operations with very low delay and most vehicles do not stop.
B	>10.0 and <20.0	Operations with good progression but with some restricted movement.
C	>20.0 and <35.0	Operations where a significant number of vehicles are stopping with some backup and light congestion.
D	>35.0 and <55.0	Operations where congestion is noticeable, longer delays occur, and many vehicles stop. The proportion of vehicles not stopping declines.
E	>55.0 and <80.0	Operations where there is significant delay, extensive queuing, and poor progression.
F	>80.0	Operations that are unacceptable to most drivers, when the arrival rates exceed the capacity of the intersection.
Unsignalized Intersections		
A	<10.0	Operations with very low delay and most vehicles do not stop.
B	>10.0 and <15.0	Operations with good progression but with some restricted movement.
C	>15.0 and <25.0	Operations where a significant number of vehicles are stopping with some backup and light congestion.
D	>25.0 and <35.0	Operations where congestion is noticeable, longer delays occur, and many vehicles stop. The proportion of vehicles not stopping declines.
E	>35.0 and <50.0	Operations where there is significant delay, extensive queuing, and poor progression.
F	>50.0	Operations that are unacceptable to most drivers, when the arrival rates exceed the capacity of the intersection.

[1] Seconds per vehicle is from 2000 Highway Capacity Manual, Chapter 17, Page 2, Exhibit 17-2.

Table 4.3-3
Roadway Segment LOS Criteria

Road		Level of Service (LOS)				
Class	**Lanes**	**A**	**B**	**C**	**D**	**E**
Expressway	6	30,000	42,000	60,000	70,000	80,000
Prime Arterial	6	25,000	35,000	50,000	55,000	60,000
Major Arterial	6	20,000	28,000	40,000	45,000	50,000
Major Arterial	4	15,000	21,000	30,000	35,000	40,000
Collector	4	10,000	14,000	20,000	25,000	30,000
Collector (1-way)	3	6,700	9,300	13,300	16,700	22,500
Collector (1-way)	2	5,000	7,000	10,000	12,500	15,000
Collector (No Center lane)	4	5,000	7,000	10,000	13,000	15,000
(Continuous left-turn lane)	2					
Collector (No fronting property)	2	4,000	5,500	7,500	9,000	10,000
Collector (Commercial/Industrial fronting)	2	2,500	3,500	5,000	6,500	8,000
Collector (Multi-family)	2	2,500	3,500	5,000	6,500	8,000
Sub-Collector (Single family)	2	-	-	2,200	-	-

Notes: The volumes and the average daily level of service above are only intended as a general planning guideline. Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Levels of service normally apply to roads carrying through traffic between major trip generators and attractors.
Source: City of San Diego Traffic Impact Study Manual, Table 2, Page 8, July 1998.

Table 4.3-4
Intersections – Existing Conditions

	Intersection	Peak Hour	Existing Delay[1]	Existing LOS[2]
1	Walnut Ave & Fourth Ave	AM	10.5	B
		PM	10.3	B
2	Upas St & Fifth Ave	AM	5.1	A
		PM	5.4	A
3	Upas St / Balboa Dr & Sixth Ave	AM	9.3	A
		PM	9.8	A
4	Quince St / Quince Dr & Sixth Ave	AM	5.6	A
		PM	4.6	A
5	Olive St & Fifth Ave	AM	14.6	B
		PM	18.9	C
6	Olive St & Olive Site Dwy	AM	Intersection does not exist under existing conditions	
		PM		
7	Olive St & Sixth Ave	AM	15.3	C
		PM	12.3	B
8	Nutmeg St & Fifth Ave	AM	11.7	B
		PM	32.9	D
9	Nutmeg St & Sixth Ave	AM	15.5	C
		PM	15.3	C
10	Nutmeg Site Dwy & Fifth Ave	AM	Intersection does not exist under existing conditions	
		PM		
11	Laurel St & First Ave	AM	6.2	A
		PM	6.8	A
12	Laurel St & Fourth Ave	AM	7.3	A
		PM	10.0	B
13	Laurel St & Fifth Ave	AM	7.7	A
		PM	9.4	A
14	Laurel St / El Prado & Sixth Ave	AM	10.1	B
		PM	11.0	B
15	Maple St & Fifth Ave	AM	21.7	C
		PM	27.5	D
16	Maple St & Sixth Ave	AM	13.9	B
		PM	14.3	B

[1] Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.
[2] LOS calculations are based on the methodology outlined in the *2000 Highway Capacity Manual* and performed using Synchro 6.0.

Table 4.3-5
Project Trip Generation Summary

Land Use	Land Use as Listed in San Diego Trip Generation Manual	Units[1]	Trip Rate[2]	Daily Trips	AM Peak Hour					PM Peak Hour				
					% of ADT[2]	In:Out Ratio[2]	In	Out	Total	% of ADT[2]	In:Out Ratio[2]	In	Out	Total
PROPOSED														
Nutmeg Site														
Condos	Multiple Dwelling Unit (Over 20 dwelling units/acre)	45 du	6/du	270	8%	2.00:8.00	4	19	22	9%	7.00:3.00	17	7	24
General Office	House of Worship (General)	5.818 ksf	15/ksf	87	4%	8.00:2.00	3	0	3	8%	5.00:5.00	3	4	7
Retail Space	Specialty Retail Center/Strip Commercial	5.185 ksf	40/ksf	208	3%	6.00:4.00	4	2	6	9%	5.00:5.00	9	10	19
Nutmeg Site Subtotal				**565**			**11**	**20**	**31**			**29**	**21**	**50**
Olive Site														
Condos	Multiple Dwelling Unit (Over 20 dwelling units/acre)	65 du	6/du	390	8%	2.00:8.00	6	25	31	9%	7.00:3.00	25	10	35
General Office	House of Worship (General)	14.209 ksf	15/ksf	213	4%	8.00:2.00	7	2	9	8%	5.00:5.00	9	8	17
Retail Space	Specialty Retail Center/Strip Commercial	0.924 ksf	40/ksf	37	3%	6.00:4.00	1	0	1	9%	5.00:5.00	2	1	3
Olive Site Subtotal				**640**			**14**	**27**	**41**			**36**	**19**	**55**
Cathedral Site Expansion														
Cathedral Office[3]	House of Worship (General)	9.003 ksf	15/ksf	135	4%	8.00:2.00	4	1	5	8%	5.00:5.00	5	6	11
Cathedral Site Expansion Subtotal				**135**			**4**	**1**	**5**			**5**	**6**	**11**
PROPOSED TOTAL				**1,340**			**29**	**48**	**77**			**70**	**46**	**116**
EXISTING														
Olive Site														
Apartment Homes[4]	Multiple Dwelling Unit (Over 20 dwelling units/acre)	12 du	6/du	72	8%	2.00:8.00	1	5	6	9%	7.00:3.00	5	1	6
Miscellaneous Church Uses[3]	House of Worship (General)	4.973 ksf	15/ksf	75	4%	8.00:2.00	2	1	3	8%	5.00:5.00	3	3	6
Olive Site Subtotal				**147**			**3**	**6**	**9**			**8**	**4**	**12**
EXISTING TOTAL				**147**			**3**	**6**	**9**			**8**	**4**	**12**
NET TRIP GENERATION (PROPOSED – EXISTING) =				**1,193**			**26**	**42**	**68**			**62**	**42**	**104**

1 du = dwelling units; ksf = thousand square feet.
2 Trip rates referenced from the City of San Diego Trip Generation Manual, revised May 2003.
3 The church/school office and cathedral office land uses are associated with the use of the church only. As such, the trip generation rates for a House of Worship land use would be applicable.
4 As part of the St. Paul’s Cathedral Nutmeg Site project, 12 existing residential units (Park Chateau) would be demolished.

Table 4.3-6
Intersections – Near Term Conditions

	Intersection	Peak Hour	Near Term Baseline		Near Term with Project		Δ[3]	Significant?
			Delay[1]	LOS[2]	Delay[1]	LOS[2]		
1	Walnut Ave & Fourth Ave	AM	11.3	B	11.4	B	0.1	-
		PM	11.1	B	11.2	B	0.1	-
2	Upas St & Fifth Ave	AM	5.1	A	5.1	A	0.0	-
		PM	5.6	A	5.6	A	0.0	-
3	Upas St / Balboa Dr & Sixth Ave	AM	9.5	A	9.5	A	0.0	-
		PM	11.1	B	11.2	B	0.1	-
4	Quince St / Quince Dr & Sixth Ave	AM	6.1	A	6.2	A	0.1	-
		PM	5.3	A	5.4	A	0.1	-
5	Olive St & Fifth Ave	AM	15.5	C	16.7	C	1.2	-
		PM	21.2	C	27.6	D	6.4	-
6	Olive St & Olive Site Dwy	AM	Intersection does not exist without the project		9.2	A	-	-
		PM			9.2	A	-	-
7	Olive St & Sixth Ave	AM	16.5	C	17.6	C	1.1	-
		PM	13.5	B	15.8	C	2.3	-
8	Nutmeg St & Fifth Ave	AM	9.7	A	10.0	B	0.3	-
		PM	15.6	C	16.7	C	1.1	-
9	Nutmeg St & Sixth Ave	AM	16.7	C	17.5	C	0.8	-
		PM	16.9	C	18.2	C	1.3	-
10	Nutmeg Site Dwy & Fifth Ave	AM	Intersection does not exist without the project		12.2	A	-	-
		PM			14.3	B	-	-
11	Laurel St & First Ave	AM	6.1	A	6.1	A	0.0	-
		PM	6.8	A	6.8	A	0.0	-
12	Laurel St & Fourth Ave	AM	7.8	A	7.9	A	0.1	-
		PM	11.3	B	11.6	B	0.3	-
13	Laurel St & Fifth Ave	AM	8.2	A	8.4	A	0.2	-
		PM	11.7	B	12.7	B	1.0	-
14	Laurel St / El Prado & Sixth Ave	AM	10.5	B	10.5	B	0.0	-
		PM	10.8	B	10.9	B	0.1	-
15	Maple St & Fifth Ave	AM	24.5	C	24.4	C	-0.1	-
		PM	31.6	D	34.6	D	3.0	-
16	Maple St & Sixth Ave	AM	14.8	B	15.0	C	0.2	-
		PM	16.1	C	16.6	C	0.5	-

[1] Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.
[2] LOS calculations are based on the methodology outlined in the *2000 Highway Capacity Manual* and performed using Synchro 6.0.
[3] Change in delay due to addition of project traffic.

Table 4.3-7
Roadway Segments – Near Term Conditions

Roadway Segment	Roadway Classification	LOS E Capacity	Near Term Baseline ADT	Near Term Baseline V/C Ratio[1]	Near Term Baseline LOS	Near Term with Project ADT	Near Term with Project V/C Ratio[1]	Near Term with Project LOS	Δ in ADT	Δ in V/C	Significant?
Fourth Ave											
Walnut Ave to Olive St	3 Lane Collector (one-way)	22,500	8,453	0.376	B	8,584	0.382	B	131	0.006	No
Olive St to Nutmeg St	3 Lane Collector (one-way)	22,500	8,453	0.376	B	8,596	0.382	B	143	0.006	No
Nutmeg St to Maple St	3 Lane Collector (one-way)	22,500	9,333	0.415	B	9,560	0.425	B	227	0.010	No
Maple St to Laurel St	3 Lane Collector (one-way)	22,500	9,333	0.415	B	9,494	0.422	B	161	0.007	No
Fifth Ave											
Upas St to Quince St	3 Lane Collector (one-way)	22,500	14,243	0.633	C	14,380	0.639	C	137	0.006	No
Quince St to Olive St	3 Lane Collector (one-way)	22,500	14,243	0.633	C	14,380	0.639	C	137	0.006	No
Olive St to Nutmeg St	3 Lane Collector (one-way)	22,500	12,795	0.569	C	12,968	0.576	C	173	0.007	No
Nutmeg St to Nutmeg Site Dwy	3 Lane Collector (one-way)	22,500	12,795	0.569	C	13,201	0.587	C	406	0.018	No
Nutmeg Site Dwy to Maple St	3 Lane Collector (one-way)	22,500	12,795	0.569	C	13,201	0.587	C	406	0.018	No
Maple St to Laurel St	3 Lane Collector (one-way)	22,500	12,795	0.569	C	13,004	0.578	C	209	0.009	No
Laurel St to Kalmia St	3 Lane Collector (one-way)	22,500	11,741	0.522	C	11,801	0.524	C	60	0.002	No
Sixth Ave											
Upas St to Quince St	4 Lane Collector	30,000	16,131	0.538	C	16,399	0.5470	C	268	0.009	No
Quince St to Olive St	4 Lane Collector	30,000	14,472	0.482	C	14,800	0.4930	C	328	0.011	No
Olive St to Nutmeg St	4 Lane Collector	30,000	13,713	0.457	B	13,993	0.4660	B	280	0.009	No
Nutmeg St to Maple St	4 Lane Collector	30,000	13,713	0.457	B	14,011	0.4670	C	298	0.010	No
Maple St to Laurel St	4 Lane Collector	30,000	13,713	0.457	B	13,940	0.4650	B	227	0.008	No
Laurel St to Kalmia St	4 Lane Collector	30,000	11,330	0.378	B	11,479	0.3830	B	149	0.005	No
Olive St											
Fifth Ave to Olive St Dwy	2 Lane Collector (multi-family)	8,000	770	0.096	A	1,092	0.137	A	322	0.041	No
Olive St Dwy to Sixth Ave	2 Lane Collector (multi-family)	8,000	770	0.096	A	1,044	0.131	A	274	0.035	No
Nutmeg St											
Fifth Ave to Sixth Ave	2 Lane Collector (multi-family)	8,000	990	0.124	A	1,139	0.142	A	149	0.018	No
Laurel St											
First Ave to Fourth Ave	2 Lane Collector (continuous left-turn lane)	15,000	11,376	0.758	D	11,674	0.778	D	298	0.020	No
Fourth Ave to Fifth Ave	2 Lane Collector (continuous left-turn lane)	15,000	10,370	0.691	D	10,597	0.706	D	227	0.015	No
Fifth to Sixth Ave	2 Lane Collector (continuous left-turn lane)	15,000	10,370	0.691	D	10,448	0.697	D	78	0.006	No

[1] The v/c ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

Table 4.3-8
Intersections – Year 2030 Conditions

	Intersection	Peak Hour	Year 2030 Baseline Delay[1]	Year 2030 Baseline LOS[2]	Year 2030 with Project Delay[1]	Year 2030 with Project LOS[2]	Δ[3]	Significant?
1	Walnut Ave & Fourth Ave	AM	14.5	B	14.7	B	0.2	-
		PM	13.7	B	14.0	B	0.3	-
2	Upas St & Fifth Ave	AM	5.9	A	5.9	A	0.0	-
		PM	7.0	A	7.0	A	0.0	-
3	Upas St / Balboa Dr & Sixth Ave	AM	13.6	B	13.6	B	0.0	-
		PM	16.9	B	17.2	B	0.3	-
4	Quince St / Quince Dr & Sixth Ave	AM	6.4	A	6.4	A	0.0	-
		PM	6.1	A	6.8	A	0.7	-
5	Olive St & Fifth Ave	AM	17.4	C	18.9	C	1.5	-
		PM	28.0	D	39.7	**E**	11.7	**Yes**
6	Olive St & Olive Site Dwy	AM	Intersection does not exist without the project		9.2	A	-	-
		PM			9.2	A	-	-
7	Olive St & Sixth Ave	AM	21.1	C	24.0	C	2.9	-
		PM	15.9	C	20.2	C	4.3	-
8	Nutmeg St & Fifth Ave	AM	11.7	B	12.2	B	0.5	-
		PM	31.8	D	36.0	**E**	4.2	**Yes**
9	Nutmeg St & Sixth Ave	AM	23.6	C	25.7	D	2.1	-
		PM	24.3	C	27.7	D	3.4	-
10	Nutmeg Site Dwy & Fifth Ave	AM	Intersection does not exist without the project		12.9	B	-	-
		PM			16.3	C	-	-
11	Laurel St & First Ave	AM	6.5	A	6.5	A	0.0	-
		PM	7.6	A	7.8	A	0.2	-
12	Laurel St & Fourth Ave	AM	9.1	A	9.3	A	0.2	-
		PM	17.2	B	17.9	B	0.7	-
13	Laurel St & Fifth Ave	AM	9.6	A	9.8	A	0.2	-
		PM	32.3	C	36.7	D	4.4	-
14	Laurel St / El Prado & Sixth Ave	AM	10.3	B	10.4	B	0.1	-
		PM	11.9	B	11.9	B	0.0	-
15	Maple St & Fifth Ave	AM	41.5	**E**	41.6	**E**	0.1	-
		PM	106.9	**F**	131.0	**F**	24.1	**Yes**
16	Maple St & Sixth Ave	AM	20.8	C	21.3	C	0.5	-
		PM	25.1	D	26.4	D	1.3	-

[1] Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.
[2] LOS calculations are based on the methodology outlined in the *2000 Highway Capacity Manual* and performed using Synchro 6.0.
[3] Change in delay due to addition of project traffic.
Note: **Bold** values indicate intersections operating at LOS E or F. **Bold and shaded** values indicate project significant impact.

Table 4.3-9
Roadway Segments – Year 2030 Conditions

Roadway Segment	Roadway Classification	LOS E Capacity	Year 2030 Baseline ADT	Year 2030 Baseline V/C Ratio[1]	Year 2030 Baseline LOS	Year 2030 Plus Project ADT	Year 2030 Plus Project V/C Ratio[1]	Year 2030 Plus Project LOS	Δ in ADT	Δ in V/C	Significant?
Fourth Ave											
Walnut Ave to Olive St	3 Lane Collector (one-way)	22,500	11,000	0.489	C	11,131	0.495	C	131	0.006	No
Olive St to Nutmeg St	3 Lane Collector (one-way)	22,500	11,000	0.489	C	11,143	0.495	C	143	0.006	No
Nutmeg St to Maple St	3 Lane Collector (one-way)	22,500	13,000	0.578	C	13,227	0.588	C	227	0.010	No
Maple St to Laurel St	3 Lane Collector (one-way)	22,500	13,000	0.578	C	13,161	0.585	C	161	0.007	No
Fifth Ave											
Upas St to Quince St	3 Lane Collector (one-way)	22,500	16,000	0.711	D	16,137	0.717	D	137	0.006	No
Quince St to Olive St	3 Lane Collector (one-way)	22,500	16,000	0.711	D	16,137	0.717	D	137	0.006	No
Olive St to Nutmeg St	3 Lane Collector (one-way)	22,500	16,000	0.711	D	16,173	0.719	D	173	0.008	No
Nutmeg St to Nutmeg Site Dwy	3 Lane Collector (one-way)	22,500	18,000	0.800	D	18,406	0.818	D	406	0.018	No
Nutmeg Site Dwy to Maple St	3 Lane Collector (one-way)	22,500	18,000	0.800	D	18,406	0.818	D	406	0.018	No
Maple St to Laurel St	3 Lane Collector (one-way)	22,500	18,000	0.800	D	18,209	0.809	D	209	0.009	No
Laurel St to Kalmia St	3 Lane Collector (one-way)	22,500	14,000	0.622	C	14,060	0.625	C	60	0.003	No
Sixth Ave											
Upas St to Quince St	4 Lane Collector	30,000	25,000	0.833	**E**	25,268	0.842	**E**	268	0.009	No
Quince St to Olive St	4 Lane Collector	30,000	19,000	0.633	C	19,328	0.644	C	328	0.011	No
Olive St to Nutmeg St	4 Lane Collector	30,000	19,000	0.633	C	19,280	0.643	C	280	0.010	No
Nutmeg St to Maple St	4 Lane Collector	30,000	19,000	0.633	C	19,298	0.643	C	298	0.010	No
Maple St to Laurel St	4 Lane Collector	30,000	19,000	0.633	C	19,227	0.641	C	227	0.008	No
Laurel St to Kalmia St	4 Lane Collector	30,000	17,000	0.567	C	17,149	0.572	C	149	0.005	No
Olive St											
Fifth Ave to Olive St Dwy	2 Lane Collector (multi-family)	8,000	963	0.120	A	1,285	0.161	A	322	0.041	No
Olive St Dwy to Sixth Ave	2 Lane Collector (multi-family)	8,000	963	0.120	A	1,237	0.155	A	274	0.035	No
Nutmeg St											
Fifth Ave to Sixth Ave	2 Lane Collector (multi-family)	8,000	1,238	0.155	A	1,387	0.173	A	149	0.018	No
Laurel St											
First Ave to Fourth Ave	2 Lane Collector (continuous left-turn lane)	15,000	15,000	1.000	**F**	15,298	1.020	**F**	298	0.020	**Yes**
Fourth Ave to Fifth Ave	2 Lane Collector (continuous left-turn lane)	15,000	13,000	0.867	**E**	13,227	0.882	**E**	227	0.015	No
Fifth to Sixth Ave	2 Lane Collector (continuous left-turn lane)	15,000	10,000	0.667	D	10,078	0.672	D	78	0.005	No

[1] The v/c ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.
Notes: **Bold** values indicate roadway segments operating at LOS E or F. **Bold and shaded** values indicate project significant impact.

Table 4.3-10
Horizon Year with Project Conditions
Peak-Hour Arterial Segment Analysis Summary

Roadway Segment	Direction	AM Peak		PM Peak	
		Speed[1]	LOS[2]	Speed[1]	LOS[2]
Laurel St					
Between Fourth and Fifth Ave	EB	12.7	D	11.3	D
	WB	16.6	C	12.5	D

Notes:
[1] Speed is calculated as the roadway segment distance divided by the travel time in miles per hour (mph).
[2] The arterial LOS is based on average through-vehicle travel speed for the segment or for the entire street under consideration and is influenced both by the number of signals per mile and by the intersection control delay.
EB = Eastbound; WB = Westbound

Table 4.3-11
2030 Horizon Year Conditions Mitigated
Intersection LOS Summary

Intersection		Peak Hour	Before Horizon Year Improvement		After Horizon Year Improvement		Description
			Delay[1]	LOS[2]	Delay[1]	LOS[2]	
5	Olive St & Fifth Ave	AM	18.9	C	18.9	C	Pay fair-share contribution toward the signalization of the Fifth Avenue and Nutmeg Street Intersection
		PM	39.7	**E**	25.7	D	
8	Nutmeg St & Fifth Ave	AM	12.2	B	5.1	A	Pay fair-share contribution toward the signalization of the intersection
		PM	36.0	**E**	7.3	A	
15	Maple St & Fifth Ave	AM	41.6	E	34.1	D	Pay fair-share contribution toward the signalization of the Fifth Avenue and Nutmeg Street Intersection
		PM	131.0	**F**	34.6	D	

[1] Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.
[2] LOS calculations are based on the methodology outlined in the *2000 Highway Capacity Manual* and performed using Synchro 6.0
Note: **Bold and shaded** values indicate significant project impacts.

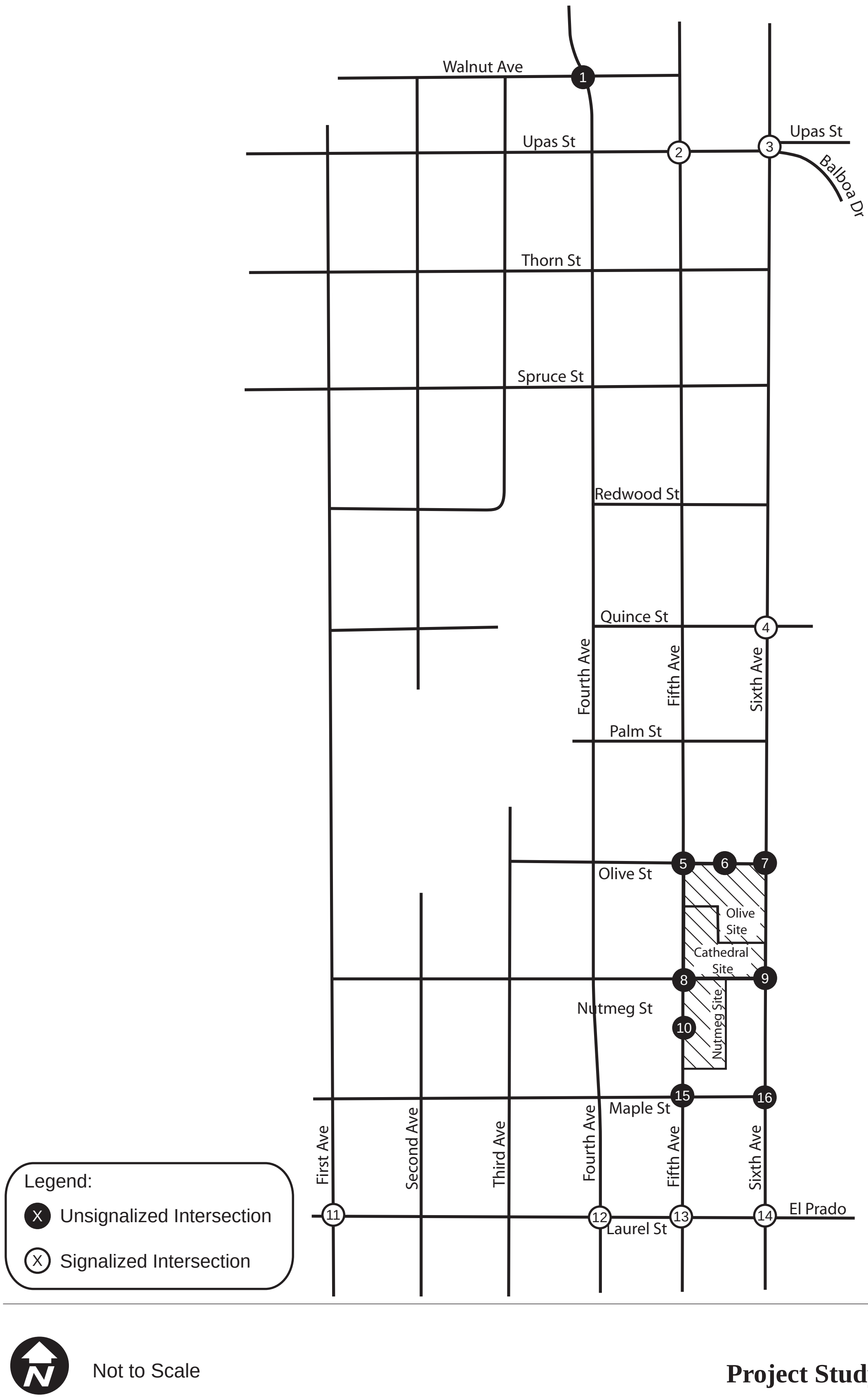
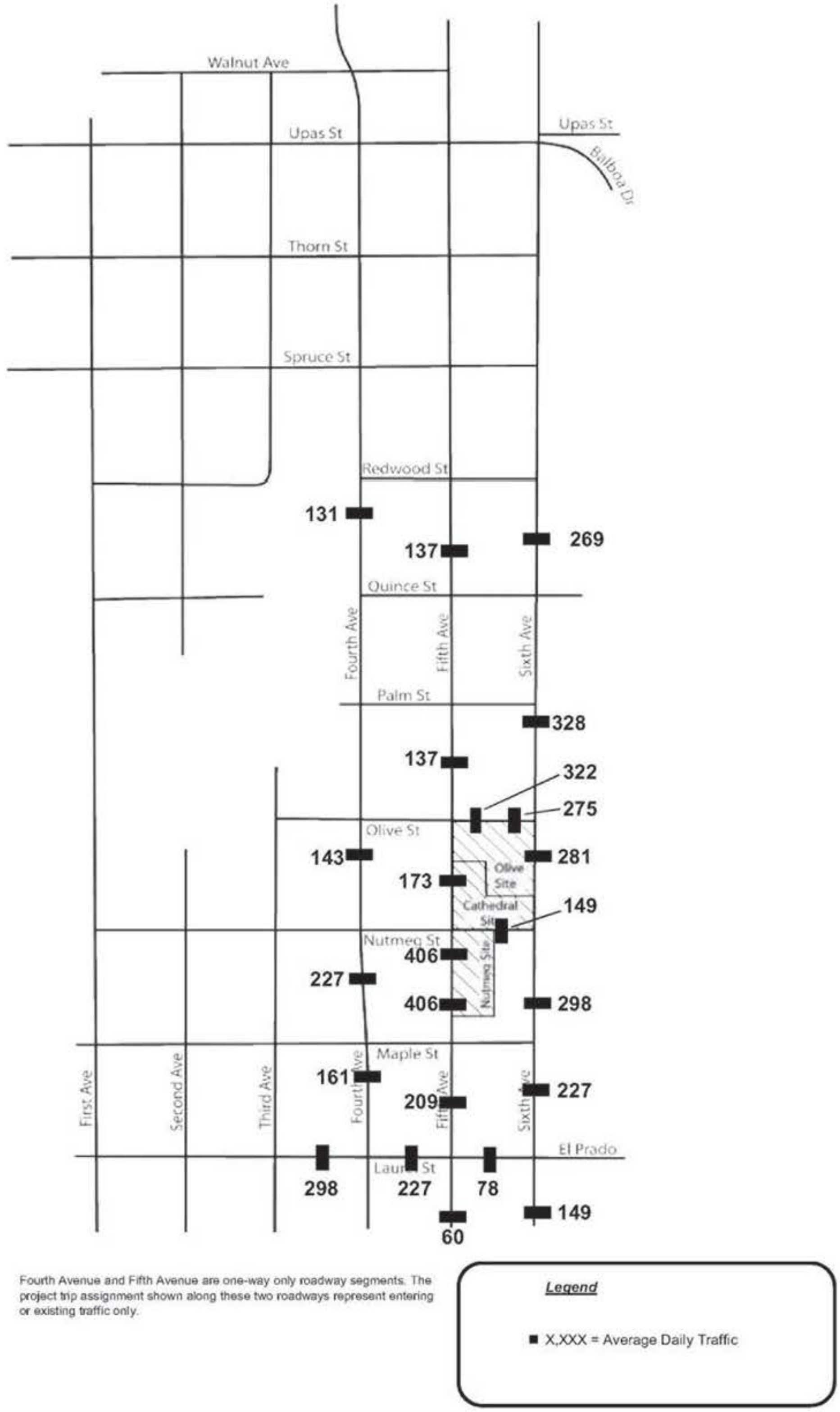
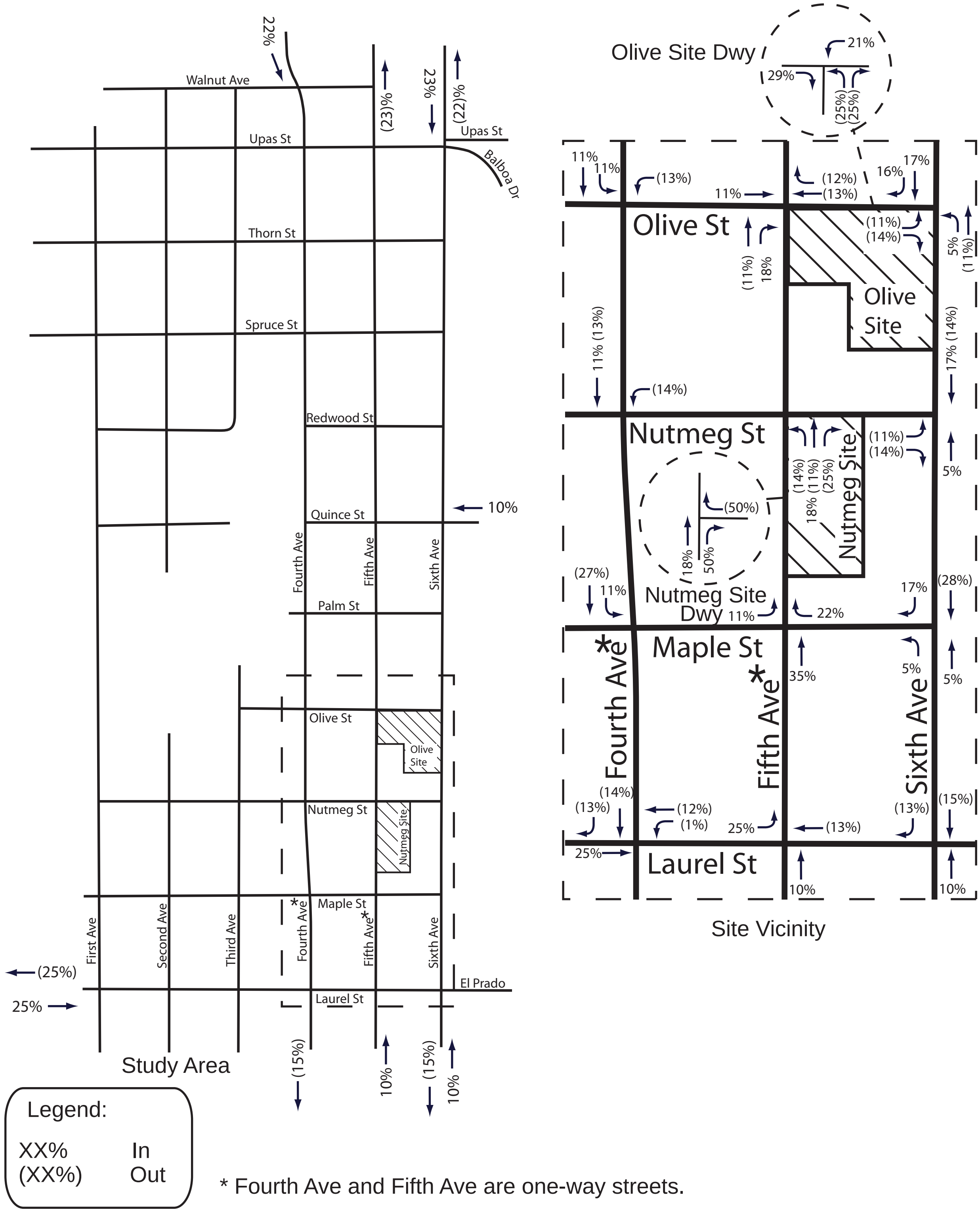


Figure 4.3-1
Project Study Intersections



Not to Scale

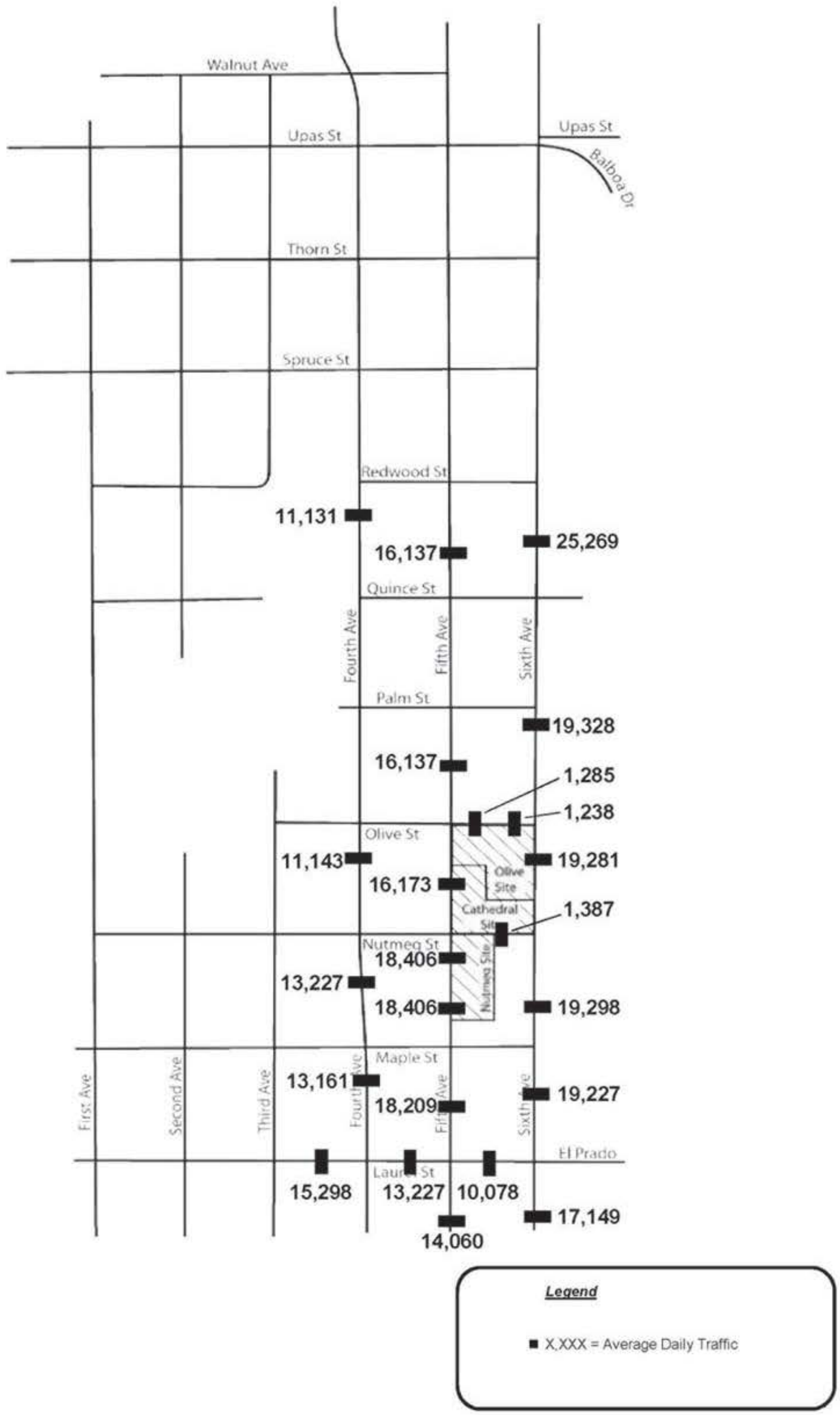
Figure 4.3-2
Project Trips – Road Segment Assignment



* Fourth Ave and Fifth Ave are one-way streets.

Not to Scale

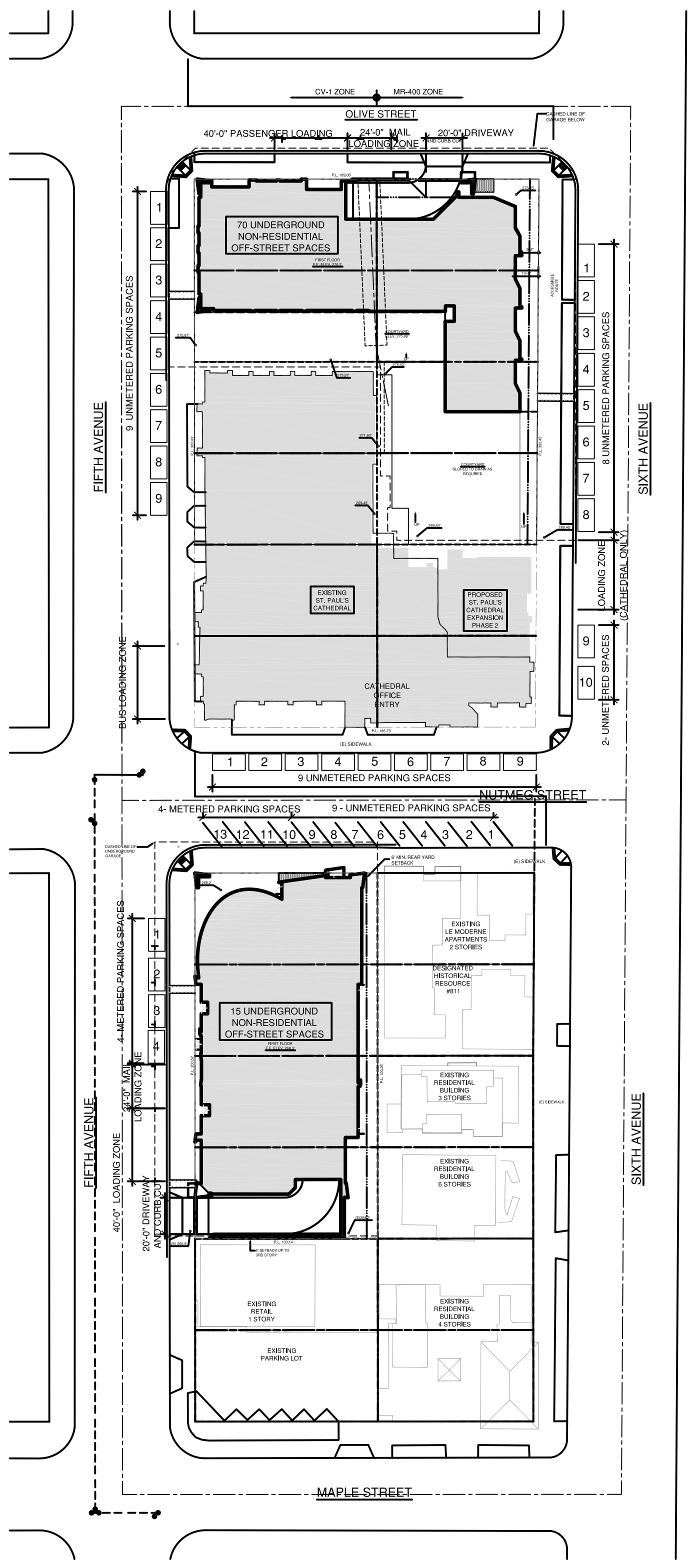
Figure 4.3-3
Project Trip Distribution



Not to Scale

Figure 4.3-4
Year 2030 with Project – Road Segment Volumes

PROPOSED SITE PLAN- ON STREET PARKING



POST-DEVELOPMENT PARKING:	
8	ON-STREET METERED SPACES
37	ON-STREET UNMETERED SPACES

BREAK DOWN PER FRONTING STREETS:

OLIVE STREET:
LOSS OF 10 ON-STREET UNMETERED SPACES, REPLACED BY A 40' PASSENGER LOADING AND A 24' MAIL LOADING ZONES.

FIFTH AVENUE: (OLIVE SITE)
NO CHANGE

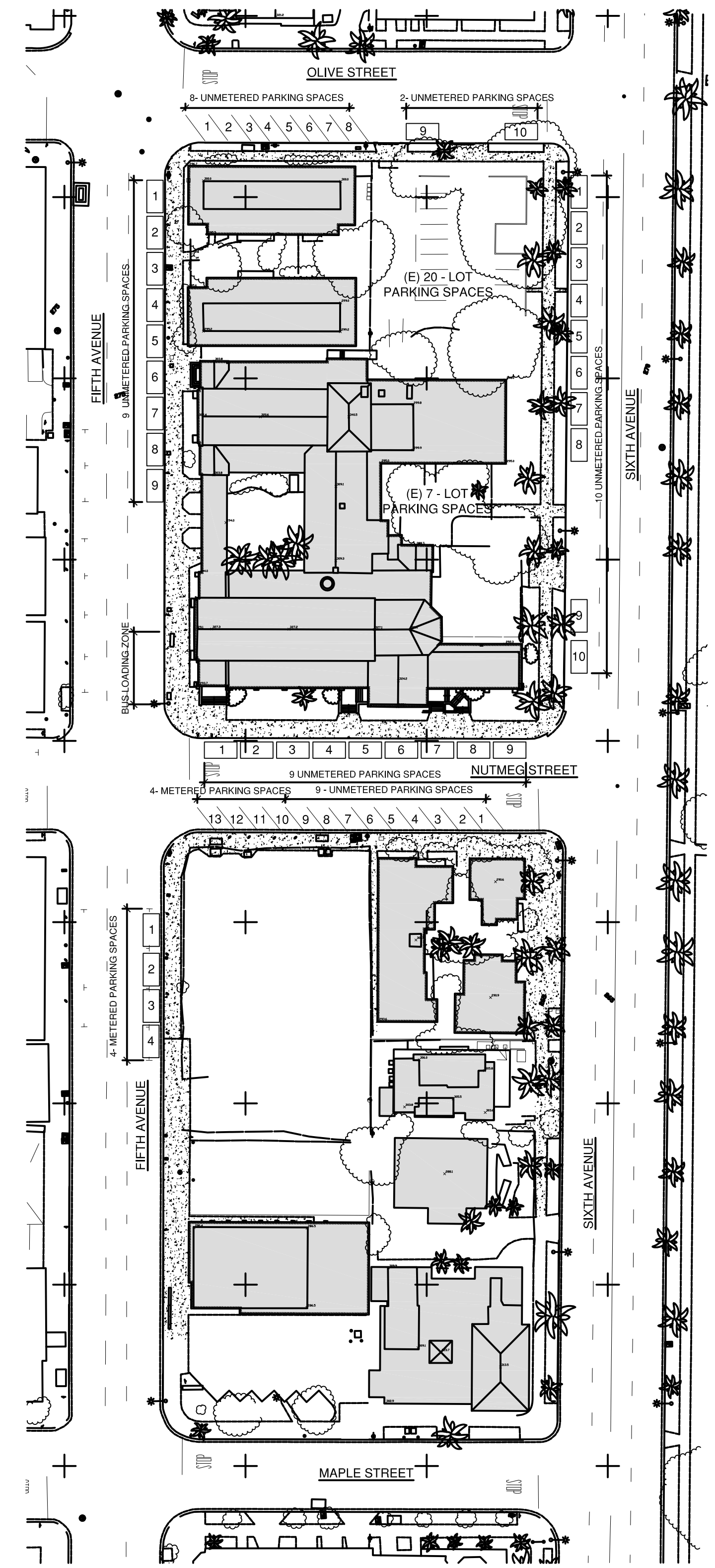
SIXTH AVENUE: (OLIVE SITE)
NO CHANGE TO NUMBER OF ON-STREET PARKING, ADDED A LOADING ZONE (CATHEDRAL ONLY)

NUTMEG STREET:
NO CHANGE

FIFTH AVENUE: (NUTMEG SITE)
NO CHANGE TO NUMBER OF ON-STREET PARKING, ADDED A 40' PASSENGER LOADING AND A 24' MAIL LOADING ZONES.

SIXTH AVENUE: (NUTMEG SITE)
NO CHANGE

NOTE: 85 OFF-STREET CATHEDRAL SPACES PROVIDED ON NEW PROJECT



EXISTING SITE PLAN- ON STREET PARKING

EXISTING PARKING:	
8	ON-STREET METERED SPACES
47	ON-STREET UNMETERED SPACES

NOTE: 27 EXISTING OFF-STREET CATHEDRAL SPACES

Source: Tucker Sadler 2011

Not to Scale

Figure 4.3-5
Proposed Parking

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4.4 AIR QUALITY

This section includes a description of existing air quality, a summary of applicable regulations, and analyses of potential short-term and long-term air quality impacts of the project. Mitigation measures are recommended, as necessary, to reduce significant air quality impacts. Air quality calculations are provided in Appendix B of this EIR. Primary sources for existing air quality data are the California Air Resources Board (ARB), the U.S. Environmental Protection Agency (EPA), and the San Diego Air Pollution Control District (SDAPCD). An analysis of project impacts associated with greenhouse gas (GHG) is provided in Chapter 4.12.

4.4.1 Existing Conditions

The project site is located in the City of San Diego in San Diego County (the County), which is within the San Diego Air Basin (SDAB). The boundaries of the SDAB coincide with that of the County. Ambient concentrations of air pollutants in the SDAB are determined by the amount of emissions released by pollutant sources and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind speed, atmospheric stability, and the presence of sunlight. Therefore, existing air quality conditions in the area are determined by natural factors such as topography, meteorology, and climate, in addition to the amount of emissions released by existing air pollutant sources. These factors are discussed separately below.

Climate

Climate is the accumulation of daily and seasonal weather events over a long period of time, whereas weather is defined as the condition of the atmosphere at any particular time and place (Ahrens 2003). The climate of San Diego County is characterized by warm, dry summers and mild, wet winters. One of the main factors that influence climate in the SDAB is a semipermanent high-pressure cell (the Pacific High) in the eastern Pacific Ocean. The Pacific High is located well to the north in the summer, causing storm tracks to be directed north of California. This high-pressure cell maintains clear skies for much of the year. When the Pacific High moves southward during the winter, this pattern changes, and low-pressure storms are brought into the region, causing widespread precipitation. In San Diego County, the months of heaviest precipitation are November through April, averaging about 10 inches annually. The mean temperature is 63 degrees Fahrenheit (°F), and the mean maximum and mean minimum temperatures are 70°F and 57°F, respectively (WRCC 2010).

The Pacific High also influences the wind patterns of California. The predominant wind directions are westerly and west-southwesterly during all four seasons, and the average annual wind speed is 5.6 miles per hour (mph).

An inversion layer, which is a layer of warm air that lies over cooler, ocean-modified air, often acts as a lid, preventing air pollutants from escaping upward. In the summer, these temperature inversions are stronger than in winter and prevent pollutants from escaping upward and dispersing. In the winter, a ground-level or surface inversion commonly forms during the night and traps carbon monoxide emitted by vehicles during the morning rush hours. Inversion layers are important elements of local air quality because they inhibit the dispersion of pollutants, thus resulting in a temporary degradation of air quality.

Criteria Air Pollutants

Concentrations of ozone, nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less (PM_{10}), fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less ($PM_{2.5}$), and lead are used as indicators of ambient air quality conditions. These are the most prevalent air pollutants known to be deleterious to human health. These pollutants are commonly referred to as "criteria air pollutants." A brief description of each criteria air pollutant, including source types, health effects, and future trends, is provided below, along with the most current attainment area designations and monitoring data for the project area and vicinity.

<u>Ozone</u>

Ozone is a photochemical oxidant, a substance whose oxygen combines chemically with another substance (i.e., oxidizes) in the presence of sunlight, and the primary component of smog. Ozone is not directly emitted into the air, but is formed through complex chemical reactions between precursor emissions of reactive organic gases (ROG) and oxides of nitrogen (NO_X) in the presence of sunlight. ROG are volatile organic compounds that are photochemically reactive. ROG emissions result primarily from incomplete fuel combustion and the evaporation of chemical solvents. It should be noted that the ROG designation includes more chemical compounds than the volatile organic compound (VOC) designation; however, for the purposes of this analysis, VOC is used to refer to ROG and VOC. NO_X are a group of gaseous compounds of nitrogen and oxygen that results from the combustion of fuels. Ozone is a highly reactive molecule that readily combines with many different chemical compounds in the atmosphere. Consequently, high levels of ozone tend to exist only while high levels of VOC and NO_X are present to sustain the ozone formation process. Once the precursors have been depleted, ozone levels rapidly decline. Because these reactions occur on a regional scale, ozone is a regional pollutant.

The adverse health effects associated with exposure to ozone pertain primarily to the respiratory system. Scientific evidence indicates that ambient levels of ozone affect not only sensitive receptors, such as children and people with asthma, but healthy adults as well. Exposure to ambient levels of ozone ranging from 0.10 to 0.40 part per million (ppm) for 1–2 hours has been found to significantly alter lung functions by increasing respiratory rates and pulmonary resistance, decreasing tidal volumes (the amount of air inhaled and exhaled), and impairing respiratory mechanics. Ambient levels of ozone above 0.12 ppm are linked to symptomatic responses that include such symptoms as throat dryness, chest tightness, headache, and nausea.

Ozone precursor emissions of VOC and NO_X have decreased over the past several years because of more stringent motor vehicle standards and cleaner burning fuels. Ozone exceedance days in the SDAB have declined at a faster rate than peak levels. From 1988 to 2007, peak 8-hour ozone levels declined by 27%, while the number of California and national 8-hour exceedance days declined by 65% and 81%, respectively (ARB 2009a). According to ARB, San Diego, which is currently nonattainment for the federal and state 8-hour ozone standard, is expected to attain the current national 8-hour standard by the year 2009. However, at the time of this writing, EPA has not yet announced new designations for the 8-hour standard. Rather, EPA is in the process of reconsidering its 2008 ozone standards in light of new scientific and technical records presented in the most recent review. EPA is anticipated to complete its reconsideration by August 2010 and has extended its redesignation deadline, because of the uncertainty associated with the reconsideration process. The current federal and state ozone standards are shown in Table 4.4-1.

<u>Carbon Monoxide</u>

CO is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes about 56% of all CO emissions nationwide. Other non-road engines and vehicles (such as construction equipment and boats) contribute about 22% of all CO emissions nationwide. Higher levels of CO generally occur in areas with heavy traffic congestion. In cities, 85 to 95% of all CO emissions may come from motor vehicle exhaust.

Adverse health effects associated with exposure to CO concentrations include such symptoms as dizziness, headaches, and fatigue. CO exposure is especially harmful to individuals who suffer from cardiovascular and respiratory diseases. The highest concentrations are generally associated with cold, stagnant weather conditions that occur during the winter. In contrast to problems caused by ozone, which tends to be a regional pollutant, CO problems tend to be localized.

SDAB is currently designated as an attainment area for the state CO standards and a maintenance area for the federal CO standards. SDAB was redesignated to a federal attainment area in 1998 and currently retains the maintenance area designation.

Nitrogen Dioxide

NO_2 is a brownish, highly reactive gas that is present in all urban environments. The major human-made sources of NO_2 are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines. Combustion devices emit primarily nitric oxide (NO), which reacts through oxidation in the atmosphere to form NO_2. The combined emissions of NO and NO_2 are referred to as NO_X and reported as equivalent NO_2. Because NO_2 is formed and depleted by reactions associated with ozone, the NO_2 concentration in a particular geographical area may not be representative of the local NO_X emission sources.

Inhalation is the most common route of exposure to NO_2 and the principal site of toxicity is in the lower respiratory tract. The severity of the adverse health effects depends primarily on the concentration inhaled rather than the duration of exposure. An individual may experience a variety of acute symptoms, including coughing, difficulty with breathing, vomiting, headache, and eye irritation, during or shortly after exposure. After a period of approximately 4 to 12 hours, an exposed individual may experience chemical pneumonitis or pulmonary edema with breathing abnormalities, cough, cyanosis, chest pain, and rapid heartbeat. Severe, symptomatic NO_2 intoxication after acute exposure has been linked on occasion with prolonged respiratory impairment with such symptoms as chronic bronchitis and decreased lung functions. SDAB is currently designated as an attainment area for the state and federal NO_2 standards.

Sulfur Dioxide

SO_2 is produced by such stationary sources as coal and oil combustion, steel mills, refineries, and pulp and paper mills. The major adverse health effects associated with SO_2 exposure pertain to the upper respiratory tract and exposure to high SO_2 concentrations may result in edema of the lungs or glottis and respiratory paralysis. Due to the implementation of ARB's ultra-low sulfur diesel fuel, SO_2 emissions have not been a problem in California. Many air quality monitoring stations have discontinued monitoring for SO_2. SDAB is currently designated as an attainment area for the state and federal SO_2 standards.

Particulate Matter

Respirable particulate matter with an aerodynamic diameter of 10 micrometers or less is referred to as PM_{10}. It consists of particulate matter emitted directly into the air, such as fugitive dust, soot, and smoke from mobile and stationary sources; construction operations; fires and natural windblown dust; and particulate matter formed in the atmosphere by condensation and/or transformation of SO_2 and VOC. Fine particulate matter $PM_{2.5}$ is a subgroup of PM_{10}, consisting of smaller particles that have an aerodynamic diameter of 2.5 micrometers or less.

Generally, adverse health effects associated with PM_{10} may result from both short-term and long-term exposure to elevated concentrations and may include breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases, alterations to the immune system, carcinogenesis, and premature death. $PM_{2.5}$ poses an increased health risk because the particles can deposit deep in the lungs and may contain substances that are particularly harmful to human health.

Direct emissions of PM_{10} are projected to almost double in the SDAB between 1975 and 2020 (ARB 2009a). This increase is primarily associated with the growth in area-wide sources, specifically, fugitive dust from vehicle travel on unpaved and paved roads, dust from construction and demolition operations, and particulates from residential fuel combustion (including wood). Population growth and increases in vehicle miles traveled within the SDAB are main factors that contribute to the growth in these area-wide sources. Although ambient PM_{10} concentrations in the SDAB are not as high as in some other areas of the state, additional emission controls would be needed to bring this area into attainment with the state standards. SDAB is currently designated as a state and federal nonattainment area for the PM_{10} standard.

Direct emissions of $PM_{2.5}$ are projected to continue increasing up to 2020 for the same reasons stated above for PM_{10}. However, the increase in $PM_{2.5}$ is not projected to be as dramatic as that for PM_{10}. Annual average $PM_{2.5}$ concentrations (national and state) in the SDAB have declined during the period of 2002 through 2007. The highest maximum 24-hour concentration of 239 micrograms per cubic meter ($\mu g/m^3$) occurred in 2003, and was due to severe wildfires that occurred in Southern California during October (ARB 2009a). SDAB is currently designated as a state and federal nonattainment area for the $PM_{2.5}$ standard.

Lead

Lead is a metal found naturally in the environment and in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in the air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid-battery manufacturers.

All areas of the state are currently designated as attainment for the state lead standard. Although the ambient lead standards are no longer violated, lead emissions from stationary sources still pose “hot spot” problems in some areas. As a result, ARB identified lead as a Toxic Air Containment (TAC), which is discussed in further detail below.

Monitoring Station Data and Attainment Area Designations

Criteria air pollutant concentrations are measured at 10 monitoring stations in the SDAB. Data from the monitoring stations at 1133 Union Street (1.2 miles southwest of the project site), 1110 Beardsley Street (2.5 miles southeast of the project site), and 330 12th Street (1.7 miles south of the project site) were used to characterize existing air quality at the project site. Table 4.4-1 presents a summary of the highest pollutant values recorded at these stations and compliance with federal and state standards from 2004 to 2008.

Both ARB and EPA use this type of monitoring data to designate areas according to attainment status for criteria air pollutants established by the agencies. The three basic designation categories are nonattainment, attainment, and unclassified. The “unclassified” designation is used in an area that cannot be classified on the basis of available information as meeting or not meeting the standards. In addition, the California designations include a subcategory of the nonattainment designation called “nonattainment-transitional.” This designation is given to nonattainment areas that are progressing and nearing attainment. The current national and state standards are shown in Table 4.4-2.

The SDAB currently meets the national standards for all criteria pollutants except ozone, and meets state standards for all criteria pollutants except ozone, PM_{10}, and $PM_{2.5}$. SDAB is classified as “basic” nonattainment for the 8-hour ozone standard. Basic is the least severe of the six degrees of ozone nonattainment. SDAPCD submitted an air quality plan to EPA in 2007; the plan demonstrated how the 8-hour ozone standard will be attained by 2009. A decision from EPA was anticipated the summer or fall of 2009; however, EPA is currently in the process of reclassifying California air basins for the 0.075 ppm 8-hour ozone standard. It is anticipated that EPA will issue a final ruling for the new classification of the SDAB in 2010, which would then trigger a 12-month period for SDAPCD to develop an air quality attainment plan according to the new classification and nullify the previous 2007 air quality plan (Reider, pers. comm., 2010).

The SDAB is currently classified as a "serious" ozone nonattainment area under state standards. For $PM_{2.5}$, the SDAB is currently classified as a national attainment area and state nonattainment area. The SDAB is classified a state nonattainment area for PM_{10}. The SDAB currently falls under a national "maintenance plan" for CO, following a 1998 redesignation as a CO attainment area.

Existing Emissions – San Diego County

Table 4.4-3 summarizes the emissions inventory for criteria air pollutants within San Diego County for various source categories. With respect to the SDAB, mobile sources are the largest contributor to the estimated annual average air pollutant levels of VOC, CO, and NO_X, accounting for approximately 57%, 94%, and 93%, respectively, of the total emissions. Areawide sources account for approximately 83% and 51% of the SDAB's PM_{10} and $PM_{2.5}$ emissions, respectively.

Existing Emissions – Project Site

Motor vehicles are the major generators of air pollutant emissions in the vicinity of the project site. Interstate 5, SR-163, and West Laurel Street carry through and local traffic that emits exhaust pollutants. Currently, the Olive Site is occupied by the Park Chateau Apartments and a parking lot. The St. Paul's Cathedral and associated office building are still in operation. The Nutmeg Site is currently vacant, undeveloped land and generates no stationary or mobile source emissions. Table 4.4-4 presents the maximum daily emissions associated with operation of the existing Park Chateau Apartments and the St. Paul's Cathedral office building. The existing operational emissions were estimated using URBEMIS 2007, which is a land use emissions model. The traffic study provided the trip generation rates associated with the Park Chateau Apartments' 12 residential dwelling units and the 4,973-square-foot St. Paul's Cathedral office building that were input into URBEMIS to estimate area and mobile source emissions. Refer to Appendix B for detailed model assumptions and outputs.

Existing Air Quality – Toxic Air Contaminants

Concentrations of TACs, or, in federal parlance, hazardous air pollutants (HAPs), are also used as indicators of ambient-air-quality conditions. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

According to the *California Almanac of Emissions and Air Quality* (ARB 2009a), the majority of the estimated health risk from TACs can be attributed to relatively few compounds, the most important being particulate matter (PM) from diesel-fueled engines (diesel PM). Diesel PM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances. Although diesel PM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present. Based on receptor modeling techniques, ARB estimated the diesel PM health risk in the SDAB in 2000 to be 420 excess cancer cases per million people. Since 1990, the health risk of diesel PM in the SDAB has been reduced by 52% (ARB 2009a).

According to ARB, Community Health Air Pollution Information System, there are no major existing stationary sources of TACs within 2 miles of the project site. There is a solar turbine facility located approximate 1 mile southwest of the project site and a U.S. Naval hospital located approximately 1 mile southeast of the project site. Vehicles on I-5, which runs approximately 0.6 mile southwest of the project site, and local traffic along Laurel Street, are sources of diesel PM and other TACs associated with vehicle exhaust. In addition, the Port of San Diego is located approximately 2 miles west of the project site, which includes many sources of diesel PM such as loading equipment, heavy-duty trucks, and marine vessels. The San Diego International Airport is also located approximately 1 mile west of the project site and involves the operation of diesel-fueled vehicles such as loading equipment, heavy-duty trucks, and potentially airplanes.

Existing Air Quality – Odors

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

No major agriculture-related odor sources (e.g., livestock or dairy operations) are located within 2 miles. However, the Port of San Diego is located approximately 2 miles west of the project site, which could be a potential source of odors due to diesel PM exhaust emissions. In addition, the San Diego Airport is located approximately 1 mile west of the project site, which could also be a potential source of odors due to diesel PM exhaust emissions and jet fuel combustion emissions.

Regulatory Framework

Air quality within the project area is regulated by EPA, ARB, and SDAPCD. Each of these agencies develops rules, regulations, policies, and/or goals to comply with applicable legislation. Although EPA regulations may not be superseded, both state and local regulations may be more stringent.

Criteria Air Pollutants

Federal Regulations

At the federal level, the Clean Air Act (CAA) required EPA to establish National Ambient Air Quality Standards (NAAQS). As shown in Table 4.4-2, EPA has established primary and secondary NAAQS for the following criteria air pollutants: ozone, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead (EPA 2009a). The CAA also required each state to prepare an air quality control plan referred to as an SIP. The federal Clean Air Act Amendments of 1990 (CAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA must review all state SIPs to determine whether they conform to the mandates of the CAA and the amendments thereof, and to determine whether implementing them would achieve air quality goals. If EPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) that imposes additional control measures may be prepared for the nonattainment area. Failure to submit an approvable SIP or to implement the plan within the mandated time frame may cause sanctions to be applied to transportation funding and stationary air pollution sources in the air basin.

State Regulations

ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California, and for implementing the California Clean Air Act (CCAA). The

CCAA, which was adopted in 1988, required ARB to establish the California Ambient Air Quality Standards (CAAQS) (Table 4.4-2). ARB established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particulate matter, in addition to the above-mentioned criteria air pollutants. The CCAA requires that all local air districts in the state endeavor to achieve and maintain the CAAQS by the earliest practical date. The act specifies that local air districts should focus particular attention on reducing the emissions from transportation and areawide emission sources, and provides districts with the authority to regulate indirect sources.

ARB and local air pollution control districts are currently developing plans for meeting new national air quality standards for ozone and $PM_{2.5}$. California's adopted 2007 State Strategy was submitted to EPA as a revision to the SIP in November 2007. In April 2009, ARB proposed a revision to the 2007 State Strategy per EPA's suggestion. The proposed revisions account for emission reductions from 2007 and 2008 regulations, clarifies ARB's legal commitment with respect EPA's approval criteria, and clarifies the discussion of the long-term strategy for identifying future technologies to achieve the last increment of emission reductions. On August 12, 2009, ARB submitted the revised 2007 State Strategy to EPA, which in the process of reviewing the document for adoption.

<u>Local Plans and Policies</u>

San Diego Air Pollution Control District

SDAPCD seeks to improve air quality conditions in San Diego County through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of SDAPCD includes preparing plans and programs for the attainment of ambient air quality standards, adopting and enforcing rules and regulations, and issuing permits for stationary sources. SDAPCD also inspects stationary sources; responds to citizen complaints; monitors ambient air quality and meteorological conditions; and implements other programs and regulations required by the CAA, CAAA, and CCAA.

Regional Air Quality Strategy

As stated previously, the SDAB is designated as a nonattainment area for ozone for both national and state standards. For each nonattainment area within the state, the CCAA has specified air quality management strategies that must be adopted by the agency responsible for the nonattainment area. Each area must prepare and adopt an air quality management plan (AQMP) or regional air quality strategy (RAQS), which lays out programs for attaining the CAAQS and NAAQS for all criteria pollutants. At present, no attainment plan for $PM_{2.5}$ or PM_{10} is required by the state regulations. Accordingly, the San Diego RAQS was developed by the SDAPCD, pursuant to CCAA requirements, and identifies feasible emission control measures to provide expeditious progress in San Diego County toward attaining the state ozone standard. The pollutants addressed are VOC and NO_X, precursors to the photochemical formation of ozone.

The RAQS control measures focus on the impact of all emission sources and all control measures, including those under the jurisdiction of ARB (e.g., on-road motor vehicles, off-road vehicles and equipment, and consumer products) and EPA (e.g., aircraft, ships, trains, and pre-empted off-road equipment). Thus, while legal authority to control different pollution sources is separated, SDAPCD is responsible for incorporating national, state, and local measures in a single plan to achieve ambient air quality standards in San Diego County. The San Diego County RAQS for the SDAB was initially adopted in 1991, and subsequently revised in 1995, then in 1998, again in 2001 and 2004, and most recently in 2009.

<u>SDAPCD Rules and Regulations</u>

All land development projects are subject to SDAPCD rules and regulations in effect at the time of construction. Specific rules applicable to the construction of the project may include the following:

- Rule 51, Nuisance, states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or that endanger the comfort, repose, health, or safety of any such persons or the public; or that cause or have a natural tendency to cause injury or damage to business or property.
- Rule 55, Fugitive Dust Control, states that no person shall engage in construction or demolition activities that discharge visible emissions of fugitive dust beyond the property line for a period or periods aggregating to more than 3 minutes within any 60-minute period. In addition, visible roadway dust from active operations shall be minimized using effective track-out/carry-out and erosion control measures, and removed at the conclusion of each work day or once every 24-hour period for continuous operations.
- Rule 67, Architectural Coatings, requires that a person shall not manufacture, blend, repackage, supply, sell, offer for sale, apply, or solicit the application of any architectural

coating for use within San Diego County that, at the time of sale or manufacture, contains more than 250 grams of VOC per liter of coating. The rule specifies different VOC limits for certain specialty coatings.

- Rule 69.5, Natural Gas-Fired Water Heaters, sets NO_X emission standards for water heaters that would be manufactured, distributed, offered for sale, or installed within San Diego County. The emission standard would only apply to those water heaters with a heat input less than 75,000 British thermal units per hour (Btu/hr).

Toxic Air Contaminants

Air quality regulations also focus on TACs. In general, for those TACs that may cause cancer, there is no concentration that does not present some risk. In other words, there is no threshold level below which adverse health impacts may not be expected to occur. This contrasts with the criteria air pollutants for which acceptable levels of exposure can be determined and for which the ambient standards have been established (Table 4.4-2). Instead, EPA and ARB regulate HAPs and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology for toxics (MACT and BACT) to limit emissions.

Federal Hazardous Air Pollutant Programs

Title III of the CAAA directed EPA to promulgate national emissions standards for HAPs (NESHAP). The NESHAP standards may differ for major emission sources than for area sources of HAPs. Major sources are stationary sources with the potential to emit more than 10 tons per year (tpy) of any HAP or more than 25 tpy of any combination of HAPs; all other sources are considered area sources. For major sources, EPA has developed technology-based emission standards designed to produce the maximum emission reduction achievable. For area sources, the standards may be different, based on generally available control technology.

The CAAA also required EPA to promulgate vehicle or fuel standards containing reasonable requirements that control toxic emissions. Performance criteria were established to limit mobile-source emissions of toxics, including benzene, formaldehyde, and 1,3-butadiene. In addition, the CAAA required the use of reformulated gasoline in selected areas with the most severe ozone nonattainment conditions to further reduce mobile-source emissions.

State and Local Toxic Air Contaminant Programs

TACs in California are primarily regulated through the Tanner Air Toxics Act (Assembly Bill [AB] 1807, Tanner Act) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588, Hot Spot Act). The Tanner Act sets forth a formal procedure for ARB to designate substances as TACs. To date, ARB has identified more than 21 TACs and adopted EPA's list of HAPs as TACs. Most recently, diesel PM was added to the ARB list of TACs.

Once a TAC is identified, ARB then adopts an Airborne Toxics Control Measure for sources that emit that particular TAC. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate BACT to minimize emissions. For example, the Airborne Toxic Control Measure (ATCM) limits truck idling to 5 minutes when not involved in operational activities.

ARB has adopted diesel-exhaust control measures and more stringent emission standards for various on-road mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors, generators). Current and future milestones include the low-sulfur diesel fuel requirement and tighter emission standards for heavy-duty diesel trucks (2007) and off-road diesel equipment (2011) nationwide. Over time, the replacement of older vehicles would result in a vehicle fleet that produces substantially lower levels of TACs than under current conditions.

ARB published the *Air Quality and Land Use Handbook: A Community Health Perspective* (ARB 2005), which provides guidance concerning land-use compatibility with TAC sources and offers recommendations for the siting of sensitive receptors (such as residential units) near uses associated with TACs, such as freeways and high-traffic roads, commercial distribution centers, rail yards, ports, refineries, dry cleaners, gasoline stations, and industrial facilities. At the local level, SDAPCD Regulations II, XI, and XII, require that all potential sources of TACs obtain permits from SDAPCD to ensure that they are constructed and operated in accordance with applicable regulations.

In addition to criteria air pollutants and TACs, GHGs are also air pollutants of concern. The analysis of GHG emissions from the project and their impact on climate change is discussed in Chapter 7.0, Cumulative Impacts, and in Section 4.12, Greenhouse Gas Emissions, of the EIR.

Sensitive Receptors

Schools, hospitals, residences, and other facilities where people congregate, especially children, older adults, and the infirm, are considered particularly sensitive to air pollutants. Typical health problems attributed to ozone exposure include respiratory ailments, eye and throat irritations, headaches, coughing, and chest discomfort.

The project site is in proximity of a number of schools. To the south, the Balboa City School (0.5 mile), City Tree Christian School (0.8 mile), Urban Discovery Academy Charter (0.8 mile), Washington Elementary School (0.8 mile), Metro Region Community Day School (1.0 mile), and Kipp Adelante Preparatory Academy (0.9 mile) are located within 1 mile of the project site. To the north, the San Diego Cooperative Charter (0.1 mile), Montessori School of San Diego (0.8 mile), Balboa Park Preschool and Home Day Care (0.6 mile), Roosevelt Junior High School and Middle School (0.7 mile), Fleur De Lis School (0.9 mile), and Florence Elementary School (1.0 mile) are located within 1 mile of the project site. Hospitals in proximity of the project site are the Doctor's Hospital to the northwest (0.4 mile), Scripps Mercy Hospital to the north (1.0 mile), and the Naval Medical Center to the southeast (1.0 mile). The project site is adjacent to multi-family residences to the west, south, and east. Retail and commercial business are located on all sides of the project site. Balboa Park is located directly east of the project site.

Odors

SDAPCD Rule 51 (Public Nuisance) and California Health & Safety Code, Division 26, Part 4, Chapter 3, Section 41700, prohibit the emission of any material that causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of the public. Projects required to obtain permits from SDAPCD, typically industrial and some commercial projects, are evaluated by SDAPCD staff for potential odor nuisance, and conditions may be applied (or control equipment required) where necessary to prevent occurrence of public nuisance.

4.4.2 Impact Analysis

Issue 1: Would the project conflict with or obstruct the implementation of the applicable air quality plan?

Per the City's Significance Determination Thresholds, air quality impacts may be significant if:

- The project would conflict with or obstruct the implementation of the applicable air quality plan.

Project Consistency with Air Quality Plan

Project consistency with any regional air quality plan is determined by whether overall growth has been accurately anticipated in any subregion. Proposed developments that are consistent with growth anticipated by the City General Plan, the community plan, and SANDAG's growth forecasts would be consistent with the RAQS, included the Transportation Control Measures (TCM), and the SIP. The project site is located in the SDAB, an area where a regional air quality plan is being implemented, and is a mixed-use residential, commercial, and retail development. These types of high-density and mixed-use developments within urban areas are the prototypical projects needed to reduce vehicle miles traveled (VMT) for recreation, work, and shopping trips. The community plan land use designation for the entire site is Very High Residential (73 to 110 dwelling units per acre) and is consistent with the City General Plan's "City of Villages" concept outlined in the Strategic Framework Element. Thus, the density and population increase associated with the project has been accounted for in the City General Plan and the project is consistent with the growth assumptions in the General Plan.

As shown in Table 4.4-3, mobile-source emissions are the main contributor to VOC and NO_X emissions in San Diego County, which is a nonattainment area for ozone. Furthermore, as stated in the project's objectives, the project would achieve a level of LEED certification, which would encompass design and project features that reduce criteria air pollutant emissions either on-site or within the region (i.e., Energy and Atmosphere credits). Although the full details of feasible emission and energy reduction features are not known at this time and other improved technologies may be available in the future, proposed project features are listed in Section 4.12, Greenhouse Gas Emissions, of the EIR.

It should also be noted that neither the net nor gross long-term operational emissions of the project would exceed the thresholds of significance for air quality impacts as shown in Table 4.4-4. Therefore, the concept and design of the project incorporates feasible and available air quality control measures and is consistent with the RAQS. Accordingly, the project meets all the criteria required for conformity with the RAQS and therefore would not result in a cumulatively considerable net increase of criteria air pollutants.

Short-Term Construction Emissions

Construction-related emissions are described as "short-term" or temporary in duration and have the potential to represent a significant impact with respect to air quality, especially fugitive PM_{10} and $PM_{2.5}$ dust emissions. During construction of the project, criteria air pollutants would be generated from activities such as building demolition, soil excavation, grading and site preparation, building construction, and application of architectural coatings. Fugitive PM_{10} and $PM_{2.5}$ dust emissions would be generated primarily from soil excavation, site grading, and demolition activities, and vary as a function of parameters such as soil silt content, soil moisture, wind speed, acreage of disturbance area, and vehicle miles traveled (VMT) by construction vehicles on- and off-site. Ozone precursor emissions of VOC and NO_X are primarily associated with gasoline and diesel equipment exhaust and the application of architectural coatings. Sources of criteria air pollutant exhaust emissions include off-road diesel equipment, heavy-duty haul trucks (i.e., soil export), material delivery trucks, and construction worker vehicles.

Project-generated, construction-related emissions of criteria air pollutants and precursors were modeled using the URBEMIS 2007 Version 9.2.4 computer model (Rimpo and Associates 2008). Project-generated emissions were modeled based on general information provided in the project description and default URBEMIS 2007 model settings and parameters attributable to the construction period and site location. Where project-specific information was not available, conservative assumptions were used to avoid underestimating construction emissions. For example, shorter time periods were assumed for each construction activity and the entire construction period to conservatively estimate maximum daily emissions. In addition, periods of high construction activity (e.g., soil excavation) for multiple sites were assumed to occur simultaneously.

For the purposes of this analysis, construction of the project is assumed to commence in 2011. This provides a conservative assumption of construction emissions because emission rates for construction equipment and vehicles would decrease with time as new technology and fleet turnover reduce average fleet emissions. Construction activities for the entire project (i.e., Olive and Nutmeg sites) would occur for approximately 18 months. Construction of the two sites was assumed to occur simultaneously and each stage (e.g., excavation, grading, building construction, architectural coatings) would occur sequentially, with limited overlap between construction stages. For modeling purposes, the Olive Site would begin with demolition of the existing uses, followed by soil excavation for the underground parking lots. Once the Olive Site has been cleared and excavated, construction of the underground parking garage, mixed-use building, and cathedral renovations and expansions would commence. Soil excavation for the

Nutmeg Site would commence during demolition activities for the Olive Site. Similar to the Olive Site, following soil excavation, the Nutmeg Site's underground parking garage and mixed-use building would be constructed.

The volume of soil excavation is provided on the Tentative Map filed with the City and would require export of 58,000 cubic yards for the Olive Site and 31,000 cubic yards for the Nutmeg Site. Project impacts from this total volume of 89,000 cubic yards of export and from other construction activities, are shown in Table 4.4-5, which presents the estimated maximum daily emissions in pounds per day associated with each phase of the project by construction year. As stated in the footnotes to Table 4.4-5, certain construction activities are expected to overlap and the results of the daily construction emissions reflect emissions from concurrent construction activities. Emissions from on-road hauling of demolition waste and excavated soil was included in the analysis based on a one-way haul distance of 20 miles. Furthermore, as listed in the Regulatory Setting, all construction activities would be required to comply with the requirements of SDAPCD Rules 67 (Architectural Coatings) and 67.7 (Cutback and Emulsified Asphalts), which limit the VOC content of architectural coatings and asphalts used within the SDAPCD's jurisdiction, respectively. Therefore, short-term construction activities would comply with all applicable SDAPCD rules and regulations.

As shown in Table 4.4-5, construction-related emissions generated by the project with implementation of required fugitive dust control measures in compliance with SDAPCD Rule 55 (Fugitive Dust Control) would be below the thresholds of significance for all pollutants and would not exceed 100 pounds per day of PM_{10} or $PM_{2.5}$ emissions. The thresholds of significance have been established by EPA as a maximum level of emissions that a single project can generate without obstructing the air quality attainment and maintenance goals of the region. In addition, conditions of the project grading would require specific fugitive dust control measures such as construction site watering, covering of haul trucks, installation of wind breakers around construction areas, minimize construction vehicle idling times, and proper maintenance of construction equipment to reduce emissions. Thus, the impact associated with the project's construction emissions would be less than significant, and the project would not conflict with or obstruct implementation of the applicable air quality plan.

Construction Toxic Air Contaminants

Construction-related activities would result in short-term, project-generated emissions of diesel PM exhaust emissions from off-road heavy-duty diesel equipment and on-road diesel haul trucks operating during excavation. Diesel PM was identified as a TAC by ARB in 1998. In January

2001, EPA promulgated a Final Rule to make emission standards more stringent for model year 2007 heavy-duty diesel engines and all subsequent model years. In December 2004, ARB adopted a fourth phase of emission standards (Tier 4) in the Clean Air Non-road Diesel Rule. As such, engine manufacturers are required to meet treatment-based exhaust standards for NO_X and PM starting in 2011 that are more than 90% lower than current levels.

The dose to which receptors are exposed is the primary factor used to determine health risk and is a function of the concentration of substances in the environment and the duration of exposure. According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments should be based on a 70-year exposure period. The project's construction period would last for only approximately 18 months. In addition, the levels of diesel PM would vary on a daily basis due to the intermittent use of heavy-duty diesel equipment.

As shown in Tables 4.4-5 and 4.4-6, the "worst-case" maximum TACs from diesel, PM_{10}, and $PM_{2.5}$ emissions would occur in 2011 if there were to be an overlap of the Olive Site and Nutmeg Site excavation activities. This "worse case" period would last for less than 2 months and diesel PM emissions would decrease substantially for the remaining construction period as there would be less construction equipment at the sites. Thus, because the use of heavy-duty diesel equipment would be temporary and intermittent, construction-related emissions would not expose sensitive receptors to substantial impact from TACs.

Long-Term Area- and Mobile-Source Operational Emissions

The Olive Site is currently occupied by the Park Chateau Apartments and a Cathedral office building that would be demolished as part of the project. The Nutmeg Site is currently vacant. When analyzing the project's operational emissions, the existing area- and mobile-source emissions associated with the Park Chateau Apartments and the Cathedral offices would be subtracted from the project's operational emissions to calculate the net change in operational emissions associated with implementation of the project. The net change in operational emissions is then compared with the thresholds of significance.

Project-generated, regional-area-source, and mobile-source emissions of criteria air pollutants and ozone precursors were modeled using the URBEMIS 2007 Version 9.2.4 computer program by selecting the land use type, project size, and trip generation rates of the project. URBEMIS accounts for area-source emissions from natural gas consumption, landscape maintenance equipment, and consumer products based on the size and type of land uses selected. Regional-area- and mobile-source emissions were modeled based on proposed land use types and sizes as described in EIR Chapter 3.0, Project Description, and the trip generation data described in EIR Section 4.3, Traffic, Circulation and Parking. URBEMIS also allows the user to select an operational year, which affects the emission factors associated with area- and mobile-source emissions. For the existing land uses, the year 2009 was used to represent conditions at the time of the Notice of Preparation. For the project, the buildout year of 2012 was used to estimate operational emissions.

Table 4.4-6 summarizes the modeled existing, proposed, and net change in operational emissions of criteria air pollutants and ozone precursors. The project's operational air quality impacts were determined by comparing the net change in emissions with the applicable significance thresholds discussed above. Refer to Appendix B for detailed modeling input parameters and model outputs.

As shown in Table 4.4-6, neither the net change nor the gross project operational emissions would exceed the significance thresholds discussed above. The thresholds of significance have been established as a maximum level of emissions that a single project can generate without obstructing the air quality attainment and maintenance goals of the region. Thus, the impact associated with the project's long-term operational emissions would be less than significant and the project would not conflict with or obstruct implementation of the applicable air quality plan.

4.4.3 Significance of Impacts

The residential density proposed by the project is consistent with the City General Plan "City of Villages" concept outlined in the Strategic Framework Element. Thus, the density and population associated with the project has been accounted for in the City's General Plan and the project is consistent with the growth assumptions in the City's General Plan. SDAPCD refers to approved general plans to forecast, inventory, and allocate regional emissions from land use and development-related sources. Therefore, emissions associated with the proposed land uses at the project site would have been accounted for when developing emission projections for the RAQS. Thus, the project is consistent with the RAQS and would have *less than significant quality impact*.

4.4.4 Mitigation, Monitoring, and Reporting

No mitigation would be required.

4.4.5 Impact Analysis

Issue 2: Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Per the City's Significance Determination Thresholds, air quality impacts may be significant if:

- The project would violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Area- and Mobile-Source Emissions

The project's net increase in emissions of criteria air pollutants and ozone precursors was modeled using the URBEMIS 2007 computer program. As shown in Table 4.4-4, neither the net increase in emissions nor the project's gross operational emissions would exceed the significance thresholds for VOC, NO_X, CO, PM_{10}, or $PM_{2.5}$.

4.4.6 Significance of Impacts

Neither the net increase in emissions nor the project's gross operational emissions would exceed the significance thresholds for criteria air pollutants. Therefore, the project would have *a less than significant air quality impact.*

4.4.7 Mitigation, Monitoring, and Reporting

No mitigation would be required.

4.4.8 Impact Analysis

Issue 3: Would the project expose sensitive receptors to substantial pollutant concentrations including air toxics such as diesel particulates?

Per the City's Significance Determination Thresholds, air quality impacts may be significant if:

- The project would expose sensitive receptors to substantial pollutant concentrations including air toxics such as diesel particulates.

This section addresses potential impacts to sensitive receptors during project operations. For potential construction impacts, please see discussions under Issue 1 and Issue 4.

Sensitive Receptors/CO "Hot Spots"

CO concentration is a direct function of motor vehicle activity (e.g., idling time and traffic flow conditions), particularly during peak commute hours and meteorological conditions. Under specific meteorological conditions (e.g., stable conditions that result in poor dispersion), CO concentrations may reach unhealthy levels with respect to local sensitive land uses such as residential areas, schools, and hospitals. A CO "hot spot" occurs when CO concentrations exceed the NAAQS or CAAQS.

SDAPCD has not developed quantitative CO screening criteria; therefore, the methods of the Sacramento Metropolitan Air Quality Management District (SMAQMD) are used, which have been approved by the City (SMAQMD 2009). The method is based on a two-tier screening method. The first tier evaluates if the project would generate traffic that would result in the deterioration of an intersection's level of service (LOS) to LOS E or F, or if the project would contribute additional traffic to an intersection that currently operates at LOS E or F. This screening criterion (i.e., intersection operating at LOS E or F) is also used in the *Transportation Project-Level Carbon Monoxide Protocol* (the Protocol) to evaluate if an intersection requires further analysis (UCD ITS 1997). The project traffic study (see Appendix G) indicates that all signalized intersections within the traffic study area would operate at LOS D or better during the AM and PM peak hours under cumulative (2030) conditions with the project.

The potential for the project to cause CO "hot spots" due to existing or year 2030 traffic congestion at local area intersections was analyzed based on qualitative screening criteria developed by SMAQMD. The analyzed intersections were those that the project traffic study determined would operate below LOS D: the Fifth Avenue intersections with Olive, Nutmeg, and Maple streets. The relevant threshold for a potential CO hot spot was an intersection volume of more than 31,600 vph. The analyzed intersections year 2030 volumes with project traffic ranged from 16,770 to 21,110 vph, which is below the threshold for a localized CO hot spot.

Operational Toxic Air Contaminants

Following buildout of the project, operational activities would generate TAC emissions from area and mobile sources. Mobile sources of TACs would include residents' diesel-fueled vehicles coming to and from the project site and heavy-duty diesel delivery trucks serving the retail and office land uses. Area sources of TACs would include activities associated with the proposed retail uses. Residential and office land uses would not typically generate large sources of TAC emissions; however, retail land uses, including restaurants, could generate TAC emissions associated with their operations. Due to the close proximity of sensitive receptors, mobile and area sources associated with the project could expose sensitive receptors to TAC emissions.

Mobile sources of TAC emissions would be distributed throughout the region and not exclusively emitted at the project site. Mobile source TAC emissions that would occur exclusively on-site would include heavy-duty diesel-fueled trucks delivering products to the proposed commercial and retail land uses. Delivery trucks could idle on-site during these deliveries, which would expose the proposed residents and adjacent residents to diesel PM exhaust emissions. However, all heavy-duty trucks would be subject to the Airborne Toxics Control Measure (ATCM), California Code of Regulations (CCR) Title 13, Section 2485, that limits idling times to a maximum of 5 minutes when not in operation. In addition, delivery events would be intermittent and any diesel PM emissions associated with heavy-duty delivery trucks would cease following completion of the delivery. The daily threshold for a potential impact would be more than 100 commercial trucks or 40 refrigerated trucks delivering materials on a frequent basis. The project total of 6,109 square feet of commercial/retail space would not be expected to generate the level of heavy truck deliveries that would expose sensitive receptors to substantial TAC concentrations. Therefore, diesel PM emissions occurring on-site would be limited to intermittent delivery events and by the heavy-duty truck idling ATCM limitation. Thus, it is not expected that mobile source TAC emissions would expose nearby or proposed residential receptors to substantial sources of TACs.

It is unknown at the time of this analysis the types of businesses that would occupy retail space at the Olive and Nutmeg sites, and it is possible that restaurants and/or dry cleaners could be included as tenants. Restaurants emit organic gases from the cooking of animal fats and oils. Any food-preparation-related emissions would be controlled through an exhaust hood to a roof-top vent. It is possible that operation of the restaurant would require use of heavy-duty trucks equipped with transportation refrigeration storage units (TRUs) to deliver cold-stored food items. TRUs are typically powered by diesel fuel, which would result in another source of diesel PM from the project site. However, as discussed above, it is not anticipated that the retail establishments would experience high truck volumes (i.e., greater than 100 commercial trucks per day or 40 TRU-equipped trucks per day as defined by ARB as the screening level [ARB 2005]) delivering materials on a frequent basis. Dry cleaning facilities could use perchloroethylene, which has been identified by ARB as a TAC. All facilities that would use perchloroethylene are required to comply with the requirements of the Dry Cleaning ATCM, which established requirements for record keeping, operations, and maintenance of equipment that use perchloroethylene to avoid exposing nearby receptors and/or contaminating groundwater. It should be noted that the ARB has approved amendments to the Dry Cleaning ATCM that would phase-out the use of perchloroethylene dry cleaning machines and equipment by 2023. Therefore, on-site or off-site sensitive receptors would not be exposed to substantial TAC concentrations from area sources or TRUs.

4.4.9 Significance of Impacts

Emissions of criteria air pollutants during construction and operation of the project would be below the City's significance criteria and would result in *a less than significant air quality impact*.

4.4.10 Mitigation, Monitoring, and Reporting

No mitigation would be required.

4.4.11 Impact Analysis

Issue 4: Would the project exceed 100 pounds per day of Particulate Matter (PM) dust?

Per the City's Significance Determination Thresholds, air quality impacts may be significant if:

- The project would exceed 100 pounds per day of Particulate Matter (PM) dust.

Short-Term Construction Impacts

Fugitive PM_{10} and $PM_{2.5}$ dust emissions during grading would be the primary source of particulate emissions from project construction. Estimated daily volumes of these emissions, as well as CO emissions and ozone precursor emissions of VOC and NO_X, are shown in Table 4.4-5. The maximum daily particulate emissions would occur if demolition and grading at both the Nutmeg and Olive sites were to occur concurrently or overlap, and would result in estimated maximum daily PM_{10} and $PM_{2.5}$ emissions of 49.91 pounds and 13.55 pounds, respectively, which is below the thresholds of significance. Other sources of criteria air pollutant exhaust emissions (VOC, NO_X, and CO) from off-road diesel equipment, heavy-duty haul trucks, material delivery trucks, and construction worker vehicles are all shown in Table 4.4-5 to be below significance thresholds.

4.4.12 Significance of Impacts

The project would result in a *less than significant short-term impact* due to PM_{10} and $PM_{2.5}$ emissions from grading activities.

4.4.13 Mitigation, Monitoring, and Reporting

No mitigation would be required.

4.4.14 Impact Analysis

Issue 5: Would the project create objectionable odors affecting a substantial number of people?

Per the City's Significance Determination Thresholds, air quality impacts may be significant if:

- The project would create objectionable odors affecting a substantial number of people.

Odors

The project could generate odor sources during construction and operational activities. Construction-generated odors would occur from heavy-duty diesel equipment and diesel-fueled vehicles. Operational odors would be generated from operations associated with potential retail land uses. The potential odor impacts associated with construction and operation are discussed separately below.

During construction of the project, exhaust odors from diesel engines and emissions associated with the application of architectural coatings may be considered offensive to some individuals. However, because odors would be intermittent and temporary (i.e., approximately 18 months) and would disperse rapidly with distance from the source, construction-generated odors would not result in the exposure of a substantial number of receptors to objectionable odorous emissions. Furthermore, the project's compliance with SDAPCD Rule 67 (Architectural Coatings) would ensure that odors generated by short-term project construction would not affect a substantial number of people.

The project would involve residential, office, and retail land uses. Residential and office land uses are not typically the type of land uses that generate substantial odor emissions. However, depending on the type of retail that would be developed on the Olive Site and Nutmeg Site, nearby and proposed residences could be exposed to objectionable odor emissions. Restaurant and food service uses have the potential to generate sources of odor from garbage or food waste. While there is a potential for odors to occur, compliance with industry standard waste disposal methods and SDAPCD Rule 51 (Nuisance) would limit potential odor exposure. In addition, it is anticipated that any waste product from on-site operations with the potential to emit odors (e.g., trash enclosures) would be disposed in proper containers and/or handled in a manner that would not emit any objectionable odors. These sources are anticipated to be minor in the context of the project's dense urban setting. Thus, the project would not expose a substantial number of people to objectionable odors.

The potential for objectionable odor emissions from the project would primarily occur if a restaurant were to generate odor from garbage or food waste. While there is a potential for odors to occur, compliance with standard industry waste disposal methods and SDAPCD Rule 51 (Nuisance) would limit potential odor exposure by disposal into proper containers. This potential source of odors would be minor in the context of the project's dense urban setting and would not be expected to expose a substantial number of people to objectionable odors.

4.4.15 Significance of Impacts

The project would not generate objectionable odors affecting a substantial number of people and, therefore, the impact would be *less than significant*.

4.4.16 Mitigation, Monitoring, and Reporting

No mitigation would be required.

Table 4.4-1
San Diego Monitoring Stations – Ambient Air Quality

Pollutant	Averaging Time	Federal Primary Standards	California Air Quality Standards	Maximum Concentrations[1]					Number of Days Exceeding Federal Standard[2]					Number of Days Exceeding State Standard[2]				
				2004	2005	2006	2007	2008	2004	2005	2006	2007	2008	2004	2005	2006	2007	2008
Ozone (San Diego – 1110 Beardsley Street)	1 hour	none [3]	0.09 ppm	0.093	0.074	0.082	0.087	0.086	0	0	0	0	0	0	0	0	0	0
	8 hour	0.075 ppm	0.070 ppm	0.071	0.063	0.070	0.065	0.073	0	0	0	0	0	-	-	0	0	1
Carbon Monoxide (1133 Union Street)	1 hour	35 ppm	20 ppm	5.3	5.3	10.8	8.7	2.4	0	0	0	0	0	0	0	0	0	0
	8 hour	9 ppm	9.0 ppm	3.6	3.9	3.5	5.2	1.8	0	0	0	0	0	0	0	0	0	0
Sulfur Dioxide (San Diego – 1110 Beardsley Street)	24 hours	0.14 ppm	0.04 ppm	0.009	0.009	0.009	0.006	0.008	0	0	0	0	0	0	0	0	0	0
	Annual	0.03 ppm	None	0.004	0.003	0.004	0.003	0.003	0	0	0	0	0	0	0	0	0	0
Nitrogen Dioxide (1110 Beardsley Street)	1 hour	0.100 ppm	0.18 ppm	0.094	0.100	0.094	0.098	0.091	–	–	–	–	–	0	0	0	0	0
	Annual	0.053 ppm	0.030 ppm	0.020	0.023	0.021	0.018	0.019	0	0	0	0	0	0	0	0	0	0
PM_{10}[4] (1110 Beardsley Street)	24 hours	150 $\mu g/m^3$	50 $\mu g/m^3$	68	77	71	110	58	0	0	0	0	0	0	0	0	0	0
	Annual	Revoked	20 $\mu g/m^3$	33	37	34	30	29	–	–	–	–	–	0	0	0	0	0
$PM_{2.5}$ (1110 Beardsley Street)	24 hours	35 $\mu g/m^3$	None	42.9	44.1	63.3	69.6	42.0	0	0	0	1	0	–	–	–	–	–
	Annual	15 $\mu g/m^3$	12 $\mu g/m^3$	13.77	15.64	13.14	12.74	13.18	0	0	0	0	0	0	1	0	0	0

"–" = data not available or applicable.

(1) Concentration units for ozone, carbon monoxide, and nitrogen dioxide are in parts per million (ppm). Concentration units for PM_{10} and $PM_{2.5}$ are in micrograms per cubic meter ($\mu g/m^3$).

(2) For annual standards, a value of 1 indicates that the standard has been exceeded.

(3) The federal 1-hour ozone standard was revoked in June 2005.

(4) PM_{10} data are recorded separately for federal and state purposes because EPA and California methods are slightly different. Federal values are shown. PM_{10} is measured every 6 days; the number of days exceeding standards is projected to a 365-day base from the measurements.

Note: The downtown San Diego monitoring station was moved from on July 14, 2005, from 12th Street to Beardsley Street. Data shown above for 2004 are from the 12th Street monitoring station. For 2005 data, the higher of the 12th Street and Beardsley Street values is shown above.

Sources: EPA 2009b; SDAPCD 2009

Table 4.4-2
National and California Ambient Air Quality Standards

Pollutant	Averaging Time	NAAQS[1]		CAAQS[2]
		Primary[3]	Secondary[4]	Concentration[5]
Ozone (O_3)[6]	1-Hour	–	Same as Primary Standard	0.09 ppm (180 $\mu g/m^3$)
	8-Hour	0.075 ppm (147 $\mu g/m^3$)		0.070 ppm (137 $\mu g/m^3$) [9]
Carbon Monoxide (CO)	8-Hour	9 ppm (10 mg/m^3)	None	9.0 ppm (10 mg/m^3)
	1-Hour	35 ppm (40 mg/m^3)		20 ppm (23 mg/m^3)
	8-Hour (Lake Tahoe)	–	–	6 ppm (7 mg/m^3)
Nitrogen Dioxide (NO_2)	Annual Average	0.053 ppm (100 $\mu g/m^3$)	Same as Primary Standard	0.030 ppm (57 $\mu g/m^3$)[10]
	1-Hour	0.100 ppm	–	0.18 ppm (339 $\mu g/m^3$)[10]
Sulfur Dioxide (SO_2)	Annual Average	0.030 ppm (80 $\mu g/m^3$)	–	–
	24-Hour	0.14 ppm (365 $\mu g/m^3$)	–	0.04 ppm (105 $\mu g/m^3$)
	3-Hour	–	0.5 ppm (1300 $\mu g/m^3$)	–
	1-Hour	–	-	0.25 ppm (655 $\mu g/m^3$)
Respirable Particulate Matter (PM_{10})[7]	24-Hour	150 $\mu g/m^3$	Same as Primary Standard	50 $\mu g/m^3$
	Annual Arithmetic Mean	Revoked		20 $\mu g/m^3$ note 7
Fine Particulate Matter ($PM_{2.5}$)[8]	24-Hour	35 $\mu g/m^3$	Same as Primary Standard	–
	Annual Arithmetic Mean	15 $\mu g/m^3$		12 $\mu g/m^3$
Lead (Pb)	30-Day Average	–	–	1.5 $\mu g/m^3$
	Calendar Quarter	1.5 $\mu g/m^3$	Same as Primary Standard	–
	Rolling 3-Month Average	0.15 $\mu g/m^3$	Same as Primary Standard	–
Hydrogen Sulfide (H_2S)	1-Hour	No Federal Standards		0.03 ppm (42 $\mu g/m^3$)
Sulfates (SO_4)	24-Hour			25 $\mu g/m^3$
Visibility Reducing Particles	8-Hour (10 AM to 6 PM, Pacific Standard Time)			Extinction coefficient of 0.23 per km-visibility of ten miles or more (0.07/30 miles for Lake Tahoe) due to particles when the relative humidity is less than 70%.
Vinyl chloride[9]	24-Hour			0.01 ppm (26 $\mu g/m^3$)

1 NAAQS (other than O_3, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact EPA for further clarification and current federal policies.

2 California Ambient Air Quality Standards for O_3, CO (except Lake Tahoe), SO_2 (1- and 24-hour), NO_2, PM_{10}, $PM_{2.5}$, and visibility reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded.

3 National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

4 National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

5 Concentration expressed first in units in which it was promulgated. Ppm in this table refers to ppm by volume or micromoles of pollutant per mole of gas.

6 On June 15, 2005, the 1-hour ozone standard was revoked for all areas except the 8-hour ozone nonattainment Early Action Compact Areas (those areas do not yet have an effective date for their 8-hour designations). Additional information on federal ozone standards is available at http://www.epa.gov/oar/oaqps/greenbk/index.html.

7 Due to a lack of evidence linking health problems to long-term exposure to coarse particle pollution, EPA revoked the annual PM_{10} standard on December 17, 2006.

8 Effective December 17, 2006, EPA lowered the $PM_{2.5}$ 24-hour standard from 65 $\mu g/m^3$ to 35 $\mu g/m^3$.

9 The ARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

10 The nitrogen dioxide ambient air quality standard was amended to lower the 1-hr standard to 0.18 ppm and establish a new annual standard of 0.030 ppm. These changes became effective March 20, 2008.

ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter; mg/m^3 = milligrams per cubic meter; km = kilometers
Source: ARB 2010a.

Table 4.4-3
Summary of 2008 Emissions Inventory for Criteria Air Pollutants and Precursors (San Diego County)

Source Type/Category	Estimated Annual Average Emissions (Tons per Day)					
	VOC	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$
Stationary Sources						
Fuel Combustion	3.31	21.77	8.60	0.38	1.81	1.67
Waste Disposal	2.13	0.10	0.26	0.04	0.09	0.07
Cleaning and Surface Coating	15.21	–	–	–	–	–
Petroleum Production and Marketing	9.04	0.01	0.01	–	–	–
Industrial Processes	2.58	0.36	0.21	0.02	6.69	4.39
Subtotal (Stationary Sources)	32.27	22.23	9.08	0.45	8.59	6.13
Areawide Sources						
Solvent Evaporation	30.62	–	–	–	0.01	0.01
Miscellaneous Processes	5.14	28.07	2.73	0.22	94.52	16.09
Subtotal (Areawide Sources)	35.76	28.07	2.73	0.22	94.52	16.10
Mobile Sources						
On-Road Motor Vehicles	51.02	531.19	100.55	0.48	5.60	4.00
Other Mobile Sources	37.59	242.67	67.20	3.60	5.82	5.33
Subtotal (Mobile Sources)	88.60	773.86	167.75	4.08	11.42	9.32
Total for San Diego County	**156.64**	**824.16**	**179.56**	**4.75**	**114.53**	**31.55**

VOC = volatile organic compounds; CO = carbon monoxide; NO_X = oxides of nitrogen; SO_X = oxides of sulfur;
PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter
Totals in table may not add exactly due to rounding.
Source: ARB 2009

Table 4.4-4
Estimated Annual Operational Emissions (pounds/day)

	VOC	NO_X	CO	PM_{10}	$PM_{2.5}$
Mobile Source Emissions	1.58	2.71	17.30	2.44	0.50
Area Source Emissions	0.94	0.24	3.30	0.01	0.01
Total	**2.52**	**2.95**	**20.60**	**2.45**	**0.51**
Threshold of Significance [1]	*273*	*273*	*547*	*383*	*547*
Exceeds threshold?	No	No	No	No	No

Source: Data modeled by AECOM 2010
Note: Modeling is based on operational year 2010.
[1]Thresholds of significance have been obtained from the EPA's New Source Review thresholds.

Table 4.4-5
Estimated Maximum Daily Construction Emissions (pounds/day)

Year/Construction Activity	Pollutants (pounds/day)[1]				
	VOC	**NO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**
Year 2011					
Demolition	1.42	11.13	6.94	4.14	1.38
Nutmeg Site Grading	5.72	58.02	26.86	14.8	4.99
Olive Site Grading	*6.60*	*70.28*	*31.24*	*20.03*	*6.42*
Nutmeg Site Construction (fine site grading)[2]	*3.04*	*25.05*	*13.50*	*5.99*	*2.14*
Nutmeg Site Construction (building construction)	2.11	17.23	19.99	1.01	0.87
Maximum Daily 2011 Emissions[3]	9.64	95.33	44.74	26.02	8.56
Year 2012					
Olive Site Grading	6.15	*64.18*	*29.20*	*19.75*	*6.16*
Nutmeg Site Construction (building construction)	1.94	*15.74*	*18.70*	*0.95*	*0.81*
Nutmeg Site Construction (architectural coating)	*22.13*	0.02	0.36	0.00	0.00
Olive Site Construction (fine site grading)[2]	2.86	23.49	12.92	4.97	1.87
Olive Site Construction (building construction)	*2.40*	19.89	26.36	1.17	0.98
Cathedral Renovation/Expansion (site grading)	2.86	23.49	12.92	1.94	1.24
Cathedral Renovation/Expansion (building construction)	1.14	8.64	5.42	0.55	0.51
Cathedral Renovation/Expansion (architectural coating)	5.74	0.00	0.06	0.00	0.00
Maximum Daily 2012 Emissions[4]	24.53	79.92	47.90	20.70	6.97
Year 2013					
Olive Site Construction (building construction)	2.21	*18.00*	*24.58*	*1.07*	*0.89*
Olive Site Construction (architectural coating)	*34.72*	0.03	0.51	0.01	0.00
Maximum Daily 2013 Emissions[5]	34.72	18.00	24.58	1.07	0.89
Maximum Daily Emissions	34.72	95.33	47.90	26.02	8.56
Threshold of Significance [6]	***273***	***273***	***547***	***100***	***100***
Exceeds Threshold?	No	No	No	No	No

1 Emissions from the overlapping construction activities that would generate the maximum daily construction emissions in a year have been italicized. The emissions for other construction activities are shown for informational purposes and are not intended to be additive.
2 Fine site grading represents the site preparation for the Olive and Nutmeg sites following construction of the underground parking lots.
3 Maximum daily emissions in 2011 occur during the overlap of the Olive Site Grading and Nutmeg Site construction (fine site grading).
4 Maximum daily emissions of VOC in 2012 occur during the overlap of Nutmeg Site construction (architectural coating) and Olive Site Construction (building construction). Maximum daily emissions of NO_X, CO, PM_{10}, and $PM_{2.5}$ in 2012 occur during the overlap of Olive Site Grading and Nutmeg Site construction (building construction).
5 Maximum daily emissions of VOC in 2013 occur during Olive Site construction (architectural coating). Maximum daily emissions of NO_X, CO, PM_{10}, and $PM_{2.5}$ in 2013 occur during Olive Site construction (building construction).
6 Thresholds of significance for VOC, NO_X, and CO have been obtained from the EPA's New Source Review thresholds. Thresholds of significance for PM_{10} and $PM_{2.5}$ have been obtained from the City's CEQA Significance Determination Thresholds.
Note: All emissions shown represent the maximum daily emissions that would occur during each construction activity and year.
Source: Data modeled by AECOM 2010. Detailed modeling assumptions and outputs are available in Appendix B.

Table 4.4-6
Estimated Annual Operational Emissions (pounds/day)

Scenario/Emissions Source	Pollutants (pounds/day)[1]				
	VOC	NO_X	CO	PM_{10}	$PM_{2.5}$
Project[2]					
Mobile Sources	11.39	19.14	126.17	23.15	4.62
Area Sources	6.50	1.94	5.31	0.05	0.05
Gross Project Emissions	**17.89**	**21.08**	**131.48**	**23.20**	**4.67**
Existing Emissions[3]					
Mobile Sources	1.58	2.71	17.30	2.44	0.50
Area Sources	0.94	0.24	3.30	0.01	0.01
Gross Existing Emissions	**2.52**	**2.95**	**20.60**	**2.45**	**0.51**
Net Change in Operational Emissions	**15.37**	**18.13**	**110.88**	**20.75**	**4.16**
Threshold of Significance [4]	*273*	*273*	*547*	*383*	*547*
Exceeds Threshold?	No	No	No	No	No

1 Pollutant emissions shown represent the maximum daily emissions that would occur in the summer or winter.
2 project emissions represent operational emissions associated with the Olive Site, Nutmeg Site, and the renovated/expanded cathedral in 2013.
3 Existing emissions represent the operational emissions associated with the Park Chateau Apartments and the cathedral in 2009.
4 Thresholds of significance for have been obtained from the EPA's New Source Review thresholds.

Source: Data modeled by AECOM 2010. Detailed modeling assumptions and outputs are available in Appendix B.

4.5 HISTORICAL RESOURCES

A Technical Report was prepared by Kelley & VerPlanck Historical Resources Consulting (2008) to evaluate the potential impacts from the proposed rehabilitation of St. Paul's Cathedral and the addition of new structures on the Olive Street project site. The report is attached as Appendix E.

4.5.1 Existing Conditions

Archaeological Resources

The project area is known to be within an area where archaeological resources have been discovered. An analysis conducted by a City archaeological specialist, which included a database review and a site visit, did not reveal the presence of any known archaeological sites within or adjacent to the project site. Due to the fully improved nature of the Olive Site and the covering of the Nutmeg Site with decomposed granite, City DSD staff advised that a site survey would likely not confirm whether significant archaeological resources were present (City of San Diego 2008a) and, therefore, no archaeological resource site survey was conducted.

Cathedral Church of St. Paul

The Cathedral Church of St. Paul in San Diego is one of the most recent examples of a Gothic Revival cathedral in the United States. It was built in four distinct phases, beginning in 1928 with the Parish House (now the Great Hall). The Depression and World War II halted plans to build a new church on the site for more than 2 decades. In 1949, Phillip Frohman was hired to prepare plans to add a new church south of the Parish Hall, which resulted in construction of the nave, completed in December 1951. In 1957, Frohman was again hired and plans were prepared that depict the finished Cathedral complex, including a permanent sanctuary and a new north transept and chapel. A portion of the proposed expansion was completed in 1960, consisting of the South Transept and the Chapel of the Holy Family. In 1968, George Hatch designed the Hatch Building, a concrete office building that stands facing Sixth Avenue. Since then, no further additions to the Cathedral have been realized, although the exterior was restored in 2001, which won a local "Orchids" architectural award.

The Gothic Revival style arose in England in the 19th century and was soon adopted in the United States by notable architects such as Richard Upjohn for the Trinity Church in New York (1839) and by James Renwick for St. Patrick's Cathedral in New York (1853). Notable works by the firm of Cram, Goodhue & Ferguson include St. Thomas's Church in New York (1906), St. Paul's Cathedral of Detroit (1907), and St. John the Divine in New York (1892). By the 1920s, the style began to decline, although practitioners such as Philip Frohman kept the style alive with works like the Cathedral of St. Peter and St. Paul, more popularly known as the National Cathedral (built between 1921 and 1990), and St. Paul's Cathedral in San Diego.

The Cathedral Church of St. Paul is not listed in the National Register of Historic Places or the California Register of Historical Resources (CRHR). Nor is it a San Diego City Landmark. The congregation of St. Paul's has exercised its rights under California Public Resources Code Section 37361 to remain exempt from local historical designation. However, that action does not preclude the City of San Diego, as Lead Agency, from independently determining that St. Paul's Cathedral is a historical resource under CEQA, pursuant to Public Resources Code Sections 21084.1 and Section 15064.5(a)(3) of the CEQA Guidelines. The City Historical Resources Board (HRB) staff reviewed the VerPlanck report and determined it to be a significant historical resource under CEQA based on the Cathedral's importance in local religious history, its architecture, and its design by a Master Architect, Philip Frohman. Therefore, the property has been determined by HRB staff to be eligible for the CRHR pursuant to CEQA. HRB staff has also determined that the proposed renovations to the Cathedral would be in conformance with Secretary of Interior Standards for Treatment of Historic Properties and related Guidelines (City of San Diego 2008a).

Park Chateau Apartment Building

Constructed in 1939, the Park Chateau apartment building is located within the project site at the southeast corner of Fifth Avenue and Olive Street. It is a two-story Spanish Eclectic-style bungalow court containing 12 apartment units. It was brought before the City HRB on April 12, 2007, for consideration to designate the property as a historical resource. HRB staff prepared a report, which concluded that the property did not meet any of the HRB criteria for designation, and recommended that it not be designated as a historical resource. HRB approved its staff's recommendation by a vote of 8 to 0. Based on this determination, the project's architectural impact analysis addresses only St. Paul's Cathedral.

Queen Palms

The Olive Site project frontage on Sixth Avenue contains 14 Queen Palms, of which 12 are planted in pairs along both sides of the sidewalk (Figure 4.5-1). Similarly paired Queen Palm plantings exist within Balboa Park along the east side of Sixth Avenue and at off-site areas extending from Elm Street near Interstate 5 to Upas Street. The original planting of these trees dates back to 1915 (Puplava and Sirois, undated) and are believed to have been planted under the direction of Kate Sessions, the official "City Gardener" who, beginning in the early 1900s, operated a nursery on City property in the northwest corner of Balboa Park. Her agreement with the City was that she would plant 100 trees a year in Balboa Park and furnish 300 more for planting throughout the City. Kate Sessions has come to be known as the "Mother of Balboa Park" (MacPhail 1976).

While many of the original palms remain, they are approximately 95 years old and have an average life expectancy of 100 to 125 years (Cornerstone Consultings 2007). More recently installed replacement Queen Palms are evident in the area, including within Balboa Park. On the west side of Sixth Avenue, the block between Laurel and Maple streets contains more recent plantings of double rows of Queen Palms, apparently after the construction of the Park Laurel residential towers. The recently completed multi-family residential building at 2626 Sixth Avenue, between Maple and Nutmeg streets, has one historic Queen Palm remaining and three new Queen Palms. The palms at both of these new planting areas are approximately 20 to 30 feet in height.

4.5.2 Impact Analysis

Issue 1: Would the project result in the alteration and/or destruction of a prehistoric or historic building, structure, object, or site, including an architecturally significant building or site?

Per the City's Significance Determination Thresholds, impacts to historical resources may be significant if the project would result in:

- The alteration and/or the destruction of a prehistoric or historic building, including an architecturally significant building or site.

Archaeological Resources

Due to the known presence of archaeological resources in the project area, the site is presumed to have the potential for on-site resources that would be impacted by the planned excavation to construct the proposed residential and commercial buildings. The analysis conducted by a City archaeological specialist did not reveal the presence of any known archaeological sites within or adjacent to the two project sites. Due to the extent of existing development and surface disturbance of the site, it would be infeasible to conduct archaeological surveys at this time.

4.5.3 Significance of Impacts

Archaeological resources, if present on-site, could be substantially damaged or destroyed during the excavation for the parking garages on the Nutmeg and Olive project sites. Damage or destruction of archaeological resources would be a *significant project impact* **(Impact AR-1)**.

4.5.4 Mitigation, Monitoring, and Reporting

Impact AR-1: Archaeological Resources

Mitigation Measure AR-1:

I. Prior to Permit Issuance

A. Entitlements Plan Check

1. Prior to issuance of any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits or a Notice to Proceed for Subdivisions, but prior to the first preconstruction meeting, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Archaeological Monitoring and Native American monitoring have been noted on the applicable construction documents through the plan check process.

B. Letters of Qualification have been submitted to ADD

1. The applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the project and the names of all persons involved in the archaeological monitoring program, as defined in the City of San Diego Historical Resources Guidelines (HRG). If applicable, individuals involved in the archaeological monitoring program must have completed the 40-hour HAZWOPER training with certification documentation.
2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the archaeological monitoring of the project meet the qualifications established in the HRG.
3. Prior to the start of work, the applicant must obtain written approval from MMC for any personnel changes associated with the monitoring program.

II. Prior to Start of Construction

A. Verification of Records Search

1. The PI shall provide verification to MMC that a site specific records search (1/4 mile radius) has been completed. Verification includes, but is not limited to a copy of a confirmation letter from South Coastal Information Center, or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.
3. The PI may submit a detailed letter to MMC requesting a reduction to the ¼ mile radius.

B. PI Shall Attend Precon Meetings

1. Prior to beginning any work that requires monitoring; the Applicant shall arrange a Precon Meeting that shall include the PI, Native American consultant/monitor (where Native American resources may be impacted), Construction Manager (CM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified Archaeologist and Native American Monitor shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Archaeological Monitoring program with the Construction Manager and/or Grading Contractor.
   a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.
2. Identify Areas to be Monitored
   a. Prior to the start of any work that requires monitoring, the PI shall submit an Archaeological Monitoring Exhibit (AME) (with verification that the AME has been reviewed and approved by the Native American consultant/monitor when Native American resources may be impacted) based on the appropriate construction documents (reduced to 11x17) to MMC identifying the areas to be monitored including the delineation of grading/excavation limits.
   b. The AME shall be based on the results of a site specific records search as well as information regarding existing known soil conditions (native or formation).

3. When Monitoring Will Occur

   a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.

   b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate site conditions such as depth of excavation and/or site graded to bedrock, etc., which may reduce or increase the potential for resources to be present.

III. During Construction

A. Monitor(s) Shall be Present During Grading/Excavation/Trenching

1. The Archaeological Monitor shall be present full-time during all soil disturbing and grading/excavation/trenching activities which could result in impacts to archaeological resources as identified on the AME. **The Construction Manager is responsible for notifying the RE, PI, and MMC of changes to any construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances OSHA safety requirements may necessitate modification of the AME.**

2. The Native American consultant/monitor shall determine the extent of their presence during soil disturbing and grading/excavation/trenching activities based on the AME and provide that information to the PI and MMC. If prehistoric resources are encountered during the Native American consultant/monitor's absence, work shall stop and the Discovery Notification Process detailed in Section III.B-C and IV.A-D shall commence.

3. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as modern disturbance post-dating the previous grading/trenching activities, presence of fossil formations, or when native soils are encountered that may reduce or increase the potential for resources to be present.

4. The archaeological and Native American consultant/monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVR's shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion)**, and in the case of ANY discoveries. The RE shall forward copies to MMC.

B. Discovery Notification Process

1. In the event of a discovery, the Archaeological Monitor shall direct the contractor to temporarily divert all soil disturbing activities, including but not limited to digging, trenching, excavating or grading activities in the area of discovery and in the area reasonably suspected to overlay adjacent resources and immediately notify the RE or BI, as appropriate.
2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.
3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.
4. No soil shall be exported off-site until a determination can be made regarding the significance of the resource specifically if Native American resources are encountered.

C. Determination of Significance

1. The PI and Native American consultant/monitor, where Native American resources are discovered shall evaluate the significance of the resource. If Human Remains are involved, follow protocol in Section IV below.
   a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required.
   b. If the resource is significant, the PI shall submit an Archaeological Data Recovery Program (ADRP) which has been reviewed by the Native American consultant/monitor, and obtain written approval from MMC. Impacts to significant resources must be mitigated before ground disturbing activities in the area of discovery will be allowed to resume. **Note: If a unique archaeological site is also an historical resource as defined in CEQA, then the limits on the amount(s) that a project applicant may be required to pay to cover mitigation costs as indicated in CEQA Section 21083.2 shall not apply.**
   c. If the resource is not significant, the PI shall submit a letter to MMC indicating that artifacts will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that that no further work is required.

IV. Discovery of Human Remains

If human remains are discovered, work shall halt in that area and no soil shall be exported off-site until a determination can be made regarding the provenance of the human remains; and the following procedures as set forth in CEQA Section 15064.5(e), the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) shall be undertaken:

A. Notification

1. Archaeological Monitor shall notify the RE or BI as appropriate, MMC, and the PI, if the Monitor is not qualified as a PI. MMC will notify the appropriate Senior Planner in the Environmental Analysis Section (EAS) of the Development Services Department to assist with the discovery notification process.
2. The PI shall notify the Medical Examiner after consultation with the RE, either in person or via telephone.

B. Isolate discovery site

1. Work shall be directed away from the location of the discovery and any nearby area reasonably suspected to overlay adjacent human remains until a determination can be made by the Medical Examiner in consultation with the PI concerning the provenance of the remains.
2. The Medical Examiner, in consultation with the PI, will determine the need for a field examination to determine the provenance.
3. If a field examination is not warranted, the Medical Examiner will determine with input from the PI, if the remains are or are most likely to be of Native American origin.

C. If Human Remains **ARE** determined to be Native American

1. The Medical Examiner will notify the Native American Heritage Commission (NAHC) within 24 hours. By law, **ONLY** the Medical Examiner can make this call.
2. NAHC will immediately identify the person or persons determined to be the Most Likely Descendent (MLD) and provide contact information.
3. The MLD will contact the PI within 24 hours or sooner after the Medical Examiner has completed coordination, to begin the consultation process in accordance with CEQA Section 15064.5(e), the California Public Resources and Health & Safety Codes.

4. The MLD will have 48 hours to make recommendations to the property owner or representative, for the treatment or disposition with proper dignity, of the human remains and associated grave goods.
5. Disposition of Native American Human Remains will be determined between the MLD and the PI, and, if:
   a. The NAHC is unable to identify the MLD, OR the MLD failed to make a recommendation within 48 hours after being notified by the Commission; OR;
   b. The landowner or authorized representative rejects the recommendation of the MLD and mediation in accordance with PRC 5097.94 (k) by the NAHC fails to provide measures acceptable to the landowner, THEN,
   c. In order to protect these sites, the Landowner shall do one or more of the following:
      (1) Record the site with the NAHC;
      (2) Record an open space or conservation easement on the site;
      (3) Record a document with the County.
   d. Upon the discovery of multiple Native American human remains during a ground disturbing land development activity, the landowner may agree that additional conferral with descendants is necessary to consider culturally appropriate treatment of multiple Native American human remains. Culturally appropriate treatment of such a discovery may be ascertained from review of the site utilizing cultural and archaeological standards. Where the parties are unable to agree on the appropriate treatment measures the human remains and buried with Native American human remains shall be reinterred with appropriate dignity, pursuant to Section 5.c., above.

D. If Human Remains are **NOT** Native American

1. The PI shall contact the Medical Examiner and notify them of the historic era context of the burial.
2. The Medical Examiner will determine the appropriate course of action with the PI and City staff (PRC 5097.98).
3. If the remains are of historic origin, they shall be appropriately removed and conveyed to the San Diego Museum of Man for analysis. The decision for internment of the human remains shall be made in consultation with MMC, EAS,

the applicant/landowner, any known descendant group, and the San Diego Museum of Man.

V. Night and/or Weekend Work

A. If night and/or weekend work is included in the contract

1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the precon meeting.

2. The following procedures shall be followed.

   a. No Discoveries

      In the event that no discoveries were encountered during night and/or weekend work, the PI shall record the information on the CSVR and submit to MMC via fax by 8AM of the next business day.

   b. Discoveries

      All discoveries shall be processed and documented using the existing procedures detailed in Sections III - During Construction, and IV – Discovery of Human Remains. Discovery of human remains shall always be treated as a significant discovery.

   c. Potentially Significant Discoveries

      If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction and IV-Discovery of Human Remains shall be followed.

   d. The PI shall immediately contact MMC, or by 8AM of the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.

B. If night and/or weekend work becomes necessary during the course of construction

1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.

2. The RE, or BI, as appropriate, shall notify MMC immediately.

C. All other procedures described above shall apply, as appropriate.

VI. Post Construction

A. Preparation and Submittal of Draft Monitoring Report

1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Historical Resources Guidelines (Appendix C/D) which describes the results, analysis, and conclusions of all phases of the Archaeological Monitoring Program (with appropriate graphics) to MMC for review and approval within 90 days following the completion of monitoring. **It should be noted that if the PI is unable to submit the Draft Monitoring Report within the allotted 90-day timeframe resulting from delays with analysis, special study results or other complex issues, a schedule shall be submitted to MMC establishing agreed due dates and the provision for submittal of monthly status reports until this measure can be met.**

   a. For significant archaeological resources encountered during monitoring, the Archaeological Data Recovery Program shall be included in the Draft Monitoring Report.

   b. Recording Sites with State of California Department of Parks and Recreation

      The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) any significant or potentially significant resources encountered during the Archaeological Monitoring Program in accordance with the City's Historical Resources Guidelines, and submittal of such forms to the South Coastal Information Center with the Final Monitoring Report.

2. MMC shall return the Draft Monitoring Report to the PI for revision or, for preparation of the Final Report.

3. The PI shall submit revised Draft Monitoring Report to MMC for approval.

4. MMC shall provide written verification to the PI of the approved report.

5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.

B. Handling of Artifacts

1. The PI shall be responsible for ensuring that all cultural remains collected are cleaned and catalogued

2. The PI shall be responsible for ensuring that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; that faunal

material is identified as to species; and that specialty studies are completed, as appropriate.

3. The cost for curation is the responsibility of the property owner.

C. Curation of artifacts: Accession Agreement and Acceptance Verification

1. The PI shall be responsible for ensuring that all artifacts associated with the survey, testing and/or data recovery for this project are permanently curated with an appropriate institution. This shall be completed in consultation with MMC and the Native American representative, as applicable.

2. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.

3. When applicable to the situation, the PI shall include written verification from the Native American consultant/monitor indicating that Native American resources were treated in accordance with state law and/or applicable agreements. If the resources were reinterred, verification shall be provided to show what protective measures were taken to ensure no further disturbance occurs in accordance with Section IV – Discovery of Human Remains, Subsection 5.

D. Final Monitoring Report(s)

1. The PI shall submit one copy of the approved Final Monitoring Report to the RE or BI as appropriate, and one copy to MMC (even if negative), within 90 days after notification from MMC that the draft report has been approved.

2. The RE shall, in no case, issue the Notice of Completion and/or release of the Performance Bond for grading until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

4.5.5 Impact Analysis

Issue 2: Would the project result in the alteration and/or destruction of a prehistoric or historic building, structure, object, or site, including an architecturally significant building or site?

Per the City's Significance Determination Thresholds, impacts to historical resources may be significant if the project would result in:

- The alteration and/or the destruction of a prehistoric or historic building, including an architecturally significant building or site.

Cathedral Church of St. Paul

The congregation of St. Paul's Cathedral seeks to complete the unfinished Cathedral according to Frohman's 1957 plans. The project would be realized in four phases as described in Section 3.2.3 of the EIR. This would include demolition of the non-historic 1968 Hatch building, removal of the wood-frame 1951 sanctuary and sacristy and replacement with a new sanctuary/choir area, sacristy, north transept, and basement below. A new lantern tower would be constructed above the east end of the Cathedral Nave and two bell towers would be added to the Fifth Avenue façade. Architectural elevations of the proposed Cathedral improvements are shown in Figure 4.5-2. Project elevation drawings in Figures 3-2a and 3-2b indicate the proposed Cathedral improvements. Renderings with the new bell towers and lantern tower are shown in Figures 3-3a, 3-3b, and 3-3c.

<ins>Determination of Cathedral as an Historic Resource</ins>

The project applicant and the representatives of St. Paul's Cathedral have concurred with the determination by City HRB that the Cathedral is a significant historical resource under CEQA and, therefore, that renovations should conform to the U.S. Secretary of Interior Standards for Treatment of Historic Properties. According to CEQA Guidelines Section 15064.5(b), a "project with an effect that may cause a substantial adverse change in the significance of an historic resource is a project that may have a significant effect on the environment."

<ins>Determination of Significant Adverse Change under CEQA</ins>

Per CEQA Guidelines Section 15064.5(b)(1), "substantial adverse change" is defined as, "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historic resource would be materially impaired." The significance of an historic resource is "materially impaired" when a project "demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance" and that justify or account for its inclusion in, or eligibility for inclusion in, the CRHR (CEQA Guidelines Section 15064.5(b)(1)).

The National Park Service (NPS) published the *Secretary of the Interior's Standards for Rehabilitation and Illustrated Guidelines for Rehabilitating Historic Buildings* (Standards), which provide guidance for reviewing proposed work involving historic properties (NPS 1995). The Standards are used by federal agencies in evaluating work on historic properties. The Standards have also been adopted by local government bodies across the country for reviewing alterations to historic properties under local preservation ordinances. Under California law, however, conformance with the Standards does not determine whether a project would cause a substantial adverse change in the significance of a historic resource. Rather, projects that comply with the Standards benefit from a regulatory presumption that they would have a less than significant adverse impact on a historic resource.

There are four different treatments outlined in the Standards: Preservation, Rehabilitation, Restoration, and Reconstruction. All four treatments vary in regard to the degree of alteration allowed, with Preservation being the most restrictive and Rehabilitation being the most flexible. According to the Standards, Rehabilitation is defined as "the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values." Rehabilitation is the only one of the four treatments that allows for the construction of an addition to accommodate a change in use or additional program space. However, the Rehabilitation Standards recommend that new additions to historic buildings be designed "in a manner that makes clear what is historic and what is new." Specifically, the Standards recommend as follows:

> "New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment."

The project proposes to rehabilitate the Cathedral in compliance with specific rehabilitation standards in the NPS Standards. Project compliance with each of the rehabilitation standards was evaluated in the attached Kelley & VerPlanck Technical Report (Appendix E). The following summarizes statements from the report that support the project's compliance with the rehabilitation standards:

- The building will be continued to be used as the congregation's Cathedral.
- The project will remove only the historically non-contributing elements, including the 1968 Hatch Building and the 1951 sanctuary and sacristy.

- The project will not result in the removal of distinctive materials, features, finishes, or construction techniques or examples of craftsmanship, nor will it alter features, spaces, or spatial relationships that characterize the property.
- The project will complete the cathedral according to Philip Frohman's 1957 drawings. Minor adjustment to the plan will be done to accommodate a slightly larger sacristy.
- The project will replicate what is depicted in Frohman's plans, using in-kind materials (concrete, stucco, and cast stone) to complete the cathedral as it was designed.
- Phases III and IV will add a lantern for natural light above the crossing and two bell towers above the entry portals at the west end. Although Frohman's 1957 plans do not show any towers, a rendering from 1948 shows a spire at the crossing. In addition, the entry portals at the west end feature thick concrete walls on all four sides that are clearly intended to take the additional load of towers.
- The lantern and the bell towers are designed to be compatible with the historic building, utilizing similar building techniques, materials, finishes, windows, and ornament.
- Although the new work will not be deliberately differentiated from the old, the intent of the rehabilitation is to complete the cathedral according to Philip Frohman's 1957 plans. The project will not destroy historic materials, features, or spatial relationships that characterize the property. Because the work in Phases I and II is intended to realize Frohman's 1957 design, the new work is explicitly designed to blend in with the old. To do otherwise would detract from the existing historic building. The new work is integral to the historic form and volume of the building and not a discreet element that can be removed at a later date. In regard to compatibility, the new work will be identical to the historic work, matching the original in regard to construction type, materials, finishes, and detailing of doors and windows. The form of the new arcade, sanctuary, north transept, and sacristy will also replicate what is shown in the 1957 plans.

The project's replication of the existing historic architecture is a reasonable effort to complete the work in a compatible manner. There are many examples of church architecture that were completed over many phases and over many years, even over many generations. To purposely alter construction type, materials, finishes, and detailing to distinguish the new from the old would do a disservice to the architectural integrity of the completed Cathedral.

4.5.6 Significance of Impacts

Cathedral Church of St. Paul

Plans for the improvements to the Cathedral as submitted to City Plan-Historic staff have been determined to comply with the Secretary of the Interior's Standards and would not result in a significant adverse impact to historical resources. However, any deviation from the plans reviewed by City Plan-Historic staff could result in a *significant impact to a Historic Resource* **(Impact HR-1)**. All other improvements and demolition, including completion of improvements per the original architectural plans and demolition of the improvements from 1951 and the 1968 Hatch Building, would be a *less than significant impact*.

Queen Palms

The 12 Queen Palms planted in pairs and two additional single plantings along the project frontage on Sixth Avenue, represent an important part of landscape history due to the age of the trees and their association with an important figure in the community's landscape development. They are also noteworthy because of their association with landscape improvements made for the Panama–California Exposition held in Balboa Park during 1915 and 1916. Nine Queen Palms would be directly impacted by construction of Olive Building and four Queen Palms (one of which is non-historic) would be impacted by Cathedral expansion and are proposed to be removed, stored during construction, and replaced. One Queen Palm at the southeast corner of the Cathedral would not be impacted. Figure 4.5-1 shows the location of the existing palms and those that would be impacted. Destruction or alteration of the historic Queen Palms landscape element would be a *significant project impact* **(Impact HR-2)**.

4.5.7 Mitigation, Monitoring, and Reporting

Impact HR-1: Historic Architectural Resources

Mitigation Measure HR-1: Prior to the issuance of any construction permits, including but not limited to, the first grading permit, demolition plans/permits, and building plans/permits for St. Paul's Cathedral, the applicant shall submit construction plans for proposed modifications to St. Paul's Cathedral consistent with the approved project, which has been determined to be in conformance with the U.S. Secretary of the Interior's Standards for Treatment of Historic Properties and related Guidelines.

Impact HR-2: Historic Landscape Resources

Mitigation Measure HR-2:

HR-2.1 Prior to issuance of any construction permits, including but not limited to, the first grading permit, demolition plans/permits, and building plans/permits for construction of the Olive Building or for demolition and/or construction of the proposed Cathedral improvements along the Sixth Avenue frontage, the existing Queen Palms that are to be removed for project construction shall be boxed for replanting. If any of these existing palms fail to survive after replanting; each shall be replaced with a Queen Palm with a minimum 20-foot brown trunk height in locations consistent with the Sixth Avenue streetscape and to the satisfaction of the City Street Division-Urban Forestry. A surety bond in an amount sufficient to purchase and install replacement trees shall be provided to guarantee the survival of the trees for 3 years. The City Street Division-Urban Forestry staff shall inspect the trees to determine that they are in a healthy and thriving condition prior to release of the bond. If any trees are determined to need additional care or replacement, action as determined by the City Street Division-Urban Forestry prior to the release of the bond shall be taken and the bond shall not be released for an additional 3 years, but may be replaced with a bond to cover only the trees requiring additional care or replacement.

HR-2.2 Prior to issuance of any construction permits, including but not limited to, the first grading permit, demolition plans/permits, and building plans/permits for construction on the Olive Site, project plans shall show the locations of the palms to be removed and those to be protected from damage during construction. The palms that are to be protected shall be provided with bright yellow or orange temporary fencing or other protection to be shown on the project plans to the satisfaction of the Development Services Department. Stockpiling, topsoil disturbance, construction material storage, vehicle use, foot traffic, and storage of any kind is prohibited within the fenced area. The protection shall be installed and remain in an unaltered and undamaged condition during the entire period of construction until authorized to be removed by the Development Services Department. Should any of the protected palms be damaged to the extent that a Registered Arborist determines that they should be removed, the applicant for the grading or building permit shall be responsible for replacement of the palms in accordance with Mitigation Measure HR-2.1 and for two additional palms for each damaged palm, to be planted along the Sixth Avenue frontage or elsewhere in Balboa Park, at locations identified by the City Street Division-Urban Forestry.

4.5.8 Impact Analysis

Issue 3: Would the project result in any impact to existing religious or sacred uses within the potential impact area.

Per the City's Significance Determination Thresholds, impacts to historical resources may be significant if the project would result in:

- Any impact to existing religious or sacred uses within the potential impact area.

4.5.9 Significance of Impacts

The project would have *no impact* to religious or sacred uses as discussed in Sections 4.5.2 and 4.5.5, above. In addition, the project would not interfere with existing religious or sacred uses.

4.5.10 Mitigation, Monitoring, and Reporting

No mitigation would be required.

4.5.11 Impact Analysis

Issue 4: Would the project result in the disturbance of any human remains, including those interred outside of formal cemeteries.

Per the City's Significance Determination Thresholds, impacts to historical resources may be significant if the project would result in:

- The disturbance of any human remains, including those interred outside of formal cemeteries.

4.5.12 Significance of Impact

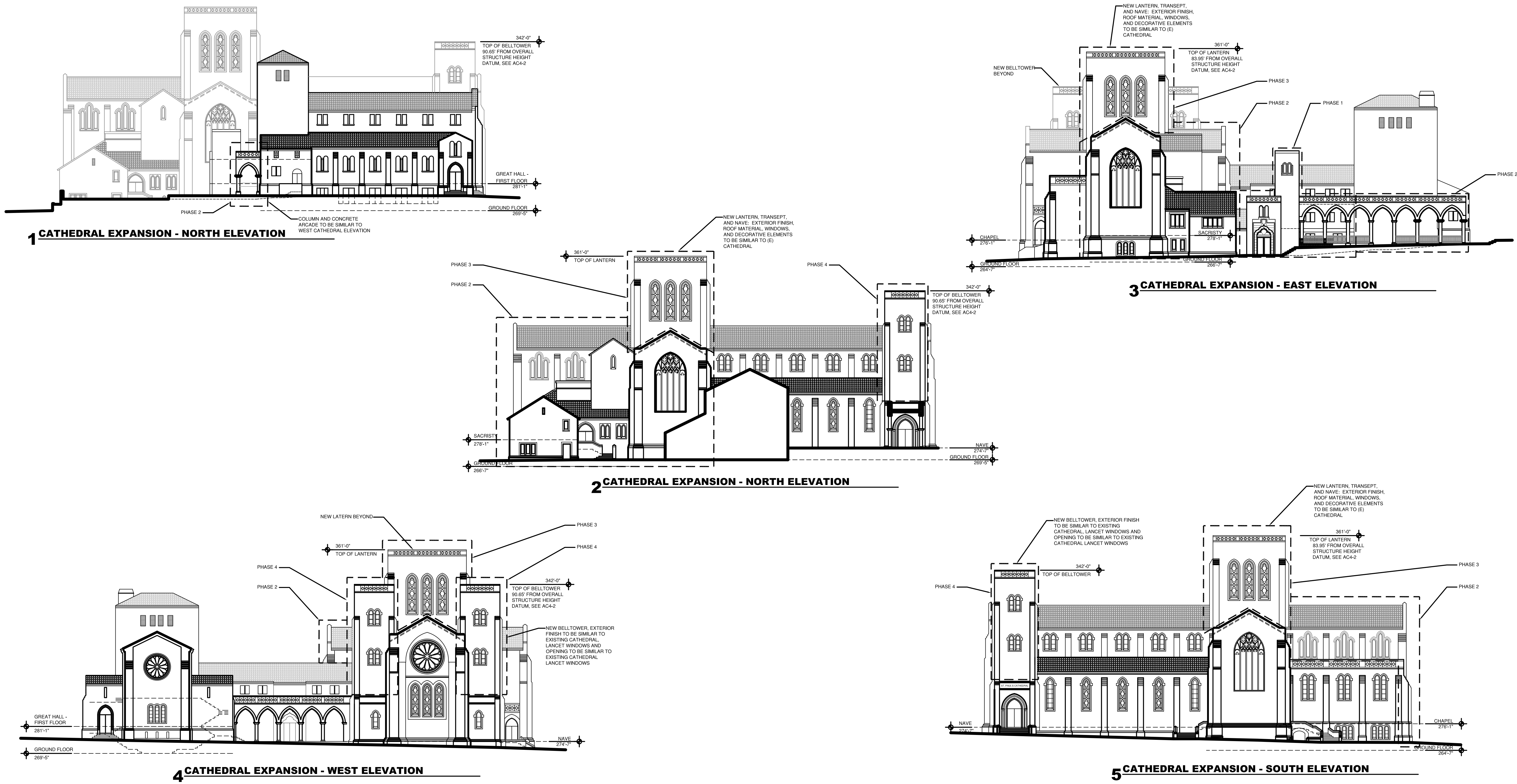
No evidence exists indicating the possible presence of human remains. Should human remains be encountered during site excavation, the impact would be mitigated in accordance with Mitigation Measure AR-1.

4.5.13 Mitigation, Monitoring, and Reporting

No mitigation would be required.

Source: GoogleEarth 2010

Figure 4.5-1
Existing Queen Palms on Olive Site, Sixth Avenue Frontage



Source: Tucker Sadler 2007

Not to Scale

Figure 4.5-2
Architectural Elevations of Proposed Cathedral

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4.6 NOISE

This section evaluates potential noise impacts resulting from the project, specifically the potential for the project to cause a substantial temporary or permanent increase in ambient noise levels within or around the project site, or to expose people to excessive noise levels. A *Glazing and External Noise Analysis* was prepared by Veneklasen Associates in 2011. In addition, construction noise modeling was conducted by AECOM. These analyses are attached as Appendix F.

Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and, therefore, may cause general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment.

Decibels (dB) are the standard unit of measurement of the sound pressure generated by noise sources and are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale for earthquake magnitudes. A doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; a halving of the noise energy would result in a 3-dB decrease.

The human ear is not equally sensitive to all frequencies within the sound spectrum. To accommodate this phenomenon, the A-weighted scale, which approximates the frequency response of the average young ear when listening to most ordinary everyday sounds, was devised. Noise levels using A-weighted measurements are written dB(A) or dBA. Table 4.6-1 shows the relationship of various noise levels to commonly experienced noise events. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA (increase or decrease) and that a change of 5 dBA is readily perceptible. An increase of 10 dBA is perceived as twice as loud and a decrease of 10 dBA is perceived as half as loud.

Although dBA may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a conglomeration of frequencies from distant sources that create a relatively steady background noise in which no particular source is identifiable. Average noise levels over a period of minutes or hours are usually expressed as dBA L_{eq}, which typically assumes a 1-hour average noise level and is used as such in this report. The maximum noise level (L_{max}) is the highest sound level occurring during a specific period. The Community Noise Equivalent Level (CNEL) is the 24-hour L_{eq} with a 5-dB "penalty" for the evening noise-sensitive hours from 7 p.m. to 10 p.m. and a 10-dB "penalty" applied during nighttime noise-sensitive hours from 10 p.m. to 7 a.m.

4.6.1 Existing Conditions

Existing Noise Conditions

The existing noise environment is primarily influenced by traffic on Fifth and Sixth avenues and noise from airplanes approaching to land at SDIA. Noise measurements were taken October 28 through 31, 2005, and again on February 10 and 11, 2010, by Veneklasen Associates on roof locations at the Cathedral facing Fifth and Sixth avenues (as shown in Figure 4.6-1). These measurements found traffic noise levels to be approximately 65 to 66 dBA CNEL in 2005 and approximately 61 to 63 dBA CNEL in 2010. The measurements indicate the consistently compatible noise environment at the project site over the past 5 years.

The ALUCP for SDIA (San Diego County Regional Airport Authority 2004) contains a noise contour map that shows the project site to be outside of the 60-dBA noise contour for SDIA (see Figure 4.6-2). The ALUCP establishes that all new residences located within the 60- to 65-dBA CNEL contours would be "conditionally compatible" with the airport use provided that the interior noise levels from exterior noise sources do not exceed 45 dBA in any habitable room. The project uses are compatible with the airport use since it would not be subject to 60 dBA CNEL or greater airport noise.

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of the purpose of the subject land use. Residential uses are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Schools, places of worship, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses. Parks, historic sites, cemeteries, and recreation areas are also considered sensitive to increases in exterior noise levels.

Noise-sensitive land uses in the project vicinity include the Cathedral, multi-family residences on the same block as the Nutmeg site, and other multi-family residential areas on the surrounding blocks of Sixth Avenue, Fifth Avenue, Nutmeg Street, Maple Street, and Olive Street. Recreationists at Balboa Park would also be considered sensitive receptors.

Regulatory Setting

State of California Title 24

Title 24 of the California Administrative Code requires that residential structures, other than detached single-family dwellings, be designed to prevent the intrusion of exterior noise so that the interior CNEL with windows closed and attributable to exterior sources does not exceed 45 dBA CNEL in any habitable room. The California State Building Code Section 1208A.8.2 implements this standard by stating that “interior noise levels attributable to exterior sources shall not exceed 45 dBA CNEL in any habitable room.”

City of San Diego General Plan Noise Element

The Noise Element of the San Diego General Plan provides land use and noise compatibility guidelines in Table NE-3. Table NE-3 indicates that multiple dwelling units and places of worship are “compatible” with exterior noise levels lower than 60 dBA CNEL and, in areas with exterior noise levels of up to 70 dBA CNEL (65 dBA CNEL for places of worship), are “conditionally compatible” provided that the building structure attenuates interior noise levels to 45 dBA CNEL.

City of San Diego Noise Ordinance

The City’s noise ordinance is contained in San Diego Municipal Code, Chapter 5, Article 9.5, Noise Abatement and Control. The noise ordinance regulates noise generated by on-site sources associated with project operation, such as heating, ventilation, and air conditioning (HVAC) units. The noise limits of the City noise ordinance for various land uses by time of day are contained in Table 4.6-2. Section 59.5.0701 of the noise ordinance requires that multi-family dwellings conform to the noise insulation standards in Title 24, Section T25-28, Noise Insulation Standards, of the California Administrative Code.

Section 59.5.0404 of the noise ordinance limits construction noise to an average sound level of 75 dBA at the affected property line during the 12-hour period from 7 a.m. to 7 p.m., and prohibits construction on specified holidays.

City of San Diego CEQA Significance Determination Thresholds

The City's CEQA significance determination thresholds provides guidance on implementing the City's noise policies and ordinances. Table K-2 of the CEQA significance determination thresholds (shown herein as Table 4.6-3) specifies that the noise level at exterior usable open space for multi-family residences should not exceed 65 dBA CNEL. The standard for commercial or retail space is an exterior noise level that does not exceed 75 dBA CNEL, and the standard for places of worship is an exterior noise level that does not exceed 70 dBA CNEL. No interior noise level standard is specified for commercial uses or places of worship. Table K-2 further specifies that outdoor usable areas would generally indicate a significant noise impact if located closer than 50 feet from the centerline of the closest traffic lane with existing or future daily traffic volumes greater than 20,000 average daily trips (ADT).

In addition to transportation noise standards, noise generated by stationary sources such as HVAC units are also regulated by the City. The City's significance determination thresholds for stationary noise sources identify the City noise ordinance property line limits as the appropriate thresholds.

The City's significance determination thresholds also refer to the limits on construction noise identified in the noise ordinance and provide additional guidance in implementing the noise ordinance by defining the noise level limit as 75 dBA L_{eq} at the affected property line during the 12-hour period from 7 a.m. to 7 p.m.

Vibration and Groundborne Noise Regulations

CEQA requires an analysis of groundborne noise and vibration. Numerous public and private organizations and governing bodies have provided guidelines to assist in the analysis of groundborne noise and vibration. However, the federal, state, and most local governments have yet to establish specific groundborne noise and vibration requirements. There are no federal, state, or local vibration regulations or guidelines directly applicable to the project.

Publications of the Federal Transit Administration (FTA) and Caltrans are two of the seminal works for the analysis of groundborne noise and vibration relating to transportation and construction-induced vibration. These guidelines serve as a useful tool to evaluate potential vibration impacts of the project.

Caltrans guidelines indicate that the "architectural damage risk level" for continuous vibration is 0.2 inch per second peak particle velocity (in/sec ppv) (Caltrans 2004). The FTA vibration standards with respect to human response within residential uses (i.e., annoyance, sleep disruption) recommend a maximum acceptable vibration standard of 80 vibration decibels (VdB) from infrequent operation events (FTA 2006). With respect to construction activities, FTA recommends a maximum acceptable vibration standard of 0.12 in/sec ppv (90 VdB) for buildings susceptible to vibration damage, 0.2 in/sec ppv (94 VdB) for non-engineered timber and masonry buildings, and 0.3 to 0.5 in/sec ppv (98 VdB to 102 VdB) for engineered and reinforced structures (FTA 2006). The proposed project does not include significant new operation-related vibration sources. Thus, for this analysis, 0.2 in/sec ppv and 94 VdB are used for the assessment of construction vibration impacts to adjacent properties.

4.6.2 Impact Analysis

Issue 1: Would the project result in a significant increase in the existing ambient noise level?

Per the City's significance determination thresholds, temporary and permanent noise impacts may be significant if the project would result in the following:

- A significant increase in the existing ambient noise level (defined here as a direct project-related temporary increase of +10 dBA L_{eq} above existing levels, or direct project-related permanent increase of +3 dBA above existing levels).

Construction Noise

The project would involve construction of two multi-story buildings, the cathedral expansion, an outdoor courtyard, and underground parking areas. Construction activities associated with improvements at the project site would generate short-term, temporary, and intermittent noise at or near individual noise-sensitive locations in the project area.

The nearest noise-sensitive land uses are multi-family residential units located in the same block as the Nutmeg site on Sixth Avenue, between Nutmeg Street and Maple Street. The property line for these units is located approximately 50 feet from the center of proposed construction area on the project site and adjacent to the east side of the Nutmeg site. Construction activities would occur within 15 feet of these adjacent residential structures.

Noise levels generated during construction would fluctuate depending on the physical location of construction activities on the project site and the particular type, number, and duration of use of various pieces of construction equipment. Noise levels from construction activities are typically considered a point source, and drop off at a rate of 6 dBA per doubling of distance over hard site surfaces such as streets and parking lots. The loudest stages of construction are typically earthmoving and foundation construction, as these stages typically involve the largest and greatest number of construction equipment.

The exact types of equipment to be used for construction of the project are not available at this time, but typical equipment for urban excavation and building construction is loaders, excavators, backhoes, trenchers, cranes, generators, pneumatic tools, and material transport trucks. For purposes of this analysis and due to the size of the site, it is assumed excavation of the site would include the use of a bulldozer and a skip-loader on-site, with an excavator located at the western edge of the Nutmeg site along Fifth Avenue. Excavated material would be loaded onto haul trucks that would be positioned in the easternmost travel lane of Fifth Avenue. However, prior to starting substantial excavation activities, support and shoring activities would be required and would include such activities along the eastern edge of the site. Shoring activities would involve the use of an augur truck/vehicle to bore holes, and concrete mixer trucks. A vibratory pile driver may also be required for limited use in setting some shoring. During shoring activities only one piece of heavy equipment would be active along the eastern edge of the site at any given time; however it is assumed that a concrete truck or other piece of equipment would be active on the western edge of the site.

As indicated in Table 4.6-4, maximum noise levels produced by these construction activities at a distance of 50 feet from the nearest noise source could range from 80 to 93 dBA without the implementation of feasible noise control. Noise levels vary for individual pieces of equipment, as equipment may come in different sizes and with different engines. Noise levels from construction equipment also vary as a function of the activity level or duty cycle. Typical construction projects, with equipment moving from one point to another, work breaks, and idle time have long-term noise averages that are lower than louder short-term noise events. Additionally, noise levels are calculated from the center of the activity due to the dynamic nature of a construction site (FTA 2006). Construction noise attributable to the proposed project was estimated using the FTA noise methodology for the prediction of heavy equipment noise sources.

Based on the proximity of the residences adjacent to the Nutmeg site, average hourly construction noise levels during excavation are calculated to be approximately 80 dBA L_{eq} at the nearest residential property line, with a maximum noise level of 82 dBA (see EIR Appendix F for construction noise calculations). During shoring, construction noise levels are calculated to be approximately 85 dBA L_{eq} at the nearest property line, with short-term maximum noise levels of 88 dBA L_{max} (see EIR Appendix F for construction noise calculations). A construction noise level of 79 to 85 dBA L_{eq} would result in a temporary increase in the existing ambient noise level of greater than 10 dBA during construction activities and would exceed the City's construction noise level limit.

Construction Vibration

Construction activities in the project area may result in varying degrees of temporary ground vibration, depending on the specific construction equipment used and operations involved. Groundborne vibration levels caused by various types of construction equipment are summarized in Table 4.6-5. Pile driving and blasting are not planned for this project. The representative vibration levels identified in Table 4.6-5 for various construction equipment types show that sensitive receptors could be exposed to groundborne vibration levels exceeding recommended vibration-level limits.

Using standard FTA vibration attenuation formulas, non-pile-driving construction activities would exceed the recommended threshold of significance of 0.2 in/sec ppv for architectural damage and the recommended threshold of significance for human disturbance of 94 VdB from construction activities involving heavy-duty equipment such as bulldozers at a distance of less than 15 feet. Based on the proximity of the nearest residential land use, there is potential for heavy construction equipment to be within 15 feet of this location. Thus, vibration levels at the nearest residential land use could result in minor architectural damage and may be considered annoying to adjacent residents.

Operational Noise

Long-term operation of the proposed project would result in an increase in ADT volumes on the local roadway network and, consequently, an increase in noise levels from traffic sources along affected segments. As shown in Table 4.6-6, the project would generate approximately 137 to 328 average daily trips on adjacent and nearby segments on Fourth, Fifth, and Sixth avenues. The Federal Highway Administration (FHWA) Traffic Noise Model (TNM) was used to calculate existing and future traffic noise levels on local roadways affected by the proposed project. The TNM model was constructed using the project site plans from Tucker Sadler and traffic data from Kimley-Horn and Associates' Traffic Impact Analysis (Appendix G). Estimated truck percentages of 2% medium trucks and 1% heavy trucks were used for daytime hours, with only 1% medium trucks for nighttime hours. Table 4.6-6 shows traffic data (Kimley-Horn and Associates 2010) used in the TNM model, with 2030 volumes representing cumulative traffic data that, in addition to normal growth, includes planned projects in the local area. For increased accuracy, each lane on Fifth Avenue and Sixth Avenue was modeled separately. The purpose of the traffic noise analysis was to determine whether the proposed project would comply with the exterior noise levels of the City's significance determination thresholds and the interior noise standards of the California Administrative Code. Table 4.6-7 was also prepared using the TNM model to determine whether the project would result in 3-dBA or greater increase in ambient traffic noise levels along affected roadways, which would be considered to be a significant project noise impact.

A significant noise impact for private residential outdoor areas occurs when noise levels are predicted to be more than 65 dBA CNEL under future cumulative conditions, and a significant noise impacts for commercial outdoor areas would occur when noise levels are predicted to be more than 75 dBA CNEL. The San Diego Municipal Code requires that at least 50% of units in a multi-family project have private, exterior, usable areas, with a project average of 50 square feet per unit. Of the project's 110 units, 57 units with balconies were analyzed for compliance with the 75 dBA CNEL requirement. Additionally, the following common areas were analyzed for compliance with the 65 dBA CNEL requirement: the courtyard between the Olive building and the Cathedral, the Olive Amenities Terrace, and the Nutmeg Pool Patio. Two outdoor commercial areas were also analyzed: an outdoor dining area on the corner of Fifth Avenue and Nutmeg Street and an outdoor café on the corner of Sixth Avenue and Olive Street. The results of this analysis (see Table 4.6-7) determined that the project would comply with the City's exterior noise standards. The traffic noise modeling (Table 4.6-7) also demonstrates that the project would result in an increase of approximately 1 to 2 dBA in the traffic ambient noise level through year 2030. Therefore, long-term noise levels from project-generated traffic sources would not result in a substantial permanent increase in ambient noise levels (3 dB or greater) under existing and cumulative conditions.

Veneklasen Associates prepared a window glazing analysis to determine if the Sound Transmission Class (STC) of the proposed project would meet the interior noise standard of 45 dBA CNEL. STC is a single-number rating of a structure's ability to resist airborne sound. In general, a higher STC rating blocks more noise from transmitting through a partition, which, for this project, would be the exterior window glazing. The Veneklasen Associates report indicates that the project would install a glazing assembly with an STC-28 or greater rating. Typical exterior glazing for a residential building (STC-27) would provide an approximate 20-dBA noise reduction from exterior to interior. As the proposed project would use a higher STC-rated window, the proposed project would comply with the interior noise standard of 45 dBA CNEL.

HVAC equipment would be a primary operational noise source associated with the proposed multi-story buildings. The proposed project would place the HVAC systems for the proposed buildings in the underground parking structures and vent them at street level. Associated noise sources at street level would be from venting fans. All other components (e.g., pumps, air compressors, chillers) would be located within the building structure and are not anticipated to be audible at the street level. Noise levels from HVAC equipment vary significantly depending on unit efficiency, size, and location, but generally average from 45 dBA to 70 dBA L_{eq} at a distance of 50 feet (EPA 1971).

Existing noise levels at residential uses adjacent to the proposed project site were measured to range between approximately 61 to 63 dBA CNEL in the area around the project site. Based on the noise levels measured for existing conditions and noise levels predicted for HVAC operations (e.g., 45 to 70 dBA L_{eq}), HVAC systems could increase ambient noise levels in the project area by more than 3 dBA depending on attenuation measures included in the design and the orientation of the exhaust vents.

4.6.3 Significance of Impacts

Temporary Construction Noise

Noise generated by short-term construction activities is estimated to generate an average maximum noise level of 85 dBA L_{eq} per hour at the nearest off-site receptor, which would exceed ambient noise levels by more than 10 dBA and, therefore, would be a *significant project noise impact* **(Impact NOI-1a).**

Permanent Increase in Ambient Noise Levels

Noise from project-related traffic would increase area noise levels by 2 dBA CNEL or less under existing and future conditions. Noise increases from parking facilities would be underground and less than 3 dBA. These impacts would be *less than significant.*

Noise generated by stationary HVAC systems could increase ambient noise levels at adjacent sensitive receptors by more than 3 dBA and, therefore, would be a *significant project noise impact* **(Impact NOI-2).**

4.6.4 Mitigation, Monitoring, and Reporting

Impact NOI-1: Construction Noise

***Mitigation Measure NOI-1a*:** The project proponent shall require any construction activities and contractors to adopt the following measures to control noise generated by construction activities:

- Construction equipment shall be properly maintained per manufacturers' specifications and fitted with the best available noise-suppression devices (e.g., mufflers, silencers, wraps).
- The project proponent and contractors shall not allow heavy-duty construction equipment to operate within 15 feet of adjacent structures to prevent structural damage from construction generated vibration.
- If heavy-duty construction equipment must be operated within 15 feet of adjacent structures, a before and after survey of cracks in the adjacent buildings shall be taken of all structures adjacent to construction activities. If any damage occurs to adjacent structures from heavy equipment operations, the project proponent shall repair all damages.
- All impact tools shall be shrouded or shielded and all intake and exhaust ports on power equipment shall be muffled or shielded.
- Heavy-duty construction equipment shall be staged and used at the farthest distance feasible from adjacent sensitive receptors.
- Construction equipment shall not be idled for extended periods.
- Fixed/stationary equipment (such as generators, compressors, rock crushers, and cement mixers) shall be located as far as possible from noise-sensitive receptors.
- An on-site coordinator shall be employed by the project applicant/contractor and his or her telephone number along with instructions on how to file a noise complaint shall be posted conspicuously around the project site during construction phases. The coordinator's duties shall include fielding and documenting noise complaints, determining the source of the complaint (e.g., piece of construction equipment), determining whether noise levels are within acceptable limits and according to City

standards, and reporting complaints to the City. The coordinator shall contact nearby noise-sensitive receptors, advising them of the construction schedule.

- Project construction and related activities shall be limited to daytime hours (7 a.m. to 7 p.m.).

Mitigation Measure NOI-1b: The above mitigation measures would reduce construction noise levels by 10 to 15 dBA at ground level, but would be ineffective for residences adjacent to the east boundary of the Nutmeg building site and located on the second floor or higher and within 50 feet of adjacent property lines. The following additional mitigation would ensure that all adjacent residences are not exposed to noise levels exceeding 75 dBA L_{eq} or noise that exceeds 10 dB above existing ambient noise levels:

- Construction equipment operating at noise levels exceeding 75 dBA L_{eq} shall not actively operate for more than 30 minutes of each one hour period at any location within 30 feet of adjacent sensitive receptors.
- Noise barriers shall be erected along the eastern boundary of the project site. Noise barriers during shoring activities shall be 14 feet in height. Noise barrier heights during excavation shall be 14 feet in height until the site is excavated to a depth of 7 feet, when the barrier height may be reduced to 12 feet. At an excavation depth of 14 feet or greater the barrier may be reduced to 8 feet. A minimum 8-foot-high barrier shall be maintained along the eastern boundary of the Nutmeg site throughout excavation and foundation activities. The noise barriers shall be constructed of material with a minimum weight of 4 pounds per square foot with no gaps or perforations. Noise barriers may be constructed of, but are not limited to, 5/8-inch plywood and 5/8-inch oriented strand board.
- Due to shading effects on adjacent residences, lower vertical wall height maybe desired. Wall heights may be lowered 6 inches or more by creating a cantilevered extension at the top of the wall. Effectively, a 10-foot high wall with an approximate 2-foot cantilevered portion angled 45 degrees toward the project site would be as effective as a 12-foot barrier vertical barrier with a height of a little over 11 feet. To use cantilevered walls, the cantilever length would depend on the vertical wall height. Table 4.6-8 provides the length of the required cantilever for various wall heights.

With implementation of Mitigation Measures NOI-1a and NOI-1b, construction noise sources would be reduced below applicable significance criteria (75 dBA L_{eq} and +10 dB increase). Therefore, the project construction noise impact would be *less than significant.*

Impact NOI-2: On-Site Noise Sources

Mitigation Measure NOI-2: The project proponent shall ensure that design and installation of stationary noise sources for the project meet the measures described below:

- Implement best design considerations and shielding, including installing stationary noise sources associated with HVAC systems indoors in mechanical rooms.
- Prior to the issuance of a building permit, the applicant or its designee shall prepare an acoustical study(s) of proposed mechanical equipment, which shall identify all noise-generating equipment, predict noise level property lines from all identified equipment, and recommended mitigation to be implemented (e.g., enclosures, barriers, site orientation), as necessary, to comply with the City of San Diego noise ordinance.

With implementation of Mitigation Measure NOI-2, stationary noise sources would be designed and controlled to comply with the City of San Diego noise ordinance. After mitigation, this impact would be reduced to *less than significant.*

4.6.5 Impact Analysis

Issue 2: Would the proposed development expose people to noise levels that exceed the City's adopted noise ordinance?

Per the City's significance determination thresholds, noise impacts may be significant if the project would result in the following:

- Exposure of people to noise levels that exceed the City's adopted construction noise ordinance (75 dBA L_{eq} at the affected property line between the hours of 7 a.m. to 7 p.m.) or
- Exposure of people to noise levels that exceed the City's adopted noise ordinance (see Table 4.6-2).

Temporary Projected-Generated Construction Noise

As described above under Issue 1, noise levels from project construction activities could reach 85 dBA L_{eq} at the nearest off-site sensitive receptor. This noise level would exceed the City's construction noise standard of 75 dBA L_{eq}.

Permanent Project-Generated Noise

As shown in Table 4.6-7, traffic noise levels with the project would range from 44 to 67 dBA CNEL under future conditions. These noise levels would comply with City standards for multi-family residential and commercial uses, and places of worship.

Project stationary noise sources from HVAC equipment, as described under Issue 1, could range from 47 to 72 dBA L_{eq} at the nearest noise-sensitive receptors. These noise levels would be likely to exceed City exterior noise standards at adjacent sensitive receptors.

4.6.6 Significance of Impacts

Noise generated by short-term construction activities would exceed City noise standards (75 dBA L_{eq}) at adjacent sensitive receptors, as described under Issue 1. This would be a *significant project impact*. With implementation of Mitigation Measure NOI-1, construction noise sources would be controlled to the extent feasible, but not to a level that would comply with the City noise ordinance. Therefore, this impact would remain a *significant and unavoidable project noise impact.*

Noise from project-related traffic would not result in noise levels exceeding City standards for adjacent land uses. These impacts would be *less than significant*.

Noise generated by stationary HVAC systems could exceed City noise standards at adjacent sensitive receptors. With implementation of Mitigation Measure NOI-2, stationary noise sources would be designed and controlled to comply with the City of San Diego noise ordinance.

4.6.7 Mitigation, Monitoring, and Reporting

Mitigation Measures NOI-1 and NOI-2, identified above, would be implemented to reduce temporary construction and permanent operational noise. After mitigation, this impact would be reduced to *less than significant.*

4.6.8 Impact Analysis

Issue 3: Would the development expose people to current or future transportation noise levels that exceed standards established in the Noise Element of the General Plan?

Per the City's Significance Determination Thresholds, noise impacts may be significant if the project would result in the following:

- Exposure of people to current or future transportation noise levels that exceed standards established in the Noise Element of the General Plan (65 dBA CNEL for multi-family residential, 70 dBA CNEL for places of worship, 45 dBA CNEL for residential interior from exterior noise).

Transportation Noise Impacts

As shown in Table 4.6-7, traffic noise prediction for year 2030 noise levels on the project's balconies would range from 50 to 58 dBA CNEL, and other outdoor use areas would be 44 to 67 dBA CNEL. Therefore, all exterior noise conditions for residential, office, commercial, and places of worship would comply with thresholds established by the City CEQA significance determination thresholds. Typical exterior glazing for a residential building would provide an approximate 20-dBA noise reduction from exterior to interior. As stated in the Veneklasen Associates report, the project would install a glazing assembly with an STC-28 or greater rating, which would provide greater than the standard noise reduction. Therefore, the project would achieve the City interior noise standard of 45 dBA CNEL.

4.6.9 Significance of Impacts

As shown in Table 4.6-7, the project would comply with exterior-noise-level criteria for residential, office, commercial, and places of worship. The project would also comply with the Title 24 interior residential noise level standard of 45 dBA CNEL. Therefore, the potential for on-site exposure of people to transportation noise levels in excess of the Noise Element would be *less than significant.*

4.6.10 Mitigation, Monitoring, and Reporting

No mitigation would be required.

4.6.11 Impact Analysis

Issue 4: Would the development result in land uses which are not compatible with aircraft noise levels as defined by an adopted Airport Land Use Compatibility Plan (ALUCP)?

Per the City's significance determination thresholds, noise impacts may be significant if the project would do the following:

- Be located within a 60-dBA CNEL contour of a nearby airport/airstrip.

Exposure of Sensitive Receptors to Aircraft-Generated Noise in Excess of 60 dBA CNEL

As stated above in Section 4.6.1, the ALUCP for SDIA (San Diego County Regional Airport Authority 2004) contains a noise contour map that shows the project site to be outside of the 60-dBA CNEL noise contour for SDIA (see Figure 4.6-2). The ALUCP establishes that all new residences located within the 60- to 65-dBA CNEL contours would be "conditionally compatible" with the airport use, provided that the interior noise levels from exterior noise sources do not exceed 45 dBA CNEL in any habitable room. The project uses are compatible with the airport use since it would not be subject to 60-dB CNEL or greater airport noise and interior noise levels from aircraft operations would be less than 45 dBA CNEL.

4.6.12 Significance of Impacts

The project would not be within the ALUCP 60-dBA CNEL noise contour and, therefore, would not expose sensitive receptors to noise levels in excess of applicable standards. This impact would be *less than significant*.

4.6.13 Mitigation, Monitoring, and Reporting

No mitigation would be required.

Table 4.6-1
Common Indoor and Outdoor Noise Levels

Noises	Sound Level dBA
Threshold of pain	140
Leaf blower/Car horn	110
Gas lawn mower at 3 feet	100
Diesel truck at 50 feet /Food blender at 3 feet	90
MD 80 passenger plane at 1,500 feet	85
Diesel truck at 50 feet at 40 mph	84
Garbage disposal at 3 feet/Motorcycle at 25 feet	80
Car at 25 feet at 65 mph	77
Vacuum cleaner at 10 feet	70
Heavy traffic at 300 feet/Air conditioner at 100 feet	60
Dishwasher in next room	50
Quiet residential area	40
Library	35
Threshold of hearing	0

Table 4.6-2
Property Line Noise-Level Limits by Land Use and Time of Day

Land Use Zone	Time of Day	One-Hour Average Sound Level (dB)
1. Single-Family Residential	7 a.m. to 7 p.m. 7 p.m. to 10 p.m. 10 p.m. to 7 a.m.	50 45 40
2. Multi-Family Residential (Up to a maximum density of 1/2,000)	7 a.m. to 7 p.m. 7 p.m. to 10 p.m. 10 p.m. to 7 a.m.	55 50 45
3. All Other Residential	7 a.m. to 7 p.m. 7 p.m. to 10 p.m. 10 p.m. to 7 a.m.	60 55 50
4. Commercial	7 a.m. to 7 p.m. 7 p.m. to 10 p.m. 10 p.m. to 7 a.m.	65 60 60
5. Industrial or Agricultural	Any time	75

Source: San Diego Municipal Code, Section 59.5.0401

Table 4.6-3
Traffic Noise Significance Thresholds (dBA CNEL)

Structure of Proposed Use that would be Impacted by Traffic Noise	Interior Space	Exterior Useable Space[1]	General Indication of Potential Significance
Single-family detached	45 dB	65 dB	Structure or outdoor useable area[2] is <50 feet from the center of the closest (outside) lane on a street with existing or future ADTs >7,500
Multi-family, school, library, hospital, day care center, hotel, motel, park, convalescent home	Development Services Department (DSD) ensures 45 dB pursuant to Title 24	65 dB	
Office, church, business, professional uses	n/a	70 dB	Structure or outdoor useable area is <50 feet from the center of the closest lane on a street with existing or future ADTs >20,000
Commercial, retail, industrial, outdoor spectator sports uses	n/a	75 dB	Structure or outdoor useable area is <50 feet from the center of the closest lane on a street with existing or future ADTs >40,000

Source: City of San Diego CEQA Significance Determination Thresholds Table K-2
[1] If a project is currently at or exceeds the significance thresholds for traffic noise described above and noise levels would result in less than a 3-dB increase, then the impact is not considered significant.
[2] Exterior useable areas do not include residential front yards or balconies unless the areas such as balconies are part of the required useable open space calculation for multi-family units.

Table 4.6-4
Construction Equipment Noise Levels

Equipment Item	Typical Maximum Noise Level (dBA) at 50 Feet	Typical Duty Cycle (Percent of 1-hour)
Earthmoving		
Backhoes	78	40
Bulldozers	82	40
Front Loaders	79	40
Skiploader	69	40
Graders	85	40
Paver	77	50
Scrapers	84	40
Slurry Trencher	80	50
Dump Truck	76	40
Pickup Truck	55	40
Materials Handling		
Concrete Mixer Truck	79	40
Concrete Pump Truck	81	20
Crane	81	16
Man Lift	75	20
Stationary Equipment		
Air Compressors	78	40
Generator	81	50
Pumps	81	50
Impact Equipment		
Compactor	83	20
Jack Hammers	89	20
Impact Pile Drivers (Peak Level)	101	20
Pneumatic Tools	85	50
Other Equipment		
Concrete Saws	90	20
Welding Machine/Torch	74	40

Source: FHWA 2006; FTA 2006

Table 4.6-5
Construction Equipment Vibration Levels

Equipment	PPV at 25 feet (in/sec)[1, 3]	Approximate Lv (VdB) at 25 feet[2]
Large Bulldozer	0.089	87
Caisson Drilling	0.089	87
Heavy-duty Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

[1] PPV is the peak particle velocity.
[2] L_v is the velocity expressed in vibration decibels (VdB), assuming a crest factor of 4.
[3] Vibration levels can be approximated at other locations and distances using the above reference levels and the following equation: $PPV_{equip} = PPV_{ref} (25/D)^{1.1}$ (in/sec); where “PPV_{ref}” is the given value in the above table and “D” is the distance for the equipment to the new receiver in feet.
Source: FTA 2006:12-12

Table 4.6-6
Traffic Volumes in Average Daily Trips (ADT)

Segment	Existing ADT Plus Project		2030 ADT Plus Project	
	Existing ADT	Project ADT	2030 ADT	Project ADT
Sixth Ave North	13,910	328	19,000	328
Sixth Ave South	13,180	298	19,000	298
Fifth Ave North	13,689	137	16,000	137
Fifth Ave South	12,298	209	18,000	209
Fourth Ave North	8,124	143	11,000	143
Fourth Ave South	8,970	227	13,000	227

Source: Kimley-Horn and Associates 2010

Table 4.6-7
Exterior Traffic Noise Analysis

Location	dBA CNEL*		
	Existing	2030	Increase
Olive Courtyard West	60	61	+1
Olive Courtyard Center	53	55	+2
Olive Amenities Terrace	61	63	+2
Olive South Balcony 8th to 16th Floors	54	56	+2
Olive North Balcony 5th to 12th Floors	55	57	+2
Olive NW Balcony 10th to 15th Floors	54	56	+2
Olive SW Balcony 10th to 15th Floors	56	58	+2
Nutmeg Pool Patio	42	44	+2
Nutmeg NE Balcony 9th to 14th Floors	56	57	+1
Nutmeg East Balcony 4th to 14th Floors	49	50	+1
Nutmeg SE Balcony 4th to 14th Floors	55	57	+2
Outdoor Dining Fifth and Nutmeg*	66	67	+1
Outdoor Café Sixth and Olive*	65	67	+2

Source: Veneklasen Associates 2011
*Per Table 4.6-3, noise level criterion for exterior commercial space is 75 dBA; all other exterior space for residential use is subject to noise level criterion of 65 dBA.

Table 4.6-8
Construction Noise Barrier Attenuation

Vertical Wall Height (Feet)	Cantilever Length (Feet)
6	2.5
8	2.5
10	2.3
12	2.1
14	1.9

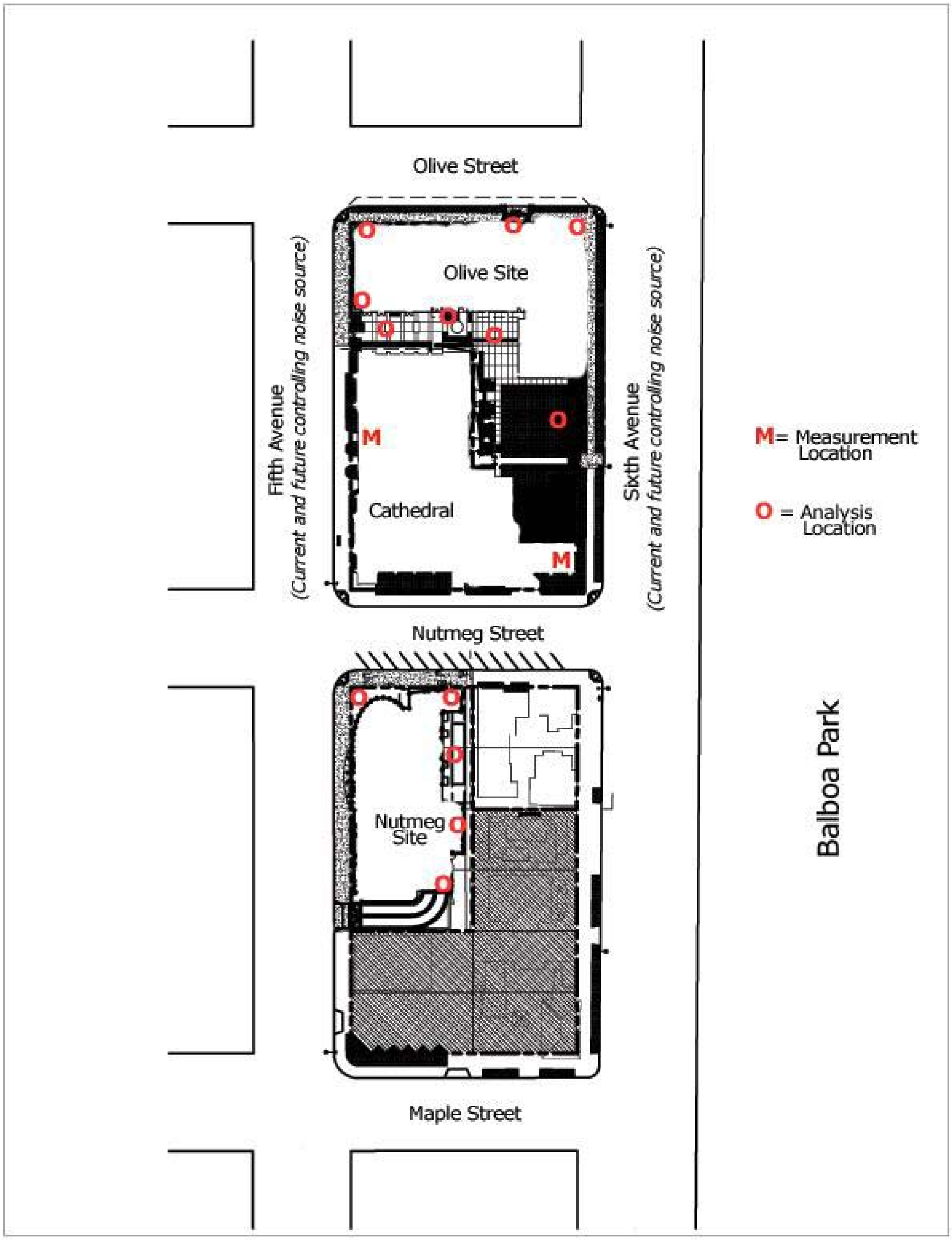

Figure 4.6-1
Noise Measurement and Analysis Locations

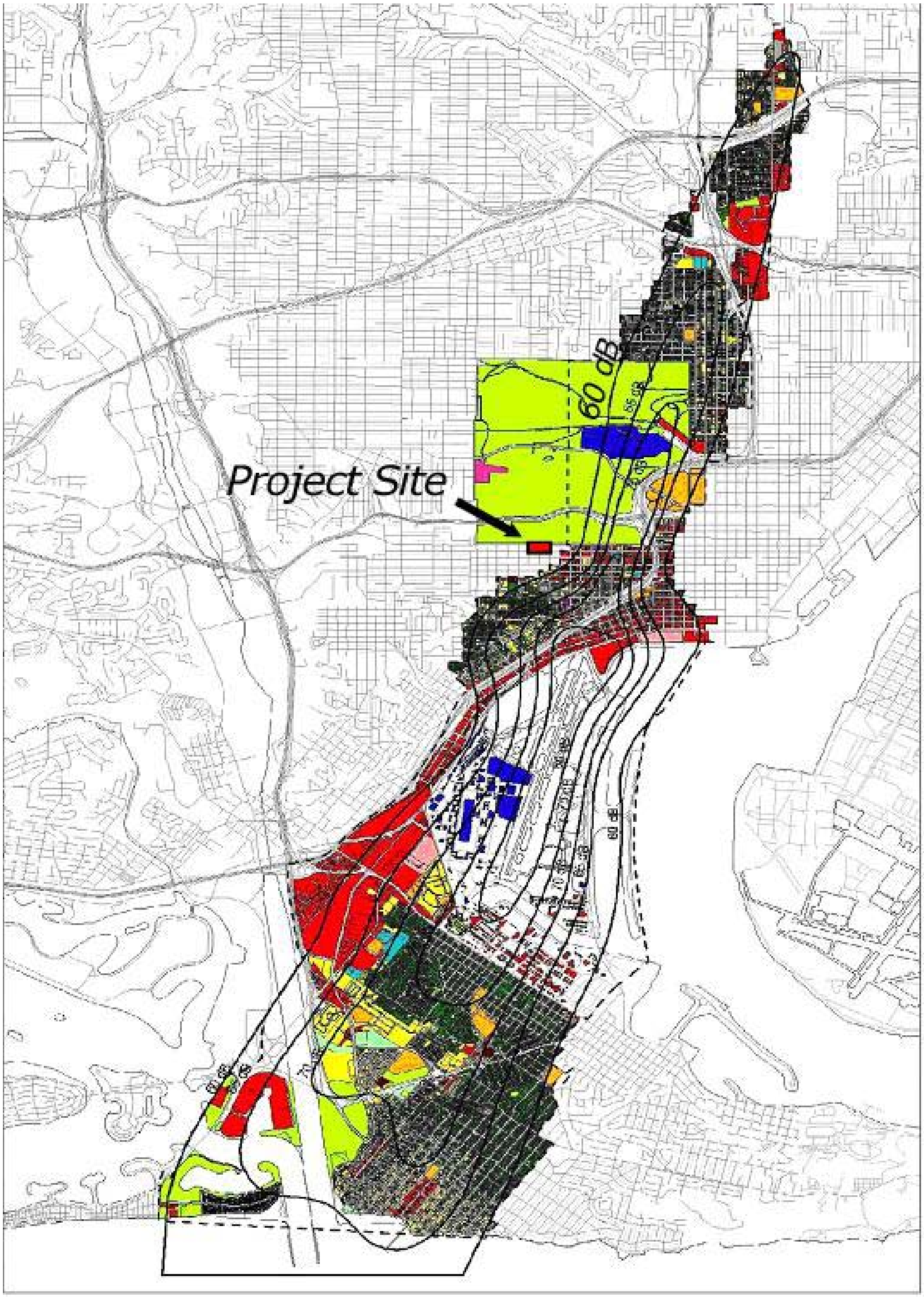

Figure 4.6-2
Projected Airport CNEL Contours

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4.7 PALEONTOLOGICAL RESOURCES

4.7.1 Existing Conditions

The project site is located within the Quaternary Very Old Paralic Deposits (Qvop9) geologic formation, which represents marine and/or non-marine terrace deposits that accumulated on the sea floor during a period of dropping sea levels. This formation, formerly identified as Lindavista formational soil, is assigned a moderate-sensitivity rating for discovery of significant paleontological resources in all areas of the City outside the Mira Mesa and Tierrasanta communities.

Paleontological resources are the remains or evidence of prehistoric life, excluding human remains, generally older than 10,000 years, which marks the end of the last late Pleistocene glacial event and the beginning of the current period of warmer climatic conditions.

The best preserved fossils are of organisms that lived within sedimentary deposits and were buried by sediment shortly after death. Fossil remains commonly include marine shells; bones and teeth of fish, reptiles, and mammals; leaf assemblages; and petrified wood.

In San Diego County, many sedimentary rock units containing paleontological resources are within the Coastal Plain Province, which contains marine and nonmarine sedimentary rock units deposited over the last 75 million years. Many of the level surfaces in the coastal areas, including most of the mesa tops and coastal benches, are elevated terraces from earlier marine sedimentary deposits.

Local marine terrace deposits of the Lindavista Formation have produced large and diverse assemblages of marine invertebrate fossils along the coast and inland to elevations of about 300 feet. Fossils known from the Coastal Plain Province are widespread and locally abundant and consist of remarkably diverse assemblages of marine invertebrates (e.g., clams, oysters, snails, cowries, crabs, and sea urchins) and marine vertebrates (e.g., sharks, rays, and bony fish). The existing ground surface elevation at the project site ranges from approximately 266 to 274 feet AMSL.

4.7.2 Impact Analysis

Issue 1: Would the project excavate over 1,000 cubic yards of material to a depth of 10 feet or more below the ground's surface in an area of high paleontological

sensitivity; or excavate over 2,000 cubic yards of material to a depth of 10 feet or more below the ground's surface in an area of moderate paleontological sensitivity?

Per the City's Significant Determination Thresholds, impacts to paleontological resources may be significant if the project would:

- Excavate over 1,000 cubic yards of material to a depth of 10 feet or more below the ground's surface in an area of high paleontological sensitivity; or excavate over 2,000 cubic yards of material to a depth of 10 feet or more below the ground's surface in an area of moderate paleontological sensitivity.

Site Excavation

Direct impacts occur through the destruction or alteration of a paleontological resource or site by grading, excavation, trenching, boring, tunneling, or other activity that disturbs the subsurface geologic formation. Excavation operations are the most common ways for paleontological resources to be adversely impacted and can result in the permanent loss of resources and valuable information. Typically, a project that would grade more than 2,000 cubic yards at a depth of cut of 10 feet or more in a moderate-sensitivity rated area would have the potential to encounter paleontological resources during grading. The project would grade to a depth of approximately 43 feet. Based on the Preliminary Geotechnical Investigation conducted by Leighton and Associates (see Appendix C), the Lindavista formation, consisting of silty fine to medium sand, would be encountered within 1 to 4 feet below grade and would continue to a depth of 20 or more feet below grade.

4.7.3 Significance of Impacts

Paleontological resources, if present on-site, could be substantially damaged or destroyed during the excavation for the parking garages on the Nutmeg and Olive project sites. Damage or destruction of a paleontological resource would be a *significant project impact* **(Impact PR-1)**.

4.7.4 Mitigation, Monitoring, and Reporting

Impact PR-1: Paleontological Resources

Mitigation Measure PR-1:

I. Prior to Permit Issuance

A. Entitlements Plan Check

1. Prior to issuance of any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits or a Notice to Proceed for Subdivisions, but prior to the first preconstruction meeting, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Paleontological Monitoring have been noted on the appropriate construction documents.

B. Letters of Qualification have been submitted to ADD

1. The applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the project and the names of all persons involved in the paleontological monitoring program, as defined in the City of San Diego Paleontology Guidelines.
2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the paleontological monitoring of the project.
3. Prior to the start of work, the applicant shall obtain approval from MMC for any personnel changes associated with the monitoring program.

II. Prior to Start of Construction

A. Verification of Records Search

1. The PI shall provide verification to MMC that a site specific records search has been completed. Verification includes, but is not limited to a copy of a confirmation letter from San Diego Natural History Museum, other institution or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.

B. PI Shall Attend Precon Meetings

1. Prior to beginning any work that requires monitoring; the Applicant shall arrange a Precon Meeting that shall include the PI, Construction Manager (CM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified paleontologist shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Paleontological Monitoring program with the Construction Manager and/or Grading Contractor.

   a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.

2. Identify Areas to be Monitored

   Prior to the start of any work that requires monitoring, the PI shall submit a Paleontological Monitoring Exhibit (PME) based on the appropriate construction documents (reduced to 11 x 17 inches) to MMC identifying the areas to be monitored including the delineation of grading/excavation limits. The PME shall be based on the results of a site specific records search as well as information regarding existing known soil conditions (native or formation).

3. When Monitoring Will Occur

   a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.

   b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate conditions such as depth of excavation and/or site graded to bedrock, presence or absence of fossil resources, etc., which may reduce or increase the potential for resources to be present.

III. During Construction

A. Monitor Shall be Present During Grading/Excavation/Trenching

1. The monitor shall be present full-time during grading/excavation/trenching activities as identified on the PME that could result in impacts to formations with high and moderate resource sensitivity. **The Construction Manager is**

responsible for notifying the RE, PI, and MMC of changes to any construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances OSHA safety requirements may necessitate modification of the PME.

2. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as trenching activities that do not encounter formational soils as previously assumed, and/or when unique/unusual fossils are encountered, which may reduce or increase the potential for resources to be present.

3. The monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVRs shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion)**, and in the case of ANY discoveries. The RE shall forward copies to MMC.

B. Discovery Notification Process

1. In the event of a discovery, the Paleontological Monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and immediately notify the RE or BI, as appropriate.

2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.

3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.

C. Determination of Significance

1. The PI shall evaluate the significance of the resource.

   a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required. The determination of significance for fossil discoveries shall be at the discretion of the PI.

   b. If the resource is significant, the PI shall submit a Paleontological Recovery Program (PRP) and obtain written approval from MMC. Impacts to significant resources must be mitigated before ground disturbing activities in the area of discovery will be allowed to resume.

c. If resource is not significant (e.g., small pieces of broken common shell fragments or other scattered common fossils) the PI shall notify the RE, or BI as appropriate, that a non-significant discovery has been made. The Paleontologist shall continue to monitor the area without notification to MMC unless a significant resource is encountered.

d. The PI shall submit a letter to MMC indicating that fossil resources will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that no further work is required.

IV. Night and/or Weekend Work

A. If night and/or weekend work is included in the contract

1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the precon meeting.

2. The following procedures shall be followed.

a. No Discoveries

In the event that no discoveries were encountered during night and/or weekend work, The PI shall record the information on the CSVR and submit to MMC via fax by 8 a.m. on the next business day.

b. Discoveries

All discoveries shall be processed and documented using the existing procedures detailed in Sections III - During Construction.

c. Potentially Significant Discoveries

If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction shall be followed.

d. The PI shall immediately contact MMC, or by 8 a.m. on the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.

B. If night work becomes necessary during the course of construction

1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.

2. The RE, or BI, as appropriate, shall notify MMC immediately.

C. All other procedures described above shall apply, as appropriate.

V. Post Construction

A. Preparation and Submittal of Draft Monitoring Report

1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Paleontological Guidelines which describes the results, analysis, and conclusions of all phases of the Paleontological Monitoring Program (with appropriate graphics) to MMC for review and approval within 90 days following the completion of monitoring,

   a. For significant paleontological resources encountered during monitoring, the Paleontological Recovery Program shall be included in the Draft Monitoring Report.

   b. Recording Sites with the San Diego Natural History Museum

   The PI shall be responsible for recording (on the appropriate forms) any significant or potentially significant fossil resources encountered during the Paleontological Monitoring Program in accordance with the City's Paleontological Guidelines, and submittal of such forms to the San Diego Natural History Museum with the Final Monitoring Report.

2. MMC shall return the Draft Monitoring Report to the PI for revision or, for preparation of the Final Report.

3. The PI shall submit revised Draft Monitoring Report to MMC for approval.

4. MMC shall provide written verification to the PI of the approved report.

5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.

B. Handling of Fossil Remains

1. The PI shall be responsible for ensuring that all fossil remains collected are cleaned and catalogued.

2. The PI shall be responsible for ensuring that all fossil remains are analyzed to identify function and chronology as they relate to the geologic history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate

C. Curation of fossil remains: Deed of Gift and Acceptance Verification

1. The PI shall be responsible for ensuring that all fossil remains associated with the monitoring for this project are permanently curated with an appropriate institution.

2. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.

D. Final Monitoring Report(s)

1. The PI shall submit two copies of the Final Monitoring Report to MMC (even if negative), within 90 days after notification from MMC that the draft report has been approved.

2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

4.8 LIGHT/GLARE/SHADING

4.8.1 Existing Conditions

The existing conditions of the project site are described in Chapter 2.2 of the EIR and consist of the 16-unit Park Chateau Apartments and St. Paul's Cathedral. There are no significant sources of on-site light, glare, or shading under the existing conditions. Residential and commercial areas to the north, south, and west, however, include high-rise buildings, restaurants, and other uses that emit light and create shaded areas, though not to the extent that the neighborhood is impacted by excessive light and shading conditions. No sources of glare, other than reflections of sunlight off windows are noticeable in the surrounding area. The nearby portion of Balboa Park to the east contains lawn areas and tree groves and does not have any night-lighted areas other than from streetlights, nor does it have nearby areas of glare or shading from buildings.

4.8.2 Impact Analysis

Issue 1: Would the project emit or reflect a significant amount of light and glare that would adversely affect daytime or nighttime views?

Light and Glare

SDMC Section 142.0730 specifies that no more than "50% of the exterior of a building may be comprised of reflective material that has a light reflectivity factor greater than 30%." The Mid-City Communities PDO SDMC Section 1512.0312(b)(2) also states that reflective glass be limited to 50% of each façade. The project architect has identified the glazing for both buildings to be composed of a PPG Industries architectural glass product, Solarban 70XL, which reduces light emissions while also reducing interior heat gain and heat loss. The reflectivity factor of Solarban 70XL windows is 12% and the Solexia + Solarban 70XL, which is also identified by the architect to be used for the project, has a reflectivity factor of 11% (PPG Industries 2010). Therefore, the project would comply with the SDMC limitation on use of reflective panels.

The most obvious difference in the architectural design of the Olive and Nutmeg buildings from other nearby buildings would be the extensive use of glass. Floor-to-ceiling glass panels are a common architectural element in downtown San Diego and though its use in the Park West neighborhood is less common, at least two buildings, 666 Upas Street and 2400 Sixth Avenue, feature floor-to-ceiling glass. The Park West neighborhood exhibits a wide variety of architectural design and no common architectural theme; therefore, the extensive use of glass would not create a severe contrast in a neighborhood with no traditional or dominant architectural character.

Analysis of Olive Building. An architectural rendering of the Olive building is shown in Figure 3-3a as viewed from Balboa Park looking northwest. The Olive building features extensive use of glass panels and exceeds the Mid-City Communities PDO requirement in SDMC Section 1512.0312(b)(2) that reflective glass be limited to 50% of each façade. The building's proposed glazing on each façade ranges from 45% to 65.8%, with the average being 59%. A deviation from the reflective glass standard has been requested and is addressed in EIR Section 4.1, Land Use. Justification for the deviation includes the desire of the architect and the Cathedral applicants that the building be designed for transparency and lightness to complement rather than compete with the solidity and mass of the Cathedral. The natural light and sense of openness afforded by the glass is also attractive to buyers in the current market and will assist in the sale of the market rate units at prices essential to financially justify inclusion of the affordable units in the project. Availability of natural lighting in the units due to the glass skin is also a desirable green building feature.

While the tower portion is primarily glass, it includes three types of glass panels (clear, spandrel, colored), as well as use of metal panels. The east façade uses more tradition architectural elements for the lower three floors, with the fourth floor and above being nearly all glass and metal. The north, west, and south façades also include stucco, travertine, and sandstone wall treatments.

Analysis of Nutmeg Building. An architectural rendering of the Nutmeg Building is shown in Figure 3-3b as viewed from Fifth Avenue looking southeast. As can be seen in Figures 3-2a and 3-3b, the building elevations on all four sides feature much more use of stucco, travertine, and sandstone than does the Olive building. The design was intended to capture some of the horizontal and vertical elements of the Cathedral, while still being a distinctly modern building.

The northwest corner of the building features a large expanse of horizontally curved, floor-to-ceiling glass that extends from the ground floor to the top floor. A smaller area of horizontally curved, floor-to-ceiling glass is featured on the east elevation. The use of vision glass and reflective spandrel construction exceeds the 50% limitation of the Mid-City Communities PDO. The building's proposed glazing on each façade ranges from 36% to 60%, with the average being 53%. A deviation from this requirement has been requested and is addressed in EIR Section 4.1, Land Use. Justification for the deviation for the Nutmeg Building is the same as for the Olive Site, which is to design the building for transparency and lightness to complement rather than compete with the solidity and mass of the Cathedral; to design the building to be attractive to buyers and assist in the sale of the market rate units; and to provide natural lighting that would reduce energy use.

4.8.3 Significance of Impacts

SDMC Section 142.0730 specifies that no more than "50% of the exterior of a building may be comprised of reflective material that has a light reflectivity factor greater than 30%." The glazing for both buildings would be composed of architectural glass products with reflectivity factors of 11% and 12%. Therefore, the project would comply with the SDMC limitation on use of reflective material and the project impact under Issue 1 would be *less than significant.*

4.8.4 Mitigation, Monitoring, and Reporting

No mitigation would be required.

4.8.5 Impact Analysis

Issue 2: Would the project cast shadows on private or public property that would adversely affect access to sunlight for use of solar collectors or recreation?

Shadows

A shadow study was conducted for the project (see Figure 4.8-1), which simulates shadows that would be cast by the proposed buildings during the spring equinox (March 21), summer solstice (June 21), fall equinox (September 21), and winter solstice (December 21) at 9:00 a.m., 12:00 p.m., and 3:00 p.m. Shadows cast on December 21 would be the longest shadows and would be directed primarily toward the businesses and residences on the west side of Fifth Avenue and the north side of Olive Street. None of the adjacent structures would be shaded for the entire day during the winter solstice period when shadows would be the longest. A portion of the 3:00 p.m. shadows on September 21 and December 21 would also be cast on the apartment building at the northwest corner of Olive Street and Sixth Avenue. Residential buildings on Sixth Avenue south of Nutmeg Street would be shadowed between 3:00 p.m. and sundown throughout the year. Shade would also be cast on a portion of the Balboa Park open lawn area to the west. This area is frequently used for picnicking, sunbathing, and other passive uses, as well as occasional more active informal group recreation and public gatherings.

Project buildings would cast shadows onto adjacent buildings to the west and north of the project site. No solar collectors or outdoor recreation areas are evident in aerial photographs of the adjacent properties to the west and north, with the exception of a private swimming pool on property at the southeast corner of Fourth Avenue and Olive Street. Shadows onto the pool area would only occur from the Nutmeg Building during the winter morning hours as shown for December 21 on Figure 4.8-1. The shadow study shows that while there is a potential for some shading of other properties, the timing and duration of shading would not preclude solar use on nearby properties.

Project shading onto Balboa Park would only occur during the afternoons, with the greatest area of shading impact occurring during the December solstice, as shown in Figure 4.8-1. Due to the latitude of San Diego being north of the tropic of cancer, the arc of the shadow across Balboa Park would stop as the sun begins to set and would not continue much farther southward than as shown for 3:00 p.m. on December 21. Due to the expansive lawn area in this portion of Balboa Park, opportunities for utilizing the park would not be substantially reduced by project shadows cast during the fall and winter afternoons in that there would be other areas that are exposed to the sun. Other typical activities in this portion of Balboa Park involve informal sports, which would not be impacted by shadows cast by the proposed project buildings.

4.8.6 Significance of Impacts

The project impact under Issue 2 would be *less than significant* in that project shadows would not substantially reduce access to sunlight for solar collectors or recreation.

4.8.7 Mitigation, Monitoring, and Reporting

Project shading impacts would be less than significant and no mitigation measures are required.

Source: Tucker Sadler 2006

Not to Scale

Figure 4.8-1
Shadow Study

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4.9 PUBLIC SERVICES AND FACILITIES

This section includes a discussion of public services and facilities that serve the project site and the surrounding region, including police protection, fire/life safety protection, schools, libraries, and parks and recreational facilities. The following analysis is based primarily on consultation with providers of public services and facilities, and a review of the Final EIR for the City of San Diego General Plan (2007b).

4.9.1 Police Protection

Existing Conditions

The San Diego Police Department (SDPD) provides city-wide police protection, which includes the project site and surrounding area. The project site is located within the area served by the Central Division Command of the department, which is one of seven area commands. The Central Division serves a population of approximately 85,927 and is responsible for 9.7 square miles. The Central Division is divided into beats or service areas, with the project located in Beat 529 (Figure 4.9-1). Central Division headquarters is located at 2501 Imperial Avenue, approximately 2.9 miles southeast of the project site. The current patrol strength at the Central Division includes 177 sworn personnel, 2 civilian personnel, and 161 uniformed patrol officers (City of San Diego 2010a). The City of San Diego has established a city-wide goal of 1.45 officers per 1,000 people, although this goal does not translate into staffing goals for individual divisions. In addition to sworn personnel, the department promotes the use of trained volunteers, retired officers, and forms of community policing to assist in crime watch prevention and reporting.

The police department currently uses a five-level priority dispatch system, which designates a response to a call for service as priority E (emergency), one, two, three, or four. The calls are prioritized by the phone dispatcher and routed to the radio operator for dispatch to the field units. Priority "E" and priority one calls involve serious crimes in progress or those with a potential for injury. The City has adopted goals for response times for each level of priority calls; these goals and the actual response times for Beat 529 and the entire City for year 2008 are described in Table 4.9-1. This data suggests that the average response time for the Central Division is presently within desired goals for all priority call levels. The Central Division is currently adequately staffed to provide police protection to the project area and vicinity.

In 2008, the incidence of violent crime in the Hillcrest neighborhood (the geographic area in which data for the project site is logged) was 7.28 incidents per 1,000 population, while, city-wide, the incidence was 4.61 incidents per 1,000 population. Total incidence of all crime in 2008 was 61.85 incidents per 1,000 population in Hillcrest and 35.4 incidents per 1,000 population city-wide. This suggests that the Hillcrest neighborhood experiences crime and crime-related calls at a frequency of 1.74 times higher than the city-wide rate. SDPD does not have these statistics available at the Beat level; however, if viewed as a city-wide average of approximately 487,775 occupied housing units in the City, this would approximate to 1.30 annual calls for service per average residence, adjusted to 2.09 annual calls for service per average residence in Hillcrest (SANDAG 2009a).

Table 4.9-1
City of San Diego Police Department Service Time Response

	Response Time (minutes)		
Priority Call Level	**Goal**	**Beat 529 Year 2009 Actual**	**City Year 2009 Actual**
E (Emergency)	7	5.99	6.11
One	12	10.72	11.73
Two	30	19.70	23.34
Three	90	53.04	63.70
Four	90	39.98	63.02

Though calls for service from the project area are typically responded to by officers assigned to the Central Division, any exceptional crisis necessitating the response of more than a few officers can be accommodated by additional personnel from other divisions, as coordinated by a central dispatcher and division chiefs. Furthermore, officers trained for specialized service (e.g., Special Weapons and Tactics [SWAT] response, arson response team, financial crimes) are also available, as required, and dispatched through the headquarters unit.

4.9.2 Impact Analysis

Issue: **Would the project have a substantial effect on or result in a need for new or modified police protection services or facilities?**

Per the City's Significance Determination Thresholds, impacts for police and fire-rescue services may be significant if:

- The project conflicts with the community plan in terms of the number, size, and location of public service facilities.
- If so, are there direct impacts from construction of proposed new public service facilities needed to serve the project?

For police and fire-rescue services, the following should also be considered and referred to the Police and/or Fire-Rescue Departments if the project exceeds the threshold of 75 dwelling units or 100,000 square feet of non-residential construction:

- Is the project located in a brush fire hazard area, hillside, or an area with inadequate fire hydrant services or street access?
- Does the project involve the use, manufacture or storage of toxic, readily-combustible, or otherwise hazardous materials?
- Would the project's location provide for adequate SDFD access as determined by Fire and Life Safety staff to be in conformance with the California Fire Code and Fire and Hazard Prevention Services Policy A-00-1?
- Would the project substantially affect Police or Fire-Rescue response times (i.e., increase the existing response times in the project area)?

Police Services

Potential police-related indirect impacts as a result of implementation of the project include increased traffic, potentially resulting in increased traffic accidents; the potential for increased car prowls on parked vehicles as a result of the higher density of use proposed by the project; and other miscellaneous calls for police services.

According to existing Uptown Community Plan population statistics (SANDAG 2020), the 94 net new residential units would add an estimated 161 residents to the area, resulting in a possible need for additional police officers to maintain the department's goal of 1.67 officers per 1,000 people. Through this calculation, the project would demand the additional staffing and service of 0.28 officers to maintain current levels of service. Using the current neighborhood approximation of 2.07 annual calls for service per average residence, an increase of approximately 203 annual calls (or one every 1.8 days) would be generated by the project. Although there is no direct means available to the project to increase police personnel, the increase in property taxes from a site that currently receives property taxes only for a 16-unit apartment building and vacant land would provide a means for the City Council to allocate additional property tax revenue from the project site to increase police services in the project area. Other opportunities for improved security and vigilance available to the project to reduce the potential for criminal activity at the project site, and therefore the need for police response, are described below.

Crime Prevention through Environmental Design

The SDPD Crime Prevention through Environmental Design (CPED) program is based on a set of four design criteria and concepts that can lead to a reduction in the incidence and fear of crime and an improvement in the quality of life. As such, the St. Paul's Cathedral project involves numerous measures to minimize crime and increase the safety at and around the project. The concepts are based on surveillance, access control, territoriality, and maintenance. The project has incorporated the following features on the interior and exterior of the building:

- Parking would be located underground through a security gate.
- Residential and office access would require an electronic key card.
- During normal business hours, visitor access to residences and offices would need to be granted by the building receptionist.
- After normal business hours, an electronic key card would be required to operate office and residential elevators.
- Clear boundaries between public, semi-public/private, and private areas would be delineated through landscaping, including plants on the sidewalk and gates.
- Residential, office, and retail units would have windows to the street, allowing for natural surveillance of the street and to help minimize the potential for graffiti.
- At both sites there would be a separate entrance key to access the amenities and common areas.
- Facilities would be locked when not in use.
- The project would establish and enforce building security standards through compliance with Conditions, Covenants, and Restrictions (CC&Rs) by all residential and commercial tenants.
- There would be adequate lighting at the street level to increase the nighttime safety of the residents and pedestrians.

- Emergency phones, alarms, and/or intercoms would be installed in convenient places for people to use to report any suspicious activity.
- Access control measures would be installed at stairways and other exit doors to prevent them from being propped open for reentry or unauthorized entry, but would still open quickly in an emergency.

Significance of Impacts

While average police response times may increase slightly and a need for an additional 0.28 police staffing is identified, the project's impact to the response times and staffing levels would be negligible and would not cause the average response time to rise above the city-wide standard of acceptable service. At existing staffing levels, police response times could increase slightly for the project area. The estimates above, however, do not suggest that the project would warrant the addition of a full-time equivalent of a police officer. The estimate of the project's call volumes would be an insignificant increase that would not require cause a substantial adverse effect on police services or facilities. As shown in Table 4.9-1, the existing response times for all priority call levels in Beat 529 are above the city-wide goal. Therefore, the project would not result in the need for new or physically altered police protection facilities and would have a *less than significant* impact on police services.

Mitigation, Monitoring, and Reporting

No mitigation would be required.

4.9.3 Fire Protection

Existing Conditions

Fire protection for the surrounding area and city-wide lifeguard services are provided by the City of San Diego Fire-Rescue Department (SDFD). The jurisdiction for SDFD covers the entire 330 square miles of the City, with 47 fire stations located throughout the City limits. SDFD currently employs 1,153 uniformed personnel and 126 civilian staff personnel at these stations. The central department headquarters is located downtown at 1010 Second Avenue. The department uses 47 engines, 18 reserve engines, 12 aerial trucks, 11 brush engines, and a variety of other equipment to provide services in the City (City of San Diego 2009d, 2009e). There are 60 First Responder units (fire trucks or engines) available on a daily basis, each with a minimum of one paramedic and a maximum of three emergency medical technicians (EMTs) on board.

The department staff is supplemented by 347 paramedics, two single-role EMTs, and 46 ambulances through a joint partnership with San Diego Medical Services Enterprise (SDMSE), a public/private partnership formed as a limited liability company between the city of San Diego and Rural/Metro Ambulance. SDMSE has 33 Advanced Life Support and 25 Basic Life Support ambulances that are staffed with one paramedic and one EMT on board. In 2008, there were 96,922 emergency medical responses and 28,296 non-emergency medical responses.

The SDFD has established programs and policies to reduce the risk of fires within the City through land use compatibility, training, sustainable development, and other measures. The City sponsors outreach and awareness programs to educate residents about fire dangers and what they can do to protect themselves and their homes. In addition to the policies and regulations developed by the Fire-Rescue Department, the City Building Code identifies requirements relating to building design and construction materials that must be used to limit fire hazard risks. The project has been subject to plan review by the Fire-Rescue Department and determined to be in compliance with standards for emergency aerial ladder accessibility and water supply.

The project area is primarily served by resources at Fire Station 3, located at 725 West Kalmia Street, approximately 0.8 mile southwest of the project site. Backup response is provided from Fire Station 8 (3974 Goldfinch Street, 1.7 miles), Fire Station 5 (3902 Ninth Avenue, 1.2 miles), Fire Station 14 (4011 32nd Street, 3.1 miles), and others that are available to provide services to the project area. The response times from the nearest fire stations to the project site are described in Table 4.9-2.

Table 4.9-2
City of San Diego Fire Department Service Time Response

Station/ Truck	Name and Location	Equipment	Response Time to Project Site
3	725 W Kalmia & State St	Triple combination pumper	3.0 minutes
5	Ninth & University	Triple combination pumper	3.0 minutes
8	Goldfinch & Washington	Triple combination pumper	3.9 minutes
14	32nd Street & Lincoln	Service aerial ladder and triple combination pumper	4.0 minutes

Source: City of San Diego 2009d

The response time to the project was calculated using the Emergency Response Management System (ERMS) point-to-point routing application. Using the road network, a path is created from the fire station location to the address, and includes the time from receipt of the alarm to arrival at the address.

In 2008, Fire Station 3 had a run volume of 1,879 incident responses for the year, which is fewer responses than the national standard for workload capacity of 2,500 yearly incidents. Additionally, SDFD's goal is 1.0 firefighter per 1,000 residents, and the city-wide average is currently 0.7 firefighters per 1,000 residents. Therefore, by these measures, the City is below the standard for provision of personnel city-wide, and operating above the standard ceiling for equipment use at Fire Station 3.

4.9.4 Impact Analysis

Issue: **Would the project have a substantial effect on or result in a need for new or modified fire/life safety protection services or facilities?**

The City's Significance Determination Thresholds for fire-rescue services are the same as stated above in Section 4.9.2.

The project has been subject to fire department review and has been determined to have access to an adequate water supply, proposes a building design that would ensure the fire department's ability to access the structures during a fire, and the number and location of fire hydrants have been identified. In addition, the project site is within a 3-minute emergency response time from two nearby fire stations and within a 4-minute emergency response time from two additional fire stations.

The project would be required to comply with the California Fire and Building Codes and San Diego Fire-Rescue and the Development Services Department policies to adhere to fire safety standards or requirements that are imposed on new developments. This would be assisted by on-site automatic fire sprinkler systems for fire suppression, reducing the risk of gross fire expansion during unit response times and assisting building users in finding effective escape routes.

SDFD uses the National Fire Protection Association (NFPA) 1710 Standard, Organization and Deployment of Fire Suppression Operations, for the initial response of a four-person engine company within 5 minutes and an effective fire force (15 firefighters) within 9 minutes. The project site is located such that fire stations in the project vicinity would meet this standard. The project would also pay a Development Impact Fee (DIF) for fire protection services. An impact fee is a charge on new development to pay for the construction or expansion of off-site improvements that are necessitated by new development. Therefore, implementation of the project would not cause a significant direct impact on the ability of fire personnel and facilities to respond to a service call in an appropriate amount of time, or result in the need for the construction of new facilities, thereby resulting in significant environmental impacts.

Significance of Impacts

While average fire response times could increase slightly, the project's impact to fire and emergency service response times would be negligible and would not cause the average response time to exceed the city-wide standard of acceptable service. The project's contribution of City DIF for fire services would avoid significant fire service impacts.

Mitigation, Monitoring, and Reporting

No mitigation would be required.

4.9.5 Schools

Existing Conditions

The project is located within the jurisdiction of the San Diego Unified School District (SDUSD). The SDUSD provides public school facilities for most of the City of San Diego for grades kindergarten through 12. As of December 2009, the SDUSD had 118 elementary schools, 24 middle schools, 29 high schools, 35 charter schools, and 15 atypical or alternative schools. While private schools exist in the area, this discussion focuses on public SDUSD schools. The specific schools that would serve the project and their locations are listed in Table 4.9-3 and illustrated in Figure 4.9-1.

As shown in Table 4.9-3, the three focal schools serving the project area are currently operating at or near their design capacity. Florence Elementary School and San Diego High School are close to their maximum capacity. It is important to note that the estimated capacity varies greatly each school year with the use of mobile classrooms and partitions separating existing rooms, as well as changes in educational programs.

Table 4.9-3
Schools Serving St. Paul's Cathedral Residential Units

School	Location from the Project Site	September 2009 Enrollment	Estimated 2009/2010 Capacity
Florence Elementary	3914 First Avenue (1 mile northwest)	318	315
Roosevelt Middle	3366 Park Boulevard (0.8 mile northeast)	810	815
San Diego High	1405 Park Boulevard (1 mile southeast)	2,938	2,954

Source: SDUSD 2010

SDUSD enrollment has been declining since the 2000/2001 school year, when the student population reached a peak of 142,260. This was after more than 20 years of steady growth in the 1980s and 1990s. School enrollment within the overall SDUSD system is currently operating below capacity, serving a total student population of 134,866 as of October 2009. Generally, elementary schools today are operating well below capacity, while secondary schools are generally operating closer to, but not exceeding, estimated occupancy levels. The SDUSD has forecast a decline in student enrollment through the 2013/2014 school years (SDUSD 2009). Although the Uptown community has been experiencing significant residential growth in recent years, the increased residential redevelopment occurring in the area has thus far not generated a substantial local public school enrollment increase.

In July 1998, San Diego voters approved Proposition MM, which allocates $1.51 billion to fund modernization of 161 existing schools, construction of 12 new schools, and the rebuilding of three existing schools. Proposition MM resulted in the improvement of school facilities and the addition of six new elementary schools and two new middle schools. There are no current plans for the construction of new schools that would specifically serve the project area.

Senate Bill (SB) 50 was enacted on August 27, 1998, and authorized a $9.2 billion K-12 school and higher education bond to be presented to the voters of California and was approved by the voters on November 3, 1998. SB 50 also significantly revised developer fee and mitigation procedures for school facilities as set forth in Government Code Section 65996. The legislation holds that the statutory fees are the exclusive means of considering and mitigating school impacts and limits the scope of EIR review for school impacts. Once the statutory fee is paid, the school impact would be mitigated because of the provision in SB 50 that the statutory fees constitute full and complete mitigation.

California Education Code Section 17620 authorizes school districts to levy a fee, charge, dedication, or other form of requirement against any development project for the construction or reconstruction of school facilities. The SDUSD prepared an Impact Fee Justification Study that concluded that, as of May 2008, it is necessary to implement the authority of Section 17620 to levy fees as follows:

- $2.63 per square foot for construction of new residential buildings
- $0.42 per square foot for construction of commercial and industrial buildings

The number of students generated per unit in single-family and multi-family developments within the SDUSD varies widely depending on unit sizes, proximity to schools, sales price or rent, density, target market, and specific amenities. Therefore, the City attempts to identify comparable existing developments to estimate the potential number of students generated from new development (Table 4.9-4). For the project area, student generation rates are based on the average number of students from apartment complexes with 60 or more units in the vicinity of the project.

Table 4.9-4
SDUSD Student Generation Rate

School Level	Students per Unit	Project Number of Students
K–5	0–0.016	0–2
6–8	0–0.028	0–3
9–12	0–0.080	0–8
K–12 Total	0–0.124	0–12

Source: SDUSD 2009b

This student estimation is supported by analysis of Census 2000 data. Based on established patterns of residential occupancy in the Uptown Community, the average household size is approximately 1.71 persons per household. Furthermore, the population of persons younger than 18 years of age in the project vicinity is approximately 5.5% of the general population, whereas the population of persons younger than 18 years of age city-wide is approximately 23.9% (SANDAG 2009b).

Although Florence Elementary School is currently at capacity, SDUSD (2009b) indicated that Florence Elementary School has the ability to adjust the number of non-resident students that the school can accommodate. Currently, 80% of the students at Florence reside in areas outside of its service boundary. Furthermore, this school was able to achieve a capacity of 437 students in 2005. This capacity is based not on physical limitations, but on personnel and services offered.

4.9.6 Impact Analysis

Issue: **Would the project have a substantial effect on or result in a need for new or modified school services or facilities?**

Significance of Impacts

Based on the SDUSD student generation rates above, the project would add 94 net new dwelling units to the community, adding approximately 161 new residents, five of whom may be younger than 18 years of age (SANDAG 2009b). Generation of nine new students to be served by the SDUSD would have no significant direct impact on the provision of school services, and any students generated by the project could be accommodated within the existing neighborhood schools without new or modified facilities. The project would not result in the need for a new school or services and would have a *less than significant impact* on school services.

Mitigation, Monitoring, and Reporting

No mitigation would be required.

4.9.7 Libraries

Existing Conditions

The City of San Diego maintains the public library system throughout the City limits. The library system consists of a Central Library located in downtown San Diego, 34 branch libraries located across most communities in the City, and one adult literacy program office. The library owned more than 3 million volumes and circulated more than 7.1 million items in 2009. The San Diego Public Library is a member of the Serra Cooperative Library System, which makes the resources of all public libraries (including public law libraries, learning centers, and computer centers) in San Diego and Imperial Counties available to San Diego Public Library card holders. The Serra System's Research Center is located in the Central Library. The two Serra Cooperative Libraries located near the project are listed below:

- San Diego County Public Law Library, 1105 Front Street
- City of San Diego Public Library, 820 E Street

The project site is served by the Central Library and the Mission Hills Branch Library, located at 925 West Washington Street, both approximately 1.3 miles from the project site. The Mission Hills Branch Library, built in 1961, is approximately 3,850 square feet, and most recently was estimated to hold approximately 46,000 volumes and circulate approximately 116,000 items annually. A second branch library, the University Heights Branch, is located at 4193 Park Boulevard. This branch, built in 1966, is approximately 3,749 square feet, and most recently was estimated to hold approximately 41,500 volumes and circulate approximately 108,000 items annually.

The City standard for library service is 15,000 square feet per branch, or two volumes per capita. Most branch libraries do not currently meet both thresholds for adequate service. As shown in Table 4.9-5, neither of the local branch libraries currently meets satisfactory levels of service based on facility size, although they do meet level of services based on volumes per the population. Based on the standard of 2 neighborhood branch volumes per capita, the Uptown community's population of 38,571 residents (SANDAG 2009a) would require 77,140 volumes and the total volumes available at the two local branches are 108,186. The project's addition of 161 new residents would not cause there to be a deficiency in library services.

Table 4.9-5
Libraries Serving Project Site

Branch	Location	Size (square ft.)	Volumes[1]
Central Library	820 E Street	144,525	792,823
University Heights	4193 Park Blvd.	3,749[2]	52,536
Mission Hills	925 W. Washington St.	3,850[2]	55,650
Mission Hills-Hillcrest (proposed)	215 W. Washington St.	approx. 15,000[3]	To be determined

[1] Source: San Diego Library Department (City of San Diego 2009f)
[2] Unacceptable level of service under City standard
[3] Acceptable level of service under City standard

In the past 5 years, capital improvement outlays have allowed for the construction of new facilities or significant expansion and modernization of existing facilities. These include larger general collection areas, more private or semi-private rooms, community meeting facilities, internet and computer facilities, sizeable children's areas, and other services. Due to size of the neighborhood branch libraries identified above, neither are currently able to provide all of the services that new branch libraries provide.

Property and an existing building at 215 West Washington Street have been acquired for the planned 15,000-square-foot Mission Hills-Hillcrest Branch Library that would be located on the same block as Florence Elementary School. The proposed branch library property is currently planned for renovations and improvements. However, funding sources for the project identified in 2003 have not been produced and, as such, continuation of building renovation is currently suspended until such a time that new sources of funding are allocated. Once completed, the approximately 15,000-square-foot branch would offer modernized facilities, additional community meeting space and programs, and greater capacity for additional volumes and collections. These would meet the City standards of library service for the Hillcrest/Mission Hills/Park West neighborhoods.

4.9.8 Impact Analysis

Issue: Would the project have a substantial effect on or result in a need for new or modified library services or facilities?

As shown in Table 4.9-5, the facility sizes are already at substandard levels though there are plans for a new branch library that would meet the minimum facility size criterion. With the project increase of 94 net new residential units and approximately 161 residents, the branch library standard of 2 neighborhood branch volumes per capita, would continue to be met. Therefore, under this standard, the project would not create a significant impact to library services.

The City imposes a DIF for provision or enhancement of library services of $441 per new residential unit. Payment of the DIF that would go specifically toward the construction of the proposed Mission Hills-Hillcrest Branch Library would address the project's contribution toward cumulative impacts.

Significance of Impacts

While the current branch library facilities serving the project area do not meet the City standard of 15,000 square feet, the number of volumes per capita at the branches meets the City standard. The proposed new Mission Hills-Hillcrest Branch Library would meet the City facility size standard. The Central Library is also conveniently located for use by future residents and would be accessible by public transit. Though an existing library facility deficiency exists in the project area, the proposed addition of approximately 161 new residents by the project would not in itself result in a need for new or modified library services or facilities. The payment of library fees in accordance with the City's DIF schedule for new residential units would be required as a condition of project approval. The project in and of itself would not add a significant number of persons to the community to directly contribute to an unacceptable level of service based on facility size. Therefore, the project would have a *less than significant impact* on library services.

Mitigation, Monitoring, and Reporting

No mitigation would be required.

4.9.9 Parks and Recreation Facilities

Existing Conditions

The City maintains the public parklands and recreation facilities within its jurisdiction and directs the future acquisition and development of these facilities. The City of San Diego establishes standards for public parks and recreation amenities based on area population. The following standards from the City's General Plan Recreation Element (City of San Diego 2008d) apply to the placement and development of park and recreation facilities.

Population Ratio: The General Plan recommends a parks-to-population ratio of approximately 2.8 acres per 1,000 people. Population-based parks should range in size from approximately 3 to 13 acres for neighborhood parks and a minimum of 13 acres for community parks.

Neighborhood Parks: Neighborhood parks should be located within a 1-mile radius of a population of 5,000 residents. These parks should aim to be approximately 3 to 13 acres in size. Typical facilities at a neighborhood park may include picnic areas, tot lots, multi-purpose courts, and/or open turf areas.

Community Parks: Community parks serve a population of 25,000 residents and typically serve one community plan area, but depending on location, may serve multiple community plan areas. These parks should be a minimum of 13 acres. Typical facilities at a community park may include passive and active recreation facilities, facilities found in neighborhood parks, could include facilities found in special activity parks, community cultural facilities, recreation centers, aquatic complexes, and multi-purpose sports fields.

Swimming Pools: One public swimming pool should be located within a plus-or-minus 6-mile radius of a population of 50,000 residents.

Figure 4.9-1 shows the location of parks within the Uptown Community. This includes two designated neighborhood parks located within the Mission Hills neighborhood (Mission Hills Park and Pioneer Memorial Park), and one neighborhood park located in University Heights (Old Trolley Barn Park). The neighborhood and community parks within the Uptown community are not considered to be parks that primarily serve the project site. Mission Hills and Pioneer Memorial parks are neighborhood parks, which have a 0.5-mile-radius service standard; these are approximately 1.5 miles northwest of the project site. The Old Trolley Barn Park is also a neighborhood park and is 2.2 miles northeast of the project site (City of San Diego 2009g).

The northwest corner of Balboa Park, one of the City's three regional parks at 1,172 acres, is located approximately 200 feet east of the project site. This significant horticultural, cultural, and recreational resource has more than 15,000 trees; 14 specialty gardens; nearly 100 arts, educational, recreational, social, and sports organizations; and 14 museums. It is home to the San Diego Zoo and Old Globe Theatre. A significant amount of open grass area, picnic facilities, and playgrounds are located on the western edge of the park, bordering the Park West neighborhood. However, Balboa Park is classified as a regional park and does not satisfy any of Uptown's population-based park requirements.

Morley Field sports complex and recreational area, located approximately 1.2 miles northeast of the project site, is within the service area of the project site for provision of swimming pools; however, the approximately 120,000 residents within the 2-mile-radius service area currently exceed the City's standard for 50,000 residents per swimming pool.

The Uptown community currently has a deficit of approximately 93.1 useable acres of population-based parks. From the perspective of a population-based provision of parkland for the community and neighborhood, the project would incrementally contribute to this cumulatively considerable deficiency.

The Uptown Community Facilities Financing Plan identifies several future park and recreation projects that would be financed in part by DIFs (City of San Diego 2002b). These include the establishment of joint-use recreational areas at Birney Elementary and Roosevelt Middle School, which have identified funding and are in the process of planning and development. These would be located, respectively, approximately 1.6 miles north and 0.8 mile northeast of the project site

(Figure 4.9-1). The program also identifies a need for 15 acres of neighborhood parkland acquisition, design, and construction; acquisition of 2 acres of land for the design and construction of a swimming pool; acquisition and development of 83 acres of parkland in 1- to 5-acre sizes to serve the neighborhoods; and acquisition and design of 6 acres of mini-parks, plazas, or greenways. With the exception of the joint-use projects at schools, the funding for these projects have not been secured, and specific locations of new park and recreation facilities have not been identified. However, the project-related park DIF would contribute to the overall fund and facilitate further acquisition, planning, and design efforts.

The Mid-City Communities Planning District requires that residential and mixed residential/ commercial projects within park-deficient neighborhoods provide a minimum of 750 square feet of on-site usable open space per dwelling unit (SDMC Section 1512.0204 [a][4]). However, San Diego Municipal Code (SDMC) Section 1512.0204 (b)(1)(B) exempts from this requirement for developments that are "within 600 feet of a public park." The project's proximity to Balboa Park would qualify it for this exemption.

4.9.10 Impact Analysis

Issue: **Would the project have a substantial effect on or result in a need for new or modified parks and recreation services or facilities?**

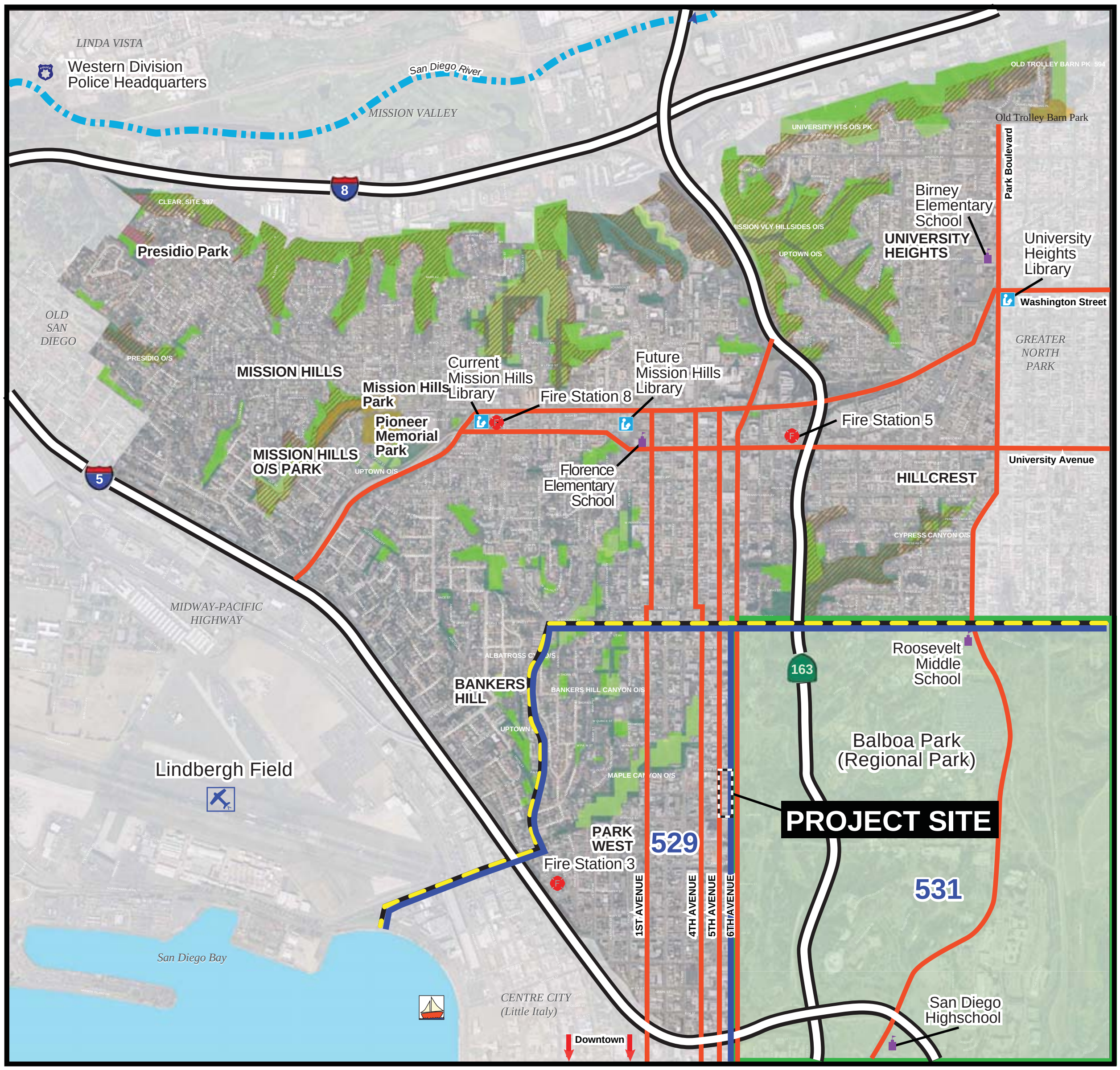
The Uptown Community Plan recognizes the deficiency of neighborhood and community parks serving the planning area and the need to provide new parks in the community (Open Space and Recreation Element). Payment of Development Impact Fees would be required to address the project's impact on population-based park requirements.

Significance of Impacts

With the addition of approximately 161 new residents to the community, the project would contribute to the existing deficiency of parks in the community. However, the increased demand placed on recreational facilities associated with the project is not considered substantial relative to the community as a whole, and the project alone would not require the construction of additional recreational facilities. The payment of park fees in accordance with the City's DIF schedule for new residential units would be required as a condition of project approval. Per the Uptown Public Facilities Financing Plan Strategy B, these fees would be used specifically within the Uptown community and Park West neighborhood (City of San Diego 2002b). Therefore, the project would have a *less than significant impact* on parks and recreational facilities.

Mitigation, Monitoring, and Reporting

No mitigation would be required.



Legend

Dedicated Open Space

Dedicated Open Space in Public Ownership

Designated Open Space

Designated Open Space in Public Ownership

Designated Open Space in Private Ownership

Parks

Community Park

Neighborhood Park

Regional Park

San Diego Police Department Central Division Boundary

San Diego Police Department Beat 529 and Boundary 531

Major Road / Transportation Corridor

River

Police

Fire

School

Library

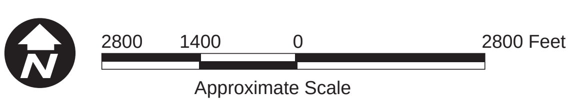


Figure 4.9-1
Public Services and Facilities

4.10 SOLID WASTE DISPOSAL

A Solid Waste Management Plan has been prepared for the project and has been submitted to the City Environmental Services Department. It is included in the EIR as Appendix L. The Waste Management Plan is intended to provide a measurable and verifiable analysis of the project's impacts on solid waste services and to produce measures to reduce those impacts. The goal of the project Waste Management Plan is to reduce waste by implementing management and recycling programs for the project during construction and occupancy.

4.10.1 Existing Conditions

The City Development Services Department is organized as the Local Enforcement Agency (LEA) to implement and enforce state laws and regulations at solid waste facility sites throughout the City of San Diego in accordance with the requirements of California Department of Resources Recycling and Recovery (CalRecycle). Solid waste sites include active and closed landfills, former disposal sites, transfer facilities, composting facilities, waste tire facilities, and waste haulers. The LEA issues permits to these facilities and conducts routine inspections to monitor sites for compliance with state laws and regulations in order to protect public health and safety and the environment.

The City operates the Miramar Landfill, which is projected to have adequate remaining capacity through year 2022. This projection is dependent on all development projects reducing landfill disposal during construction and operation. According to the state's CalRecycle Solid Waste Information System (SWIS), the Miramar Landfill's most recent estimate of remaining capacity is 16,473,000 cubic yards (11.5 million tons) (CalRecycle 2011a). Preserving capacity at the Miramar Landfill in order to extend its useful life for the benefit of the citizens of the City is a paramount concern. Other available landfills in western San Diego County are: the Sycamore Sanitary Landfill, which holds land use permits from, and pays franchise fees to, the city of San Diego; Sycamore Sanitary Landfill has an estimated remaining capacity of 47,388,428 cubic yards (33.2 million tons) and an estimated closure date of December 2031; and Otay Landfill in unincorporated San Diego County, which is operated by Republic (formerly Allied Waste Industries), and has an estimated remaining capacity of 33,070,879 cubic yards (23.2 million tons) and an estimated closure date of April 2021 (CalRecycle 2011a).

The California Public Resources Code (Section 41700 et seq.) requires that each region prepare a solid waste management plan that identifies adequate capacity for disposal of solid waste for at least 15 years in the future. The County's plan is the San Diego County Integrated Waste

Management Plan Countywide Siting Element (County of San Diego 2011). Based on 2002 data, it estimated that there was 62.9 million tons of remaining capacity in the existing operating landfills and that the County would run out of physical capacity in approximately year 2016. Additional landfill capacity is expected with the opening of the Gregory Canyon Landfill in the Pala area and, if permitted by CalRecycle, would provide an additional 33.4 million tons of landfill capacity (County of San Diego 2011).

Regulatory Setting

SDMC Section 142.0801 et seq. (effective January 1, 2000) is the City's Refuse and Recyclable Materials Storage Regulations, which requires that permanent, adequate, and convenient space be provided for the storage and collection of refuse and recyclable material. The intent of these regulations is to encourage recycling of solid waste to reduce the amount of waste material entering landfills. SDMC Section 66.0709 et seq. (Effective 20, 2007) is the City's Recycling Ordinance, which establishes requirements for recycling of recyclable materials generated from single-family and multi-family residences, commercial facilities, and special events. SDMC Section 66.0606 et seq. (adopted effective January 17, 2008) establishes the City's Construction and Demolition Debris Ordinance, which requires that 75% by weight of the total construction and demolition debris generated by development shall be diverted from landfill disposal "provided that a certified recycling facility which accepts mixed construction and demolition debris is operating within 15 miles of the City."

4.10.2 Impact Analysis

Issue: **Would the project result in construction or demolition that would meet and/or exceed the following thresholds:**

a. Single-family/multi-family construction of 50 dwelling units; or

b. Commercial construction of 40,000 square feet?

Generation of Solid Waste

Estimates of solid waste generated by full occupancy of the project residential, commercial, and Cathedral space have been estimated based on formulas and values from CalRecycle (2011b). The Olive Building is estimated to generate approximately 79 tons/year, the Nutmeg Building would generate approximately 105 tons/year, and St. Paul's Cathedral would generate approximately 15 tons/year. Total project solid waste generation would be approximately 199 tons/year. In addition, using the City standard of 3.89 pounds of waste per square foot of non-residential construction, and 4.38 pounds of waste per square foot of residential construction, the project will produce approximately 1,088 tons of solid waste during construction. Site development would also result in the excavation of approximately 89,000 cubic yards of soil that would require off-site reuse/recycling.

To facilitate reuse and recycling of materials and comply with SDMC Section 66.0606, construction debris would be source separated. Potentially marketable categories of construction waste are: inert granule products (concrete and asphalt), ferrous metals, and wood waste products. As this project progresses, a more clearly defined recycled materials process would be developed in consultation with the demolition and construction contractors. The options for demolition and construction waste would be determined before project construction begins. All material would be recycled, salvaged, or reused, to the extent feasible. If materials can be reused but are not needed on this project, donations would be made to appropriate charities or nonprofit agencies. Refuse haulers would be chosen based on their agreement to comply with the project recycling plan. Recycling facilities would be chosen based on diversion rate and geographic proximity to the project site. All contractors would be informed of and be required to comply with the waste management plan. All recycling areas at the construction sites would be identified with large signs and recycling bins would be placed in areas that minimize misuse or contamination by the public or employees. The grading contractor would determine whether there are construction projects underway or available asphalt and/or concrete batch plants that require soil import. Soil removed during excavation would be reused on the project (for grading purposes, etc.) to maximum extent possible. Remaining soil would be recycled using Hanson Aggregates West – Miramar (9229 Harris Plant Rd., San Diego, CA 92126) unless a recycler with an equal or greater recycling rate can be identified at the time of project implementation.

In addition to the SDMC requirements cited above, the checklist for LEED certification includes the requirement for a waste management plan, which has been prepared for the project (see Appendix L) and would be updated prior to issuance of demolition, grading, and building permits. The demolition, construction, and operations phases of the project would generate waste and involve substantial use of materials and resources. The LEED credit category for a waste management plan encourages the selection of sustainably grown, harvested, produced, and transported products and materials. It promotes the reduction of waste as well as reuse and recycling, and takes into account the reduction of waste at a product's source. The developer plans on following criteria for LEED certification to the extent feasible. As such, the project proposes to provide communal recycling containers in each building, which would comply with the City's refuse and recyclable material storage area requirements as shown in Table 4.10-1.

Furthermore, in accordance with the checklist for LEED certification, 10% of the material used during construction would be recycled content; 10% would be extracted, processed, and manufactured regionally; and 2.5% of the value of the building would be rapidly renewable materials. The developer would have at least 50% wood-based materials installed in the project that are Forest Stewardship Council (FSC) certified.

According to the Waste Management Plan in Appendix L of the EIR, the project would generate not more than 120 tons of solid waste during construction that would require landfill disposal, and would also generate approximately 199 tons/year of solid waste from operation of the residential, office, retail, and Cathedral land uses.

4.10.3 Significance of Impacts

The project would have a potentially significant solid waste disposal impact during construction. In addition, the project would have potentially significant solid waste disposal impact following construction, based on the threshold of a project with 50 or more proposed dwelling units per the City's Significance Determination Thresholds (City of San Diego 2007a). Accordingly, a Waste Management Plan has been prepared for the project, which is included in this EIR as Appendix L and was reviewed by the City Environmental Services Department. Following construction, the project would be required to comply with the regulations in SDMC Section 66.0706, Recycling Requirements for Residential Facilities Serviced by a Franchisee, which specifies requirements for recycling services and occupant education. Thus, with implementation of the Waste Management Plan and compliance with SDMC Section 66.0606 and Section 66.0706, the project would have a less than significant direct impact to solid waste disposal services.

It is expected that the project will have no significant impacts once the Waste Management Plan has been accepted, and the measures outlined in the plan are implemented. The project's direct impact to solid waste disposal services would be *less than significant* and no mitigation measures are required. However, the project's contribution to cumulative solid waste disposal impacts is addressed in Section 7.3.1 of the EIR and mitigation measures are identified to reduce cumulative project solid waste impacts to less than significant.

4.10.4 Mitigation, Monitoring, and Reporting

No mitigation would be required.

Table 4.10-1
Refuse and Recyclable Material Storage Area Requirements

Location & Use	Number of DU/SF	Area Required			Area Provided		
		Refuse Storage Area (SF)	Recycle Storage Area (SF)	Total Area Required (SF)	Refuse Storage Area	Recycle Storage Area	Total Area Provided
Olive Site - Residential	65 DU	144	144	**288**	297.5	297.5	**595**
Olive Site - Commercial Use	15,133 SF	48	48	**96**	85	85	**170**
Olive Site - Total	*65 DU + 15,133 SF*	*192*	*192*	***384***	*382.5*	*382.5*	***765***
Nutmeg Site - Residential	45 DU	96	96	**192**	385	385	**770**
Nutmeg Site - Commercial Use	11,003 SF	48	48	**96**	69	69	**138**
Nutmeg Site - Total	*110 DU + 26,136 SF*	*144*	*144*	***288***	*454*	*454*	***908***

DU = Dwelling Units; SF = Square Feet

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4.11 ENERGY CONSERVATION

This section was prepared pursuant to Appendix F of the CEQA Guidelines, which requires an EIR to include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. This section has been developed from data and reports from San Diego Gas and Electric (SDG&E), the California Energy Commission (CEC), and the Energy Information Administration (EIA) of the U.S. Department of Energy.

4.11.1 Existing Conditions

California uses both conventional and renewable energy resources. The State has large crude oil and substantial natural gas deposits located in its Central Valley and along its Pacific coast. In addition, federal assessments indicate that large deposits of recoverable oil and gas lie offshore in the Outer Continental Shelf. California's renewable energy potential is extensive. The State's hydroelectric power potential ranks second in the nation behind Washington State and substantial geothermal and wind power resources are found along its coastal mountain ranges and its eastern border with Nevada (EIA 2011). High solar energy potential is found in southeastern California's deserts.

In 2008, total energy usage for the State was 8,381 trillion Btu[1] (EIA 2011). Broken down by consumption sector for 2008: residential uses consumed 1,569 trillion Btu; commercial uses consumed 1,640 trillion Btu; industrial uses consumed 1,955 trillion Btu; and transportation consumed 3,218 trillion Btu (EIA 2011). Given the nature of the proposed project as mixed-use, the remainder of this discussion will focus on the sources of energy that are most relevant to the project: electricity and natural gas for residential/commercial uses, and transportation fuel for construction and vehicle trips associated with residential/commercial uses of the proposed project.

Electricity

In 2008, California consumed over 286,771 gigawatt-hour (gWh) of electricity (CEC 2009). About 70% of the electricity consumed was generated by power plants either within California or owned by California. The remainder is imported from the Pacific Northwest and Southwest regions of the United States.

[1] The British thermal unit (Btu) is a traditional unit of energy equal to about 1.06 kilojoules, or approximately the amount of energy needed to heat one pound of water by one degree Fahrenheit.

Natural gas is the main source for electricity generation in California. Natural gas-fired power plants account for approximately 38% of California's electricity generation, followed by coal (20%), hydroelectric (17%), nuclear (14%), and renewable (11%) (CEC 2006a).

California leads all states in the country in electricity generation from non-hydroelectric renewable energy sources including wind, geothermal, solar, fuel wood, and municipal solid waste/landfill gas resources. With nearly 10% of the wind capacity in the United States, California is a leader in the production of wind energy. The geothermal generation facilities in California lead the nation with over 2,300 megawatts of capacity (EIA 2010). The state's solar energy generation continues to grow with numerous existing and planned solar power facilities in the Mojave Desert.

The City of San Diego, where the project lies, receives its electricity from SDG&E, a natural gas and electric utility. The average annual electricity use of all residential customers of SDG&E was 7,588 million kWh in 2009.

Natural Gas

California produces less than 2% of the total United States' supply of natural gas (EIA 2011). Basins producing natural gas are located across the state, as well as offshore in the Pacific Ocean. Only approximately 14% of the natural gas that California consumes is developed from in-state sources (EIA 2009). While natural gas production in California is currently declining, its supply is fairly stable due to an increase in natural gas piped in from the Rocky Mountains, the Southwest, and western Canada.

Electricity generation is the largest user of natural gas, at approximately half of the State's supplies (EIA 2009), followed by residential uses such as space and water heating. Industrial uses and residential uses account for 23% and 22%, respectively, with commercial operations using 10% (EIA 2009).

Total residential natural gas consumption increased from approximately 6,500 million therms in 1970 to approximately 6,700 million therms[2] in 2007. However, the average annual natural gas consumption per household dropped more than 36%, from 845 therms to 538 therms during this same time period. This has been despite an almost doubling of the population and is a result of California's building and appliance energy efficiency standards.

[2] The therm (symbol thm) is a non-SI unit of heat energy equal to 100,000 Btu). It is approximately the energy equivalent of burning 100 cubic feet (often referred to as 1 cf) of natural gas.

SDG&E also provides natural gas to the City. The average annual natural gas use of all residential customers of SDG&E was 308 million therms in 2009.

Gasoline

In 2009, California consumed approximately 15 billion gallons of on-road fuel (EIA 2009). A CEC staff report identifies a historical decline in on-road fuel demand (CEC 2010). However, under a growing economy, the CEC projects that the demand for on-road fuel will increase through 2014 (CEC 2010). For 2014, Californians are expected to use approximately 16.4 billion gallons of gasoline. However, by 2030, the CEC estimates that demand for gasoline will drop to 14.3 billion gallons per year, based on assumptions of new energy efficiency regulations at the state and local levels, expectation of rising fuel prices, and an increasing number of hybrid and light-duty diesel vehicles.

Between 2005 and 2009, the number of hybrid vehicles on the road increased by 95% each year. By 2030, hybrid vehicles are expected to account for 18% of the on-road vehicle fleet, compared to 3% in 2007. Light-duty diesel vehicles are expected to account for 13% of on-road vehicles by 2030, compared to zero percent in 2007.

Imports of crude oil and combined fuel (gasoline, diesel, and jet fuel) are expected to increase by 2015 and exports to neighboring states, including Nevada and Arizona, are predicted to increase more than 50%. By 2015, refinery capacity is expected to increase between 3.3% and 8.1%.

Regulatory Setting

Since the energy crisis of the 1970s, efforts to promote and require energy conservation and alternatives have been embodied in numerous plans, policies, programs, and regulations promulgated at the federal, state, regional, and local levels.

Federal Plans, Policies, Regulations, and Laws

National Energy Act

The National Energy Act (NEA) of 1978 was a legislative response by the U.S. Congress to the 1973 energy crisis. Some of the more notable acts of this legislation are discussed below.

Public Utility Regulatory Policies Act (PURPA)

PURPA was passed by Congress in 1978 as part of the NEA to promote greater use of renewable energy. This law created a market for nonutility electric power producers to permit independent power producers to connect to their lines and to pay for the electricity that was delivered. Although PURPA is a federal law, implementation was left to the states and a variety of regulatory regimes developed, although in many states virtually nothing was done.

Energy Tax Act

The Energy Tax Act (Public Law 95-318) was also passed by Congress in 1978 as part of the NEA. This law was a response to the 1973 oil crisis and promoted fuel efficiency and renewable energy through taxes and tax credits.

National Energy Conservation Policy Act (NECPA)

NECPA (Public Law 95-619) is a U.S. statute signed into law in 1978 as part of the NEA. NECPA requires utilities to provide residential consumers with energy conservation audits and other services to encourage slower growth of electricity demand. NECPA was amended in 1985 by the Energy Policy and Conservation Act Amendments of 1985 (Public Law 99-58).

Energy Policy and Conservation Act

Enacted in 1975, this legislation established fuel economy standards for new light-duty vehicles sold in the United States, extended petroleum price controls, and directed the creation of petroleum reserves. The law placed responsibility on the National Highway Traffic and Safety Administration (a part of the U.S. Department of Transportation) for establishing and regularly updating vehicle standards. The EPA administers the Corporate Average Fuel Economy (CAFE) program, which determines vehicle manufacturers' compliance with existing fuel economy standards. Since the inception of the CAFE program, the average fuel economy for new light-duty vehicles (autos, pickups, vans, and SUVs) steadily increased from 13.1 miles per gallon (mpg) for the 1975 model year to 21.0 mpg for the 2005 model year.

U.S. Department of Energy

The U.S. Department of Energy is responsible for energy policy and nuclear safety. Its purview includes the nation's nuclear weapons program, nuclear reactor production for the U.S. Navy, energy conservation, energy-related research, radioactive waste disposal, and domestic energy production.

Energy Policy Acts

The Energy Policy Act of 1992, executive orders, and presidential directives require federal agencies to meet a number of energy and water management goals. For example, federal agencies are called upon to reduce their energy use by 35 percent by 2010 in comparison to 1985 levels. The Federal Energy Management Program reports agencies' progress annually, manages interagency working groups, and offers policy guidance and direction (U.S. Department of Energy 2006).

The Energy Policy Act of 2005 reestablishes a number of federal agency goals and contains relevant, amended portions of NECPA.

The Energy Independence and Security Act of 2007 is an omnibus energy policy law that consists mainly of provisions to increase energy efficiency and the availability of renewable energy. The highlights of key provisions include: CAFE standard of 35 mpg for the combined fleet of cars and light trucks by model year 2020; Renewable Fuels Standard; Energy Efficiency Equipment Standards for lighting and for residential and commercial appliance equipment; and, Repeal of Oil and Gas Tax Incentives to offset the estimated cost to implement the CAFE standards.

Federal Energy Regulatory Commission

The Federal Energy Regulatory Commission (FERC) regulates and oversees energy industries in the economic, environmental, and safety interests of the American public. FERC is the federal agency with jurisdiction over interstate electricity sales, wholesale electric rates, hydroelectric licensing, natural gas pricing, and oil pipeline rates. FERC also reviews and authorizes liquefied natural gas terminals, interstate natural gas pipelines, and nonfederal hydropower projects.

<u>State Plans, Policies, Regulations, and Laws</u>

California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates privately owned electric, natural gas, and other public utilities. Utility companies providing electricity, natural gas, and telecommunications services to the city are under CPUC's regulatory authority.

California Energy Commission

The California Energy Commission (CEC) is the state's energy policy and planning agency. Among its duties, the CEC has exclusive regulatory authority over the construction or expansion of power generating facilities. The Warren Alquist State Energy Resources Conservation and Development Act created the CEC and gave it statutory authority to regulate energy resources throughout the state in terms of supply, demand, and consumption.

Senate Bills 107 and 1078 – California's Renewable Energy Portfolio Standard Program

California established its Renewable Energy Portfolio Standard Program under SB 1078 in 2002, which originally included a goal of increasing the percentage of renewable energy in the state's electricity mix to 20% by 2017. SB 107 requires investor-owned utilities, such as SDG&E, to meet the 20% renewable energy goal by 2010.

Executive Order S-14-08

Executive Order S-14-08 was signed into law in November 2008. This Executive Order raises California's renewable energy goals and requires all retail sellers of electricity to serve 33% of their load with renewable energy by 2020.

Executive Order S-21-09

Executive Order S-21-09 was signed into law in September 2009 and reiterates the intent of Executive Order S-14-08 to enhance the availability of renewable energy. Executive Order S-21-09 allows California Air Resources Board (CARB) to work with state energy agencies to adopt regulations necessary to implement the 33% increase in renewable energy by 2020 goal. Executive Order S-21-09 also encourages coordination between the CPUC, CEC, and CARB to consider and implement regulations to reduce GHG emissions through the creation and use of renewable energy sources.

SB 375 – California's Regional Transportation and Land Use Planning Efforts

SB 375 was enacted in 2008 to further the efforts of AB 32 by controlling indirect GHG emissions through land use and transportation processes. Please see Section 4.12, Greenhouse Gas Emissions, of the EIR for more information pertaining to SB 375.

California's Energy Efficiency Standards for Residential Buildings, 24 CCR Part 6

The Energy Efficiency Standards for Residential Buildings were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2008 Standards have been adopted and went into effect on January 1, 2010. Projects that apply for a building permit on or after this date must comply with the 2008 Standards. Typically, every three years, energy efficiency standards are revised and performance requirements are more stringent.

California Green Building Standards Code

On July 17, 2008, the California Building Standards Commission adopted the California Green Building Standards Code for all new construction statewide. The code sets targets for energy efficiency, water consumption, dual plumbing systems for potable and recyclable water, diversion of construction waste from landfills, and use of environmentally sensitive materials in construction and design, including eco-friendly flooring, carpeting, paint, coatings, thermal insulation, and acoustical wall and ceiling panels.

Green Building Initiative

In December 2004, Governor Schwarzenegger signed Executive Order S-20-04 (Green Building Initiative) to establish energy- and resource-efficiency in building construction. The Order sets a goal of reducing energy use in state-owned buildings by 20% by 2015, and directs the CEC to refine Title 24 energy-efficiency standards for buildings to meet the same goal. In November 2009, Governor Schwarzenegger signed Executive Order S-14-08, which was designed to simplify California's renewable energy project approval process and increase the state's renewable portfolio standard to 33% renewable power by 2020.

Part 11 of the Title 24 Building Standards Code is referred to as the California Green Building Standards Code (CALGreen Code). The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact, and encouraging sustainable construction practices in the following categories: (1) planning and design; (2) energy efficiency; (3) water efficiency and conservation; (4) material conservation and resource efficiency; and (5) environmental air quality." The California Building Standards Commission (CBSC) has released a 2010 Draft California Green Building Standards Code on its website. This update to Part 11 of the Title 24 Building Standards Code was to be effective on January 1, 2011. Unless otherwise noted in the regulation, all newly constructed buildings in California are subject of the requirements of the CALGreen Code.

Regional and Local Plans, Policies, and Laws

City of San Diego LEED Commercial Program

In 2002, the City of San Diego adopted a LEED "Silver Level" standard for all new and significantly remodeled municipal buildings larger than 5,000 square feet. The municipal building standard is anticipated to raise the energy efficiency of participating buildings by 12 to 17%. As part of the ongoing program, new and remodeled municipal building design plans are reviewed by the City's Environmental Services Energy Conservation and Management Division. Although this program does not affect the proposed project, it does establish precedence for the level of energy efficiency in new buildings sought by the City.

Climate Wise-Energy Star Alliance

This alliance is a regional program sponsored by the City's Environmental Services Department, San Diego Regional Energy Office, and SDG&E. The goal of the program is to increase energy efficiency, prevent pollution, reduce GHG emissions, and reduce energy costs. To accomplish these goals, the program provides on-site consultations, energy audits, and monthly technical and program updates for private companies, public institutions, non-profit organizations, and other entities in the San Diego region.

City of San Diego General Plan

The City General Plan (adopted March 2008) contains ten elements that describe citywide policies and further the "City of Villages" strategy for growth and development. The following list provides the Conservation Element (CE) and the Urban Design Element (UD) policies related to energy conservation:

CE-A.5. Employ sustainable or "green" building techniques for the construction and operation of buildings.

a. Develop and implement sustainable building standards for new and significant remodels of residential and commercial buildings to maximize energy efficiency, and to achieve overall net zero energy consumption by 2020 for new residential buildings and 2030 for new commercial buildings. This can be accomplished through factors including, but not limited to:

- Designing mechanical and electrical systems that achieve greater energy efficiency with currently available technology;
- Minimizing energy use through innovative site design and building orientation that addresses factors such as sun-shade patterns, prevailing winds, landscape, and sun-screens;
- Employing self generation of energy using renewable technologies;
- Combining energy efficient measures that have longer payback periods with measures that have shorter payback periods;
- Reducing levels of non-essential lighting, heating and cooling; and
- Using energy efficient appliances and lighting.

b. Provide technical services for "green" buildings in partnership with other agencies and organizations.

CE-A.6. Design new and major remodels to City buildings, and where feasible, long-term building leases for City facilities, to achieve at a minimum, the Silver Rating goal identified by the Leadership in Energy and Environmental Design (LEED) Green Building Rating System to conserve resources, including but not limited to energy and renewable resources.

CE-A.8. Reduce construction and demolition waste in accordance with Public Facilities Element, Policy PF-I.2, or by renovating or adding on to existing buildings, rather than constructing new buildings.

CE-A.9. Reuse building materials, use materials that have recycled content, or use materials that are derived from sustainable or rapidly renewable sources to the extent possible, through factors including:

- Scheduling time for deconstruction and recycling activities to take place during project demolition and construction phases;
- Using life cycle costing in decision-making for materials and construction techniques. Life cycle costing analyzes the costs and benefits over the life of a particular product, technology, or system;

- Removing code obstacles to using recycled materials in buildings and for construction; and
- Implementing effective economic incentives to recycle construction and demolition debris (see also Public Facilities Element, Policy PF-I.2).

C-A.11. Implement sustainable landscape design and maintenance.

a. Use integrated pest management techniques, where feasible, to delay, reduce, or eliminate dependence on the use of pesticides, herbicides, and synthetic fertilizers.

b. Encourage composting efforts through education, incentives, and other activities.

c. Decrease the amount of impervious surfaces in developments, especially where public places, plazas and amenities are proposed to serve as recreation opportunities (see also Recreation Element, Policy RE-A.6 and A.7).

d. Strategically plant deciduous shade trees, evergreen trees, and drought tolerant native vegetation, as appropriate, to contribute to sustainable development goals.

e. Reduce use of lawn types that require high levels of irrigation.

f. Strive to incorporate existing mature trees and native vegetation into site designs.

g. Minimize the use of landscape equipment powered by fossil fuels.

h. Implement water conservation measures in site/building design and landscaping.

i. Encourage the use of high efficiency irrigation technology, and recycled site water to reduce the use of potable water for irrigation. Use recycled water to meet the needs of development projects to the maximum extent feasible (see Policy CE-A.12).

CE-A.12. Reduce the San Diego Urban Heat Island, through actions such as:

- Using cool roofing materials, such as reflective, low heat retention tiles, membranes and coatings, or vegetated eco-roofs to reduce heat build-up;

- Planting trees and other vegetation, to provide shade and cool air temperatures. In particular, properly position trees to shade buildings, air conditioning units, and parking lots; and
- Reducing heat buildup in parking lots through increased shading or use of cool paving materials as feasible (see also Urban Design Element, Policy UD-A.12).

CE-F.2. Continue to upgrade energy conservation in City buildings and support community outreach efforts to achieve similar goals in the community.

CE-F.3. Continue to use methane as an energy source from inactive and closed landfills.

CE-I.1. Maintain a centralized Energy Conservation and Management Program and Comprehensive Plan for all City operations.

CE-I.2. Coordinate City energy planning programs with federal, state and regional agencies. Maximize energy efficiency, use of clean renewable resources, and demand response.

CE-I.3. Pursue state and federal funding opportunities for research and development of alternative and renewable energy sources.

CE-I.4. Maintain and promote water conservation and waste diversion programs to conserve energy.

CE-I.5. Support the installation of photovoltaic panels, and other forms of renewable energy production.

a. Seek funding to incorporate renewable energy alternatives in public buildings.

b. Promote the use and installation of renewable energy alternatives in new and existing development.

CE-I.6. Develop emergency contingency plans, in cooperation with other local agencies and regional suppliers, to assure essential energy supplies and reduce non-essential consumption during periods of energy shortage.

CE-I.7. Pursue investments in energy efficiency and direct sustained efforts towards eliminating inefficient energy use.

CE-I.8. Improve fuel-efficiency to reduce consumption of fossil fuels.

CE-I.9. Implement local and regional transportation policies that improve mobility and increase energy efficiency and conservation.

CE-I.10. Use renewable energy sources to generate energy to the extent feasible.

CE-I.11. Collaborate with others to develop incentives to increase the use of renewable energy sources or reduce use of non-renewable energy sources.

CE-I.12. Use small, decentralized, aesthetically-designed, and appropriately-sited energy efficient power generation facilities to the extent feasible.

CE-I.13. Promote and conduct energy conservation education.

UD-A.4. Use sustainable building methods in accordance with the sustainable development policies in the Conservation Element.

UD-A.5. Design buildings that contribute to a positive neighborhood character and relate to neighborhood and community context.

a. Relate architecture to San Diego's unique climate and topography.

b. Encourage designs that are sensitive to the scale, form, rhythm, proportions, and materials in proximity to commercial areas and residential neighborhoods that have a well established, distinctive character.

c. Provide architectural features that establish and define a building's appeal and enhance the neighborhood character.

d. Encourage the use of materials and finishes that reinforce a sense of quality and permanence.

e. Provide architectural interest to discourage the appearance of blank walls for development. This would include not only building walls, but fencing bordering the pedestrian network, where some form of architectural variation should be provided to add interest to the streetscape and enhance the pedestrian experience. For example, walls could protrude, recess, or change in color, height or texture to provide visual interest.

f. Design building wall planes to have shadow relief, where pop-outs, offsetting planes, overhangs and recessed doorways are used to provide visual interest at the pedestrian level.

g. Design rear elevations of buildings to be as well-detailed and visually interesting as the front elevation, if they will be visible from a public right-of-way or accessible public place or street.

h. Acknowledge the positive aspects of nearby existing buildings by incorporating compatible features in new developments.

i. Maximize natural ventilation, sunlight, and views.

j. Provide convenient, safe, well-marked, and attractive pedestrian connections from the public street to building entrances.

k. Design roofs to be visually appealing when visible from public vantage points and public rights-of-way.

4.11.2 Impact Analysis

Issue 1: Would the project develop land uses causing wasteful, inefficient, and unnecessary consumption of energy or construct new or retrofitted buildings that would have excessive energy requirements for daily operation?

Methodology

This section describes the energy required to construct the proposed project as well as the energy needed for operation. The proposed project involves construction of 110 dwelling units, 6,109 square feet of commercial retail space, 20,027 square feet of commercial office space, and the net expansion of the cathedral by approximately 4,030 square feet.

The direct energy analysis includes the potential for increased energy consumed by fossil-fuel-powered vehicles associated with the proposed project as well as the energy consumed during construction. A discussion of VMT is a component of the direct energy analysis because VMT can infer energy consumption. The fuel usage for this analysis is estimated based on the average mile per gallon for San Diego County taken from the annual fleet averages for San Diego County developed for the EMFAC2007 model and multiplied by the total VMT estimated for the proposed project as part of the air quality analysis. This approach incorporates all future fuel efficiency developments in fuel carbon content, fuel economy, and fuel technology as estimated by the ARB for use in developing regional air quality plans. Construction-related energy consumption directly attributable to the proposed project is primarily related to the fuel consumption associated with equipment operation. Fuel consumption is estimated using fuel usage from OFFROAD2007 by activity and horsepower rating. For purposes of this analysis, the average fuel consumption rate for all construction equipment is 1 gallon per hour per 15 horsepower (HP).

The indirect energy analysis primarily addresses the electricity and natural gas consumption associated with operation of the buildings and the conveyance/treatment of water. Energy consumption associated with the operation of the buildings and water conveyance is taken from the calculations used to develop GHG emissions (CCAR 2009).

Construction Energy Use

Most of the energy used during construction would be in the form of gasoline- and diesel-powered construction and transportation equipment, including trucks, bulldozers, front-end loaders, forklifts, and cranes. Other equipment includes construction lighting, field services (office trailers), and electrically driven equipment such as pumps and other tools. Secondary energy users, which produce the construction material required to build the proposed project, also represent a portion of the construction energy demand.

Based on the air quality analysis modeling, demolition, grading, and construction of the proposed project would require a total of approximately 1,446,272 HP hours of activity. Based on an average fuel consumption rate of 1 gallon per hour per 15 HP, heavy construction equipment would consume approximately 96,418 gallons of fuel. Construction workers, materials deliveries, and soil and debris export would generate approximately 1,028,815 VMT over the life of the proposed project. Based on the average gallons per VMT for San Diego County, this would consume approximately 59,527 gallons of fuel. Thus, construction of the proposed project is anticipated to consume approximately 155,945 gallons of fuel. This is a conservative estimate as the air quality analysis is based on a maximum day scenario. While the proposed project would also use limited amounts of electricity as a short-term (up to 18 months) consequence of construction, these estimates have been prepared assuming an all fuel-powered construction fleet. The energy consumption associated with construction activities would not result in local energy demand exceeding the capacity of SDG&E and gasoline/diesel fuel suppliers.

Operational Energy Use

Fuel consumption associated with building operation would be primarily related to vehicle use by residents, patrons, and employees. According to the traffic analysis, the proposed project would result in a net trip generation of 1,193 ADT. Based on the air quality analysis, this would result in approximately 13,144 VMT. To estimate the fuel used, gallons per VMT was developed based on EMFAC2007 and the total reported VMT and total fuel consumed for San Diego County for 2010, which resulted in an average of 17.3 miles per gallon of fuel. Based on this consumption factor, 13,144 VMT is projected to consume approximately 761 gallons of fuel per day, and 277,587 gallons annually.

A typical dwelling unit is estimated to consume approximately 7,080 kilowatts (kW) of electricity per year, while commercial offices and retail are estimated to consume 17.3 kW per square foot and 14.3 kW per square foot, respectively. For purposes of this analysis, the renovated portion of the Cathedral is considered commercial office. Based on the proposed uses, operation of the proposed buildings and improvements are estimated to consume 1,282 megawatts (mW) per year.

Water conveyance and treatment in California requires substantial amounts of energy. Based on the GHG analysis, a single multiple-family residence consumes approximately 147 gallons of water per resident per day. Commercial retail and office land uses are estimated to consume 182 and 160 gallons of water per employee per day, respectively. Based on these consumption rates, the proposed project is estimated to consume approximately 15.4 million gallons of water per year. To convey and treat water in Southern California requires an average of 13,021 kW per million gallons. Thus, water conveyance and treatment for the proposed project would result in an annual electricity consumption of approximately 197 mW per year. Therefore, the total annual electricity consumption for the proposed land uses and for water conveyance and treatment would be approximately 1,479 mW.

A typical dwelling unit is estimated to consume approximately 4,012 cubic feet of natural gas per month, while commercial offices and retail are estimated to consume 2.0 and 2.9 gallons per square-foot per month, respectively. For purposes of calculating natural gas consumption, the renovated portion of the Cathedral is considered commercial office. Based on the proposed uses, operation of the proposed buildings and improvements are estimated to consume 6,085,141 cubic feet of natural gas per year.

Although operation of the proposed project would result in the consumption of energy, several aspects of the proposed project would help manage the amount and efficiency of energy consumption and would ensure that energy consumption is not inefficient, wasteful, unnecessary, or place a significant demand on regional energy supplies. Consistent with Title 24 building standards, a number of energy reduction and efficiency measures are being incorporated into the proposed project to reduce energy consumption and would use many of the best energy reduction and efficiency measures available. A description of the energy conservation measures proposed to be incorporated into the project is provided in the Project Design Features ENR-1, below.

4.11.3 Significance of Impacts

Construction activities are not anticipated to result in an inefficient use of energy, as construction contractors would purchase their own gasoline and diesel fuel from local suppliers and would conserve the use of their supplies to minimize costs to the proposed project.

It is assumed that secondary facilities, such as those that would produce construction materials for the proposed project would utilize all reasonable energy conservation practices in order to minimize the costs associated with energy use. As such, it is assumed that construction-related energy consumption by secondary facilities during the construction of the proposed project would not result in a wasteful, inefficient, and unnecessary usage of energy; or place a significant demand on regional energy supply or require substantial additional capacity with regards to energy consumption during the construction phase.

Compliance with Title 24 building standards and incorporation of energy reduction and conservation methods into facility design, would result in increases in energy demand associated with the project that would not represent a wasteful use of energy. The renovations to the Cathedral would replace existing, less energy-efficient facilities, while the new buildings would incorporate energy efficiency measures.

In terms of energy consumption related to vehicle use, the provision of residential units in the proposed project would potentially reduce the distance of vehicle trips and benefit reduced fuel consumption due to the location of the site near Downtown San Diego and in proximity to many employment opportunities, civic services, social activities, and public transportation.

The construction and operation of the proposed project would not result in the wasteful, inefficient, or unnecessary consumption of energy, nor would it construct new or retrofitted buildings that would have excessive energy requirements for daily operation. Thus, the proposed project would result in a *less than significant impact* on energy resources.

Issue 2: Would the project result in the need for new systems or substantial alterations to electrical, natural gas, or communication systems infrastructure?

Many federal, state, and regional regulations are currently being implemented to ensure that sufficient energy supplies are available to the public. Some of the existing federal regulations provide conservation strategies and incentives to promote the development of renewable energy sources, such as PURPA, the Energy Tax Act, the Energy Policy Act, and the NECPA. CEC is a State agency responsible for promoting energy efficiency, developing energy technologies, supporting renewable energy, and planning and directing response to energy emergencies. CEC also provides incentives and subsidies for implementing renewable energy developments. CPUC is another State agency that assists in regulating utility services and ensuring electric system reliability; and NECPA provides taxable municipal bond financing for the construction of new generation projects.

4.11.4 Impact Analysis

Increased energy usage would require additional energy supplies to meet increasing demand. Sources would likely continue to be the same sources that supply energy today. In 2008, consumers purchased 20,623 gWh from SDG&E (CEC 2009). Demand is projected to increase annually by approximately 1.3% between 2010 and 2030 (CEC 2009). The proposed project represents a long-term increase of 1.5 megawatt-hour (mWh) a year, which would be an increase of approximately 0.007% in the overall existing demand. This small increase would not represent a significant increase in electricity usage and it is within SDG&E's capabilities to provide it without additional infrastructure. Therefore, the project would not require the construction of additional electrical generation capacity.

The proposed project's natural gas usage is estimated to be approximately 6,085,141 cubic feet per year, equivalent to approximately 62,928 therms. Natural gas usage in San Diego County is approximately 541 million therms annually (CEC 2009). Demand is projected to increase annually by approximately 1.5% between 2010 and 2030 (CEC 2009). The proposed project would use approximately 0.01% of the current natural gas use within the County. This small increase in natural gas use would not represent a significant increase in natural gas usage and is within SDG&E capabilities to provide it without additional infrastructure. Therefore, the proposed project would not require the construction of additional natural gas storage or distribution facility capacity to accommodate the project.

4.11.5 Significance of Impacts

The energy demands of the proposed project would not result in the need for new systems or substantial alterations to electrical, natural gas, or communication systems infrastructure. The proposed project would employ specific energy conservation measures in conformance with City General Plan Conservation Element policies CE-A.5 (employ green building techniques), CE-A.9 (recycling activities during demolition and construction), CE-A.10 (provide recyclables storage area), CE-A.12 (use cool roofing materials and avoid parking lot heat build-up). Therefore, the project would result in a *less than significant impact* on energy resources. In addition, the project proposes to incorporate the following energy conservation design features:

Project Design Features ENR-1: The project would design and install energy efficient features in the proposed buildings to increase electrical efficiency by 15% from 2020 business-as-usual practices. Project design features that may be used to achieve a 15% increase in electrical efficiency include, but are not limited to:

- Fulfill all LEED Energy and Atmosphere category prerequisites of Fundamental Commissioning of Building Energy Systems, Minimum Energy Performance, and Fundamental Refrigerant Management;
- Achieve the LEED Energy and Atmosphere credits related to energy efficiency: Optimize Energy Performance, On-site Renewable Energy, Enhance Commissioning, Measurement and Verification, and/or Green Power;
- Install ENERGY STAR appliances, light fixtures, and light bulbs throughout all buildings;
- Install passive solar design (e.g., shade trees, glazing materials with low light reflectivity, operable windows for ventilation);
- All roofs shall be ENERGY STAR roofs or green roofs that consist of 50% vegetative cover or 50% of the roofs shall be covered with photovoltaic panels; and
- Install motion-sensor, light-emitting diode (LED) lights for outdoor lighting.

4.11.6 Mitigation, Monitoring, and Reporting

Project impacts on energy resources would be less than significant and no mitigation measures are required.

4.12 GREENHOUSE GAS EMISSIONS

This chapter provides a description of global climate change, GHG emissions, the existing regulatory framework surrounding GHG emissions, and an analysis of the potential impacts related to GHGs that would result from implementation of the project. The GHG emissions associated with construction and operation of the project are quantified and analyzed in the context of the evolving regulatory environment. The results of calculations of GHG emission estimates are provided in Appendix I of the EIR.

4.12.1 Existing Conditions

Background

Physical Scientific Basis of Climate Change

Certain gases in Earth's atmosphere, classified as GHGs, play a critical role in determining Earth's surface temperature. Solar radiation enters Earth's atmosphere from space. A portion of the radiation is absorbed by Earth's surface, and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from Earth as low-frequency infrared radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by GHGs. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on Earth. Without the greenhouse effect, Earth would not be able to support life as we know it.

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons, chlorofluorocarbons, and sulfur hexafluoride. Human-caused emissions of these GHGs in excess of natural ambient concentrations are responsible for intensifying the greenhouse effect and have led to a trend of unnatural warming of Earth's climate, known as global climate change or global warming. It is unlikely that global climate change of the past 50 years can be explained without acknowledging the contribution from human activities (Intergovernmental Panel on Climate Change [IPCC] 2007).

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about 1 day), GHGs have much longer atmospheric lifetimes of 1 year to several thousand years. GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood by scientists who study atmospheric chemistry that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. Of the total annual human-caused CO_2 emissions, approximately 54% is sequestered within 1 year through ocean uptake, by northern hemisphere forest regrowth, and other terrestrial sinks; whereas the remaining 46% of human-caused CO_2 emissions remains stored in the atmosphere (Seinfeld and Pandis 1998).

Similarly, impacts of GHGs are borne globally, as opposed to localized air quality effects of criteria air pollutants and TACs. The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; suffice it to say, the quantity is enormous, and no single project alone would measurably contribute to a noticeable incremental change in the global average temperature, or to global, local, or micro climate. From the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative.

Greenhouse Gas Emission Sources

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the transportation, industrial/manufacturing, electric utility, residential, commercial, and agricultural sectors (ARB 2009b). In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation (ARB 2009b). Emissions of CO_2 are byproducts of fossil fuel combustion while CH_4, a highly potent GHG, results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. N_2O is also largely attributable to agricultural practices and soil management.

California is the 12th to 16th largest emitter of CO_2 in the world, depending on the source of the estimate (CEC 2006b). California produced 484 million gross metric tons of CO_2 equivalent (CO_2e) in 2004 (ARB 2009b). CO_2e is a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential (GWP) of a GHG, is dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Expressing emissions in CO_2e takes the contributions of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2004, accounting for 38% of total GHG emissions in the state. The transportation sector was followed by the electric power sector, which accounts for 22% of total GHG emissions in the state (including both in-state and out-of-state sources); and the industrial sector, which accounts for 20% of total GHG emissions in the state (ARB 2008).

Adaptation to Climate Change

According to the IPCC, which was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme, global average temperature is expected to increase by 3–7°F by the end of the century, depending on future GHG emission scenarios (IPCC 2007). Resource areas other than air quality and global average temperature could be indirectly affected by the accumulation of GHG emissions. For example, an increase in the global average temperature is expected to result in a decreased volume of precipitation falling as snow in California and an overall reduction in snowpack in the Sierra Nevada. Snowpack in the Sierra Nevada provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of supply for the state (including the project site). According to CEC, the snowpack portion of the water supply could potentially decline by 30–90% by the end of the 21st century (CEC 2006c). A study cited in a report by the California Department of Water Resources (DWR) projects that approximately 50% of the statewide snowpack would be lost by the end of the century (Knowles and Cayan 2002). Although current forecasts are uncertain, it is evident that this phenomenon could lead to significant challenges in securing an adequate water supply for a growing population. An increase in precipitation falling as rain rather than snow also could lead to increased potential for floods because water that would normally be stored as snow in the Sierra Nevada until spring could flow into the Central Valley concurrently with winter storm events. This scenario would place more pressure on California's levee/flood control system (DWR 2006).

Another outcome of global climate change is sea level rise. Sea level rose approximately 7 inches during the last century, and it is predicted to rise an additional 7–22 inches by 2100, depending on the future levels of GHG emissions (IPCC 2007). If this occurs, resultant effects could include increased coastal flooding, saltwater intrusion, and disruption of wetlands (CEC 2006c). As the existing climate throughout California changes over time, the ranges of various plant and wildlife species could shift or be reduced, depending on the favored temperature and moisture regimes of each species. In the worst cases, some species would become extinct or be extirpated from the state if suitable climate conditions are no longer available.

The project site is situated approximately 265 feet above sea level and, thus, would not be directly affected by the potential sea level rise predicted to occur over the next 100 years. However, similar to the conditions discussed above, sea level rise could have a negative impact on certain species due to the loss of habitat; as well as an impact to the economy and infrastructure of the San Diego region.

Federal Plans, Policies, Regulations, and Laws

U.S. EPA is the federal agency responsible for implementing the federal CAA. The Supreme Court of the United States ruled on April 2, 2007, that CO_2 is an air pollutant as defined under the CAA, and that U.S. EPA has the authority to regulate emissions of GHGs.

<u>Proposed Endangerment and Cause or Contribute Findings for GHG under the CAA</u>

On April 23, 2009, the EPA published their Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases under the CAA (Endangerment Finding) in the Federal Register. The Endangerment Finding is based on Section 202(a) of the CAA, which states that the Administrator (of the EPA) should regulate and develop standards for "emission[s] of air pollution from any class or classes of new motor vehicles or new motor vehicle engines, which in [its] judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare." The proposed rule addresses Section 202(a) in two distinct findings: whether or not the concentrations of the six key GHGs (i.e., CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) in the atmosphere threaten the public health and welfare of current and future generations; and whether or not the combined emissions of GHGs from new motor vehicles and motor vehicle engines contribute to atmospheric concentrations of GHGs and, therefore, increase the threat of climate change.

The Administrator proposed the finding that atmospheric concentrations of GHGs endanger the public health and welfare within the meaning of Section 202(a) of the CAA. The evidence supporting this finding consists of human activity resulting in "high atmospheric levels" of GHG emissions, which are very likely responsible for increases in average temperatures and other climatic changes. Furthermore, the observed and projected results of climate change (e.g., higher likelihood of heat waves, wildfires, droughts, sea level rise, and increased intensity of storms) are a threat to the public health and welfare. Therefore, GHGs were found to endanger the public health and welfare of current and future generations.

The Administrator also proposed the finding that GHG emissions from new motor vehicles and motor vehicle engines are contributing to air pollution, which is endangering public health and welfare. The proposed finding cites that in 2006, motor vehicles were the second largest contributor to domestic GHG emissions (24% of total) behind electricity generation. Furthermore, in 2005 the U.S. was responsible for 18% of global GHG emissions. Therefore, GHG emissions from motor vehicles and motor vehicle engines were found to contribute to air pollution that endangers public health and welfare.

On December 7, 2009, the EPA finalized its decision that GHG emissions from motor vehicles constitute an "endangerment" under the CAA. This finalized finding by the EPA allows for the establishment of GHG emissions standards for new motor vehicles.

Mandatory Greenhouse Gas Reporting Rule

On April 10, 2009, EPA published the Proposed Mandatory Greenhouse Gas Reporting Rule (Proposed Reporting Rule) in the Federal Register. The Proposed Reporting Rule is a response to the fiscal year (FY) 2008 Consolidated Appropriations Act (H.R. 2764; Public Law 110-161) that required EPA to develop "… mandatory reporting of greenhouse gases above appropriate thresholds in all sectors of the economy…." The Proposed Reporting Rule would apply to fossil fuel and industrial GHG suppliers, vehicle and engine manufacturers, and all facilities that would emit 25,000 metric tons or more of CO_2e per year. Facility owners would be required to submit an annual report with detailed calculations of facility GHG emissions. The Proposed Reporting Rule would also mandate recordkeeping and administrative requirements to enable EPA to verify the annual GHG emissions reports. Owners of existing facilities that commenced operation prior to January 1, 2011, would be required to submit an annual report for calendar year 2011. Owners of new facilities commencing operation after January 1, 2011, would be required to submit an annual report from the facility's commencement date to December 31, 2011. For all subsequent operating years, facility owners would be required to report GHG emissions for the entire calendar year (January 1 to December 31). At the time of this writing, EPA is still in the process refining the Proposed Reporting Rule.

State Plans, Policies, Regulations, and Laws

ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the CCAA, which was adopted in 1988.

Various statewide and local initiatives to reduce the state's contribution to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is under way and there is a long-term potential for severe adverse environmental, social, and economic effects. Every nation emits GHGs and, therefore, because they all make an incremental cumulative contribution to global climate change, cooperation on a global scale is required to reduce the rate of GHG generation to a level that can help to slow or stop the human-caused increase in average global temperatures and associated changes in climatic conditions.

Assembly Bill (AB) 1493

This bill, signed in 2002, required that ARB develop and adopt by January 1, 2005, regulations that achieve "the maximum feasible reduction of greenhouse gases emitted by passenger vehicles and light-duty trucks and other vehicles determined by ARB to be vehicles whose primary use is noncommercial personal transportation in the state."

To meet the requirements of AB 1493, ARB added GHG emissions standards to California's existing standards for motor vehicle emissions in 2004. Amendments to Title 13 of the California Code of Regulations, Sections 1900 and 1961 (13 CCR 1900, 1961), and adoption of Section 1961.1 (13 CCR 1961.1), require automobile manufacturers to meet fleet-average GHG emissions limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes (i.e., any medium-duty vehicle with a gross vehicle weight rating less than 10,000 pounds that is designed primarily for the transportation of persons), beginning with the 2009 model year. For passenger cars and light-duty trucks, the GHG emission limits for the 2016 model year are approximately 37% lower than the limits for the first year of the regulations, the 2009 model year. For light-duty trucks and medium-duty passenger vehicles, GHG emissions would be reduced approximately 24% between 2009 and 2016.

In December 2004, a group of car dealerships, automobile manufacturers, and trade groups representing automobile manufacturers filed suit against ARB to prevent enforcement of 13 CCR 1900 and 1961 as amended by AB 1493 and 13 CCR 1961.1. The auto-makers' suit in the U.S. District Court for the Eastern District of California, contended California's implementation of regulations that, in effect, regulate vehicle fuel economy, violates various federal laws, regulations, and policies.

On December 12, 2007, the court found that if California receives appropriate authorization from EPA, which was the last remaining factor in enforcing the standard, these regulations would be consistent with and have the force of federal law, thus rejecting the automakers' claim. This authorization to implement more stringent standards in California was requested in the form of a CAA Section 209, subsection (b) waiver in 2005. EPA did not act on granting California authorization to implement the standards and, therefore, Governor Schwarzenegger and Attorney General Edmund G. Brown filed suit against EPA for the delay. In December 2007, EPA Administrator Stephen Johnson denied California's request for the waiver to implement AB 1493. Johnson cited the need for a national approach to reducing GHG emissions, the lack of a "need to meet compelling and extraordinary conditions," and the emissions reductions that would be achieved through the Energy Independence and Security Act of 2007 as the reasoning for the denial (ARB 2010b).

The state then filed suit against EPA for its decision to deny the CAA waiver. The recent change in administration led EPA to reexamine its position for denial of California's CAA waiver and for its past opposition to GHG emissions regulation. California received the waiver on June 30, 2009. In December 2009, ARB approved amendments to the regulatory text for GHG emission standards and test procedures for 2001 and subsequent model year passenger vehicles. In addition, in February 2010, ARB proposed a rulemaking to consider amendments to new passenger motor vehicle GHG emissions standards for model years 2012 to 2016 to permit compliance with federal GHG emission standards.

Executive Order S-3-05

Governor Schwarzenegger signed this Executive Order in 2005, proclaiming that California is vulnerable to the impacts of climate change. It declared that increased temperatures could reduce the Sierra Nevada's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total GHG emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80% below the 1990 level by 2050.

The Executive Order directed the secretary of CalEPA to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The secretary was also directed to submit biannual reports to the governor and the state legislature describing progress made toward reaching the emission targets, impacts of global warming on California's resources, and mitigation and adaptation plans to combat these impacts. To comply with the Executive Order, the secretary of CalEPA created the California Climate Action Team (CCAT), made up of members from various state agencies and commissions. CCAT released its first report in March 2006. The report proposed to achieve the targets by building on voluntary actions of California businesses, local government, and community actions, as well as through state incentive and regulatory programs.

AB 32, the California Global Warming Solutions Act of 2006

In September 2006, Governor Arnold Schwarzenegger signed AB 32, which establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction would be accomplished through an enforceable statewide cap on GHG emissions that would be phased in starting in 2012. To effectively implement the cap, AB 32 directs ARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then ARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires that ARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrived at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves the reductions in GHG emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

AB 32 Climate Change Proposed Scoping Plan

In October 2008, ARB published its Climate Change Proposed Scoping Plan (Proposed Scoping Plan), which is the state's plan to achieve GHG reductions in California required by AB 32 (ARB 2008). The Proposed Scoping Plan contains the main strategies California would implement to achieve a reduction of 169 million metric tons (MMT) of CO_2e, or approximately 30%, from the state's projected 2020 emission level of 596 MMT of CO_2e under a business-as-usual scenario (this is a reduction of 42 MMT CO_2e, or almost 10%, from 2002–2004 average emissions). The Proposed Scoping Plan also includes GHG reductions recommended by ARB for each emissions sector of the state's GHG inventory.

The largest proposed GHG reductions are recommended to result from improving emission standards for light-duty vehicles (estimated reductions of 31.7 MMT CO_2e), implementation of the Low Carbon Fuel Standard (15.0 MMT CO_2e, discussed below), energy efficiency measures in buildings and appliances from combined heat and power systems (26.3 MMT CO_2e), and a renewable portfolio standard for electricity production (21.3 MMT CO_2e).

ARB has not yet determined what amount of GHG reductions it recommends from local government operations; however, the Proposed Scoping Plan does state that land use planning and urban growth decisions will play an important role in the state's GHG reductions because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions. ARB is also developing an additional protocol for community emissions and acknowledges that decisions on how land is used will have large impacts on the GHG emissions from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas sectors. The Proposed Scoping Plan states that the ultimate GHG reduction assignment to local government operations is to be determined (ARB 2008). With regard to land use planning, the Proposed Scoping Plan expects approximately 5.0 MMT CO_2e would be achieved associated with implementation of SB 375, which is discussed below. The Proposed Scoping Plan was approved by ARB on December 11, 2008. ARB is currently working in collaboration with several state, regional, and local agencies to implement the Proposed Scoping Plan.

Executive Order S-1-07

This Executive Order was signed by Governor Schwarzenegger in 2007 and proclaims that the transportation sector is the main source of GHG emissions in California, at more than 40% of statewide emissions. It establishes a goal that the carbon intensity of transportation fuels sold in California should be reduced by a minimum of 10% by 2020. This order also directed ARB to determine if this Low Carbon Fuel Standard could be adopted as a discrete early action measure for meeting the mandates in AB 32.

SB 1368

The companion bill of AB 32, SB 1368 was signed by Governor Schwarzenegger in September 2006 and required the California Public Utilities Commission (PUC) to establish a GHG-emission performance standard for baseload generation from investor-owned utilities by February 1, 2007. CEC was also required to establish a similar standard for local publicly owned utilities by June 30, 2007. These standards were not to exceed the GHG emission rate from a baseload combined-cycle natural-gas-fired plant. The legislation further requires that all electricity provided to California, including imported electricity, be generated from plants that meet the standards set by the PUC and CEC.

Senate Bills 1078 and 107 and Executive Order S-14-08

SB 1078 requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20% of their supply from renewable sources by 2017. SB 107 changed the target date to 2010. Governor Schwarzenegger signed Executive Order S-14-08 in November 2008, which expands the state's Renewable Energy Standard to 33% renewable power by 2020. Governor Schwarzenegger plans to propose legislative language that would codify the new higher standard (Office of the Governor 2008a). In 2009, San Diego Gas and Electric (SDG&E), which provides electricity and natural gas to the project site, used 10.5% renewable energy to provide electricity to customers.

SB 97

Signed August 2007, SB 97 acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. This bill directed the California Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Natural Resources Agency, guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA by July 1, 2009. The Natural Resources Agency was required to certify or adopt those guidelines by January 1, 2010. On April 13, 2009, OPR submitted to the secretary for Natural Resources its proposed amendments to the state CEQA Guidelines for GHG emissions, as required by SB 97. On February 16, 2010, the Office of Administrative Law (OAL) approved the CEQA amendments and filed them with the Secretary of State for inclusion in the California Code of Regulations. The CEQA amendments became effective on March 18, 2010.

SB 375

Signed in September 2008, SB 375 aligns regional transportation planning efforts, regional GHG-reduction targets, and land use and housing allocation. It requires Metropolitan Planning Organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy (APS), which would prescribe land use allocations in that MPO's Regional Transportation Plan (RTP). ARB, in consultation with MPOs, is to provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets are to be updated every 8 years, but can be updated every 4 years if advancements in emission technologies affect the reduction strategies to achieve the targets. ARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG-reduction targets, transportation projects would not be eligible for funding programmed after January 1, 2012.

This bill also extends the minimum time period for the Regional Housing Needs Allocation cycle from 5 years to 8 years for local governments located within an MPO that meets certain requirements. City or county land use policies (including general plans) are not required to be consistent with the RTP (and associated SCS or APS). However, new provisions of CEQA would incentivize qualified projects that are consistent with an approved SCS or APS, which would be categorized as "transit priority projects." At the time of this writing, ARB is in consultation with the MPOs to develop reduction targets.

Regional and Local Plans, Policies, and Laws

City of San Diego Sustainable Community Program

In 2002, the City adopted the San Diego Sustainable Community Program, which initiated the City's partnership into the Cities for Climate Protection Campaign by the International Council for Local Environmental Initiatives. This partnership commits the City to developing a GHG inventory of its energy, transportation, and waste management emissions, and a Climate Protection Action Plan to actively reduce those emissions. The goal of the plan and the Sustainable Community Program is to reduce the City's GHG emissions to a level 15% below 1990 levels by 2010. The City is currently in the process of implementing its Sustainable Community Program.

City of San Diego LEED Commercial Program

In 2002, the City of San Diego adopted a LEED "Silver Level" standard for all new and significantly remodeled municipal buildings larger than 5,000 square feet. The municipal building standard is anticipated to raise the energy efficiency of participating buildings by 12 to 17% (City of San Diego 2009b). As part of the ongoing program, new and remodeled municipal building design plans are reviewed by the City's Environmental Services Energy Conservation and Management Division. Although this program does not affect the proposed project, it does establish precedence for the level of energy efficiency in new buildings sought by the City.

Climate Wise-Energy Star Alliance

This alliance is a regional program sponsored by the City's Environmental Services Department, San Diego Regional Energy Office, and SDG&E. The goal of the program is to increase energy efficiency, prevent pollution, reduce GHG emissions, and reduce energy costs. To accomplish these goals, the program provides on-site consultations, energy audits, and monthly technical and program updates for private companies, public institutions, non-profit organizations, and other entities in the San Diego region.

City of San Diego General Plan Conservation Element

As was identified in Section 4.11, Energy Conservation, of the EIR, the City General Plan (March 2008) contains ten elements that describe citywide policies intend to further the "City of Villages" strategy for growth and development that the City has developed. Listed in Section 4.11 are policies contained in the Conservation Element and the Urban Design Element related to energy conservation that are intended to implement the following City goals:

- To reduce the City's overall carbon dioxide footprint by improving energy efficiency, increasing use of alternative modes of transportation, employing sustainable planning and design techniques, and providing environmentally sound waste management.
- To be prepared for and be able to adapt to adverse climate change impacts.
- To become a city that is an international model of sustainable development and conservation.

4.12.2 Impact Analysis

Issue 1: Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Analysis Methodology

The SDAPCD has not adopted a significance threshold for analyzing GHG emissions generated by a land development project, such as the project, or a methodology for analyzing impacts related to GHG emissions or global climate change. However, through the adoption of AB 32, the State of California identified GHG reduction goals and strategies to minimize the effects of global climate change. In addition, per SB 97, the OPR developed CEQA Guidelines amendments that include significance criteria for evaluating the impacts of GHG emissions, which were approved by OAL and became effective March 18, 2010.

The City has provided guidance for the evaluation of GHG emissions from land use development projects through their Addressing Greenhouse Gas Emissions from Projects Subject to CEQA memorandum (City of San Diego August 18, 2010). The memorandum recommends that the conservative, quantitative threshold of 900 metric tons (MT) of CO_2e per year for operational emissions be used to evaluate the potential impact of a project's GHG emissions. This screening threshold is based on the California Air Pollution Control Officers Association (CAPCOA) report "CEQA and Climate Change" (CAPCOA 2008). Projects that would generate GHG emissions that exceed 900 MT CO_2e per year from its operational activities (traffic generation, electricity and natural gas use, solid waste disposal, and water use) would be required to demonstrate a 28.3% reduction in GHG emissions from the project's 2020 business-as-usual emissions in order to be consistent with the AB 32 Scoping Plan GHG reduction goal.

OPR's CEQA Guideline amendments state: "[a] lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project." Therefore, the construction and operational emissions associated with the project have been quantified using methods described below. Appendix I of the EIR contains detailed calculations and assumptions used for quantifying the project's GHG emissions. Construction-related GHG emissions were estimated using similar methodology to that described in Section 4.4 of the EIR for criteria air pollutants. URBEMIS 2007 Version 9.2.4 also estimates CO_2 emissions associated with construction-related GHG sources such as off-road construction equipment, material delivery trucks, soil haul trucks, and construction worker vehicles (Rimpo and Associates 2008). Construction emissions have been amortized over a 30 year period, which is the assumed lifetime of the project, and added to annual operational emissions.

Operational emissions of GHGs, including GHGs generated by direct and indirect sources, require a more comprehensive analysis than URBEMIS 2007 is able to conduct. The City has identified five primary sources of GHG emissions from land use development projects. Direct primary sources include emissions such as vehicle trips and natural gas consumption. Indirect primary sources include off-site emissions occurring as a result of the project's operations such as electricity consumption, water consumption, and solid waste disposal. In order to account for all five operational emission sources, the statewide land use emissions computer model, California Emissions Estimator Model (CalEEMod) Version 2011.1.1, was used to quantify operational emissions. CalEEMod allows the user to input land use types and sizes, as well as trip generation rates, similar to URBEMIS 2007. However, CalEEMod calculates area, energy, mobile, waste, and wastewater GHG emissions using region-specific parameters. Furthermore, CalEEMod includes a quantification module based on the CAPCOA *Quantifying Greenhouse Gas Mitigation Measures* (August 2010). Therefore, CalEEMod was used to model operational emissions for the existing land uses on the project site, the proposed project, and the proposed project with project features. Model inputs were based on project-specific data (e.g., size and type of proposed uses) and vehicle trip information from the traffic analysis prepared for this project (Kimley-Horn and Associates 2010).

It is to be noted that GHG emissions associated with construction and operation of the project would predominantly be in the form of CO_2. While emissions of other GHGs, such as CH_4 and N_2O, are important with respect to global climate change, the project is not expected to emit substantial quantities of GHGs other than CO_2, even when factoring in the relatively larger GWP of CH_4 and N_2O. This is because most emissions from the project would be associated with vehicle emissions (i.e., mobile-source emissions). Although vehicles also emit small quantities of N_2O and CH_4, the primary GHG emitted during fuel combustion is CO_2. Both state law and the U.S. EPA's proposed endangerment finding also include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride as important GHGs, as discussed above in the regulatory setting. However, these compounds are typically emitted by industrial processes and are not applicable to the project. Thus, project-generated emissions of CO_2 are used as a proxy[3] for total GHG emissions, unless otherwise noted.

Construction and Operational GHG Emissions

Short-term construction and long-term operation of the project would generate emissions of GHGs. Construction-related emissions would be generated from off-road equipment and on-road vehicle exhaust emissions. Operational emissions would be generated from vehicle trips to and from the project and area sources such as natural gas consumption associated with household heating systems, water heating, and landscape maintenance equipment. In addition, the project would consume electricity and potable water, both of which would generate GHG emissions associated with electricity production. The following analysis quantifies and evaluates the impact of the project's construction emissions and its direct and indirect operational emissions.

[3] Proxy: A measured variable used to infer the value of a variable of interest in climate research.

Short-Term Construction-Related GHG Emissions

Construction-related GHG emissions associated with heavy-duty construction equipment, material delivery trucks, and construction worker trips would occur intermittently during construction of the project. Following buildout of the project, construction-related GHG emissions would cease. Therefore, construction-related GHG emissions are considered temporary and short-term. Table 4.12-1 presents the GHG emissions generated during each year of construction as well as the total GHG emissions generated during the lifetime of construction activities.

As shown in Table 4.12-1, the project would generate approximately 1,442 metric tons of CO_2 during the entire construction period. Due to the lack of a numerical threshold established by SDAPCD, ARB, or any other regulatory agency for construction-related GHG emissions, the following thresholds are used to provide context:

- Facilities (i.e., stationary, continuous sources of GHG emissions) that generate greater than 25,000 metric tons of CO_2 per year are mandated to report their GHG emissions to the ARB pursuant to AB 32 and EPA's General Reporting Protocol;
- Stationary sources that generate greater than 10,000 metric tons of CO_2 per year may be required to participate in the cap-and-trade program through the Western Climate Initiative (ARB 2009c); and
- The South Coast Air Quality Management District's (SCAQMD) significance screening level of 3,000 metric tons of CO_2 per year for mixed-use projects in its Draft Guidance Document–Interim CEQA Greenhouse Gas Significance Threshold (SCAQMD 2008).

This information is presented for informational purposes only and it is not the intention of the Lead Agency to adopt any of the above-listed emission levels as a numeric threshold. Rather, the purpose is to put the project's finite construction-related GHG emissions in the appropriate statewide context in order to evaluate whether the project's contribution to the global impact of climate change would have a significant impact on the environment. It is also important to recognize that the project may meet the requirements of a LEED-certified building. Although the precise credits to achieve LEED certification are not known at the time of this writing, the developer and architect would be required to comply with certain prerequisites related to Sustainable Sites and Materials and Resources. Though the construction-related LEED measures may not result in reduction of direct GHG emissions (e.g., exhaust emissions), they could result in reduced soil erosion during construction; use of recycled materials; diversion of demolition materials from landfills; and use of recycled, local, and/or sustainable materials, which indirectly result in a reduction of GHG emissions. In addition, the AB 32 Scoping Plan cites the LEED program as the state's method of reducing GHG emissions from new construction and from retrofits to existing buildings. Therefore, development of the project would be considered consistent with the strategies and goals of AB 32.

As shown in Table 4.12-1, the total construction-related GHG emissions over 18 months (1.5 years) of activity would be 1,442 MT of CO_2. Therefore, on an annual basis, the project would generate approximately 961 MT of CO_2. The annual construction emissions would be less than any of the emission thresholds listed above.

Construction-related emissions would be temporary and finite, be below those levels being considered and/or discussed by other government agencies and associations, and be consistent with the AB 32 Scoping Plan. Therefore, the project's construction-related GHG emissions would not be a cumulatively considerable contribution to climate change and would be less than significant. Nevertheless, in order to evaluate construction emissions they have been amortized over the assumed lifetime of the project (i.e., 30 years) and added to the operational emissions below.

<u>Long-Term Operational GHG Emissions</u>

Following buildout of the project, the Olive and Nutmeg buildings and the Cathedral would result in a net increase in operational emissions (i.e., area, mobile, and indirect sources). As shown in Table 4.12-2, the project would result in a net increase of 2,136 MT CO_2e per year for the lifetime of the project, which includes amortized construction emissions. Therefore, the project's annual operational emissions would require a more detailed analysis to demonstrate that the project with GHG-reducing features achieves a 28.3 percent reduction when compared to the project without GHG-reducing features.

However, when evaluating a project's long-term operational GHG emissions, it is also important to consider design and location features related to GHG efficiency. The design of the project should be compared with applicable planning documents such as the City General Plan and the AB 32 Scoping Plan, which were developed to reduce future GHG emissions. The project would be consistent with many of the policies of the Conservation Element of the General Plan listed above in the subsection titled Regional and Local Plans, Policies, and Laws. The proposed achievement of LEED-certified buildings would be consistent with overall goal of the following City Conservation Element policies: Policy CE-A.6, which encourages municipal buildings to be built to LEED standards; Policy CE-A.7, which eliminates the use of chlorofluorocarbon-based refrigerants and is a prerequisite of LEED certification; and Policy CE-A.10, which has requirements for recycling and waste disposal features for new building and is also a prerequisite of LEED certification. Furthermore, the location of the project is consistent with the Mixed-Use Villages growth strategy of the General Plan. Therefore, the project design and location would be consistent with the conservation and growth strategies of the region, which have been developed with the San Diego Sustainable Community Program and goals in mind.

To meet AB 32 goals, California would need to generate less GHG emissions than current levels. It is recognized, however, that for most projects, there is no simple metric available to determine if a single project would substantially increase or decrease overall GHG emission levels. AB 32 demonstrates California’s commitment to reducing the rate of GHG emissions and the state’s associated contribution to climate change without the intent to limit population or economic growth within the state. Thus, to achieve the goals of AB 32, which are tied to GHG emission rates of a specific benchmark year (i.e., 1990), California would have to achieve a lower rate of emissions per unit of population than occurs now. Further, to accommodate future population and economic growth, the state would have to achieve an even lower rate of emissions per unit than was achieved in 1990. The goal to achieve 1990 quantities of GHG emissions by 2020 means that this would need to be accomplished with the GHG impact from 30 years of population and economic growth beyond 1990. Thus, future planning efforts that would not encourage reductions in GHG emissions would conflict with the policy decisions contained in the spirit of AB 32 and would impede California’s ability to comply with the mandate.

Although the project would increase the intensity of land uses on the project site when compared to the existing site conditions, its design and location features would be consistent with the goals of the AB 32 Scoping Plan. For example, as discussed above, the AB 32 Scoping Plan identifies the LEED certification as a strategy used to reduce GHG emissions from new and remodeled buildings. In addition, the compact mixed-use site design; its location in close proximity to employment, shopping, social, and recreational opportunities; and its location along a public transit corridor improve the project’s contribution to meeting the sustainability strategies of the AB 32 Scoping Plan: “Growing more sustainably has the potential to provide additional greenhouse gas and energy savings by encouraging more compact, mixed-use developments resulting in reduced demand for electricity and heating and cooling energy” (ARB 2008).

The infill nature of the project allows residents of the project to travel shorter trip distances or use transit to reach amenities such as employment centers and retail stores. The proposed commercial and retail land uses would also provide the same opportunity to walk, bike, or use transit to these uses or to reduce vehicle trip distances traveled by existing residents in the Park West and Uptown communities. Shorter trip distances result in reduced VMT and associated mobile source emissions, which are the largest source (i.e., 38%) of GHG emissions in the state (ARB 2009a). Therefore, the project's design is consistent with both the City General Plan, which was developed with GHG reduction strategies in mind, and the AB 32 Scoping Plan, which is California's implementing plan to achieve the GHG reduction goals of AB 32.

Although it is acknowledged that the project's annual operational emissions would exceed the City's emissions level for further analysis of 900 MT CO_2e per year, the project would be consistent with the goals and development strategies set by the City General Plan, its Sustainable Community Program, and the AB 32 Scoping Plan. It should be noted that the GHG reductions associated with aforementioned features such as LEED certification (i.e., long-term energy, water, and materials efficiency), mixed-used design, access to transit, location in a high-density area, and reduced trip distances, have not been accounted for in this GHG analysis due to current limitations in modeling tools. Although it is not anticipated that these features would reduce the project's GHG emissions below the 900 MT CO_2e per year level, they represent the principal design features required by future land use development in order for California to meet its AB 32 GHG reduction goals. Therefore, considering the information above, the project would not conflict with any applicable local or state plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Nevertheless, based on the City's Addressing Greenhouse Gas Emissions from Projects Subject to CEQA memorandum (City of San Diego August 2010), projects that would generate GHG emissions that exceed 900 MT CO_2e per year from its operational activities would be required to demonstrate a 28.3% reduction in GHG emissions from the project's 2020 business-as-usual emissions in order to be consistent with the AB 32 Scoping Plan GHG reduction goal.

4.12.3 <u>Significance of Impacts</u>

The project would exceed the 900 MT CO_2e/yr interim screening criteria and would be required to reduce emissions by 28.3% per the City's Addressing Greenhouse Gas Emissions from Projects Subject to CEQA memorandum (City of San Diego August 2010). Specific GHG reduction measures have been identified for implementation by the project to improve energy efficiency, water conservation, and incentives for alternative modes of transportation. Application of these, along with reduction achieved through statewide reduction measures associated with the AB 32 Scoping Plan, would reduce the project's net change in operational emissions shown in Table 4.12-2 from 2,136 MT CO_2e/yr to 1,306 MT CO_2e/yr per Table 4.12-3, which would be a reduction of 830 MT CO_2e/yr, or 34.3%. Calculation made to determine the estimated emissions reductions are found in Appendix I of the EIR. The project would implement some or all of the following design measures or equivalent measures as may be needed to reduce emissions by a minimum 28.3%:

Project Design Features GHG-1: The project would design and install energy efficient features in the proposed buildings. The proposed project intends to pursue LEED Certification and the energy efficiency measures of the LEED process have been inserted into the project design features. The project design features that were quantified using CalEEMod are indicated appropriately below:

- Fulfill all LEED Energy and Atmosphere category prerequisites of Fundamental Commissioning of Building Energy Systems, Minimum Energy Performance, and Fundamental Refrigerant Management;
- Achieve the LEED Energy and Atmosphere credits related to energy efficiency: Optimize Energy Performance, On-site Renewable Energy, Enhance Commissioning, Measurement and Verification, and/or Green Power;
- Install ENERGY STAR appliances, light fixtures, and light bulbs throughout all buildings;
- Install passive solar design (e.g., shade trees, glazing materials with low light reflectivity, operable windows for ventilation);
- All roofs shall be ENERGY STAR roofs or green roofs that consist of 50% vegetative cover or 50% of the roofs shall be covered with photovoltaic panels;
- Install motion-sensor, light-emitting diode (LED) lights for outdoor lighting;
- Install renewable energy systems to generate a minimum of 10% of the buildings energy demand (CalEEMod quantified); and
- Residential units shall only include natural gas hearth and not wood burning fireplaces (CalEEMod quantified).

Project Design Features GHG-2: The project shall design and install water conserving and efficient features in the proposed buildings to reduce residential and commercial water consumption. The project design features that were quantified using CalEEMod are indicated below:

- Fulfill the LEED Water Efficiency prerequisite for Water Use Reduction;
- Achieve the LEED Water Efficiency credits for Water Efficient Landscaping, Innovative Wastewater Technology, and/or Water Use Reduction;
- Install low-flow water fixtures such as faucets, shower heads, and toilets in all residential and commercial buildings (CalEEMod quantified);
- Install motion-sensor faucets in public bathrooms; and
- Landscape with only drought-tolerant and/or native plant species to minimize outdoor water use.

Project Design Features GHG-3: The project shall provide on-site resources, infrastructure, and incentives to promote and facilitate the use of alternative modes of transportation. The project design features that were quantified using CalEEMod are indicated below. The following project design features would be implemented to reduce VMT associated with the project's operation:

- Achieve the LEED Sustainable Sites credits for Site Selection; Development Density and Community Connectivity; Brownfield Redevelopment; and Alternative Transportation: Public Transportation Access, Bicycle Storage and Changing Rooms, Low Emitting and Fuel Efficient Vehicles, and Parking Capacity;
- Bike-friendly facilities shall be provided for all commercial and retail uses. At a minimum, secure bicycle storage, lockers, and shower facilities shall be provided;
- Bike racks shall be installed at a minimum ratio of one bicycle parking space per 20 car parking spaces;

Project Design Features GHG-4: The project would provide on-site resources, infrastructure, and incentives to reduce solid waste generation and disposal. The mitigation measures that were quantified using CalEEMod are indicated appropriately below. The following project design features would be implemented to reduce solid waste disposal associated with the project's operation:

- Reduce solid waste disposal from project land uses by a minimum of 10%. Strategies to achieve the 10% reduction include, but are not limited to waste diversion, recycling, and composting (CalEEMod quantified).

Project Design Features GHG-5: The following measures would require compliance by future building tenants and would not need to be accomplished to achieve 28.3% reduction in GHG emissions from the project. They are provided here as guidance based on CAPCOA *Quantifying Greenhouse Gas Mitigation Measures*:

- All employers should provide and fund transit use incentives to its employees. These incentives shall include reimbursement for the cost of commuting by transit (CalEEMod quantified);
- All employers should provide employee parking cashout to 100% of its employees in order to incentive employees to utilize alternative modes of transportation (CalEEMod quantified);
- Each employer should post transit route maps and schedules at each worksite. Residential management should post the same route maps and schedules in the lobby of residential uses; and
- Commercial office employers should provide employees with the option of telecommuting or working alternative work schedules (e.g., 9/80 or 4/10). Commercial uses should achieve a minimum of 10% of employees working a 9/80 schedule, 1% of employees working a 4/40 schedule, and 1% of employees telecommuting 1.5 days per week.

The project design features would reduce operational greenhouse gas emissions by a minimum of 28.3%, which would reduce the project impact to *less than significant.*

4.12.4 Mitigation, Monitoring, and Reporting

With implementation of the aforementioned project design features, project impacts to greenhouse gas emissions would be less than significant and no mitigation measures are required.

Table 4.12-1
Estimated Construction-Related GHG Emissions

Construction Year	CO_2 (metric tons)
Year 2011	299
Year 2012	997
Year 2013	146
Total Project-Related Construction Emissions	1,442
Amortized Annual Construction Emissions (30 years)	48

Table 4.12-2
Estimated Annual Operational GHG Emissions

Operational Scenario/Emissions Source	Emissions (metric tons CO_2/year)
Existing Conditions	
Area Sources (natural gas)	29
Mobile Sources	189
Electricity Consumption	45
Water Consumption	8
Solid Waste	15
Gross Existing Conditions Emissions	*286*
Project	
Area Sources (natural gas)	264
Mobile Sources	1,453
Electricity Consumption	517
Water Consumption	102
Solid Waste	38
Amortized Annual Construction Emissions (30 years)	48
Gross Project Emissions	*2,422*
Net Change in Operational Emissions	2,136

Table 4.12-3
Estimated Annual Operational GHG Emissions
(with Statewide Reductions and Mitigation)

Operational Scenario/Emissions Source	Emissions (metric tons CO_2/year)
Proposed Project	
Net Operational Emissions	136
Target GHG Emissions (with 28.3% reduction)	532
Target GHG Reductions (28.3% reduction)	604
GHG Emission Reductions	
Pavley I (Assembly Bill 1493)	248
Low Carbon Fuel Standard (Executive Order S-1-07)	117
Renewable Portfolio Standard (Executive Order S-14-08)	42
Project Design Features GHG-1a	62
Project Design Features GHG-1b	14
Project Design Features GHG-1c	343
Project Design Features GHG-4	4
Total GHG Reductions from 2020 Business-As-Usual	*830*
Percent GHG Reductions from 2020 Business-As-Usual	*34.3%*
Net Operational Emissions After Reduction	306

Notes: CO_2e = carbon dioxide equivalent
[1] Percent GHG reduction from 2020 business-as-usual represents the percent reduction from the proposed *gross* emissions.

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CHAPTER 5.0
SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Irreversible environmental changes caused by the project would result primarily from the consumption of nonrenewable resources for construction of buildings and from consumption of water for the operation of the residential, commercial, and church uses. The project site is to be developed in an area of existing urban uses and would be consistent with the City of Villages strategy of the General Plan to direct new development to infill sites and mixed-use centers with convenient access. The project site is shown as a location with a “High Propensity” for urban village development on Figure 2.4-1 of the City General Plan. While the project represents a commitment of resources that would make future removal or non-use unlikely, the project location provides advantages for reduced consumption of energy resources over the long term that would be less likely to be achieved by providing the same number of housing units at a lower density in a more suburban location with less proximity to employment centers and transit, and without neighborhood services and recreation within walking distance.

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CHAPTER 6.0
GROWTH INDUCEMENT

As required by CEQA Guidelines, Section 15126.2, an analysis of ways in which the project could foster economic or population growth, either directly or indirectly, in the surrounding area is provided in this chapter of the EIR. Induced growth is any growth that exceeds planned growth and results in new development that would not have taken place in the absence of the project. A project can be determined to have a growth-inducing impact if it directly or indirectly causes economic or population expansion through the removal of obstacles to growth, actions that are sometimes referred to as "growth accommodating."

The project would create economic growth through infill development of two mixed-use residential, commercial, and retail buildings, and through revitalization of the Cathedral buildings. The project site is fully served by public infrastructure and does not propose to extend new infrastructure or increase the capacity of public services such as water, sewer, and roads beyond what presently serves the project site. The project does not provide or necessitate infrastructure that would provide excess capacity for use by other future developments.

The project would result in the construction of 110 new dwelling units and the removal of 16 dwelling units, for a net increase of 94 new dwelling units. Based on SANDAG data as described in more detail in EIR Section 8.1.5, Population and Housing, the population density in the Uptown Community Plan area is 1.71 persons per household, which would yield an increase of approximately 161 residents. New project area residents may stimulate economic growth in the area by purchasing goods and services from the commercial businesses in the surrounding area.

In conclusion, the project is an effort that would result in direct and indirect economic and population growth in the Park West neighborhood of the Uptown Community Plan. This growth would be consistent with the project site's "High" and "Very High" residential designations of the Uptown Community Plan (City of San Diego 1988) and with the goals and objectives of the City General Plan (City of San Diego 2008d) as described in Sections 2.3 and 4.1 of this EIR. The project, if implemented, is intended to stimulate economic growth, but the effects of that growth would be consistent with long-term City planning goals and would not be an adverse project impact.

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CHAPTER 7.0
CUMULATIVE IMPACTS

CEQA requires a discussion of a project's potential cumulative impacts and long-term impacts. The following sections address these issues as they relate to implementation of the project.

The CEQA Guidelines define cumulative effects as "two or more individual effects that, when considered together, are considerable or which compound or increase other environmental impacts." The Guidelines further state that the individual effects can be the various changes related to a single project or the changes involved in a number of other closely related past, present, and reasonably foreseeable probable future projects (CEQA Guidelines Section 15355). CEQA Guidelines Section 16130(b)(1) allows for the use of two alternative methods to determine the scope of the projects for the cumulative impact analysis:

- List Method–A list of past, present, and reasonably anticipated future projects producing related or cumulative impacts, including those projects outside the control of the agency.
- Regional Growth Projections Method–A summary of projections contained in an adopted general plan or related planning document that is designed to evaluate regional or areawide conditions.

For the purpose of the EIR, the issuance of the Notice of Preparation (October 7, 2009) is considered the baseline from which to analyze future known or anticipated cumulative impacts, and the Regional Growth Projections Method has been utilized for the analysis. The traffic impact analysis used the known projects in the area for analysis of near-term impacts as shown in Figure 7-1. The cumulative analysis references these nearby projects, as appropriate, but the impact analysis primarily uses buildout assumptions of the SANDAG 2030 Regional Growth Forecasts on a subregional level that includes the City's General Plan buildout projections. This method was selected because it would describe the impacts of growth from a long-term perspective that would be less subject to short-term fluctuations in economic conditions and land development cycles. It accommodates a greater projection of population and development growth assumed under long-term land use planning than a list of known or anticipated future projects. Therefore, the Regional Growth Projections Method analyzes cumulative impacts of the project over a long time span with continued growth and development.

7.1 SANDAG 2030 REGIONAL GROWTH FORECAST

SANDAG estimates regional growth for the purpose of planning and public policy development. The most recent SANDAG growth projections available when the NOP was published for the EIR, is the 2030 forecast, which provides an extensive analysis of regional economic and demographic conditions and contains estimates and forecasts of employment, population, and housing for the period ranging from 2010 to 2030.

SANDAG projections are available by countywide, city, major statistical areas, subregional areas, and community planning areas. Table 7-1 shows the current estimates and future projections for population, housing, and employment for the Uptown Community Planning Area and the City. The population of the Uptown Community Plan is expected to increase approximately 27.4% between 2010 and 2030 to approximately 54,240 persons, compared to the entire City's population, which is expected to increase by approximately 21.3%. The Uptown Community Planning Area is expected to experience a higher increase (29.8%) in housing units between 2010 and 2030 compared to the City of San Diego (17.8%). However, the entire City is expected to experience a greater increase (14.7%) in employment growth than the Uptown Community Planning Area (6.3%) from 2010 to 2030.

Table 7-1
Projections for the City of San Diego and the Uptown Community Planning Area

	Total Population		Total Housing Units		Total Employment[1]	
	2010	**2030**	**2010**	**2030**	**2010**	**2030**
City of San Diego	1,365,130	1,656,257	518,063	610,049	880,326	1,010,157
Uptown Community Planning Area	39,391	54,240	22,793	29,594	29,909	31,793

[1]Includes military
Source: SANDAG 2010

7.2 GEOGRAPHIC SCOPE FOR CUMULATIVE IMPACT ANALYSIS

The geographic scope of the cumulative impact analysis varies depending upon the environmental issue being analyzed. The project's contribution to impacts associated with traffic noise, and health and public safety, for example, would affect the local neighborhood; while the impacts associated with air quality and greenhouse gas emissions would extend to the SDAB and potentially beyond. Impacts associated with geology, historical resources, paleontology, and water quality would extend to areas beyond the local neighborhood to include geographic areas that share similar conditions and the potential for similar adverse effects to these resources.

7.3 CUMULATIVE IMPACT ANALYSIS

7.3.1 Cumulative Effects Found to Be Significant

Solid Waste

According to the City's Significance Determination Thresholds, construction, demolition, or renovation of projects of 50 or more dwelling units would have a potentially significant cumulative impact to solid waste disposal during site demolition, excavation, and construction.

Mitigation Measures

Impact SW-1: Solid Waste Disposal

Mitigation Measure SW-1: In order to avoid cumulative impacts to public services (waste management), the following mitigation measures shall be implemented by the project applicant:

I. Entitlements Division Plan Check

1. Prior to the issuance of any construction permit, including but is not limited to, demolition, grading, building or any other construction permit, the Assistant Deputy Director (ADD) Environmental Designee shall verify that all the requirements of the Refuse & Recyclable Materials Storage Regulations and all of the requirements of the waste management plan are shown and noted on the appropriate construction documents. All requirements, notes and graphics shall be in substantial conformance with the conditions and exhibits of the associated discretionary approval.
2. The construction documents shall include a Waste Management Plan that addresses the following information and elements for demolition, construction, and occupancy phases of the project as applicable:
    a. tons of waste anticipated to be generated,
    b. material type of waste to be generated,
    c. source separation techniques for waste generated,
    d. how materials will be reused on site,
    e. name and location of recycling, reuse, or landfill facilities where waste will be taken if not reused on site,

f. a “buy recycled” program,

g. how the project will aim to reduce the generation of construction/ demolition debris,

h. a plan of how waste reduction and recycling goals will be communicated to subcontractors,

i. a time line for each of the three main phases of the project as stated above,

j. a list of required progress and final inspections by City staff.

3. The plan shall strive for a goal of 84.5%waste reduction.

4. The plan shall include specific performance measures to be assessed upon the completion of the project to measure success in achieving waste minimization goals.

5. The Plan shall include notes requiring the Permittee/Applicant to notify Mitigation Monitoring Coordination (MMC) and Environmental Services Department (ESD) when:

   a. a demolition permit is issued,

   b. demolition begins on site,

   c. inspections are needed. The Permittee/Applicant shall arrange for progress inspections, and a final inspection, as specified in the plan and shall contact both MMC and ESD to perform these periodic site visits during demolition and construction to inspect the progress of the project's waste diversion efforts.

6. When Demolition ends, notification shall be sent to the following:

   Mitigation Monitoring Coordination (MMC)
   9601 Ridgehaven Court, Ste. 320, MS 1102 B
   San Diego, CA 92123 1636
   (619) 980 7122

   Environmental Services Department (ESD)
   9601 Ridgehaven Court, Ste. 320, MS 1103 B
   San Diego, CA 92123 1636
   (858) 627-3303

II. Prior to the issuance of any grading or building permit, the Permittee/Applicant shall receive approval, in writing, from the ADD Environmental Designee (MMC) that the Waste Management Plan has been prepared, approved, and implemented. Also, prior to the issuance of any grading or building permit, the Permittee/Applicant shall submit written evidence to the ADD Environmental Designee that the final Demolition/ Construction report has been approved by MMC and ESD. This report shall summarize the results of implementing the above Waste Management Plan elements, including: the actual waste generated and diverted from the project, the waste reduction percentage achieved, and how that goal was achieved, etc.

1. Pre-Construction (Precon) Meeting

    a. Demolition Permit - Prior to issuance of any demolition permit, the Permittee/Applicant shall be responsible to obtain written verification from MMC indicating that the Permittee/Applicant has arranged a Preconstruction (Precon) Meeting to coordinate the implementation of the MMRP. The Precon Meeting that shall include: the Construction Manager, Demolition/Building/ Grading Contractor, MMC, ESD, and the Building Inspector and/or the Resident Engineer (whichever is applicable) to verify that implementation of the Waste Management Plan shall be performed in compliance with the plan approved by Entitlements Division and ESD, to ensure that impacts to solid waste facilities are mitigated to below a level of significance.

    b. At the Precon Meeting, the Permittee/Applicant shall submit three (3) reduced copies (11 x 17 inches) of the approved Waste Management Plan; two (2) to MMC and one (1) to ESD.

    c. Prior to the start of demolition, the Permittee/the Construction Manager shall submit a construction/demolition schedule to MMC and ESD.

        i. Grading and Building Permit - Prior to issuance of any grading or building permit, the permittee shall be responsible to arrange a preconstruction meeting to coordinate the implementation of the MMRP. The Precon Meeting that shall include: the Construction Manager, Building/Grading Contractor, MMC, ESD, and the Building Inspector and/or the Resident Engineer (whichever is applicable) to verify that implementation of the Waste Management Plan shall be performed in compliance with the plan approved by Entitlements Division and ESD.

d. At the Precon Meeting, The Permittee/Applicant shall submit reduced copies (11 x 17 inches) of the approved Waste Management Plan to the Resident Engineer, Building Inspector, MMC and ESD.

III. Prior to the start of construction, the Permittee/Construction Manager shall submit a construction schedule to the Resident Engineer, Building Inspector, MMC and ESD.

1. The Permittee/Applicant and Construction Manager shall call for inspections by the Resident Engineer, Building Inspector, MMC, and ESD who will periodically visit the demolition/construction site to verify implementation of the Waste Management Plan. The Consultant Site Visit Record (CSVR) shall be used to document the Daily Waste Management Activity/progress.

2. Within 30 days after the completion of the implementation of the MMRP, for any demolition or construction permit, a final results report shall be submitted to both MMC and ESD for review and approval to the satisfaction of the ADD Environmental Designee/City. MMC will coordinate the approval with ESD and issue the approval notification.

3. Prior to final clearance of any demolition permit, issuance of any grading or building permit, release of the grading bond and/or issuance of any Certificate of Occupancy, the Permittee/Applicant shall provide documentation to the ADD Environmental Designee that the Waste Management Plan has been effectively implemented.

7.3.2 Cumulative Effects Found Not to Be Significant

Land Use

As discussed in Chapter 4.1 of the EIR, the project is located within a developed urban neighborhood and would conform to the San Diego General Plan, the Uptown Community Plan, and the Regional Comprehensive Plan. It also complies with the regulations set forth in the LDC and the Mid-City Communities PDO. The project would not conflict with any other plans or policies for the community, City, region, or other agency with jurisdiction over the project site. Therefore, the project would not contribute to a cumulatively significant impact related to land use.

Visual Quality/Community Character

As discussed in Chapter 4.2 of the EIR, the project area contains numerous high-rise buildings that exhibit a wide variety of architectural designs and do not exhibit a common architectural theme. The proposed Olive and Nutmeg buildings, while unique, would not severely contrast with the diverse neighborhood architectural character in terms of architectural design, height, scale, or bulk. The Queen Palms planted along the Olive Site project frontage on Sixth Avenue are important landscape features that would be impacted during project construction and would be boxed and replanted to the satisfaction of the City Street Division–Urban Forestry. Therefore, the project would not contribute to a cumulatively significant impact related to visual quality/community character.

Traffic, Circulation, and Parking

Implementation of the project would introduce new vehicular and alternative transportation trips to and from the project site on the existing roadway network in the vicinity of the project. Impacts to road segments and intersections in the project area are analyzed in Chapter 4.3–Traffic, Circulation, and Parking, of the EIR and included analysis of six nearby projects that could contribute to increased traffic in the project area. Three intersections and three local road segments are identified that would experience a significant cumulative impact from project-generated trips plus trips generated through anticipated future growth.

Payment of the project's fair share for installation of a traffic signal at the Nutmeg Street and Fifth Avenue intersection would reduce the project's impact to less than significant. Therefore, the project would not contribute to a significant cumulative impact to traffic and circulation.

The project would involve removal of 10 on-street parking spaces; but it would also remove 16 dwelling units, provide 40 church parking spaces to replace 20 existing church spaces, and provide 326 on-site parking spaces where 287 spaces would be required by the City Municipal Code. Therefore, the project would not contribute to a significant cumulative impact to existing parking or to a demand for off-site parking.

The project site is served by existing public transit service on Fourth and Fifth avenues. In addition, the project is consistent with the permitted dwelling unit density allocated to the project site by the Uptown Community Plan, does not propose roadway improvements inconsistent with the City's roadway classifications, and would not conflict with existing or planned bicycle route designations. Therefore, the project would not contribute to a significant cumulative impact to existing or planned transportation systems or programs supporting alternative transportation.

The project would not generate traffic in excess the specific Uptown Community Plan allocation for the project site; would not result in a significant impact to parking; and would not impact plans and programs supporting alternative transportation. In addition, the project would mitigate its proportional contribution to the need for a traffic signal at the Nutmeg Street and Fifth Avenue intersection. Therefore, the project would not contribute to a significant cumulative impact to traffic, circulation, and parking.

Air Quality

Cumulative air quality impacts during construction would only result from the two nearest projects shown as #2 and #3 in Figure 7-1 if construction were to be concurrent with the project. The Second and Laurel project (#2) began construction in mid-2010 and would likely be completed prior to commencement of the St. Paul's project. The St. Paul CCRC project (#3) at Maple and Fourth Avenue had not commenced construction at the time of preparation of this EIR. Therefore, the potential exists for project construction periods to overlap. Each project would be required to control fugitive particulate emissions in compliance with SDAPCD Rule 55 (Fugitive Dust Control), which would avoid a significant short-term air quality impact.

As discussed in Chapter 4.4 of the EIR in regard to long-term operational impacts associated with ozone precursors (NO_X and/or ROGs), significant cumulative impacts would not be expected to occur if a project is consistent with the applicable general plan and, therefore, with the SANDAG 2030 Regional Growth Forecasts. These forecasts have been used to address precursors to the formation of ozone (VOC and NO_X), and to formulate the pollutant reduction strategies contained in the RAQS to provide expeditious progress toward attaining the state ozone standard. Therefore, due the project's consistency with the City General Plan and the SANDAG 2030 Regional Growth Forecasts, it would not contribute to a cumulatively significant air quality impact.

Historical Resources

As described in Chapter 4.5 of the EIR, a mitigation measure has been included to ensure that modification to St. Paul's Cathedral would be in conformance to U.S. Secretary of Interior's standards. Development of the project site would require that 13 of the 14 Queen Palms planted along the project frontage on Sixth Avenue, would be within an area of direct impact for excavation of the underground parking area for the Olive Building and expansion of the Cathedral. Therefore, a mitigation measure has been included requiring that the Queen Palms be boxed and replanted. Implementation of these mitigation measures would reduce project historical resource impacts to less than significant. There is also the potential for discovery of archaeological resources or human remains during project construction and mitigation is required in Chapter 4.5 to notify City staff, evaluate the resources, and curate any artifacts discovered. Implementation of these mitigation measures would reduce project historic and archaeological resource impacts to less than significant. Therefore, the project would not contribute to a significant cumulative impact to historical or archaeological resources.

Noise

As discussed in Chapter 4.6 of the EIR, traffic noise associated with the project would cause an increase in the ambient noise level of only approximately 1 to 2 dBA through year 2030. The project would be required to comply with the Title 24 interior residential noise level standard of 45 dBA and all City noise-level standards for exterior useable space would be met for residential, retail, commercial, and church uses. In addition, the project would be required to comply with the construction noise limitations of the City Noise Abatement and Control Ordinance and to mitigation measures NOI-1 and NOI-2. Therefore, the project would not contribute to a cumulatively significant impact related to noise.

Paleontological Resources

Chapter 4.7 of the EIR has identified the potential for paleontological resources to be encountered during project excavation. A project mitigation measure requires monitoring during construction, notification of City staff, and evaluation and curation of any artifacts discovered. Other projects within the Uptown Community Plan area could also encounter paleontological resources due to past occurrences of these resources within the Lindavista formation and would also be required to avoid or mitigate impacts should paleontological resources be encountered. Implementation of the mitigation measure PR-1 identified for the project in Chapter 4.7 of the EIR would reduce the project's potential paleontological resource impacts to below a level of significant. As such, the project, in combination with other past, present, and future projects, would not result in impacts to paleontological resources that would be cumulatively considerable.

Light/Glare/Shading

As discussed in Chapter 4.8 of the EIR, project buildings would cast shadows onto adjacent buildings to the west, north, and east of the project site. However, no solar collectors are evident in aerial photographs of the adjacent properties to the west and north and the only recreational use is a private swimming pool on property at the southeast corner of Fourth Avenue and Olive Street. The shadow study shows that while there is a potential for some shading of other properties, the timing and duration of shading would not preclude solar use on nearby properties. Project shading onto Balboa Park would only occur during the afternoons, with the greatest area of shading impact occurring during the December solstice (see Figure 4.8-1). Due to the expansive lawn area in this portion of Balboa Park, opportunities for recreational activities, which would not be impacted by shadows cast by the proposed project buildings. Therefore, the project would not contribute to a cumulatively significant impact related to light, glare, and shading.

Public Services and Facilities

As discussed in Chapter 4.9 of the EIR, adequate public services and facilities exist to serve the project and the surrounding region, including police protection, fire/life safety protection, schools, libraries, and parks and recreational facilities. Therefore, the project would not contribute to a cumulatively significant impact related to public services and facilities.

Energy Conservation

As discussed in Chapter 4.11 of the EIR, San Diego County used 20,623 mWh in 2008 while the proposed project is expected to require approximately 1.5 mWh a year or roughly 0.007% of all the electricity used in San Diego County. Similarly the proposed project would only require 0.01% of the current natural gas used within the County. These small increases would add incrementally to energy usage but would not represent a significant cumulative increase in the energy usage within San Diego County. Further, the proposed project's compliance with Title 24 building standards and incorporation of additional energy saving techniques during construction and operation would help ensure the project does not make a cumulatively considerable contribution to an increased energy demand.

Greenhouse Gas Emissions

As discussed in Chapter 4.12 of the EIR, short-term construction and long-term operation of the project would generate emissions of GHGs. Construction-related emissions would be generated from off-road equipment and on-road vehicle exhaust emissions. Operational emissions would be generated from vehicle trips and area sources such as natural gas consumption associated with household heating systems, water heating, and landscape maintenance equipment. In addition, the project would consume electricity and potable water, both of which would generate GHG emissions associated with electricity production. As shown in Table 4.12-3 of the EIR, it is anticipated that the combination of statewide regulations and the project's proposed design features would help reduce the project's year 2020 business-as-usual operational emissions by a minimum of 28.3%. Therefore, the project would not have a cumulatively considerable contribution to GHG emissions.

Hydrology and Drainage

As discussed in Section 8.1-1 of the EIR, the project's drainage pattern and extent of impervious surfaces would remain the same as the existing conditions. Rainfall and runoff would be collected in building down-drains and directed to the adjacent streets via curb underdrains, where runoff would be conveyed off-site to existing curb inlets on Sixth Avenue. Conformance with applicable regulatory standards would avoid or address potentially significant impacts related to drainage alteration and runoff volumes and velocities. No off-site drainage improvements are anticipated to be required for completion of the project and there would be no adverse drainage impact on downstream drainage conditions. In addition, water quality would be improved throughout the development with implementation of site design, source control, and treatment control BMPs described in Appendix H of the EIR. Therefore, the project would not contribute to a cumulatively significant impact related to hydrology and drainage.

Water Quality

As discussed in Section 8.1-2 of the EIR, the drainage conditions in the project area consist of curbs and gutters that direct surface runoff to the south to an off-site curb inlet on Sixth Avenue. This inlet conveys flows by pipe to an inlet at the northwest corner of Laurel Street and Sixth Avenue. Flow is then conveyed east in an existing 24-inch reinforced concrete pipe under El Prado and discharged to the south into a natural drainage canyon in Balboa Park.

Project grading, right-of-way, and construction plans are required to provide adequate water pollution control measures during construction; and project improvement and landscape plans would include design measures to provide adequate long-term water pollution control. Compliance with storm water discharge permit conditions and effective implementation of construction and post-construction BMPs in compliance with RWQCB Order No. R9-2007-0001 and the City JURMP, would avoid or reduce to less than significant any potential water quality impacts due to the project. Thus, the project would not combine with past, present, and future projects to cause an increase in urban runoff that would contribute to a cumulatively considerable contribution to impairment of downstream water quality.

Geology and Soils

As discussed in Section 8.1-3 of the EIR, compliance with the recommendations of the Leighton and Associates report in Appendix C of the EIR would ensure that the project would not cause structural instability due to an unstable geologic unit or soil; and would be designed and built in accordance with the 2010 California Building Code (CBC), which would mitigate the effects of earthquake ground shaking on the proposed structures to a currently acceptable level. Therefore, the project would not contribute to a cumulatively significant impact related to geology and soils.

Health and Public Safety

Hazardous Materials

As discussed in Section 8.1-4 of the EIR, the Phase I Environmental Site Assessment for the project site determined that it is not on any agency's list of hazardous sites. Asbestos and lead-based paint surveys were also conducted and determined that these hazardous materials are present in the existing buildings. The project is required to comply with the Lead Hazard Prevention and Control Ordinance of the SDMC and with SDAPCD regulations to ensure that no significant impacts would result during demolition. Therefore, the project would not contribute to a cumulatively significant impact related to hazardous materials.

Aircraft Hazards

The project site is within a 2.3-mile circling radius around the SDIA and a minimum height for aircraft approaching the airport of 800 feet AMSL and a minimum of 300 feet of obstacle clearance within that circling radius, have been established by the FAA. Therefore, buildings within the SDIA circling radius can be no taller than 500 feet AMSL. The Olive Site would have a maximum height extending to 456 feet AMSL and the Nutmeg Site would have a maximum height extending to 418 feet AMSL. Therefore, the height of each of the proposed buildings would not exceed the FAA maximum of 500 feet AMSL ~~and the FAA has issued a determination of no hazard for the project (FAA 2011)~~.

Both project buildings were submitted for review by the FAA. The FAA conducted an aeronautical study that considered and assessed the height and location of the objects and analyzed the impact relative to existing and proposed TERPS obstacle clearance surfaces defined for each published arrival, departure, and en route procedures for aircraft operating under both Visual Flight Rules (VFR) and Instrument Flight Rules (IFR); the impact on all existing and planned public-use airports, military airports, and aeronautical facilities; and the cumulative impact resulting from the studied structures when combined with the impact of other existing or proposed structures. The FAA evaluation found that there would be no significant adverse effect upon VFR operations, or upon IFR operations, or upon the operation of an Air Navigation Aid (NAVAID). Application of standard VFR traffic pattern criteria found that although the site underlies traffic pattern airspace, due to the buildings' ground surface elevations, the structure heights would not impact traffic pattern operations. The study disclosed that the buildings would have no substantial adverse effect on air navigation. The FAA has issued a Determination of No Hazard to Air Navigation for the project (FAA 2011). As a condition of this determination, the structures are required to be marked and/or lighted in accordance with FAA Advisory Circular 70/7460-1K Change 2, Obstruction Marking and Lighting, Red Lights, in Chapters 4, 5, and 12.

SDCRAA determined that the project would not be an operational hazard for the airport and it would not penetrate the obstacle clearance surfaces based on an independent study by Ricondo and Associates. The September 20, 2007, SDCRAA letter and Ricondo and Associates report are included as Appendix J of the EIR. The Nutmeg building site is within the AAOZ and does not penetrate the AAOZ surfaces; and the Olive building site is not within the AAOZ as further detailed in Section 8.1-4 of the EIR. All of the aviation-related studies and approval are included in Appendix J of the EIR.

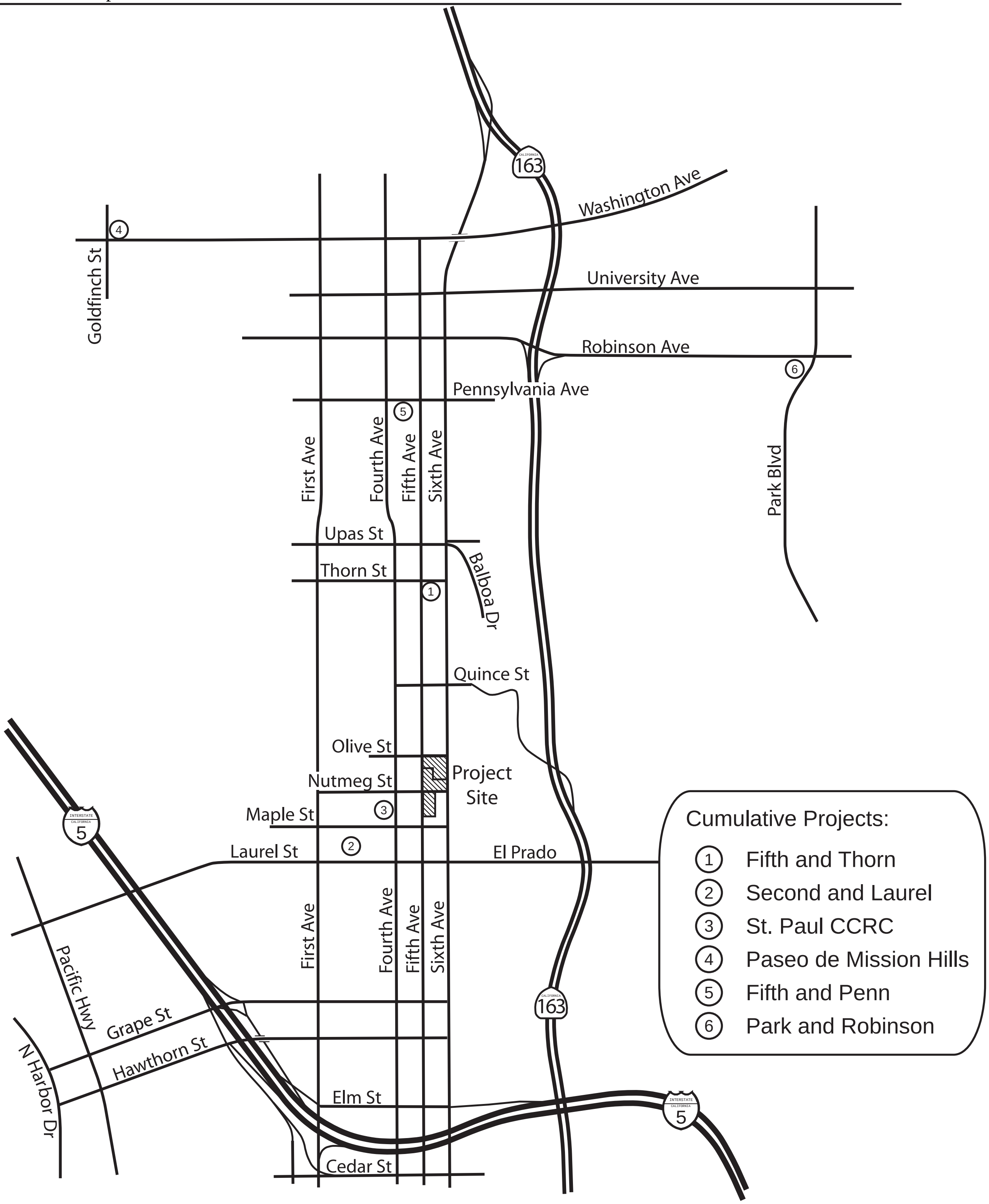
Therefore, the project would not contribute to a cumulatively significant impact related to ~~hazardous materials or~~ aircraft hazards.

Population and Housing

As discussed in Section 8.1-5 of the EIR, the project area is a varied mix of office, multi-family residential, and commercial uses as allowed by the Mid-City Communities PDO and provides excellent opportunities for housing and employment in the project area. The project would construct 110 new dwelling units and remove 16 dwelling units, for a net increase of 94 dwelling units. Using SANDAG's overall residential density of 1.71 persons per household in the Uptown Community Plan area, 94 net new dwelling units would yield approximately 161 new residents. The project would rely on existing water and sewer line infrastructure and would not increase the capacity in any service lines such that additional population growth could occur as a result of project infrastructure improvements. The project would also not increase the capacity of the existing road infrastructure. Therefore, the project would not contribute to a cumulatively significant impact related to population and housing.

Public Utilities

As discussed in Section 8.1-6 of the EIR, potable water and sewer services are administered by the City Public Utilities Department and the project would be required to incorporate water conservation devices into project designs, such as the use of low-flush toilets, low-flow faucets, and timers on landscape sprinklers. The City's Water Conservation Plan in the SDMC also lists several mandatory prohibitions on customer water use practices in order to conserve water. Natural gas and electric services are provided by SDG&E; Cable TV, high speed cable internet access, and telephone services are provided by Cox Communications; and telephone services and high-speed DSL internet access can also be provided by AT&T. The required facilities existing within and adjacent to the project site have adequate capacity to serve the project and would not require substantial alteration or the construction of new facilities that would create physical impacts. Therefore, the project is not anticipated to contribute to a cumulatively significant impact on public utilities.



N Not To Scale

Figure 7-1
Cumulative Project Locations

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CHAPTER 8.0
EFFECTS FOUND NOT TO BE SIGNIFICANT

8.1 EFFECTS FOUND NOT SIGNIFICANT AS PART OF THE EIR PROCESS

Issues of potential environmental concern addressed in this chapter of the EIR were initially identified by the City DSD in a letter to the project applicant (City of San Diego 2008a). After detailed analysis of potential environmental impacts, the project was determined to have a less than significant impact to the issues addressed in this section of the EIR and no mitigation would be required.

8.1.1 Hydrology and Drainage

This section contains information regarding hydrology and drainage issues pertaining to the project, including a discussion of regional and local hydrology, surface/receiving waters, and groundwater that may impact water quality. Information in this section was obtained from the *Drainage Report, St. Paul's Cathedral*, prepared by PDC, dated November 2005. As described in Chapter 2.0, City regulations, standards, and procedures for hydrology and drainage have been adopted to implement the Federal CWA and the NPDES administered by the SWRCB.

Currently, the project site drains via surface flow to an existing 21-foot curb inlet on Sixth Avenue, south of Maple Street. The proposed drainage pattern would remain the same as the existing conditions. Flows would be collected in building down-drains and directed to the adjacent streets via curb underdrains, where street curbs and gutters would convey the flow to the existing curb inlet on Sixth Avenue. Flow collected by this inlet is conveyed by pipe south to the northwest corner of Laurel Street and Sixth Avenue. Flow is then conveyed east in an existing 24-inch reinforced concrete pipe under El Prado and discharged into a natural drainage canyon in Balboa Park.

The project involves redevelopment of existing properties that would maintain similar impervious characteristics to the existing development and, therefore, drainage patterns and peak discharges would remain the same. In addition, as described in Section 3.3 of the EIR, potential pollutants from rooftop runoff not collected in the rooftop gardens would be collected by downspouts and private storm drain systems, which would allow treatment for pollutants by downspout filters or flow-through planter boxes. By directing rainfall that flows onto the site and building downspouts into planter boxes, much of the site's runoff could be treated by biofiltration. Rain water cisterns (holding tanks) are also being considered as a means to decrease off-site runoff while reducing the need for using treated municipal water for irrigation purposes.

The proposed drainage pattern would remain the same as the existing conditions. As stated below in Section 8.1.2 and in the Water Quality Technical Report (Appendix H of the EIR), the project site is currently 86% impervious and the runoff coefficient is 0.91. Under the proposed conditions, the project area would also be 86% impervious and the overall runoff coefficient is expected to be 0.91. Rainfall and runoff would be collected in building down-drains and directed to the adjacent streets via curb underdrains, where street curbs and gutters would convey the flow off-site to existing curb inlets on Sixth Avenue south of Maple Street. No off-site drainage improvements are anticipated to be required for completion of the project. Therefore, there would be no expected adverse impact on downstream conditions. In addition, water quality would be improved throughout the development with implementation of site design, source control, and treatment control BMPs described in Appendix H of the EIR. Therefore, project impacts to Hydrology and Drainage would be less than significant.

8.1.2 Water Quality

As stated under Water Quality Regulations in Chapter 2.0 of the EIR, the SWRCB and the San Diego RWQCB have adopted water quality orders in compliance with the CWA to regulate construction site storm water management from projects that disturb 1 or more acres of soil. Permit applicants are required to submit a Notice of Intent (NOI) to the SWRCB and to prepare a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP identifies BMPs that must be implemented to reduce construction effects on receiving water quality based on potential pollutants.

In addition, the San Diego RWQCB Order No. R9-2007-0001 renewed the requirement that all jurisdictions within the San Diego region prepare a Jurisdictional Urban Runoff Management Plan (JURMP) to address both construction activities and existing development. The City's JURMP was adopted by the City Council on January 22, 2008 (City of San Diego 2008b). The City JURMP and the City Municipal Code Land Development Manual–Storm Water Standards establish a series of source control, site design, and treatment control BMPs that are to be implemented by all priority projects. Priority project categories that would subject the St. Paul's Cathedral and Residences project to the City's JURMP are more than 10 dwelling units, significant redevelopment of over 5,000 square feet, and the potential for use of a project's retail space for a restaurant, lunch counter, or refreshment stand selling prepared foods and drinks for immediate consumption.

The project would require preparation and submittal of a SWPPP covering project demolition and grading for control of pollutants to comply with the City JURMP and the General Municipal Storm Water Permit. The locations of all erosion-control devices would be noted on the project plans and the applicant would be responsible for monitoring and maintaining the BMP erosion-control measures on a weekly basis. Typical construction BMPs include fiber rolls, storm drain inlet protection, street sweeping and vacuuming, stabilized construction entrance/exit, containment of material delivery and storage areas, and management of concrete and other construction and hazardous wastes.

Potential operational impacts would primarily result from airborne deposition of pollutants and debris that would be picked up by storm water runoff collected from rooftop surfaces and at the ground level. Pollutants from rooftop runoff would be collected by downspouts and private storm drain systems, which would allow treatment for pollutants in sediment runoff and for removal of trash and debris by downspout filters (FloGard® or similar) or flow-through planter boxes. By directing downspouts into planter boxes, much of the site's runoff could be treated by biofiltration. Rainwater cisterns (holding tanks) could also be used to decrease off-site runoff while reducing the need for using treated municipal water for irrigation purposes. In addition to ground floor landscaping shown in Figures 3-5a and 3-5b, rooftop gardens are proposed on the second, third, and 13th floors of the Nutmeg building and on the fourth floor of the Olive building.

The potential pollutants from airborne deposition and debris in the project courtyards would be addressed by site design and source control BMPs and by regular sweeping and vacuuming to reduce the amount of surface pollutants. Runoff that reaches on-site catch basins would be treated using inlet inserts, such as ClearWater® inlet filters, prior to entering the on-site holding tanks or being discharged into curb inlets. In addition, signs would be posted designating specific landscaped area(s) for pet use. Plastic bag dispensers and waste containers would be made available in each area.

Since all of the parking on-site would be within project buildings, storm water contact with oil and grease would not be a pollutant source of concern. Separate drainage systems connecting to the sewer would be used to collect any nuisance water discharges or plumbing problems within the parking structures. Impacts from the location of trash dumpsters would be limited to an area within the first floor of the garage in each building and would not be subject to impact from storm water nor would they be a source of storm drain pollutants during cleaning.

A summary of proposed post-construction BMPs is provided in Table 8-1. Prior to issuance of permits or approvals for any site development plans or right-of-way improvement plans, the developer would prepare and submit for review and approval by the City Engineer, improvement plans and landscape plans that demonstrate that potential pollutants are isolated from the City storm drain system to the extent feasible. Based on the discussion above, no significant water quality impacts from project construction and operation are anticipated.

Table 8-1
Post-Construction BMP Summary

Pollutant	Pollutant Sources	Mitigation Measures
Sediment and Nutrients; Trash and Debris	Landscaped areas, rooftops, general use, retail/office use, trash storage areas	Minimization of impervious footprint, minimization of directly connected impervious areas, maximization of canopy interception. Inlet stenciling and signage, protective trash storage design, efficient irrigation and landscape design, storm water education, regular cleaning and sweeping. Biofiltration, proprietary filtration system.
Pesticides; Oxygen demanding substances	Landscaped areas, general use, retail/office use	Efficient irrigation and landscape design, integrated pest management principles, storm water education. Biofiltration, proprietary filtration system.
Bacteria and Viruses	General use, trash storage areas, landscaping	Protective trash storage design, efficient irrigation and landscape design, storm water education, regular cleaning and sweeping
Heavy metals; Oil and grease; Organic compounds	Parking, retail/office use	Minimization of impervious footprint, minimization of directly connected impervious areas. Inlet stenciling and signage, covered parking, storm water education, regular cleaning and sweeping. Biofiltration, proprietary filtration system.

8.1.3 Geology and Soils

Information in this section was obtained, in part, from the Preliminary Geotechnical Investigation that was prepared for the project site and is attached as Appendix C (Leighton and Associates 2004a). Also included in Appendix C is a Geotechnical Update Letter dated May 9, 2011, which was prepared by Leighton and Associates to respond to City cycle review comments (Leighton and Associates 2011). The purpose of the Preliminary Geotechnical Investigation was to evaluate the surface and subsurface soil conditions and general site geology, and to identify potential geologic constraints that may affect development of the proposed project.

The project site is located within the Quaternary Very Old Paralic Deposits (Qvop9) geologic unit, which represents marine and/or non-marine terrace deposits that accumulated on the sea floor during a period of dropping sea levels. This Pleistocene-age geologic unit was exposed in all of the borings on the project site beneath fill and typically consists of dense to very dense, damp to moist, clayey and silty sandstone with gravel and cobble. The Pliocene-age San Diego Formation underlies Qvop9, and typically consists of dense to very dense, damp to moist, silty fine sandstone and fine to coarse sandstone with gravel and cobble.

The project site is located within a seismically active region of California and, therefore, the potential exists for geologic hazards, such as earthquakes and ground failure. No known active or inactive faults are located on the project site, and it is not located within a designated State of California Alquist-Priolo Earthquake Fault Zone (Leighton and Associates 2004a). Earthquakes that might occur on the Rose Canyon Fault Zone or other faults within the southern California and northern Baja California area are potential generators of significant ground motion at the project site. The offshore portion of the Rose Canyon Fault zone is located approximately 0.7-mile west of the project site and is expected to be the dominant source of potential ground motion at the site. According to the CBC, the maximum credible earthquake from the Rose Canyon Fault is a magnitude 7.2.

The potential for ground rupture at the project site is considered to be very low due to the absence of active or potentially active faults at the property. The Leighton and Associates report concludes that the effect of seismic shaking at the project site would be mitigated by adhering to the CBC or state-of-the-art seismic design standards of the Structural Engineers Association of California. The proposed structures would be designed and built in conformance with the CBC, and would incorporate recommendations from the Leighton and Associates report and identified in Appendix C. According to the City of San Diego's Seismic Safety Study, the project area lies within Geologic Hazard Category 52, which is characterized as having a favorable geologic structure and low risk for geologic instability.

Grading would occur for excavation of the subterranean parking levels to a depth of approximately 43 feet for the Olive Site and to approximately 32 feet for the Nutmeg Site. Existing undocumented fill and topsoil would be removed and/or recompacted beneath the proposed site improvements. The Qvop9 and San Diego formations are considered suitable for the proposed development (Leighton and Associates 2004a). Excavations for the project would be temporarily shored with shoring systems designed by a California licensed civil engineer to avoid settlement of adjacent properties or the public right-of-way. Shoring plans prepared for the project would be required by the city to be reviewed and approved by the project geotechnical consultant. Excavation during construction for the parking garage may encounter groundwater seepage, which is not uncommon in the area.

Compliance with the recommendations of the Leighton and Associates report would ensure that the project would not cause structural instability due to an unstable geologic unit or soil; and would be designed and built in accordance with the 2010 CBC, which would mitigate the effects of earthquake ground shaking on the proposed structures to a currently acceptable level.

8.1.4 Health and Public Safety

This section contains information regarding human health and public safety issues pertaining to known or potential hazardous substances and potential hazards from aircraft operations at SDIA.

Existing Hazardous Materials

A Phase I Environmental Site Assessment Report was prepared for the project by Leighton and Associates (2004b) to assess the potential presence of hazardous materials within the project site and existing buildings. The report is included as Appendix D of the EIR. Regulatory database lists were reviewed for cases pertaining to leaking underground storage tanks (USTs) and aboveground storage tanks (ASTs), hazardous waste sites, and abandoned sites within the specified radii of standards established by the American Society for Testing and Materials (ASTM). No facilities appear to represent a potential source of migration of hazardous substances to soil or groundwater beneath the site.

The Phase I Environmental Site Assessment conducted by Leighton and Associates (2004b) included a search of federal, state, and local regulatory databases covering the project site and surrounding areas. The project site was not listed by any of the regulatory agencies and, therefore, there is no further discussion about the project site in relationship to the agencies' lists of hazardous sites.

Asbestos

An asbestos survey at the project was conducted under the direction of Leighton and Associates to determine if friable and/or non-friable asbestos-containing materials are present. Asbestos fibers were identified in both of the Park Chateau apartment buildings and in the church administrative offices. If this material is disturbed in any way, it becomes friable (i.e., easily crumbled or pulverized) and can become an airborne health hazard.

Uniformly applied development procedures when asbestos is known to be located within a building proposed to be altered or demolished, require that an approved contractor remove this material in accordance with all local, state, and federal regulations prior to demolition.

Lead-Based Paint

A lead-based paint (LBP) survey was conducted under the direction of Leighton and Associates to determine the presence and assess the condition of LBP on painted surfaces. Based on the survey, the following surfaces are considered to contain high lead concentrations in excess of 1.0 mg/cm^2 or 5,000 ppm:

> Park Chateau Apartments – all wood window components, wood stair stringers and posts on rear stairways, the entry doors and door frames, the ceramic floors and walls, countertops, and the exterior fascia;
>
> St. Paul's administrative building – the bathroom ceramic baseboards.

The Lead Hazard Prevention and Control Ordinance found in SDMC Section 54.1001 et seq., which became effective on May 9, 2008, was developed with the primary purpose to eliminate lead hazards and prevent lead poisoning through lead-safe housing and ensuring lead-safe work practices. When the work activities disturb or remove paint, a Lead Paint Activity Visual Inspection Form must be completed by the renovator and remain available to the City of San Diego for a period of 3 years following the visual clearance date.

Compliance with State and the SDAPCD regulations would ensure that no significant impacts would result during demolition. Specifically, the State requires safe handling, removal, and disposal of ACM and LBP through compliance with Section 9021.5 of the Labor Code; CCR Title 8 Section 1532.1; CCR Title 17, Division 1, Chapter 8; and CCR Title 22, Division 4.5. Additionally, Rule 361.145 of the SDAPCD provides guidance for the handling and disposal of ACM, including specific requirements for notification and emissions control. Based on the above-described procedures and regulations, significant impacts related to health and public safety associated with the project are not anticipated.

Aircraft Operations

The FAA has established a 2.3-mile circling radius around the SDIA, consistent with FAA Order 8260.3B, which, for the purposes of aircraft safety, imposes a minimum height for aircraft approaching the airport of 800 feet AMSL. A minimum of 300 feet of obstacle clearance also must be provided within that circle. Therefore, buildings within a 2.3-mile radius of SDIA can be no taller than 500 feet AMSL. The height of the Olive Building would be 180 feet and the Nutmeg Building would be 150 feet above ground level. The Olive Site is at a~~n~~ ground elevation of approximately 274 feet AMSL, which would result in maximum obstruction extending to 454 feet AMSL. The Nutmeg Site is at a~~n~~ ground elevation of approximately 266 feet, which would result in maximum obstruction extending to 416 feet AMSL. The height of each of the proposed buildings would not exceed the FAA maximum of 500 feet AMSL and would maintain an obstacle clearance in excess of the 300 feet specified by the FAA.

The project (both building sites) was submitted to the FAA. The FAA conducted an aeronautical study that considered and assessed the height and location of the object and analyzed the impact relative to existing and proposed TERPS obstacle clearance surfaces defined for each published arrival, departure, and en route procedures for aircraft operating under both VFR and IFR; the impact on all existing and planned public-use airports, military airports and aeronautical facilities; and the cumulative impact resulting from the studied structure when combined with the impact of other existing or proposed structures. FAA evaluation found that there would be no significant adverse effect upon VFR operations, or upon IFR operations, or upon the operation of a NAVAID. Application of standard VFR traffic pattern criteria found that although the site underlies traffic pattern airspace, because of terrain, the structure height would not impact traffic pattern operations. The study disclosed that the buildings would have no substantial adverse effect on air navigation. As stated above, the FAA has conducted aeronautical studies for the project site (both buildings) and has issued a determination of no hazard to air navigation for the project (FAA 2011).

In addition to the building height, a temporary construction crane would be needed for both buildings. The construction crane would consist of a vertical tower ("mast") and a horizontal lifting arm ("jib"). For the project, the jib would need to operate approximately 25 feet above the overall building height, which would be 180 feet for the Olive Building and 150 feet for the Nutmeg Building. To operate at this height, the crane would need to have an overall height of 205 feet above ground level for the Olive Building and 175 feet above ground level for the Nutmeg Building. Thus, the overall height of the construction crane would be 479 feet AMSL for the Olive Building and 441 feet AMSL for the Nutmeg Building. Therefore, neither building would require the construction crane to exceed the FAA maximum of 500 feet AMSL and would maintain an obstacle clearance in excess of the 300 feet as specified by the FAA.

In addition, the project would comply with FAA Advisory circular 70/7460-1K Change 2 for Obstruction Marking and Lighting (FAA 2009). Therefore, the project would not interfere with emergency air support or air navigation.

8.1.5 Population and Housing

The project area is a varied mix of office, multi-family residential, and commercial uses in an MR-400 Residential Zone and a CV-1 Commercial Village Zone. The Mid-City Communities PDO enables this mix of use without restriction to specified zoning districts. For example, Table 1512-03I of the SDMC shows that residential uses are allowed in all of the commercial zones, as well as a wide variety of office uses, shops, and restaurants. The MR-400 Residential Zone allows all uses permitted in any abutting commercial zone if located within a mixed-use commercial/residential structure.

A land use survey conducted on February 3, 2010, of the eight-block area bounded by Sixth Avenue, Laurel Street, Fourth Avenue, and Palm Street identified 23 office, professional, and medical buildings, and 19 residential or mixed residential/commercial buildings. There are also five restaurants and a market within the area surveyed. These conditions provide excellent opportunity for housing and employment in the project area.

Year 2000 U.S. Census data provided by SANDAG shows the 92103 zip code to consist of 2,638.8 acres, of which 725.5 acres are single-family residential, 404.5 acres are multi-family residential, 176.6 acres are commercial, and 54.6 acres are office. SANDAG data from 2008 shows the total population of the Uptown Community Plan to be 38,571 residents in 22,590 dwelling units, with a combined average of 1.71 persons per household for all housing types (SANDAG 2009b, 2009b, 2010). The project would result in the construction of 110 new dwelling units and the removal of 16 dwelling units, for a net increase of 94 dwelling units. Using the community plan's overall residential density of 1.71 persons per household, 94 dwelling units would yield approximately 161 residents, which would increase the Uptown population by 0.44%.

The project would rely on existing water and sewer line infrastructure and would not increase the capacity in any service lines such that additional population growth could occur. The project would also not increase the capacity of the existing road infrastructure.

8.1.6 <u>Public Utilities</u>

This section presents an overview of the utility systems at the project sites, including those for gas and electricity, telephone and cable television, water, wastewater, and storm drainage. Solid waste disposal is evaluated in Section 4.10 of the EIR.

Water and Wastewater Service

Potable water and sewer requirements for incoming development projects are administered by the City Public Utilities Department. The incorporation of water conservation devices into project designs would be required by this City department, such as the use of low-flush toilets, low-flow faucets, and timers on lawn sprinklers.

A 16-inch cast iron (CI) water main runs north and south in Fifth Avenue and would be relocated by the project within the existing street right-of-way approximately 26 feet to the west between Maple and Nutmeg streets. An 8-inch asbestos cement (AC) water main runs east and west in Olive Street. Another 8-inch AC water main runs north and south in Sixth Avenue. Based on the available record drawings and the project design, the existing water infrastructure in Fifth Avenue, Olive Street, and Sixth Avenue is expected to be adequate for serving the proposed development.

Per the City of San Diego Land Development Project Review for the project, it was agreed that the project sites could discharge wastewater to the existing 10-inch sewer mains in Olive Street and Fifth Avenue and that the existing 10-inch sewer main adjacent to the site in Fifth Avenue can adequately handle the wastewater flow from the proposed development. The City Public Utilities Department concurred with this determination.

Water Conservation

Water usage in San Diego has remained relatively constant since the implementation of water efficiency improvements. The City of San Diego's Water Conservation Plan currently entails several mandatory prohibitions that require customers to reduce water by implementing such water conservation measures (detailed in SDMC Section 67.3806) as the following:

- Lawn watering and landscape irrigation, including construction meter irrigation, is permitted only during designated hours on designated days.
- Water shall not be used to wash down sidewalks, driveways, parking areas, tennis courts, patios, or other paved areas, except to alleviate immediate fire or sanitation hazards.

The project's proposed water facilities would be designed and constructed in accordance with established criteria in the most current edition of the City of San Diego Water Facility Design Guidelines, and City regulations, standards, and practices.

Storm Drainage

There is no underground storm drain infrastructure near the project sites. Section 8.1.1 of the EIR, Hydrology and Drainage, describes the existing storm drainage system that the serves the project site.

Gas and Electrical

Natural gas and electric services are provided by SDG&E. Cable TV, high speed cable internet access, and telephone services can be provided by Cox Communications. Telephone services and high-speed DSL internet access can be provided by SBC Communications (formerly Pacific Bell). SBC is mandated by the State Public Utilities Code to provide telephone service wherever it is requested throughout California.

With the addition of new residences, offices, commercial uses, and associated landscaped areas, the project would use additional public utilities. The provision of these services would require minor extension of existing facilities within the project site and the existing street frontages in order to connect to facilities in the adjacent streets. The required facilities existing within and adjacent to the project site have adequate capacity to serve the project and would not require substantial alteration or the construction of new facilities that would create physical impacts. Therefore, the project is not anticipated to have a significant impact on public utilities.

8.2 EFFECTS FOUND NOT SIGNIFICANT DURING INITIAL STUDY

As allowed in Section 15063(c) of the CEQA Guidelines, issues that are identified as not significant or less than significant are not addressed in detail in the previous chapters. Through the initial environmental analysis process, three issues relative to the project were found to have no significant impacts or less than significant impacts. The effects that were concluded not to be significant are:

- Agricultural Resources
- Biological Resources
- Mineral Resources

The rationale for these conclusions is stated below.

8.2.1 Agricultural Resources

The project would not involve changes to agricultural zoning, nor would it involve the conversion of farmland. No agricultural resources are identified within the vicinity of the project and no impacts to agricultural resources would result from the project.

8.2.2 Biological Resources

The entire project is located within a fully developed and urbanized area. No biological resources are present on the project site. Nor is the project site located in or adjacent to the Multiple Species Conservation Program's Multi-Habitat Planning Area. Therefore, there would be no significant project impacts to biological resources.

8.2.3 Mineral Resources

No known mineral resources are within or adjacent to the project site. Therefore, no impacts to mineral resources are anticipated.

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CHAPTER 9.0
ALTERNATIVES TO THE PROPOSED PROJECT

The CEQA Guidelines Section 15126.6(c) directs lead agencies that the "range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects." Based on this guidance, this EIR evaluates alternatives that would lessen or avoid significant project impacts that have been identified in Chapter 4.0. The alternatives analysis evaluates each issue area in comparison to the project and also discusses the ability of each alternative to achieve the project objectives as listed below. Each alternative is first described and then analyzed in comparison to the project and whether it would avoid or substantially reduce at least one of the significant effects of the project.

CEQA requires consideration of the No Project Alternative and identification of the environmentally superior alternative from among the project alternatives. If the No Project Alternative is the environmentally superior alternative, the EIR needs to identify an environmentally superior alternative from among the other alternatives.

The following alternatives to the project are evaluated in this EIR:

- No Project Alternative
- Reduced Residential Units/Reduced Building Height Project Alternative

The proposed St. Paul's Cathedral and Residences project has been described and analyzed in the previous chapters with an emphasis on potentially significant impacts and recommended mitigation measures to reduce these impacts. Table 9-1 provides a summary of the significant impacts of the project and compares the impacts of the alternatives to the project.

9.1 PROJECT OBJECTIVES

The project has the following objectives:

- Provide needed housing at a density consistent with the Uptown Community Plan.
- Optimize the St. Paul's Cathedral congregation's land assets to meet their revenue and civic goals.

- Provide sufficient office space to accommodate the Cathedral's operations and programs.
- Generate an ongoing revenue stream to endow the Cathedral programs and ministries.
- Finish the Cathedral construction in the spirit of the original design.
- Renovate the existing St. Paul's Cathedral to include Americans with Disabilities Act (ADA)-compliant restrooms, ramps, and lifts, and other improvements to better serve the congregation.
- Retain the existing historic Queen Palms located along Sixth Avenue.
- Provide on-site affordable housing as part of the project.
- Implement the following recommendations of the Uptown Community Plan:
    - Provide floor-area-ratio bonuses to encourage high-intensity mixed-use development in the Hillcrest commercial core and along major transportation corridors.
    - Enhance the existing pedestrian orientation of commercial areas through controls on the design of development.
    - Improve the design of multi-family development by requiring offsetting building walls, screened or underground parking, minimal curb cuts, private open space, and improved landscaping.
- Provide pedestrian-oriented retail uses and commercial services.
- Make a significant commitment to incorporating environmental sustainability into the master plan by pursuing LEED (Leadership in Energy and Environmental Design) certification.

9.2 RATIONALE FOR ALTERNATIVE SELECTION

9.2.1 Alternatives Considered but Rejected

Reduced ADT Project Alternative

This alternative would reduce proposed residential and commercial land uses so as to reduce project ADT from 1,193 net new trips to approximately 870 new vehicle trips, a 27% reduction in ADT. This could be accomplished by eliminating 13 dwelling units from the Nutmeg

Building, and 15 dwelling units, 7,959 square feet of office space, and 924 square feet of retail space from the Olive Building. The affordable housing units would be eliminated and off-street parking would be reduced consistent with the reduced number of dwelling units and office and commercial space. Architectural design and landscape elements would remain the same as the project. There would be no change in the development plans for the Cathedral under this alternative. This alternative was rejected because it would not avoid or substantially lessen a significant project impact as required by CEQA Guidelines Section 15126.6(a).

Reduced Use of Vision Glass Alternative

As stated in Section 3.4 of the EIR, deviations were originally requested to allow 66.5% vision glass for the Nutmeg building and 89% vision glass for the Olive building. SDMC Section 1512.0312(b)(2) specifies that no more than a combined total of 50% of each of the façades shall be vision glass above the ground floor. The deviation request was reduced by the applicant to allow 53% vision glass on the Nutmeg building and 59% on the Olive building. This alternative would require that vision glass be further reduced to 50% in compliance the SDMC standard. This alternative was rejected from further analysis based on rationale provided by the project architect that the buildings were designed for transparency and lightness to complement rather than compete with the solidity and mass of the Cathedral. This rationale is described in more detail in the request for the SDMC deviation in Section 4.1 of the EIR (see deviation request #4). This request is further justified by the low light reflectivity of the proposed glazing materials that would have a light reflectivity factor of 11% and 12%, whereas SDMC Section 142.0730 specifies that no more than "50% of the exterior of a building may be comprised of reflective material that has a light reflectivity factor greater than 30%." These considerations have been determined to adequately support the requested relatively minor deviation authorized by SDMC Section 126.0504(l) as an incentive for including affordable housing in the project. Since light and glare impacts were determined to be less than significant in Section 4.8 of the EIR, additional analysis of this alternative would be unnecessary.

Alternative Land Uses on the Project Site

During development of the alternatives to be analyzed in the EIR, the elimination of individual project features, such as the commercial and retail uses in the MR-400 zone or limiting development in the CV-1 zone to only commercial uses, were rejected as potential project alternatives. Mixed-use residential and commercial development in both zones is consistent with the Uptown Community Plan, existing zoning, the City of Villages Strategy of the General Plan that "focuses growth into mixed-use activity centers," and the smart growth concepts of

SANDAG's Regional Comprehensive Plan. In addition, the significant project impacts described in Chapter 4.0 of the EIR would not be avoided or substantially reduced by limiting the location of residential and commercial uses to the MR-400 and CV-1 zones since development of the project site in compliance with the regulations of these zone would still allow buildings up to 150 feet in height and cause similar significant impacts as the project and the Reduced Residential Units/Reduced Building Height Project Alternative.

Alternative Project Location

The CEQA Guidelines recommend considering an alternative location to reduce potential impacts of a project. There are numerous sites in the nearby project area that could be redeveloped with a mixed-use commercial and residential project. However, the project's significant impacts, other than to the Queen Palms, are not specific to the project site. Therefore, construction of the same project design on an alternative site in the Uptown community would not be expected to reduce or avoid the significant project impacts identified in Chapter 4.0 of the EIR. The alternative site would also not provide the economic benefits to St. Paul's Cathedral that would provide funding for the congregation's project objectives, which include finishing the Cathedral construction in the spirit of the original design and using its existing property resources to accommodate the Cathedral's public outreach and civic programs and to generate an ongoing revenue stream to endow Cathedral programs and ministries. As such, an alternative project location would not meet the objectives of the project.

9.2.2 Alternatives Selected for Evaluation

The No Project Alternative and the Reduced Residential Units/Reduced Building Height Project Alternative have been determined to be the only reasonable project alternatives that would reduce significant project effects. No other reduced project alternatives were identified that would be consistent with CEQA Guidelines Section 15126.6(a).

No Project Alternative

The CEQA Guidelines require that a No Project Alternative be included in all EIRs. The No Project Alternative assumes that there would be no residential or commercial development at the project site and the existing conditions would remain as described in the EIR. The No Project Alternative would not preclude expansion of the church since it is a permitted use and, therefore, would not be a discretionary project and would not be subject to CEQA review.

Reduced Residential Units/Reduced Building Height Project Alternative

This alternative would develop the Olive Site with a mixed-use project that would be reduced in height from 180 feet with the project to the 150-foot height limit of the CV-1 Zone. The affordable housing units would be eliminated and the total project would be reduced from 110 units to 96 units. The Nutmeg Building would remain at 150 feet in height and both buildings would include the same commercial and office space as the project. Off-street parking in the Olive building would be reduced consistent with the reduced number of dwelling units. Architectural design and landscape elements would remain the same as the project. There would be no change in the development plans for the Cathedral under this alternative.

9.3 NO PROJECT ALTERNATIVE

Under this alternative, the vacant Nutmeg Site would remain vacant and there would be no demolition of existing structures and no new construction of residential or commercial facilities. The No Project Alternative would not preclude expansion of the church as a permitted land use and, therefore, would not be a discretionary project and would not be subject to CEQA review. Church expansion is not dependent on development of the project's residential and commercial uses other than from a financial standpoint. Therefore, no analysis of the environmental effects of the church expansion is included in analysis of the No Project Alternative.

The No Project Alternative would not achieve the project objectives identified above and in Section 3.1 of the EIR of providing affordable housing units and implementing recommendations of the community plan for high-intensity mixed-use development along major transportation corridors; and providing funding for the congregation to finish the Cathedral, assist with public outreach and civic programs, and endow Cathedral programs and ministries. A comparison of the environmental effects of the No Project Alternative follows.

9.3.1 Land Use

The No Project Alternative would retain the existing land uses on the project site, though alterations to St. Paul's Cathedral would be allowed without the land use approvals the project requires for the mixed-use buildings. The proposed mixed-use development is consistent with the City General Plan and Uptown Community Plan and, because the No Project Alternative would not implement the City's land use plans for the project site it would have a greater land use impact than the project. The project was determined to have a less than significant impact for this issue in Section 4.1 of the EIR.

9.3.2 Visual Quality/Community Character

The No Project Alternative would not change the visual character of the site. However, since the existing apartment buildings on the Olive Site and the vacant Nutmeg Site are not compatible with the desired visual quality and community character of the Uptown Community Plan, the No Project Alternative would have a greater impact than the project. The project was determined to have a less than significant impact for this issue in Section 4.2 of the EIR.

9.3.3 Traffic and Circulation

Under the No Project Alternative, all of the intersections and roadways evaluated in the project vicinity would continue to operate at LOS D or better under near term conditions without the project. However, increased delays at project area intersections and roadway segments would still occur from increased cumulative traffic volumes under the No Project Alternative. This would include LOS F conditions at the intersection of Maple Street and Fifth Avenue during the PM peak hour and LOS E conditions during the AM peak hour. Roadway segment operations on Laurel Street between First and Fourth avenues would still be at LOS F without the project. LOS E conditions would occur Laurel Street between Fourth and Fifth avenues; and also on Sixth Avenue between Upas and Quince streets. The project's fair share contribution to installation of a traffic signal at the intersection of Nutmeg Street and Fifth Avenue for mitigation of the project's contribution to cumulative traffic growth would not be provided.

9.3.4 Air Quality

Under the No Project Alternative, construction impacts associated with the project would be avoided because no additional development would occur on the project sites. The existing structures would not be demolished and the existing uses would continue to operate in their current capacity and function. Operational air quality impacts associated with increased traffic would be avoided because no changes to the project sites would occur. The project was determined to have a less than significant impact for this issue in Section 4.4 of the EIR.

9.3.5 Historical Resources

Thirteen of the 14 Queen Palms located along the Olive Site project frontage on Sixth Avenue would be impacted for construction of the Olive Building and the Cathedral. Due to the potential presence of archaeological resources in the project area, the site is presumed to have the potential for on-site resources that would be impacted by excavation to construct the proposed residential and commercial buildings. Only limited excavation would be required for church expansion and would occur in areas previously impacted by church construction. Therefore, no impacts or threats to archeological resources would occur in the project area under the No Project Alternative.

9.3.6 Noise

Under the No Project Alternative, traffic volumes would remain the same, with no additional traffic or other new noise sources caused by the project's housing, retail, or commercial uses. There would also be no construction noise with the No Project Alternative. Although increased traffic noise from the project's 1,193 ADTs would not cause significant impacts to existing noise-sensitive land uses, the No Project Alternative would result in no increase in existing traffic noise levels in the project area. Temporary construction noise and a permanent increase in the ambient noise levels from HVAC systems were identified as significant project impacts for which mitigation was identified. With mitigation, the project was determined to have a less than significant impact for this issue in Section 4.6 of the EIR.

9.3.7 Paleontological Resources

The No Project Alternative would not create a potential impact to paleontological resources, as there would be no development on the Nutmeg Site or Olive Site. With the project, direct impacts would occur if project grading, excavation, trenching, boring, tunneling, or other activity that disturbs the subsurface geologic formation were to result in the destruction or alteration of a paleontological resource.

9.3.8 Light/Glare/Shading

The No Project Alternative would not create new sources of light, glare, and shading and, therefore, would have less impact than the proposed project. The project was determined to have a less than significant impact for this issue in Section 4.8 of the EIR.

9.3.9 Public Services and Facilities

The No Project Alternative would not create increased demands for public services and facilities and, therefore, would have less impact than the proposed project. The project was determined to have a less than significant impact for this issue in Section 4.9 of the EIR.

9.3.10 Solid Waste

The No Project Alternative would not increase the generation of solid waste from construction and operation of the project and, therefore, would have less impact than the proposed project. The project was determined to have a less than significant impact for this issue in Section 4.10 of the EIR.

9.3.11 Energy Conservation

The No Project Alternative would not cause an increase in energy use from construction and operation of the project and, therefore, would have less impact than the proposed project. The project was determined to have a less than significant impact for this issue in Section 4.11 of the EIR.

9.3.12 Greenhouse Gas Emissions

The project's contribution the greenhouse gas emissions, though not determined to be cumulatively considerable with proposed project features, would not occur under the No Project Alternative, though demand for additional housing would likely cause a similar GHG contribution at other locations in the region. The project was determined to have a less than significant impact for this issue in Section 4.12 of the EIR.

9.4 REDUCED RESIDENTIAL UNITS/REDUCED BUILDING HEIGHT PROJECT ALTERNATIVE

This alternative would develop the Olive Site with a mixed-use project that would conform to the 150-foot height limit of the CV-1 Zone, which would require the deletion of three floors. Due to the reduced height, no deviation to allow an increased height by providing affordable housing units would be required and the project would replace the 11 affordable housing units with four larger two-bedroom market-rate units. Overall, the Olive Site would be reduced from 65 units to 51 units and the total project would be reduced from 110 units to 96 units. The Cathedral improvements would be the same as the project. The 16-unit Park Chateau Apartment would be removed and, therefore there would be a net increase of 80 dwelling units under this alternative.

The Reduced Residential Units/Reduced Building Height Project Alternative would include the same amount of ground-floor commercial space as the project. By eliminating 14 dwelling units, the Reduced Residential Units/Reduced Building Height Project Alternative would reduce project trips by six ADT for each unit eliminated, for a total reduction of 84 ADT. Total net project ADT (see Table 4.3-5) would be reduced from 1,193 to 1,109 ADT.

9.4.1 Land Use and

The Reduced Residential Units/Reduced Building Height Project Alternative would be compatible with adjacent land uses and would retain the same amount of ground floor retail space. It would be consistent with the Uptown Community Plan and would not require a height deviation from the Mid-City Communities PDO for the Olive Building. It would also be consistent with other land use plans and regulations applicable to the project site and would be compatible with FAA standards and the SDIA ALUCP. Because the Reduced Residential Units/Reduced Building Height Project Alternative would not require a height deviation, it would have a reduced impact on land use in comparison to the project. The project was determined to have a less than significant impact for this issue in Section 4.1 of the EIR.

9.4.2 Visual Quality/Community Character

The Reduced Residential Units/Reduced Building Height Project Alternative would reduce the height of the Olive Building from 17 floors to 14 floors. This would be only a minor change in visual quality in an area where the proposed 17-story building would not be out of character with other high-rise buildings on nearby properties and was not determined to have a significant visual or community character impact. No other changes in architectural character would occur with this alternative. Therefore, the Reduced Residential Units/Reduced Building Height Project Alternative would have a similar impact on visual quality/community character as the project. The project was determined to have a less than significant impact for this issue in Section 4.2 of the EIR.

9.4.3 Traffic and Circulation

The Reduced Residential Units/Reduced Building Height Project Alternative would not noticeably reduce future project area traffic volumes since elimination of 84 trips on Fifth Avenue, which would be projected to carry up to 18,406 ADT with the project, would produce only a slightly reduced traffic impact from the reduction in dwelling units. Therefore, the overall impact on traffic congestion from existing and future traffic volumes would be the same as the project with projected LOS E and F conditions on nearby intersections and LOS E and F on nearby segments of Sixth Avenue and Laurel Street. Therefore, the Reduced Residential Units/Reduced Building Height Project Alternative would have a similar impact on traffic and circulation as the project.

9.4.4 Air Quality

The Reduced Residential Units/Reduced Building Height Project Alternative would result in a minor decrease in traffic from the site and an associated minor decrease in air pollutant emissions during both construction and operation. Operational activities of the Reduced Residential Units/Reduced Building Height Project Alternative would generate slightly less TAC emissions from mobile sources than would the project. Standard permit conditions to reduce fugitive dust emissions would also be implemented for the Reduced Residential Units/Reduced Building Height Project Alternative. Air quality impacts would be slightly reduced and the overall impact of this alternative would be less than the project. The project was determined to have a less than significant impact for this issue in Section 4.4 of the EIR.

9.4.5 Historical Resources

The Reduced Residential Units/Reduced Building Height Project Alternative would have the same footprint of development and excavation requirements as the project and would have the same impact on Queen Palms and potential archaeological resources. Therefore, this alternative would result in a similar impact to historical and archaeological resources as the project.

9.4.6 Noise

The Reduced Residential Units/Reduced Building Height Project Alternative would result in a reduction from 1,193 ADT with the project to 1,109 ADT under this alternative. Traffic noise impacts from existing and future traffic volumes on Fifth and Sixth avenues would not be significantly reduced since elimination of 84 trips on Fifth Avenue, which would be projected to carry up to 18,406 ADT with the project, would not substantially reduce traffic noise. As with the project, exterior noise levels would be similar to the project and would be in compliance with the SDMC exterior noise level requirements. The requirement to reduce interior noise levels for residential uses to no greater than 45 dBA would be the same as the project. The project was determined to have a less than significant impact for this issue in Section 4.6 of the EIR.

9.4.7 Paleontological Resources

Implementation of the Reduced Residential Units/Reduced Building Height Project Alternative would require excavation for underground parking and, therefore, would result in a similar potential impact to paleontological resources as the project.

9.4.8 Light/Glare/Shading

The Reduced Residential Units/Reduced Building Height Project Alternative would result in a minor reduction in the length of shadows from the Olive Building, though the elimination of three floors would have only a minor change in light and glare in comparison to the overall scope of the project. Light, glare, and shading impacts of the project were all determined to be less than significant. Although there would be a slight reduction in shading due to the reduced building height, shading impacts would be of limited duration on any adjacent property and the worst-case shading impact would only occur during the winter months. Therefore, the Reduced Residential Units/Reduced Building Height Project Alternative would have a similar impact as the proposed project. The project was determined to have a less than significant impact for this issue in Section 4.8 of the EIR.

9.4.9 Public Services and Facilities

Project impacts to police, fire, schools, libraries, and parks and recreation were determined to be less than significant. Police and school impacts are population based and reducing the project population under the Reduced Residential Units/Reduced Building Height Project Alternative would result in a minor reduction in demand for these services. However, a reduction in school impact fees and property tax revenue would also result from a reduction in dwelling units. In addition, the demand for increased public services and facilities is population based and reducing the project's number of dwelling units would not reduce the demand for new housing in the Uptown Community. Therefore, the overall impact of the Reduced Residential Units/Reduced Building Height Project Alternative would be similar to the proposed project. The project was determined to have a less than significant impact for this issue in Section 4.9 of the EIR.

9.4.10 Solid Waste

Reduction of 14 dwelling units under the Reduced Residential Units/Reduced Building Height Project Alternative would result in a minor reduction of solid waste disposal at the City's Miramar Landfill. However, solid waste impacts are determined to be cumulatively significant and the project's minor reduction in dwelling units would not reduce the demand for housing in San Diego and would not extend the life of the landfills. Therefore, the impact of the Reduced Residential Units/Reduced Building Height Project Alternative would be similar to the project. The project was determined to have a less than significant impact for this issue in Section 4.10 of the EIR.

9.4.11 Energy Conservation

Energy conservation is a national and worldwide issue that relies on the availability of fuels and energy sources located outside the City of San Diego. While fewer dwelling units at the project site would result in a minor reduction in energy consumption from the project, energy use is affected by population increase, advances in technology, and development of new energy resources and not by the number of dwelling units constructed. Therefore, the Reduced Residential Units/Reduced Building Height Project Alternative would have a similar impact as the project. The project was determined to have a less than significant impact for this issue in Section 4.11 of the EIR.

9.4.12 Greenhouse Gas Emissions

The Reduced Residential Units/Reduced Building Height Project Alternative would result in a minor decrease in GHG emissions from traffic and from other construction and operational emissions. Proposed project features identified for the project would also reduce project-level and cumulative GHG impacts to less than significant for this alternative. GHG emissions would be slightly reduced and the overall impact of this alternative would be less than the project. The project was determined to have a less than significant impact for this issue in Section 4.12 of the EIR.

9.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Table 9-1 provides a summary of the project and each alternative on an impact-by-impact basis. The EIR analysis for the project concludes that no significant and unmitigated impacts would result from the project. The No Project Alternative reduces or avoids most environmental impacts when compared with the other alternatives, but would not meet the project objectives. CEQA requires that an alternative other than the No Project Alternative be identified as the environmentally superior alternative.

Based on the available data and the analysis provided in this section of the EIR, the Reduced Residential Units/Reduced Building Height Project Alternative would be the environmentally superior alternative in that it would reduce project-generated traffic, which would also reduce potential project impacts to air quality and GHG emissions to a greater degree than would the project. The Year 2030 traffic impacts would remain significant and a traffic signal at the Fifth Avenue and Nutmeg Street intersection would still be required under the Reduced Residential Units/Reduced Building Height Project Alternative.

Table 9-1
Comparison of Project Alternatives' Impacts to Project Impacts*

Issue Area	Project	No Project Alternative	Reduced Residential Units/Reduced Building Height Project Alternative
Land Use	Potential impacts less than significant.	Greater than the project since it would not implement City's land use plans for the site	Less than the project since it would not require a height deviation.
Visual Quality/Community Character	Potential impacts less than significant.	Greater than the project since the existing apartment building and vacant lot are not consistent with the desired community character.	Similar to the project since reduction in building height would not substantially improve the project's compatibility with the visual quality and community character of the area.
Traffic and Circulation	Potential impacts mitigated to less than significant.	Less than the project since none of the analyzed intersections or road segments would experience a significant traffic increase.	Similar to the project since the reduced trip generation from 18,406 ADT with the project to 17,297 ADT with the alternative would have a similar traffic impact and would still require contribution to a traffic signal.
Air Quality	Potential impacts less than significant.	Less than the project since no construction or operations emissions would occur.	Less than the project since there would be a reduction in construction and operational emissions.
Historical Resources	Potential impacts mitigated to less than significant.	Less than the project since no historical resources would be impacted.	Similar impacts could occur to archeological resources and the Queen Palms and during demolition and construction as with the project.
Noise	Potential impacts mitigated to less than significant.	Less than the project since there would be no increase in existing traffic or construction noise levels.	Similar to the project since the reduction in the future volume of traffic would result in only a minor reduction in the increased level of year 2030 traffic noise. Construction noise would also be similar to the proposed project.
Paleontological Resources	Potential impacts mitigated to less than significant.	Less than the project since there would be no excavation.	Similar potential impact to paleontological resources as the project since excavation for parking would still occur with this alternative.
Light/Glare/Shading	Potential impacts less than significant.	Less than the project since there would not be a new source of	Similar to the project since three fewer floors would cause only a minor reduction in light, glare, and shading impacts.

Table 9-1 (continued)
Comparison of Project Alternatives' Impacts to Project Impacts*

Issue Area	Project	No Project Alternative	Reduced Residential Units/Reduced Building Height Project Alternative
Public Services and Facilities	Potential impacts less than significant.	Less than the project since there would not be an increased need for public services and facilities.	Similar to the project since the loss of school fees and property tax revenue from reduced dwelling units would offset the reduced public service needs.
Solid Waste	Project impacts less than significant; cumulative impacts significant and unavoidable	Less than the project since there would not be an increased need for solid waste disposal.	Similar to the project since demand for housing and resulting solid waste impacts would not be reduced if 14 project units are eliminated.
Energy Conservation	Potential impacts less than significant.	Less than the project since there would not be an increase in energy use from project construction and operation.	Similar to the project since local population growth and increased need for energy would not be reduced if 14 project units are eliminated.
Greenhouse Gas Emissions	Potential impacts less than significant.	Less than the project since no GHG construction or operations emissions would occur.	Less GHG emissions would occur as a result of reduced ADT and other emission sources with this alternative in comparison to the project.

* Greater = Alternative results in greater impact than the project.
Less = Alternative results in less impact than the project.
Similar = Alternative results in similar impact as the project.

CHAPTER 10.0
MITIGATION MONITORING AND REPORTING PROGRAM

As Lead Agency for the proposed project under CEQA, the City will administer the Mitigation Monitoring and Reporting Program (MMRP) for the following environmental issue areas identified in the EIR: Traffic, Circulation, and Parking; Archaeological Resources, Historic Architectural Resources; Historic Landscape Resources; Paleontological Resources; and Solid Waste. The mitigation measures identified below include all applicable measures from the St. Paul’s Cathedral and Residences EIR (Project No. 96101); SCH No. 2009101036). Implementation of this MMRP shall be made a requirement of project approval.

Section 21081.6 of the state Public Resources Code requires a Lead or Responsible Agency that approves or carries out a project where an EIR has identified significant environmental effects, to adopt a “reporting or monitoring program for adopted or required changes to mitigate or avoid significant environmental effects.” The City of San Diego is the Lead Agency for the project and, therefore, must assure the enforceability of the MMRP. Accordingly, the following mitigation measures are included in this MMRP and are to be enforced by the City:

A. GENERAL REQUIREMENTS – PART I Plan Check Phase (prior to permit issuance)

1. Prior to the issuance of a Notice To Proceed (NTP) for a subdivision, or any construction permits, such as Demolition, Grading or Building, or beginning any construction related activity on-site, the Development Services Department (DSD) Director’s Environmental Designee (ED) shall review and approve all Construction Documents (CD), (plans, specification, details, etc.) to ensure the MMRP requirements are incorporated into the design.
2. In addition, the ED shall verify that <u>the MMRP Conditions/Notes that apply ONLY to the construction phases of this project are included VERBATIM</u>, under the heading, “**ENVIRONMENTAL/MITIGATION REQUIREMENTS**.”
3. These notes must be shown within the first three (3) sheets of the construction documents in the format specified for engineering construction document templates as shown on the City website: http://www.sandiego.gov/development-services/industry/standtemp.shtml.
4. The **TITLE INDEX SHEET** must also show on which pages the “Environmental/Mitigation Requirements” notes are provided.

5. **SURETY AND COST RECOVERY –** The Development Services Director or City Manager may require appropriate surety instruments or bonds from private Permit Holders to ensure the long term performance or implementation of required mitigation measures or programs. The City is authorized to recover its cost to offset the salary, overhead, and expenses for City personnel and programs to monitor qualifying projects.

B. GENERAL REQUIREMENTS – PART II Post Plan Check (After permit issuance/Prior to start of construction)

1. **PRE CONSTRUCTION MEETING IS REQUIRED TEN (10) WORKING DAYS PRIOR TO BEGINNING ANY WORK ON THIS PROJECT:** The PERMIT HOLDER/OWNER is responsible to arrange and perform this meeting by contacting the CITY RESIDENT ENGINEER (RE) of the Field Engineering Division and City staff from MITIGATION MONITORING COORDINATION (MMC). Attendees must also include the Permit holder's Representative(s), Job Site Superintendent and the following consultants: **Qualified archaeological monitor; Qualified paleontological monitor.**

   Note: Failure of all responsible Permit Holder's representatives and consultants to attend shall require an additional meeting with all parties present.

   CONTACT INFORMATION:

   a) The PRIMARY POINT OF CONTACT is the **RE** at the **Field Engineering Division – 858-627-3200**

   b) For Clarification of ENVIRONMENTAL REQUIREMENTS, applicant t is also required to call **RE and MMC at 858-627-3360**

2. **MMRP COMPLIANCE:** This Project, Project Tracking System (PTS) Number 96101 and/or Environmental Document Number SCH 2009101036, shall conform to the mitigation requirements contained in the associated Environmental Document and implemented to the satisfaction of the DSD's Environmental Designee (MMC) and the City Engineer (RE). The requirements may not be reduced or changed but may be annotated (i.e. to explain when and how compliance is being met and location of verifying proof, etc.). Additional clarifying information may also be added to other relevant plan sheets and/or specifications as appropriate (i.e., specific locations, times of monitoring, methodology, etc.

Note: Permit Holder's Representatives must alert RE and MMC if there are any discrepancies in the plans or notes, or any changes due to field conditions. All conflicts must be approved by RE and MMC BEFORE the work is performed.

3. **OTHER AGENCY REQUIREMENTS:** Evidence of compliance with all other agency requirements or permits shall be submitted to the RE and MMC for review and acceptance prior to the beginning of work or within one week of the Permit Holder obtaining documentation of those permits or requirements. Evidence shall include copies of permits, letters of resolution or other documentation issued by the responsible agency: **Not Applicable**

4. **MONITORING EXHIBITS:** All consultants are required to submit to RE and MMC, a monitoring exhibit on a 11 x 17 inches reduction of the appropriate construction plan, such as site plan, grading, landscape, etc., marked to clearly show the specific areas including the **LIMIT OF WORK**, scope of that discipline's work, and notes indicating when in the construction schedule that work will be performed. When necessary for clarification, a detailed methodology of how the work will be performed shall be included.

   Note: Surety and Cost Recovery – When deemed necessary by the Development Services Director or City Manager, additional surety instruments or bonds from the private Permit Holder may be required to ensure the long term performance or implementation of required mitigation measures or programs. The City is authorized to recover its cost to offset the salary, overhead, and expenses for City personnel and programs to monitor qualifying projects.

5. **OTHER SUBMITTALS AND INSPECTIONS:** The Permit Holder/Owner's representative shall submit all required documentation, verification letters, and requests for all associated inspections to the RE and MMC for approval per the following schedule:

Document Submittal/Inspection Checklist

Issue Area	Document Submittal	Associated Inspection/Approval Notes
General	Consultant Qualification Letters	Prior to Pre-construction Meeting
General	Consultant Const. Monitoring Exhibits	Prior to or at the Pre-Construction meeting
Landscape	Tree Protection Arborist Verification	Tree Protection Fence inspection
Paleontology	Paleontology Reports	Paleontology site observation
Archaeology	Archaeology Reports	Archaeology /Historic site observation

Issue Area	Document Submittal	Associated Inspection/Approval Notes
Traffic	Traffic Reports	Traffic features site observation
Noise	Acoustical Report	Noise mitigation features inspection
Waste Management	Waste Management Plan	Waste management inspections
Bond Release	Request for Bond Release letter	Final MMRP inspections prior to Bond Release Letter

C. SPECIFIC MMRP ISSUE AREA CONDITIONS/REQUIREMENTS

TRAFFIC, CIRCULATION, AND PARKING

Mitigation Measure TRF-1: Prior to issuance of any building permit for construction of either of the Olive Site or Nutmeg Site structures, the applicant shall pay to the City the project's fair share (22.4%) of the cost for installation of a traffic signal at the Nutmeg Street and Fifth Avenue intersection.

ARCHAEOLOGICAL RESOURCES

Mitigation Measure AR-1:

I. Prior to Permit Issuance

A. Entitlements Plan Check

1. Prior to issuance of any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits or a Notice to Proceed for Subdivisions, but prior to the first preconstruction meeting, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Archaeological Monitoring and Native American monitoring have been noted on the applicable construction documents through the plan check process.

B. Letters of Qualification have been submitted to ADD

1. The applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the project and the names of all persons involved in the archaeological monitoring program, as defined in the City of San Diego Historical Resources Guidelines (HRG). If applicable, individuals involved in the archaeological monitoring program must have completed the 40-hour HAZWOPER training with certification documentation.

2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the archaeological monitoring of the project meet the qualifications established in the HRG.
3. Prior to the start of work, the applicant must obtain written approval from MMC for any personnel changes associated with the monitoring program.

II. Prior to Start of Construction

A. Verification of Records Search

1. The PI shall provide verification to MMC that a site specific records search (1/4 mile radius) has been completed. Verification includes, but is not limited to a copy of a confirmation letter from South Coastal Information Center, or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.
3. The PI may submit a detailed letter to MMC requesting a reduction to the ¼ mile radius.

B. PI Shall Attend Precon Meetings

1. Prior to beginning any work that requires monitoring; the Applicant shall arrange a Precon Meeting that shall include the PI, Native American consultant/monitor (where Native American resources may be impacted), Construction Manager (CM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified Archaeologist and Native American Monitor shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Archaeological Monitoring program with the Construction Manager and/or Grading Contractor.
   a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.
2. Identify Areas to be Monitored
   a. Prior to the start of any work that requires monitoring, the PI shall submit an Archaeological Monitoring Exhibit (AME) (with verification that the AME has been reviewed and approved by the Native American consultant/monitor when Native American resources may be impacted) based on the appropriate

construction documents (reduced to 11x17) to MMC identifying the areas to be monitored including the delineation of grading/excavation limits.

b. The AME shall be based on the results of a site specific records search as well as information regarding existing known soil conditions (native or formation).

3. When Monitoring Will Occur

a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.

b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate site conditions such as depth of excavation and/or site graded to bedrock, etc., which may reduce or increase the potential for resources to be present.

III. During Construction

A. Monitor(s) Shall be Present During Grading/Excavation/Trenching

1. The Archaeological Monitor shall be present full-time during all soil disturbing and grading/excavation/trenching activities which could result in impacts to archaeological resources as identified on the AME. **The Construction Manager is responsible for notifying the RE, PI, and MMC of changes to any construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances OSHA safety requirements may necessitate modification of the AME.**

2. The Native American consultant/monitor shall determine the extent of their presence during soil disturbing and grading/excavation/trenching activities based on the AME and provide that information to the PI and MMC. If prehistoric resources are encountered during the Native American consultant/monitor's absence, work shall stop and the Discovery Notification Process detailed in Section III.B-C and IV.A-D shall commence.

3. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as modern disturbance post-dating the previous grading/trenching activities, presence of fossil formations, or when native soils are encountered that may reduce or increase the potential for resources to be present.

4. The archaeological and Native American consultant/monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVR's shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion)**, and in the case of ANY discoveries. The RE shall forward copies to MMC.

B. Discovery Notification Process

1. In the event of a discovery, the Archaeological Monitor shall direct the contractor to temporarily divert all soil disturbing activities, including but not limited to digging, trenching, excavating or grading activities in the area of discovery and in the area reasonably suspected to overlay adjacent resources and immediately notify the RE or BI, as appropriate.
2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.
3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.
4. No soil shall be exported off-site until a determination can be made regarding the significance of the resource specifically if Native American resources are encountered.

C. Determination of Significance

1. The PI and Native American consultant/monitor, where Native American resources are discovered shall evaluate the significance of the resource. If Human Remains are involved, follow protocol in Section IV below.
   a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required.
   b. If the resource is significant, the PI shall submit an Archaeological Data Recovery Program (ADRP) which has been reviewed by the Native American consultant/monitor, and obtain written approval from MMC. Impacts to significant resources must be mitigated before ground disturbing activities in the area of discovery will be allowed to resume. **Note: If a unique archaeological site is also an historical resource as defined in CEQA, then the limits on the amount(s) that a project applicant may be required to**

pay to cover mitigation costs as indicated in CEQA Section 21083.2 shall not apply.

c. If the resource is not significant, the PI shall submit a letter to MMC indicating that artifacts will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that that no further work is required.

IV. Discovery of Human Remains

If human remains are discovered, work shall halt in that area and no soil shall be exported off-site until a determination can be made regarding the provenance of the human remains; and the following procedures as set forth in CEQA Section 15064.5(e), the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) shall be undertaken:

A. Notification

1. Archaeological Monitor shall notify the RE or BI as appropriate, MMC, and the PI, if the Monitor is not qualified as a PI. MMC will notify the appropriate Senior Planner in the Environmental Analysis Section (EAS) of the Development Services Department to assist with the discovery notification process.
2. The PI shall notify the Medical Examiner after consultation with the RE, either in person or via telephone.

B. Isolate discovery site

1. Work shall be directed away from the location of the discovery and any nearby area reasonably suspected to overlay adjacent human remains until a determination can be made by the Medical Examiner in consultation with the PI concerning the provenance of the remains.
2. The Medical Examiner, in consultation with the PI, will determine the need for a field examination to determine the provenance.
3. If a field examination is not warranted, the Medical Examiner will determine with input from the PI, if the remains are or are most likely to be of Native American origin.

C. If Human Remains **ARE** determined to be Native American

1. The Medical Examiner will notify the Native American Heritage Commission (NAHC) within 24 hours. By law, **ONLY** the Medical Examiner can make this call.

2. NAHC will immediately identify the person or persons determined to be the Most Likely Descendent (MLD) and provide contact information.
3. The MLD will contact the PI within 24 hours or sooner after the Medical Examiner has completed coordination, to begin the consultation process in accordance with CEQA Section 15064.5(e), the California Public Resources and Health & Safety Codes.
4. The MLD will have 48 hours to make recommendations to the property owner or representative, for the treatment or disposition with proper dignity, of the human remains and associated grave goods.
5. Disposition of Native American Human Remains will be determined between the MLD and the PI, and, if:
   a. The NAHC is unable to identify the MLD, OR the MLD failed to make a recommendation within 48 hours after being notified by the Commission; OR;
   b. The landowner or authorized representative rejects the recommendation of the MLD and mediation in accordance with PRC 5097.94 (k) by the NAHC fails to provide measures acceptable to the landowner, THEN,
   c. In order to protect these sites, the Landowner shall do one or more of the following:
      (1) Record the site with the NAHC;
      (2) Record an open space or conservation easement on the site;
      (3) Record a document with the County.
   d. Upon the discovery of multiple Native American human remains during a ground disturbing land development activity, the landowner may agree that additional conferral with descendants is necessary to consider culturally appropriate treatment of multiple Native American human remains. Culturally appropriate treatment of such a discovery may be ascertained from review of the site utilizing cultural and archaeological standards. Where the parties are unable to agree on the appropriate treatment measures the human remains and buried with Native American human remains shall be reinterred with appropriate dignity, pursuant to Section 5.c., above.

D. If Human Remains are **NOT** Native American
   1. The PI shall contact the Medical Examiner and notify them of the historic era context of the burial.

2. The Medical Examiner will determine the appropriate course of action with the PI and City staff (PRC 5097.98).
3. If the remains are of historic origin, they shall be appropriately removed and conveyed to the San Diego Museum of Man for analysis. The decision for internment of the human remains shall be made in consultation with MMC, EAS, the applicant/landowner, any known descendant group, and the San Diego Museum of Man.

V. Night and/or Weekend Work

A. If night and/or weekend work is included in the contract

1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the precon meeting.
2. The following procedures shall be followed.

a. No Discoveries

In the event that no discoveries were encountered during night and/or weekend work, the PI shall record the information on the CSVR and submit to MMC via fax by 8AM of the next business day.

b. Discoveries

All discoveries shall be processed and documented using the existing procedures detailed in Sections III - During Construction, and IV – Discovery of Human Remains. Discovery of human remains shall always be treated as a significant discovery.

c. Potentially Significant Discoveries

If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction and IV-Discovery of Human Remains shall be followed.

d. The PI shall immediately contact MMC, or by 8AM of the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.

B. If night and/or weekend work becomes necessary during the course of construction

1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.
2. The RE, or BI, as appropriate, shall notify MMC immediately.

C. All other procedures described above shall apply, as appropriate.

VI. Post Construction

A. Preparation and Submittal of Draft Monitoring Report

1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Historical Resources Guidelines (Appendix C/D) which describes the results, analysis, and conclusions of all phases of the Archaeological Monitoring Program (with appropriate graphics) to MMC for review and approval within 90 days following the completion of monitoring. **It should be noted that if the PI is unable to submit the Draft Monitoring Report within the allotted 90-day timeframe resulting from delays with analysis, special study results or other complex issues, a schedule shall be submitted to MMC establishing agreed due dates and the provision for submittal of monthly status reports until this measure can be met.**

   a. For significant archaeological resources encountered during monitoring, the Archaeological Data Recovery Program shall be included in the Draft Monitoring Report.

   b. Recording Sites with State of California Department of Parks and Recreation

      The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) any significant or potentially significant resources encountered during the Archaeological Monitoring Program in accordance with the City's Historical Resources Guidelines, and submittal of such forms to the South Coastal Information Center with the Final Monitoring Report.

2. MMC shall return the Draft Monitoring Report to the PI for revision or, for preparation of the Final Report.

3. The PI shall submit revised Draft Monitoring Report to MMC for approval.

4. MMC shall provide written verification to the PI of the approved report.

5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.

B. Handling of Artifacts

1. The PI shall be responsible for ensuring that all cultural remains collected are cleaned and catalogued

2. The PI shall be responsible for ensuring that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate.

3. The cost for curation is the responsibility of the property owner.

C. Curation of artifacts: Accession Agreement and Acceptance Verification

1. The PI shall be responsible for ensuring that all artifacts associated with the survey, testing and/or data recovery for this project are permanently curated with an appropriate institution. This shall be completed in consultation with MMC and the Native American representative, as applicable.

2. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.

3. When applicable to the situation, the PI shall include written verification from the Native American consultant/monitor indicating that Native American resources were treated in accordance with state law and/or applicable agreements. If the resources were reinterred, verification shall be provided to show what protective measures were taken to ensure no further disturbance occurs in accordance with Section IV – Discovery of Human Remains, Subsection 5.

D. Final Monitoring Report(s)

1. The PI shall submit one copy of the approved Final Monitoring Report to the RE or BI as appropriate, and one copy to MMC (even if negative), within 90 days after notification from MMC that the draft report has been approved.

2. The RE shall, in no case, issue the Notice of Completion and/or release of the Performance Bond for grading until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

HISTORICAL RESOURCES

Mitigation Measure HR-1: Prior to the issuance of any construction permits, including but not limited to, the first grading permit, demolition plans/permits, and building plans/permits for St. Paul's Cathedral, the applicant shall submit construction plans for proposed modifications to St. Paul's Cathedral consistent with the approved project, which has been determined to be in conformance with the U.S. Secretary of the Interior's Standards for Treatment of Historic Properties and related Guidelines.

Mitigation Measure HR-2:

HR-2.1 Prior to issuance of any construction permits, including but not limited to, the first grading permit, demolition plans/permits, and building plans/permits for construction of the Olive Building or for demolition and/or construction of the proposed St. Paul's Cathedral improvements along the Sixth Avenue frontage, the existing Queen Palms that are to be removed for project construction shall be boxed for replanting. If any of these existing palms fail to survive after replanting; each shall be replaced with a Queen Palm with a minimum 20-foot brown trunk height in locations consistent with the Sixth Avenue streetscape and to the satisfaction of the City Street Division-Urban Forestry. A surety bond in an amount sufficient to purchase and install replacement trees shall be provided to guarantee the survival of the trees for 3 years. The City Street Division-Urban Forestry staff shall inspect the trees to determine that they are in a healthy and thriving condition prior to release of the bond. If any trees are determined to need additional care or replacement, action as determined by the City Street Division-Urban Forestry prior to the release of the bond shall be taken and the bond shall not be released for an additional 3 years, but may be replaced with a bond to cover only the trees requiring additional care or replacement.

HR-2.2 Prior to issuance of any construction permits, including but not limited to, the first grading permit, demolition plans/permits, and building plans/permits for construction on the Olive Site, project plans shall show the locations of the palms to be removed and those to be protected from damage during construction. The palms that are to be protected shall be provided with bright yellow or orange temporary fencing or other protection to be shown on the project plans to the satisfaction of the Development Services Department. Stockpiling, topsoil disturbance, construction material storage, vehicle use, foot traffic, and storage of any kind is prohibited within the fenced area. The protection shall be installed and remain in an unaltered and undamaged condition during the entire period of construction until authorized to be removed by the Development Services Department. Should any of the protected palms be damaged to the extent that a Registered Arborist determines that they should be removed, the applicant for the grading or building permit shall be responsible for replacement of the palms in accordance with Mitigation Measure HR-2.1 and for two additional palms for each damaged palm, to be planted along the Sixth Avenue frontage or elsewhere in Balboa Park, at locations identified by the City Street Division-Urban Forestry.

NOISE

***Mitigation Measure NOI-1a*:** The project proponent shall require any construction activities and contractors to adopt the following measures to control noise generated by construction activities:

- Construction equipment shall be properly maintained per manufacturers' specifications and fitted with the best available noise-suppression devices (e.g., mufflers, silencers, wraps).
- The project proponent and contractors shall not allow heavy-duty construction equipment to operate within 15 feet of adjacent structures to prevent structural damage from construction generated vibration.
- If heavy-duty construction equipment must be operated within 15 feet of adjacent structures, a before and after survey of cracks in the adjacent buildings shall be taken of all structures adjacent to construction activities. If any damage occurs to adjacent structures from heavy equipment operations, the project proponent shall repair all damages.
- All impact tools shall be shrouded or shielded and all intake and exhaust ports on power equipment shall be muffled or shielded.
- Heavy-duty construction equipment shall be staged and used at the farthest distance feasible from adjacent sensitive receptors.
- Construction equipment shall not be idled for extended periods.
- Fixed/stationary equipment (such as generators, compressors, rock crushers, and cement mixers) shall be located as far as possible from noise-sensitive receptors.
- An on-site coordinator shall be employed by the project applicant/contractor and his or her telephone number along with instructions on how to file a noise complaint shall be posted conspicuously around the project site during construction phases. The coordinator's duties shall include fielding and documenting noise complaints, determining the source of the complaint (e.g., piece of construction equipment), determining whether noise levels are within acceptable limits and according to City standards, and reporting complaints to the City. The coordinator shall contact nearby noise-sensitive receptors, advising them of the construction schedule.
- Project construction and related activities shall be limited to daytime hours (7 a.m. to 7 p.m.).

***Mitigation Measure NOI-1b*:** The above mitigation measures would reduce construction noise levels by 10 to 15 dBA at ground level, but would be ineffective for adjacent residences on the second floor or higher and for any actions within 50 feet of adjacent property lines. The following additional mitigation would ensure that all adjacent residences are not exposed to noise levels exceeding 75 dBA L_{eq} or noise that exceeds 10 dB above existing ambient noise levels:

- Construction equipment operating at noise levels exceeding 75 dBA L_{eq} shall not actively operate for more than 30 minutes of each 1 hour period within 30 feet of adjacent sensitive receptors.
- Noise barriers shall be erected along the eastern boundary of the project site. Noise barriers during shoring activities shall be 14 feet in height. Noise barrier heights during excavation shall be 14 feet in height until the site is excavated to a depth of 7 feet, when the barrier height may be reduced to 12 feet. At an excavation depth of 14 feet or greater the barrier may be reduced to 8 feet. A minimum 8-foot-high barrier shall be maintained along the eastern boundary of the Nutmeg site throughout excavation and foundation activities. The noise barriers should be constructed of material with a minimum weight of 4 pounds per square foot with no gaps or perforations. Noise barriers may be constructed of, but are not limited to, 5/8-inch plywood and 5/8-inch oriented strand board.
- Due to shading effects on adjacent residences, lower vertical wall height maybe desired. Wall heights may be lowered 6 inches or more by creating a cantilevered extension at the top of the wall. Effectively, a 10-foot high wall with an approximate 2-foot cantilevered portion angled 45 degrees toward the project site would be as effective as a 12-foot barrier vertical barrier with a height of a little over 11 feet. To use cantilevered walls, the cantilever length would depend on the vertical wall height. Table 4.6-8 provides the of the required cantilever length for various wall heights.

Mitigation Measure NOI-2: The project proponent shall ensure that design and installation of stationary noise sources for the project meet the measures described below:

- Implement best design considerations and shielding, including installing stationary noise sources associated with HVAC systems indoors in mechanical rooms.
- Prior to the issuance of a building permit, the applicant or its designee shall prepare an acoustical study(s) of proposed mechanical equipment, which shall identify all noise-generating equipment, predict noise level property lines from all identified equipment,

and recommended mitigation to be implemented (e.g., enclosures, barriers, site orientation), as necessary, to comply with the City of San Diego noise ordinance.

PALEONTOLOGICAL RESOURCES

Mitigation Measure PR-1:

I. Prior to Permit Issuance

A. Entitlements Plan Check

1. Prior to issuance of any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits or a Notice to Proceed for Subdivisions, but prior to the first preconstruction meeting, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Paleontological Monitoring have been noted on the appropriate construction documents.

B. Letters of Qualification have been submitted to ADD

1. The applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the project and the names of all persons involved in the paleontological monitoring program, as defined in the City of San Diego Paleontology Guidelines.

2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the paleontological monitoring of the project.

3. Prior to the start of work, the applicant shall obtain approval from MMC for any personnel changes associated with the monitoring program.

II. Prior to Start of Construction

A. Verification of Records Search

1. The PI shall provide verification to MMC that a site specific records search has been completed. Verification includes, but is not limited to a copy of a confirmation letter from San Diego Natural History Museum, other institution or, if the search was in-house, a letter of verification from the PI stating that the search was completed.

2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.

B. PI Shall Attend Precon Meetings

1. Prior to beginning any work that requires monitoring; the Applicant shall arrange a Precon Meeting that shall include the PI, Construction Manager (CM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified paleontologist shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Paleontological Monitoring program with the Construction Manager and/or Grading Contractor.

   a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.

2. Identify Areas to be Monitored

   Prior to the start of any work that requires monitoring, the PI shall submit a Paleontological Monitoring Exhibit (PME) based on the appropriate construction documents (reduced to 11 x 17 inches) to MMC identifying the areas to be monitored including the delineation of grading/excavation limits. The PME shall be based on the results of a site specific records search as well as information regarding existing known soil conditions (native or formation).

3. When Monitoring Will Occur

   a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.

   b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate conditions such as depth of excavation and/or site graded to bedrock, presence or absence of fossil resources, etc., which may reduce or increase the potential for resources to be present.

III. During Construction

A. Monitor Shall be Present During Grading/Excavation/Trenching

1. The monitor shall be present full-time during grading/excavation/trenching activities as identified on the PME that could result in impacts to formations with high and moderate resource sensitivity. **The Construction Manager is**

responsible for notifying the RE, PI, and MMC of changes to any construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances OSHA safety requirements may necessitate modification of the PME.

2. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as trenching activities that do not encounter formational soils as previously assumed, and/or when unique/unusual fossils are encountered, which may reduce or increase the potential for resources to be present.

3. The monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVRs shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion)**, and in the case of ANY discoveries. The RE shall forward copies to MMC.

B. Discovery Notification Process

1. In the event of a discovery, the Paleontological Monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and immediately notify the RE or BI, as appropriate.

2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.

3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.

C. Determination of Significance

1. The PI shall evaluate the significance of the resource.

   a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required. The determination of significance for fossil discoveries shall be at the discretion of the PI.

   b. If the resource is significant, the PI shall submit a Paleontological Recovery Program (PRP) and obtain written approval from MMC. Impacts to significant resources must be mitigated before ground disturbing activities in the area of discovery will be allowed to resume.

c. If resource is not significant (e.g., small pieces of broken common shell fragments or other scattered common fossils) the PI shall notify the RE, or BI as appropriate, that a non-significant discovery has been made. The Paleontologist shall continue to monitor the area without notification to MMC unless a significant resource is encountered.

d. The PI shall submit a letter to MMC indicating that fossil resources will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that no further work is required.

IV. Night and/or Weekend Work

A. If night and/or weekend work is included in the contract

1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the precon meeting.

2. The following procedures shall be followed.

a. No Discoveries

In the event that no discoveries were encountered during night and/or weekend work, The PI shall record the information on the CSVR and submit to MMC via fax by 8 a.m. on the next business day.

b. Discoveries

All discoveries shall be processed and documented using the existing procedures detailed in Sections III - During Construction.

c. Potentially Significant Discoveries

If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction shall be followed.

d. The PI shall immediately contact MMC, or by 8 a.m. on the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.

B. If night work becomes necessary during the course of construction

1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.

2. The RE, or BI, as appropriate, shall notify MMC immediately.

C. All other procedures described above shall apply, as appropriate.

V. Post Construction

A. Preparation and Submittal of Draft Monitoring Report

1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Paleontological Guidelines which describes the results, analysis, and conclusions of all phases of the Paleontological Monitoring Program (with appropriate graphics) to MMC for review and approval within 90 days following the completion of monitoring,

a. For significant paleontological resources encountered during monitoring, the Paleontological Recovery Program shall be included in the Draft Monitoring Report.

b. Recording Sites with the San Diego Natural History Museum

The PI shall be responsible for recording (on the appropriate forms) any significant or potentially significant fossil resources encountered during the Paleontological Monitoring Program in accordance with the City's Paleontological Guidelines, and submittal of such forms to the San Diego Natural History Museum with the Final Monitoring Report.

2. MMC shall return the Draft Monitoring Report to the PI for revision or, for preparation of the Final Report.

3. The PI shall submit revised Draft Monitoring Report to MMC for approval.

4. MMC shall provide written verification to the PI of the approved report.

5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.

B. Handling of Fossil Remains

1. The PI shall be responsible for ensuring that all fossil remains collected are cleaned and catalogued.

2. The PI shall be responsible for ensuring that all fossil remains are analyzed to identify function and chronology as they relate to the geologic history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate

C. Curation of fossil remains: Deed of Gift and Acceptance Verification

1. The PI shall be responsible for ensuring that all fossil remains associated with the monitoring for this project are permanently curated with an appropriate institution.

2. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.

D. Final Monitoring Report(s)

1. The PI shall submit two copies of the Final Monitoring Report to MMC (even if negative), within 90 days after notification from MMC that the draft report has been approved.

2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

<u>SOLID WASTE DISPOSAL</u>

Mitigation Measure SW-1: In order to avoid cumulative impacts to public services (waste management), the following mitigation measures shall be implemented by the project applicant:

I. Entitlements Division Plan Check

1. Prior to the issuance of any construction permit, including but is not limited to, demolition, grading, building or any other construction permit, the Assistant Deputy Director (ADD) Environmental Designee shall verify that all the requirements of the Refuse & Recyclable Materials Storage Regulations and all of the requirements of the waste management plan are shown and noted on the appropriate construction documents. All requirements, notes and graphics shall be in substantial conformance with the conditions and exhibits of the associated discretionary approval.

2. The construction documents shall include a Waste Management Plan that addresses the following information and elements for demolition, construction, and occupancy phases of the project as applicable:

    a. tons of waste anticipated to be generated,

    b. material type of waste to be generated,

    c. source separation techniques for waste generated,

    d. how materials will be reused on site,

    e. name and location of recycling, reuse, or landfill facilities where waste will be taken if not reused on site,

    f. a "buy recycled" program,

    g. how the project will aim to reduce the generation of construction/ demolition debris,

    h. a plan of how waste reduction and recycling goals will be communicated to subcontractors,

    i. a time line for each of the three main phases of the project as stated above,

    j. a list of required progress and final inspections by City staff.

3. The plan shall strive for a goal of 50% waste reduction.

4. The plan shall include specific performance measures to be assessed upon the completion of the project to measure success in achieving waste minimization goals.

5. The Plan shall include notes requiring the Permittee/Applicant to notify Mitigation Monitoring Coordination (MMC) and Environmental Services Department (ESD) when:

    a. a demolition permit is issued,

    b. demolition begins on site,

    c. inspections are needed. The Permittee/Applicant shall arrange for progress inspections, and a final inspection, as specified in the plan and shall contact both MMC and ESD to perform these periodic site visits during demolition and construction to inspect the progress of the project's waste diversion efforts.

6. When Demolition ends, notification shall be sent to the following:

   Mitigation Monitoring Coordination (MMC)
   9601 Ridgehaven Court, Ste. 320, MS 1102 B
   San Diego, CA 92123 1636
   (619) 980 7122

   Environmental Services Department (ESD)
   9601 Ridgehaven Court, Ste. 320, MS 1103 B
   San Diego, CA 92123 1636
   (858) 627-3303

II. Prior to the issuance of any grading or building permit, the Permittee/Applicant shall receive approval, in writing, from the ADD Environmental Designee (MMC) that the Waste Management Plan has been prepared, approved, and implemented. Also, prior to the issuance of any grading or building permit, the Permittee/Applicant shall submit written evidence to the ADD Environmental Designee that the final Demolition/Construction report has been approved by MMC and ESD. This report shall summarize the results of implementing the above Waste Management Plan elements, including: the actual waste generated and diverted from the project, the waste reduction percentage achieved, and how that goal was achieved, etc.

1. Pre-Construction (Precon) Meeting

   a. Demolition Permit - Prior to issuance of any demolition permit, the Permittee/Applicant shall be responsible to obtain written verification from MMC indicating that the Permittee/Applicant has arranged a Preconstruction (Precon) Meeting to coordinate the implementation of the MMRP. The Precon Meeting that shall include: the Construction Manager, Demolition/ Building/Grading Contractor, MMC, ESD, and the Building Inspector and/or the Resident Engineer (whichever is applicable) to verify that implementation of the Waste Management Plan shall be performed in compliance with the plan approved by Entitlements Division and ESD, to ensure that impacts to solid waste facilities are mitigated to below a level of significance.

   b. At the Precon Meeting, the Permittee/Applicant shall submit three (3) reduced copies (11 x 17 inches) of the approved Waste Management Plan; two (2) to MMC and one (1) to ESD.

c. Prior to the start of demolition, the Permittee/the Construction Manager shall submit a construction/demolition schedule to MMC and ESD.

i. Grading and Building Permit - Prior to issuance of any grading or building permit, the permittee shall be responsible to arrange a preconstruction meeting to coordinate the implementation of the MMRP. The Precon Meeting that shall include: the Construction Manager, Building/Grading Contractor, MMC, ESD, and the Building Inspector and/or the Resident Engineer (whichever is applicable) to verify that implementation of the Waste Management Plan shall be performed in compliance with the plan approved by Entitlements Division and ESD.

d. At the Precon Meeting, the Permittee/Applicant shall submit reduced copies (11 x 17 inches) of the approved Waste Management Plan to the Resident Engineer, Building Inspector, MMC and ESD.

III. Prior to the start of construction, the Permittee/Construction Manager shall submit a construction schedule to the Resident Engineer, Building Inspector, MMC and ESD.

1. The Permittee/Applicant and Construction Manager shall call for inspections by the Resident Engineer, Building Inspector, MMC, and ESD who will periodically visit the demolition/construction site to verify implementation of the Waste Management Plan. The Consultant Site Visit Record (CSVR) shall be used to document the Daily Waste Management Activity/progress.

2. Within 30 days after the completion of the implementation of the MMRP, for any demolition or construction permit, a final results report shall be submitted to both MMC and ESD for review and approval to the satisfaction of the ADD Environmental Designee/City. MMC will coordinate the approval with ESD and issue the approval notification.

3. Prior to final clearance of any demolition permit, issuance of any grading or building permit, release of the grading bond and/or issuance of any Certificate of Occupancy, the Permittee/Applicant shall provide documentation to the ADD Environmental Designee that the Waste Management Plan has been effectively implemented.

CHAPTER 11.0
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CHAPTER 12.0
CONTRIBUTORS TO EIR PREPARATION AND AGENCIES CONSULTED

City of San Diego Development Services Department

John Fisher, Development Project Manager III
Elizabeth Shearer-Nguyen, Associate Planner
Ann Gonsalves, Senior Traffic Engineer
Kamran Khaligh, DSD
Lisa Wood, Environmental Services Division
Jim Quinn, DSD
Mehdi Rastakhiz, DSD
Billy Church, DSD
Dan Weston, DSD
Jeff Harkness, City Planning and Community Investment (CPCI)
Cathy Winterrowd, CPCI
Marlon Pangilinan, CPCI
Jose Lopez, Fire Department
Martha Carranza, Police Department

AECOM

Preparation of Draft EIR
John Bridges, FAICP
Role: Principal in Charge, CEQA Compliance Review
Yara Fisher, AICP
Role: Project Management
Jerry McLees, AICP
Role: Principal Author
William Maddux
Role: Noise Analysis
George Lu
Role: Air Quality Analysis and Climate Change
Dan Harris
Role: Waste Management Plan

Tucker Sadler

Gregory A. Mueller
Ivana Vinski
Project Architects and Shadow Study

Leighton Associates, Inc.

Preliminary Geotechnical Investigation
Phase I Environmental Site Assessment Report

Kelley & VerPlanck Historical Resources Consulting

Analysis of Historic Architectural Resources

Veneklasen Associates

Glazing and External Noise Analysis

Kimley-Horn and Associates

Traffic Impact Analysis

Project Design Consultants (PDC)

Drainage Report
Water Quality Technical Report

Williams Aviation Consultants, Inc.

Evaluation of SDIA Protected Surfaces