

# **AIR QUALITY ASSESSMENT**

## **Pacific Village Residential Development City of San Diego**

**City Project No. 470158**

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## **LIST OF ACRONYMS**

Air Quality Impact Assessments (AQIA)  
Assembly Bill 32 (AB32)  
California Air Resource Board (CARB)  
California Ambient Air Quality Standards (CAAQS)  
California Environmental Quality Act (CEQA)  
Carbon Dioxide (CO<sub>2</sub>)  
Cubic Yards (CY)  
Diesel Particulate Matter (DPM)  
Environmental Protection Agency (EPA)  
EPA Office of Air Quality Planning and Standards (OAQPS)  
Hazardous Air Pollutants (HAPs)  
Hydrogen Sulfide (H<sub>2</sub>S)  
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San Diego Air Pollution Control District (SDAPCD)  
South Coast Air Quality Management District (SCAQMD)  
Specific Plan Area (SPA)  
State Implementation Plan (SIP)  
Toxic Air Contaminants (TACs)  
Vehicle Miles Traveled (VMT)

## **EXECUTIVE SUMMARY**

This air quality impact study has been completed to determine air quality impacts (if any) associated with the development of the proposed Project. The overall project site is comprised of approximately 41.45 acres of land east of Carmel Mountain Road, south of the Peñasquitos Drive Shopping Center. The project would demolish 332 residential units and then reconstruct 601 residential structures.

Based upon this analysis, no direct or cumulative criteria or fugitive dust impacts are expected from construction. Therefore, mitigation measures for criteria pollutants and fugitive dust from construction are not required. It should be noted that the grading contractor will be required to follow BMPs for grading and comply with all SDAPCD rules.

A diesel particulate health risk analysis was conducted, and based on diesel exhaust emission quantities, the proposed project would not create significant diesel particulate health risk impacts.

No combined cumulative construction impacts are expected because nearby construction projects would not be close enough to cause air quality mixing sufficient to exceed air quality thresholds. Therefore, no cumulative construction impacts are expected. Once each the project is fully operational, ROG, CO and PM impacts would not be expected.

Based upon the operational analysis, the proposed project would exceed both ROG and CO thresholds if wood burning fireplaces are installed. It was found that all ROG and CO impacts could be fully mitigated by conditioning the project to not install wood burning fireplaces.

The project site is currently zone RM-1-1 and would not require a rezone in order to increase to the proposed density. Given this, the Project would be consistent with the City's General Plan and would have been considered within the Regional Air Quality Strategy (RAQS). Therefore, the proposed project would not conflict with or obstruct the RAQS or State Implementation Plan (SIP) and would be consistent with growth in the region.

Finally, odor impacts from construction operations would be expected though would be considered short-term events and would not be considered a significant impact.

## **1.0 INTRODUCTION**

### **1.1 Purpose of this Study**

The purpose of this Air Quality study is to determine potential air quality impacts (if any) that may be created by construction, area or operational emissions (short term or long term) from the proposed Project. Should impacts be determined, the intent of this study would be to recommend suitable mitigation measures to mitigate those impacts to the extent feasible.

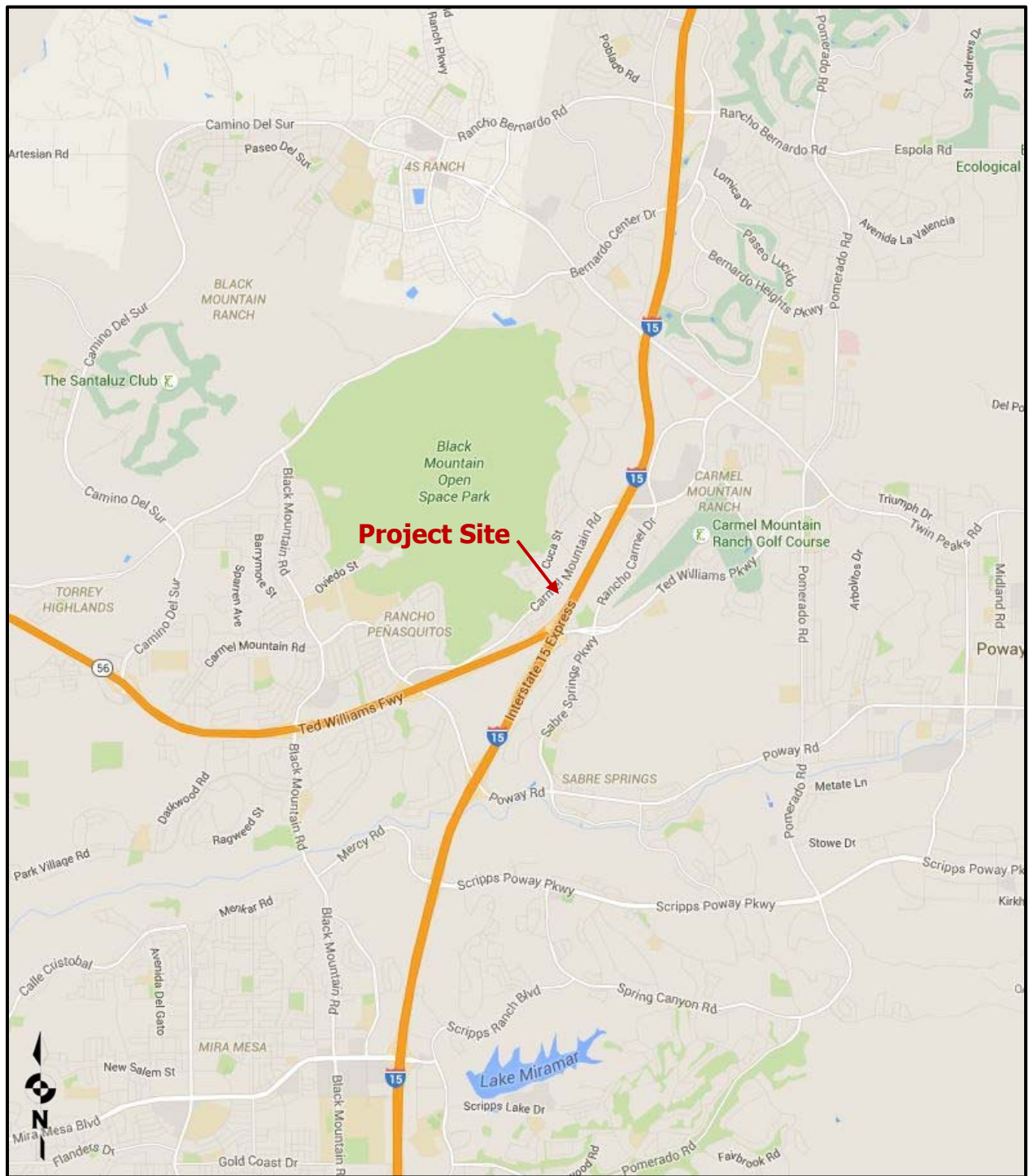
### **1.2 Project Location**

The site is immediately west of Interstate 15 (I-15), east of Carmel Mountain Road, south of the Peñasquitos Drive Shopping Center, and north of the multi-family development, Peñasquitos Villas, within the Community of Rancho Peñasquitos in the City of San Diego. A general project vicinity map is shown in Figure 1–A on the following page.

### **1.3 Project Description**

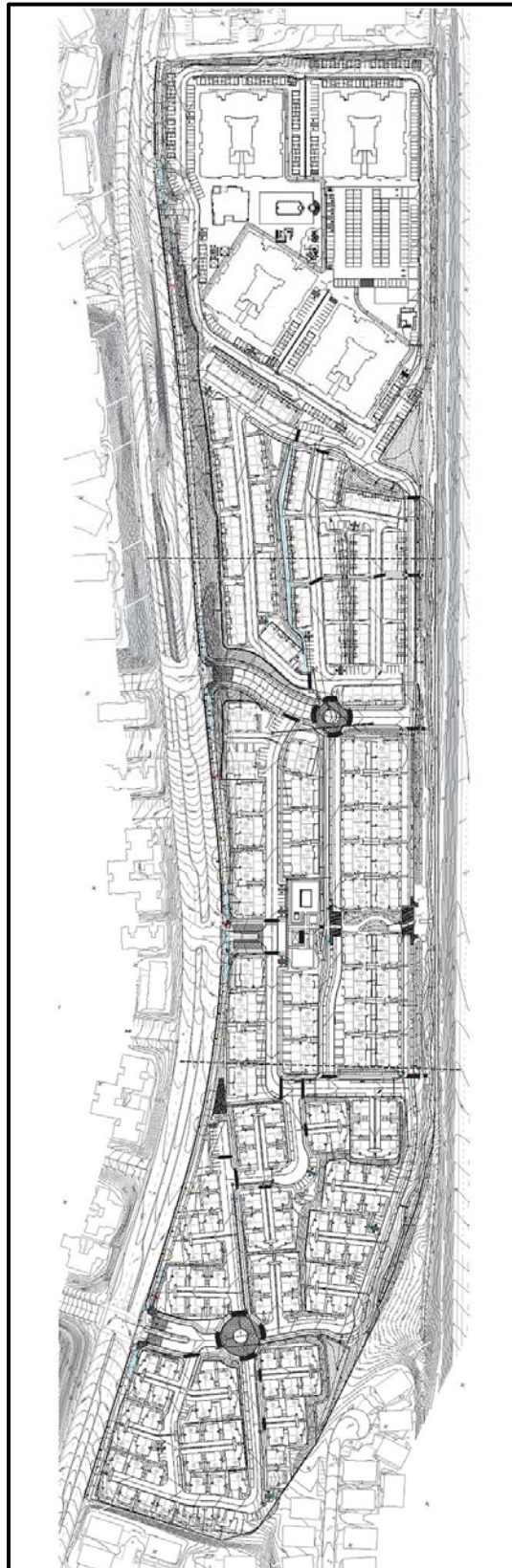
The existing use of the property serves a 332-unit apartment complex which was constructed in 1970. The Project proposes the redevelopment of this 41-acre rental complex currently known as Penasquitos Village with 601 DU. Three (3) distinct housing types are proposed. The “for sale” component proposes 99 single-family cluster homes, 105 multi-family tri-plex units, and 120 town homes and 277 apartments for a total of 601 units. The project development plan is shown on Figure 1-B on Page 3 of this report.

**Figure 1-A: Project Vicinity Map**



Source: (Google, 2016)

**Figure 1-B: Proposed Project Site Development Plan**



Source: (Latitude 33, 2016)



## **2.0 EXISTING ENVIRONMENTAL SETTING**

### **2.1 Existing Setting**

The Project site lies in the in the northern part of San Diego within the Scrips Ranch area of the City which is within the San Diego Air Basin (SDAB). The overall site consists of a developed land use consisting of 332 apartment units. Elevations within this area range from approximately 600 feet above Mean Sea Level (MSL) at its southern terminus to approximately 615 feet MSL towards the north of the project site.

The proposed project is surrounded by residential to the west and south, commercial to the north and Interstate 15 and residential to the east. The project site would have access to the MTS Bus Line route 20 (MTS, 2016) just along Carmel Mountain Road which connects North San Diego to Route 110 to Downtown San Diego.

### **2.2 Climate and Meteorology**

Climate within the San Diego Air Basin (SDAB) area often varies dramatically over short geographical distances with cooler temperatures on the western coast gradually warming to the east as prevailing winds from the west heats up. Most of southern California is dominated by high-pressure systems for much of the year, which keeps San Diego mostly sunny and warm. Typically, during the winter months, the high pressure system drops to the south and brings cooler, moister weather from the north. It is common for inversion layers to develop within high-pressure areas, which mostly define pressure patterns over the SDAB. These inversions are caused when a thin layer of the atmosphere increases in temperature with height. An inversion acts like a lid preventing vertical mixing of air through convective overturning.

Meteorological trends within the City of San Diego in the geographical area near Poway produce daytime highs typically ranging between 69°F in the winter to approximately 90°F in the summer with August usually being the hottest month. Median temperatures range from approximately 53°F in the winter to approximately 75°F in the summer. The average humidity is approximately 64% in the winter and about 74% in the summer (City-Data, 2016).

### **2.3 Regulatory Standards**

#### **2.3.1 Federal Standards and Definitions**

The Federal Air Quality Standards were developed per the requirements of The Federal Clean Air Act, which is a federal law that was passed in 1970 and further amended in 1990.

This law provides the basis for the national air pollution control effort. An important element of the act included the development of national ambient air quality standards (NAAQS) for major air pollutants.

The Clean Air Act established two types of air quality standards otherwise known as primary and secondary standards. **Primary Standards** set limits for the intention of protecting public health, which includes sensitive populations such as people with asthma, children and elderly. **Secondary Standards** set limits to protect public welfare to include the protection against decreased visibility, damage to animals, crops, vegetation and buildings.

The EPA Office of Air Quality Planning and Standards (OAQPS) has set National Ambient Air Quality Standards for principal pollutants, which are called "criteria" pollutants. These pollutants are defined below:

1. **Carbon Monoxide (CO):** *is a colorless, odorless, and tasteless gas and is produced from the partial combustion of carbon-containing compounds, notably in internal-combustion engines. Carbon monoxide usually forms when there is a reduced availability of oxygen present during the combustion process. Exposure to CO near the levels of the ambient air quality standards can lead to fatigue, headaches, confusion, and dizziness. CO interferes with the blood's ability to carry oxygen.*
2. **Lead (Pb):** *is a potent neurotoxin that accumulates in soft tissues and bone over time. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Because lead is only slowly excreted, exposures to small amounts of lead from a variety of sources can accumulate to harmful levels. Effects from inhalation of lead near the level of the ambient air quality standard include impaired blood formation and nerve conduction. Lead can adversely affect the nervous, reproductive, digestive, immune, and blood-forming systems. Symptoms can include fatigue, anxiety, short-term memory loss, depression, weakness in the extremities, and learning disabilities in children.*
3. **Nitrogen Dioxide (NO<sub>2</sub>):** *is a reactive, oxidizing gas capable of damaging cells lining the respiratory tract and is one of the nitrogen oxides emitted from high-temperature combustion, such as those occurring in trucks, cars, power plants, home heaters, and gas stoves. In the presence of other air contaminants, NO<sub>2</sub> is usually visible as a reddish-brown air layer over urban areas. NO<sub>2</sub> along with other traffic-related pollutants is associated with respiratory symptoms, respiratory illness and respiratory impairment. Studies in animals have reported biochemical, structural, and cellular changes in the lung when exposed to NO<sub>2</sub> above the level of the current state air quality standard. Clinical studies of human subjects suggest that NO<sub>2</sub> exposure to levels near the current standard may worsen the effect of allergens in allergic asthmatics, especially in children.*
4. **Particulate Matter (PM<sub>10</sub> or PM<sub>2.5</sub>):** *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 in shape, size and chemical composition, and can be made up of multiple materials such as metal, soot, soil, and dust. PM<sub>10</sub> particles are 10 microns (μm) or less and PM<sub>2.5</sub> particles are 2.5 (μm) or less. These particles can contribute significantly to regional*



*haze and reduction of visibility in California. Exposure to PM levels exceeding current air quality standards increases the risk of allergies such as asthma and respiratory illness.*

5. **Ozone (O<sub>3</sub>):** *is a highly oxidative unstable gas capable of damaging the linings of the respiratory tract. This pollutant forms in the atmosphere through reactions between chemicals directly emitted from vehicles, industrial plants, and many other sources. Exposure to ozone above ambient air quality standards can lead to human health effects such as lung inflammation, tissue damage and impaired lung functioning. Ozone can also damage materials such as rubber, fabrics and plastics.*
6. **Sulfur Dioxide (SO<sub>2</sub>):** *is a gaseous compound of sulfur and oxygen and is formed when sulfur-containing fuel is burned by mobile sources, such as locomotives, ships, and off-road diesel equipment. SO<sub>2</sub> is also emitted from several industrial processes, such as petroleum refining and metal processing. Effects from SO<sub>2</sub> exposures at levels near the one-hour standard include bronchoconstriction accompanied by symptoms, which may include wheezing, shortness of breath and chest tightness, especially during exercise or physical activity. Children, the elderly, and people with asthma, cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most susceptible to these symptoms. Continued exposure at elevated levels of SO<sub>2</sub> results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality.*

### 2.3.2 State Standards and Definitions

The State of California Air Resources Board (ARB) sets the laws and regulations for air quality on the state level. The California Ambient Air Quality Standards (CAAQS) are either the same as or more restrictive than the NAAQS and also set limits for four additional contaminants. Table 2.1 on the following page identifies both the NAAQS and CAAQS. The additional contaminants as regulated by the CAAQS are defined below:

1. **Visibility Reducing Particles:** *Particles in the air that obstruct the visibility.*
2. **Sulfates:** *are salts of Sulfuric Acid. Sulfates occur as microscopic particles (aerosols) resulting from fossil fuel and biomass combustion. They increase the acidity of the atmosphere and form acid rain.*
3. **Hydrogen Sulfide (H<sub>2</sub>S):** *is a colorless, toxic and flammable gas with a recognizable smell of rotten eggs or flatulence. H<sub>2</sub>S occurs naturally in crude petroleum, natural gas, volcanic gases, and hot springs. Usually, H<sub>2</sub>S is formed from bacterial breakdown of organic matter. Exposure to low concentrations of hydrogen sulfide may cause irritation to the eyes, nose, or throat. It may also cause difficulty in breathing for some people with asthma. Brief exposures to high concentrations of hydrogen sulfide (greater than 500 ppm) can cause a loss of consciousness and possibly death.*
4. **Vinyl Chloride:** *also known as chloroethene and is a toxic, carcinogenic, colorless gas with a sweet odor. It is an industrial chemical mainly used to produce its polymer, polyvinyl chloride (PVC).*

**Table 2.1: Ambient Air Quality Standards**

Ambient Air Quality Standards						
Pollutant	Average Time	California Standards <sup>1</sup>		Federal Standards <sup>2</sup>		
		Concentration <sup>3</sup>	Method <sup>4</sup>	Primary <sup>3,5</sup>	Secondary <sup>3,6</sup>	Method <sup>7</sup>
Ozone (O <sub>3</sub> ) <sup>8</sup>	1 Hour	0.09 ppm (180 µg/m <sup>3</sup> )	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m <sup>3</sup> )		0.070 ppm (137 µg/m <sup>3</sup> )		
Respirable Particulate Matter (PM <sub>10</sub> ) <sup>9</sup>	24 Hour	50 µg/m <sup>3</sup>	Gravimetric or Beta Attenuation	150 µg/m <sup>3</sup>	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m <sup>3</sup>		-		
Fine Particulate Matter (PM <sub>2.5</sub> ) <sup>9</sup>	24 Hour	No Separate State Standard		35 µg/m <sup>3</sup>	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m <sup>3</sup>	Gravimetric or Beta Attenuation	12.0 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>	
Carbon Monoxide (CO)	8 hour	9.0 ppm (10mg/m <sup>3</sup> )	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m <sup>3</sup> )	-	Non-Dispersive Infrared Photometry
	1 hour	20 ppm (23 mg/m <sup>3</sup> )		35 ppm (40 mg/m <sup>3</sup> )		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m <sup>3</sup> )		-		
Nitrogen Dioxide (NO <sub>2</sub> ) <sup>10</sup>	Annual Arithmetic Mean	0.030 ppm (57 µg/m <sup>3</sup> )	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m <sup>3</sup> ) <sup>8</sup>	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.18 ppm (339 µg/m <sup>3</sup> )		0.100 ppm <sup>8</sup> (188/ µg/m <sup>3</sup> )	-	
Sulfur Dioxide (SO <sub>2</sub> ) <sup>11</sup>	Annual Arithmetic Mean	-	Ultraviolet Fluorescence	0.030 ppm <sup>10</sup> (for Certain Areas)	-	Ultraviolet Fluorescence; Spectrophotometry (Pararoosaniline Method) <sup>9</sup>
	24 Hour	0.04 ppm (105 µg/m <sup>3</sup> )		0.14 ppm <sup>10</sup> (for Certain Areas) (See Footnote 9)	-	
	3 Hour	-		-	0.5 ppm (1300 µg/m <sup>3</sup> )	
	1 Hour	0.25 ppm (655 µg/m <sup>3</sup> )		75 ppb (196 µg/m <sup>3</sup> )	-	
	30 Day Average	1.5 µg/m <sup>3</sup>		-	-	
Lead <sup>12,13</sup>	Calendar Quarter	-	Atomic Absorption	1.5 µg/m <sup>3</sup>	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average	-		0.15 µg/m <sup>3</sup>		
	Visibility Reducing Particles	8 Hour		See footnote 13		
Sulfates	24 Hour	25 µg/m <sup>3</sup>	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m <sup>3</sup> )	Ultraviolet Fluorescence			
Vinyl Chloride <sup>12</sup>	24 Hour	0.01 ppm (26 µg/m <sup>3</sup> )	Gas Chromatography			
<div>1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equalled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.</div> <div>2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM<sub>10</sub>, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m<sup>3</sup> is equal to or less than one. For PM<sub>2.5</sub>, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.</div> <div>3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.</div> <div>4. Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.</div> <div>5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.</div> <div>6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.</div> <div>7. Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.</div> <div>8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.</div> <div>9. On December 14, 2012, the national annual PM<sub>2.5</sub> primary standard was lowered from 15 µg/m<sup>3</sup> to 12.0 µg/m<sup>3</sup> . The existing national 24- hour PM<sub>2.5</sub> standards (primary and secondary) were retained at 35 µg/m<sup>3</sup> , as was the annual secondary standard of 15 µg/m<sup>3</sup> . The existing 24-hour PM<sub>10</sub> standards (primary and secondary) of 150 µg/m<sup>3</sup> also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.</div> <div>10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.</div> <div>11. On June 2, 2010, a new 1-hour SO<sub>2</sub> standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO<sub>2</sub> national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.</div> <div>12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.</div> <div>13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m<sup>3</sup> as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.</div> <div>14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.</div> <div>Source: (California Air Resources Board, 10/1/15)</div>						

### 2.3.3 Regional Standards

The State of California has 35 air districts, which are each responsible for ensuring that the criteria pollutants are below the NAAQS and CAAQS. Air basins that exceed either the NAAQS or the CAAQS for any criteria pollutants are designated as “non-attainment areas” for that pollutant. Currently, there are 15 non-attainment areas for the federal ozone standard and two non-attainment areas for the PM<sub>2.5</sub> standard and many areas are in non-attainment for PM<sub>10</sub> as well. The state therefore created the California State Implementation Plan (SIP), which is designed to provide control measures needed for California Air basins to attain ambient air quality standards.

The San Diego Air Pollution Control District (SDAPCD) is the government agency which regulates sources of air pollution within San Diego County including the City of Oceanside. Therefore, the SDAPCD developed a Regional Air Quality Strategy (RAQS) to provide control measures designed to achieve attainment status. Currently, San Diego is in “non-attainment” status for federal and State O<sub>3</sub> standards and the State PM<sub>10</sub> and PM<sub>2.5</sub> standards; however, an attainment plan is only available for O<sub>3</sub>. The RAQS was adopted in 1992 and has been updated as recently as 2009 which was the latest update incorporating minor changes to the prior 2004 update.

The 2009 update mostly clarifies and enhances emission reductions by implementing new volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) reduction measures. The criteria pollutant standards are generally attained when each monitor within the region has had no exceedances during the previous three calendar years. A complete listing of the current attainment status with respect to both federal and state standards by pollutants for San Diego County is shown in Table 2.2 on the following page.

The RAQS is largely based on population predictions by the San Diego Association of Governments (SANDAG). Projects that produce less growth than predicted by SANDAG would generally conform to the RAQS and projects that create more growth than projected by SANDAG may create a significant impact especially if the project produces unmitigable emission generation in excess of the regional standards. Also the project would be considered to have a significant impact if the project produces cumulative impacts.

**Table 2.2: San Diego County Air Basin Attainment Status by Pollutant**

San Diego County Air Basin Attainment Status by Pollutant			
Pollutant	Average Time	California Standards	Federal Standards
Ozone (O <sub>3</sub> )	1 Hour	Non-attainment	No Federal Standard
	8 Hour		Marginal Non-attainment
Respirable Particulate Matter (PM <sub>10</sub> )	24 Hour	Non-attainment	Unclassified <sup>1</sup>
	Annual Arithmetic Mean	No State Standard	Unclassified <sup>2</sup>
Fine Particulate Matter PM <sub>2.5</sub>	24 Hour	No State Standard	Attainment
	Annual Arithmetic Mean	Non-attainment	Attainment
Carbon Monoxide (CO)	8 hour	Attainment	Maintenance Area <sup>3</sup>
	1 hour		
Nitrogen Dioxide (NO <sub>2</sub> )	Annual Arithmetic Mean	No State Standard	Attainment
	1 Hour	Attainment	No Federal Standard
Sulfur Dioxide (SO <sub>2</sub> )	Annual Arithmetic Mean	No State Standard	Attainment
	24 Hour	Attainment	Attainment
	1 Hour	Attainment	No Federal Standard
Lead	30 Day Average	Attainment	No Federal Standard
	Calendar Quarter	No State Standard	Attainment
Visibility Reducing Particles	8 Hour (10AM to 6PM, PST)	Unclassified	No Federal Standard
Sulfates	24 Hour	Attainment	No Federal Standard
Hydrogen Sulfide	1 Hour	Unclassified	No Federal Standard
<p>1. Data reflects status as of March 19, 2009.</p> <p>2. Unclassified; indicates data are not sufficient for determining attainment or nonattainment.</p> <p>3. Maintenance Area (defined by U.S. Department of Transportation) is any geographic region of the United States previously designated nonattainment pursuant to the CAA Amendments of 1990 and subsequently redesignated to attainment subject to the requirement to develop a maintenance plan under section 175A of the CAA, as amended.</p>			

## 2.4 California Environmental Quality Act (CEQA) Significance Thresholds

The California Environmental Quality Act Guidelines provide a checklist to identify the significance of air quality impacts. These guidelines are found in Appendix G of the CEQA guidelines and are as follows:

**AIR QUALITY** -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the Project:

- A:* Conflict with or obstruct implementation of the San Diego Regional Air Quality Strategy (RAQS) or applicable portions of the State Implementation Plan (SIP)?
- B:* Result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation?

- C:* Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable Federal or State ambient air quality standard (PM<sub>10</sub>, PM<sub>2.5</sub> or exceed quantitative thresholds for O<sub>3</sub> precursors, oxides of nitrogen [NO<sub>x</sub>] and Volatile Organic Compounds [VOCs])?
- D:* Expose sensitive receptors (including, but not limited to, schools, hospitals, resident care facilities, or day-care centers) to substantial pollutant concentrations?
- E:* *Create objectionable odors affecting a substantial number of people?*

## 2.5 SDAPCD Rule 20.2 – Air Quality Impact Assessment Screening Thresholds

The SDAPCD has established thresholds in Rule 20.2 for new or modified stationary sources. The County's Guidelines for Determining Significance and Report Format and Content Requirements include screening level thresholds for all County related Air Quality Impact Assessments (AQIA) and for determining CEQA air quality impacts. These screening criteria can be used to demonstrate whether a project's total emissions would result in a significant impact as defined by CEQA. Also, since SDAPCD does not have AQIA threshold for Volatile Organic Compounds (VOCs), it is acceptable to use the Coachella Valley VOC threshold from the South Coast Air Quality Management District. Should emissions be found to exceed these thresholds, additional modeling is required to demonstrate that the project's total air quality impacts are below the state and federal ambient air quality standards. These daily screening thresholds for construction and operations are shown in Table 2.3 below.

**Table 2.3: Screening Thresholds for Criteria Pollutants**

Pollutant	Total Emissions (Pounds per Day)
Construction Emissions	
Respirable Particulate Matter (PM <sub>10</sub> and PM <sub>2.5</sub> )	100 and 55
Nitrogen Oxide (NO <sub>x</sub> )	250
Sulfur Oxide (SO <sub>x</sub> )	250
Carbon Monoxide (CO)	550
Volatile Organic Compounds (VOCs)	75
Reactive Organic Gases (ROG) SCAQMD	75
Operational Emissions	
Respirable Particulate Matter (PM <sub>10</sub> and PM <sub>2.5</sub> )	100 and 55
Nitrogen Oxide (NO <sub>x</sub> )	250
Sulfur Oxide (SO <sub>x</sub> )	250
Carbon Monoxide (CO)	550
Lead and Lead Compounds	3.2
Volatile Organic Compounds (VOCs)	75
Reactive Organic Gases (ROG) SCAQMD	75

Non criteria pollutants such as Hazardous Air Pollutants (HAPs) or Toxic Air Contaminants (TACs) are also regulated by the SDAPCD. Rule 1200 (Toxic Air Contaminants - New Source Review) adopted on June 12, 1996, requires evaluation of potential health risks for any new, relocated, or modified emission unit which may increase emissions of one or more toxic air contaminants. The rule requires that projects that could increase cancer risk to between 1 and 10 in one million need to implement toxics best available control technology (T-BACT) or impose the most effective emission limitation, emission control device or control technique to reduce the cancer risk. At no time shall the project increase the cancer risk to over 10 in one million or a health hazard index (chronic and acute) greater than one. Projects creating cancer risks less than one in one million are not required to implement T-BACT technology.

The U.S. Environmental Protection Agency (U.S. EPA) uses the term Volatile Organic Compounds (VOC) and the California Air Resources Board's (CARB's) Emission Inventory Branch (EIB) uses the term Reactive Organic Gases (ROG) to essentially define the same thing. There are minor deviations between compounds that define each term however for purposes of this study we will assume they are essentially the same due to the fact SCAQMD interchanges these words and because CALEEMOD 2013.2.2 directly calculates ROG in place of VOC.

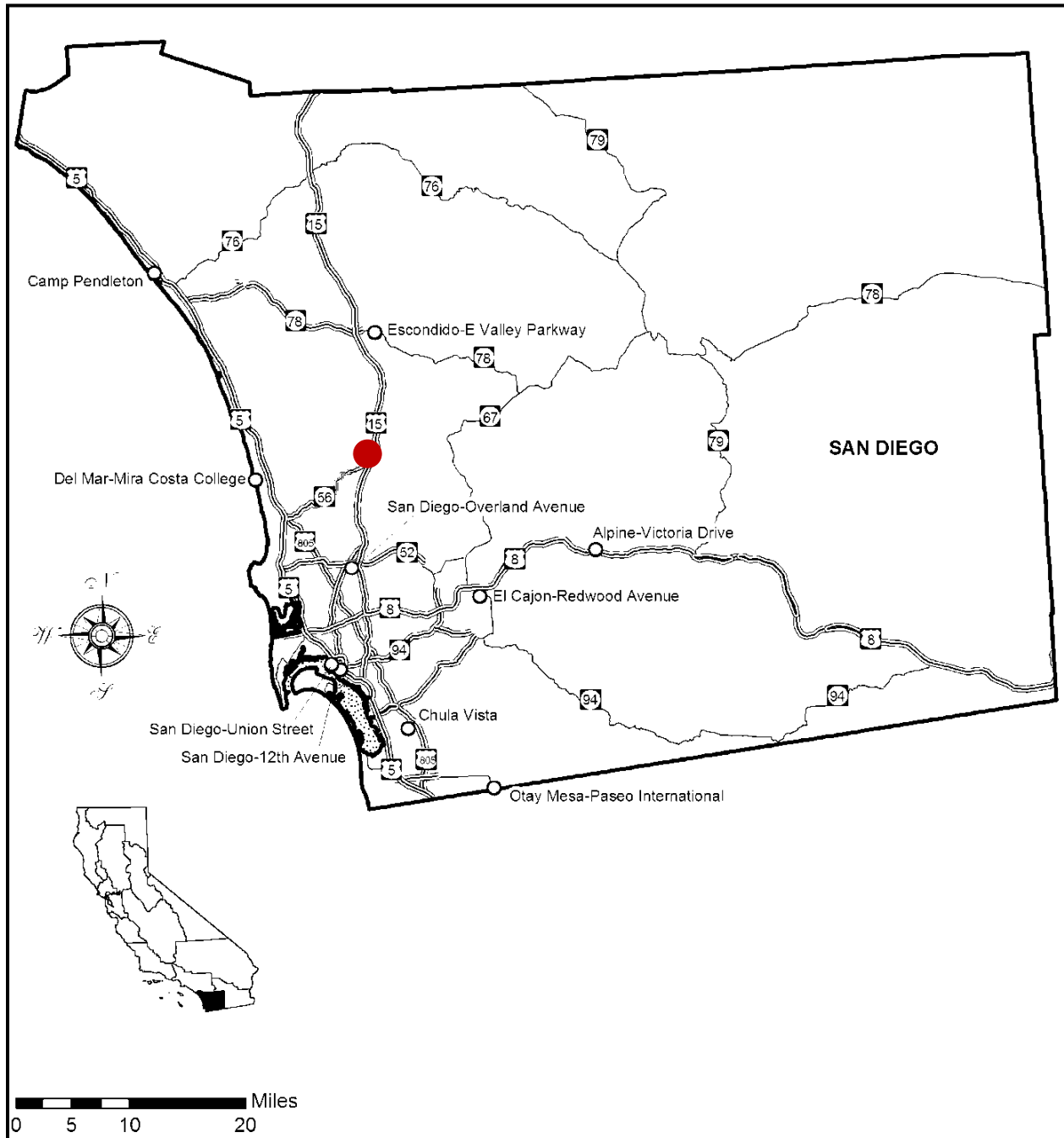
## 2.6 Local Air Quality

Criteria pollutants are measured continuously throughout the San Diego Air Basin. This data is used to track ambient air quality patterns throughout the County. As mentioned earlier, this data is also used to determine attainment status when compared to the NAAQS and CAAQS.

The SDAPCD is responsible for monitoring and reporting monitoring data. The District operates 10 monitoring sites, which collect data on criteria pollutants. Four additional sites collect meteorological data which is used by the District to assist with pollutant forecasting, data analysis and characterization of pollutant transport. Figure 2-A shows the relative locations of the monitoring sites.

SDAPCD published the five year air quality summary for all of the monitoring stations within the San Diego basin (SDAPCD, 2015). The proposed development project is closest to the Kearney Mesa and Escondido monitoring stations which are located approximately 9.25 and 10.7 miles from the Project site, respectively. Table 2.4 on page 13 identifies the criteria pollutants monitored at the aforementioned station.

**Figure 2-A: Ambient Air Quality Monitoring Stations within SDAB – CARB**



Source: (California Air Resources Board, 2014)

**Table 2.4: Three-Year Ambient Air Quality Summary near the Project Site**

<b>Pollutant</b>	<b>Closest Recorded Ambient Monitoring Site</b>	<b>Averaging Time</b>	<b>CAAQS</b>	<b>NAAQS</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
O <sub>3</sub> (ppm)	Kearny Mesa / Kearny Villa Rd.	1 Hour	0.09 ppm	-	0.10	0.08	0.10
	Kearny Mesa / Kearny Villa Rd.	8 Hour	0.070 ppm	0.075 ppm	0.07	0.08	0.08
PM <sub>10</sub> (µg/m <sup>3</sup> )	Kearny Mesa / Kearny Villa Rd.	24 Hour	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	35	39	39
	Kearny Mesa / Kearny Villa Rd.	Annual Arithmetic Mean	20 µg/m <sup>3</sup>	-	16.0	19.9	19.4
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	Kearny Mesa / Kearny Villa Rd.	24 Hour	-	35 µg/m <sup>3</sup>	20.0	22.0	20.2
NO <sub>2</sub> (ppm)	Kearny Mesa / Kearny Villa Rd.	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	.011	.010	.009
	Kearny Mesa / Kearny Villa Rd.	1 Hour	0.18 ppm	-	0.057	0.067	0.051
CO (ppm)	600 E Valley Parkway, Escondido CA	8 Hour	9 ppm	9 ppm	3.8	2.6	3.1
	600 E Valley Parkway, Escondido CA	1 Hour	20 ppm	35 ppm	4.4	3.2	3.8



### 3.0 METHODOLOGY

#### 3.1 Construction Emissions Calculations

Air Quality impacts related to construction and daily operations were calculated using the latest CalEEMod air quality model, which was developed by ENVIRON International Corporation for South Coast Air Quality Management District (SCAQMD) in 2013. The construction module in CalEEMod is used to calculate the emissions associated with the construction of the project and uses methodologies presented in the US EPA AP-42 document with emphasis on Chapter 11.9. The CalEEMod input/output model is shown in Attachment A to this report.

The SCREEN3 dispersion model will be used to determine the concentration for air pollutants at any location near the pollutant generator. Additionally, the model will predict the maximum exposure distance and concentrations. The SCREEN3 input/output file for the proposed project is shown in Attachment B at the end of this report. The worst case exhaust emissions generated from the Project from construction equipment was utilized and calculated within the CalEEMod model.

Once the dispersed concentrations of diesel particulates are estimated in the surrounding air, they are used to evaluate estimated exposure to people. Exposure is evaluated by calculating the dose in milligrams per kilogram body weight per day (mg/kg/d). For residential exposure, the breathing rates are determined for specific age groups, so inhalation dose (Dose-air) is calculated for each of these age groups, 3rd trimester, 0<2, 2<9, 2<16, 16<30 and 16-70 years. The following algorithms calculate this dose for exposure through the inhalation pathways. The worst case cancer risk dose calculation is defined in Equation 1 below (OEHHA, February 2015):

Equation 1

$$Dose_{air} = C_{air} * (BR/BW) * A * EF * (1 \times 10^{-6})$$

Dose <sub>air</sub>	=	Dose through inhalation (mg/kg/d) Concentration in air (µg/m <sup>3</sup> ) Annual average DPM concentration in µg/m <sup>3</sup> -SCREEN3
C <sub>air</sub>	=	predicts a 1-hr concentration and is corrected to an annual average by multiplying the 1-hr average by 0.08 (US EPA, 1992)
BR/BW	=	Daily breathing rate normalized to body weight (L/kg BW-day). See Table I.2 for the daily breathing rate for each age range.
A	=	Inhalation absorption factor (assumed to be 1)
EF	=	Exposure frequency (unitless, days/365 days)
1x10 <sup>-6</sup>	=	Milligrams to micrograms conversion (10 <sup>-3</sup> mg/ µg), cubic meters to liters conversion (10 <sup>-3</sup> m <sup>3</sup> /l)

Once the dose is determined then you must calculate the cancer risk. The average daily inhalation dose (mg/kg-day) multiplied by the cancer potency factor (mg/kg-day)<sup>-1</sup> will give

the inhalation cancer risk (unitless), which is an expression of the chemical's cancer risk during a 70-year lifespan of exposure. For example, an inhalation cancer risk of  $5 \times 10^{-6}$  is the same as stating that an individual has an estimated probability of developing cancer from their exposure of 5 chances per million people exposed.

Cancer risk is calculated by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor, the frequency of time spent at home and the exposure duration divided by averaging time, to yield the excess cancer risk. As described below, the excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk for any given location. Specific factors as modeled are shown within the project models attached to this report. The worst case cancer risk calculation is defined in Equation 2 below (OEHHA, February 2015):

*Equation 2*  $RISK_{inh-res} = DOSE_{air} \times CPF \times ASF \times ED/AT \times FAH$

RISK <sub>inh-res</sub>	=	Residential inhalation cancer risk
DOSE <sub>air</sub>	=	Daily inhalation dose (mg/kg-day)
CPF	=	Inhalation cancer potency factor (mg/kg-day <sup>-1</sup> )
ASF	=	Age sensitivity factor for a specified age group (unitless)
ED	=	Exposure duration (in years) for a specified age group
AT	=	Averaging time for lifetime cancer risk (years)
FAH	=	Fraction of time spent at home (unitless)

OEHHA recommends that an exposure duration (residency time) of 30 years be used to estimate individual cancer risk for the Maximally Exposed Individual Resident (MEIR). OEHHA also recommends that the 30-year exposure duration be used as the basis for public notification and risk reduction audits and plans.

Exposure durations of 9-years and 70-years are also recommended to be evaluated for the MEIR to show the range of cancer risk based on residency periods. If a facility is notifying the public regarding cancer risk, the 9-and 70-year cancer risk estimates are useful for people who have resided in their current residence for periods shorter and longer than 30 years.

Non-Cancer risks or risks defined as chronic or acute are also known with respect to DPM and are determined by the hazard index. To calculate hazard index, DPM concentration is divided by its Reference Exposure Levels (REL). Where the total equals or exceeds one, a health hazard is presumed to exist. RELs are published by the Office of Environmental Health Hazard Assessment (OEHHA, 2014). Diesel Exhaust has a REL of 5 µg/m<sup>3</sup> and targets the respiratory system.

## 3.2 Construction Assumptions

Construction of the proposed project is expected to start sometime in the middle of 2017. The project would start with the demolition of all onsite structures (approximately 332,000 SF). After all demolition is complete and all waste and debris is hauled offsite, the project would prepare the site and complete all the necessary grading and start building the units. The project is assumed to be fully constructed in 2020 but could take longer depending on market demands. For purposes of analysis however, a worst case year of 2020 was assumed. Table 3.1 below describes the construction equipment and durations assumed within this report.

**Table 3.1: Expected Construction Equipment**

Equipment Identification	Proposed Start	Proposed Completion	Quantity	Work Days
<b>Demolition</b>	5/1/2017	7/15/2017		55
Concrete/Industrial Saws			1	
Excavators			3	
Rubber Tired Dozers			2	
<b>Site Preparation</b>	7/16/2017	8/15/2017		22
Rubber Tired Dozers			3	
Tractors/Loaders/Backhoes			4	
<b>Grading</b>	8/16/2017	10/15/2017		43
Excavators			2	
Graders			1	
Rubber Tired Dozers			1	
Scrapers			2	
Tractors/Loaders/Backhoes			2	
<b>Paving</b>	10/16/2017	12/1/2017		35
Pavers			2	
Paving Equipment			2	
Rollers			2	
<b>Building Construction</b>	12/2/2017	10/1/2020		739
Cranes			1	
Forklifts			3	
Generator Sets			1	
Tractors/Loaders/Backhoes			3	
Welders			1	
<b>Architectural Coating</b>	5/1/2018	10/1/2020		633
<b>Total Days</b>				894
This equipment list is based upon equipment inventory within CALEEMOD 2013.2.2. The quantity and types are based upon assumptions from Projects of similar size and scope in the County of San Diego and the City of San Diego.				

### 3.3 Operational Emissions

Once construction is completed the proposed project would generate emissions from daily operations which would include sources such as Area, Energy, Mobile, Waste and Water uses, which are also calculated within CalEEMod. Area Sources include consumer products, landscaping and architectural coatings as part of regular maintenance. Energy sources would be from uses such as electricity and natural gas. Finally, mobile or transportation related emissions are calculated in CalEEMod through the use of EMFAC2011. The operational model is also included in CalEEMod **Attachments A** at the end of this report.

In the EMFAC model, the emission rates are multiplied with vehicle activity data provided by the regional transportation agencies to calculate the statewide or regional emission inventories. An emission inventory is based on the emission rate (e.g., grams per pollutant emitted over a mile) and vehicle activity (e.g., miles driven per day). Area sources originate from daily onsite uses, which require either burning fuel to generate energy (i.e. natural gas fireplaces, gas furnaces, gas water heaters and small engines) or the evaporation of organic gases such as from paints (architectural coatings).

The Project traffic engineer estimated that there will be 4,452 daily trips once the project is constructed however, would only add 1,796 trips which were broken down within the Project traffic study (LLG Engineers, 2016). The CalEEMod model estimates emission predictions for ROG, NO<sub>x</sub>, CO, SO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> for area source assumptions. It is assumed that all facilities will have access to both Natural Gas and electricity. Additionally, it was assumed that 10% of the structural surface area will be re-painted each year.

Consumer product emissions are generated by a wide range of product categories, including air fresheners, automotive products, household cleaners, and personal care products. Emissions associated with these products primarily depend on the increased population associated with residential development. Default Consumer Product emission factors were used in the CalEEMod model. Architectural coatings would be compliant with San Diego's Rule 67 and would not exceed 150 g/l VOC.

### 3.4 Odor Impacts

Potential onsite odor generators would only be expected during short term construction activities such as paving and possibly painting however, the odors would be considered short term and would not have a potential to create offensive odors and would therefore not be considered an impact under CEQA.

## 4.0 FINDINGS

### 4.1 Construction Findings

Construction of the proposed project is expected to start sometime in the middle of 2017. The project would start with the demolition of all onsite structures (approximately 332,000 SF). After all demolition is complete and all waste and debris is hauled offsite, the project would prepare the site and complete all the necessary grading and start building the units. The project is assumed to be fully constructed in 2020 but could take longer depending on market demands. For purposes of analysis however, a worst case year of 2020 was assumed. A tabulation of the construction emissions are shown in Table 4.1 below. Given these findings, no direct construction impacts are expected. Mitigation measures for criteria pollutants and fugitive dust from construction is not required. It should be noted that the grading contractor will be required to follow BMPs for grading and comply with all SDAPCD rules and regulations.

**Table 4.1: Construction Emissions**

Year	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub> (Dust)	PM <sub>10</sub> (Exhaust)	PM <sub>10</sub> (Total)	PM <sub>2.5</sub> (Dust)	PM <sub>2.5</sub> (Exhaust)	PM <sub>2.5</sub> (Total)
2017	6.16	69.67	47.61	0.08	19.66	3.32	22.42	10.13	3.05	12.66
2018	4.28	29.11	37.09	0.08	3.44	1.59	5.02	0.92	1.49	2.41
2019	3.85	26.31	35.33	0.08	3.44	1.37	4.81	0.92	1.29	2.21
2020	219.96	23.73	34.01	0.08	3.44	1.19	4.63	0.92	1.12	2.04
<b>Threshold (lb/day)</b>	<b>75</b>	<b>250</b>	<b>550</b>	<b>250</b>	-	-	<b>100</b>	-	-	<b>55</b>
Exceeds Threshold	No	No	No	No	-	-	No	-	-	No

### 4.2 Health Risk

Based upon the air quality modeling, worst-case onsite PM<sub>10</sub> from onsite construction exhaust would cumulatively produce 0.0034 tons over the construction duration (894-working days) or an average of 0.00012 grams/second. The average emission rate over the grading area is  $7.41 \times 10^{-10}$  g/m<sup>2</sup>/s, which was calculated as follows:

$$\frac{0.00012 \frac{\text{grams}}{\text{second}}}{39.9 \text{ acres} * 4,046 \frac{\text{meters}^2}{\text{acre}}} = 7.41 * 10^{-10} \frac{\text{grams}}{\text{meters}^2 \text{ second}}$$

Utilizing the SCREEN3 dispersion model, we find that the peak maximum 1-hr concentration is  $0.0236 \mu\text{g}/\text{m}^3$  during the worst-case construction period. Converting the peak 1-hr concentration to an annual concentration reduces the concentration to  $0.0019 \mu\text{g}/\text{m}^3$ . Therefore, utilizing the risk equation identified above in Section 3.1, the inhalation cancer risk is 1.21 at the point of maximum exposure 285 meters away which is less than 10 in one million. Given that no impacts are expected. The calculations are provided in **Attachment B** to this report. Furthermore, the project would be required to comply with all applicable diesel equipment regulations which would preclude health impacts.

There are known acute and chronic health risks associated with diesel exhaust which are considered non-cancer risks. These risks are calculated based on methods identified in Section 3.1 of this report. From this we find that the annual concentration of  $0.0019 \mu\text{g}/\text{m}^3$  divided by the REL of  $5 \mu\text{g}/\text{m}^3$  yields a Health Hazard Index of 0.0004, which is less than one. Therefore, no non-cancer risks are expected and all health risks are considered less than significant.

#### 4.3 Operational Findings

The Project traffic engineer estimated that there will be 4,452 daily trips once the project is constructed however, would only add 1,796 new trips to the existing roadways. This is because the existing site contains 332 residential units which will be removed as a part of this project. Since the existing uses are currently operational, only the additive emissions from the project will be considered. The CALEEMOD 2013.2.2 Model was run for both the winter and summer scenarios and assumed average winter and summer temperatures and assumed a 5.8 mile trip distance.

The expected daily pollutant generation can be calculated utilizing the product of the average daily miles traveled and the expected emissions inventory calculated by CALEEMOD 2013.2.2 utilizing emissions from EMFAC2011. Tables 4.2 and 4.3 on the following pages identify air quality emissions from the existing project and the proposed project as well as the proposed project increase once the project is fully developed.

**Table 4.2: Daily Pollutant Generation (Proposed Project Increase - Summer)**

	<b>ROG</b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>SO<sub>x</sub></b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
<b>Existing 322 Unit - Summer Scenario</b>						
Area Source Emission Estimates (Lb/Day)	10.83	0.32	27.77	0.00	0.15	0.15
Energy Emission Estimates (Lb/Day)	0.11	0.96	0.41	0.01	0.08	0.08
Mobile Emission Estimates (Lb/Day)	8.91	16.49	78.91	0.16	10.75	3.01
<b>Total (Lb/Day)</b>	<b>19.85</b>	<b>17.77</b>	<b>107.09</b>	<b>0.17</b>	<b>10.97</b>	<b>3.23</b>
<b>Proposed Project Only w/ Title 24 2013 Energy Standards - Summer Scenario</b>						
Area Source Emission Estimates Mitigated (Lb/Day)	930.84	12.73	1,155.03	0.44	159.31	159.31
Energy Emission Estimates Mitigated (Lb/Day)	0.14	1.19	0.51	0.01	0.10	0.10
Mobile Emission Estimates Mitigated (Lb/Day)	2.89	3.44	21.17	0.11	22.37	5.70
<b>Total (Lb/Day)</b>	<b>933.87</b>	<b>17.36</b>	<b>1,176.71</b>	<b>0.56</b>	<b>181.78</b>	<b>165.11</b>
City Screening Level Thresholds	75	250	550	250	100	55
Significant?	Yes	No	Yes	No	No	No
<b>Mitigated Proposed Project Only w/ Title 24 2013 Energy Standards - Summer Scenario</b>						
Area Source Emission Estimates Mitigated (Lb/Day)	21.90	0.58	49.75	0.00	0.27	0.27
Energy Emission Estimates Mitigated (Lb/Day)	0.25	2.15	0.91	0.01	0.17	0.17
Mobile Emission Estimates Mitigated (Lb/Day)	11.80	19.93	100.07	0.27	33.12	8.71
<b>Total (Lb/Day)</b>	<b>33.95</b>	<b>22.65</b>	<b>150.74</b>	<b>0.28</b>	<b>33.56</b>	<b>9.16</b>
Significant?	No	No	No	No	No	No
<b>Mitigated Proposed Project Air Quality Emission Increase - Summer Scenario</b>						
Area Source Emission Estimates (Lb/Day)	11.08	0.25	21.98	0.00	0.12	0.12
Energy Emission Estimates (Lb/Day)	0.14	1.19	0.51	0.01	0.10	0.10
Mobile Emission Estimates (Lb/Day)	2.89	3.44	21.17	0.11	22.37	5.70
<b>Total (Lb/Day)</b>	<b>14.10</b>	<b>4.88</b>	<b>43.65</b>	<b>0.12</b>	<b>22.59</b>	<b>5.93</b>
City Screening Level Thresholds	75	250	550	250	100	55
Significant?	No	No	No	No	No	No
Daily pollutant generation assumes trip distances within CalEEMod						

**Table 4.2: Daily Pollutant Generation (Proposed Project Increase - Winter)**

	<b>ROG</b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>SO<sub>x</sub></b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
<b>Existing 322 Unit - Winter Scenario</b>						
Area Source Emission Estimates (Lb/Day)	10.83	0.32	27.77	0.00	0.15	0.15
Energy Emission Estimates (Lb/Day)	0.11	0.96	0.41	0.01	0.08	0.08
Mobile Emission Estimates (Lb/Day)	9.61	17.50	85.83	0.15	10.75	3.01
<b>Total (Lb/Day)</b>	<b>20.55</b>	<b>18.78</b>	<b>114.01</b>	<b>0.16</b>	<b>10.97</b>	<b>3.23</b>
<b>Proposed Project Only w/ Title 24 2013 Energy Standards - Winter Scenario</b>						
Area Source Emission Estimates Mitigated (Lb/Day)	941.67	13.05	1,182.80	0.45	159.46	159.46
Energy Emission Estimates Mitigated (Lb/Day)	0.25	2.15	0.91	0.01	0.17	0.17
Mobile Emission Estimates Mitigated (Lb/Day)	12.62	21.15	109.45	0.25	33.12	8.71
<b>Total (Lb/Day)</b>	<b>954.55</b>	<b>36.35</b>	<b>1,293.16</b>	<b>0.71</b>	<b>192.75</b>	<b>168.34</b>
City Screening Level Thresholds	75	250	550	250	100	55
Significant?	Yes	No	Yes	No	No	No
<b>Mitigated Proposed Project Only w/ Title 24 2013 Energy Standards - Winter Scenario</b>						
Area Source Emission Estimates Mitigated (Lb/Day)	21.90	0.58	49.75	0.00	0.27	0.27
Energy Emission Estimates Mitigated (Lb/Day)	0.25	2.15	0.91	0.01	0.17	0.17
Mobile Emission Estimates Mitigated (Lb/Day)	12.62	21.15	109.45	0.25	33.12	8.71
<b>Total (Lb/Day)</b>	<b>34.78</b>	<b>23.87</b>	<b>160.11</b>	<b>0.27</b>	<b>33.57</b>	<b>9.16</b>
Significant?	No	No	No	No	No	No
<b>Mitigated Proposed Project Air Quality Emission Increase - Winter Scenario</b>						
Area Source Emission Estimates (Lb/Day)	11.08	0.25	21.98	0.00	0.12	0.12
Energy Emission Estimates (Lb/Day)	0.14	1.19	0.51	0.01	0.10	0.10
Mobile Emission Estimates (Lb/Day)	3.01	3.65	23.61	0.10	22.37	5.71
<b>Total (Lb/Day)</b>	<b>14.23</b>	<b>5.09</b>	<b>46.10</b>	<b>0.11</b>	<b>22.59</b>	<b>5.93</b>
City Screening Level Thresholds	75	250	550	250	100	55
Significant?	No	No	No	No	No	No
Daily pollutant generation assumes trip distances within CalEEMod						

Based upon these calculations, the proposed project would generate operational air quality impacts from estimated wood burning fireplaces. It was found that conditioning the project to not install wood burning fireplaces would fully mitigate any significant air quality impacts.



#### 4.4 Odor Impact Findings

Odor impacts from construction operations would be considered short term and would not be considered an impact.

#### 4.5 Cumulative Impact Findings

The project traffic study identified two (2) cumulative projects that are currently planned for development in the project area for the build-out scenario and are identified in Table 4.3 below:

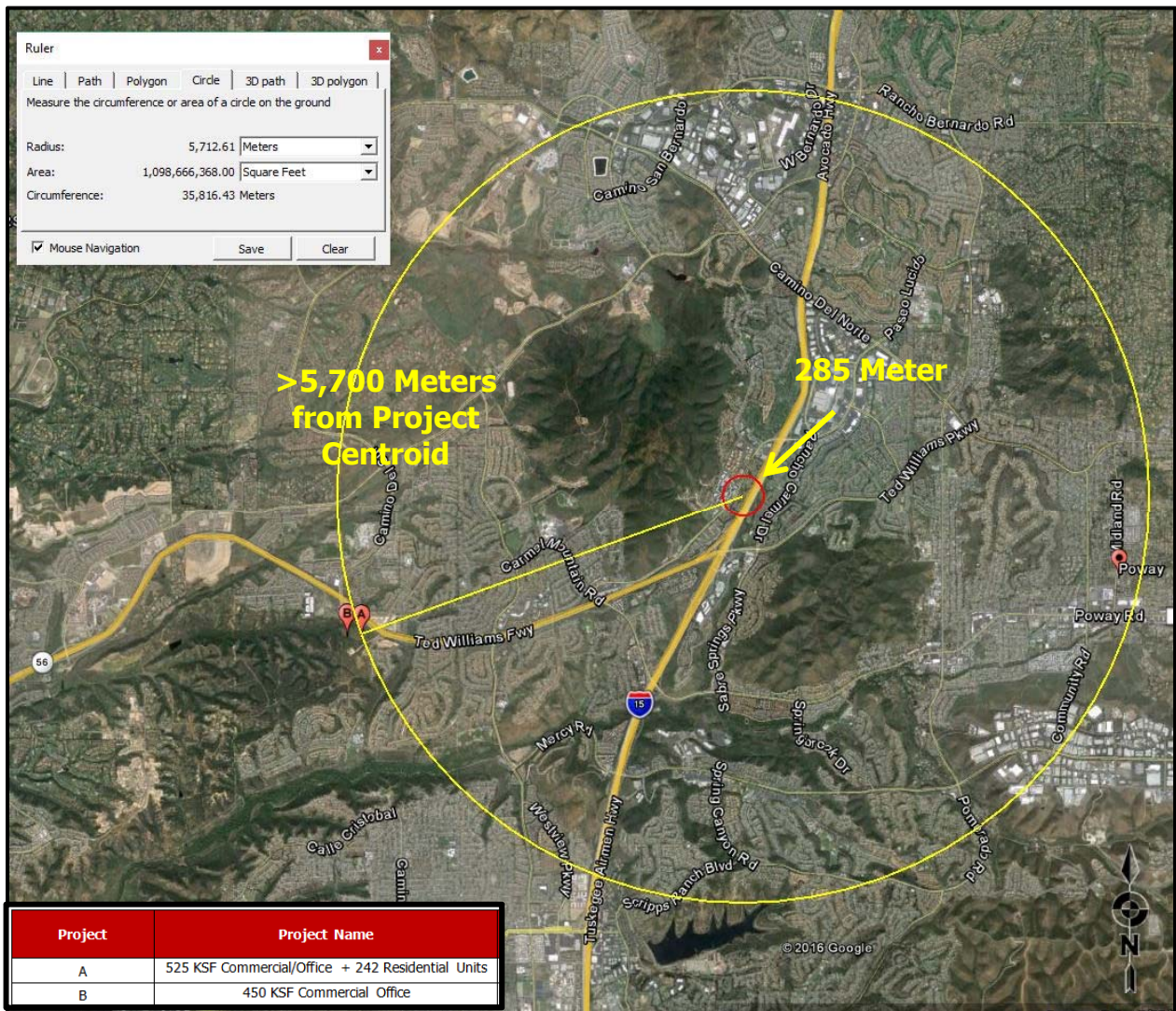
**Table 4.3: Near Term Cumulative Projects**

Project	Project Name	Average Daily Trips
A	525 KSF Commercial/Office + 242 Residential Units	16,468
B	450 KSF Commercial Office	5,260

The SCEEN3 dispersion model estimates that worst-case emissions or point of maximum dispersed exposure would be at roughly 285 Meters from the project centroid. Also, based on air quality modeling, the project would not generate direct construction impacts. Given this, it's not expected that the high dissipative air quality emissions would mix with cumulative project emissions during periods of simultaneous construction. Therefore, cumulative construction air quality impacts are not expected.

Figure 4-A on the following page shows the proposed project site with a red 285-meter point of maximum exposure contour overlaid on the map. Also, the cumulative projects are identified on the map at over 5,700 meters from the project site. Given the fact that the projects point of maximum exposure is only 285 meters away from the project centroid and that the nearest cumulative project is over 5,700 meters away, no cumulative construction impacts would be expected.

**Figure 4-A: Point of Maximum Exposure Dispersion Contour**



#### 4.6 Regional Air Quality Strategy Compliance

The proposed project is a proposed residential development would construct 564 residences within a footprint that currently serves 332 residents or a growth of 232 residents within the same footprint as well as provide all necessary supporting infrastructure on approximately 39.9 acres of a 41.45 acre property. The project site is currently zone RM-1-1 and would not require a rezone in order to increase to the proposed density. Given this, the Project would be consistent with the City's General Plan and would have been considered within the Regional Air Quality Strategy (RAQS). Therefore, the proposed project would not conflict with or obstruct the RAQS or State Implementation Plan (SIP) and would be consistent with growth in the region.

#### 4.7 Summary of Findings

Based upon this analysis, no direct or cumulative criteria or fugitive dust impacts are expected from construction. Therefore, mitigation measures for criteria pollutants and fugitive dust from construction are not required. It should be noted that the grading contractor will be required to follow BMPs for grading and comply with all SDAPCD rules.

A diesel particulate health risk analysis was conducted, and based on diesel exhaust emission quantities, the proposed project would not create significant diesel particulate health risk impacts. The project would however be required to comply with all applicable regulations that would preclude any impact.

No combined cumulative construction impacts are expected because nearby construction projects would not be close enough to cause air quality mixing sufficient to exceed air quality thresholds. Therefore, no cumulative construction impacts are expected.

Based upon the operational analysis, the proposed project would exceed both ROG and CO thresholds if wood burning fireplaces are installed. It was found that all ROG and CO impacts could be fully mitigated by conditioning the project to not install wood burning fireplaces.

The project site is currently zone RM-1-1 and would not require a rezone in order to increase to the proposed density. Given this, the Project would be consistent with the City's General Plan and would have been considered within the Regional Air Quality Strategy (RAQS). Therefore, the proposed project would not conflict with or obstruct the RAQS or State Implementation Plan (SIP) and would be consistent with growth in the region.

Finally, odor impacts from construction operations would be expected though would be considered short-term events and would not be considered a significant impact.

## **5.0 REFERENCES**

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**ATTACHMENT A**

CALEEMOD 2013.2.2 – Summer, Winter, Annual

**Penasquitos Village. (Existing)****San Diego County, Summer****1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	332.00	Dwelling Unit	41.00	332,000.00	950

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13			<b>Operational Year</b>	2016
<b>Utility Company</b>	Sierra Pacific Resources				
<b>CO2 Intensity (lb/MWhr)</b>	1328.16	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.00617

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Project Site is 41 acres

Construction Phase - No Construction

Off-road Equipment - No Construction

Trips and VMT - no trips

Demolition -

Vehicle Trips - Per Traffic Study and 5.8 miles per trip

Woodstoves - No Fireplaces

Area Coating - 150 g.l.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	50.00	1.00
tblFireplaces	FireplaceDayYear	82.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	NumberGas	182.60	0.00
tblFireplaces	NumberNoFireplace	33.20	332.00
tblFireplaces	NumberWood	116.20	0.00
tblLandUse	LotAcreage	20.75	41.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblVehicleTrips	HO_TL	7.50	5.80
tblVehicleTrips	HS_TL	7.30	5.80
tblVehicleTrips	HW_TL	10.80	5.80
tblVehicleTrips	ST_TR	7.16	8.00
tblVehicleTrips	SU_TR	6.07	8.00
tblVehicleTrips	WD_TR	6.59	8.00
tblWoodstoves	NumberCatalytic	16.60	0.00
tblWoodstoves	NumberNoncatalytic	16.60	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00

## 2.0 Emissions Summary

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## 2.1 Overall Construction (Maximum Daily Emission)

### Unmitigated Construction

[illegible]

### Mitigated Construction

[illegible][illegible]



**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	10.8252	0.3249	27.7721	1.4500e-003		0.1498	0.1498		0.1498	0.1498	0.0000	49.3194	49.3194	0.0503	0.0000	50.3748
Energy	0.1119	0.9562	0.4069	6.1000e-003		0.0773	0.0773		0.0773	0.0773		1,220.6717	1,220.6717	0.0234	0.0224	1,228.1005
Mobile	8.9129	16.4898	78.9062	0.1584	10.5350	0.2106	10.7456	2.8123	0.1936	3.0058		13,801.4912	13,801.4912	0.5980		13,814.0489
<b>Total</b>	<b>19.8499</b>	<b>17.7709</b>	<b>107.0852</b>	<b>0.1660</b>	<b>10.5350</b>	<b>0.4377</b>	<b>10.9727</b>	<b>2.8123</b>	<b>0.4207</b>	<b>3.2329</b>	<b>0.0000</b>	<b>15,071.4822</b>	<b>15,071.4822</b>	<b>0.6716</b>	<b>0.0224</b>	<b>15,092.5242</b>

**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	10.8252	0.3249	27.7721	1.4500e-003		0.1498	0.1498		0.1498	0.1498	0.0000	49.3194	49.3194	0.0503	0.0000	50.3748
Energy	0.1119	0.9562	0.4069	6.1000e-003		0.0773	0.0773		0.0773	0.0773		1,220.6717	1,220.6717	0.0234	0.0224	1,228.1005
Mobile	8.9129	16.4898	78.9062	0.1584	10.5350	0.2106	10.7456	2.8123	0.1936	3.0058		13,801.4912	13,801.4912	0.5980		13,814.0489
<b>Total</b>	<b>19.8499</b>	<b>17.7709</b>	<b>107.0852</b>	<b>0.1660</b>	<b>10.5350</b>	<b>0.4377</b>	<b>10.9727</b>	<b>2.8123</b>	<b>0.4207</b>	<b>3.2329</b>	<b>0.0000</b>	<b>15,071.4822</b>	<b>15,071.4822</b>	<b>0.6716</b>	<b>0.0224</b>	<b>15,092.5242</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	1/2/2017	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73

#### 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	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

**3.2 Demolition - 2017****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

**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	0.0000	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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

**3.2 Demolition - 2017****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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

**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	0.0000	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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

**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	8.9129	16.4898	78.9062	0.1584	10.5350	0.2106	10.7456	2.8123	0.1936	3.0058		13,801.49 12	13,801.49 12	0.5980		13,814.04 89
Unmitigated	8.9129	16.4898	78.9062	0.1584	10.5350	0.2106	10.7456	2.8123	0.1936	3.0058		13,801.49 12	13,801.49 12	0.5980		13,814.04 89

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,656.00	2,656.00	2656.00	4,979,421	4,979,421
Total	2,656.00	2,656.00	2,656.00	4,979,421	4,979,421

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	5.80	5.80	5.80	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.510118	0.073510	0.192396	0.133166	0.036737	0.005265	0.012605	0.021642	0.001847	0.002083	0.006548	0.000610	0.003471

## 5.0 Energy Detail

### 4.4 Fleet Mix

Historical Energy Use: Y

## 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	0.1119	0.9562	0.4069	6.1000e-003		0.0773	0.0773		0.0773	0.0773		1,220.6717	1,220.6717	0.0234	0.0224	1,228.1005
NaturalGas Unmitigated	0.1119	0.9562	0.4069	6.1000e-003		0.0773	0.0773		0.0773	0.0773		1,220.6717	1,220.6717	0.0234	0.0224	1,228.1005

## 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 Low Rise	10375.7	0.1119	0.9562	0.4069	6.1000e-003		0.0773	0.0773		0.0773	0.0773		1,220.6717	1,220.6717	0.0234	0.0224	1,228.1005
<b>Total</b>		<b>0.1119</b>	<b>0.9562</b>	<b>0.4069</b>	<b>6.1000e-003</b>		<b>0.0773</b>	<b>0.0773</b>		<b>0.0773</b>	<b>0.0773</b>		<b>1,220.6717</b>	<b>1,220.6717</b>	<b>0.0234</b>	<b>0.0224</b>	<b>1,228.1005</b>

## 5.2 Energy by Land Use - NaturalGas

### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	10.3757	0.1119	0.9562	0.4069	6.1000e-003		0.0773	0.0773		0.0773	0.0773		1,220.6717	1,220.6717	0.0234	0.0224	1,228.1005
<b>Total</b>		<b>0.1119</b>	<b>0.9562</b>	<b>0.4069</b>	<b>6.1000e-003</b>		<b>0.0773</b>	<b>0.0773</b>		<b>0.0773</b>	<b>0.0773</b>		<b>1,220.6717</b>	<b>1,220.6717</b>	<b>0.0234</b>	<b>0.0224</b>	<b>1,228.1005</b>

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10.8252	0.3249	27.7721	1.4500e-003		0.1498	0.1498		0.1498	0.1498	0.0000	49.3194	49.3194	0.0503	0.0000	50.3748
Unmitigated	10.8252	0.3249	27.7721	1.4500e-003		0.1498	0.1498		0.1498	0.1498	0.0000	49.3194	49.3194	0.0503	0.0000	50.3748

**6.2 Area by SubCategory****Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.8458					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.1048					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	0.8746	0.3249	27.7721	1.4500e-003		0.1498	0.1498		0.1498	0.1498		49.3194	49.3194	0.0503		50.3748
<b>Total</b>	<b>10.8252</b>	<b>0.3249</b>	<b>27.7721</b>	<b>1.4500e-003</b>		<b>0.1498</b>	<b>0.1498</b>		<b>0.1498</b>	<b>0.1498</b>	<b>0.0000</b>	<b>49.3194</b>	<b>49.3194</b>	<b>0.0503</b>	<b>0.0000</b>	<b>50.3748</b>



## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.8458					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.1048					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	0.8746	0.3249	27.7721	1.4500e-003		0.1498	0.1498		0.1498	0.1498		49.3194	49.3194	0.0503		50.3748
<b>Total</b>	<b>10.8252</b>	<b>0.3249</b>	<b>27.7721</b>	<b>1.4500e-003</b>		<b>0.1498</b>	<b>0.1498</b>		<b>0.1498</b>	<b>0.1498</b>	<b>0.0000</b>	<b>49.3194</b>	<b>49.3194</b>	<b>0.0503</b>	<b>0.0000</b>	<b>50.3748</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

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

**Penasquitos Village. (Existing)**  
**San Diego County, Winter**

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	332.00	Dwelling Unit	41.00	332,000.00	950

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13			<b>Operational Year</b>	2016
<b>Utility Company</b>	Sierra Pacific Resources				
<b>CO2 Intensity (lb/MWhr)</b>	1328.16	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.00617

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project Site is 41 acres

Construction Phase - No Construction

Off-road Equipment - No Construction

Trips and VMT - no trips

Demolition -

Vehicle Trips - Per Traffic Study and 5.8 miles per trip

Woodstoves - No Fireplaces

Area Coating - 150 g.l.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	50.00	1.00
tblFireplaces	FireplaceDayYear	82.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	NumberGas	182.60	0.00
tblFireplaces	NumberNoFireplace	33.20	332.00
tblFireplaces	NumberWood	116.20	0.00
tblLandUse	LotAcreage	20.75	41.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblVehicleTrips	HO_TL	7.50	5.80
tblVehicleTrips	HS_TL	7.30	5.80
tblVehicleTrips	HW_TL	10.80	5.80
tblVehicleTrips	ST_TR	7.16	8.00
tblVehicleTrips	SU_TR	6.07	8.00
tblVehicleTrips	WD_TR	6.59	8.00
tblWoodstoves	NumberCatalytic	16.60	0.00
tblWoodstoves	NumberNoncatalytic	16.60	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00

## 2.0 Emissions Summary

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## 2.1 Overall Construction (Maximum Daily Emission)

### Unmitigated Construction

[illegible]

### Mitigated Construction

[illegible][illegible]

## 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	10.8252	0.3249	27.7721	1.4500e-003		0.1498	0.1498		0.1498	0.1498	0.0000	49.3194	49.3194	0.0503	0.0000	50.3748
Energy	0.1119	0.9562	0.4069	6.1000e-003		0.0773	0.0773		0.0773	0.0773		1,220.6717	1,220.6717	0.0234	0.0224	1,228.1005
Mobile	9.6120	17.5004	85.8332	0.1507	10.5350	0.2119	10.7470	2.8123	0.1948	3.0071		13,135.2747	13,135.2747	0.5985		13,147.8431
<b>Total</b>	<b>20.5490</b>	<b>18.7815</b>	<b>114.0122</b>	<b>0.1582</b>	<b>10.5350</b>	<b>0.4391</b>	<b>10.9741</b>	<b>2.8123</b>	<b>0.4219</b>	<b>3.2342</b>	<b>0.0000</b>	<b>14,405.2657</b>	<b>14,405.2657</b>	<b>0.6722</b>	<b>0.0224</b>	<b>14,426.3184</b>

### 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	10.8252	0.3249	27.7721	1.4500e-003		0.1498	0.1498		0.1498	0.1498	0.0000	49.3194	49.3194	0.0503	0.0000	50.3748
Energy	0.1119	0.9562	0.4069	6.1000e-003		0.0773	0.0773		0.0773	0.0773		1,220.6717	1,220.6717	0.0234	0.0224	1,228.1005
Mobile	9.6120	17.5004	85.8332	0.1507	10.5350	0.2119	10.7470	2.8123	0.1948	3.0071		13,135.2747	13,135.2747	0.5985		13,147.8431
<b>Total</b>	<b>20.5490</b>	<b>18.7815</b>	<b>114.0122</b>	<b>0.1582</b>	<b>10.5350</b>	<b>0.4391</b>	<b>10.9741</b>	<b>2.8123</b>	<b>0.4219</b>	<b>3.2342</b>	<b>0.0000</b>	<b>14,405.2657</b>	<b>14,405.2657</b>	<b>0.6722</b>	<b>0.0224</b>	<b>14,426.3184</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	1/2/2017	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73

#### 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	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

**3.2 Demolition - 2017****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

**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	0.0000	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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

**3.2 Demolition - 2017****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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

**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	0.0000	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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

**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	9.6120	17.5004	85.8332	0.1507	10.5350	0.2119	10.7470	2.8123	0.1948	3.0071		13,135.27 47	13,135.27 47	0.5985		13,147.84 31
Unmitigated	9.6120	17.5004	85.8332	0.1507	10.5350	0.2119	10.7470	2.8123	0.1948	3.0071		13,135.27 47	13,135.27 47	0.5985		13,147.84 31

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,656.00	2,656.00	2656.00	4,979,421	4,979,421
Total	2,656.00	2,656.00	2,656.00	4,979,421	4,979,421

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	5.80	5.80	5.80	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.510118	0.073510	0.192396	0.133166	0.036737	0.005265	0.012605	0.021642	0.001847	0.002083	0.006548	0.000610	0.003471

## 5.0 Energy Detail

### 4.4 Fleet Mix

Historical Energy Use: Y

## 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	0.1119	0.9562	0.4069	6.1000e-003		0.0773	0.0773		0.0773	0.0773		1,220.6717	1,220.6717	0.0234	0.0224	1,228.1005
NaturalGas Unmitigated	0.1119	0.9562	0.4069	6.1000e-003		0.0773	0.0773		0.0773	0.0773		1,220.6717	1,220.6717	0.0234	0.0224	1,228.1005

## 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 Low Rise	10375.7	0.1119	0.9562	0.4069	6.1000e-003		0.0773	0.0773		0.0773	0.0773		1,220.6717	1,220.6717	0.0234	0.0224	1,228.1005
<b>Total</b>		<b>0.1119</b>	<b>0.9562</b>	<b>0.4069</b>	<b>6.1000e-003</b>		<b>0.0773</b>	<b>0.0773</b>		<b>0.0773</b>	<b>0.0773</b>		<b>1,220.6717</b>	<b>1,220.6717</b>	<b>0.0234</b>	<b>0.0224</b>	<b>1,228.1005</b>

## 5.2 Energy by Land Use - NaturalGas

### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	10.3757	0.1119	0.9562	0.4069	6.1000e-003		0.0773	0.0773		0.0773	0.0773		1,220.6717	1,220.6717	0.0234	0.0224	1,228.1005
<b>Total</b>		<b>0.1119</b>	<b>0.9562</b>	<b>0.4069</b>	<b>6.1000e-003</b>		<b>0.0773</b>	<b>0.0773</b>		<b>0.0773</b>	<b>0.0773</b>		<b>1,220.6717</b>	<b>1,220.6717</b>	<b>0.0234</b>	<b>0.0224</b>	<b>1,228.1005</b>

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10.8252	0.3249	27.7721	1.4500e-003		0.1498	0.1498		0.1498	0.1498	0.0000	49.3194	49.3194	0.0503	0.0000	50.3748
Unmitigated	10.8252	0.3249	27.7721	1.4500e-003		0.1498	0.1498		0.1498	0.1498	0.0000	49.3194	49.3194	0.0503	0.0000	50.3748

**6.2 Area by SubCategory****Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.8458					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.1048					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	0.8746	0.3249	27.7721	1.4500e-003		0.1498	0.1498		0.1498	0.1498		49.3194	49.3194	0.0503		50.3748
<b>Total</b>	<b>10.8252</b>	<b>0.3249</b>	<b>27.7721</b>	<b>1.4500e-003</b>		<b>0.1498</b>	<b>0.1498</b>		<b>0.1498</b>	<b>0.1498</b>	<b>0.0000</b>	<b>49.3194</b>	<b>49.3194</b>	<b>0.0503</b>	<b>0.0000</b>	<b>50.3748</b>

## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.8458					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.1048					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	0.8746	0.3249	27.7721	1.4500e-003		0.1498	0.1498		0.1498	0.1498		49.3194	49.3194	0.0503		50.3748
<b>Total</b>	<b>10.8252</b>	<b>0.3249</b>	<b>27.7721</b>	<b>1.4500e-003</b>		<b>0.1498</b>	<b>0.1498</b>		<b>0.1498</b>	<b>0.1498</b>	<b>0.0000</b>	<b>49.3194</b>	<b>49.3194</b>	<b>0.0503</b>	<b>0.0000</b>	<b>50.3748</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

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

**Pacific Village - Proposed Project with T24 Reductions**  
**San Diego County, Summer**

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	277.00	Dwelling Unit	12.00	277,000.00	792
Condo/Townhouse	225.00	Dwelling Unit	25.50	225,000.00	644
Single Family Housing	99.00	Dwelling Unit	11.80	178,200.00	283

### 1.2 Other Project Characteristics

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

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 41 acres

Construction Phase -

Off-road Equipment -

Trips and VMT -

Demolition -

Grading - 41 acres

Architectural Coating - 150 g.l.

Vehicle Trips - Traffic Gen

Woodstoves - No Fire Places

Area Coating - 150 g.l.

Energy Use - T24 Corrections SFE - 36.4%, MFE - 23.3%, SFNG - 6.5%, MFNG - 3.8%, Lighting Energy Intensity 25%

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	150.00
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final



tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblEnergyUse	LightingElect	810.36	607.77
tblEnergyUse	LightingElect	1,001.10	750.83
tblEnergyUse	LightingElect	1,608.84	1,206.63
tblEnergyUse	T24E	184.75	141.70
tblEnergyUse	T24E	206.69	158.53
tblEnergyUse	T24E	425.62	270.69
tblEnergyUse	T24NG	8,285.40	7,970.55
tblEnergyUse	T24NG	10,789.48	10,379.48
tblEnergyUse	T24NG	21,834.49	20,415.25
tblGrading	AcresOfGrading	187.50	41.00
tblGrading	AcresOfGrading	0.00	41.00
tblLandUse	LotAcreage	17.31	12.00
tblLandUse	LotAcreage	14.06	25.50
tblLandUse	LotAcreage	32.14	11.80
tblProjectCharacteristics	OperationalYear	2014	2020
tblTripsAndVMT	VendorTripNumber	64.00	60.00
tblTripsAndVMT	WorkerTripNumber	397.00	370.00

tblTripsAndVMT	WorkerTripNumber	79.00	74.00
tblVehicleTrips	HO_TL	7.50	5.80
tblVehicleTrips	HO_TL	7.50	5.80
tblVehicleTrips	HO_TL	7.50	5.80
tblVehicleTrips	HS_TL	7.30	5.80
tblVehicleTrips	HS_TL	7.30	5.80
tblVehicleTrips	HS_TL	7.30	5.80
tblVehicleTrips	HW_TL	10.80	5.80
tblVehicleTrips	HW_TL	10.80	5.80
tblVehicleTrips	HW_TL	10.80	5.80
tblVehicleTrips	ST_TR	7.16	6.00
tblVehicleTrips	ST_TR	7.16	8.00
tblVehicleTrips	ST_TR	10.08	10.00
tblVehicleTrips	SU_TR	6.07	6.00
tblVehicleTrips	SU_TR	6.07	8.00
tblVehicleTrips	SU_TR	8.77	10.00
tblVehicleTrips	WD_TR	6.59	6.00
tblVehicleTrips	WD_TR	6.59	8.00
tblVehicleTrips	WD_TR	9.57	10.00

## 2.0 Emissions Summary

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**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					
2017	6.1627	69.6666	47.6143	0.0796	19.6635	3.3184	22.4188	10.1264	3.0529	12.6613	0.0000	7,136.717 2	7,136.717 2	1.9425	0.0000	7,177.508 8
2018	4.2804	29.1128	37.0926	0.0795	3.4377	1.5853	5.0230	0.9198	1.4886	2.4084	0.0000	6,966.795 9	6,966.795 9	0.7875	0.0000	6,983.333 8
2019	3.8533	26.3098	35.3263	0.0795	3.4376	1.3710	4.8086	0.9198	1.2875	2.2073	0.0000	6,806.332 5	6,806.332 5	0.7682	0.0000	6,822.465 5
2020	232.5861	23.7337	34.0090	0.0795	3.4376	1.1922	4.6298	0.9198	1.1196	2.0394	0.0000	6,621.589 6	6,621.589 6	0.7530	0.0000	6,637.403 3
<b>Total</b>	<b>246.8824</b>	<b>148.8229</b>	<b>154.0422</b>	<b>0.3181</b>	<b>29.9764</b>	<b>7.4668</b>	<b>36.8801</b>	<b>12.8858</b>	<b>6.9486</b>	<b>19.3164</b>	<b>0.0000</b>	<b>27,531.43 52</b>	<b>27,531.43 52</b>	<b>4.2513</b>	<b>0.0000</b>	<b>27,620.71 14</b>

## 2.1 Overall Construction (Maximum Daily Emission)

### 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					
2017	2.0757	9.6559	38.6475	0.0796	19.7920	0.1120	19.8026	10.1579	0.1038	10.1685	0.0000	7,136.717 2	7,136.717 2	1.9425	0.0000	7,177.508 8
2018	1.9382	8.0808	36.9709	0.0795	6.3688	0.0971	6.4659	1.6393	0.0899	1.7292	0.0000	6,966.795 9	6,966.795 9	0.7875	0.0000	6,983.333 8
2019	1.8282	7.5737	35.6170	0.0795	6.3688	0.0921	6.4608	1.6393	0.0853	1.7246	0.0000	6,806.332 5	6,806.332 5	0.7682	0.0000	6,822.465 5
2020	232.3736	6.8787	34.6116	0.0795	6.3687	0.0854	6.4542	1.6392	0.0792	1.7185	0.0000	6,621.589 6	6,621.589 6	0.7530	0.0000	6,637.403 3
<b>Total</b>	<b>238.2157</b>	<b>32.1892</b>	<b>145.8470</b>	<b>0.3181</b>	<b>38.8983</b>	<b>0.3866</b>	<b>39.1834</b>	<b>15.0757</b>	<b>0.3583</b>	<b>15.3407</b>	<b>0.0000</b>	<b>27,531.43 52</b>	<b>27,531.43 52</b>	<b>4.2513</b>	<b>0.0000</b>	<b>27,620.71 14</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	3.51	78.37	5.32	0.00	-29.76	94.82	-6.25	-16.99	94.84	20.58	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	941.6689	13.0542	1,182.8027	0.4452		159.4609	159.4609		159.4562	159.4562	16,690.8102	7,089.1623	23,779.9725	15.4899	1.3129	24,512.2465
Energy	0.2514	2.1481	0.9141	0.0137		0.1737	0.1737		0.1737	0.1737		2,742.2128	2,742.2128	0.0526	0.0503	2,758.9015
Mobile	11.7990	19.9315	100.0742	0.2655	32.8177	0.2992	33.1170	8.4346	0.2762	8.7107		20,270.8986	20,270.8986	0.7774		20,287.2245
<b>Total</b>	<b>953.7193</b>	<b>35.1337</b>	<b>1,283.7910</b>	<b>0.7244</b>	<b>32.8177</b>	<b>159.9338</b>	<b>192.7515</b>	<b>8.4346</b>	<b>159.9060</b>	<b>168.3406</b>	<b>16,690.8102</b>	<b>30,102.2737</b>	<b>46,793.0839</b>	<b>16.3199</b>	<b>1.3631</b>	<b>47,558.3725</b>

### 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	21.9015	0.5754	49.7481	2.6200e-003		0.2736	0.2736		0.2736	0.2736	0.0000	89.2800	89.2800	0.0871	0.0000	91.1081
Energy	0.2514	2.1481	0.9141	0.0137		0.1737	0.1737		0.1737	0.1737		2,742.2128	2,742.2128	0.0526	0.0503	2,758.9015
Mobile	11.7990	19.9315	100.0742	0.2655	32.8177	0.2992	33.1170	8.4346	0.2762	8.7107		20,270.8986	20,270.8986	0.7774		20,287.2245
<b>Total</b>	<b>33.9519</b>	<b>22.6549</b>	<b>150.7364</b>	<b>0.2818</b>	<b>32.8177</b>	<b>0.7465</b>	<b>33.5642</b>	<b>8.4346</b>	<b>0.7234</b>	<b>9.1579</b>	<b>0.0000</b>	<b>23,102.3913</b>	<b>23,102.3913</b>	<b>0.9171</b>	<b>0.0503</b>	<b>23,137.2341</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	96.44	35.52	88.26	61.09	0.00	99.53	82.59	0.00	99.55	94.56	100.00	23.25	50.63	94.38	96.31	51.35

### 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	1/1/2017	3/10/2017	5	50	
2	Site Preparation	Site Preparation	3/11/2017	4/21/2017	5	30	
3	Grading	Grading	4/22/2017	8/4/2017	5	75	
4	Building Construction	Building Construction	8/5/2017	6/5/2020	5	740	
5	Paving	Paving	6/6/2020	8/21/2020	5	55	
6	Architectural Coating	Architectural Coating	8/22/2020	11/6/2020	5	55	

Acres of Grading (Site Preparation Phase): 41

Acres of Grading (Grading Phase): 41

Acres of Paving: 0

Residential Indoor: 1,377,405; Residential Outdoor: 459,135; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	1,510.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	370.00	60.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	74.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

### 3.2 Demolition - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6177	0.0000	6.6177	1.0022	0.0000	1.0022			0.0000			0.0000
Off-Road	4.0482	42.6971	33.8934	0.0399		2.1252	2.1252		1.9797	1.9797		4,036.467 4	4,036.467 4	1.1073		4,059.7211
<b>Total</b>	<b>4.0482</b>	<b>42.6971</b>	<b>33.8934</b>	<b>0.0399</b>	<b>6.6177</b>	<b>2.1252</b>	<b>8.7429</b>	<b>1.0022</b>	<b>1.9797</b>	<b>2.9819</b>		<b>4,036.467 4</b>	<b>4,036.467 4</b>	<b>1.1073</b>		<b>4,059.721 1</b>



**3.2 Demolition - 2017****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	0.5544	7.5465	5.7615	0.0226	0.5263	0.1016	0.6279	0.1441	0.0935	0.2376		2,237.342 1	2,237.342 1	0.0155		2,237.667 3
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	0.0559	0.6070	1.5600e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		125.2526	125.2526	6.0400e-003		125.3794
<b>Total</b>	<b>0.6021</b>	<b>7.6025</b>	<b>6.3684</b>	<b>0.0241</b>	<b>0.6495</b>	<b>0.1025</b>	<b>0.7520</b>	<b>0.1768</b>	<b>0.0943</b>	<b>0.2711</b>		<b>2,362.594 7</b>	<b>2,362.594 7</b>	<b>0.0215</b>		<b>2,363.046 8</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6177	0.0000	6.6177	1.0022	0.0000	1.0022			0.0000			0.0000
Off-Road	0.4739	2.0535	23.8257	0.0399		9.4800e-003	9.4800e-003		9.4800e-003	9.4800e-003	0.0000	4,036.467 4	4,036.467 4	1.1073		4,059.7211
<b>Total</b>	<b>0.4739</b>	<b>2.0535</b>	<b>23.8257</b>	<b>0.0399</b>	<b>6.6177</b>	<b>9.4800e-003</b>	<b>6.6271</b>	<b>1.0022</b>	<b>9.4800e-003</b>	<b>1.0116</b>	<b>0.0000</b>	<b>4,036.467 4</b>	<b>4,036.467 4</b>	<b>1.1073</b>		<b>4,059.721 1</b>

### 3.2 Demolition - 2017

#### 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	0.5544	7.5465	5.7615	0.0226	0.9255	0.1016	1.0271	0.2421	0.0935	0.3356		2,237.342 1	2,237.342 1	0.0155		2,237.667 3
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	0.0559	0.6070	1.5600e-003	0.2303	9.0000e-004	0.2312	0.0590	8.3000e-004	0.0598		125.2526	125.2526	6.0400e-003		125.3794
<b>Total</b>	<b>0.6021</b>	<b>7.6025</b>	<b>6.3684</b>	<b>0.0241</b>	<b>1.1558</b>	<b>0.1025</b>	<b>1.2584</b>	<b>0.3011</b>	<b>0.0943</b>	<b>0.3954</b>		<b>2,362.594 7</b>	<b>2,362.594 7</b>	<b>0.0215</b>		<b>2,363.046 8</b>

### 3.3 Site Preparation - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.5156	0.0000	19.5156	10.0872	0.0000	10.0872			0.0000			0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339		4,003.085 9	4,003.085 9	1.2265		4,028.843 2
<b>Total</b>	<b>4.8382</b>	<b>51.7535</b>	<b>39.3970</b>	<b>0.0391</b>	<b>19.5156</b>	<b>2.7542</b>	<b>22.2698</b>	<b>10.0872</b>	<b>2.5339</b>	<b>12.6211</b>		<b>4,003.085 9</b>	<b>4,003.085 9</b>	<b>1.2265</b>		<b>4,028.843 2</b>

### 3.3 Site Preparation - 2017

#### 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	0.0572	0.0671	0.7284	1.8700e-003	0.1479	1.0800e-003	0.1489	0.0392	9.9000e-004	0.0402		150.3031	150.3031	7.2500e-003		150.4553
<b>Total</b>	<b>0.0572</b>	<b>0.0671</b>	<b>0.7284</b>	<b>1.8700e-003</b>	<b>0.1479</b>	<b>1.0800e-003</b>	<b>0.1489</b>	<b>0.0392</b>	<b>9.9000e-004</b>	<b>0.0402</b>		<b>150.3031</b>	<b>150.3031</b>	<b>7.2500e-003</b>		<b>150.4553</b>

#### 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					19.5156	0.0000	19.5156	10.0872	0.0000	10.0872			0.0000			0.0000
Off-Road	0.4757	2.0615	21.2415	0.0391		9.5100e-003	9.5100e-003		9.5100e-003	9.5100e-003	0.0000	4,003.0859	4,003.0859	1.2265		4,028.8432
<b>Total</b>	<b>0.4757</b>	<b>2.0615</b>	<b>21.2415</b>	<b>0.0391</b>	<b>19.5156</b>	<b>9.5100e-003</b>	<b>19.5251</b>	<b>10.0872</b>	<b>9.5100e-003</b>	<b>10.0967</b>	<b>0.0000</b>	<b>4,003.0859</b>	<b>4,003.0859</b>	<b>1.2265</b>		<b>4,028.8432</b>

**3.3 Site Preparation - 2017****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	0.0572	0.0671	0.7284	1.8700e-003	0.2764	1.0800e-003	0.2775	0.0708	9.9000e-004	0.0718		150.3031	150.3031	7.2500e-003		150.4553
<b>Total</b>	<b>0.0572</b>	<b>0.0671</b>	<b>0.7284</b>	<b>1.8700e-003</b>	<b>0.2764</b>	<b>1.0800e-003</b>	<b>0.2775</b>	<b>0.0708</b>	<b>9.9000e-004</b>	<b>0.0718</b>		<b>150.3031</b>	<b>150.3031</b>	<b>7.2500e-003</b>		<b>150.4553</b>

**3.4 Grading - 2017****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6018	0.0000	6.6018	3.3728	0.0000	3.3728			0.0000			0.0000
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518		6,313.3690	6,313.3690	1.9344		6,353.9915
<b>Total</b>	<b>6.0991</b>	<b>69.5920</b>	<b>46.8050</b>	<b>0.0617</b>	<b>6.6018</b>	<b>3.3172</b>	<b>9.9190</b>	<b>3.3728</b>	<b>3.0518</b>	<b>6.4246</b>		<b>6,313.3690</b>	<b>6,313.3690</b>	<b>1.9344</b>		<b>6,353.9915</b>

**3.4 Grading - 2017****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	0.0635	0.0746	0.8093	2.0800e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		167.0035	167.0035	8.0500e-003		167.1726
<b>Total</b>	<b>0.0635</b>	<b>0.0746</b>	<b>0.8093</b>	<b>2.0800e-003</b>	<b>0.1643</b>	<b>1.1900e-003</b>	<b>0.1655</b>	<b>0.0436</b>	<b>1.1000e-003</b>	<b>0.0447</b>		<b>167.0035</b>	<b>167.0035</b>	<b>8.0500e-003</b>		<b>167.1726</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6018	0.0000	6.6018	3.3728	0.0000	3.3728			0.0000			0.0000
Off-Road	0.7564	3.2778	34.7787	0.0617		0.0151	0.0151		0.0151	0.0151	0.0000	6,313.3690	6,313.3690	1.9344		6,353.9915
<b>Total</b>	<b>0.7564</b>	<b>3.2778</b>	<b>34.7787</b>	<b>0.0617</b>	<b>6.6018</b>	<b>0.0151</b>	<b>6.6170</b>	<b>3.3728</b>	<b>0.0151</b>	<b>3.3880</b>	<b>0.0000</b>	<b>6,313.3690</b>	<b>6,313.3690</b>	<b>1.9344</b>		<b>6,353.9915</b>

**3.4 Grading - 2017****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	0.0635	0.0746	0.8093	2.0800e-003	0.3071	1.1900e-003	0.3083	0.0786	1.1000e-003	0.0797		167.0035	167.0035	8.0500e-003		167.1726
<b>Total</b>	<b>0.0635</b>	<b>0.0746</b>	<b>0.8093</b>	<b>2.0800e-003</b>	<b>0.3071</b>	<b>1.1900e-003</b>	<b>0.3083</b>	<b>0.0786</b>	<b>1.1000e-003</b>	<b>0.0797</b>		<b>167.0035</b>	<b>167.0035</b>	<b>8.0500e-003</b>		<b>167.1726</b>

**3.5 Building Construction - 2017****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
<b>Total</b>	<b>3.1024</b>	<b>26.4057</b>	<b>18.1291</b>	<b>0.0268</b>		<b>1.7812</b>	<b>1.7812</b>		<b>1.6730</b>	<b>1.6730</b>		<b>2,639.8053</b>	<b>2,639.8053</b>	<b>0.6497</b>		<b>2,653.4490</b>

**3.5 Building Construction - 2017****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	0.5737	5.0850	6.2648	0.0143	0.3983	0.0746	0.4729	0.1136	0.0687	0.1823		1,407.347 3	1,407.347 3	0.0105		1,407.566 9
Worker	1.1756	1.3794	14.9717	0.0385	3.0395	0.0221	3.0616	0.8062	0.0204	0.8266		3,089.564 5	3,089.564 5	0.1490		3,092.692 9
<b>Total</b>	<b>1.7493</b>	<b>6.4644</b>	<b>21.2365</b>	<b>0.0528</b>	<b>3.4377</b>	<b>0.0967</b>	<b>3.5345</b>	<b>0.9198</b>	<b>0.0890</b>	<b>1.0089</b>		<b>4,496.911 9</b>	<b>4,496.911 9</b>	<b>0.1594</b>		<b>4,500.259 8</b>

**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	0.3265	2.2289	17.4110	0.0268		6.0900e-003	6.0900e-003		6.0900e-003	6.0900e-003	0.0000	2,639.805 3	2,639.805 3	0.6497		2,653.449 0
<b>Total</b>	<b>0.3265</b>	<b>2.2289</b>	<b>17.4110</b>	<b>0.0268</b>		<b>6.0900e-003</b>	<b>6.0900e-003</b>		<b>6.0900e-003</b>	<b>6.0900e-003</b>	<b>0.0000</b>	<b>2,639.805 3</b>	<b>2,639.805 3</b>	<b>0.6497</b>		<b>2,653.449 0</b>

**3.5 Building Construction - 2017****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	0.5737	5.0850	6.2648	0.0143	0.6878	0.0746	0.7625	0.1847	0.0687	0.2533		1,407.347 3	1,407.347 3	0.0105		1,407.566 9
Worker	1.1756	1.3794	14.9717	0.0385	5.6810	0.0221	5.7031	1.4546	0.0204	1.4750		3,089.564 5	3,089.564 5	0.1490		3,092.692 9
<b>Total</b>	<b>1.7493</b>	<b>6.4644</b>	<b>21.2365</b>	<b>0.0528</b>	<b>6.3689</b>	<b>0.0967</b>	<b>6.4656</b>	<b>1.6393</b>	<b>0.0890</b>	<b>1.7283</b>		<b>4,496.911 9</b>	<b>4,496.911 9</b>	<b>0.1594</b>		<b>4,500.259 8</b>

**3.5 Building Construction - 2018****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.939 0	2,609.939 0	0.6387		2,623.351 7
<b>Total</b>	<b>2.6687</b>	<b>23.2608</b>	<b>17.5327</b>	<b>0.0268</b>		<b>1.4943</b>	<b>1.4943</b>		<b>1.4048</b>	<b>1.4048</b>		<b>2,609.939 0</b>	<b>2,609.939 0</b>	<b>0.6387</b>		<b>2,623.351 7</b>



**3.5 Building Construction - 2018****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	0.5400	4.5932	5.9698	0.0142	0.3982	0.0693	0.4675	0.1136	0.0638	0.1774		1,383.1807	1,383.1807	0.0103		1,383.3960
Worker	1.0717	1.2588	13.5901	0.0385	3.0395	0.0217	3.0611	0.8062	0.0201	0.8263		2,973.6763	2,973.6763	0.1386		2,976.5861
<b>Total</b>	<b>1.6117</b>	<b>5.8519</b>	<b>19.5599</b>	<b>0.0527</b>	<b>3.4377</b>	<b>0.0910</b>	<b>3.5287</b>	<b>0.9198</b>	<b>0.0838</b>	<b>1.0036</b>		<b>4,356.8570</b>	<b>4,356.8570</b>	<b>0.1488</b>		<b>4,359.9821</b>

**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	0.3265	2.2289	17.4110	0.0268		6.0900e-003	6.0900e-003		6.0900e-003	6.0900e-003	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517
<b>Total</b>	<b>0.3265</b>	<b>2.2289</b>	<b>17.4110</b>	<b>0.0268</b>		<b>6.0900e-003</b>	<b>6.0900e-003</b>		<b>6.0900e-003</b>	<b>6.0900e-003</b>	<b>0.0000</b>	<b>2,609.9389</b>	<b>2,609.9389</b>	<b>0.6387</b>		<b>2,623.3517</b>

**3.5 Building Construction - 2018****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	0.5400	4.5932	5.9698	0.0142	0.6878	0.0693	0.7571	0.1847	0.0638	0.2484		1,383.1807	1,383.1807	0.0103		1,383.3960
Worker	1.0717	1.2588	13.5901	0.0385	5.6810	0.0217	5.7027	1.4546	0.0201	1.4747		2,973.6763	2,973.6763	0.1386		2,976.5861
<b>Total</b>	<b>1.6117</b>	<b>5.8519</b>	<b>19.5599</b>	<b>0.0527</b>	<b>6.3688</b>	<b>0.0910</b>	<b>6.4598</b>	<b>1.6393</b>	<b>0.0838</b>	<b>1.7231</b>		<b>4,356.8570</b>	<b>4,356.8570</b>	<b>0.1488</b>		<b>4,359.9821</b>

**3.5 Building Construction - 2019****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
<b>Total</b>	<b>2.3516</b>	<b>20.9650</b>	<b>17.1204</b>	<b>0.0268</b>		<b>1.2850</b>	<b>1.2850</b>		<b>1.2083</b>	<b>1.2083</b>		<b>2,580.7618</b>	<b>2,580.7618</b>	<b>0.6279</b>		<b>2,593.9479</b>

**3.5 Building Construction - 2019****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	0.5057	4.1815	5.6725	0.0142	0.3982	0.0644	0.4626	0.1136	0.0593	0.1729		1,359.3568	1,359.3568	9.9900e-003		1,359.5667
Worker	0.9960	1.1633	12.5335	0.0385	3.0395	0.0215	3.0610	0.8062	0.0200	0.8262		2,866.2140	2,866.2140	0.1303		2,868.9510
<b>Total</b>	<b>1.5017</b>	<b>5.3448</b>	<b>18.2060</b>	<b>0.0527</b>	<b>3.4376</b>	<b>0.0860</b>	<b>3.5236</b>	<b>0.9198</b>	<b>0.0792</b>	<b>0.9990</b>		<b>4,225.5708</b>	<b>4,225.5708</b>	<b>0.1403</b>		<b>4,228.5176</b>

**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	0.3265	2.2289	17.4110	0.0268		6.0900e-003	6.0900e-003		6.0900e-003	6.0900e-003	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479
<b>Total</b>	<b>0.3265</b>	<b>2.2289</b>	<b>17.4110</b>	<b>0.0268</b>		<b>6.0900e-003</b>	<b>6.0900e-003</b>		<b>6.0900e-003</b>	<b>6.0900e-003</b>	<b>0.0000</b>	<b>2,580.7618</b>	<b>2,580.7618</b>	<b>0.6279</b>		<b>2,593.9479</b>

**3.5 Building Construction - 2019****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	0.5057	4.1815	5.6725	0.0142	0.6877	0.0644	0.7522	0.1847	0.0593	0.2439		1,359.3568	1,359.3568	9.9900e-003		1,359.5667
Worker	0.9960	1.1633	12.5335	0.0385	5.6810	0.0215	5.7026	1.4546	0.0200	1.4746		2,866.2140	2,866.2140	0.1303		2,868.9510
<b>Total</b>	<b>1.5017</b>	<b>5.3448</b>	<b>18.2060</b>	<b>0.0527</b>	<b>6.3688</b>	<b>0.0860</b>	<b>6.4547</b>	<b>1.6392</b>	<b>0.0792</b>	<b>1.7185</b>		<b>4,225.5708</b>	<b>4,225.5708</b>	<b>0.1403</b>		<b>4,228.5176</b>

**3.5 Building Construction - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465		2,542.4799	2,542.4799	0.6194		2,555.4880
<b>Total</b>	<b>2.1113</b>	<b>19.0839</b>	<b>16.8084</b>	<b>0.0268</b>		<b>1.1128</b>	<b>1.1128</b>		<b>1.0465</b>	<b>1.0465</b>		<b>2,542.4799</b>	<b>2,542.4799</b>	<b>0.6194</b>		<b>2,555.4880</b>

**3.5 Building Construction - 2020****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	0.4785	3.5626	5.4675	0.0142	0.3982	0.0578	0.4559	0.1136	0.0531	0.1667		1,328.285 2	1,328.285 2	9.6700e- 003		1,328.488 2
Worker	0.9426	1.0872	11.7330	0.0385	3.0395	0.0216	3.0610	0.8062	0.0200	0.8262		2,750.824 5	2,750.824 5	0.1239		2,753.427 1
<b>Total</b>	<b>1.4211</b>	<b>4.6498</b>	<b>17.2006</b>	<b>0.0527</b>	<b>3.4376</b>	<b>0.0793</b>	<b>3.5169</b>	<b>0.9198</b>	<b>0.0731</b>	<b>0.9929</b>		<b>4,079.109 7</b>	<b>4,079.109 7</b>	<b>0.1336</b>		<b>4,081.915 3</b>

**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	0.3265	2.2289	17.4110	0.0268		6.0900e- 003	6.0900e- 003		6.0900e- 003	6.0900e- 003	0.0000	2,542.479 9	2,542.479 9	0.6194		2,555.488 0
<b>Total</b>	<b>0.3265</b>	<b>2.2289</b>	<b>17.4110</b>	<b>0.0268</b>		<b>6.0900e- 003</b>	<b>6.0900e- 003</b>		<b>6.0900e- 003</b>	<b>6.0900e- 003</b>	<b>0.0000</b>	<b>2,542.479 9</b>	<b>2,542.479 9</b>	<b>0.6194</b>		<b>2,555.488 0</b>

### 3.5 Building Construction - 2020

#### 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	0.4785	3.5626	5.4675	0.0142	0.6877	0.0578	0.7455	0.1846	0.0531	0.2378		1,328.285 2	1,328.285 2	9.6700e- 003		1,328.488 2
Worker	0.9426	1.0872	11.7330	0.0385	5.6810	0.0216	5.7026	1.4546	0.0200	1.4746		2,750.824 5	2,750.824 5	0.1239		2,753.427 1
<b>Total</b>	<b>1.4211</b>	<b>4.6498</b>	<b>17.2006</b>	<b>0.0527</b>	<b>6.3687</b>	<b>0.0793</b>	<b>6.4481</b>	<b>1.6392</b>	<b>0.0731</b>	<b>1.7124</b>		<b>4,079.109 7</b>	<b>4,079.109 7</b>	<b>0.1336</b>		<b>4,081.915 3</b>

### 3.6 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	1.3301	13.7845	14.3523	0.0223		0.7390	0.7390		0.6799	0.6799		2,160.757 1	2,160.757 1	0.6988		2,175.432 6
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.3301</b>	<b>13.7845</b>	<b>14.3523</b>	<b>0.0223</b>		<b>0.7390</b>	<b>0.7390</b>		<b>0.6799</b>	<b>0.6799</b>		<b>2,160.757 1</b>	<b>2,160.757 1</b>	<b>0.6988</b>		<b>2,175.432 6</b>

**3.6 Paving - 2020****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	0.0382	0.0441	0.4757	1.5600e-003	0.1232	8.7000e-004	0.1241	0.0327	8.1000e-004	0.0335		111.5199	111.5199	5.0200e-003		111.6254
<b>Total</b>	<b>0.0382</b>	<b>0.0441</b>	<b>0.4757</b>	<b>1.5600e-003</b>	<b>0.1232</b>	<b>8.7000e-004</b>	<b>0.1241</b>	<b>0.0327</b>	<b>8.1000e-004</b>	<b>0.0335</b>		<b>111.5199</b>	<b>111.5199</b>	<b>5.0200e-003</b>		<b>111.6254</b>

**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	0.2745	1.1895	16.9276	0.0223		5.4900e-003	5.4900e-003		5.4900e-003	5.4900e-003	0.0000	2,160.7571	2,160.7571	0.6988		2,175.4326
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.2745</b>	<b>1.1895</b>	<b>16.9276</b>	<b>0.0223</b>		<b>5.4900e-003</b>	<b>5.4900e-003</b>		<b>5.4900e-003</b>	<b>5.4900e-003</b>	<b>0.0000</b>	<b>2,160.7571</b>	<b>2,160.7571</b>	<b>0.6988</b>		<b>2,175.4326</b>

### 3.6 Paving - 2020

#### 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	0.0382	0.0441	0.4757	1.5600e-003	0.2303	8.7000e-004	0.2312	0.0590	8.1000e-004	0.0598		111.5199	111.5199	5.0200e-003		111.6254
<b>Total</b>	<b>0.0382</b>	<b>0.0441</b>	<b>0.4757</b>	<b>1.5600e-003</b>	<b>0.2303</b>	<b>8.7000e-004</b>	<b>0.2312</b>	<b>0.0590</b>	<b>8.1000e-004</b>	<b>0.0598</b>		<b>111.5199</b>	<b>111.5199</b>	<b>5.0200e-003</b>		<b>111.6254</b>

### 3.7 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	232.1554					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		281.9057
<b>Total</b>	<b>232.3975</b>	<b>1.6838</b>	<b>1.8314</b>	<b>2.9700e-003</b>		<b>0.1109</b>	<b>0.1109</b>		<b>0.1109</b>	<b>0.1109</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0218</b>		<b>281.9057</b>



**3.7 Architectural Coating - 2020****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	0.1885	0.2174	2.3466	7.7000e-003	0.6079	4.3100e-003	0.6122	0.1612	4.0000e-003	0.1652		550.1649	550.1649	0.0248		550.6854
<b>Total</b>	<b>0.1885</b>	<b>0.2174</b>	<b>2.3466</b>	<b>7.7000e-003</b>	<b>0.6079</b>	<b>4.3100e-003</b>	<b>0.6122</b>	<b>0.1612</b>	<b>4.0000e-003</b>	<b>0.1652</b>		<b>550.1649</b>	<b>550.1649</b>	<b>0.0248</b>		<b>550.6854</b>

**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	232.1554					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0218		281.9057
<b>Total</b>	<b>232.1851</b>	<b>0.1288</b>	<b>1.8324</b>	<b>2.9700e-003</b>		<b>5.9000e-004</b>	<b>5.9000e-004</b>		<b>5.9000e-004</b>	<b>5.9000e-004</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0218</b>		<b>281.9057</b>

### 3.7 Architectural Coating - 2020

#### 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	0.1885	0.2174	2.3466	7.7000e-003	1.1362	4.3100e-003	1.1405	0.2909	4.0000e-003	0.2949		550.1649	550.1649	0.0248		550.6854
<b>Total</b>	<b>0.1885</b>	<b>0.2174</b>	<b>2.3466</b>	<b>7.7000e-003</b>	<b>1.1362</b>	<b>4.3100e-003</b>	<b>1.1405</b>	<b>0.2909</b>	<b>4.0000e-003</b>	<b>0.2949</b>		<b>550.1649</b>	<b>550.1649</b>	<b>0.0248</b>		<b>550.6854</b>

### 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	11.7990	19.9315	100.0742	0.2655	32.8177	0.2992	33.1170	8.4346	0.2762	8.7107		20,270.8986	20,270.8986	0.7774		20,287.2245
Unmitigated	11.7990	19.9315	100.0742	0.2655	32.8177	0.2992	33.1170	8.4346	0.2762	8.7107		20,270.8986	20,270.8986	0.7774		20,287.2245

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,662.00	1,662.00	1662.00	3,115,888	3,115,888
Condo/Townhouse	1,800.00	1,800.00	1800.00	3,374,608	3,374,608
Single Family Housing	990.00	990.00	990.00	1,856,034	1,856,034
Total	4,452.00	4,452.00	4,452.00	8,346,529	8,346,529

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	5.80	5.80	5.80	41.60	18.80	39.60	86	11	3
Condo/Townhouse	5.80	5.80	5.80	41.60	18.80	39.60	86	11	3
Single Family Housing	5.80	5.80	5.80	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

## 5.0 Energy Detail

### 2.4 Fleet Mix

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	0.2514	2.1481	0.9141	0.0137		0.1737	0.1737		0.1737	0.1737		2,742.2128	2,742.2128	0.0526	0.0503	2,758.9015
NaturalGas Unmitigated	0.2514	2.1481	0.9141	0.0137		0.1737	0.1737		0.1737	0.1737		2,742.2128	2,742.2128	0.0526	0.0503	2,758.9015

## 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 Low Rise	7944.63	0.0857	0.7322	0.3116	4.6700e-003		0.0592	0.0592		0.0592	0.0592		934.6618	934.6618	0.0179	0.0171	940.3500
Condo/Townhouse	8248.59	0.0890	0.7602	0.3235	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.4226	970.4226	0.0186	0.0178	976.3285
Single Family Housing	7115.59	0.0767	0.6558	0.2790	4.1900e-003		0.0530	0.0530		0.0530	0.0530		837.1284	837.1284	0.0160	0.0154	842.2230
<b>Total</b>		<b>0.2514</b>	<b>2.1481</b>	<b>0.9141</b>	<b>0.0137</b>		<b>0.1737</b>	<b>0.1737</b>		<b>0.1737</b>	<b>0.1737</b>		<b>2,742.2128</b>	<b>2,742.2128</b>	<b>0.0526</b>	<b>0.0503</b>	<b>2,758.9015</b>

## 5.2 Energy by Land Use - NaturalGas

### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	8.24859	0.0890	0.7602	0.3235	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.4226	970.4226	0.0186	0.0178	976.3285
Single Family Housing	7.11559	0.0767	0.6558	0.2790	4.1900e-003		0.0530	0.0530		0.0530	0.0530		837.1284	837.1284	0.0160	0.0154	842.2230
Apartments Low Rise	7.94463	0.0857	0.7322	0.3116	4.6700e-003		0.0592	0.0592		0.0592	0.0592		934.6618	934.6618	0.0179	0.0171	940.3500
<b>Total</b>		<b>0.2514</b>	<b>2.1481</b>	<b>0.9141</b>	<b>0.0137</b>		<b>0.1737</b>	<b>0.1737</b>		<b>0.1737</b>	<b>0.1737</b>		<b>2,742.2128</b>	<b>2,742.2128</b>	<b>0.0526</b>	<b>0.0503</b>	<b>2,758.9015</b>

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive 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	21.9015	0.5754	49.7481	2.6200e-003		0.2736	0.2736		0.2736	0.2736	0.0000	89.2800	89.2800	0.0871	0.0000	91.1081
Unmitigated	941.6689	13.0542	1,182.8027	0.4452		159.4609	159.4609		159.4562	159.4562	16,690.8102	7,089.1623	23,779.9725	15.4899	1.3129	24,512.2465

**6.2 Area by SubCategory****Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.8304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	14.5563					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	919.7674	12.4788	1,133.0546	0.4426		159.1873	159.1873		159.1826	159.1826	16,690.8102	6,999.8824	23,690.6925	15.4029	1.3129	24,421.1384
Landscaping	1.5149	0.5754	49.7481	2.6200e-003		0.2736	0.2736		0.2736	0.2736		89.2800	89.2800	0.0871		91.1081
<b>Total</b>	<b>941.6689</b>	<b>13.0542</b>	<b>1,182.8027</b>	<b>0.4452</b>		<b>159.4609</b>	<b>159.4609</b>		<b>159.4562</b>	<b>159.4562</b>	<b>16,690.8102</b>	<b>7,089.1623</b>	<b>23,779.9725</b>	<b>15.4899</b>	<b>1.3129</b>	<b>24,512.2465</b>

## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.8304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	14.5563					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	1.5149	0.5754	49.7481	2.6200e-003		0.2736	0.2736		0.2736	0.2736		89.2800	89.2800	0.0871		91.1081
<b>Total</b>	<b>21.9015</b>	<b>0.5754</b>	<b>49.7481</b>	<b>2.6200e-003</b>		<b>0.2736</b>	<b>0.2736</b>		<b>0.2736</b>	<b>0.2736</b>	<b>0.0000</b>	<b>89.2800</b>	<b>89.2800</b>	<b>0.0871</b>	<b>0.0000</b>	<b>91.1081</b>

## 7.0 Water Detail

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### 7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

## 9.0 Operational Offroad

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

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**Pacific Village - Proposed Project with T24 Reductions**  
**San Diego County, Winter**

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	277.00	Dwelling Unit	12.00	277,000.00	792
Condo/Townhouse	225.00	Dwelling Unit	25.50	225,000.00	644
Single Family Housing	99.00	Dwelling Unit	11.80	178,200.00	283

### 1.2 Other Project Characteristics

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

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 41 acres

Construction Phase -

Off-road Equipment -

Trips and VMT -

Demolition -

Grading - 41 acres

Architectural Coating - 150 g.l.

Vehicle Trips - Traffic Gen

Woodstoves - No Fire Places

Area Coating - 150 g.l.

Energy Use - T24 Corrections SFE - 36.4%, MFE - 23.3%, SFNG - 6.5%, MFNG - 3.8%, Lighting Energy Intensity 25%

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	150.00
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblEnergyUse	LightingElect	810.36	607.77
tblEnergyUse	LightingElect	1,001.10	750.83
tblEnergyUse	LightingElect	1,608.84	1,206.63
tblEnergyUse	T24E	184.75	141.70
tblEnergyUse	T24E	206.69	158.53
tblEnergyUse	T24E	425.62	270.69
tblEnergyUse	T24NG	8,285.40	7,970.55
tblEnergyUse	T24NG	10,789.48	10,379.48
tblEnergyUse	T24NG	21,834.49	20,415.25
tblGrading	AcresOfGrading	187.50	41.00
tblGrading	AcresOfGrading	0.00	41.00
tblLandUse	LotAcreage	17.31	12.00
tblLandUse	LotAcreage	14.06	25.50
tblLandUse	LotAcreage	32.14	11.80
tblProjectCharacteristics	OperationalYear	2014	2020
tblTripsAndVMT	VendorTripNumber	64.00	60.00
tblTripsAndVMT	WorkerTripNumber	397.00	370.00

tblTripsAndVMT	WorkerTripNumber	79.00	74.00
tblVehicleTrips	HO_TL	7.50	5.80
tblVehicleTrips	HO_TL	7.50	5.80
tblVehicleTrips	HO_TL	7.50	5.80
tblVehicleTrips	HS_TL	7.30	5.80
tblVehicleTrips	HS_TL	7.30	5.80
tblVehicleTrips	HS_TL	7.30	5.80
tblVehicleTrips	HW_TL	10.80	5.80
tblVehicleTrips	HW_TL	10.80	5.80
tblVehicleTrips	HW_TL	10.80	5.80
tblVehicleTrips	ST_TR	7.16	6.00
tblVehicleTrips	ST_TR	7.16	8.00
tblVehicleTrips	ST_TR	10.08	10.00
tblVehicleTrips	SU_TR	6.07	6.00
tblVehicleTrips	SU_TR	6.07	8.00
tblVehicleTrips	SU_TR	8.77	10.00
tblVehicleTrips	WD_TR	6.59	6.00
tblVehicleTrips	WD_TR	6.59	8.00
tblVehicleTrips	WD_TR	9.57	10.00

## 2.0 Emissions Summary

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**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					
2017	6.1663	69.6757	47.5874	0.0771	19.6635	3.3184	22.4188	10.1264	3.0529	12.6613	0.0000	6,937.6767	6,937.6767	1.9425	0.0000	6,978.4683
2018	4.4178	29.3729	38.7495	0.0771	3.4377	1.5860	5.0236	0.9198	1.4892	2.4090	0.0000	6,774.8306	6,774.8306	0.7878	0.0000	6,791.3745
2019	3.9776	26.5465	36.9181	0.0771	3.4376	1.3716	4.8093	0.9198	1.2881	2.2079	0.0000	6,620.9515	6,620.9515	0.7685	0.0000	6,637.0907
2020	232.5957	23.9444	35.5575	0.0770	3.4376	1.1927	4.6303	0.9198	1.1201	2.0399	0.0000	6,443.3360	6,443.3360	0.7533	0.0000	6,459.1562
<b>Total</b>	<b>247.1573</b>	<b>149.5394</b>	<b>158.8125</b>	<b>0.3083</b>	<b>29.9764</b>	<b>7.4687</b>	<b>36.8820</b>	<b>12.8858</b>	<b>6.9503</b>	<b>19.3181</b>	<b>0.0000</b>	<b>26,776.7947</b>	<b>26,776.7947</b>	<b>4.2521</b>	<b>0.0000</b>	<b>26,866.0897</b>

## 2.1 Overall Construction (Maximum Daily Emission)

### 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					
2017	2.2302	9.9058	40.3924	0.0771	19.7920	0.1123	19.8026	10.1579	0.1040	10.1685	0.0000	6,937.6767	6,937.6767	1.9425	0.0000	6,978.4683
2018	2.0756	8.3410	38.6278	0.0771	6.3688	0.0978	6.4666	1.6393	0.0905	1.7298	0.0000	6,774.8306	6,774.8306	0.7878	0.0000	6,791.3745
2019	1.9524	7.8103	37.2088	0.0771	6.3688	0.0927	6.4614	1.6393	0.0859	1.7252	0.0000	6,620.9515	6,620.9515	0.7685	0.0000	6,637.0907
2020	232.3832	7.0893	36.1601	0.0770	6.3687	0.0860	6.4547	1.6392	0.0797	1.7190	0.0000	6,443.3360	6,443.3360	0.7533	0.0000	6,459.1562
Total	238.6414	33.1464	152.3891	0.3083	38.8983	0.3887	39.1853	15.0757	0.3602	15.3424	0.0000	26,776.7947	26,776.7947	4.2521	0.0000	26,866.0897

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	3.45	77.83	4.04	0.00	-29.76	94.80	-6.25	-16.99	94.82	20.58	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	941.6689	13.0542	1,182.8027	0.4452		159.4609	159.4609		159.4562	159.4562	16,690.8102	7,089.1623	23,779.9725	15.4899	1.3129	24,512.2465
Energy	0.2514	2.1481	0.9141	0.0137		0.1737	0.1737		0.1737	0.1737		2,742.2128	2,742.2128	0.0526	0.0503	2,758.9015
Mobile	12.6247	21.1492	109.4466	0.2524	32.8177	0.3007	33.1184	8.4346	0.2775	8.7121		19,307.2666	19,307.2666	0.7784		19,323.6134
<b>Total</b>	<b>954.5450</b>	<b>36.3515</b>	<b>1,293.1634</b>	<b>0.7113</b>	<b>32.8177</b>	<b>159.9352</b>	<b>192.7530</b>	<b>8.4346</b>	<b>159.9074</b>	<b>168.3419</b>	<b>16,690.8102</b>	<b>29,138.6418</b>	<b>45,829.4519</b>	<b>16.3209</b>	<b>1.3631</b>	<b>46,594.7614</b>

### 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	21.9015	0.5754	49.7481	2.6200e-003		0.2736	0.2736		0.2736	0.2736	0.0000	89.2800	89.2800	0.0871	0.0000	91.1081
Energy	0.2514	2.1481	0.9141	0.0137		0.1737	0.1737		0.1737	0.1737		2,742.2128	2,742.2128	0.0526	0.0503	2,758.9015
Mobile	12.6247	21.1492	109.4466	0.2524	32.8177	0.3007	33.1184	8.4346	0.2775	8.7121		19,307.2666	19,307.2666	0.7784		19,323.6134
<b>Total</b>	<b>34.7776</b>	<b>23.8727</b>	<b>160.1088</b>	<b>0.2688</b>	<b>32.8177</b>	<b>0.7479</b>	<b>33.5657</b>	<b>8.4346</b>	<b>0.7247</b>	<b>9.1593</b>	<b>0.0000</b>	<b>22,138.7594</b>	<b>22,138.7594</b>	<b>0.9180</b>	<b>0.0503</b>	<b>22,173.6230</b>



	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	96.36	34.33	87.62	62.22	0.00	99.53	82.59	0.00	99.55	94.56	100.00	24.02	51.69	94.38	96.31	52.41

### 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	1/1/2017	3/10/2017	5	50	
2	Site Preparation	Site Preparation	3/11/2017	4/21/2017	5	30	
3	Grading	Grading	4/22/2017	8/4/2017	5	75	
4	Building Construction	Building Construction	8/5/2017	6/5/2020	5	740	
5	Paving	Paving	6/6/2020	8/21/2020	5	55	
6	Architectural Coating	Architectural Coating	8/22/2020	11/6/2020	5	55	

Acres of Grading (Site Preparation Phase): 41

Acres of Grading (Grading Phase): 41

Acres of Paving: 0

Residential Indoor: 1,377,405; Residential Outdoor: 459,135; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	1,510.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	370.00	60.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	74.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

### 3.2 Demolition - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6177	0.0000	6.6177	1.0022	0.0000	1.0022			0.0000			0.0000
Off-Road	4.0482	42.6971	33.8934	0.0399		2.1252	2.1252		1.9797	1.9797		4,036.467 4	4,036.467 4	1.1073		4,059.7211
<b>Total</b>	<b>4.0482</b>	<b>42.6971</b>	<b>33.8934</b>	<b>0.0399</b>	<b>6.6177</b>	<b>2.1252</b>	<b>8.7429</b>	<b>1.0022</b>	<b>1.9797</b>	<b>2.9819</b>		<b>4,036.467 4</b>	<b>4,036.467 4</b>	<b>1.1073</b>		<b>4,059.721 1</b>

**3.2 Demolition - 2017****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	0.6151	7.7896	7.4885	0.0225	0.5263	0.1019	0.6281	0.1441	0.0937	0.2378		2,232.087 2	2,232.087 2	0.0157		2,232.416 9
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	0.0504	0.0628	0.5868	1.4700e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		117.6222	117.6222	6.0400e-003		117.7491
<b>Total</b>	<b>0.6655</b>	<b>7.8523</b>	<b>8.0752</b>	<b>0.0240</b>	<b>0.6495</b>	<b>0.1028</b>	<b>0.7523</b>	<b>0.1768</b>	<b>0.0946</b>	<b>0.2713</b>		<b>2,349.709 4</b>	<b>2,349.709 4</b>	<b>0.0217</b>		<b>2,350.166 0</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6177	0.0000	6.6177	1.0022	0.0000	1.0022			0.0000			0.0000
Off-Road	0.4739	2.0535	23.8257	0.0399		9.4800e-003	9.4800e-003		9.4800e-003	9.4800e-003	0.0000	4,036.467 4	4,036.467 4	1.1073		4,059.7211
<b>Total</b>	<b>0.4739</b>	<b>2.0535</b>	<b>23.8257</b>	<b>0.0399</b>	<b>6.6177</b>	<b>9.4800e-003</b>	<b>6.6271</b>	<b>1.0022</b>	<b>9.4800e-003</b>	<b>1.0116</b>	<b>0.0000</b>	<b>4,036.467 4</b>	<b>4,036.467 4</b>	<b>1.1073</b>		<b>4,059.721 1</b>

**3.2 Demolition - 2017****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	0.6151	7.7896	7.4885	0.0225	0.9255	0.1019	1.0274	0.2421	0.0937	0.3358		2,232.087 2	2,232.087 2	0.0157		2,232.416 9
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	0.0504	0.0628	0.5868	1.4700e-003	0.2303	9.0000e-004	0.2312	0.0590	8.3000e-004	0.0598		117.6222	117.6222	6.0400e-003		117.7491
<b>Total</b>	<b>0.6655</b>	<b>7.8523</b>	<b>8.0752</b>	<b>0.0240</b>	<b>1.1558</b>	<b>0.1028</b>	<b>1.2586</b>	<b>0.3011</b>	<b>0.0946</b>	<b>0.3956</b>		<b>2,349.709 4</b>	<b>2,349.709 4</b>	<b>0.0217</b>		<b>2,350.166 0</b>

**3.3 Site Preparation - 2017****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.5156	0.0000	19.5156	10.0872	0.0000	10.0872			0.0000			0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339		4,003.085 9	4,003.085 9	1.2265		4,028.843 2
<b>Total</b>	<b>4.8382</b>	<b>51.7535</b>	<b>39.3970</b>	<b>0.0391</b>	<b>19.5156</b>	<b>2.7542</b>	<b>22.2698</b>	<b>10.0872</b>	<b>2.5339</b>	<b>12.6211</b>		<b>4,003.085 9</b>	<b>4,003.085 9</b>	<b>1.2265</b>		<b>4,028.843 2</b>

**3.3 Site Preparation - 2017****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	0.0604	0.0753	0.7041	1.7600e-003	0.1479	1.0800e-003	0.1489	0.0392	9.9000e-004	0.0402		141.1467	141.1467	7.2500e-003		141.2989
<b>Total</b>	<b>0.0604</b>	<b>0.0753</b>	<b>0.7041</b>	<b>1.7600e-003</b>	<b>0.1479</b>	<b>1.0800e-003</b>	<b>0.1489</b>	<b>0.0392</b>	<b>9.9000e-004</b>	<b>0.0402</b>		<b>141.1467</b>	<b>141.1467</b>	<b>7.2500e-003</b>		<b>141.2989</b>

**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					19.5156	0.0000	19.5156	10.0872	0.0000	10.0872			0.0000			0.0000
Off-Road	0.4757	2.0615	21.2415	0.0391		9.5100e-003	9.5100e-003		9.5100e-003	9.5100e-003	0.0000	4,003.0859	4,003.0859	1.2265		4,028.8432
<b>Total</b>	<b>0.4757</b>	<b>2.0615</b>	<b>21.2415</b>	<b>0.0391</b>	<b>19.5156</b>	<b>9.5100e-003</b>	<b>19.5251</b>	<b>10.0872</b>	<b>9.5100e-003</b>	<b>10.0967</b>	<b>0.0000</b>	<b>4,003.0859</b>	<b>4,003.0859</b>	<b>1.2265</b>		<b>4,028.8432</b>

**3.3 Site Preparation - 2017****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	0.0604	0.0753	0.7041	1.7600e-003	0.2764	1.0800e-003	0.2775	0.0708	9.9000e-004	0.0718		141.1467	141.1467	7.2500e-003		141.2989
<b>Total</b>	<b>0.0604</b>	<b>0.0753</b>	<b>0.7041</b>	<b>1.7600e-003</b>	<b>0.2764</b>	<b>1.0800e-003</b>	<b>0.2775</b>	<b>0.0708</b>	<b>9.9000e-004</b>	<b>0.0718</b>		<b>141.1467</b>	<b>141.1467</b>	<b>7.2500e-003</b>		<b>141.2989</b>

**3.4 Grading - 2017****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6018	0.0000	6.6018	3.3728	0.0000	3.3728			0.0000			0.0000
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518		6,313.3690	6,313.3690	1.9344		6,353.9915
<b>Total</b>	<b>6.0991</b>	<b>69.5920</b>	<b>46.8050</b>	<b>0.0617</b>	<b>6.6018</b>	<b>3.3172</b>	<b>9.9190</b>	<b>3.3728</b>	<b>3.0518</b>	<b>6.4246</b>		<b>6,313.3690</b>	<b>6,313.3690</b>	<b>1.9344</b>		<b>6,353.9915</b>

**3.4 Grading - 2017****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	0.0671	0.0837	0.7823	1.9500e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		156.8296	156.8296	8.0500e-003		156.9987
<b>Total</b>	<b>0.0671</b>	<b>0.0837</b>	<b>0.7823</b>	<b>1.9500e-003</b>	<b>0.1643</b>	<b>1.1900e-003</b>	<b>0.1655</b>	<b>0.0436</b>	<b>1.1000e-003</b>	<b>0.0447</b>		<b>156.8296</b>	<b>156.8296</b>	<b>8.0500e-003</b>		<b>156.9987</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6018	0.0000	6.6018	3.3728	0.0000	3.3728			0.0000			0.0000
Off-Road	0.7564	3.2778	34.7787	0.0617		0.0151	0.0151		0.0151	0.0151	0.0000	6,313.3690	6,313.3690	1.9344		6,353.9915
<b>Total</b>	<b>0.7564</b>	<b>3.2778</b>	<b>34.7787</b>	<b>0.0617</b>	<b>6.6018</b>	<b>0.0151</b>	<b>6.6170</b>	<b>3.3728</b>	<b>0.0151</b>	<b>3.3880</b>	<b>0.0000</b>	<b>6,313.3690</b>	<b>6,313.3690</b>	<b>1.9344</b>		<b>6,353.9915</b>



**3.4 Grading - 2017****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	0.0671	0.0837	0.7823	1.9500e-003	0.3071	1.1900e-003	0.3083	0.0786	1.1000e-003	0.0797		156.8296	156.8296	8.0500e-003		156.9987
<b>Total</b>	<b>0.0671</b>	<b>0.0837</b>	<b>0.7823</b>	<b>1.9500e-003</b>	<b>0.3071</b>	<b>1.1900e-003</b>	<b>0.3083</b>	<b>0.0786</b>	<b>1.1000e-003</b>	<b>0.0797</b>		<b>156.8296</b>	<b>156.8296</b>	<b>8.0500e-003</b>		<b>156.9987</b>

**3.5 Building Construction - 2017****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
<b>Total</b>	<b>3.1024</b>	<b>26.4057</b>	<b>18.1291</b>	<b>0.0268</b>		<b>1.7812</b>	<b>1.7812</b>		<b>1.6730</b>	<b>1.6730</b>		<b>2,639.8053</b>	<b>2,639.8053</b>	<b>0.6497</b>		<b>2,653.4490</b>

**3.5 Building Construction - 2017****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	0.6616	5.2054	8.5080	0.0142	0.3983	0.0754	0.4737	0.1136	0.0693	0.1830		1,396.523 2	1,396.523 2	0.0107		1,396.748 7
Worker	1.2421	1.5477	14.4733	0.0362	3.0395	0.0221	3.0616	0.8062	0.0204	0.8266		2,901.348 2	2,901.348 2	0.1490		2,904.476 5
<b>Total</b>	<b>1.9037</b>	<b>6.7532</b>	<b>22.9814</b>	<b>0.0503</b>	<b>3.4377</b>	<b>0.0975</b>	<b>3.5352</b>	<b>0.9198</b>	<b>0.0897</b>	<b>1.0096</b>		<b>4,297.871 3</b>	<b>4,297.871 3</b>	<b>0.1597</b>		<b>4,301.225 2</b>

**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	0.3265	2.2289	17.4110	0.0268		6.0900e-003	6.0900e-003		6.0900e-003	6.0900e-003	0.0000	2,639.805 3	2,639.805 3	0.6497		2,653.449 0
<b>Total</b>	<b>0.3265</b>	<b>2.2289</b>	<b>17.4110</b>	<b>0.0268</b>		<b>6.0900e-003</b>	<b>6.0900e-003</b>		<b>6.0900e-003</b>	<b>6.0900e-003</b>	<b>0.0000</b>	<b>2,639.805 3</b>	<b>2,639.805 3</b>	<b>0.6497</b>		<b>2,653.449 0</b>

**3.5 Building Construction - 2017****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	0.6616	5.2054	8.5080	0.0142	0.6878	0.0754	0.7632	0.1847	0.0693	0.2540		1,396.523 2	1,396.523 2	0.0107		1,396.748 7
Worker	1.2421	1.5477	14.4733	0.0362	5.6810	0.0221	5.7031	1.4546	0.0204	1.4750		2,901.348 2	2,901.348 2	0.1490		2,904.476 5
<b>Total</b>	<b>1.9037</b>	<b>6.7532</b>	<b>22.9814</b>	<b>0.0503</b>	<b>6.3689</b>	<b>0.0975</b>	<b>6.4664</b>	<b>1.6393</b>	<b>0.0897</b>	<b>1.7290</b>		<b>4,297.871 3</b>	<b>4,297.871 3</b>	<b>0.1597</b>		<b>4,301.225 2</b>

**3.5 Building Construction - 2018****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.939 0	2,609.939 0	0.6387		2,623.351 7
<b>Total</b>	<b>2.6687</b>	<b>23.2608</b>	<b>17.5327</b>	<b>0.0268</b>		<b>1.4943</b>	<b>1.4943</b>		<b>1.4048</b>	<b>1.4048</b>		<b>2,609.939 0</b>	<b>2,609.939 0</b>	<b>0.6387</b>		<b>2,623.351 7</b>

**3.5 Building Construction - 2018****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	0.6203	4.6997	8.1458	0.0142	0.3982	0.0700	0.4682	0.1136	0.0644	0.1780		1,372.516 9	1,372.516 9	0.0105		1,372.738 3
Worker	1.1288	1.4124	13.0711	0.0361	3.0395	0.0217	3.0611	0.8062	0.0201	0.8263		2,792.374 7	2,792.374 7	0.1386		2,795.284 6
<b>Total</b>	<b>1.7491</b>	<b>6.1121</b>	<b>21.2168</b>	<b>0.0503</b>	<b>3.4377</b>	<b>0.0917</b>	<b>3.5294</b>	<b>0.9198</b>	<b>0.0845</b>	<b>1.0043</b>		<b>4,164.891 6</b>	<b>4,164.891 6</b>	<b>0.1491</b>		<b>4,168.022 8</b>

**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	0.3265	2.2289	17.4110	0.0268		6.0900e-003	6.0900e-003		6.0900e-003	6.0900e-003	0.0000	2,609.938 9	2,609.938 9	0.6387		2,623.351 7
<b>Total</b>	<b>0.3265</b>	<b>2.2289</b>	<b>17.4110</b>	<b>0.0268</b>		<b>6.0900e-003</b>	<b>6.0900e-003</b>		<b>6.0900e-003</b>	<b>6.0900e-003</b>	<b>0.0000</b>	<b>2,609.938 9</b>	<b>2,609.938 9</b>	<b>0.6387</b>		<b>2,623.351 7</b>

**3.5 Building Construction - 2018****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	0.6203	4.6997	8.1458	0.0142	0.6878	0.0700	0.7578	0.1847	0.0644	0.2491		1,372.516 9	1,372.516 9	0.0105		1,372.738 3
Worker	1.1288	1.4124	13.0711	0.0361	5.6810	0.0217	5.7027	1.4546	0.0201	1.4747		2,792.374 7	2,792.374 7	0.1386		2,795.284 6
<b>Total</b>	<b>1.7491</b>	<b>6.1121</b>	<b>21.2168</b>	<b>0.0503</b>	<b>6.3688</b>	<b>0.0917</b>	<b>6.4605</b>	<b>1.6393</b>	<b>0.0845</b>	<b>1.7237</b>		<b>4,164.891 6</b>	<b>4,164.891 6</b>	<b>0.1491</b>		<b>4,168.022 8</b>

**3.5 Building Construction - 2019****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.761 8	2,580.761 8	0.6279		2,593.947 9
<b>Total</b>	<b>2.3516</b>	<b>20.9650</b>	<b>17.1204</b>	<b>0.0268</b>		<b>1.2850</b>	<b>1.2850</b>		<b>1.2083</b>	<b>1.2083</b>		<b>2,580.761 8</b>	<b>2,580.761 8</b>	<b>0.6279</b>		<b>2,593.947 9</b>

**3.5 Building Construction - 2019****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	0.5784	4.2764	7.7884	0.0141	0.3982	0.0651	0.4632	0.1136	0.0599	0.1734		1,348.853 9	1,348.853 9	0.0103		1,349.070 0
Worker	1.0476	1.3051	12.0094	0.0361	3.0395	0.0215	3.0610	0.8062	0.0200	0.8262		2,691.335 8	2,691.335 8	0.1303		2,694.072 8
<b>Total</b>	<b>1.6260</b>	<b>5.5814</b>	<b>19.7978</b>	<b>0.0503</b>	<b>3.4376</b>	<b>0.0866</b>	<b>3.5242</b>	<b>0.9198</b>	<b>0.0798</b>	<b>0.9996</b>		<b>4,040.189 7</b>	<b>4,040.189 7</b>	<b>0.1406</b>		<b>4,043.142 8</b>

**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	0.3265	2.2289	17.4110	0.0268		6.0900e-003	6.0900e-003		6.0900e-003	6.0900e-003	0.0000	2,580.761 8	2,580.761 8	0.6279		2,593.947 9
<b>Total</b>	<b>0.3265</b>	<b>2.2289</b>	<b>17.4110</b>	<b>0.0268</b>		<b>6.0900e-003</b>	<b>6.0900e-003</b>		<b>6.0900e-003</b>	<b>6.0900e-003</b>	<b>0.0000</b>	<b>2,580.761 8</b>	<b>2,580.761 8</b>	<b>0.6279</b>		<b>2,593.947 9</b>

**3.5 Building Construction - 2019****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	0.5784	4.2764	7.7884	0.0141	0.6877	0.0651	0.7528	0.1847	0.0599	0.2445		1,348.853 9	1,348.853 9	0.0103		1,349.070 0
Worker	1.0476	1.3051	12.0094	0.0361	5.6810	0.0215	5.7026	1.4546	0.0200	1.4746		2,691.335 8	2,691.335 8	0.1303		2,694.072 8
<b>Total</b>	<b>1.6260</b>	<b>5.5814</b>	<b>19.7978</b>	<b>0.0503</b>	<b>6.3688</b>	<b>0.0866</b>	<b>6.4554</b>	<b>1.6392</b>	<b>0.0798</b>	<b>1.7191</b>		<b>4,040.189 7</b>	<b>4,040.189 7</b>	<b>0.1406</b>		<b>4,043.142 8</b>

**3.5 Building Construction - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465		2,542.479 9	2,542.479 9	0.6194		2,555.488 0
<b>Total</b>	<b>2.1113</b>	<b>19.0839</b>	<b>16.8084</b>	<b>0.0268</b>		<b>1.1128</b>	<b>1.1128</b>		<b>1.0465</b>	<b>1.0465</b>		<b>2,542.479 9</b>	<b>2,542.479 9</b>	<b>0.6194</b>		<b>2,555.488 0</b>

**3.5 Building Construction - 2020****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	0.5462	3.6412	7.5318	0.0141	0.3982	0.0583	0.4565	0.1136	0.0536	0.1672		1,317.9903	1,317.9903	9.9700e-003		1,318.1997
Worker	0.9906	1.2192	11.2174	0.0361	3.0395	0.0216	3.0610	0.8062	0.0200	0.8262		2,582.8658	2,582.8658	0.1239		2,585.4685
<b>Total</b>	<b>1.5368</b>	<b>4.8604</b>	<b>18.7491</b>	<b>0.0502</b>	<b>3.4376</b>	<b>0.0799</b>	<b>3.5175</b>	<b>0.9198</b>	<b>0.0736</b>	<b>0.9934</b>		<b>3,900.8561</b>	<b>3,900.8561</b>	<b>0.1339</b>		<b>3,903.6681</b>

**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	0.3265	2.2289	17.4110	0.0268		6.0900e-003	6.0900e-003		6.0900e-003	6.0900e-003	0.0000	2,542.4799	2,542.4799	0.6194		2,555.4880
<b>Total</b>	<b>0.3265</b>	<b>2.2289</b>	<b>17.4110</b>	<b>0.0268</b>		<b>6.0900e-003</b>	<b>6.0900e-003</b>		<b>6.0900e-003</b>	<b>6.0900e-003</b>	<b>0.0000</b>	<b>2,542.4799</b>	<b>2,542.4799</b>	<b>0.6194</b>		<b>2,555.4880</b>



### 3.5 Building Construction - 2020

#### 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	0.5462	3.6412	7.5318	0.0141	0.6877	0.0583	0.7460	0.1846	0.0536	0.2383		1,317.990 3	1,317.990 3	9.9700e- 003		1,318.199 7
Worker	0.9906	1.2192	11.2174	0.0361	5.6810	0.0216	5.7026	1.4546	0.0200	1.4746		2,582.865 8	2,582.865 8	0.1239		2,585.468 5
<b>Total</b>	<b>1.5368</b>	<b>4.8604</b>	<b>18.7491</b>	<b>0.0502</b>	<b>6.3687</b>	<b>0.0799</b>	<b>6.4486</b>	<b>1.6392</b>	<b>0.0736</b>	<b>1.7129</b>		<b>3,900.856 1</b>	<b>3,900.856 1</b>	<b>0.1339</b>		<b>3,903.668 1</b>

### 3.6 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	1.3301	13.7845	14.3523	0.0223		0.7390	0.7390		0.6799	0.6799		2,160.757 1	2,160.757 1	0.6988		2,175.432 6
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.3301</b>	<b>13.7845</b>	<b>14.3523</b>	<b>0.0223</b>		<b>0.7390</b>	<b>0.7390</b>		<b>0.6799</b>	<b>0.6799</b>		<b>2,160.757 1</b>	<b>2,160.757 1</b>	<b>0.6988</b>		<b>2,175.432 6</b>

**3.6 Paving - 2020****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	0.0402	0.0494	0.4548	1.4600e-003	0.1232	8.7000e-004	0.1241	0.0327	8.1000e-004	0.0335		104.7108	104.7108	5.0200e-003		104.8163
<b>Total</b>	<b>0.0402</b>	<b>0.0494</b>	<b>0.4548</b>	<b>1.4600e-003</b>	<b>0.1232</b>	<b>8.7000e-004</b>	<b>0.1241</b>	<b>0.0327</b>	<b>8.1000e-004</b>	<b>0.0335</b>		<b>104.7108</b>	<b>104.7108</b>	<b>5.0200e-003</b>		<b>104.8163</b>

**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	0.2745	1.1895	16.9276	0.0223		5.4900e-003	5.4900e-003		5.4900e-003	5.4900e-003	0.0000	2,160.7571	2,160.7571	0.6988		2,175.4326
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.2745</b>	<b>1.1895</b>	<b>16.9276</b>	<b>0.0223</b>		<b>5.4900e-003</b>	<b>5.4900e-003</b>		<b>5.4900e-003</b>	<b>5.4900e-003</b>	<b>0.0000</b>	<b>2,160.7571</b>	<b>2,160.7571</b>	<b>0.6988</b>		<b>2,175.4326</b>

### 3.6 Paving - 2020

#### 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	0.0402	0.0494	0.4548	1.4600e-003	0.2303	8.7000e-004	0.2312	0.0590	8.1000e-004	0.0598		104.7108	104.7108	5.0200e-003		104.8163
<b>Total</b>	<b>0.0402</b>	<b>0.0494</b>	<b>0.4548</b>	<b>1.4600e-003</b>	<b>0.2303</b>	<b>8.7000e-004</b>	<b>0.2312</b>	<b>0.0590</b>	<b>8.1000e-004</b>	<b>0.0598</b>		<b>104.7108</b>	<b>104.7108</b>	<b>5.0200e-003</b>		<b>104.8163</b>

### 3.7 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	232.1554					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		281.9057
<b>Total</b>	<b>232.3975</b>	<b>1.6838</b>	<b>1.8314</b>	<b>2.9700e-003</b>		<b>0.1109</b>	<b>0.1109</b>		<b>0.1109</b>	<b>0.1109</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0218</b>		<b>281.9057</b>

### 3.7 Architectural Coating - 2020

#### 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	0.1981	0.2438	2.2435	7.2300e-003	0.6079	4.3100e-003	0.6122	0.1612	4.0000e-003	0.1652		516.5732	516.5732	0.0248		517.0937
<b>Total</b>	<b>0.1981</b>	<b>0.2438</b>	<b>2.2435</b>	<b>7.2300e-003</b>	<b>0.6079</b>	<b>4.3100e-003</b>	<b>0.6122</b>	<b>0.1612</b>	<b>4.0000e-003</b>	<b>0.1652</b>		<b>516.5732</b>	<b>516.5732</b>	<b>0.0248</b>		<b>517.0937</b>

#### 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	232.1554					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0218		281.9057
<b>Total</b>	<b>232.1851</b>	<b>0.1288</b>	<b>1.8324</b>	<b>2.9700e-003</b>		<b>5.9000e-004</b>	<b>5.9000e-004</b>		<b>5.9000e-004</b>	<b>5.9000e-004</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0218</b>		<b>281.9057</b>

### 3.7 Architectural Coating - 2020

#### 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	0.1981	0.2438	2.2435	7.2300e-003	1.1362	4.3100e-003	1.1405	0.2909	4.0000e-003	0.2949		516.5732	516.5732	0.0248		517.0937
<b>Total</b>	<b>0.1981</b>	<b>0.2438</b>	<b>2.2435</b>	<b>7.2300e-003</b>	<b>1.1362</b>	<b>4.3100e-003</b>	<b>1.1405</b>	<b>0.2909</b>	<b>4.0000e-003</b>	<b>0.2949</b>		<b>516.5732</b>	<b>516.5732</b>	<b>0.0248</b>		<b>517.0937</b>

### 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	12.6247	21.1492	109.4466	0.2524	32.8177	0.3007	33.1184	8.4346	0.2775	8.7121		19,307.2666	19,307.2666	0.7784		19,323.6134
Unmitigated	12.6247	21.1492	109.4466	0.2524	32.8177	0.3007	33.1184	8.4346	0.2775	8.7121		19,307.2666	19,307.2666	0.7784		19,323.6134

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,662.00	1,662.00	1662.00	3,115,888	3,115,888
Condo/Townhouse	1,800.00	1,800.00	1800.00	3,374,608	3,374,608
Single Family Housing	990.00	990.00	990.00	1,856,034	1,856,034
Total	4,452.00	4,452.00	4,452.00	8,346,529	8,346,529

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	5.80	5.80	5.80	41.60	18.80	39.60	86	11	3
Condo/Townhouse	5.80	5.80	5.80	41.60	18.80	39.60	86	11	3
Single Family Housing	5.80	5.80	5.80	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

## 5.0 Energy Detail

### 2.4 Fleet Mix

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	0.2514	2.1481	0.9141	0.0137		0.1737	0.1737		0.1737	0.1737		2,742.2128	2,742.2128	0.0526	0.0503	2,758.9015
NaturalGas Unmitigated	0.2514	2.1481	0.9141	0.0137		0.1737	0.1737		0.1737	0.1737		2,742.2128	2,742.2128	0.0526	0.0503	2,758.9015

## 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 Low Rise	7944.63	0.0857	0.7322	0.3116	4.6700e-003		0.0592	0.0592		0.0592	0.0592		934.6618	934.6618	0.0179	0.0171	940.3500
Condo/Townhouse	8248.59	0.0890	0.7602	0.3235	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.4226	970.4226	0.0186	0.0178	976.3285
Single Family Housing	7115.59	0.0767	0.6558	0.2790	4.1900e-003		0.0530	0.0530		0.0530	0.0530		837.1284	837.1284	0.0160	0.0154	842.2230
<b>Total</b>		<b>0.2514</b>	<b>2.1481</b>	<b>0.9141</b>	<b>0.0137</b>		<b>0.1737</b>	<b>0.1737</b>		<b>0.1737</b>	<b>0.1737</b>		<b>2,742.2128</b>	<b>2,742.2128</b>	<b>0.0526</b>	<b>0.0503</b>	<b>2,758.9015</b>

## 5.2 Energy by Land Use - NaturalGas

### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	8.24859	0.0890	0.7602	0.3235	4.8500e-003		0.0615	0.0615		0.0615	0.0615		970.4226	970.4226	0.0186	0.0178	976.3285
Single Family Housing	7.11559	0.0767	0.6558	0.2790	4.1900e-003		0.0530	0.0530		0.0530	0.0530		837.1284	837.1284	0.0160	0.0154	842.2230
Apartments Low Rise	7.94463	0.0857	0.7322	0.3116	4.6700e-003		0.0592	0.0592		0.0592	0.0592		934.6618	934.6618	0.0179	0.0171	940.3500
<b>Total</b>		<b>0.2514</b>	<b>2.1481</b>	<b>0.9141</b>	<b>0.0137</b>		<b>0.1737</b>	<b>0.1737</b>		<b>0.1737</b>	<b>0.1737</b>		<b>2,742.2128</b>	<b>2,742.2128</b>	<b>0.0526</b>	<b>0.0503</b>	<b>2,758.9015</b>

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive 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	21.9015	0.5754	49.7481	2.6200e-003		0.2736	0.2736		0.2736	0.2736	0.0000	89.2800	89.2800	0.0871	0.0000	91.1081
Unmitigated	941.6689	13.0542	1,182.8027	0.4452		159.4609	159.4609		159.4562	159.4562	16,690.8102	7,089.1623	23,779.9725	15.4899	1.3129	24,512.2465



**6.2 Area by SubCategory****Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.8304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	14.5563					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	919.7674	12.4788	1,133.0546	0.4426		159.1873	159.1873		159.1826	159.1826	16,690.8102	6,999.8824	23,690.6925	15.4029	1.3129	24,421.1384
Landscaping	1.5149	0.5754	49.7481	2.6200e-003		0.2736	0.2736		0.2736	0.2736		89.2800	89.2800	0.0871		91.1081
<b>Total</b>	<b>941.6689</b>	<b>13.0542</b>	<b>1,182.8027</b>	<b>0.4452</b>		<b>159.4609</b>	<b>159.4609</b>		<b>159.4562</b>	<b>159.4562</b>	<b>16,690.8102</b>	<b>7,089.1623</b>	<b>23,779.9725</b>	<b>15.4899</b>	<b>1.3129</b>	<b>24,512.2465</b>

## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.8304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	14.5563					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	1.5149	0.5754	49.7481	2.6200e-003		0.2736	0.2736		0.2736	0.2736		89.2800	89.2800	0.0871		91.1081
<b>Total</b>	<b>21.9015</b>	<b>0.5754</b>	<b>49.7481</b>	<b>2.6200e-003</b>		<b>0.2736</b>	<b>0.2736</b>		<b>0.2736</b>	<b>0.2736</b>	<b>0.0000</b>	<b>89.2800</b>	<b>89.2800</b>	<b>0.0871</b>	<b>0.0000</b>	<b>91.1081</b>

## 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

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

## 9.0 Operational Offroad

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

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**Pacific Village - Proposed Project with T24 Reductions**  
**San Diego County, Annual**

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	277.00	Dwelling Unit	12.00	277,000.00	792
Condo/Townhouse	225.00	Dwelling Unit	25.50	225,000.00	644
Single Family Housing	99.00	Dwelling Unit	11.80	178,200.00	283

### 1.2 Other Project Characteristics

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

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 41 acres

Construction Phase -

Off-road Equipment -

Trips and VMT -

Demolition -

Grading - 41 acres

Architectural Coating - 150 g.l.

Vehicle Trips - Traffic Gen

Woodstoves - No Fire Places

Area Coating - 150 g.l.

Energy Use - T24 Corrections SFE - 36.4%, MFE - 23.3%, SFNG - 6.5%, MFNG - 3.8%, Lighting Energy Intensity 25%

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	150.00
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblEnergyUse	LightingElect	810.36	607.77
tblEnergyUse	LightingElect	1,001.10	750.83
tblEnergyUse	LightingElect	1,608.84	1,206.63
tblEnergyUse	T24E	184.75	141.70
tblEnergyUse	T24E	206.69	158.53
tblEnergyUse	T24E	425.62	270.69
tblEnergyUse	T24NG	8,285.40	7,970.55
tblEnergyUse	T24NG	10,789.48	10,379.48
tblEnergyUse	T24NG	21,834.49	20,415.25
tblGrading	AcresOfGrading	187.50	41.00
tblGrading	AcresOfGrading	0.00	41.00
tblLandUse	LotAcreage	17.31	12.00
tblLandUse	LotAcreage	14.06	25.50
tblLandUse	LotAcreage	32.14	11.80
tblProjectCharacteristics	OperationalYear	2014	2020
tblTripsAndVMT	VendorTripNumber	64.00	60.00
tblTripsAndVMT	WorkerTripNumber	397.00	370.00

tblTripsAndVMT	WorkerTripNumber	79.00	74.00
tblVehicleTrips	HO_TL	7.50	5.80
tblVehicleTrips	HO_TL	7.50	5.80
tblVehicleTrips	HO_TL	7.50	5.80
tblVehicleTrips	HS_TL	7.30	5.80
tblVehicleTrips	HS_TL	7.30	5.80
tblVehicleTrips	HS_TL	7.30	5.80
tblVehicleTrips	HW_TL	10.80	5.80
tblVehicleTrips	HW_TL	10.80	5.80
tblVehicleTrips	HW_TL	10.80	5.80
tblVehicleTrips	ST_TR	7.16	6.00
tblVehicleTrips	ST_TR	7.16	8.00
tblVehicleTrips	ST_TR	10.08	10.00
tblVehicleTrips	SU_TR	6.07	6.00
tblVehicleTrips	SU_TR	6.07	8.00
tblVehicleTrips	SU_TR	8.77	10.00
tblVehicleTrips	WD_TR	6.59	6.00
tblVehicleTrips	WD_TR	6.59	8.00
tblVehicleTrips	WD_TR	9.57	10.00

## 2.0 Emissions Summary

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**2.1 Overall Construction****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.6777	6.3960	5.5362	8.6700e-003	0.9061	0.3201	1.2262	0.3566	0.2969	0.6535	0.0000	753.6043	753.6043	0.1470	0.0000	756.6916
2018	0.5612	3.8344	4.9563	0.0101	0.4381	0.2069	0.6451	0.1175	0.1943	0.3118	0.0000	806.0761	806.0761	0.0933	0.0000	808.0343
2019	0.5049	3.4655	4.7220	0.0101	0.4381	0.1790	0.6171	0.1175	0.1681	0.2855	0.0000	787.7312	787.7312	0.0910	0.0000	789.6415
2020	6.6339	1.7865	2.4880	5.3100e-003	0.2093	0.0909	0.3002	0.0561	0.0852	0.1412	0.0000	408.4650	408.4650	0.0573	0.0000	409.6689
<b>Total</b>	<b>8.3777</b>	<b>15.4825</b>	<b>17.7025</b>	<b>0.0342</b>	<b>1.9917</b>	<b>0.7968</b>	<b>2.7885</b>	<b>0.6476</b>	<b>0.7444</b>	<b>1.3920</b>	<b>0.0000</b>	<b>2,755.8766</b>	<b>2,755.8766</b>	<b>0.3886</b>	<b>0.0000</b>	<b>2,764.0363</b>

## 2.1 Overall Construction

### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.1768	0.8785	4.5235	8.6700e-003	1.0751	8.9900e-003	1.0841	0.3981	8.3700e-003	0.4065	0.0000	753.6037	753.6037	0.1470	0.0000	756.6910
2018	0.2555	1.0897	4.9405	0.0101	0.8102	0.0127	0.8229	0.2088	0.0118	0.2206	0.0000	806.0758	806.0758	0.0933	0.0000	808.0339
2019	0.2406	1.0204	4.7600	0.0101	0.8102	0.0121	0.8222	0.2088	0.0112	0.2199	0.0000	787.7308	787.7308	0.0910	0.0000	789.6411
2020	6.4982	0.4451	2.5928	5.3100e-003	0.3874	5.1500e-003	0.3925	0.0998	4.7900e-003	0.1046	0.0000	408.4648	408.4648	0.0573	0.0000	409.6687
Total	7.1712	3.4338	16.8167	0.0342	3.0829	0.0389	3.1218	0.9154	0.0361	0.9515	0.0000	2,755.875 1	2,755.875 1	0.3886	0.0000	2,764.034 7

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	14.40	77.82	5.00	0.00	-54.79	95.12	-11.95	-41.36	95.15	31.64	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	tons/yr										MT/yr					
Area	41.5674	0.5634	50.9326	0.0184		6.5513	6.5513		6.5511	6.5511	620.8076	267.6471	888.4546	0.5800	0.0488	915.7725
Energy	0.0459	0.3920	0.1668	2.5000e-003		0.0317	0.0317		0.0317	0.0317	0.0000	1,269.7015	1,269.7015	0.0415	0.0151	1,275.2598
Mobile	2.1430	3.8321	19.1803	0.0463	5.8217	0.0545	5.8762	1.4980	0.0503	1.5483	0.0000	3,210.3414	3,210.3414	0.1283	0.0000	3,213.0352
Waste						0.0000	0.0000		0.0000	0.0000	70.4277	0.0000	70.4277	4.1622	0.0000	157.8331
Water						0.0000	0.0000		0.0000	0.0000	12.4229	256.2623	268.6852	1.2863	0.0323	305.6980
<b>Total</b>	<b>43.7563</b>	<b>4.7875</b>	<b>70.2797</b>	<b>0.0672</b>	<b>5.8217</b>	<b>6.6375</b>	<b>12.4592</b>	<b>1.4980</b>	<b>6.6331</b>	<b>8.1311</b>	<b>703.6582</b>	<b>5,003.9523</b>	<b>5,707.6105</b>	<b>6.1982</b>	<b>0.0962</b>	<b>5,867.5985</b>

## 2.2 Overall Operational

### Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.8569	0.0518	4.4773	2.4000e-004		0.0246	0.0246		0.0246	0.0246	0.0000	7.2894	7.2894	7.1100e-003	0.0000	7.4387
Energy	0.0459	0.3920	0.1668	2.5000e-003		0.0317	0.0317		0.0317	0.0317	0.0000	1,269.7015	1,269.7015	0.0415	0.0151	1,275.2598
Mobile	2.1430	3.8321	19.1803	0.0463	5.8217	0.0545	5.8762	1.4980	0.0503	1.5483	0.0000	3,210.3414	3,210.3414	0.1283	0.0000	3,213.0352
Waste						0.0000	0.0000		0.0000	0.0000	52.8208	0.0000	52.8208	3.1216	0.0000	118.3748
Water						0.0000	0.0000		0.0000	0.0000	9.9383	222.9363	232.8746	1.0296	0.0259	262.5304
<b>Total</b>	<b>6.0458</b>	<b>4.2759</b>	<b>23.8244</b>	<b>0.0490</b>	<b>5.8217</b>	<b>0.1108</b>	<b>5.9325</b>	<b>1.4980</b>	<b>0.1066</b>	<b>1.6046</b>	<b>62.7591</b>	<b>4,710.2686</b>	<b>4,773.0277</b>	<b>4.3281</b>	<b>0.0410</b>	<b>4,876.6388</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>86.18</b>	<b>10.69</b>	<b>66.10</b>	<b>27.01</b>	<b>0.00</b>	<b>98.33</b>	<b>52.38</b>	<b>0.00</b>	<b>98.39</b>	<b>80.27</b>	<b>91.08</b>	<b>5.87</b>	<b>16.37</b>	<b>30.17</b>	<b>57.34</b>	<b>16.89</b>

## 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	1/1/2017	3/10/2017	5	50	
2	Site Preparation	Site Preparation	3/11/2017	4/21/2017	5	30	
3	Grading	Grading	4/22/2017	8/4/2017	5	75	
4	Building Construction	Building Construction	8/5/2017	6/5/2020	5	740	
5	Paving	Paving	6/6/2020	8/21/2020	5	55	
6	Architectural Coating	Architectural Coating	8/22/2020	11/6/2020	5	55	

**Acres of Grading (Site Preparation Phase): 41**

**Acres of Grading (Grading Phase): 41**

**Acres of Paving: 0**

**Residential Indoor: 1,377,405; Residential Outdoor: 459,135; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	1,510.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	370.00	60.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	74.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

### 3.2 Demolition - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1654	0.0000	0.1654	0.0251	0.0000	0.0251	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1012	1.0674	0.8473	1.0000e-003		0.0531	0.0531		0.0495	0.0495	0.0000	91.5455	91.5455	0.0251	0.0000	92.0729
<b>Total</b>	<b>0.1012</b>	<b>1.0674</b>	<b>0.8473</b>	<b>1.0000e-003</b>	<b>0.1654</b>	<b>0.0531</b>	<b>0.2186</b>	<b>0.0251</b>	<b>0.0495</b>	<b>0.0745</b>	<b>0.0000</b>	<b>91.5455</b>	<b>91.5455</b>	<b>0.0251</b>	<b>0.0000</b>	<b>92.0729</b>

**3.2 Demolition - 2017****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0148	0.1955	0.1730	5.6000e-004	0.0129	2.5400e-003	0.0154	3.5400e-003	2.3400e-003	5.8700e-003	0.0000	50.6920	50.6920	3.5000e-004	0.0000	50.6994
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	0.0000	0.0000
Worker	1.1700e-003	1.5400e-003	0.0146	4.0000e-005	3.0100e-003	2.0000e-005	3.0300e-003	8.0000e-004	2.0000e-005	8.2000e-004	0.0000	2.6941	2.6941	1.4000e-004	0.0000	2.6970
<b>Total</b>	<b>0.0160</b>	<b>0.1970</b>	<b>0.1876</b>	<b>6.0000e-004</b>	<b>0.0159</b>	<b>2.5600e-003</b>	<b>0.0185</b>	<b>4.3400e-003</b>	<b>2.3600e-003</b>	<b>6.6900e-003</b>	<b>0.0000</b>	<b>53.3862</b>	<b>53.3862</b>	<b>4.9000e-004</b>	<b>0.0000</b>	<b>53.3964</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1654	0.0000	0.1654	0.0251	0.0000	0.0251	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0119	0.0513	0.5956	1.0000e-003		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	91.5454	91.5454	0.0251	0.0000	92.0728
<b>Total</b>	<b>0.0119</b>	<b>0.0513</b>	<b>0.5956</b>	<b>1.0000e-003</b>	<b>0.1654</b>	<b>2.4000e-004</b>	<b>0.1657</b>	<b>0.0251</b>	<b>2.4000e-004</b>	<b>0.0253</b>	<b>0.0000</b>	<b>91.5454</b>	<b>91.5454</b>	<b>0.0251</b>	<b>0.0000</b>	<b>92.0728</b>



**3.2 Demolition - 2017****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0148	0.1955	0.1730	5.6000e-004	0.0226	2.5400e-003	0.0251	5.9200e-003	2.3400e-003	8.2600e-003	0.0000	50.6920	50.6920	3.5000e-004	0.0000	50.6994
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	0.0000	0.0000
Worker	1.1700e-003	1.5400e-003	0.0146	4.0000e-005	5.6100e-003	2.0000e-005	5.6300e-003	1.4400e-003	2.0000e-005	1.4600e-003	0.0000	2.6941	2.6941	1.4000e-004	0.0000	2.6970
<b>Total</b>	<b>0.0160</b>	<b>0.1970</b>	<b>0.1876</b>	<b>6.0000e-004</b>	<b>0.0282</b>	<b>2.5600e-003</b>	<b>0.0308</b>	<b>7.3600e-003</b>	<b>2.3600e-003</b>	<b>9.7200e-003</b>	<b>0.0000</b>	<b>53.3862</b>	<b>53.3862</b>	<b>4.9000e-004</b>	<b>0.0000</b>	<b>53.3964</b>

**3.3 Site Preparation - 2017****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2927	0.0000	0.2927	0.1513	0.0000	0.1513	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0726	0.7763	0.5910	5.9000e-004		0.0413	0.0413		0.0380	0.0380	0.0000	54.4731	54.4731	0.0167	0.0000	54.8236
<b>Total</b>	<b>0.0726</b>	<b>0.7763</b>	<b>0.5910</b>	<b>5.9000e-004</b>	<b>0.2927</b>	<b>0.0413</b>	<b>0.3340</b>	<b>0.1513</b>	<b>0.0380</b>	<b>0.1893</b>	<b>0.0000</b>	<b>54.4731</b>	<b>54.4731</b>	<b>0.0167</b>	<b>0.0000</b>	<b>54.8236</b>

**3.3 Site Preparation - 2017****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	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	0.0000	0.0000
Worker	8.4000e-004	1.1100e-003	0.0105	3.0000e-005	2.1700e-003	2.0000e-005	2.1800e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.9398	1.9398	1.0000e-004	0.0000	1.9419
<b>Total</b>	<b>8.4000e-004</b>	<b>1.1100e-003</b>	<b>0.0105</b>	<b>3.0000e-005</b>	<b>2.1700e-003</b>	<b>2.0000e-005</b>	<b>2.1800e-003</b>	<b>5.8000e-004</b>	<b>1.0000e-005</b>	<b>5.9000e-004</b>	<b>0.0000</b>	<b>1.9398</b>	<b>1.9398</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>1.9419</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2927	0.0000	0.2927	0.1513	0.0000	0.1513	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1400e-003	0.0309	0.3186	5.9000e-004		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	54.4730	54.4730	0.0167	0.0000	54.8235
<b>Total</b>	<b>7.1400e-003</b>	<b>0.0309</b>	<b>0.3186</b>	<b>5.9000e-004</b>	<b>0.2927</b>	<b>1.4000e-004</b>	<b>0.2929</b>	<b>0.1513</b>	<b>1.4000e-004</b>	<b>0.1515</b>	<b>0.0000</b>	<b>54.4730</b>	<b>54.4730</b>	<b>0.0167</b>	<b>0.0000</b>	<b>54.8235</b>

### 3.3 Site Preparation - 2017

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	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	0.0000	0.0000
Worker	8.4000e-004	1.1100e-003	0.0105	3.0000e-005	4.0400e-003	2.0000e-005	4.0600e-003	1.0400e-003	1.0000e-005	1.0500e-003	0.0000	1.9398	1.9398	1.0000e-004	0.0000	1.9419
<b>Total</b>	<b>8.4000e-004</b>	<b>1.1100e-003</b>	<b>0.0105</b>	<b>3.0000e-005</b>	<b>4.0400e-003</b>	<b>2.0000e-005</b>	<b>4.0600e-003</b>	<b>1.0400e-003</b>	<b>1.0000e-005</b>	<b>1.0500e-003</b>	<b>0.0000</b>	<b>1.9398</b>	<b>1.9398</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>1.9419</b>

### 3.4 Grading - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2476	0.0000	0.2476	0.1265	0.0000	0.1265	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2287	2.6097	1.7552	2.3100e-003		0.1244	0.1244		0.1144	0.1144	0.0000	214.7772	214.7772	0.0658	0.0000	216.1592
<b>Total</b>	<b>0.2287</b>	<b>2.6097</b>	<b>1.7552</b>	<b>2.3100e-003</b>	<b>0.2476</b>	<b>0.1244</b>	<b>0.3720</b>	<b>0.1265</b>	<b>0.1144</b>	<b>0.2409</b>	<b>0.0000</b>	<b>214.7772</b>	<b>214.7772</b>	<b>0.0658</b>	<b>0.0000</b>	<b>216.1592</b>

**3.4 Grading - 2017****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	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	0.0000	0.0000
Worker	2.3300e-003	3.0900e-003	0.0292	7.0000e-005	6.0100e-003	4.0000e-005	6.0600e-003	1.6000e-003	4.0000e-005	1.6400e-003	0.0000	5.3883	5.3883	2.7000e-004	0.0000	5.3940
<b>Total</b>	<b>2.3300e-003</b>	<b>3.0900e-003</b>	<b>0.0292</b>	<b>7.0000e-005</b>	<b>6.0100e-003</b>	<b>4.0000e-005</b>	<b>6.0600e-003</b>	<b>1.6000e-003</b>	<b>4.0000e-005</b>	<b>1.6400e-003</b>	<b>0.0000</b>	<b>5.3883</b>	<b>5.3883</b>	<b>2.7000e-004</b>	<b>0.0000</b>	<b>5.3940</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2476	0.0000	0.2476	0.1265	0.0000	0.1265	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0284	0.1229	1.3042	2.3100e-003		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	214.7770	214.7770	0.0658	0.0000	216.1589
<b>Total</b>	<b>0.0284</b>	<b>0.1229</b>	<b>1.3042</b>	<b>2.3100e-003</b>	<b>0.2476</b>	<b>5.7000e-004</b>	<b>0.2481</b>	<b>0.1265</b>	<b>5.7000e-004</b>	<b>0.1271</b>	<b>0.0000</b>	<b>214.7770</b>	<b>214.7770</b>	<b>0.0658</b>	<b>0.0000</b>	<b>216.1589</b>

**3.4 Grading - 2017****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	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	0.0000	0.0000
Worker	2.3300e-003	3.0900e-003	0.0292	7.0000e-005	0.0112	4.0000e-005	0.0113	2.8800e-003	4.0000e-005	2.9200e-003	0.0000	5.3883	5.3883	2.7000e-004	0.0000	5.3940
<b>Total</b>	<b>2.3300e-003</b>	<b>3.0900e-003</b>	<b>0.0292</b>	<b>7.0000e-005</b>	<b>0.0112</b>	<b>4.0000e-005</b>	<b>0.0113</b>	<b>2.8800e-003</b>	<b>4.0000e-005</b>	<b>2.9200e-003</b>	<b>0.0000</b>	<b>5.3883</b>	<b>5.3883</b>	<b>2.7000e-004</b>	<b>0.0000</b>	<b>5.3940</b>

**3.5 Building Construction - 2017****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1629	1.3863	0.9518	1.4100e-003		0.0935	0.0935		0.0878	0.0878	0.0000	125.7265	125.7265	0.0309	0.0000	126.3763
<b>Total</b>	<b>0.1629</b>	<b>1.3863</b>	<b>0.9518</b>	<b>1.4100e-003</b>		<b>0.0935</b>	<b>0.0935</b>		<b>0.0878</b>	<b>0.0878</b>	<b>0.0000</b>	<b>125.7265</b>	<b>125.7265</b>	<b>0.0309</b>	<b>0.0000</b>	<b>126.3763</b>

**3.5 Building Construction - 2017****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	0.0000	0.0000
Vendor	0.0328	0.2751	0.4074	7.5000e-004	0.0205	3.9400e-003	0.0244	5.8600e-003	3.6200e-003	9.4800e-003	0.0000	66.8115	66.8115	5.0000e-004	0.0000	66.8221
Worker	0.0604	0.0800	0.7562	1.9200e-003	0.1558	1.1600e-003	0.1569	0.0414	1.0700e-003	0.0425	0.0000	139.5563	139.5563	7.1000e-003	0.0000	139.7052
<b>Total</b>	<b>0.0932</b>	<b>0.3551</b>	<b>1.1636</b>	<b>2.6700e-003</b>	<b>0.1763</b>	<b>5.1000e-003</b>	<b>0.1814</b>	<b>0.0473</b>	<b>4.6900e-003</b>	<b>0.0519</b>	<b>0.0000</b>	<b>206.3677</b>	<b>206.3677</b>	<b>7.6000e-003</b>	<b>0.0000</b>	<b>206.5273</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0171	0.1170	0.9141	1.4100e-003		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	125.7264	125.7264	0.0309	0.0000	126.3762
<b>Total</b>	<b>0.0171</b>	<b>0.1170</b>	<b>0.9141</b>	<b>1.4100e-003</b>		<b>3.2000e-004</b>	<b>3.2000e-004</b>		<b>3.2000e-004</b>	<b>3.2000e-004</b>	<b>0.0000</b>	<b>125.7264</b>	<b>125.7264</b>	<b>0.0309</b>	<b>0.0000</b>	<b>126.3762</b>

**3.5 Building Construction - 2017****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	0.0000	0.0000
Vendor	0.0328	0.2751	0.4074	7.5000e-004	0.0353	3.9400e-003	0.0392	9.4900e-003	3.6200e-003	0.0131	0.0000	66.8115	66.8115	5.0000e-004	0.0000	66.8221
Worker	0.0604	0.0800	0.7562	1.9200e-003	0.2907	1.1600e-003	0.2918	0.0745	1.0700e-003	0.0756	0.0000	139.5563	139.5563	7.1000e-003	0.0000	139.7052
<b>Total</b>	<b>0.0932</b>	<b>0.3551</b>	<b>1.1636</b>	<b>2.6700e-003</b>	<b>0.3259</b>	<b>5.1000e-003</b>	<b>0.3310</b>	<b>0.0840</b>	<b>4.6900e-003</b>	<b>0.0887</b>	<b>0.0000</b>	<b>206.3677</b>	<b>206.3677</b>	<b>7.6000e-003</b>	<b>0.0000</b>	<b>206.5273</b>

**3.5 Building Construction - 2018****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3483	3.0355	2.2880	3.5000e-003		0.1950	0.1950		0.1833	0.1833	0.0000	308.9844	308.9844	0.0756	0.0000	310.5723
<b>Total</b>	<b>0.3483</b>	<b>3.0355</b>	<b>2.2880</b>	<b>3.5000e-003</b>		<b>0.1950</b>	<b>0.1950</b>		<b>0.1833</b>	<b>0.1833</b>	<b>0.0000</b>	<b>308.9844</b>	<b>308.9844</b>	<b>0.0756</b>	<b>0.0000</b>	<b>310.5723</b>

**3.5 Building Construction - 2018****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	0.0000	0.0000
Vendor	0.0766	0.6175	0.9680	1.8500e-003	0.0509	9.0800e-003	0.0600	0.0146	8.3500e-003	0.0229	0.0000	163.2212	163.2212	1.2300e-003	0.0000	163.2470
Worker	0.1364	0.1814	1.7004	4.7600e-003	0.3872	2.8300e-003	0.3900	0.1029	2.6200e-003	0.1055	0.0000	333.8705	333.8705	0.0164	0.0000	334.2150
<b>Total</b>	<b>0.2129</b>	<b>0.7989</b>	<b>2.6683</b>	<b>6.6100e-003</b>	<b>0.4381</b>	<b>0.0119</b>	<b>0.4501</b>	<b>0.1175</b>	<b>0.0110</b>	<b>0.1284</b>	<b>0.0000</b>	<b>497.0917</b>	<b>497.0917</b>	<b>0.0176</b>	<b>0.0000</b>	<b>497.4620</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0426	0.2909	2.2721	3.5000e-003		7.9000e-004	7.9000e-004		7.9000e-004	7.9000e-004	0.0000	308.9841	308.9841	0.0756	0.0000	310.5720
<b>Total</b>	<b>0.0426</b>	<b>0.2909</b>	<b>2.2721</b>	<b>3.5000e-003</b>		<b>7.9000e-004</b>	<b>7.9000e-004</b>		<b>7.9000e-004</b>	<b>7.9000e-004</b>	<b>0.0000</b>	<b>308.9841</b>	<b>308.9841</b>	<b>0.0756</b>	<b>0.0000</b>	<b>310.5720</b>



### 3.5 Building Construction - 2018

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	0.0000	0.0000
Vendor	0.0766	0.6175	0.9680	1.8500e-003	0.0877	9.0800e-003	0.0968	0.0236	8.3500e-003	0.0320	0.0000	163.2212	163.2212	1.2300e-003	0.0000	163.2470
Worker	0.1364	0.1814	1.7004	4.7600e-003	0.7225	2.8300e-003	0.7253	0.1852	2.6200e-003	0.1878	0.0000	333.8705	333.8705	0.0164	0.0000	334.2150
<b>Total</b>	<b>0.2129</b>	<b>0.7989</b>	<b>2.6683</b>	<b>6.6100e-003</b>	<b>0.8102</b>	<b>0.0119</b>	<b>0.8221</b>	<b>0.2088</b>	<b>0.0110</b>	<b>0.2198</b>	<b>0.0000</b>	<b>497.0917</b>	<b>497.0917</b>	<b>0.0176</b>	<b>0.0000</b>	<b>497.4620</b>

### 3.5 Building Construction - 2019

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3069	2.7359	2.2342	3.5000e-003		0.1677	0.1677		0.1577	0.1577	0.0000	305.5302	305.5302	0.0743	0.0000	307.0913
<b>Total</b>	<b>0.3069</b>	<b>2.7359</b>	<b>2.2342</b>	<b>3.5000e-003</b>		<b>0.1677</b>	<b>0.1677</b>		<b>0.1577</b>	<b>0.1577</b>	<b>0.0000</b>	<b>305.5302</b>	<b>305.5302</b>	<b>0.0743</b>	<b>0.0000</b>	<b>307.0913</b>

**3.5 Building Construction - 2019****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	0.0000	0.0000
Vendor	0.0715	0.5619	0.9238	1.8500e-003	0.0509	8.4400e-003	0.0594	0.0146	7.7700e-003	0.0223	0.0000	160.4088	160.4088	1.2000e-003	0.0000	160.4339
Worker	0.1265	0.1676	1.5640	4.7600e-003	0.3872	2.8100e-003	0.3900	0.1029	2.6000e-003	0.1055	0.0000	321.7922	321.7922	0.0154	0.0000	322.1162
<b>Total</b>	<b>0.1980</b>	<b>0.7295</b>	<b>2.4878</b>	<b>6.6100e-003</b>	<b>0.4381</b>	<b>0.0113</b>	<b>0.4494</b>	<b>0.1175</b>	<b>0.0104</b>	<b>0.1278</b>	<b>0.0000</b>	<b>482.2010</b>	<b>482.2010</b>	<b>0.0166</b>	<b>0.0000</b>	<b>482.5502</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0426	0.2909	2.2721	3.5000e-003		7.9000e-004	7.9000e-004		7.9000e-004	7.9000e-004	0.0000	305.5299	305.5299	0.0743	0.0000	307.0909
<b>Total</b>	<b>0.0426</b>	<b>0.2909</b>	<b>2.2721</b>	<b>3.5000e-003</b>		<b>7.9000e-004</b>	<b>7.9000e-004</b>		<b>7.9000e-004</b>	<b>7.9000e-004</b>	<b>0.0000</b>	<b>305.5299</b>	<b>305.5299</b>	<b>0.0743</b>	<b>0.0000</b>	<b>307.0909</b>

### 3.5 Building Construction - 2019

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	0.0000	0.0000
Vendor	0.0715	0.5619	0.9238	1.8500e-003	0.0877	8.4400e-003	0.0961	0.0236	7.7700e-003	0.0314	0.0000	160.4088	160.4088	1.2000e-003	0.0000	160.4339
Worker	0.1265	0.1676	1.5640	4.7600e-003	0.7225	2.8100e-003	0.7253	0.1852	2.6000e-003	0.1878	0.0000	321.7922	321.7922	0.0154	0.0000	322.1162
<b>Total</b>	<b>0.1980</b>	<b>0.7295</b>	<b>2.4878</b>	<b>6.6100e-003</b>	<b>0.8102</b>	<b>0.0113</b>	<b>0.8214</b>	<b>0.2088</b>	<b>0.0104</b>	<b>0.2192</b>	<b>0.0000</b>	<b>482.2010</b>	<b>482.2010</b>	<b>0.0166</b>	<b>0.0000</b>	<b>482.5502</b>

### 3.5 Building Construction - 2020

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1193	1.0782	0.9497	1.5100e-003		0.0629	0.0629		0.0591	0.0591	0.0000	130.3172	130.3172	0.0318	0.0000	130.9839
<b>Total</b>	<b>0.1193</b>	<b>1.0782</b>	<b>0.9497</b>	<b>1.5100e-003</b>		<b>0.0629</b>	<b>0.0629</b>		<b>0.0591</b>	<b>0.0591</b>	<b>0.0000</b>	<b>130.3172</b>	<b>130.3172</b>	<b>0.0318</b>	<b>0.0000</b>	<b>130.9839</b>

**3.5 Building Construction - 2020****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	0.0000	0.0000
Vendor	0.0293	0.2072	0.3863	8.0000e-004	0.0221	3.2800e-003	0.0253	6.3100e-003	3.0100e-003	9.3200e-003	0.0000	67.8609	67.8609	5.0000e-004	0.0000	67.8714
Worker	0.0518	0.0678	0.6328	2.0600e-003	0.1676	1.2200e-003	0.1689	0.0446	1.1300e-003	0.0457	0.0000	133.7059	133.7059	6.3500e-003	0.0000	133.8393
<b>Total</b>	<b>0.0811</b>	<b>0.2750</b>	<b>1.0191</b>	<b>2.8600e-003</b>	<b>0.1897</b>	<b>4.5000e-003</b>	<b>0.1942</b>	<b>0.0509</b>	<b>4.1400e-003</b>	<b>0.0550</b>	<b>0.0000</b>	<b>201.5668</b>	<b>201.5668</b>	<b>6.8500e-003</b>	<b>0.0000</b>	<b>201.7108</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0185	0.1259	0.9837	1.5100e-003		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	130.3170	130.3170	0.0318	0.0000	130.9838
<b>Total</b>	<b>0.0185</b>	<b>0.1259</b>	<b>0.9837</b>	<b>1.5100e-003</b>		<b>3.4000e-004</b>	<b>3.4000e-004</b>		<b>3.4000e-004</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>130.3170</b>	<b>130.3170</b>	<b>0.0318</b>	<b>0.0000</b>	<b>130.9838</b>

### 3.5 Building Construction - 2020

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	0.0000	0.0000
Vendor	0.0293	0.2072	0.3863	8.0000e-004	0.0380	3.2800e-003	0.0412	0.0102	3.0100e-003	0.0132	0.0000	67.8609	67.8609	5.0000e-004	0.0000	67.8714
Worker	0.0518	0.0678	0.6328	2.0600e-003	0.3128	1.2200e-003	0.3140	0.0802	1.1300e-003	0.0813	0.0000	133.7059	133.7059	6.3500e-003	0.0000	133.8393
<b>Total</b>	<b>0.0811</b>	<b>0.2750</b>	<b>1.0191</b>	<b>2.8600e-003</b>	<b>0.3508</b>	<b>4.5000e-003</b>	<b>0.3553</b>	<b>0.0904</b>	<b>4.1400e-003</b>	<b>0.0945</b>	<b>0.0000</b>	<b>201.5668</b>	<b>201.5668</b>	<b>6.8500e-003</b>	<b>0.0000</b>	<b>201.7108</b>

### 3.6 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	tons/yr										MT/yr					
Off-Road	0.0366	0.3791	0.3947	6.1000e-004		0.0203	0.0203		0.0187	0.0187	0.0000	53.9057	53.9057	0.0174	0.0000	54.2718
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0366</b>	<b>0.3791</b>	<b>0.3947</b>	<b>6.1000e-004</b>		<b>0.0203</b>	<b>0.0203</b>		<b>0.0187</b>	<b>0.0187</b>	<b>0.0000</b>	<b>53.9057</b>	<b>53.9057</b>	<b>0.0174</b>	<b>0.0000</b>	<b>54.2718</b>

**3.6 Paving - 2020****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	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	0.0000	0.0000
Worker	1.0200e-003	1.3400e-003	0.0125	4.0000e-005	3.3100e-003	2.0000e-005	3.3300e-003	8.8000e-004	2.0000e-005	9.0000e-004	0.0000	2.6383	2.6383	1.3000e-004	0.0000	2.6409
<b>Total</b>	<b>1.0200e-003</b>	<b>1.3400e-003</b>	<b>0.0125</b>	<b>4.0000e-005</b>	<b>3.3100e-003</b>	<b>2.0000e-005</b>	<b>3.3300e-003</b>	<b>8.8000e-004</b>	<b>2.0000e-005</b>	<b>9.0000e-004</b>	<b>0.0000</b>	<b>2.6383</b>	<b>2.6383</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>2.6409</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.5500e-003	0.0327	0.4655	6.1000e-004		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	53.9056	53.9056	0.0174	0.0000	54.2717
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>7.5500e-003</b>	<b>0.0327</b>	<b>0.4655</b>	<b>6.1000e-004</b>		<b>1.5000e-004</b>	<b>1.5000e-004</b>		<b>1.5000e-004</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>53.9056</b>	<b>53.9056</b>	<b>0.0174</b>	<b>0.0000</b>	<b>54.2717</b>

**3.6 Paving - 2020****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	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	0.0000	0.0000
Worker	1.0200e-003	1.3400e-003	0.0125	4.0000e-005	6.1700e-003	2.0000e-005	6.2000e-003	1.5800e-003	2.0000e-005	1.6000e-003	0.0000	2.6383	2.6383	1.3000e-004	0.0000	2.6409
<b>Total</b>	<b>1.0200e-003</b>	<b>1.3400e-003</b>	<b>0.0125</b>	<b>4.0000e-005</b>	<b>6.1700e-003</b>	<b>2.0000e-005</b>	<b>6.2000e-003</b>	<b>1.5800e-003</b>	<b>2.0000e-005</b>	<b>1.6000e-003</b>	<b>0.0000</b>	<b>2.6383</b>	<b>2.6383</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>2.6409</b>

**3.7 Architectural Coating - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	6.3843					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6600e-003	0.0463	0.0504	8.0000e-005		3.0500e-003	3.0500e-003		3.0500e-003	3.0500e-003	0.0000	7.0215	7.0215	5.4000e-004	0.0000	7.0329
<b>Total</b>	<b>6.3909</b>	<b>0.0463</b>	<b>0.0504</b>	<b>8.0000e-005</b>		<b>3.0500e-003</b>	<b>3.0500e-003</b>		<b>3.0500e-003</b>	<b>3.0500e-003</b>	<b>0.0000</b>	<b>7.0215</b>	<b>7.0215</b>	<b>5.4000e-004</b>	<b>0.0000</b>	<b>7.0329</b>

### 3.7 Architectural Coating - 2020

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	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	0.0000	0.0000
Worker	5.0400e-003	6.6000e-003	0.0616	2.0000e-004	0.0163	1.2000e-004	0.0164	4.3400e-003	1.1000e-004	4.4500e-003	0.0000	13.0156	13.0156	6.2000e-004	0.0000	13.0286
<b>Total</b>	<b>5.0400e-003</b>	<b>6.6000e-003</b>	<b>0.0616</b>	<b>2.0000e-004</b>	<b>0.0163</b>	<b>1.2000e-004</b>	<b>0.0164</b>	<b>4.3400e-003</b>	<b>1.1000e-004</b>	<b>4.4500e-003</b>	<b>0.0000</b>	<b>13.0156</b>	<b>13.0156</b>	<b>6.2000e-004</b>	<b>0.0000</b>	<b>13.0286</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	6.3843					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.2000e-004	3.5400e-003	0.0504	8.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	7.0214	7.0214	5.4000e-004	0.0000	7.0329
<b>Total</b>	<b>6.3851</b>	<b>3.5400e-003</b>	<b>0.0504</b>	<b>8.0000e-005</b>		<b>2.0000e-005</b>	<b>2.0000e-005</b>		<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>7.0214</b>	<b>7.0214</b>	<b>5.4000e-004</b>	<b>0.0000</b>	<b>7.0329</b>



### 3.7 Architectural Coating - 2020

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	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	0.0000	0.0000
Worker	5.0400e-003	6.6000e-003	0.0616	2.0000e-004	0.0305	1.2000e-004	0.0306	7.8000e-003	1.1000e-004	7.9100e-003	0.0000	13.0156	13.0156	6.2000e-004	0.0000	13.0286
<b>Total</b>	<b>5.0400e-003</b>	<b>6.6000e-003</b>	<b>0.0616</b>	<b>2.0000e-004</b>	<b>0.0305</b>	<b>1.2000e-004</b>	<b>0.0306</b>	<b>7.8000e-003</b>	<b>1.1000e-004</b>	<b>7.9100e-003</b>	<b>0.0000</b>	<b>13.0156</b>	<b>13.0156</b>	<b>6.2000e-004</b>	<b>0.0000</b>	<b>13.0286</b>

### 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	tons/yr										MT/yr					
Mitigated	2.1430	3.8321	19.1803	0.0463	5.8217	0.0545	5.8762	1.4980	0.0503	1.5483	0.0000	3,210.3414	3,210.3414	0.1283	0.0000	3,213.0352
Unmitigated	2.1430	3.8321	19.1803	0.0463	5.8217	0.0545	5.8762	1.4980	0.0503	1.5483	0.0000	3,210.3414	3,210.3414	0.1283	0.0000	3,213.0352

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,662.00	1,662.00	1662.00	3,115,888	3,115,888
Condo/Townhouse	1,800.00	1,800.00	1800.00	3,374,608	3,374,608
Single Family Housing	990.00	990.00	990.00	1,856,034	1,856,034
Total	4,452.00	4,452.00	4,452.00	8,346,529	8,346,529

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	5.80	5.80	5.80	41.60	18.80	39.60	86	11	3
Condo/Townhouse	5.80	5.80	5.80	41.60	18.80	39.60	86	11	3
Single Family Housing	5.80	5.80	5.80	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

## 5.0 Energy Detail

### 2.4 Fleet Mix

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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	815.6974	815.6974	0.0328	6.7900e-003	818.4927
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	815.6974	815.6974	0.0328	6.7900e-003	818.4927
NaturalGas Mitigated	0.0459	0.3920	0.1668	2.5000e-003		0.0317	0.0317		0.0317	0.0317	0.0000	454.0041	454.0041	8.7000e-003	8.3200e-003	456.7671
NaturalGas Unmitigated	0.0459	0.3920	0.1668	2.5000e-003		0.0317	0.0317		0.0317	0.0317	0.0000	454.0041	454.0041	8.7000e-003	8.3200e-003	456.7671

## 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	tons/yr										MT/yr					
Condo/Townhouse	3.01074e+006	0.0162	0.1387	0.0590	8.9000e-004		0.0112	0.0112		0.0112	0.0112	0.0000	160.6644	160.6644	3.0800e-003	2.9500e-003	161.6421
Single Family Housing	2.59719e+006	0.0140	0.1197	0.0509	7.6000e-004		9.6800e-003	9.6800e-003		9.6800e-003	9.6800e-003	0.0000	138.5960	138.5960	2.6600e-003	2.5400e-003	139.4395
Apartments Low Rise	2.89979e+006	0.0156	0.1336	0.0569	8.5000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	154.7438	154.7438	2.9700e-003	2.8400e-003	155.6855
<b>Total</b>		<b>0.0459</b>	<b>0.3920</b>	<b>0.1668</b>	<b>2.5000e-003</b>		<b>0.0317</b>	<b>0.0317</b>		<b>0.0317</b>	<b>0.0317</b>	<b>0.0000</b>	<b>454.0041</b>	<b>454.0041</b>	<b>8.7100e-003</b>	<b>8.3300e-003</b>	<b>456.7671</b>

## 5.2 Energy by Land Use - NaturalGas

### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	3.01074e+006	0.0162	0.1387	0.0590	8.9000e-004		0.0112	0.0112		0.0112	0.0112	0.0000	160.6644	160.6644	3.0800e-003	2.9500e-003	161.6421
Single Family Housing	2.59719e+006	0.0140	0.1197	0.0509	7.6000e-004		9.6800e-003	9.6800e-003		9.6800e-003	9.6800e-003	0.0000	138.5960	138.5960	2.6600e-003	2.5400e-003	139.4395
Apartments Low Rise	2.89979e+006	0.0156	0.1336	0.0569	8.5000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	154.7438	154.7438	2.9700e-003	2.8400e-003	155.6855
<b>Total</b>		<b>0.0459</b>	<b>0.3920</b>	<b>0.1668</b>	<b>2.5000e-003</b>		<b>0.0317</b>	<b>0.0317</b>		<b>0.0317</b>	<b>0.0317</b>	<b>0.0000</b>	<b>454.0041</b>	<b>454.0041</b>	<b>8.7100e-003</b>	<b>8.3300e-003</b>	<b>456.7671</b>

## 5.3 Energy by Land Use - Electricity

### Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	937753	306.4659	0.0123	2.5500e-003	307.5161
Condo/Townhouse	908048	296.7581	0.0119	2.4700e-003	297.7751
Single Family Housing	650146	212.4734	8.5500e-003	1.7700e-003	213.2015
<b>Total</b>		<b>815.6974</b>	<b>0.0328</b>	<b>6.7900e-003</b>	<b>818.4927</b>

### 5.3 Energy by Land Use - Electricity

#### Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	937753	306.4659	0.0123	2.5500e-003	307.5161
Condo/Townhouse	908048	296.7581	0.0119	2.4700e-003	297.7751
Single Family Housing	650146	212.4734	8.5500e-003	1.7700e-003	213.2015
<b>Total</b>		<b>815.6974</b>	<b>0.0328</b>	<b>6.7900e-003</b>	<b>818.4927</b>

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.8569	0.0518	4.4773	2.4000e-004		0.0246	0.0246		0.0246	0.0246	0.0000	7.2894	7.2894	7.1100e-003	0.0000	7.4387
Unmitigated	41.5674	0.5634	50.9326	0.0184		6.5513	6.5513		6.5511	6.5511	620.8076	267.6471	888.4546	0.5800	0.0488	915.7725

## 6.2 Area by SubCategory

### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.0641					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.6565					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	37.7105	0.5116	46.4552	0.0182		6.5267	6.5267		6.5265	6.5265	620.8076	260.3576	881.1652	0.5729	0.0488	908.3339
Landscaping	0.1363	0.0518	4.4773	2.4000e-004		0.0246	0.0246		0.0246	0.0246	0.0000	7.2894	7.2894	7.1100e-003	0.0000	7.4387
<b>Total</b>	<b>41.5674</b>	<b>0.5634</b>	<b>50.9326</b>	<b>0.0184</b>		<b>6.5513</b>	<b>6.5513</b>		<b>6.5511</b>	<b>6.5511</b>	<b>620.8076</b>	<b>267.6471</b>	<b>888.4546</b>	<b>0.5800</b>	<b>0.0488</b>	<b>915.7725</b>

## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.0641					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.6565					0.0000	0.0000		0.0000	0.0000	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	0.1363	0.0518	4.4773	2.4000e-004		0.0246	0.0246		0.0246	0.0246	0.0000	7.2894	7.2894	7.1100e-003	0.0000	7.4387
<b>Total</b>	<b>3.8569</b>	<b>0.0518</b>	<b>4.4773</b>	<b>2.4000e-004</b>		<b>0.0246</b>	<b>0.0246</b>		<b>0.0246</b>	<b>0.0246</b>	<b>0.0000</b>	<b>7.2894</b>	<b>7.2894</b>	<b>7.1100e-003</b>	<b>0.0000</b>	<b>7.4387</b>

## 7.0 Water Detail

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### 7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	232.8746	1.0296	0.0259	262.5304
Unmitigated	268.6852	1.2863	0.0323	305.6980

## 7.2 Water by Land Use

### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	18.0477 / 11.3779	123.8366	0.5928	0.0149	140.8958
Condo/Townhouse	14.6597 / 9.24196	100.5893	0.4816	0.0121	114.4460
Single Family Housing	6.45025 / 4.06646	44.2593	0.2119	5.3100e-003	50.3562
<b>Total</b>		<b>268.6852</b>	<b>1.2863</b>	<b>0.0323</b>	<b>305.6980</b>



## 7.2 Water by Land Use

### Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	14.4381 / 11.3779	107.3316	0.4745	0.0120	120.9999
Condo/Townhouse	11.7277 / 9.24196	87.1827	0.3854	9.7000e-003	98.2851
Single Family Housing	5.1602 / 4.06646	38.3604	0.1696	4.2700e-003	43.2454
<b>Total</b>		<b>232.8746</b>	<b>1.0296</b>	<b>0.0259</b>	<b>262.5304</b>

## 8.0 Waste Detail

---

### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	52.8208	3.1216	0.0000	118.3748
Unmitigated	70.4277	4.1622	0.0000	157.8331

**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	127.42	25.8651	1.5286	0.0000	57.9654
Condo/Townhouse	103.5	21.0096	1.2416	0.0000	47.0838
Single Family Housing	116.03	23.5530	1.3919	0.0000	52.7839
<b>Total</b>		<b>70.4277</b>	<b>4.1622</b>	<b>0.0000</b>	<b>157.8331</b>

## 8.2 Waste by Land Use

### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	95.565	19.3988	1.1464	0.0000	43.4740
Condo/Townhouse	77.625	15.7572	0.9312	0.0000	35.3128
Single Family Housing	87.0225	17.6648	1.0440	0.0000	39.5879
<b>Total</b>		<b>52.8208</b>	<b>3.1216</b>	<b>0.0000</b>	<b>118.3748</b>

## 9.0 Operational Offroad

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

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**ATTACHMENT B**

SCREEN3

05/16/16  
13:43:26\*\*\* SCREEN3 MODEL RUN \*\*\*  
\*\*\* VERSION DATED 13043 \*\*\*

Pacific Village UNmitigated

## SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	AREA
EMISSION RATE (G/(S-M**2))	=	0.741000E-09
SOURCE HEIGHT (M)	=	3.0000
LENGTH OF LARGER SIDE (M)	=	401.8300
LENGTH OF SMALLER SIDE (M)	=	401.8300
RECEPTOR HEIGHT (M)	=	1.5000
URBAN/RURAL OPTION	=	URBAN

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.  
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION

BUOY. FLUX = 0.000 M\*\*4/S\*\*3; MOM. FLUX = 0.000 M\*\*4/S\*\*2.

\*\*\* FULL METEOROLOGY \*\*\*

\*\*\*\*\*  
\*\*\* SCREEN AUTOMATED DISTANCES \*\*\*  
\*\*\*\*\*

\*\*\* TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES \*\*\*

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	MAX DIR (DEG)
10.	0.1750E-01	5	1.0	1.0	10000.0	3.00	45.
100.	0.1995E-01	5	1.0	1.0	10000.0	3.00	45.
200.	0.2185E-01	5	1.0	1.0	10000.0	3.00	45.
300.	0.2262E-01	5	1.0	1.0	10000.0	3.00	45.
400.	0.1412E-01	5	1.0	1.0	10000.0	3.00	45.
500.	0.1060E-01	5	1.0	1.0	10000.0	3.00	45.
600.	0.8610E-02	5	1.0	1.0	10000.0	3.00	45.
700.	0.7291E-02	5	1.0	1.0	10000.0	3.00	45.
800.	0.6334E-02	5	1.0	1.0	10000.0	3.00	45.
900.	0.5601E-02	5	1.0	1.0	10000.0	3.00	45.
1000.	0.5017E-02	5	1.0	1.0	10000.0	3.00	45.
1100.	0.4538E-02	5	1.0	1.0	10000.0	3.00	45.
1200.	0.4138E-02	5	1.0	1.0	10000.0	3.00	45.
1300.	0.3798E-02	5	1.0	1.0	10000.0	3.00	44.
1400.	0.3505E-02	5	1.0	1.0	10000.0	3.00	44.
1500.	0.3251E-02	5	1.0	1.0	10000.0	3.00	45.
1600.	0.3028E-02	5	1.0	1.0	10000.0	3.00	45.
1700.	0.2831E-02	5	1.0	1.0	10000.0	3.00	45.
1800.	0.2655E-02	5	1.0	1.0	10000.0	3.00	44.
1900.	0.2499E-02	5	1.0	1.0	10000.0	3.00	44.
2000.	0.2358E-02	5	1.0	1.0	10000.0	3.00	44.
2100.	0.2231E-02	5	1.0	1.0	10000.0	3.00	45.
2200.	0.2115E-02	5	1.0	1.0	10000.0	3.00	43.
2300.	0.2010E-02	5	1.0	1.0	10000.0	3.00	44.
2400.	0.1915E-02	5	1.0	1.0	10000.0	3.00	45.
2500.	0.1826E-02	5	1.0	1.0	10000.0	3.00	45.
2600.	0.1746E-02	5	1.0	1.0	10000.0	3.00	45.
2700.	0.1671E-02	5	1.0	1.0	10000.0	3.00	45.
2800.	0.1602E-02	5	1.0	1.0	10000.0	3.00	44.
2900.	0.1539E-02	5	1.0	1.0	10000.0	3.00	45.
3000.	0.1479E-02	5	1.0	1.0	10000.0	3.00	45.
3500.	0.1237E-02	5	1.0	1.0	10000.0	3.00	45.
4000.	0.1060E-02	5	1.0	1.0	10000.0	3.00	45.

SCREENunmitigated.OUT

4500.	0.9255E-03	5	1.0	1.0	10000.0	3.00	43.
5000.	0.8202E-03	5	1.0	1.0	10000.0	3.00	39.
5500.	0.7353E-03	5	1.0	1.0	10000.0	3.00	36.
6000.	0.6664E-03	5	1.0	1.0	10000.0	3.00	45.
6500.	0.6084E-03	5	1.0	1.0	10000.0	3.00	35.
7000.	0.5598E-03	5	1.0	1.0	10000.0	3.00	35.
7500.	0.5181E-03	5	1.0	1.0	10000.0	3.00	39.
8000.	0.4820E-03	5	1.0	1.0	10000.0	3.00	41.
8500.	0.4505E-03	5	1.0	1.0	10000.0	3.00	45.
9000.	0.4229E-03	5	1.0	1.0	10000.0	3.00	32.
9500.	0.3984E-03	5	1.0	1.0	10000.0	3.00	32.
10000.	0.3766E-03	5	1.0	1.0	10000.0	3.00	1.

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 10. M:  
 285. 0.2358E-01 5 1.0 1.0 10000.0 3.00 45.

\*\*\*\*\*  
 \*\*\* SUMMARY OF SCREEN MODEL RESULTS \*\*\*  
 \*\*\*\*\*

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	0.2358E-01	285.	0.

\*\*\*\*\*  
 \*\* REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS \*\*  
 \*\*\*\*\*

Unmitigated - Pacific Village

From CalEE Annual Output	Emission per day (Ton/Total Construction Duration)	0.0034	
	Number of Workdays	894	
	Emission per day (lb/day)	0.007606264	
	Construction day (Hours)	8	
	Emission Rate (Grams/Second)	0.00011964	
	Project Site Size (Acres)	39.9	
	Project Site Size (meters)	161469.5713	
	Length of Smalles Side (meters)	401.8327653	
Used as an input to Screen3	Emission Rate over Grading Area	7.40946E-10	
	Concentration 1-hr	0.0236	
1-Hr Concentration from Screen3 Output	Concentration Annual	0.001888	0.0003776

New Method based on Risk Assessment  
Guidelines - Guidance Manual for Preparation of  
Health Risk Assessments - February 2015

Page 5-1 Calculate Point of  
Maximum Impact and  
Maximally Exposed Individual  
Resident

1st find Dose (Equation 5.4.1.1) Page 5-24  
2nd

5.4 Estimation of Dose

Duration	Construction Days 894	Construction Days converted to years				
		2.449315068				
Age (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70
Cair (annual) - From F15	0.001888	0.001888	0.001888	0.001888	0.001888	0.001888
Breathing Rate per agegroup BR/BW (Page 5-25)	361	1090	861	745	335	290
A (Default is 1)	1	1	1	1	1	1
Exposure Frequency = EF (days/365days)	0.96	0.96	0.96	0.96	0.96	0.96
10^-6 Microgram to Milligram / liters to m3	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
Dose-inh	0.00000065	0.00000198	0.00000156	0.00000135	0.00000061	0.00000053
8.2.4 Calculating Residential and Offsite Worker Inhalation Cancer Risk						
Equation 8.2.4 A Page 8-7						
Construction Days	894	2.449315068				
potency factor for Diesel	1.1	1.1	1.1	1.1	1.1	1.1
Age Sensitivity Factor	10	10	11	12	13	14
ED (Must add up to Construction Time in years)	0.25	2	2.449315068	2.449315068	2.449315068	2.449315068
AT	70	70	70	70	70	70
FAH (USE 1 if School for 3rd and 2-9) Page 8-5	0.85	0.85	0.72	0.72	0.73	0.73
Risk for Each Age Group	2.18491E-08	5.27768E-07	4.75708E-07	4.49037E-07	2.21781E-07	2.06758E-07
	0.021849123	0.527768283	0.475708439	0.449037424	0.221780594	0.206757569
Cancer Risk Per Million 9-years	1.03					
Cancer Risk Per Million 30-years	1.22					
Cancer Risk Per Million 70-years	1.21					

December 14, 2016

LEN-69

Mr. Andrew Han  
Lennar Homes of California  
25 Enterprise, Suite 400  
Aliso Viejo, CA 92656

**Subject: Biological Resources Letter Report for the Pacific Village Project**

Dear Mr. Han:

This letter presents the results of a biological resources study conducted by HELIX Environmental Planning, Inc. (HELIX) for the proposed Pacific Village Project (project) in the City of San Diego (City). The study was conducted to provide the City, resource agencies, and the public with current biological data to satisfy review of the proposed project under the California Environmental Quality Act (CEQA) and to demonstrate compliance with federal, state, and city regulations. This report, prepared in compliance with the City Biology Guidelines (City 2012), describes the project site's current biological conditions, vegetation community, and plant and wildlife species observed or detected during surveys, and identified resources that are sensitive. It also identifies sensitive species with potential to occur within the project site. In addition, project impacts are assessed, and no mitigation is required for this project.

## **INTRODUCTION**

### **Project Location and Description**

The approximately 41.45-acre study area is located adjacent to the west side of Interstate (I-) 15, immediately north of the intersection of I-15 and State Route 56 in Rancho Peñasquitos, a community of the City of San Diego (Figure 1). It is situated in unsectioned lands in Township 14 South, Range 2 West on the U.S. Geological Survey Poway quadrangle map (Figure 2). Elevations within the study area range from approximately 575 feet above mean sea level (AMSL) to 640 feet AMSL. The study area is an existing residential development. The study area falls within the boundaries of the City's Multiple Species Conservation Program (MSCP) Subarea Plan, but it is outside of the City's Multi-habitat Planning Area (MHPA).



The proposed project is the redevelopment of the property into single family for-sale homes (“for-sale component”) and apartment homes (“for-rent component”). The for-sale component envisions three building types, including 99 detached cluster homes, 105 triplex homes, and 120 row townhomes on 30 acres. The for-sale component will be of two and three stories in height with direct access garages at grade, as well as guest parking throughout the community. There will be a HOA-maintained recreation center as well as open spaces throughout the community. There will be three entry and exit points fronting Carmel Mountain Road.

The for-rent component will house 277 apartment homes in three-story buildings. Parking is provided within a separate structure as well as in carports and surface parking in both tandem and side by side configurations. The three-story “E-Urban” buildings will feature internal corridors and are wrapped around small courtyards. The for-rent component will have a separate entrance from Carmel Mountain Road that leads directly to the leasing and clubhouse facilities. There will be a centrally located two-story clubhouse with adjacent pool, spa, deck, and tennis court.

## **METHODS**

Prior to conducting the biological field survey, searches of the California Department of Fish and Wildlife’s (CDFW’s) California Natural Diversity Database (CNDDDB; CDFW 2015a), and U.S. Fish and Wildlife Service (USFWS) and SanBIOS databases were conducted, and a previous study of the project area (Dudek 2015) was referenced for information regarding sensitive species documented in the vicinity of the study area.

### **General Biological Survey**

A general biological survey of the study area was conducted by HELIX biologist Jason Kurnow on November 16, 2015. The study area consists of everything within the project boundary, including the proposed limits of work (Figure 3). Vegetation was mapped on a 1"=360' scale aerial of the study area. Vegetation communities were mapped in accordance with the City’s Biology Guidelines (City 2012). The study area was surveyed on foot with the aid of binoculars, and all detected plant and animal species were recorded (Attachments A and B, respectively). An explanation of status codes is included in Attachment C. Animal identifications were made in the field by direct, visual observation or indirectly by detection of calls, burrows, tracks, or scat. All plant identifications were made in the field or in the lab through comparison with voucher specimens or photographs. As part of the general biological survey, HELIX verified the location and size of jurisdictional features mapped on site (Dudek 2015). Dudek conducted a formal jurisdictional delineation in 2015. No rare plant or focused species surveys were conducted during this survey. Representative photographs were taken (Attachment D).

### **Rare Plants**

Rare plants investigated included those that are listed as threatened or endangered by the USFWS or the CDFW, those that are ranked as rare by the California Native Plant Society (CNPS), those listed as narrow endemics in the City’s Biology Guidelines, as well as narrow

endemic species listed in the City's MSCP Subarea Plan. Rare plant species were looked for opportunistically during the general biological survey; however, independent rare plant surveys were not conducted.

### **Jurisdictional Delineation**

HELIX biologist Jason Kurnow conducted a jurisdictional delineation on November 16, 2015 using criteria noted below. The HELIX delineation was compared to a previous on-site delineation by Dudek (2015).

### **U.S. Army Corps of Engineers Jurisdictional Areas**

All areas with depressions, drainage channels, or wetland vegetation were evaluated for the presence of wetland and non-wetland Waters of the U.S. (WUS). An area would qualify as wetlands if it satisfied the three wetland criteria (vegetation, hydrology, and soil) described in the Wetlands Delineation Manual (Environmental Laboratory 1987) and Arid West Regional Supplement (U.S. Army Corps of Engineers [USACE] 2008). Areas were determined to be non-wetland WUS if there was evidence of regular surface flow (e.g., bed and bank); but, the vegetation and/or soils criterion was not met. Non-wetland WUS encompassed by the ordinary high water mark were measured, and vegetation (if present) was noted. The WUS were measured and mapped in the field. Areas with man-made drainage features located in upland areas (where no historical jurisdictional feature existed) were not considered to be jurisdictional. Man-made drainage features with historical waters features were considered to be potentially jurisdictional. Historic aerial photographs were used in determining presence of historic drainage features.

### **California Department of Fish and Wildlife Jurisdictional Areas**

The CDFW jurisdictional areas depend on the presence of riparian vegetation or regular surface flow. Streambeds within CDFW jurisdiction are defined as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports riparian vegetation" (Title 14, Section 1.72). The CDFW jurisdictional habitat includes all riparian shrub or tree canopy that may extend beyond the banks of a stream.

### **City Wetlands**

City wetlands are defined in the City's Environmentally Sensitive Lands (ESL) regulations (San Diego Municipal Code Section 143.0101 et seq.) and include areas characterized by any of the following conditions: (1) all areas persistently or periodically containing naturally occurring wetland vegetation communities characteristically dominated by hydrophytic vegetation, including but not limited to salt marsh, brackish marsh, freshwater marsh, riparian forest, oak riparian forest, riparian woodlands, riparian scrub, and vernal pools; (2) areas that have hydric soils or wetland hydrology and lack naturally occurring wetland vegetation communities because human activities have removed the historic wetland vegetation or catastrophic or recurring

natural events or processes have acted to preclude the establishment of wetland vegetation as in the case of salt pannes and mudflats; (3) areas lacking wetland vegetation communities, hydric soils, and wetland hydrology due to non-permitted filling of previously existing wetlands; and (4) areas mapped as wetlands on Map C-713 as shown in Chapter 13, Article 2, Division 6 (Sensitive Coastal Overlay Zone).

### **Survey Limitations**

All noted animal species were identified by direct observation, vocalizations, or the observance of scat, tracks, or other signs. However, the lists of species identified are not necessarily comprehensive accounts of all species that occur on the site, as species that are nocturnal, secretive, or seasonally restricted may not have been observed.

### **Nomenclature**

Nomenclature used in this report follows Baldwin et al. (2012) for scientific names of plants, while common names follow the CNPS (2015). Other conventions used are Holland (1986) and Oberbauer (2008) for vegetation communities, American Ornithologist's Union (AOU 2014) for birds, Baker et al. (2003) for mammals, and Collins et al. (2011) for herbs. Plant species status is taken from the CNPS (2015). Animal species status is from CDFW (2015b).

## **RESULTS**

### **Vegetation Communities**

One vegetation community was mapped within the study area: developed land (Figure 3). This is not considered a sensitive habitat and is not assigned a Tier rating by the City. None of the study area occurs within the City's MHPA (Figure 3).

#### **Developed**

Developed land is where permanent structures and/or pavement have been placed, which prevents the growth of vegetation, or where landscaping is clearly tended and maintained. Developed land within the study area consists of existing residential development, including landscaping and roadways (Figure 3). Developed land accounts for the entirety of the study area (approximately 41.45 acres).

#### **Plants**

A total of 18 plant species were observed during the biological survey (Attachment A). Ornamental species occurring within developed land, except for trees, are not included in the species tally or in Attachment A.

## **Animals**

A total of six animal species, including one mammal and five bird species, were observed or detected during the biological survey (Attachment B).

## **Sensitive Resources**

### **Sensitive Habitat**

Sensitive habitat is defined as land that supports unique vegetation communities or the habitats of rare or endangered species or subspecies of animals or plants as defined by Section 15380 of the California Environmental Quality Act (CEQA) Guidelines. No sensitive vegetation communities were mapped within the study area.

### **Sensitive Plants**

No sensitive plant species were observed during the biological survey. Sensitive plants, including City narrow endemic species, occurring within a five-mile radius of the study area were evaluated for their potential to occur. A list of sensitive plant species with potential to occur within the study area is discussed in Attachment E. Given the site's previous development, no sensitive plant species are expected to occur. An explanation of status and sensitivity codes is provided in Attachment C.

### **Sensitive Animals**

No sensitive animal species were detected during the biological survey. Sensitive animals occurring within a five-mile radius of the study area were evaluated for their potential to occur. No animal species were assessed as having a high potential to occur. One animal species was assessed as having a moderate potential to occur: Cooper's hawk (*Accipiter cooperii*). Cooper's hawk is a CDFW Watch List and MSCP covered species. It was observed flying overhead during Dudek's survey (Dudek 2015) but was not observed during the current survey. The survey area does not contain suitable nesting habitat but does have trees for perching and marginal foraging habitat. A list of sensitive animal species with potential to occur within the study area is discussed in Attachment F. An explanation of status and sensitivity codes is provided in Attachment C.

## **Jurisdictional Areas**

The study area supports a portion of a drainage feature possibly regulated as non-wetland WUS by the USACE/Regional Water Quality Control Board (RWQCB) and as ephemeral streambed by CDFW. This drainage feature is a concrete-lined channel that runs along the southern boundary from an off-site culvert outlet under Carmel Mountain Road to an off-site culvert that runs under I-15 (Figure 3). Historic aerials of the site, as well as the National Hydrology Dataset (U.S. Geological Survey), show flow lines indicating that a natural channel existed prior to conversion to residential development. During the course of land conversion, the banks of the

channel were artificially lined with concrete and the course slightly altered to run along the boundary of the site. The natural course of the channel ran from Black Mountain Open Space Park to Chicarita Creek, which is a tributary to Los Peñasquitos Creek that flows into the Pacific Ocean. A total of 0.06 acre of potential non-wetland WUS/streambed occurs within the study area (Table 1). This drainage feature (which as noted later in this report will be avoided by the project construction) is not considered a City wetland, as it is an artificially created, concrete-lined drainage that lacks wetland vegetation and hydric soils.

<b>Table 1</b> <b>EXISTING DRAINAGES WITHIN THE STUDY AREA</b>	
<b>JURISDICTIONAL AREA TYPE</b>	<b>ACRES*</b>
Potential Jurisdictional Waters (Non-wetland WUS / Streambed; concrete channel, earthen channel)	0.06
Other Non-jurisdictional Drainage Features (concrete channel, plastic pipe culvert, swale, culvert)	0.05

\* Rounded to the nearest hundredth.

The study area supports 0.05 acre of other drainage features along the northeast boundary of the study area, which convey runoff from the surrounding development area (Figure 3). These features include man-made features (i.e., v-ditch, corrugated plastic culvert, concrete-lined channel, and swale) constructed within uplands solely for draining runoff from the site. These artificial features do not meet any jurisdictional criteria.

### **Wildlife Corridors and Movement**

Wildlife corridors can be local or regional in scale. Their functions may vary temporally and spatially based on conditions and species presence. Wildlife corridors represent areas where wildlife movement is concentrated due to natural or anthropogenic constraints. Local corridors provide access to resources such as food, water, and shelter, and animals use these corridors to move between different habitats. Regional corridors provide these functions as well by linking two or more large habitat areas. Regional corridors provide avenues for wildlife dispersal, migration, and contact between otherwise distinct populations.

Given that the study area is completely developed as a residential area, does not contain any native habitat, and is bounded by roads and urban development, wildlife movement within the site is unlikely. Drainage features located along a portion of the eastern and southern boundaries of the study area are also unlikely to provide much value for wildlife movement, as these are concrete structures bounded by residential development and I-15 and do not tie into any existing native habitat areas. The study area does not have connectivity to open space preserves in the area and is not designated as MHPA. The nearest MHPA occurs 877 feet to the southwest of the study area, and is separated from the proposed project by developed land. The study area has limited potential to function as a wildlife corridor.

## **REGIONAL AND REGULATORY CONTEXT**

Biological resources within the parcel are subject to regulatory administration by the federal government, State of California, and the City.

### **Federal**

#### **Endangered Species Act**

The USFWS regulates impacts on listed species and their habitats through the Endangered Species Act (ESA). Projects that affect listed species or their habitats require mitigation of those effects in accordance with USFWS standards. The City has incidental take authorization from USFWS for species covered by the MSCP.

The USFWS identifies critical habitat for endangered and threatened species. Critical habitat is defined as areas of land that are considered necessary for endangered or threatened species to recover. The ultimate goal is to restore healthy populations of listed species within their native habitat so they can be removed from the list of threatened or endangered species. Once an area is designated as critical habitat pursuant to the federal ESA, all federal agencies must consult with the USFWS to ensure that any action they authorize, fund, or carry out is not likely to result in destruction or adverse modification of the critical habitat. The study area is not within or adjacent to critical habitat for any species.

#### **Migratory Bird Treaty Act**

All migratory bird species that are native to the United States or its territories are protected under the federal Migratory Bird Treaty Act (MBTA) as amended under the Migratory Bird Treaty Reform Act (MBTRA) of 2004 (FR Doc. 05-5127). The MBTA is generally protective of migratory birds but does not actually stipulate the type of protection required. In common practice, USFWS places restrictions on disturbances allowed near active raptor nests. Compliance with the MBTA will ensure there are no impacts to nesting birds.

#### **Clean Water Act**

Federal wetland regulation applicable to the study area is guided by the Clean Water Act (CWA). The purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all WUS. Permitting for projects filling WUS (including wetlands) is overseen by the USACE under Section 404 of the CWA. Projects are typically permitted on an individual basis or are covered under one of several approved general or Nationwide Permits. In addition, under Section 401 of the federal CWA, an applicant for a federal permit for an activity that may result in a discharge to a water body must obtain certification from the state that the proposed activity will comply with state water quality standards and water quality objectives. Section 401 provides the RWQCB with regulatory authority to certify or deny the proposed activity. A Section 401 Certification must be obtained prior to issuance of a 404 Permit.



## **State of California**

### **California Environmental Quality Act**

Primary environmental legislation in California is found in the California Environmental Quality Act (CEQA) and its implementing guidelines (State CEQA Guidelines). This legislation requires that discretionary projects with potential adverse effects or impacts on the environment undergo environmental review. Adverse impacts to the environment are typically mitigated as a result of the environmental review process in accordance with existing laws and regulations.

### **California Endangered Species Act**

The California ESA is similar to the federal ESA in that it contains a process for listing of species and regulating potential impacts to listed species. Section 2081 of the California ESA authorizes the CDFW to enter into a memorandum of agreement for take of listed species for scientific, educational, or management purposes.

### **Native Plant Protection Act**

The Native Plant Protection Act (NPPA) enacted a process by which plants are listed as rare or endangered. The NPPA regulates collection, transport, and commerce in listed plants. The California ESA followed the NPPA and covers both plants and animals determined to be endangered or threatened with extinction. Plants listed as rare under NPPA were designated rare under the California ESA.

### **California Fish and Game Code**

Pursuant to California Fish and Game Code Section 3503, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Raptors and owls and their active nests are protected by California Fish and Game Code Section 3503.5, which states that it is unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird unless authorized by the CDFW.

The California Fish and Game Code (Sections 1600 et seq.) requires issuance of a Lake and Streambed Alteration Agreement by CDFW for projects affecting riparian and wetland habitats.

## **City of San Diego**

### **Environmentally Sensitive Lands**

Impacts to biological resources in the City must comply with the City's ESL Regulations. The purpose of the regulations is to "protect, preserve, and, where damaged restore, the environmentally sensitive lands of San Diego and the viability of the species supported by those

lands.” Environmentally sensitive lands are defined to include sensitive biological resources, steep hillsides, coastal beaches, sensitive coastal bluffs, and 100-year floodplains.

The ESL regulations require impacts to wetlands be avoided unless the activities meet specific exemption criteria established in the ordinance. Impacts to City-defined wetlands require approval of deviation findings as required by ESL regulations. However, as noted above, no City wetlands occur within the study area.

The ESL regulations also restrict development within the MHPA, including impact avoidance areas around raptor nesting locations (specifically, Cooper’s hawk, northern harrier [*Circus cyaneus*], golden eagle [*Aquila chrysaetos*], and burrowing owl [*Athene cunicularia*]) and known locations of the southern pond turtle (*Clemmys marmorata pallida*), and also requires seasonal restrictions on grading where development may impact the following bird species: western snowy plover (*Charadrius alexandrinus nivosus*), southwestern willow flycatcher (*Empidonax traillii extimus*), least tern (*Sternula antillarum browni*), San Diego cactus wren (*Campylorhynchus brunneicapillus sandiegensis*), least Bell’s vireo (*Vireo bellii pusillus*), tricolored blackbird (*Agelaius tricolor*), and coastal California gnatcatcher (*Poliophtila californica californica*). As noted above, the study area does not occur within the MHPA.

### **Multiple Species Conservation Program**

In July 1997, the USFWS, CDFW, and City adopted the Implementing Agreement for the MSCP. This program allows the incidental take of threatened and endangered species as well as regionally-sensitive species that are conserved by it (covered species). The MSCP designates regional preserves that are intended to be mostly void of development activities, while allowing development of other areas subject to the requirements of the program. Impacts to biological resources are regulated by the City’s ESL regulations.

The City’s MSCP Subarea Plan has been prepared to meet the requirements of the California Natural Communities Conservation Planning Act of 1992. This Subarea Plan describes how the City’s portion of the MSCP Preserve, the MHPA, will be implemented.

The proposed project is located within the “Northern Areas” portion of the MSCP (Section 1.2.4 of the Subarea Plan), outside of the MHPA. The nearest MHPA lies 877 feet to the southwest of the proposed project, and is separated from the project by developed land. The “Northern Areas” portion of the MHPA is intended to provide linkages to the core areas of Del Mar Mesa, Los Peñasquitos Canyon Preserve, Los Peñasquitos Lagoon, Torrey Pines State Park, the proposed San Dieguito River Valley Regional Park and the Black Mountain area. These linkages and core areas provide an important network of viable native habitats and plant communities, support the full range of native species, and provide functional wildlife connections over the long term (City 1997). This portion of the Subarea has 29 specific MHPA guidelines, none of which applies to the proposed project, as it occurs outside of the MHPA.



### General Planning Policies and Guidelines

The MSCP establishes specific guidelines that limit activities that occur within the MHPA. In general, activities occurring within the MHPA must conform to these guidelines and, wherever feasible, should be located in the least sensitive areas. As the proposed project does not occur within the MHPA, these guidelines do not apply.

### General Management Directives

The following general management directive applies to the project, as outlined in Section 1.5.2 of the City's MSCP Subarea Plan:

#### *Mitigation*

Mitigation, when required as part of project approvals, shall be performed in accordance with the City's ESL Ordinance and Biology Guidelines.

The proposed project would comply with the mitigation management directive outlined above in that impacts would not occur to any sensitive habitat, and mitigation is not required.

### MHPA Adjacency Guidelines

The City's MSCP Subarea Plan addresses the indirect impacts to preserve areas from adjacent development in Section 1.4.3, Land Use Adjacency Guidelines (City 1997). The Land Use Adjacency Guidelines provide requirements for land uses adjacent to the habitat preserve in order to minimize indirect impacts to the sensitive resources contained therein. As stated previously, the study area is not located within or adjacent to the MHPA, and these guidelines do not apply. The nearest MHPA lies 877 feet to the southwest of the proposed project, and is separated from the project by developed land.

## **CRITERIA FOR DETERMINING IMPACT SIGNIFICANCE**

In accordance with the Significance Determination Guidelines (City 2011), a project would result in a significant or potentially significant biological resources impact if it would:

- Substantially affect a species or its habitat that is identified as a candidate, sensitive, or special status species in the MSCP or other plans and regulations, or by the CDFW or USFWS;
- Substantially affect Tier I – Tier III Habitats as identified in the City Biology Guidelines or other sensitive habitats identified by the CDFW or USFWS;
- Substantially affect wetlands through direct removal, filling, hydrological interruption or other means;
- Substantially interfere with movement of any resident or migratory fish or wildlife species;
- Conflict with any approved state, regional, or local habitat conservation plan;

- Introduce land use within an area adjacent to the MHPA that would result in adverse edge effects;
- Conflict with any local policies or ordinances protecting biological resources; and/or
- Result in an introduction of invasive plant species into a natural open space area.

## IMPACTS

This section describes potential impacts associated with implementation of the proposed project—the redevelopment of the property into single family for-sale and apartment homes, a recreation center and clubhouse, parking areas, and open space areas. Impacts alter the affected biological resources such that those resources are eliminated temporarily or permanently.

### Vegetation Communities

The proposed project would result in 41.45 acres of impacts to developed land (Table 2). Proposed impacts are outside the MHPA. Everything within the project boundary is proposed to be evaluated as an impact except for the concrete drainage along the southern boundary of the study area that is considered potentially jurisdictional under federal and state regulations. Developed land is not considered a sensitive vegetation community. Impacts to developed land are not considered significant and do not require mitigation. No sensitive vegetation communities would be impacted by the project.

<b>Table 2</b> <b>IMPACTS TO VEGETATION COMMUNITIES</b>		
<b>VEGETATION COMMUNITY</b>	<b>TIER*</b>	<b>OUTSIDE MHPA**</b>
Developed	--	41.45†
<b>TOTAL</b>		<b>41.45†</b>

\* Tiers are assigned to upland habitats based upon the rarity of the resource and are used for determining mitigation ratios.

\*\* Area presented in acreage rounded to the nearest hundredth.

† No impacts are proposed to occur to the jurisdictional drainage along the southern edge of the study area.

### Sensitive Plant Species

No sensitive plant species, including City narrow endemic species, were observed in the study area during the biological survey. No sensitive plant species would be impacted by the project.

### Sensitive Animal Species

No sensitive animal species were observed in the study area during the biological survey. No animals were assessed as having high potential to occur. No sensitive animal species are anticipated to be impacted by the project.

### **Jurisdictional Areas**

The proposed project would not result in impacts to any jurisdictional areas. Although it occurs within the project footprint, the potential jurisdictional USACE non-wetland WUS/CDFW concrete channel occurring within the study area will be avoided by the proposed work. As such, no impacts to jurisdictional areas would occur.

### **Wildlife Corridors and Movement**

The project would not impact wildlife corridors, as the study area was not determined to function as a wildlife corridor. It is entirely developed and lacks connectivity to undeveloped areas. The project may temporarily interfere with local wildlife movement during construction, but these impacts are considered less than significant since wildlife use of the developed site is expected to be low and construction would occur during daylight hours, thus minimizing disruption to animal species that may be present in the vicinity.

### **MITIGATION**

The project would not significantly impact sensitive biological resources, and no mitigation is required.

### **CONCLUSION**

The proposed development of the Pacific Village Project would not result in any significant impacts to biological resources, and no mitigation is required.

Please do not hesitate to contact me or Tom Huffman at (619) 462-1515 if you have any questions.

Sincerely,



Amy Mattson  
Biologist

Enclosures:

Figure 1	Regional Location Map
Figure 2	Project Vicinity (Aerial Photograph)
Figure 3	Vegetation and Jurisdictional Features
Figure 4	Project Impacts
Attachment A	Plant Species Observed
Attachment B	Animal Species Observed or Detected
Attachment C	Explanation of Status Codes
Attachment D	Representative Photographs
Attachment E	Sensitive Plant Species Observed or with Potential to Occur
Attachment F	Sensitive Animal Species Observed or with Potential to Occur

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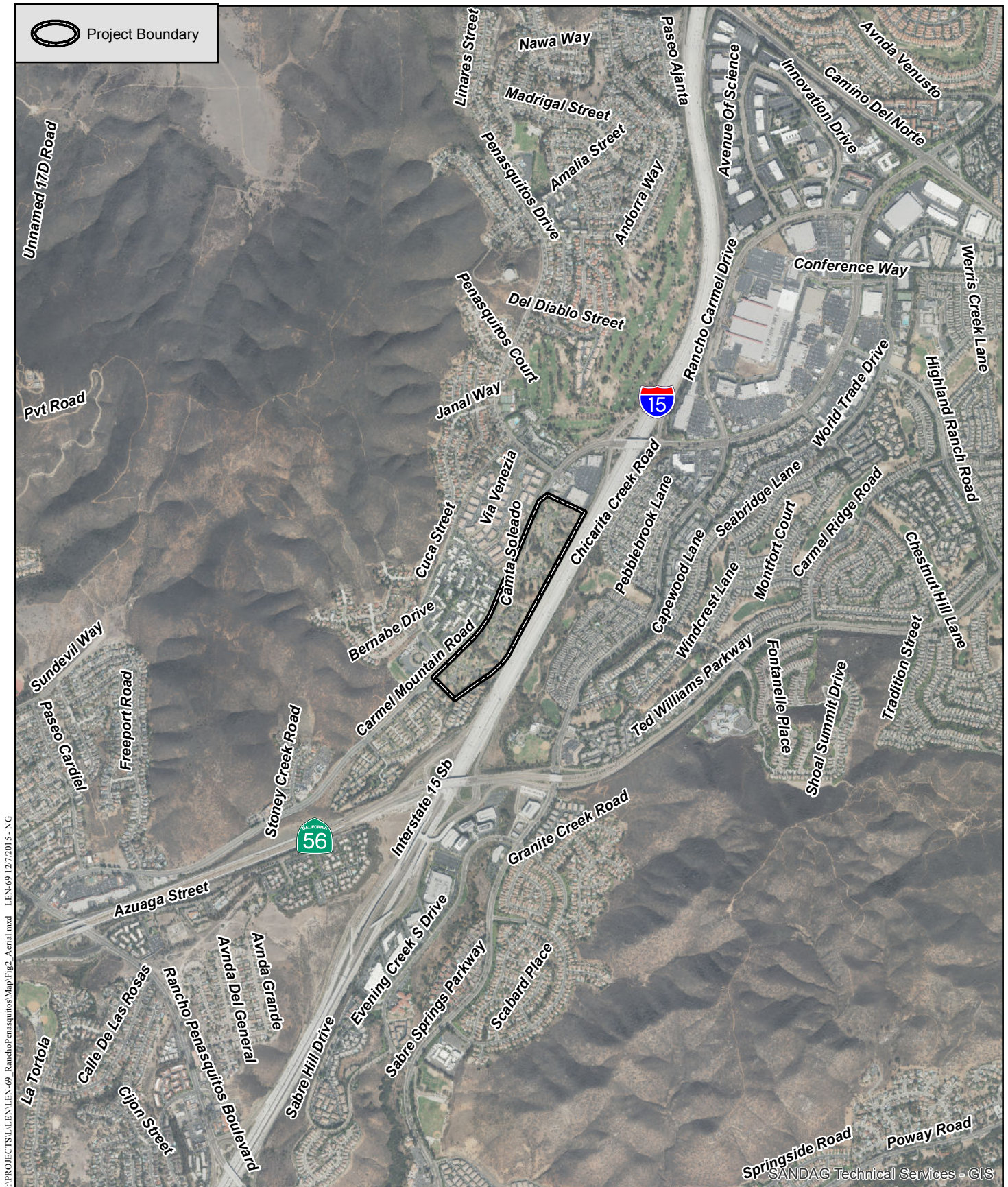


## Regional Location Map

PACIFIC VILLAGE

Figure 1



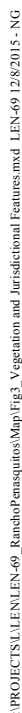


## Project Vicinity (Aerial Photograph)

PACIFIC VILLAGE

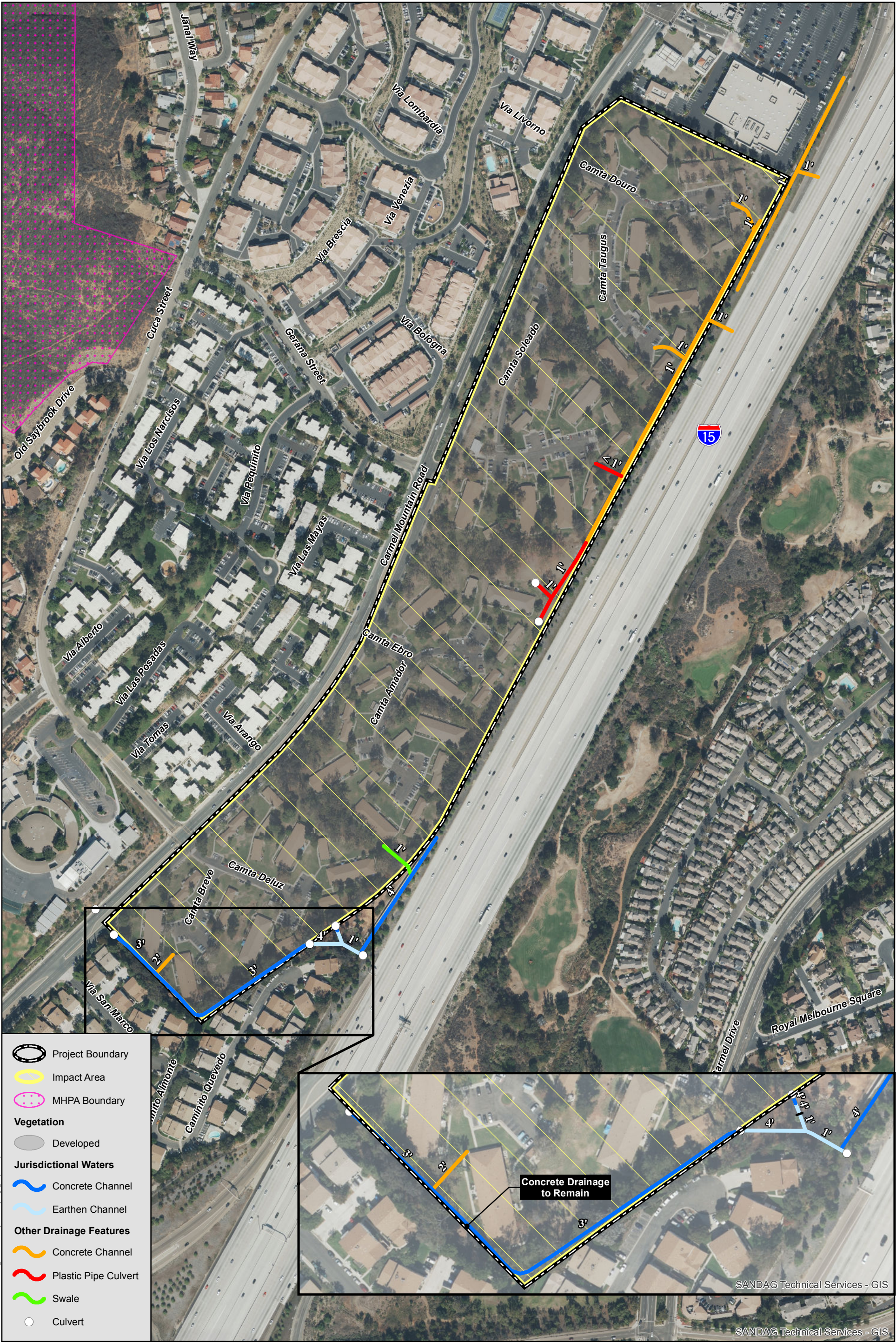
Figure 2





## Figure 3





## Project Impacts

PACIFIC VILLAGE

Figure 4



**Attachment A**  
**PLANT SPECIES OBSERVED**

<b><u>FAMILY</u></b>	<b><u>SCIENTIFIC NAME</u></b>	<b><u>COMMON NAME</u></b>
<b>Gymnosperms</b>		
Pinaceae	<i>Pinus</i> sp.*	pine
<b>Eudicots</b>		
Anacardiaceae	<i>Malosma laurina</i>	laurel sumac
	<i>Rhus integrifolia</i>	lemonadeberry
	<i>Schinus molle</i> *	Peruvian pepper tree
	<i>Schinus terebinthifolius</i> *	Brazilian pepper tree
Asteraceae	<i>Baccharis pilularis</i>	coyote brush
	<i>Erigeron canadensis</i>	horseweed
	<i>Sonchus oleraceus</i> *	common sow thistle
Brassicaceae	<i>Brassica nigra</i> *	black mustard
Chenopodiaceae	<i>Salsola tragus</i> *	Russian thistle
Euphorbiaceae	<i>Chamaesyce</i> sp.*	spurge
Myrtaceae	<i>Eucalyptus globulus</i> *	blue gum
	<i>Eucalyptus</i> sp.*	eucalyptus
Plantaginaceae	<i>Penstemon</i> sp.	penstemon
Platanaceae	<i>Platanus racemosa</i>	western sycamore
<b>Monocots</b>		
Arecaceae	<i>Washingtonia robusta</i> *	Mexican fan palm
Poaceae	<i>Cortaderia jubata</i> *	pampas grass
Poaceae	<i>Cynodon dactylon</i> *	Bermuda grass

\*Non-native species

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**Attachment B**  
**ANIMAL SPECIES OBSERVED OR DETECTED**

**SCIENTIFIC NAME**

**COMMON NAME**

**VERTEBRATES**

**Birds**

*Calypte anna*

Anna's Hummingbird

*Corvus brachyrhynchos*

American Crow

*Melospiza crissalis*

California Towhee

*Haemorhous mexicanus*

house Finch

*Setophaga coronata*

yellow-rumped Warbler

**Mammals**

*Spermophilus beecheyi*

California ground squirrel

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**Attachment C**  
**EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES**

**FEDERAL, STATE, AND LOCAL CODES**

**U.S. Fish and Wildlife Service (USFWS)**

FE	Federally listed as Endangered
FT	Federally listed Threatened
FPE	Federally proposed for listing as Endangered
FPT	Federally proposed for listing as Threatened
FPD	Federally proposed for delisting
FC	Federal candidate species (former Category 1 candidates)

**California Department of Fish and Wildlife (CDFW)**

SE	State listed as Endangered
ST	State listed as Threatened
SCE	State candidate for listing as Endangered
SCT	State candidate for listing as Threatened
SCD	State candidate for delisting
SSC	State Species of Special Concern
WL	Watch List

Fully Protected      Fully Protected species refer to all vertebrate and invertebrate taxa of concern to the Natural Diversity Data Base regardless of legal or protection status. These species may not be taken or possessed without a permit from the Fish and Game Commission and/or CDFW.

**Multiple Species Conservation Program (MSCP) Covered**

Multiple Species Conservation Program covered species for which the City has take authorization within the MSCP area.

**City Narrow Endemic (NE)**

Narrow endemic species are native species that are confined to a specific geographic region, soil type, and/or habitat. Narrow endemics are listed in the City of San Diego Biology Guidelines

**Attachment C (cont.)**  
**EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES**

**OTHER CODES AND ABBREVIATIONS**

**California Native Plant Society (CNPS) Codes**

**Ranks**

- 1A = Plants presumed extirpated in California and either rare or extinct elsewhere. Eligible for state listing.
- 1B = Plants rare, threatened, or endangered in California and elsewhere. Eligible for state listing.
- 2A = Plants presumed extirpated in California, but common elsewhere. Eligible for state listing.
- 2B = Plants rare, threatened, or endangered in California, but more common elsewhere. Eligible for state listing.
- 3 = Plants about which more information is needed – A review list. Eligible for state listing.
- 4 = Plants of limited distribution-A watch list. Few are eligible for state listing. Recommended for evaluation of impact significance

**Threat Code Extensions**

- .1 – Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)
- .2 – Moderately threatened in California (20 to 80 percent occurrences threatened/moderate degree and immediacy of threat)
- .3 – Not very threatened in California (less than 20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known)

Threat Rank guidelines only represent a starting point in the assessment of threat level. Other factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are considered in setting the Threat Rank.

Many of the Threat Ranks have not been reassessed since the time they were first designated after implementation of the Rare Plant Status Review Process, and therefore may not represent the current level of threats associated with a given taxon.

The Threat Ranks do not designate a change of environmental protections. For instance, a CRPR 1B.3 plant has the same environmental protections as a CRPR 1B.1 plant, and it is mandatory that both be fully considered during preparation of environmental documents relating to CEQA.





Developed area



Developed area





Other drainage feature.  
Looking southwest from near  
northeast corner of property.

Jurisdictional concrete channel.  
Looking west along southern boundary.



Jurisdictional concrete channel.  
Looking east along eastern boundary.

**Attachment E**  
**SENSITIVE PLANT SPECIES**  
**OBSERVED OR WITH POTENTIAL TO OCCUR**

<b>SPECIES</b>	<b>LISTING OR SENSITIVITY*</b>	<b>POTENTIAL TO OCCUR</b>
San Diego thorn-mint ( <i>Acanthomintha ilicifolia</i> )	FT/SE CNPS Rank 1B.1 City Narrow Endemic (NE) MSCP Covered	None. Found in grassy openings in chaparral or sage scrub, or near vernal pools, with friable or broken clay soils. No native habitats are present within the study area. Blooming period is April through June.
California adolphia ( <i>Adolphia californica</i> )	--/-- CNPS Rank 2B.1	None. Most often found in sage scrub but occasionally occurs in peripheral chaparral habitats, particularly hillsides near creeks. No native habitats are present within the study area, and species was not observed during survey. Blooming period is December through April.
San Diego ambrosia ( <i>Ambrosia pumila</i> )	FE/-- CNPS Rank 1B.1 City NE MSCP Covered	None. Found in a variety of habitats, including sage scrub, grasslands, wetlands, disturbed habitat, and sloped areas. No native habitats are present within the study area, and species was not observed during survey. Blooming period is April through October.
Del Mar manzanita ( <i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i> )	FE/-- CNPS Rank 1B.1 MSCP Covered	None. Occurs in relatively open, coastal chaparral. At occasional inland sites it occurs in denser mixed chaparral vegetation. No native habitats are present within the study area, and species was not observed during survey. Blooming period is December through February.
Palmer's sagewort ( <i>Artemisia palmeri</i> )	--/-- CNPS Rank 4.2	None. Habitat includes stream courses, often within coastal sage scrub and southern mixed chaparral. No native habitats are present within the study area, and drainages are not vegetated. Blooming period is May through September.
Coulter's saltbrush ( <i>Atriplex coulteri</i> )	--/-- CNPS Rank 1B.2	Not expected. Occurs in coastal dunes, coastal scrub, and coastal bluff scrub. Historic occurrence within the project site (CDFW 2015a); however, site has been developed. No native habitat remains. Species was not observed during survey. Blooming period is March through October.

**Attachment E (cont.)**  
**SENSITIVE PLANT SPECIES**  
**OBSERVED OR WITH POTENTIAL TO OCCUR**

<b>SPECIES</b>	<b>LISTING OR SENSITIVITY*</b>	<b>POTENTIAL TO OCCUR</b>
Encinitas baccharis ( <i>Baccharis vanessae</i> )	FT/SE CNPS Rank 1B.1 City NE MSCP Covered	None. Mature but relatively low-growing chaparral is primary habitat; also found in southern maritime and southern mixed chaparrals. No native habitats are present within the study area, and species was not observed during survey. Blooming period is August through November.
San Diego goldenstar ( <i>Bloomeria</i> [Muilla] <i>clevelandii</i> )	--/-- CNPS Rank 1B.1 MSCP Covered	None. Occurs in valley grasslands, particularly near mima mound topography or in the vicinity of vernal pools. Clay soils on dry mesas and hillsides in coastal sage scrub or chaparral. This plant does not typically grow in the shade of woody perennials, but rather in somewhat open locales. No native habitats are present within the study area. Blooming period is April through May.
Thread-leaved Brodiaea ( <i>Brodiaea filifolia</i> )	FT/SE CNPS Rank 1B.1 MSCP Covered	None. Typically occurs on clay soils in vernal moist grasslands and vernal pool periphery. No native habitats are present within the study area. Blooming period is March through June.
Orcutt's brodiaea ( <i>Brodiaea orcuttii</i> )	--/-- CNPS Rank 1B.1 MSCP Covered	None. Vernal moist grasslands, mima mound topography, and vernal pool periphery are preferred habitat. Occasionally will grow on streamside embankments in clay soils. No native habitats are present within the study area. Blooming period is May through July.
Wart-stemmed ceanothus ( <i>Ceanothus verrucosus</i> )	--/-- CNPS Rank 2B.2 MSCP Covered	None. Coastal chaparral intermixed with chamise and mission manzanita is the preferred habitat for this species. No native habitats are present within the study area, and species was not observed during survey. Blooming period is December through April.
Orcutt's spineflower ( <i>Chorizanthe orcuttiana</i> )	FE/SE CNPS Rank 1B.1	None. Favored species microhabitat is coastal chamise chaparral openings with a distinctive loose sandy substrate. No native habitats are present within the study area. Blooming period is March through May.

**Attachment E (cont.)**  
**SENSITIVE PLANT SPECIES**  
**OBSERVED OR WITH POTENTIAL TO OCCUR**

<b>SPECIES</b>	<b>LISTING OR SENSITIVITY*</b>	<b>POTENTIAL TO OCCUR</b>
Long-spined spineflower ( <i>Chorizanthe polygonoides</i> var. <i>longispina</i> )	--/-- CNPS Rank 1B.2	None. Typically found on clay lenses largely devoid of shrubs. Can be occasionally seen on vernal pool and even montane meadows peripheries near vernal seeps. No native habitats are present within the study area. Blooming period is April through June.
Delicate clarkia ( <i>Clarkia delicata</i> )	--/-- CNPS Rank 1B.2	None. Occurs in shaded areas or the periphery of oak woodlands and cismontane chaparral. No native habitats are present within the study area. Blooming period is April through May.
Summer-holly ( <i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i> )	--/-- CNPS Rank 1B.2	None. Mesic north-facing slopes in southern mixed chaparral are the preferred habitat of this large, showy shrub. Rugged steep drainages seem to be a preferred location for isolated shrubs. No native habitats are present within the study area, and species was not observed during survey. Blooming period is April through June.
Del Mar Mesa sand aster ( <i>Corethrogyne filaginifolia</i> var. <i>linifolia</i> )	--/-- CNPS Rank 1B.2	None. Occurs on sandy soils in coastal bluff scrub, openings in maritime chaparral, and coastal sage scrub. No native habitats are present within the study area, and species was not observed during survey. Blooming period is July through November.
Variegated dudleya ( <i>Dudleya variegata</i> )	--/-- CNPS Rank 1B.2 City NE MSCP Covered	None. Occurs in chaparral, cismontane woodland, coastal sage scrub, valley and foothill grassland, and vernal pools. No native habitats are present within the study area. Blooming period is May through June.
Palmer's goldenbush ( <i>Ericameria palmeri</i> ssp. <i>palmeri</i> )	--/-- CNPS Rank 1B.1 MSCP Covered	None. This sizeable shrub grows along coastal drainages, in mesic chaparral sites, or rarely in Diegan coastal sage scrub. Occasionally occurs as a hillside element (usually at higher elevations inland on north-facing slopes). No native habitats are present within the study area, and species was not observed during survey. Blooming period is July through November.
San Diego button-celery ( <i>Eryngium aristulatum</i> var. <i>parishii</i> )	FE/SE CNPS Rank 1B.1 City NE MSCP Covered	None. Occurs within vernal pools. No vernal pools are present within the study area, and species was not observed during survey. Blooming period is April through June.

**Attachment E (cont.)**  
**SENSITIVE PLANT SPECIES**  
**OBSERVED OR WITH POTENTIAL TO OCCUR**

<b>SPECIES</b>	<b>LISTING OR SENSITIVITY*</b>	<b>POTENTIAL TO OCCUR</b>
San Diego barrel cactus ( <i>Ferocactus viridescens</i> )	--/-- CNPS Rank 2B.1 MSCP Covered	None. Occurs in chaparral, coastal sage scrub, valley and foothill grassland, and vernal pools. No native habitats are present within the study area, and species was not observed during survey. Blooming period is May through June.
Campbell's liverwort ( <i>Geothallus tuberosus</i> )	--/-- CNPS Rank 1B.1	None. Occurs in mesic coastal scrub and vernal pools between 32 and 1968 feet above mean sea level. No native habitats are present within the study area.
Palmer's grapplinghook ( <i>Harpagonella palmeri</i> )	--/-- CNPS Rank 4.2	None. Occurs on clay soils in annual grasslands and coastal sage scrub below approximately 3,300 feet above mean sea level. No native habitats are present within the study area. Blooming period is March through April.
Decumbent goldenbush ( <i>Isocoma menziesii</i> var. <i>decumbens</i> )	--/-- CNPS Rank 1B.2	None. Occurs in chaparral and sandy coastal sage scrub, often in disturbed areas. No native habitats are present within the study area, and species was not observed during survey. Blooming period is July through November.
San Diego marsh-elder ( <i>Iva hayesiana</i> )	--/-- CNPS Rank 2B.2	None. Occurs in marshes, swamps, and playas. No native habitats are present within the study area, and drainages are not vegetated. Blooming period is March through September.
Robinson's peppergrass ( <i>Lepidium virginicum</i> var. <i>robinsonii</i> )	--/-- CNPS Rank 4.3	None. This annual herb grows in openings in chaparral and sage scrub at the coastal and foothill elevations. Typically observed in relatively dry, exposed locales rather than beneath a shrub canopy or along creeks. No native habitats are present within the study area. Blooming period is January through July.
Willow monardella ( <i>Monardella viminea</i> )	FE/SE CNPS Rank 1B.1 MSCP Covered	None. Occurs in riparian scrub, usually at sandy locales in seasonally dry washes. Typically occur in areas with no canopy cover, and river cobbles may lie in close proximity. No native habitats are present within the study area, drainages are not vegetated, and species was not observed during survey. Blooming period is June through August.

**Attachment E (cont.)**  
**SENSITIVE PLANT SPECIES**  
**OBSERVED OR WITH POTENTIAL TO OCCUR**

<b>SPECIES</b>	<b>LISTING OR SENSITIVITY*</b>	<b>POTENTIAL TO OCCUR</b>
Little mouseltail ( <i>Myosurus minimus</i> ssp. <i>apus</i> )	--/-- CNPS Rank 3.1	None. Occurs in vernal pools and alkaline marshes. This cryptic species typically grows in the deeper portions of vernal pool basins, sprouting immediately after the surface water has evaporated. No native habitats are present within the study area, and drainages are not vegetated. Blooming period is April through June.
Spreading navarretia ( <i>Navarretia fossalis</i> )	FT/-- CNPS Rank 1B.1 City NE MSCP Covered	None. Occurs within vernal pools. No vernal pools are present within the study area. Blooming period is April through June.
San Diego mesa mint ( <i>Pogogyne abramsii</i> )	FE/SE CNPS Rank 1B.1 City NE MSCP Covered	None. This small annual is restricted to vernal pools in grasslands, chamise chaparral, and coastal sage scrub on mesas. No vernal pools are present within the study area. Blooming period is April through July.
Nuttall's scrub oak ( <i>Quercus dumosa</i> )	--/-- CNPS Rank 1B.1	None. Chaparral with a relatively open canopy cover is the preferred habitat in flat terrain (also found in coastal scrub). On north-facing slopes, may grow in dense monotypic stands. Sandy or clay loam soils. No native habitats are present within the study area. Blooming period is February through April.

\*Refer to Appendix C for an explanation of listing and sensitivity codes.

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**Attachment F**  
**SENSITIVE ANIMAL SPECIES**  
**KNOWN TO OCCUR OR WITH POTENTIAL TO OCCUR**

<b>SPECIES</b>	<b>LISTING OR SENSITIVITY*</b>	<b>POTENTIAL/HABITAT</b>
<b>INVERTEBRATES</b>		
San Diego fairy shrimp ( <i>Branchinecta sandiegonensis</i> )	FE/-- MSCP Covered	None. Occurs in seasonally astatic pools and other areas of shallow, standing water (e.g., vernal pools, road pools). No suitable habitat occurs in the study area.
Riverside fairy shrimp ( <i>Streptocephalus woottoni</i> )	FE/-- MSCP Covered	None. Occurs in seasonally astatic pools and other areas of shallow, standing water (e.g., vernal pools, road pools). No suitable habitat occurs in the study area.
<b>VERTEBRATES</b>		
<b>Reptiles and Amphibians</b>		
Orange-throated whiptail ( <i>Aspidoscelis hyperythra</i> )	--/SSC MSCP Covered	Low. Typically occurs in sage scrub and grassland areas. Landscaped areas provide marginal habitat in the study area.
Rosy boa ( <i>Charina trivirgata</i> )	--/--	Not expected. Occurs among rocky outcrops in coastal sage scrub, chaparral, and desert scrub. No suitable habitat occurs in the study area.
Northern red diamond rattlesnake ( <i>Crotalus ruber</i> )	--/SSC	Not expected. Found in chaparral, coastal sage scrub, along creek banks, particularly among rock outcrops or piles of debris with a supply of burrowing rodents for prey. No suitable habitat occurs in the study area.
San Diego ringneck snake ( <i>Diadophis punctatus similis</i> )	--/--	Low. Generally occurs in moist habitats such as oak woodlands and canyon bottoms, but is also sometimes encountered in grassland, chaparral, and coastal sage scrub. Landscaped areas provide marginal habitat in the study area.
Blainville's horned lizard ( <i>Phrynosoma blainvillii</i> )	--/SSC MSCP Covered	Not expected. Coastal sage scrub and open areas in chaparral, oak woodlands, and coniferous forests with sufficient basking sites, adequate scrub cover, and areas of loose soil; require native ants, especially harvester ants ( <i>Pogonomyrmex</i> sp.), and are generally excluded from areas invaded by Argentine ants ( <i>Linepithema humile</i> ). No suitable habitat occurs in the study area.
Coronado Island skink ( <i>Plestiodon skiltonianus interparietalis</i> )	--/SSC	Low. Found in open areas, sparse brush, and oak woodlands, usually under rocks, leaf litter, logs, debris, or in the shallow burrows it digs (Zeiner et al. 1988). Landscaped areas provide marginal habitat in the study area.

**Attachment F (cont.)**  
**SENSITIVE ANIMAL SPECIES**  
**KNOWN TO OCCUR OR WITH POTENTIAL TO OCCUR**

<b>SPECIES</b>	<b>LISTING OR SENSITIVITY*</b>	<b>POTENTIAL/HABITAT</b>
<b>VERTEBRATES (cont.)</b>		
<b>Reptiles and Amphibians (cont.)</b>		
Western spadefoot ( <i>Spea hammondi</i> )	--/SSC	Not expected. Occurs in open coastal sage scrub, chaparral, and grassland, along sandy or gravelly washes, floodplains, alluvial fans, or playas; require temporary pools for breeding and friable soils for burrowing; generally excluded from areas with bullfrogs ( <i>Rana catesbiana</i> ) or crayfish ( <i>Procambarus</i> sp). No suitable habitat occurs in the study area.
<b>Birds</b>		
Cooper's hawk ( <i>Accipiter cooperii</i> )	--/WL MSCP Covered	Moderate. Occurs throughout the continental U.S. excluding Alaska, parts of Montana, and parts of the Dakotas. Winters in Mexico and Honduras. In San Diego County, tends to inhabit lowland riparian areas and oak woodlands in proximity to suitable foraging areas such as shrublands or fields. No suitable nesting habitat occurs in the study area though there are sparse trees for perching. Landscaped areas provide marginal foraging habitat. Was observed flying over the eucalyptus trees on site (Dudek 2015), but not observed during the current survey.
Southern California rufous-crowned sparrow ( <i>Aimophila ruficeps canescens</i> )	--/WL MSCP Covered	Low. Occurs in sage scrub and grassland areas. Landscaped areas provide marginal habitat in the study area.
Burrowing owl ( <i>Athene cunicularia</i> )	BCC/SSC MSCP Covered	None. Species typically found in grassland or open scrub habitats supporting ground squirrel ( <i>Spermophilus beecheyi</i> ) burrows or other burrows or places for nesting (e.g. in piles of riprap or debris). No suitable habitat occurs in the study area.
Coastal cactus wren ( <i>Campylorhynchus brunneicapillus sandiegensis</i> )	BCC/SSC MSCP Covered	None. Occurs in coastal sage scrub with large cacti for nesting. No suitable habitat occurs in the study area.

**Attachment F (cont.)**  
**SENSITIVE ANIMAL SPECIES**  
**KNOWN TO OCCUR OR WITH POTENTIAL TO OCCUR**

<b>SPECIES</b>	<b>LISTING OR SENSITIVITY*</b>	<b>POTENTIAL/HABITAT</b>
<b>VERTEBRATES (cont.)</b>		
<b>Birds (cont.)</b>		
White-tailed kite ( <i>Elanus leucurus</i> )	--/Fully Protected	Low. Typical habitat includes riparian woodlands and oak or sycamore groves adjacent to grassland. Landscaped areas provide marginal foraging habitat in the study area.
California horned lark ( <i>Eremophila alpestris actia</i> )	--/WL	Low. Occurs in open habitats such as coastal strand, arid grasslands, and sandy desert floors. Landscaped areas provide marginal habitat in the study area.
Yellow-breasted chat ( <i>Icteria virens</i> )	--/SSC	None. Prefers brushy tangles, briars, stream thickets, riparian scrub, and riparian woodland. Breeding confined to riparian woodlands. No suitable habitat occurs in the study area.
Coastal California gnatcatcher ( <i>Poliophtila californica californica</i> )	FT/SSC MSCP Covered	Not expected. Habitat consists of sage scrub communities. No suitable habitat occurs within or adjacent to the study area. CNDDDB records this species over 1 mile away within the Black Mountain Open Space Park located northwest of the site and within the Sabre Springs Open Space located southeast of the project site.
Least Bell's vireo ( <i>Vireo bellii pusillus</i> )	FE/SE MSCP Covered	None. Occurs in dense riparian thickets with canopy and shrub layers. No suitable habitat occurs in the study area.
<b>Mammals</b>		
Mexican long-tongued bat ( <i>Choeronycteris mexicana</i> )	--/SSC	Low. Arid scrub, mixed forest, and canyons in mountain ranges rising from desert. Usually appears during the day in caves and mines but sometimes in building entrances. Structures may provide marginal roosting habitat in the study area.
Western mastiff bat ( <i>Eumops perotis californicus</i> )	--/SSC	Not expected. Found in the lower and upper Sonoran desert scrub near cliffs, preferring the rugged rocky canyons with abundant crevices. During winter months it goes into torpor every day, but arouses and leaves the roost to forage at night when temperatures at dusk are above 5° C. Prefer crowding into tight crevices. No suitable habitat occurs in the study area.

**Attachment F (cont.)**  
**SENSITIVE ANIMAL SPECIES**  
**KNOWN TO OCCUR OR WITH POTENTIAL TO OCCUR**

<b>SPECIES</b>	<b>LISTING OR SENSITIVITY*</b>	<b>POTENTIAL/HABITAT</b>
<b>VERTEBRATES (cont.)</b>		
<b>Mammals (cont.)</b>		
Western yellow bat ( <i>Lasiurus xanthinus</i> )	--/SSC	Low. Found in wooded areas and desert scrub. Roosts in foliage, particularly in thorny vegetation, palms, and other desert riparian habitats. Trees may provide marginal roosting habitat in the study area.
San Diego black-tailed jackrabbit ( <i>Lepus californicus bennettii</i> )	--/SSC	Moderate. Found primarily in open habitats including coastal sage scrub, chaparral, grasslands, croplands, and open, disturbed areas if there is at least some shrub cover present. Landscaped areas may provide suitable habitat in the study area.
Yuma myotis ( <i>Myotis yumanensis</i> )	--/--	Moderate. Open forests and woodland are optimal habitat. Closely tied to bodies of water for foraging and drinking. Roosts in buildings, mines, crevices, caves, and under bridges. Landscaped areas may provide suitable foraging habitat, and structures may provide suitable roosting habitat in the study area. Ephemeral drainages in the study area are an unreliable water source.
San Diego desert woodrat ( <i>Neotoma lepida intermedia</i> )	--/SSC	Not expected. Occurs in open chaparral and coastal sage scrub, often building large, stick nests in rock outcrops or around clumps of cactus or yucca. No suitable habitat occurs in the study area, and nests would have been observed during the survey.
Pocketed free-tailed bat ( <i>Nyctinomops femorosaccus</i> )	--/SSC	Not expected. Prefers desert habitats with high cliffs or rock outcrops. Suitable high rocks are not found on in the study area.
Big free-tailed bat ( <i>Nyctinomops macrotis</i> )	--/SSC	Not expected. Isolated populations throughout southwestern U.S. Prefers forest and deserts. Occurs in low, rugged canyons and forages over open water. No suitable habitat occurs in the study area.

\*Refer to Appendix C for an explanation of listing and sensitivity codes.

DRAINAGE STUDY FOR:

**PACIFIC VILLAGE**

**TENTATIVE MAP NO. 1669785**

CITY OF SAN DIEGO, CALIFORNIA

PTS NO. 470158

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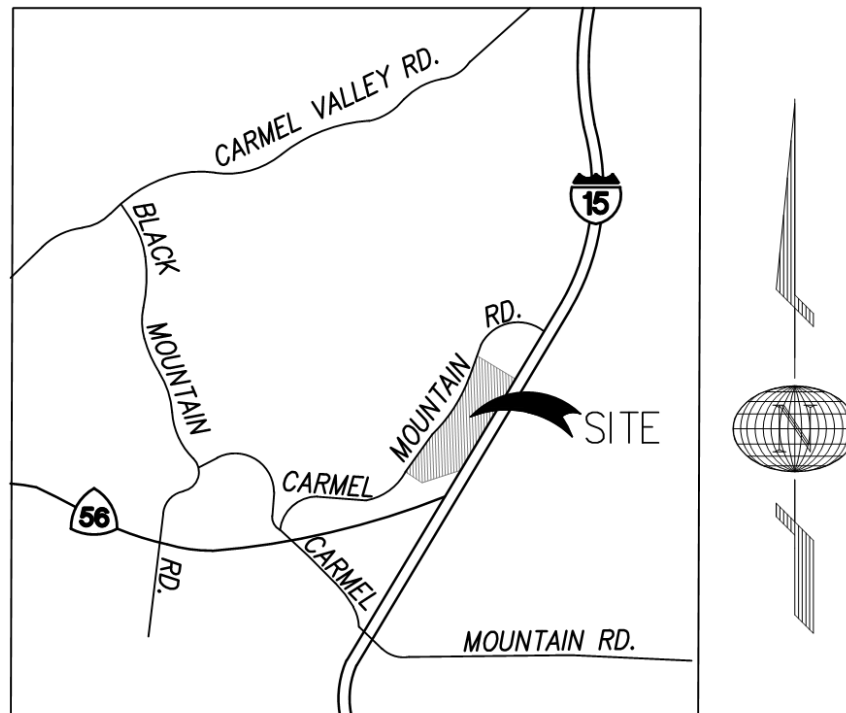
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## I. PROJECT DESCRIPTION

Latitude 33 is developing a tentative map for the Pacific Village project located in Ranchos Penasquitos just west of Interstate 15 along Carmel Mountain Road, see vicinity map below. As part of this development there is a mix of 2-story single family detached cluster homes, triplexes, 3-story row townhomes and apartments. This report has been prepared to document the analysis of the existing and proposed drainage condition associated with Pacific Village.



VICINITY MAP

## II. EXISTING SITE CONDITION

The project area is approximately 41 acres of developed land consisting of relatively spread out single story multidwelling residential homes. The existing site is comprised of rolling hills with gentle slopes no larger than 2:1 and as mild as 30:1. Although the overall surface flow pattern tends to drain to the southeast, there are two major basins at Pacific Village. There exists a ridge running east roughly in the middle of the site that divides the project into northern and southern basins. Within each basin there exists 36-in storm drains which begin outside the project limits from the west and aid with the capture of onsite flows. These flows are then transferred east under Interstate 15 and travel south eventually meeting up with Los Penasquitos Creek.

### III. DEVELOPED SITE CONDITION

---

The post project developed site at Pacific Village will have a 99 cluster homes, 102 triplexes, 128 row townhomes and 240 apartments. The storm water run-off from the project site will be treated by biofiltration basins onsite and will follow a similar flow pattern as the existing condition utilizing the two existing 36-in storm drains. The drainage areas have been designed to maintain the overall drainage areas tributary to the existing storm drains.

The two existing 36-in storm drains collecting runoff from the project site cross through and also drain a portion of Interstate 15. Caltrans requires a design storm of 25-yrs for conventional, high volume, multilane highways with speeds over 45 mph while design storms for this project are much less. According to the City of San Diego's Storm Water Standards, BMP Design Manual, dated January 2016, the flow control performance requirements for the proposed developed site states that we need to reduce the discharge leaving the site to a fraction of the 2-yr storm event. Based on the geomorphic assessment performed by Chang Consultants titled, Hydromodification Screening for Pacific Village, dated May 10, 2016 the low flow threshold for this project is half of the discharge for the 2-yr storm ( $0.5Q_2$ ).

The manual specifically states that, "For flow rates ranging from 10 percent, 30 percent or 50 percent of the pre-development 2year runoff event ( $0.1Q_2$ ,  $0.3Q_2$ , or  $0.5Q_2$ ) to the pre-development 10-year runoff event ( $Q_{10}$ ), the post-project discharge rates and durations must not exceed the pre-development rates and durations by more than 10 percent...", (pg. 6-4 of the City of San Diego's Storm Water Standards, BMP Design Manual, dated January 2016). This requirement is beyond the scope of this study but fortunately the manual also allows the low flow orifices used as flow control for the storage facilities to be determined using the BMP Sizing Spreadsheet that was developed by the County of San Diego, which is a much more conservative approach.

These orifices are sized to discharge 50 percent of the predevelopment two year storm. In the existing condition there has been no reports of flooding or backwater effects from the contribution of the current projects site's runoff onto Caltrans property. Also, currently there are no hydromodification structural BMPs in place to regulate flows onto Caltrans right-of-way. With the new flow control BMPs proposed, the flows leaving the project will be less than what they are currently today due to the simple fact that we are reducing the flows to predevelopment conditions, meaning much less impervious area and thus less flow and this flow is half of the 2-year storm event. Please see the Storm Water Quality Management Plan (SWQMP) for details of Water Quality and hydromodification compliance calculations.

For some developed site conditions there exist jurisdictional waters on the project site that the government, both federal and state, wish to protect. Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers regulates the discharge of dredged and/or fill material in water of the United States. Section 401 of the Clean Water Act requires that any applicant for a section 404 permit also obtain a Water Quality Certification from the State. The purpose of the certificate is to confirm that the discharge of fill materials will be in compliance with the State's applicable Water Quality Standards. This project does not have any jurisdictional waters onsite. There is no proposal to dredge or fill in Waters of the U.S. or of the State and thus is not required to obtain approval from the Regional Water Quality Control Board under the Federal Clean Water Act (CWA) section 401 and 404.



## IV. HYDROLOGIC METHODOLOGY

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This report is intended to support preliminary engineering design, as well as demonstrate compliance with applicable design standards. Specifically this report will address:

1. Flow rates for the pre-development and post project conditions.
2. Note, a separate Storm Water Quality Management Plan (SWQMP) has been prepared for this project. Refer to the SWQMP for detailed discussion of the following:
  - a. Project pollutants of concern and receiving water information.
  - b. Water quality treatment.
  - c. Hydromodification Management.
  - d. Other miscellaneous items required by the June 2015 Model BMP Design Manual, San Diego Region.

Appendix I of the City of San Diego's 1984 *Drainage Design Manual*'s rational method procedure was the basis for the pre-developed and post project 100-year and 50-year hydrologic analysis. This study was accomplished through the implementation of the 2015 Autodesk Storm and Sanitary Analysis software, which has the capability to utilize a rational method program based on the City of San Diego storm water design criteria. The input parameters are summarized below and the supporting data is included in Appendix A.

- Intensity-Duration-Frequency: The City's 100-year and 50-year Intensity-Duration-Frequency curve from the *Drainage Design Manual* was used.
- Drainage area: The pre-development drainage basins were delineated from the base topographic mapping prepared for the project. Proposed condition drainage basins were delineated using the proposed grading and the tentative map storm drain plans.
- Manning's Roughness Coefficients: Table 1-104.14A was used to determine appropriate values.
- Run-off Coefficient: Taking into consideration the amount of landscaped area for the pre-developed condition a value of 0.55 was used and for the post condition a runoff coefficient of 0.70 was implemented in accordance with Table 2 in Appendix I.
- Flow lengths and elevations: The flow lengths and elevations were obtained from the topographic mapping and grading plans.

## V. DISCUSSION AND RESULT

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The rational method results (see table below) show that there is an overall growth in flow for both the North and South basins during the 50 and 100 year storm events. For the northern basin there is a decrease in total area but there is also a decrease in time of concentration which results in an overall increase in flow of moderate size. The southern basin gained the area the northern basin lost. This development creates a longer flow path which increases the time of concentration. Although the area increased, the time of concentration also increased so that the resulting flow rise is tolerable. Appendix A shows the rational method calculations from the 2015 Autodesk Storm and Sanitary Analysis software used in this analysis.

Basin	Exist Area	Prop. Area	Exist Q50	Prop. Q50	Exist Q100	Prop. Q100
	(ac)	(ac)	(cfs)	(cfs)	(cfs)	(cfs)
North	27.43	24.80	37.98	46.91	42.38	51.69
South	16.18	18.81	35.86	42.49	38.58	46.45

## APPENDIX A: EXISTING & PROPOSED HYDROLOGIC CALCULATIONS

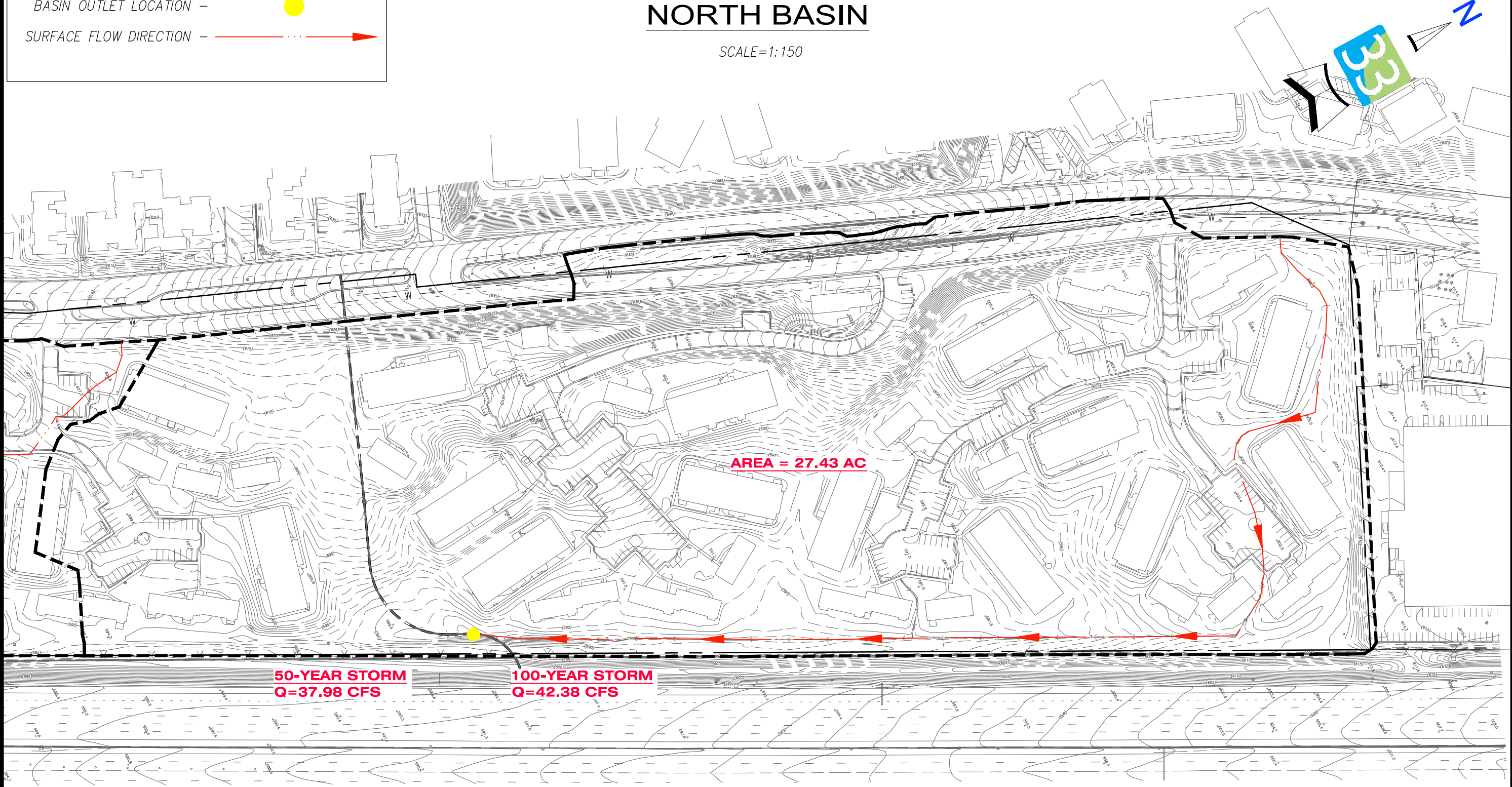
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LEGEND

- PROPOSED BASIN LIMITS - [dashed line]
- BASIN OUTLET LOCATION - [yellow dot]
- SURFACE FLOW DIRECTION - [red arrow]

PACIFIC VILLAGE  
EXISTING CONDITION HYDROLOGY MAP  
NORTH BASIN

SCALE=1:150



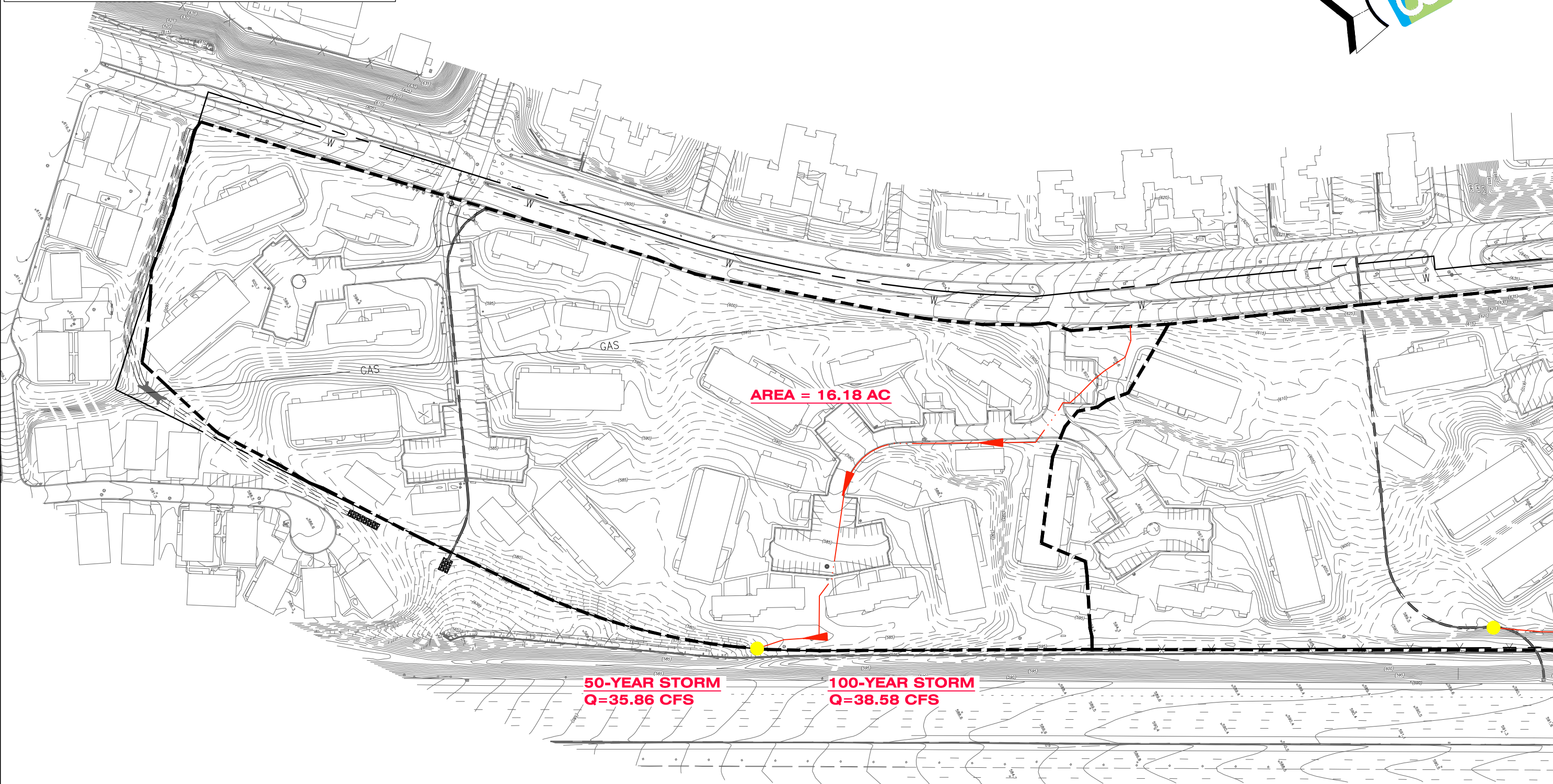
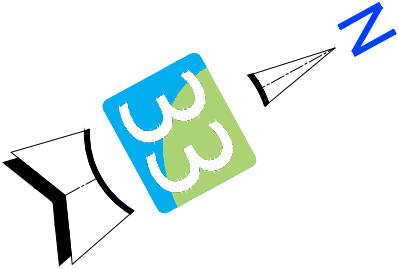


LEGEND

- PROPOSED BASIN LIMITS - [dashed line]
- BASIN OUTLET LOCATION - [yellow dot]
- SURFACE FLOW DIRECTION - [red arrow]

PACIFIC VILLAGE  
EXISTING CONDITION HYDROLOGY MAP  
SOUTH BASIN

SCALE=1:150



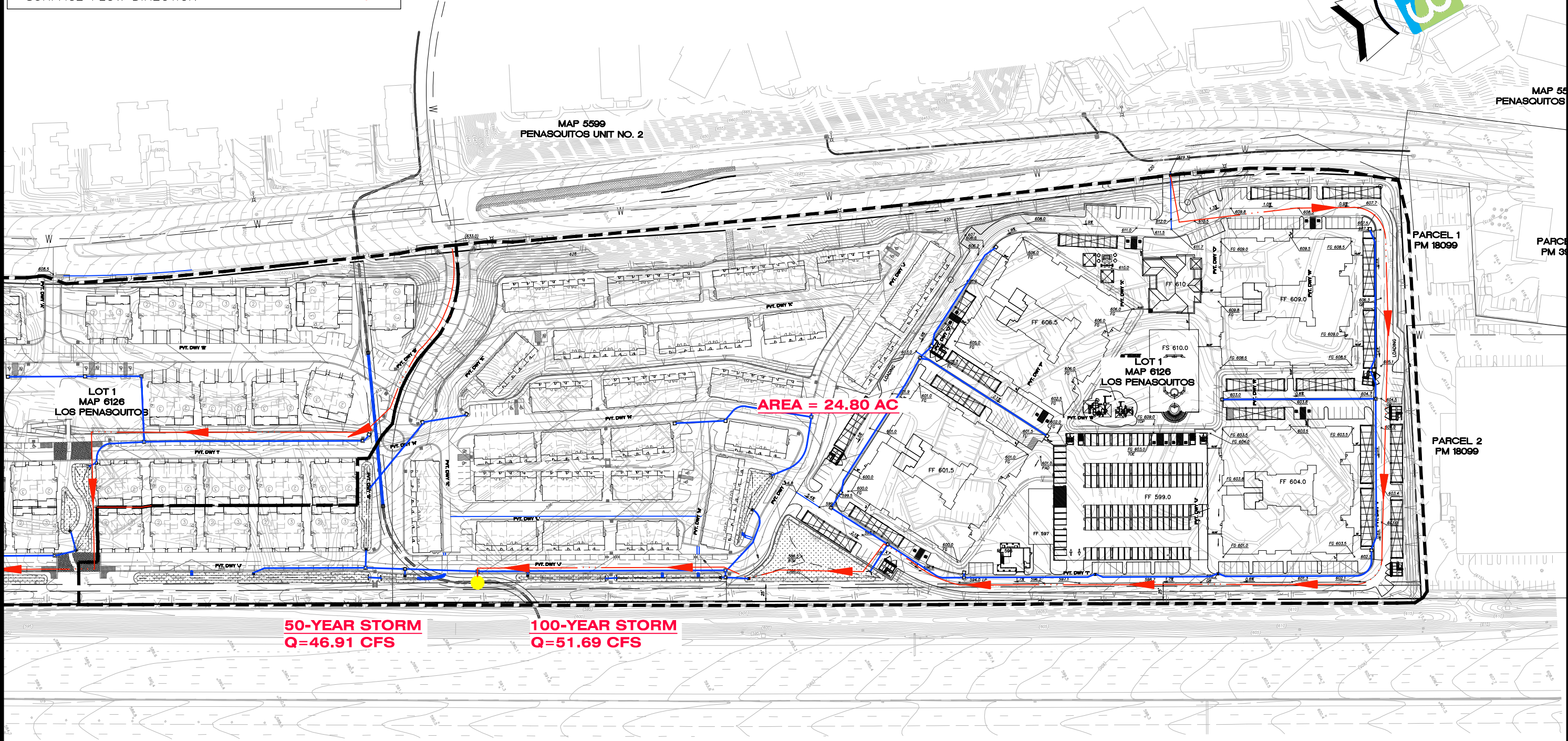
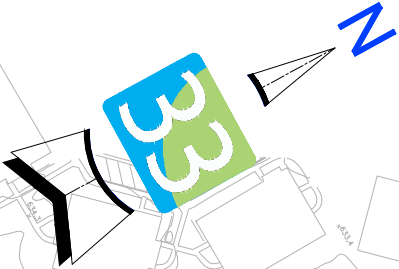


LEGEND

- PROPOSED BASIN LIMITS -
- STORM DRAIN SYSTEM -
- BASIN OUTLET LOCATION -
- SURFACE FLOW DIRECTION -

PACIFIC VILLAGE  
PROPOSED CONDITION HYDROLOGY MAP  
NORTH BASIN

SCALE=1:150



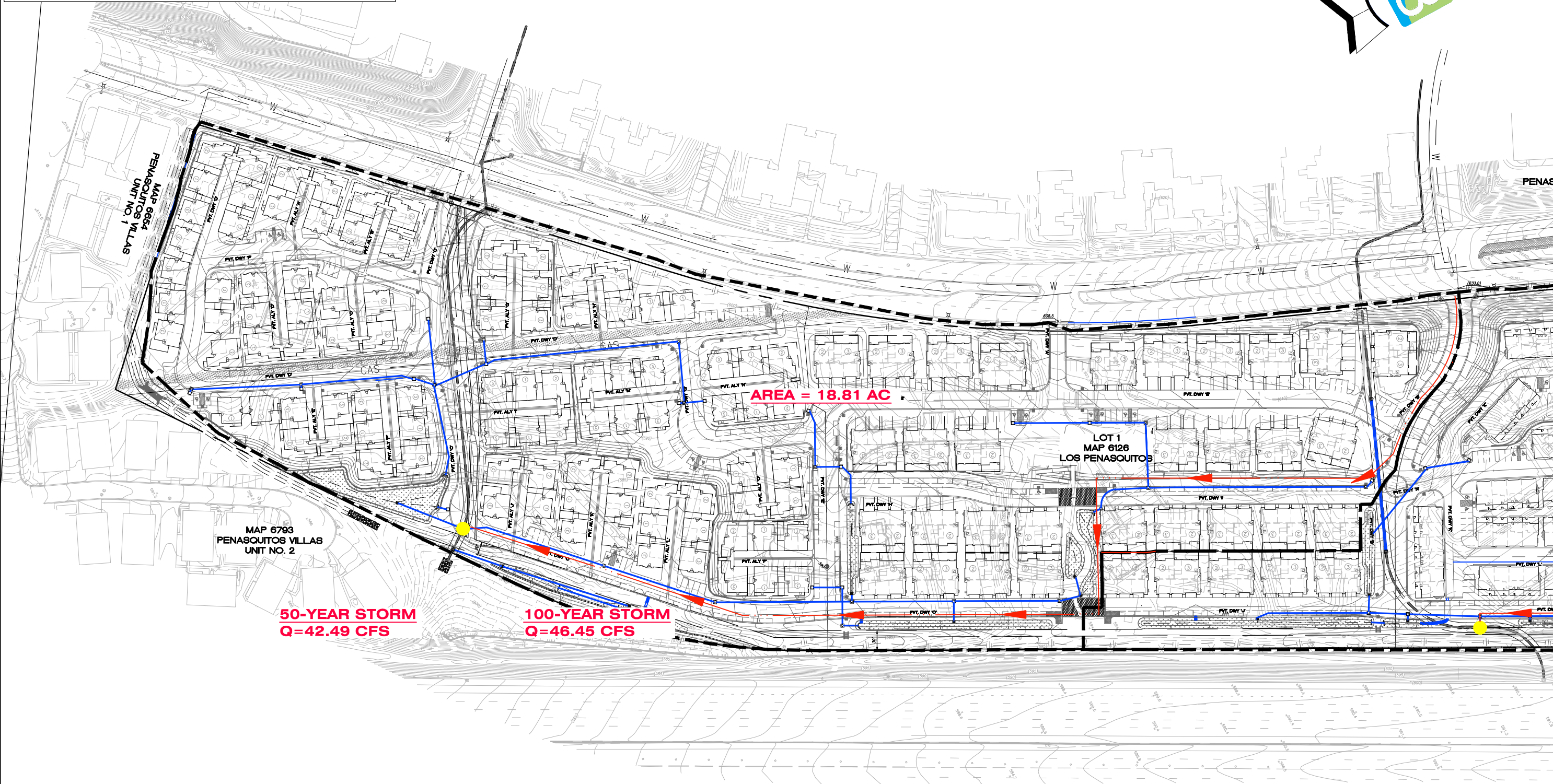
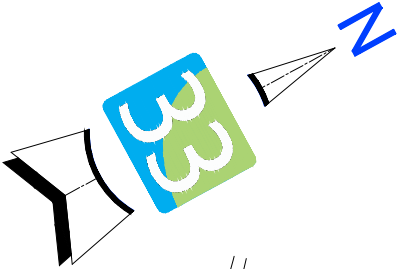


LEGEND

- PROPOSED BASIN LIMITS -
- STORM DRAIN SYSTEM -
- BASIN OUTLET LOCATION -
- SURFACE FLOW DIRECTION -

PACIFIC VILLAGE  
PROPOSED CONDITION HYDROLOGY MAP  
SOUTH BASIN

SCALE=1:150



Project Description

File Name ..... Lennar Exisitng Drainage.SPF  
Description ..... C:\Users\jgreen\Desktop\Test\1323 C3D SD & EXIST DA.dwg

Project Options

Flow Units ..... CFS  
Elevation Type ..... Elevation  
Hydrology Method ..... Rational  
Time of Concentration (TOC) Method ..... SCS TR-55  
Link Routing Method ..... Hydrodynamic  
Enable Overflow Ponding at Nodes ..... YES  
Skip Steady State Analysis Time Periods ..... YES

Analysis Options

Start Analysis On ..... Dec 11, 2015 00:00:00  
End Analysis On ..... Dec 11, 2015 02:00:00  
Start Reporting On ..... Dec 11, 2015 00:00:00  
Antecedent Dry Days ..... 0 days  
Runoff (Dry Weather) Time Step ..... 0 01:00:00 days hh:mm:ss  
Runoff (Wet Weather) Time Step ..... 0 00:05:00 days hh:mm:ss  
Reporting Time Step ..... 0 00:05:00 days hh:mm:ss  
Routing Time Step ..... 30 seconds

Rainfall Details

Return Period..... 50 year(s)



Subbasin Hydrology

Subbasin : {Site 1}.Lenar\_Exist\_North

Input Data

Area (ac) ..... 27.43  
Weighted Runoff Coefficient ..... 0.5500

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	27.43	-	0.55
Composite Area & Weighted Runoff Coeff.	27.43		0.55

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

$T_c = (0.007 * ((n * L_f)^{0.8})) / ((P^{0.5}) * (S_f^{0.4}))$

Where :

Tc = Time of Concentration (hr)  
n = Manning's roughness  
Lf = Flow Length (ft)  
P = 2 yr, 24 hr Rainfall (inches)  
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation :

V = 16.1345 \* (Sf^0.5) (unpaved surface)  
V = 20.3282 \* (Sf^0.5) (paved surface)  
V = 15.0 \* (Sf^0.5) (grassed waterway surface)  
V = 10.0 \* (Sf^0.5) (nearly bare & untilled surface)  
V = 9.0 \* (Sf^0.5) (cultivated straight rows surface)  
V = 7.0 \* (Sf^0.5) (short grass pasture surface)  
V = 5.0 \* (Sf^0.5) (woodland surface)  
V = 2.5 \* (Sf^0.5) (forest w/heavy litter surface)  
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hr)  
Lf = Flow Length (ft)  
V = Velocity (ft/sec)  
Sf = Slope (ft/ft)

Channel Flow Equation :

V = (1.49 \* (R^(2/3)) \* (Sf^0.5)) / n  
R = Aq / Wp  
Tc = (Lf / V) / (3600 sec/hr)

Where :

Tc = Time of Concentration (hr)  
Lf = Flow Length (ft)  
R = Hydraulic Radius (ft)  
Aq = Flow Area (ft^2)  
Wp = Wetted Perimeter (ft)  
V = Velocity (ft/sec)  
Sf = Slope (ft/ft)  
n = Manning's roughness

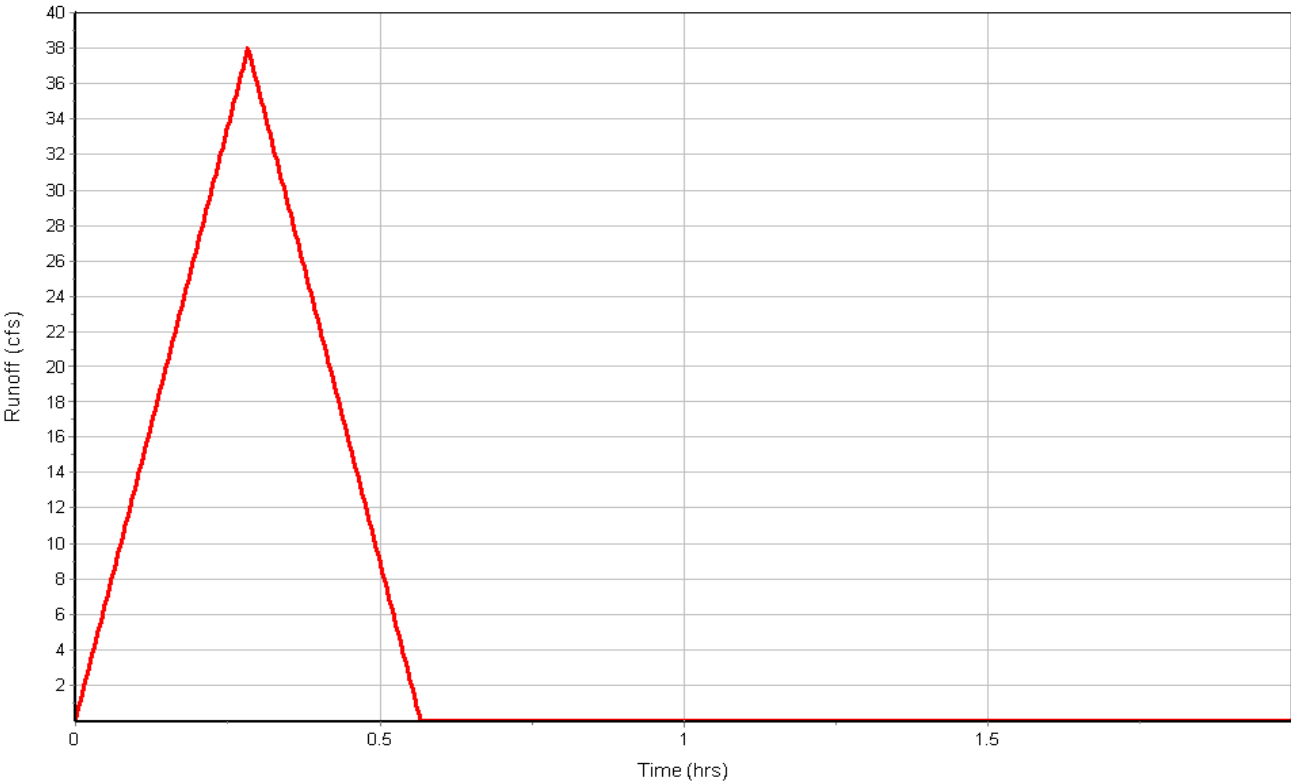
Sheet Flow Computations	Subarea	Subarea	Subarea
	A	B	C
Manning's Roughness :	0.06	0.00	0.00
Flow Length (ft) :	298.868	0.00	0.00
Slope (%) :	2.449	0.00	0.00
2 yr, 24 hr Rainfall (in) :	2.40	0.00	0.00
Velocity (ft/sec) :	0.41	0.00	0.00
Computed Flow Time (min) :	12.04	0.00	0.00
Shallow Concentrated Flow Computations	Subarea	Subarea	Subarea
	A	B	C
Flow Length (ft) :	342.641	0.00	0.00
Slope (%) :	1.097	0.00	0.00
Surface Type :	Unpaved	Unpaved	Unpaved
Velocity (ft/sec) :	1.69	0.00	0.00
Computed Flow Time (min) :	3.38	0.00	0.00
Channel Flow Computations	Subarea	Subarea	Subarea
	A	B	C
Manning's Roughness :	0.015	0.00	0.00
Flow Length (ft) :	1282.998	0.00	0.00
Channel Slope (%) :	1.24	0.00	0.00
Cross Section Area (ft²) :	6.534	0.00	0.00
Wetted Perimeter (ft) :	4.712	0.00	0.00
Velocity (ft/sec) :	13.75	0.00	0.00
Computed Flow Time (min) :	1.55	0.00	0.00
Total TOC (min) .....	16.97		

### Subbasin Runoff Results

Total Rainfall (in) .....	0.71
Total Runoff (in) .....	0.39
Peak Runoff (cfs) .....	37.98
Rainfall Intensity .....	2.517
Weighted Runoff Coefficient .....	0.5500
Time of Concentration (days hh:mm:ss) .....	0 00:16:58

Subbasin : {Site 1}.Lenar\_Exist\_North

Runoff Hydrograph



## Subbasin : {Site 1}.Lennar\_Exist\_South

### Input Data

Area (ac) ..... 16.18  
Weighted Runoff Coefficient ..... 0.5500

### Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	16.18	-	0.55
Composite Area & Weighted Runoff Coeff.	16.18		0.55

### Time of Concentration

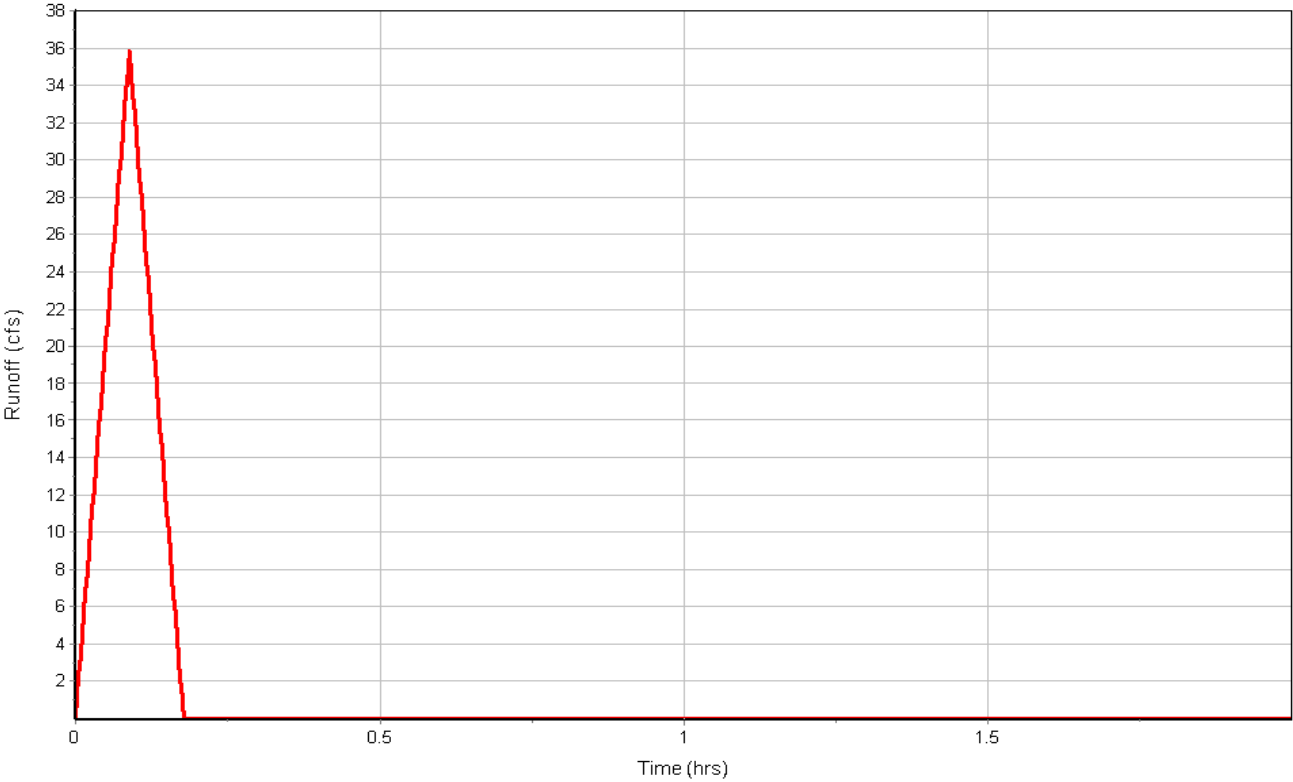
Sheet Flow Computations	Subarea A	Subarea B	Subarea C
	0.018	0.00	0.00
	Manning's Roughness :		
	Flow Length (ft) :	237.731	0.00
	Slope (%) :	4.39	0.00
	2 yr, 24 hr Rainfall (in) :	2.40	0.00
Shallow Concentrated Flow Computations	Velocity (ft/sec) :	1.31	0.00
	Computed Flow Time (min) :	3.03	0.00
	Subarea A	Subarea B	Subarea C
	Flow Length (ft) :	449.65	0.00
	Slope (%) :	4.18	0.00
	Surface Type :	Paved	Unpaved
Channel Flow Computations	Velocity (ft/sec) :	4.16	0.00
	Computed Flow Time (min) :	1.80	0.00
	Subarea A	Subarea B	Subarea C
	Manning's Roughness :	0.05	0.00
	Flow Length (ft) :	192.64	0.00
	Channel Slope (%) :	1.84	0.00
Total TOC (min) .....5.33	Cross Section Area (ft²) :	3.14	0.00
	Wetted Perimeter (ft) :	1.57	0.00
	Velocity (ft/sec) :	6.42	0.00
	Computed Flow Time (min) :	0.50	0.00

### Subbasin Runoff Results

Total Rainfall (in) ..... 0.36  
Total Runoff (in) ..... 0.20  
Peak Runoff (cfs) ..... 35.86  
Rainfall Intensity ..... 4.029  
Weighted Runoff Coefficient ..... 0.5500  
Time of Concentration (days hh:mm:ss) ..... 0 00:05:20

Subbasin : {Site 1}.Lennar\_Exist\_South

Runoff Hydrograph



Project Description

File Name ..... Lennar Proposed Drainage.SPF  
Description ..... H:\1300\1323.00 - Lennar Penasquitos 41-acre\Engineering\Reports\Drainage\SSA Calcs\1323 C3D PROP DA.dwg

Project Options

Flow Units ..... CFS  
Elevation Type ..... Elevation  
Hydrology Method ..... Rational  
Time of Concentration (TOC) Method ..... SCS TR-55  
Link Routing Method ..... Hydrodynamic  
Enable Overflow Ponding at Nodes ..... YES  
Skip Steady State Analysis Time Periods ..... YES

Analysis Options

Start Analysis On ..... Dec 17, 2015 00:00:00  
End Analysis On ..... Dec 17, 2015 02:00:00  
Start Reporting On ..... Dec 17, 2015 00:00:00  
Antecedent Dry Days ..... 0 days  
Runoff (Dry Weather) Time Step ..... 0 01:00:00 days hh:mm:ss  
Runoff (Wet Weather) Time Step ..... 0 00:05:00 days hh:mm:ss  
Reporting Time Step ..... 0 00:05:00 days hh:mm:ss  
Routing Time Step ..... 30 seconds

Rainfall Details

Return Period..... 50 year(s)

## Subbasin Hydrology

### Subbasin : {Site 1}.Lennar\_Proposed\_North

#### Input Data

Area (ac) ..... 24.80  
Weighted Runoff Coefficient ..... 0.7000

#### Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	24.80	-	0.70
Composite Area & Weighted Runoff Coeff.	24.80		0.70

#### Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

$$T_c = (0.007 * ((n * L_f)^{0.8})) / ((P^{0.5}) * (S_f^{0.4}))$$

Where :

$T_c$  = Time of Concentration (hr)  
 $n$  = Manning's roughness  
 $L_f$  = Flow Length (ft)  
 $P$  = 2 yr, 24 hr Rainfall (inches)  
 $S_f$  = Slope (ft/ft)

Shallow Concentrated Flow Equation :

$V = 16.1345 * (S_f^{0.5})$  (unpaved surface)  
 $V = 20.3282 * (S_f^{0.5})$  (paved surface)  
 $V = 15.0 * (S_f^{0.5})$  (grassed waterway surface)  
 $V = 10.0 * (S_f^{0.5})$  (nearly bare & untilled surface)  
 $V = 9.0 * (S_f^{0.5})$  (cultivated straight rows surface)  
 $V = 7.0 * (S_f^{0.5})$  (short grass pasture surface)  
 $V = 5.0 * (S_f^{0.5})$  (woodland surface)  
 $V = 2.5 * (S_f^{0.5})$  (forest w/heavy litter surface)  
 $T_c = (L_f / V) / (3600 \text{ sec/hr})$

Where:

$T_c$  = Time of Concentration (hr)  
 $L_f$  = Flow Length (ft)  
 $V$  = Velocity (ft/sec)  
 $S_f$  = Slope (ft/ft)

Channel Flow Equation :

$V = (1.49 * (R^{2/3}) * (S_f^{0.5})) / n$   
 $R = A_q / W_p$   
 $T_c = (L_f / V) / (3600 \text{ sec/hr})$

Where :

$T_c$  = Time of Concentration (hr)  
 $L_f$  = Flow Length (ft)  
 $R$  = Hydraulic Radius (ft)  
 $A_q$  = Flow Area (ft<sup>2</sup>)  
 $W_p$  = Wetted Perimeter (ft)  
 $V$  = Velocity (ft/sec)  
 $S_f$  = Slope (ft/ft)  
 $n$  = Manning's roughness

Sheet Flow Computations	Subarea	Subarea	Subarea
	A	B	C
Manning's Roughness :	0.060	0.00	0.00
Flow Length (ft) :	127.732	0.00	0.00
Slope (%) :	3.184	0.00	0.00
2 yr, 24 hr Rainfall (in) :	2.40	0.00	0.00
Velocity (ft/sec) :	0.39	0.00	0.00
Computed Flow Time (min) :	5.49	0.00	0.00
Shallow Concentrated Flow Computations	Subarea	Subarea	Subarea
	A	B	C
Flow Length (ft) :	1180.914	0.00	0.00
Slope (%) :	1.331	0.00	0.00
Surface Type :	Paved	Unpaved	Unpaved
Velocity (ft/sec) :	2.35	0.00	0.00
Computed Flow Time (min) :	8.38	0.00	0.00
Channel Flow Computations	Subarea	Subarea	Subarea
	A	B	C
Manning's Roughness :	0.012	0.00	0.00
Flow Length (ft) :	593.649	0.00	0.00
Channel Slope (%) :	1.788	0.00	0.00
Cross Section Area (ft²) :	3.14	0.00	0.00
Wetted Perimeter (ft) :	6.28	0.00	0.00
Velocity (ft/sec) :	10.46	0.00	0.00
Computed Flow Time (min) :	0.95	0.00	0.00
Total TOC (min) .....	14.81		

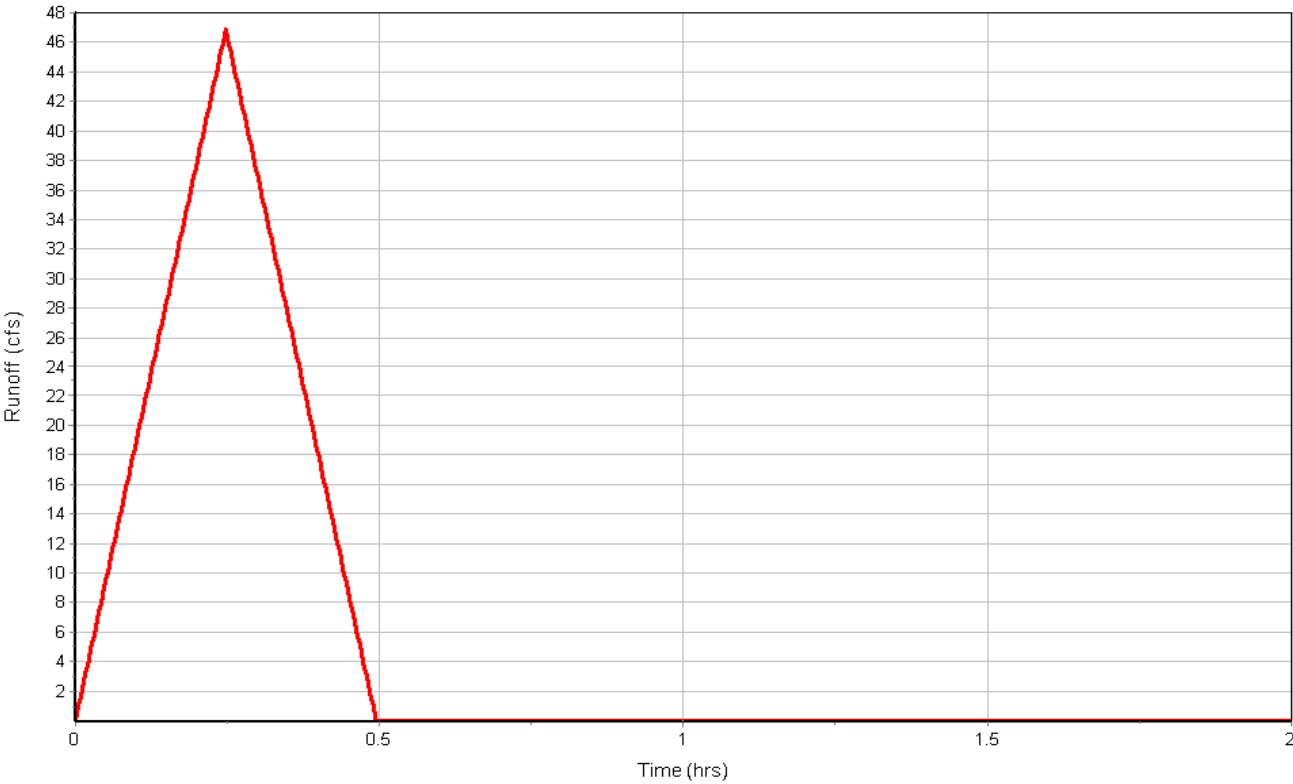
### Subbasin Runoff Results

Total Rainfall (in) .....	0.67
Total Runoff (in) .....	0.47
Peak Runoff (cfs) .....	46.91
Rainfall Intensity .....	2.702
Weighted Runoff Coefficient .....	0.7000
Time of Concentration (days hh:mm:ss) .....	0 00:14:49



Subbasin : {Site 1}.Lennar\_Proposed\_North

Runoff Hydrograph



## Subbasin : {Site 1}.Lennar\_Proposed\_South

### Input Data

Area (ac) ..... 18.81  
Weighted Runoff Coefficient ..... 0.7000

### Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	18.81	-	0.70
Composite Area & Weighted Runoff Coeff.	18.81		0.70

### Time of Concentration

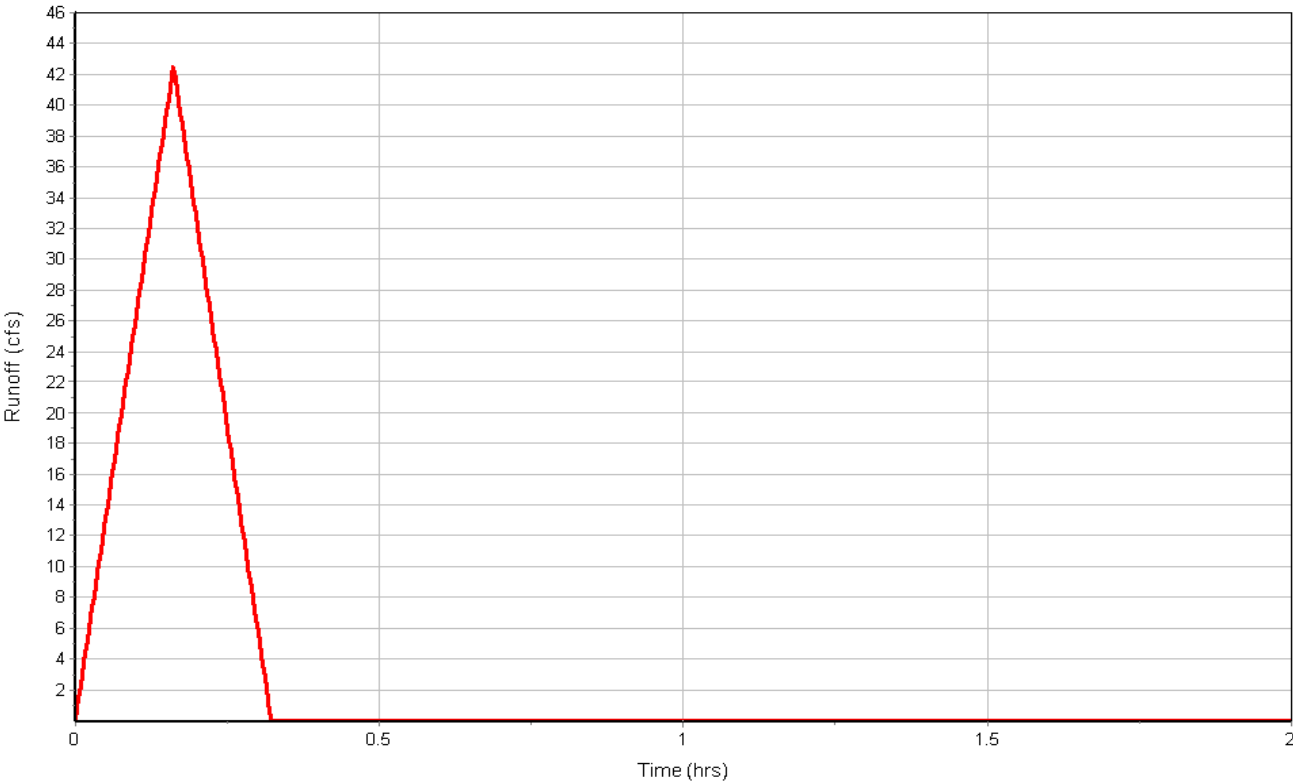
Sheet Flow Computations	Subarea A	Subarea B	Subarea C
	0.06	0.00	0.00
	Flow Length (ft) :	93.345	0.00
	Slope (%) :	4.057	0.00
	2 yr, 24 hr Rainfall (in) :	2.40	0.00
Shallow Concentrated Flow Computations	Velocity (ft/sec) :	0.40	0.00
	Computed Flow Time (min) :	3.88	0.00
	Subarea A	Subarea B	Subarea C
	432.559	0.00	0.00
	Flow Length (ft) :	1.820	0.00
Channel Flow Computations	Slope (%) :	1.820	0.00
	Surface Type :	Paved	Unpaved
	Velocity (ft/sec) :	2.74	0.00
	Computed Flow Time (min) :	2.63	0.00
	Subarea A	Subarea B	Subarea C
	0.012	0.00	0.00
Total TOC (min) .....9.72	Flow Length (ft) :	1505.761	0.00
	Channel Slope (%) :	1.0	0.00
	Cross Section Area (ft²) :	3.14	0.00
	Wetted Perimeter (ft) :	6.28	0.00
	Velocity (ft/sec) :	7.82	0.00
	Computed Flow Time (min) :	3.21	0.00

### Subbasin Runoff Results

Total Rainfall (in) ..... 0.52  
Total Runoff (in) ..... 0.36  
Peak Runoff (cfs) ..... 42.49  
Rainfall Intensity ..... 3.227  
Weighted Runoff Coefficient ..... 0.7000  
Time of Concentration (days hh:mm:ss) ..... 0 00:09:43

Subbasin : {Site 1}.Lennar\_Proposed\_South

Runoff Hydrograph



Project Description

File Name ..... Lennar Exisitng Drainage.SPF  
Description ..... C:\Users\jgreen\Desktop\Test\1323 C3D SD & EXIST DA.dwg

Project Options

Flow Units ..... CFS  
Elevation Type ..... Elevation  
Hydrology Method ..... Rational  
Time of Concentration (TOC) Method ..... SCS TR-55  
Link Routing Method ..... Hydrodynamic  
Enable Overflow Ponding at Nodes ..... YES  
Skip Steady State Analysis Time Periods ..... YES

Analysis Options

Start Analysis On ..... Dec 11, 2015 00:00:00  
End Analysis On ..... Dec 11, 2015 02:00:00  
Start Reporting On ..... Dec 11, 2015 00:00:00  
Antecedent Dry Days ..... 0 days  
Runoff (Dry Weather) Time Step ..... 0 01:00:00 days hh:mm:ss  
Runoff (Wet Weather) Time Step ..... 0 00:05:00 days hh:mm:ss  
Reporting Time Step ..... 0 00:05:00 days hh:mm:ss  
Routing Time Step ..... 30 seconds

Rainfall Details

Return Period..... 100 year(s)

Subbasin Hydrology

Subbasin : {Site 1}.Lenar\_Exist\_North

Input Data

Area (ac) ..... 27.43  
Weighted Runoff Coefficient ..... 0.5500

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	27.43	-	0.55
Composite Area & Weighted Runoff Coeff.	27.43		0.55

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

$T_c = (0.007 * ((n * L_f)^{0.8})) / ((P^{0.5}) * (S_f^{0.4}))$

Where :

Tc = Time of Concentration (hr)  
n = Manning's roughness  
Lf = Flow Length (ft)  
P = 2 yr, 24 hr Rainfall (inches)  
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation :

V = 16.1345 \* (Sf^0.5) (unpaved surface)  
V = 20.3282 \* (Sf^0.5) (paved surface)  
V = 15.0 \* (Sf^0.5) (grassed waterway surface)  
V = 10.0 \* (Sf^0.5) (nearly bare & untilled surface)  
V = 9.0 \* (Sf^0.5) (cultivated straight rows surface)  
V = 7.0 \* (Sf^0.5) (short grass pasture surface)  
V = 5.0 \* (Sf^0.5) (woodland surface)  
V = 2.5 \* (Sf^0.5) (forest w/heavy litter surface)  
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hr)  
Lf = Flow Length (ft)  
V = Velocity (ft/sec)  
Sf = Slope (ft/ft)

Channel Flow Equation :

$V = (1.49 * (R^{2/3}) * (S_f^{0.5})) / n$   
 $R = A_q / W_p$   
 $T_c = (L_f / V) / (3600 \text{ sec/hr})$

Where :

Tc = Time of Concentration (hr)  
Lf = Flow Length (ft)  
R = Hydraulic Radius (ft)  
Aq = Flow Area (ft²)  
Wp = Wetted Perimeter (ft)  
V = Velocity (ft/sec)  
Sf = Slope (ft/ft)  
n = Manning's roughness

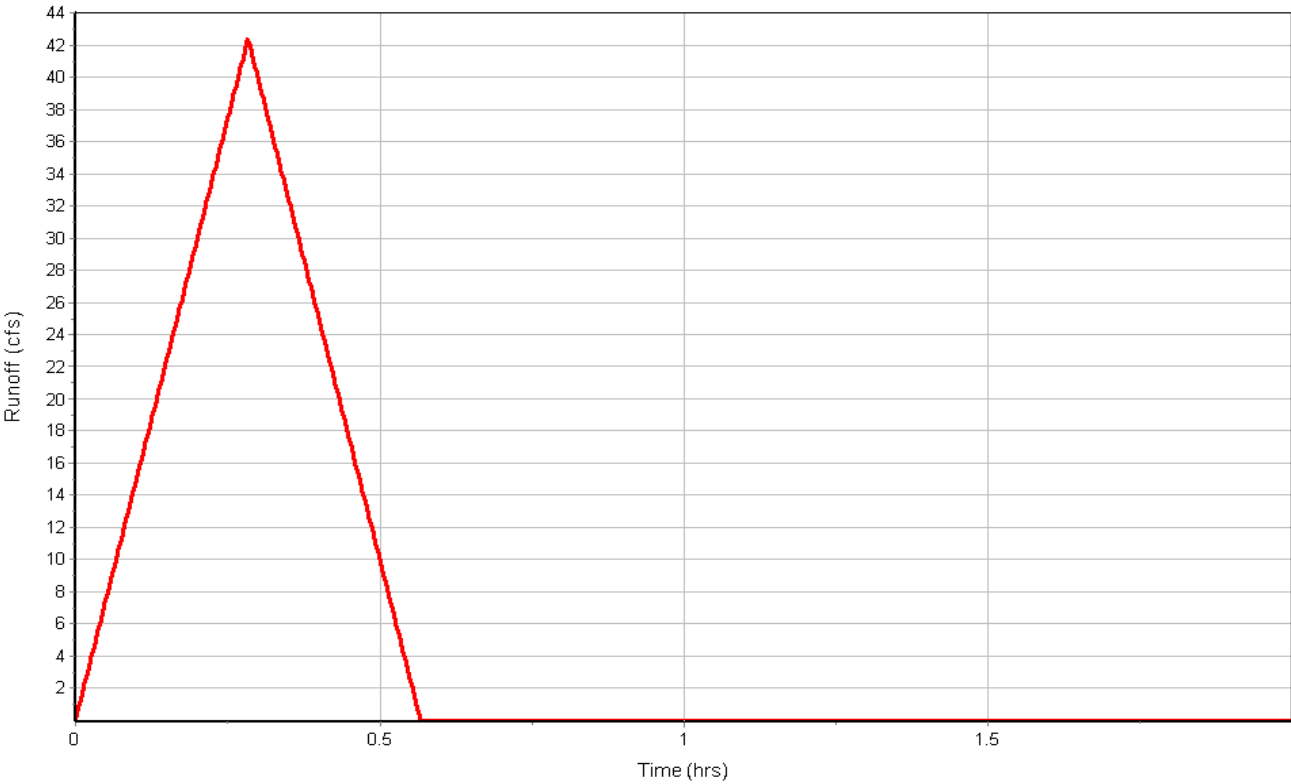
Sheet Flow Computations	Subarea	Subarea	Subarea
	A	B	C
Manning's Roughness :	0.06	0.00	0.00
Flow Length (ft) :	298.868	0.00	0.00
Slope (%) :	2.449	0.00	0.00
2 yr, 24 hr Rainfall (in) :	2.40	0.00	0.00
Velocity (ft/sec) :	0.41	0.00	0.00
Computed Flow Time (min) :	12.04	0.00	0.00
Shallow Concentrated Flow Computations	Subarea	Subarea	Subarea
	A	B	C
Flow Length (ft) :	342.641	0.00	0.00
Slope (%) :	1.097	0.00	0.00
Surface Type :	Unpaved	Unpaved	Unpaved
Velocity (ft/sec) :	1.69	0.00	0.00
Computed Flow Time (min) :	3.38	0.00	0.00
Channel Flow Computations	Subarea	Subarea	Subarea
	A	B	C
Manning's Roughness :	0.015	0.00	0.00
Flow Length (ft) :	1282.998	0.00	0.00
Channel Slope (%) :	1.24	0.00	0.00
Cross Section Area (ft²) :	6.534	0.00	0.00
Wetted Perimeter (ft) :	4.712	0.00	0.00
Velocity (ft/sec) :	13.75	0.00	0.00
Computed Flow Time (min) :	1.55	0.00	0.00
Total TOC (min) .....	16.97		

### Subbasin Runoff Results

Total Rainfall (in) .....	0.80
Total Runoff (in) .....	0.44
Peak Runoff (cfs) .....	42.38
Rainfall Intensity .....	2.809
Weighted Runoff Coefficient .....	0.5500
Time of Concentration (days hh:mm:ss) .....	0 00:16:58

Subbasin : {Site 1}.Lenar\_Exist\_North

Runoff Hydrograph



## Subbasin : {Site 1}.Lennar\_Exist\_South

### Input Data

Area (ac) ..... 16.18  
Weighted Runoff Coefficient ..... 0.5500

### Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	16.18	-	0.55
Composite Area & Weighted Runoff Coeff.	16.18		0.55

### Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
	0.018	0.00	0.00
	Manning's Roughness :		
	Flow Length (ft) :	237.731	0.00
	Slope (%) :	4.39	0.00
	2 yr, 24 hr Rainfall (in) :	2.40	0.00
Shallow Concentrated Flow Computations	Velocity (ft/sec) :	1.31	0.00
	Computed Flow Time (min) :	3.03	0.00
	Subarea A	Subarea B	Subarea C
	Flow Length (ft) :	449.65	0.00
	Slope (%) :	4.18	0.00
	Surface Type :	Paved	Unpaved
Channel Flow Computations	Velocity (ft/sec) :	4.16	0.00
	Computed Flow Time (min) :	1.80	0.00
	Subarea A	Subarea B	Subarea C
	Manning's Roughness :	0.05	0.00
	Flow Length (ft) :	192.64	0.00
	Channel Slope (%) :	1.84	0.00
Total TOC (min) .....5.33	Cross Section Area (ft²) :	3.14	0.00
	Wetted Perimeter (ft) :	1.57	0.00
	Velocity (ft/sec) :	6.42	0.00
	Computed Flow Time (min) :	0.50	0.00

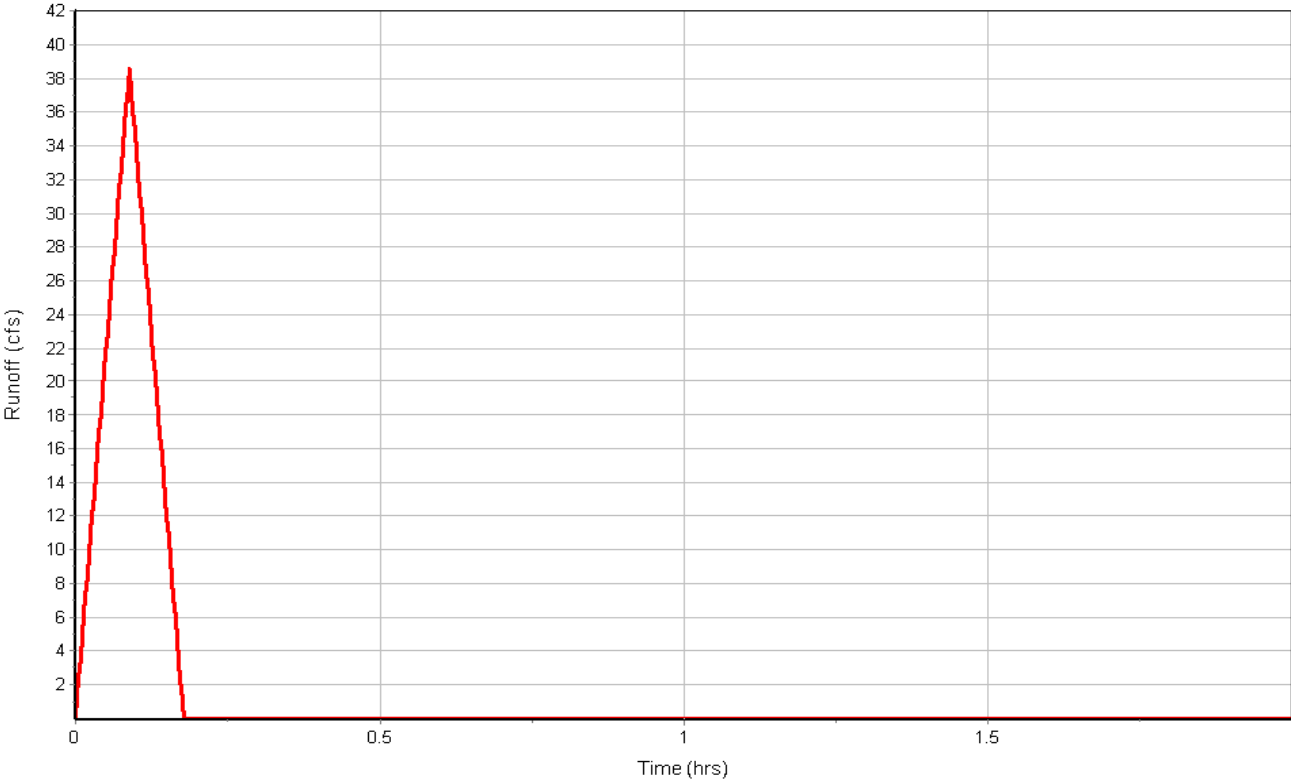
### Subbasin Runoff Results

Total Rainfall (in) ..... 0.39  
Total Runoff (in) ..... 0.21  
Peak Runoff (cfs) ..... 38.58  
Rainfall Intensity ..... 4.334  
Weighted Runoff Coefficient ..... 0.5500  
Time of Concentration (days hh:mm:ss) ..... 0 00:05:20



Subbasin : {Site 1}.Lennar\_Exist\_South

Runoff Hydrograph



Project Description

File Name .....	Lennar Proposed Drainage.SPF
Description .....	H:\1300\1323.00 - Lennar Penasquitos 41-acre\Engineering\Reports\Drainage\SSA Calcs\1323 C3D PROP DA.dwg

Project Options

Flow Units .....	CFS
Elevation Type .....	Elevation
Hydrology Method .....	Rational
Time of Concentration (TOC) Method .....	SCS TR-55
Link Routing Method .....	Hydrodynamic
Enable Overflow Ponding at Nodes .....	YES
Skip Steady State Analysis Time Periods .....	YES

Analysis Options

Start Analysis On .....	Dec 17, 2015	00:00:00
End Analysis On .....	Dec 17, 2015	02:00:00
Start Reporting On .....	Dec 17, 2015	00:00:00
Antecedent Dry Days .....	0	days
Runoff (Dry Weather) Time Step .....	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step .....	0 00:05:00	days hh:mm:ss
Reporting Time Step .....	0 00:05:00	days hh:mm:ss
Routing Time Step .....	30	seconds

Rainfall Details

Return Period.....	100 year(s)
--------------------	-------------

## Subbasin Hydrology

### Subbasin : {Site 1}.Lennar\_Proposed\_North

#### Input Data

Area (ac) ..... 24.80  
Weighted Runoff Coefficient ..... 0.7000

#### Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	24.80	-	0.70
Composite Area & Weighted Runoff Coeff.	24.80		0.70

#### Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

$$T_c = (0.007 * ((n * L_f)^{0.8})) / ((P^{0.5}) * (S_f^{0.4}))$$

Where :

$T_c$  = Time of Concentration (hr)  
 $n$  = Manning's roughness  
 $L_f$  = Flow Length (ft)  
 $P$  = 2 yr, 24 hr Rainfall (inches)  
 $S_f$  = Slope (ft/ft)

Shallow Concentrated Flow Equation :

$V = 16.1345 * (S_f^{0.5})$  (unpaved surface)  
 $V = 20.3282 * (S_f^{0.5})$  (paved surface)  
 $V = 15.0 * (S_f^{0.5})$  (grassed waterway surface)  
 $V = 10.0 * (S_f^{0.5})$  (nearly bare & untilled surface)  
 $V = 9.0 * (S_f^{0.5})$  (cultivated straight rows surface)  
 $V = 7.0 * (S_f^{0.5})$  (short grass pasture surface)  
 $V = 5.0 * (S_f^{0.5})$  (woodland surface)  
 $V = 2.5 * (S_f^{0.5})$  (forest w/heavy litter surface)  
 $T_c = (L_f / V) / (3600 \text{ sec/hr})$

Where:

$T_c$  = Time of Concentration (hr)  
 $L_f$  = Flow Length (ft)  
 $V$  = Velocity (ft/sec)  
 $S_f$  = Slope (ft/ft)

Channel Flow Equation :

$V = (1.49 * (R^{2/3}) * (S_f^{0.5})) / n$   
 $R = A_q / W_p$   
 $T_c = (L_f / V) / (3600 \text{ sec/hr})$

Where :

$T_c$  = Time of Concentration (hr)  
 $L_f$  = Flow Length (ft)  
 $R$  = Hydraulic Radius (ft)  
 $A_q$  = Flow Area (ft<sup>2</sup>)  
 $W_p$  = Wetted Perimeter (ft)  
 $V$  = Velocity (ft/sec)  
 $S_f$  = Slope (ft/ft)  
 $n$  = Manning's roughness

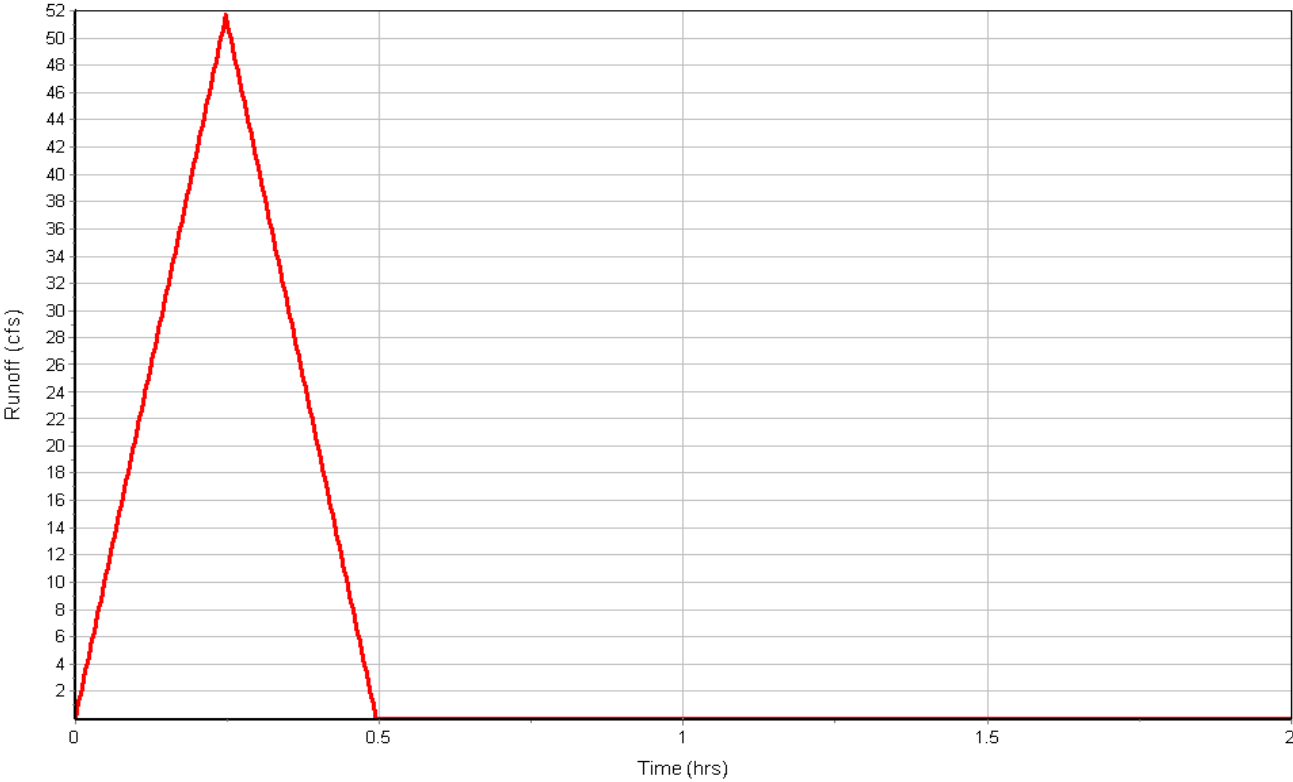
Sheet Flow Computations	Subarea	Subarea	Subarea
	A	B	C
Manning's Roughness :	0.060	0.00	0.00
Flow Length (ft) :	127.732	0.00	0.00
Slope (%) :	3.184	0.00	0.00
2 yr, 24 hr Rainfall (in) :	2.40	0.00	0.00
Velocity (ft/sec) :	0.39	0.00	0.00
Computed Flow Time (min) :	5.49	0.00	0.00
Shallow Concentrated Flow Computations	Subarea	Subarea	Subarea
	A	B	C
Flow Length (ft) :	1180.914	0.00	0.00
Slope (%) :	1.331	0.00	0.00
Surface Type :	Paved	Unpaved	Unpaved
Velocity (ft/sec) :	2.35	0.00	0.00
Computed Flow Time (min) :	8.38	0.00	0.00
Channel Flow Computations	Subarea	Subarea	Subarea
	A	B	C
Manning's Roughness :	0.012	0.00	0.00
Flow Length (ft) :	593.649	0.00	0.00
Channel Slope (%) :	1.788	0.00	0.00
Cross Section Area (ft²) :	3.14	0.00	0.00
Wetted Perimeter (ft) :	6.28	0.00	0.00
Velocity (ft/sec) :	10.46	0.00	0.00
Computed Flow Time (min) :	0.95	0.00	0.00
Total TOC (min) .....	14.81		

### Subbasin Runoff Results

Total Rainfall (in) .....	0.74
Total Runoff (in) .....	0.52
Peak Runoff (cfs) .....	51.69
Rainfall Intensity .....	2.978
Weighted Runoff Coefficient .....	0.7000
Time of Concentration (days hh:mm:ss) .....	0 00:14:49

Subbasin : {Site 1}.Lennar\_Proposed\_North

Runoff Hydrograph



## Subbasin : {Site 1}.Lennar\_Proposed\_South

### Input Data

Area (ac) ..... 18.81  
Weighted Runoff Coefficient ..... 0.7000

### Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	18.81	-	0.70
Composite Area & Weighted Runoff Coeff.	18.81		0.70

### Time of Concentration

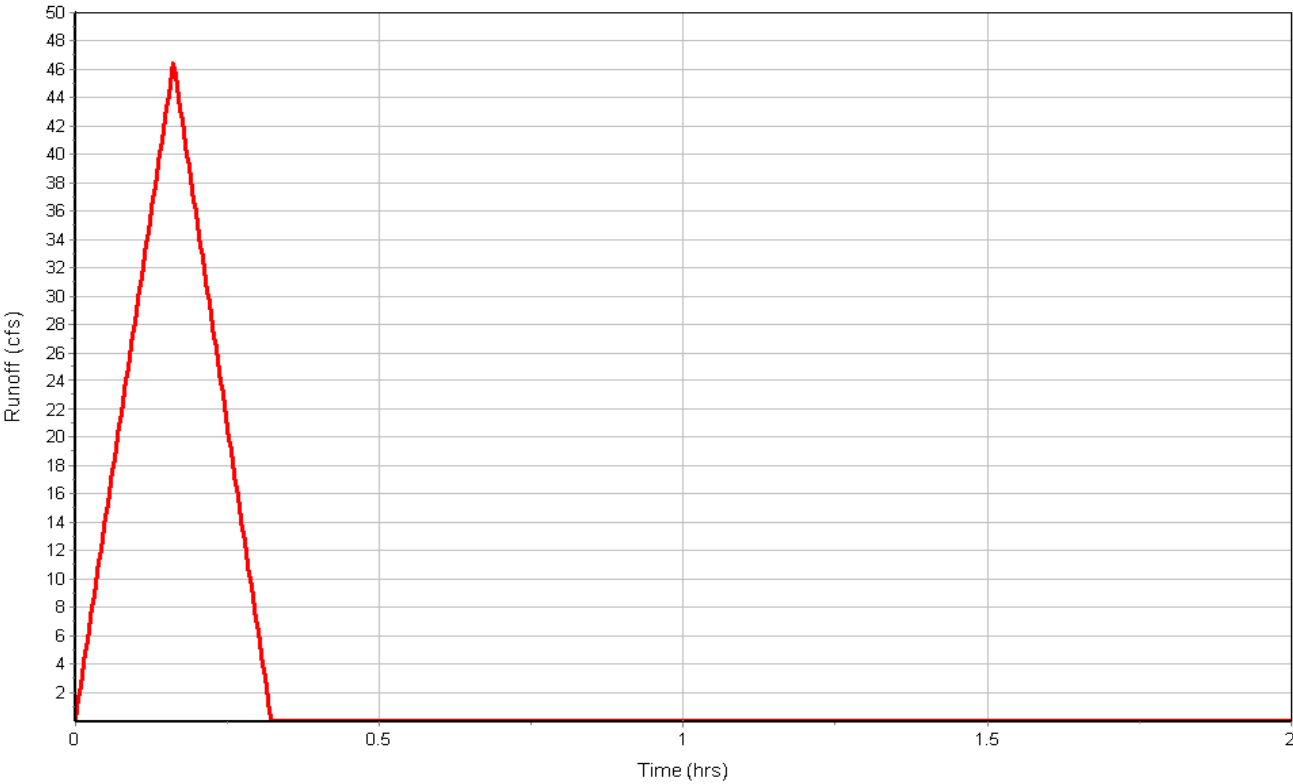
Sheet Flow Computations	Subarea A	Subarea B	Subarea C
	0.06	0.00	0.00
	Manning's Roughness :		
	Flow Length (ft) :	93.345	0.00
	Slope (%) :	4.057	0.00
	2 yr, 24 hr Rainfall (in) :	2.40	0.00
Shallow Concentrated Flow Computations	Velocity (ft/sec) :	0.40	0.00
	Computed Flow Time (min) :	3.88	0.00
	Subarea A	Subarea B	Subarea C
	Flow Length (ft) :	432.559	0.00
	Slope (%) :	1.820	0.00
	Surface Type :	Paved	Unpaved
Channel Flow Computations	Velocity (ft/sec) :	2.74	0.00
	Computed Flow Time (min) :	2.63	0.00
	Subarea A	Subarea B	Subarea C
	Manning's Roughness :	0.012	0.00
	Flow Length (ft) :	1505.761	0.00
	Channel Slope (%) :	1.0	0.00
Total TOC (min) .....9.72	Cross Section Area (ft²) :	3.14	0.00
	Wetted Perimeter (ft) :	6.28	0.00
	Velocity (ft/sec) :	7.82	0.00
	Computed Flow Time (min) :	3.21	0.00

### Subbasin Runoff Results

Total Rainfall (in) ..... 0.57  
Total Runoff (in) ..... 0.40  
Peak Runoff (cfs) ..... 46.45  
Rainfall Intensity ..... 3.527  
Weighted Runoff Coefficient ..... 0.7000  
Time of Concentration (days hh:mm:ss) ..... 0 00:09:43

Subbasin : {Site 1}.Lennar\_Proposed\_South

Runoff Hydrograph



September 29, 2016

Project No. 15198-01

Mr. Andrew Han  
**Lennar Homes**  
25 Enterprise, Suite 250  
Aliso Viejo, CA 92656

**Subject:** *Geotechnical Response to Report Review Checklist for the Proposed Site Development, "Pacific Village", City of San Diego, California*

### **Introduction**

In accordance with your request, LGC Geotechnical, Inc. has prepared this geotechnical response-report to the City of San Diego review checklist dated July 15, 2016 (City, 2016c) for the proposed site development of "Pacific Village" in the City of San Diego, California. This response-report has been prepared after a meeting with members of the City of San Diego in which they provided clarification of subjective language within the 2016 Storm Water Design Manual and additional information not present in the current manual that is being enforced and will be incorporated in a forthcoming document.

This response-report should be considered as part of the project design documents in conjunction with our previous geotechnical reports (LGC Geotechnical, 2016a and b). In the case of conflict, the recommendations contained herein should supersede those provided in our previous report. The remaining recommendations provided in our previous geotechnical reports remain valid and applicable.

### **GEOTECHNICAL REVIEW DATED July 15, 2016**

For your convenience, the pertinent geotechnical review comments and questions that request further information have been repeated below along with our responses.

#### **Comment No.10 (Page 24)**

"The project's geotechnical consultant had indicated in Criteria 1 (Form I-8) that the site is not feasible for implementing storm water infiltration systems. The project's geotechnical consultant must address the specific geologic or geotechnical hazard associated with any amount of storm water infiltration that cannot be mitigated to an acceptable level for each proposed storm water BMP at the site. Note that a geotechnical condition created by the proposed (after the fact) grading may not be considered a valid geotechnical hazard."



**Response to Comment No. 10 (Page 24)**

The I-8 Form has been updated based on information presented by the City at our recent meeting. Please see the attached I-8 Form.

**Comment No. 11 (Page 24)**

“If geologic or geotechnical hazards can be demonstrated for each site that cannot be mitigated to an acceptable level, the project’s geotechnical consultant should clarify if, in their professional opinion and based on their site specific investigation, there are no areas of the site where any amount of storm water infiltration is feasible.”

**Response to Comment No. 11 (Page 24)**

As mentioned in “Response to Comment No. 10, the I-8 Form has been updated and is attached to this response-report.

**Comment No. 12 (Page 24)**

“Infiltration testing will be necessary if there are no geologic or geotechnical constraints that will preclude any amount of infiltration. The infiltration testing should conform to the design phase testing methods listed in Table D.3-1 of Appendix D of the Storm Water Standards.”

**Response to Comment No. 12 (Page 24)**

Based on our discussions with the members of the City of San Diego at our meeting on September 27, 2016, at this stage of the project (“Planning Stage”) the storm water infiltration systems can be designed for partial infiltration utilizing a 0.01 inch/hour infiltration rate. This BMP will consist of filter media underlain with open graded rock wrapped in a filter fabric, including a perforated pipe. The sides will be lined with an impermeable liner, however, the bottom will be unlined and likely underlain by compacted fill or granite bedrock materials. During the “design stage” the owner (Lennar Homes) may elect to perform field infiltration testing, to determine the infiltration rate in selected drainage management areas. Should the calculated infiltration rate be less than 0.01 inches/hr, the owner may elect to place an impermeable liner on the bottom of the BMP, as infiltration will be deemed infeasible. If performed, this information will be presented to the City for review.

**Limitations**

Our services were performed using the degree of care and skill ordinarily exercised, under similar circumstances, by reputable soils engineers and geologists practicing in this or similar localities. No other warranty, expressed or implied, is made as to the conclusions and professional advice included in this report.


It should be understood that LGC Geotechnical has relied on the accuracy of documents, verbal information, and other material and information provided by the City of San Diego and other associated parties in

preparation of this report. LGC Geotechnical makes no warranties or guarantees as to the accuracy or completeness of information obtained from or compiled by others.


Should you have any questions regarding this report, please do not hesitate to contact this office.

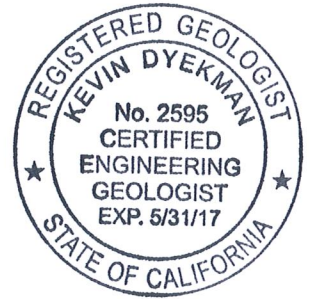
Sincerely,

*LGC Geotechnical, Inc.*

  
Dennis Boratyne, GE 2770  
Vice President



  
Kevin Dyekman, CEG 2595  
Project Geologist



BJE/KAD/aca

Attachments: References  
Form I-8 Categorization of Infiltration Feasibility Conditions  
City of San Diego, 2016, Cycle Issues, L64A-003A, dated July 15, 2016

Distribution: (4) Addressee (3 wet-signed copies for City submittal and 1 electronic copy)

## *References*

### *References*

City of San Diego, 2016a, Storm Water Standards, Part 1: BMP Design Manual – Appendices, January 2016 Edition

\_\_\_\_\_, 2016b, Cycle Issues, L64A-003A, dated April 4, 2016

\_\_\_\_\_, 2016c, Cycle Issues, L64A-003A, dated July 15, 2016

Petra Geotechnical, Inc., Feasibility/Due-Diligence Geotechnical Assessment Report, Rancho Penasquitos Project Site at Southwest Intersection of Freeway 15 and Carmel Mountain Road, San Diego, California, J.N. 15-261, dated July 15, 2015.

LGC Geotechnical, Inc., 2016a, Geotechnical 40-Scale Rough Grading Plan Review, “Pacific Village”, City of San Diego, California, Project No. 15198-01, dated January 18, 2016.

\_\_\_\_\_, 2016b, Geotechnical Response to Report Review Checklist for the Proposed Site Development, “Pacific Village”, City of San Diego, California, Project No. 15198-01, dated April 12, 2106.

***Form I-8 Categorization of Infiltration  
Feasibility Conditions***

Categorization of Infiltration Feasibility Condition		Form I-8	
<b>Part 1 - Full Infiltration Feasibility Screening Criteria</b> Would infiltration of the full design volume be feasible from a physical perspective without any undesirable consequences that cannot be reasonably mitigated?			
Criteria	Screening Question	Yes	No
1	Is the estimated reliable infiltration rate below proposed facility locations greater than 0.5 inches per hour? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Provide basis:  No. Based on <b>Figure C.5-C.5.-1 Soils Exhibit</b> our site soils are categorized as Hydrologic Soils Group C. Per <b>Table G.1-5</b> , Hydrologic Soil Group C has an infiltration range from 0 to 0.08 inches per hour. Based on this categorization the associated infiltration rates are below 0.5 inches per hour.          Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.			
2	Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Provide basis:  Yes. Based on current information, it is our opinion that infiltration will not increase the risk of geotechnical hazards.          Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.			

Form I-8 Page 2 of 4

Criteria	Screening Question	Yes	No
3	Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of groundwater contamination (shallow water table, storm water pollutants or other factors) that cannot be mitigated to an acceptable level? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	<input type="checkbox"/>	<input type="checkbox"/>
<p>Provide basis:</p> <p>Consideration to Criteria 3 was not performed by LGC Geotechnical as groundwater contamination is not the purview of the geotechnical consultant.</p> <p>Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.</p>			
4	Can infiltration greater than 0.5 inches per hour be allowed without causing potential water balance issues such as change of seasonality of ephemeral streams or increased discharge of contaminated groundwater to surface waters? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	<input type="checkbox"/>	<input type="checkbox"/>
<p>Provide basis:</p> <p>Consideration to Criteria 4 was not performed by LGC Geotechnical as water balance issues are not the purview of the geotechnical consultant.</p>			
Part 1 Result*	<p>If all answers to rows 1 - 4 are "Yes" a full infiltration design is potentially feasible. The feasibility screening category is Full Infiltration</p> <p>If any answer from row 1-4 is "No", infiltration may be possible to some extent but would not generally be feasible or desirable to achieve a "full infiltration" design. Proceed to Part 2</p>		

\*To be completed using gathered site information and best professional judgment considering the definition of MEP in the MS4 Permit. Additional testing and/or studies may be required by the City Engineer to substantiate findings

Form I-8 Page 3 of 4

Part 2 – Partial Infiltration vs. No Infiltration Feasibility Screening Criteria

Would infiltration of water in any appreciable amount be physically feasible without any negative consequences that cannot be reasonably mitigated?

Criteria	Screening Question	Yes	No
5	Do soil and geologic conditions allow for infiltration in any appreciable rate or volume? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Provide basis:

Yes. As defined by the City of San Diego, an appreciable rate is considered to be 0.01 inches per hour or greater. Additionally, all soils and rock must be assumed to have a minimum infiltration rate of 0.01 inches per hour unless proven otherwise with field infiltration test results. At this time, the site soils and rock are considered to have an “appreciable” infiltration rate.

Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.

6	Can Infiltration in any appreciable quantity be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Provide basis:

Yes. Based on current information, it is our opinion that partial infiltration at an appreciable rate will not increase the risk of geotechnical hazards.

Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.



Form I-8 Page 4 of 4

Criteria	Screening Question	Yes	No
7	Can Infiltration in any appreciable quantity be allowed without posing significant risk for groundwater related concerns (shallow water table, storm water pollutants or other factors)? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	<input type="checkbox"/>	<input type="checkbox"/>
<p>Provide basis:</p> <p>Consideration to Criteria 7 was not performed by LGC Geotechnical as the described groundwater related concerns are not the purview of the geotechnical consultant.</p> <p>Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.</p>			
8	Can infiltration be allowed without violating downstream water rights? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	<input type="checkbox"/>	<input type="checkbox"/>
<p>Provide basis:</p> <p>Consideration to Criteria 8 was not performed by LGC Geotechnical as water rights are not the purview of the geotechnical consultant.</p> <p>Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide</p>			
Part 2 Result*	<p>If all answers from row 1-4 are yes then partial infiltration design is potentially feasible. The feasibility screening category is Partial Infiltration.</p> <p>If any answer from row 5-8 is no, then infiltration of any volume is considered to be infeasible within the drainage area. The feasibility screening category is No Infiltration.</p>		

\*To be completed using gathered site information and best professional judgment considering the definition of MEP in the MS4 Permit. Additional testing and/or studies may be required by the City Engineer to substantiate findings

***City of San Diego, 2016, Cycle Issues, L64A-  
003A, dated July 15, 2016***



L64A-003A

## Review Information

<b>Cycle Type:</b> 8 Submitted (Multi-Discipline)	<b>Submitted:</b> 05/24/2016	Deemed Complete on 05/24/2016
<b>Reviewing Discipline:</b> LDR-Geology	<b>Cycle Distributed:</b> 05/24/2016	
<b>Reviewer:</b> Washburn, Jacobe	<b>Assigned:</b> 05/24/2016	
(619) 446-5075	<b>Started:</b> 05/25/2016	
jwashburn@sandiego.gov	<b>Review Due:</b> 06/15/2016	
<b>Hours of Review:</b> 2.50	<b>Completed:</b> 06/15/2016	<b>COMPLETED ON TIME</b>
<b>Next Review Method:</b> Submitted (Multi-Discipline)	<b>Closed:</b> 07/15/2016	

- . The review due date was changed to 07/21/2016 from 06/27/2016 per agreement with customer.
- . The reviewer has indicated they want to review this project again. Reason chosen by the reviewer: New Document Required.
- . We request a 3rd complete submittal for LDR-Geology on this project as: Submitted (Multi-Discipline).
- . The reviewer has requested more documents be submitted.
- . Your project still has 6 outstanding review issues with LDR-Geology (6 of which are new issues).
- . Last month LDR-Geology performed 79 reviews, 97.5% were on-time, and 64.7% were on projects at less than < 3 complete submittals.

## 470158-1 (3/10/2016)

## References

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input checked="" type="checkbox"/>	1	Geotechnical 40-scale Rough Grading Plan Review, "Pacific Village", City of San Diego, California, prepared by LGC Geotechnical, Inc., dated January 18, 2016 (their project no. 15198-01).
		(From Cycle 1)
<input checked="" type="checkbox"/>	2	Pacific Village, Vesting Tentative Map, Planned Development Permit, Site Development Permit, prepared by Latitude 33 Planning & Engineering, original date February 3, 2016.
		(From Cycle 1)

## Comments

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input checked="" type="checkbox"/>	3	Submit an addendum geotechnical report or update letter that specifically addresses the proposed development for the purposes of environmental review and the following:
		(From Cycle 1)
<input checked="" type="checkbox"/>	4	If it is the intent of the geotechnical consultant to use the geotechnical investigation and test data prepared by Petra Geosciences (2015), the geotechnical consultant should clarify that they agree with the data, findings, and conclusions contained in that report.
		(From Cycle 1)
<input checked="" type="checkbox"/>	5	Provide a complete copy of the geotechnical report prepared by Petra Geosciences (2015) referenced the submitted geotechnical report prepared by LGC Geotechnical, Inc.
		(From Cycle 1)
<input checked="" type="checkbox"/>	6	The project's geotechnical consultant should provide a conclusion regarding if the proposed development will destabilize or result in settlement of adjacent properties or the city Right-of-Way.
		(From Cycle 1)

## 470158-8 (6/15/2016)

## References

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	7	Geotechnical 40-scale Rough Grading Plan Review, "Pacific Village", City of San Diego, California, prepared by LGC Geotechnical, Inc., dated January 18, 2016 (their project no. 15198-01).
		Geotechnical Response to Report Review Checklist for the Proposed Site Development, "Pacific Village", City of San Diego, California, prepared by LGC Geotechnical, Inc., dated April 12, 2016 (their project no. 15198-01).
		(New Issue)





L64A-003A

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	8	Pacific Village, Vesting Tentative Map, <b>Planned Development Permit</b> , Site <b>Development Permit</b> , prepared by <b>Latitude 33 Planning &amp; Engineering</b> , original date February 3, 2016.

(New Issue)

## Comments

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	9	Submit an addendum geotechnical report or update letter that specifically addresses the proposed development for the purposes of environmental review and the following:
		(New Issue)
<input type="checkbox"/>	10	The project's geotechnical consultant has indicated in Criteria 1 (Form I-8) that the site is not feasible for implementing storm water infiltration systems. The project's geotechnical consultant must address the specific geologic or geotechnical hazard associated with any amount of storm water infiltration that cannot be mitigated to an acceptable level for each proposed storm water BMP at the site. Note that a geotechnical condition created by the proposed (after the fact) grading may not be considered a valid geotechnical hazard.
		(New Issue)
<input type="checkbox"/>	11	If geologic or geotechnical hazards can be demonstrated for each site that cannot be mitigated to an acceptable level, the project's geotechnical consultant should clarify if, in their professional opinion and based on their site specific investigation, there are no areas of the site where any amount of storm water infiltration is feasible.
		(New Issue)
<input type="checkbox"/>	12	Infiltration testing will be necessary if there are no geologic or geotechnical constraints that will preclude any amount of infiltration. The infiltration testing should conform to the design phase testing methods listed in Table D.3-1 of Appendix D of the Storm Water Standards.

(New Issue)



August 25, 2016

Project No. 15198-01

Mr. Andrew Han  
***Lennar Homes***  
25 Enterprise, Suite 250  
Aliso Viejo, CA 92656

***Subject: Geotechnical Response to Report Review Checklist for the Proposed Site Development, "Pacific Village", City of San Diego, California***

### **Introduction**

In accordance with your request, LGC Geotechnical, Inc. has prepared this geotechnical response-report to the City of San Diego review checklist dated July 15, 2016 (City, 2016c) for the proposed site development of "Pacific Village" in the City of San Diego, California.

This response-report should be considered as part of the project design documents in conjunction with our previous geotechnical reports (LGC Geotechnical, 2016a and b). In the case of conflict, the recommendations contained herein should supersede those provided in our previous report. The remaining recommendations provided in our previous geotechnical reports remain valid and applicable.

### **GEOTECHNICAL REVIEW DATED July 15, 2016**

For your convenience, the pertinent geotechnical review comments and questions that request further information have been repeated below along with our responses.

#### **Comment No.10 (Page 24)**

"The project's geotechnical consultant had indicated in Criteria 1 (Form I-8) that the site is not feasible for implementing storm water infiltration systems. The project's geotechnical consultant must address the specific geologic or geotechnical hazard associated with any amount of storm water infiltration that cannot be mitigated to an acceptable level for each proposed storm water BMP at the site. Note that a geotechnical condition created by the proposed (after the fact) grading may not be considered a valid geotechnical hazard."

**Response to Comment No. 10 (Page 24)**

The subject project is a redevelopment of an existing community. The existing site conditions mostly consists of engineered artificial fill over granitic bedrock. The fill thickness above the bedrock ranges from approximately 1-foot to 10 feet. Although the planned development will require changing of grades, it does not change the fact that the site already has engineered fill over bedrock material. As discussed in our previous reports, by definition, engineered fill material is compacted, resulting in much less void space than naturally deposited alluvial materials and from a practical standpoint is considered impermeable. Additionally, the crystalline, igneous granitic bedrock is impermeable. An attempt to infiltrate water into the engineered fill and/or bedrock could potentially result in water ponding, ground water mounding and lateral water migration, which could impact utility backfill, foundations and slope stability.

There is a relatively small area in the south-central portion of the site that has an alluvial layer above the granite rock ranging in thickness from 3 to 13 feet. The upper surface of the granite is bowl-shaped with the low spot adjacent to Interstate 15 where there is an existing 20-foot high descending slope. Given the small area of the alluvial material and the relatively thin vertical thickness, introduction of water could result in either “groundwater mounding” or water migration along the bedrock contact or internal joints towards the slope-face reducing the “slope stability”.

In review of Section C.2. Geotechnical Feasibility Criteria of the Storm Water Standards BMP Design Manual (City of San Diego, 2016b), “groundwater mounding” as discussed in Section C.2.5 and “slope stability” as discussed in Section C.2.3 are geotechnical hazards that if present “controls the feasibility and desirability” of the option of introducing stormwater to the subsurface. Per Form I-8, page I-8, with the presence of any of these geotechnical factors “The feasibility screening category is No Infiltration”.

**Comment No. 11 (Page 24)**

“If geologic or geotechnical hazards can be demonstrated for each site that cannot be mitigated to an acceptable level, the project’s geotechnical consultant should clarify if, in their professional opinion and based on their site specific investigation, there are no areas of the site where any amount of storm water infiltration is feasible.”

**Response to Comment No. 11 (Page 24)**

As mentioned in “Response to Comment No. 10, the majority of the site consists of existing fill material on top of shallow granitic bedrock. The only material onsite that could potentially have a suitable infiltration rate is the relatively thin deposit of alluvium that sets on top of the shallow granitic bedrock. Due to this alluvial layer being relatively thin and the presence of impermeable granitic bedrock below, introduction of stormwater into this layer would result in either “groundwater mounding” or “slope instability” as the bedrock contact dips towards an existing slope face. It therefore is our professional opinion, based on the available data, there are no areas of the site where any amount of storm water infiltration is feasible.

**Comment No. 12 (Page 24)**

“Infiltration testing will be necessary if there are no geologic or geotechnical constraints that will preclude any amount of infiltration. The infiltration testing should conform to the design phase testing methods listed in Table D.3-1 of Appendix D of the Storm Water Standards.”

**Response to Comment No. 12 (Page 24)**

Per section D.1. of the BMP Design Manual, “infiltration testing should only be conducted after other feasibility criteria specified in the manual have been evaluated and cleared.” As discussed in our “Response to Comment No. 10” there is the potential for two geologic hazards; “groundwater mounding” and “slope stability” thus categorizing this project as “not cleared”.

**Limitations**

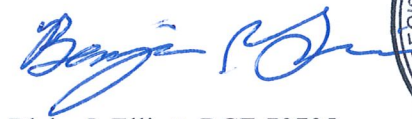
Our services were performed using the degree of care and skill ordinarily exercised, under similar circumstances, by reputable soils engineers and geologists practicing in this or similar localities. No other warranty, expressed or implied, is made as to the conclusions and professional advice included in this report.

It should be understood that LGC Geotechnical has relied on the accuracy of documents, verbal information, and other material and information provided by you and other associated parties in preparation of this report. LGC Geotechnical makes no warranties or guarantees as to the accuracy or completeness of information obtained from or compiled by others.

Should you have any questions regarding this report, please do not hesitate to contact this office.

Sincerely,

**LGC Geotechnical, Inc.**



Blake J. Elliott, RCE 70705  
Project Engineer



Kevin Dyekman, CEG 2595  
Project Geologist



BJE/SHH/KAD/aca

Attachments: References  
City of San Diego, 2016, Cycle Issues, L64A-003A, dated July 15, 2016

Distribution: (4) Addressee (3 wet-signed copies for City submittal and 1 electronic copy)

### *References*

City of San Diego, 2016a, Storm Water Standards, Part 1: BMP Design Manual – Appendices, January 2016 Edition

\_\_\_\_\_, 2016b, Cycle Issues, L64A-003A, dated April 4, 2016

\_\_\_\_\_, 2016c, Cycle Issues, L64A-003A, dated July 15, 2016

Petra Geotechnical, Inc., Feasibility/Due-Diligence Geotechnical Assessment Report, Rancho Penasquitos Project Site at Southwest Intersection of Freeway 15 and Carmel Mountain Road, San Diego, California, J.N. 15-261, dated July 15, 2015.

LGC Geotechnical, Inc., 2016a, Geotechnical 40-Scale Rough Grading Plan Review, “Pacific Village”, City of San Diego, California, Project No. 15198-01, dated January 18, 2016.

\_\_\_\_\_, 2016b, Geotechnical Response to Report Review Checklist for the Proposed Site Development, “Pacific Village”, City of San Diego, California, Project No. 15198-01, dated April 12, 2106.



# Cycle Issues



THE CITY OF SAN DIEGO  
Development Services Department  
1222 First Avenue, San Diego, CA 92101-4154

7/15/16 3:31 pm

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L64A-003A

## Review Information

<b>Cycle Type:</b> 8 Submitted (Multi-Discipline)	<b>Submitted:</b> 05/24/2016	Deemed Complete on 05/24/2016
<b>Reviewing Discipline:</b> LDR-Geology	<b>Cycle Distributed:</b> 05/24/2016	
<b>Reviewer:</b> Washburn, Jacobe	<b>Assigned:</b> 05/24/2016	
(619) 446-5075	<b>Started:</b> 05/25/2016	
jwashburn@sandiego.gov	<b>Review Due:</b> 06/15/2016	
<b>Hours of Review:</b> 2.50	<b>Completed:</b> 06/15/2016	<b>COMPLETED ON TIME</b>
<b>Next Review Method:</b> Submitted (Multi-Discipline)	<b>Closed:</b> 07/15/2016	

- . The review due date was changed to 07/21/2016 from 06/27/2016 per agreement with customer.
- . The reviewer has indicated they want to review this project again. Reason chosen by the reviewer: New Document Required.
- . We request a 3rd complete submittal for LDR-Geology on this project as: Submitted (Multi-Discipline).
- . The reviewer has requested more documents be submitted.
- . Your project still has 6 outstanding review issues with LDR-Geology (6 of which are new issues).
- . Last month LDR-Geology performed 79 reviews, 97.5% were on-time, and 64.7% were on projects at less than < 3 complete submittals.

## 470158-1 (3/10/2016)

### References

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input checked="" type="checkbox"/>	1	Geotechnical 40-scale Rough Grading Plan Review, "Pacific Village", City of San Diego, California, prepared by LGC Geotechnical, Inc., dated January 18, 2016 (their project no. 15198-01).  (From Cycle 1)
<input checked="" type="checkbox"/>	2	Pacific Village, Vesting Tentative Map, Planned Development Permit, Site Development Permit, prepared by Latitude 33 Planning & Engineering, original date February 3, 2016.  (From Cycle 1)

### Comments

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input checked="" type="checkbox"/>	3	Submit an addendum geotechnical report or update letter that specifically addresses the proposed development for the purposes of environmental review and the following:  (From Cycle 1)
<input checked="" type="checkbox"/>	4	If it is the intent of the geotechnical consultant to use the geotechnical investigation and test data prepared by Petra Geosciences (2015), the geotechnical consultant should clarify that they agree with the data, findings, and conclusions contained in that report.  (From Cycle 1)
<input checked="" type="checkbox"/>	5	Provide a complete copy of the geotechnical report prepared by Petra Geosciences (2015) referenced the submitted geotechnical report prepared by LGC Geotechnical, Inc.  (From Cycle 1)
<input checked="" type="checkbox"/>	6	The project's geotechnical consultant should provide a conclusion regarding if the proposed development will destabilize or result in settlement of adjacent properties or the city Right-of-Way.  (From Cycle 1)

## 470158-8 (6/15/2016)

### References

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	7	Geotechnical 40-scale Rough Grading Plan Review, "Pacific Village", City of San Diego, California, prepared by LGC Geotechnical, Inc., dated January 18, 2016 (their project no. 15198-01).  Geotechnical Response to Report Review Checklist for the Proposed Site Development, "Pacific Village", City of San Diego, California, prepared by LGC Geotechnical, Inc., dated April 12, 2016 (their project no. 15198-01).  (New Issue)





L64A-003A

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	8	Pacific Village, Vesting Tentative Map, <b>Planned Development Permit</b> , Site <b>Development Permit</b> , prepared by <b>Latitude 33 Planning &amp; Engineering</b> , original date February 3, 2016.

(New Issue)

## Comments

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	9	Submit an addendum geotechnical report or update letter that specifically addresses the proposed development for the purposes of environmental review and the following:
		(New Issue)
<input type="checkbox"/>	10	The project's geotechnical consultant has indicated in Criteria 1 (Form I-8) that the site is not feasible for implementing storm water infiltration systems. The project's geotechnical consultant must address the specific geologic or geotechnical hazard associated with any amount of storm water infiltration that cannot be mitigated to an acceptable level for each proposed storm water BMP at the site. Note that a geotechnical condition created by the proposed (after the fact) grading may not be considered a valid geotechnical hazard.
		(New Issue)
<input type="checkbox"/>	11	If geologic or geotechnical hazards can be demonstrated for each site that cannot be mitigated to an acceptable level, the project's geotechnical consultant should clarify if, in their professional opinion and based on their site specific investigation, there are no areas of the site where any amount of storm water infiltration is feasible.
		(New Issue)
<input type="checkbox"/>	12	Infiltration testing will be necessary if there are no geologic or geotechnical constraints that will preclude any amount of infiltration. The infiltration testing should conform to the design phase testing methods listed in Table D.3-1 of Appendix D of the Storm Water Standards.

(New Issue)



April 12, 2016

Project No. 15198-01

Mr. Andrew Han  
***Lennar Homes***  
25 Enterprise, Suite 250  
Aliso Viejo, CA 92656

***Subject: Geotechnical Response to Report Review Checklist for the Proposed Site Development, "Pacific Village", City of San Diego, California***

### **Introduction**

In accordance with your request, LGC Geotechnical, Inc. has prepared this geotechnical response-report to the City of San Diego review checklist dated March 21, 2016 (City, 2016) for the proposed site development of "Pacific Village" in the City of San Diego, California.

This response-report should be considered as part of the project design documents in conjunction with our previous geotechnical reports (LGC, 2016). In the case of conflict, the recommendations contained herein should supersede those provided in our previous report. The remaining recommendations provided in our previous geotechnical reports remain valid and applicable.

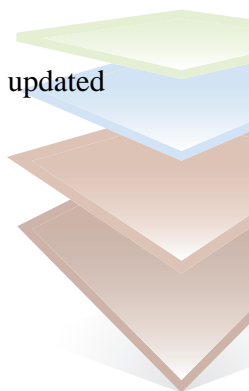
### **GEOTECHNICAL REVIEW DATED MARCH 21, 2016**

For your convenience, the pertinent geotechnical review comments and questions that request further information have been repeated below along with our responses.

#### **Comment No.6 (Page 6)**

"GEOLOGIC CONDITIONS- The project site is located within Geological Hazard Category 53 defined as level or sloping terrain, unfavorable geologic structure with low to moderate risk and Hazard Category 32 defined as Liquefaction with low potential, fluctuating groundwater and minor drainages. EAS has received the Geotechnical 40-Scale Rough Grading Plan Review, "Pacific Village" (January 18, 2016).

At this time LDR-Geology is requesting additional information, please also provide EAS with any updated reports and information. Please see LDR-Geology staff comments for further information."



**Response to Comment No. 6 (Page 6)**

Comment noted. The topics of liquefaction potential and groundwater are discussed in our referenced report (LGC, 2016).

**Comment No. 15 (Page 8)**

“PALEONTOLOGICAL RESOURCES- According to the Geology of the San Diego Metropolitan Area, California (1975) published by the California Division of Mines and Geology, the project site appears to be underlain by Santiago Peak Volcanics, which is assigned a low to moderate sensitivity rating for paleontological resources.”

**Response to Comment No. 15 (Page 8)**

The subject site is underlain by undifferentiated Santiago Peak Volcanics and Granitic Bedrock Formations, which are similarly categorized and should be considered low (to moderate) sensitivity for paleontological resources based on the nature of the bedrock as a crystalline rock. It is our opinion that crystalline bedrock lacks such resources in general due to the environment of formation of the material. Surficial units include older artificial fill soils that have been placed with compaction (disturbed soils), and limited areas of older alluvial deposits at depth below artificial fill soils.

**Comment No. 16 (Page 8)**

“Paleontological monitoring during grading activities may be required if it is determined that the project's earth movement quantity exceeds the Paleontological threshold (if greater than 1,000 cubic yards and ten feet deep for formations with a high sensitivity rating, and if greater than 2,000 cubic yards and ten feet deep for formation with a moderate sensitivity rating). Please be aware that monitoring may also be required for shallow grading (less than ten feet) when a site has been previously graded and/or unweathered formations are present at the surface.”

**Response to Comment No. 16 (Page 8)**

It is our understanding that the grading of the project will include greater than 2,000 cubic yards of earth movement, but will only extend more than ten feet below existing grades in the area near the current site entrance. At this location it is expected that only existing fill material will be encountered in the grading. It is our opinion that the site materials are not ideal for collection of paleontological resources. Final determination of this requirement is the purview of others.

**Comment No. 3 (Page 24)**

“Submit an addendum geotechnical report or update letter that specifically addresses the proposed development for the purposes of environmental review and the following:”

**Response to Comment No. 3 (Page 24)**

This response report has been produced to address the geotechnical comments included in the project review sheet.

**Comment No. 4 (Comments, Page 24)**

“If it is the intent of the geotechnical consultant to use the geotechnical investigation and test data prepared by Petra Geosciences (2015), the geotechnical consultant should clarify that they agree with the data, findings, and conclusion, contained in that report.”

**Response to Comment No. 4 (Comments, Page 24)**

The Petra Geosciences report was mistakenly not listed in the reference section. It has been included in the reference section of this response report. The data collected by Petra during their field evaluation has been reviewed by LGC Geotechnical and we are in general agreement with the observations and conclusions made based on their findings.

**Comment No. 5 (Comments, Page 24)**

“Provide a complete copy of the geotechnical report prepared by Petra (2015) referenced the submitted geotechnical report prepared by LGC Geotechnical, Inc.”

**Response to Comment No. 5 (Comments, Page 24)**

Included as an attachment to this report is the report from Petra Geoscience (2015).

**Comment No. 6 (Comments, Page 24)**

“The project’s geotechnical consultant should provide a conclusion regarding if the proposed development will destabilize or result in settlement of adjacent properties of the city Right-of-Way.”

**Response to Comment No. 6 (Comments, Page 24)**

The grade changes between the development site and the city Right-of-Way are relatively minor and the added loading on the development site is minimal. Based on the on-site soil, we do not anticipate any major settlement or destabilization of adjacent properties and improvements to occur.

**Limitations**

Our services were performed using the degree of care and skill ordinarily exercised, under similar circumstances, by reputable soils engineers and geologists practicing in this or similar localities. No other warranty, expressed or implied, is made as to the conclusions and professional advice included in this report.

It should be understood that LGC Geotechnical has relied on the accuracy of documents, verbal information, and other material and information provided by you and other associated parties in preparation of this report. LGC Geotechnical makes no warranties or guarantees as to the accuracy or completeness of information obtained from or compiled by others.

Should you have any questions regarding this report, please do not hesitate to contact this office.

Sincerely,

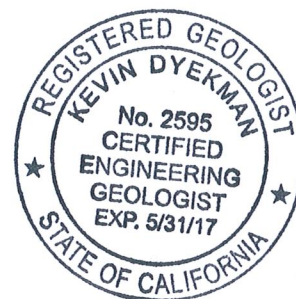
**LGC Geotechnical, Inc.**



Blake J. Elliott, RCE 70705  
Project Engineer



Kevin Dyekman, CEG 2595  
Project Geologist



BJE/SHH/KAD/aca

Attachments: References

City of San Diego, 2016, Cycle Issues, L64A-003A, dated April 4, 2016  
Petra Geotechnical, Inc. report, dated July 15, 2015

Distribution: (4) Addressee (3 wet-signed copies for City submittal and 1 electronic copy)

### **References**

City of San Diego, 2016, Cycle Issues, L64A-003A, dated April 4, 2016

Petra Geotechnical, Inc., Feasibility/Due-Diligence Geotechnical Assessment Report, Rancho Penasquitos Project Site at Southwest Intersection of Freeway 15 and Carmel Mountain Road, San Diego, California, J.N. 15-261, dated July 15, 2015.

LGC Geotechnical, Inc., 2016, Geotechnical 40-Scale Rough Grading Plan Review, “Pacific Village”, City of San Diego, California, Project No. 15198-01, dated January 18, 2016.

# Cycle Issues



4/4/16 9:14 am

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THE CITY OF SAN DIEGO  
Development Services Department  
1222 First Avenue, San Diego, CA 92101-4154

L64A-003A

## Project Information

**Project Nbr:** 470158 **Title:** Pacific Village  
**Project Mgr:** Tirandazi, Firouzeh (619) 446-5325 ftirandazi@sandiego.gov



## Review Information

**Cycle Type:** 3 LDR-Map Check(Submit) **Submitted:** Deemed Complete on 02/10/2016  
**Reviewing Discipline:** LDR-Map Check **Cycle Distributed:**  
**Reviewer:** Bowcutt, Michael **Assigned:** 02/10/2016  
(619) 446-5096 **Started:** 03/14/2016  
MBowcutt@sandiego.gov **Review Due:** 03/15/2016  
**Hours of Review:** 8.00 **Completed:** 03/15/2016 **COMPLETED ON TIME**  
**Next Review Method:** Submitted (Multi-Discipline) **Closed:** 04/04/2016

- . The reviewer has indicated they want to review this project again. Reason chosen by the reviewer: First Review Issues.
- . We request a 2nd complete submittal for LDR-Map Check on this project as: Submitted (Multi-Discipline).
- . The reviewer has requested more documents be submitted.
- . Your project still has 9 outstanding review issues with LDR-Map Check (all of which are new).
- . Last month LDR-Map Check performed 121 reviews, 79.3% were on-time, and 70.0% were on projects at less than < 3 complete submittals.

## 1st Review

### Exhibit

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	1	Please add the following to the title block all sheets:  I.O. = 24006477 P.T.S. No. = 470158 CCS83 Coords= 1932-6299 L.C. Coords= 292-1739 (New Issue)
<input type="checkbox"/>	2	The procedure shown to establish the basis of bearings is unclear. Please state the Basis of bearings. (New Issue)
<input type="checkbox"/>	3	Please clarify the number of lots and their usage. (New Issue)
<input type="checkbox"/>	4	Please only return the cover sheet along with sheets 8 & 9. (New Issue)

### Conditions

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	5	Prior to the expiration of the Tentative Map, a Final Map to subdivide the Lot shall be recorded in the office of the County Recorder. (New Issue)
<input type="checkbox"/>	6	Prior to the recordation of the Final Map taxes must be paid or bonded for this property pursuant to section 66492 of the Subdivision Map Act. A current original tax certificate, recorded in the office of the San Diego County Recorder must be provided to satisfy this condition. (New Issue)
<input type="checkbox"/>	7	All subdivision maps in the City of San Diego are required to be tied to the California Coordinate System of 1983 (CCS83), Zone 6 pursuant to section 8801 through 8819 of the California Public Resources Code.  (New Issue)
<input type="checkbox"/>	8	The Final Map shall:  a. Use the California Coordinate System for its "Basis of Bearings" and express all measured and calculated bearing values in terms of said system. The angle of grid divergence from a true meridian (theta or mapping angle) and the north point of said map shall appear on each sheet thereof. Establishment of said Basis of Bearings may be by use of existing Horizontal Control stations or astronomic observations. (New Issue)
<input type="checkbox"/>	9	(continued)  b. Show two measured ties from the boundary of the map to existing Horizontal Control stations having California Coordinate values of First Order accuracy. These tie lines to the existing control shall be shown in relation to the California Coordinate System (i.e., grid bearings and grid distances). All other distances shown on the map are to be shown as ground distances. A combined factor for conversion of grid-to-ground shall be shown on the map.  (New Issue)

For questions regarding the 'LDR-Map Check' review, please call Michael Bowcutt at (619) 446-5096. Project Nbr: 470158 / Cycle: 3





# Cycle Issues



THE CITY OF SAN DIEGO  
Development Services Department  
1222 First Avenue, San Diego, CA 92101-4154

4/4/16 9:11 am

Page 1 of 26

L64A-003A

## Project Information

**Project Nbr:** 470158 **Title:** Pacific Village  
**Project Mgr:** Tirandazi, Firouzeh (619) 446-5325 ftirandazi@sandiego.gov



## Review Information

**Cycle Type:** 1 Submitted (Multi-Discipline) **Submitted:** 02/05/2016 Deemed Complete on 02/08/2016  
**Reviewing Discipline:** LDR-Planning Review **Cycle Distributed:** 02/08/2016  
**Reviewer:** Stanco Jr, Joseph **Assigned:** 02/11/2016  
(619) 446-5373 **Started:** 03/17/2016  
Jstanco@sandiego.gov **Review Due:** 03/15/2016  
**Hours of Review:** 6.00 **Completed:** 03/31/2016 **COMPLETED LATE**  
**Next Review Method:** Submitted (Multi-Discipline) **Closed:** 04/04/2016

- . The review due date was changed to 04/04/2016 from 03/18/2016 per agreement with customer.
- . The reviewer has indicated they want to review this project again. Reason chosen by the reviewer: First Review Issues.
- . We request a 2nd complete submittal for LDR-Planning Review on this project as: Submitted (Multi-Discipline).
- . The reviewer has requested more documents be submitted.
- . Your project still has 22 outstanding review issues with LDR-Planning Review (all of which are new).
- . Last month LDR-Planning Review performed 91 reviews, 30.8% were on-time, and 39.7% were on projects at less than < 3 complete submittals.

## 1ST REVIEW - MAR 2016

### Project Information

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	1	The proposed project is located at 10955 Carmel Mountain Rd, in the RM-1-1 zone, within the Rancho Penasquitos Community Plan area and the Airport Influence Area (MCAS-Miramar, Review Area 2).  The proposed project is for the construction of 564 dwelling units (99 detached units, 120 townhome units, 105 triplex units, and 240 apartment units) on a 41.45-acre site. (New Issue)

### Permits

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input checked="" type="checkbox"/>	2	The proposed project will require the following development permits and approvals:  A Planned Development Permit (PDP) for deviations to structure height and side setbacks.  A Neighborhood Use Permit (NUP) for Neighborhood Identification Signs in accordance with Process Two, per Section 141.1102. Please see signage comments below for more information [INFORMATIONAL ITEM ONLY]. (New Issue)
<input type="checkbox"/>	3	If a Tentative Map is being requested, please indicate the reason (i.e. subdivision, condominium conversion, etc.). If a subdivision is proposed, identify all proposed lots and lot areas within the Development Summary. Planning staff will consult with Map Check staff to determine the decision-level for the mapping application. (New Issue)
<input type="checkbox"/>	4	The applicant's cover letter indicates that a Site Development Permit (SDP) is being requested because "the site is within Airport Influence Area 2 for MCAS-Miramar." The property's location within the Airport Influence Area does not require an SDP. Please see Planning's comment regarding Airport Overlays. (New Issue)
<input type="checkbox"/>	5	Per Section 126.0502(c)(4), public improvements required in association with private development that involve development of more than 3,000 feet of property frontage require an SDP Process 3. Please identify if this is being proposed.  Per Section 126.0502(c)(6), development of manufactured slopes at a gradient steeper than 25 percent and a height of 25 feet or more as described in Section 142.0103 require an SDP Process 3. Please identify if this is being proposed.  Please remove references to "Site Development Permit" from the plans if this permit will not be requested. (New Issue)
<input checked="" type="checkbox"/>	6	Please note that Conditional Use Permit (CUP) No. 5206, approved in 1962, was officially deleted from the project site in 1976 with the approval of CUP 5206 / Amendment No. 5. As such, the subject property is governed by the underlying RM-1-1 zone [INFORMATIONAL ITEM ONLY]. (New Issue)

For questions regarding the 'LDR-Planning Review' review, please call Joseph Stanco Jr at (619) 446-5373. Project Nbr: 470158 / Cycle: 1





L64A-003A

## Development Regulations

### Height

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	7	The maximum structure height in the RM-1-1 zone is 30-feet, per Section 131.0431. Submit a comprehensive Roof Plan/Height Exhibit which shows and identifies the height of all structures which will exceed a structure height of 30-feet, as measured from finish grade below. Since a tentative map is being processed with this application, structure height is measured from finish grade, per Section 113.0228(b). (New Issue)
<input type="checkbox"/>	8	Planning staff will consult with Long Range Planning staff on all proposed height deviations and whether they are appropriate for the area or will adversely affect the Rancho Penasquitos Community Plan. (New Issue)
<input type="checkbox"/>	9	Per the Supplemental Planned Development Permit (PDP) Regulations, Section 143.0410(j)(2), "the scale of the project should be consistent with the neighborhood scale as represented by the dominant development pattern in the surrounding area, or as otherwise specified in the applicable land use plan." Per Section 143.0410(j)(5), "buildings should avoid an overwhelming or dominating appearance as compared to adjacent structures and development patterns." (continued) (New Issue)
<input type="checkbox"/>	10	Please demonstrate how the proposed project will comply with the regulations cited above. Please provide visual simulations, massing studies, or other visual representations which demonstrate compliance with the Supplemental PDP Regulations. (New Issue)
<input type="checkbox"/>	11	In accordance with the Supplemental PDP Regulations, Section 143.0410(d)(3), please demonstrate how pedestrian access to the surrounding streets is maximized. (New Issue)
<input type="checkbox"/>	12	In accordance with the Supplemental PDP Regulations, Section 143.0420(a), please address and clearly label on the plans how the proposed multiple dwelling units will provide the minimum usable and total open space. (New Issue)

### Floor Area Ratio

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	13	The maximum Floor Area Ratio (FAR) in the RM-1-1 zone is 0.75. The Development Summary on the cover sheet indicates that the proposed FAR is 0.59. However, the total Gross Floor Area (GFA) is shown as 1,072,775 sq.ft., which results in an FAR of 0.83, based on a total premises area of 1,285,020 sq.ft.  Please revise so that proposed FAR does not exceed 0.75, and provide a comprehensive breakdown of GFA per building type. (New Issue)

### Setbacks

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	14	Per Section 131.0443(d)(2)(A), one side of the property may observe a 5-foot setback for 50% of the building envelope provided the remaining percentage observes a side setback equal to 10% of the lot width. The opposite side may observe a side setback of 5-feet.  The development summary on the cover sheet indicates a proposed side setback of 2.5-feet. Please identify the structures which will deviate from the minimum side setback requirements of the RM-1-1 zone on the site plan. (New Issue)
<input type="checkbox"/>	15	Update the required side setback within the development summary to reference a setback equal to 10 percent of the lot width, per Section 131.0443(d)(2)(A). (New Issue)

### Storage

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	16	Please identify the required 240 cubic foot storage area for each dwelling unit, per Section 131.0454. (New Issue)

### Private Open Space

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	17	Please identify the required private exterior open space for each dwelling unit, per Section 131.0455(a). (New Issue)

### Common Open Space





L64A-003A

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	18	Please identify the common open space for the proposed facility, per Section 131.0456. (New Issue)

#### Supplemental

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	19	Please demonstrate compliance with the transparency requirement for all floors above the first floor which face Carmel Mountain Road, per Section 131.0464(d)(3). (New Issue)

#### Refuse/Recyclable Storage

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	20	Please demonstrate compliance with the location, screening, and minimum area required for Refuse and Recyclable Storage Areas for the proposed 564-dwelling unit facility, per Section 142.0810 and 142.0820. (New Issue)

#### Walls/Fences

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	21	Three fence and wall types are shown on Sheet 14. However, staff could not locate these fences on the site plans. Please address. (New Issue)
<input type="checkbox"/>	22	Please identify the heights of all retaining walls and fences on the site plan. Please identify if any walls or fences will exceed the maximum heights permitted in the Fence Regulations, per Sections 142.0301 and 142.0340. (New Issue)

#### Signage

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	23	The elevations of two entry monument signs are shown on Sheet 13. Please identify the location of these proposed signs on the site plan. (New Issue)
<input type="checkbox"/>	24	Please note that in the RM-1-1 zone, permanent signage is limited, per Section 142.1270. Neighborhood Identification Signs are permitted in the RM-1-1 zone with the approval of a Neighborhood Use Permit (NUP) in accordance with Process Two, per Section 141.1102. However, these signs are limited in overall size, copy area, and quantity. Please demonstrate compliance with the Neighborhood Identification Sign Regulations per Section 141.1102, and include an NUP within the development summary. (New Issue)

#### Airport Overlays

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input checked="" type="checkbox"/>	25	The subject property is located within Review Area 2 of the Airport Influence Area for MCAS-Miramar and is required to comply with the airspace protection compatibility requirements per Section 132.1520. The project site is not located within the FAA Part 77 Notification Area, and therefore, complies with the airspace protection compatibility requirements [INFORMATIONAL ITEM ONLY]. (New Issue)



# Cycle Issues



THE CITY OF SAN DIEGO  
Development Services Department  
1222 First Avenue, San Diego, CA 92101-4154

4/4/16 9:11 am

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## Review Information

<b>Cycle Type:</b> 1 Submitted (Multi-Discipline)	<b>Submitted:</b> 02/05/2016	Deemed Complete on 02/08/2016
<b>Reviewing Discipline:</b> LDR-Environmental	<b>Cycle Distributed:</b> 02/08/2016	
<b>Reviewer:</b> Dresser, Morgan	<b>Assigned:</b> 02/08/2016	
(619) 446-5404	<b>Started:</b> 03/14/2016	
Mdresser@sandiego.gov	<b>Review Due:</b> 03/18/2016	
<b>Hours of Review:</b> 16.00	<b>Completed:</b> 03/28/2016	<b>COMPLETED LATE</b>
<b>Next Review Method:</b> Submitted (Multi-Discipline)	<b>Closed:</b> 04/04/2016	

- . The reviewer has indicated they want to review this project again. Reason chosen by the reviewer: First Review Issues.
- . We request a 2nd complete submittal for LDR-Environmental on this project as: Submitted (Multi-Discipline).
- . The reviewer has requested more documents be submitted.
- . Your project still has 29 outstanding review issues with LDR-Environmental (all of which are new).
- . Last month LDR-Environmental performed 90 reviews, 50.0% were on-time, and 34.5% were on projects at less than < 3 complete submittals.

## Cycle 1- March 2016

Cleared?	Issue Num	Issue Text
<input type="checkbox"/>	1	PROJECT SCOPE- This project proposes a Vesting Tentative Map, Planned Development Permit and Site Development Permit for the redevelopment of an existing rental complex for the construction of 99 single family dwelling units, 105 triplexes, 120 3-story townhomes, and 240 apartment units. The 41.45 acre site is located at 10955 Carmel Mountain Road in the RM-1-1 zone of the Rancho Penasquitos Community Plan Area. Council District 5. (New Issue)
<input type="checkbox"/>	2	LAND USE- EAS defers to LDR Planning Review on Land Development Code and community plan issues; please refer to Planning Review comments for additional information and/or clarification. Per the City's Significance Determination Thresholds, an inconsistency with a land use plan is not in and of itself a significant impact; the inconsistency would have to result in a secondary physical impact. EAS will coordinate with the LDR Planning Reviewer to assess any potential impact and determine what, if any, mitigation is required. (New Issue)
<input type="checkbox"/>	3	BIOLOGICAL RESOURCES- EAS has received the Biological Resources Letter Report for the Rancho Penasquitos Project prepared by Helix Environmental Planning (January 2016). During this survey, there were no sensitive plants or animals observed. The site contains approximately 0.06 acres of potential non-wetland Waters of the U.S. and approximately 0.05 acres of other non-jurisdictional drainage features. The current project design will not impact any of the potential non-wetland Waters of the U.S. or other non-jurisdictional drainage features. (New Issue)
<input type="checkbox"/>	4	Furthermore, the project site is currently developed with 332 units. Review of aerial and street level photography appears to show that the project site does not contain any sensitive biological resources on site. The project site does not contain any sensitive riparian habitat or other identified habitat community. The project site does not contain, nor is it adjacent to, MHPA designated lands. (New Issue)
<input type="checkbox"/>	5	The following are staffs redlines/clarifications pertaining to the report: 1) Please remove information regarding the MBTA on page 12 (Nesting Birds) and page 13 (Sensitive Animals and Nesting Birds). Only state that the project will comply with the MBTA. 2) Please make it clear that there are no impacts and there is no mitigation required. (New Issue)
<input type="checkbox"/>	6	<b>GEOLOGIC CONDITIONS-</b> The project site is located within Geological Hazard Category 53 defined as level or sloping terrain, unfavorable geologic structure with low to moderate risk and Hazard Category 32 defined as Liquefaction with low potential, fluctuating groundwater and minor drainages.  EAS has received the Geotechnical 40-Scale Rough Grading Plan Review, "Pacific Village" (January 18, 2016). At this time LDR-Geology is requesting additional information, please also provide EAS with any updated reports and information. Please see LDR-Geology staff comments for further information. (New Issue)
<input type="checkbox"/>	7	<b>GREENHOUSE GAS EMISSIONS (GHG)-</b> A quantitative analysis addressing greenhouse gas (GHG) emissions from the project shall be provided in a GHG emissions analysis and summarized in the appropriate environmental document. The analysis should include, but not be limited to, the primary sources of GHG emissions associated with the project: vehicular traffic, generation of electricity, natural gas consumption/combustion, solid waste generation and water usage. The City of San Diego has not adopted a formal Threshold of Significance for CEQA for GHG emissions. (New Issue)

For questions regarding the 'LDR-Environmental' review, please call Morgan Dresser at (619) 446-5404. Project Nbr: 470158 / Cycle: 1





L64A-003A

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	8	Therefore, in accordance with amendments to the state CEQA Guidelines regarding analysis of greenhouse gas emissions, the City of San Diego is utilizing the California Air Pollution Control Officers Association (CAPCOA) report "CEQA & Climate Change" dated January 2008 as an interim guideline to determine whether a GHG analysis would be required. The CAPCOA report references the 900 metric ton guideline as a conservative threshold for requiring further analysis and mitigation. The project exceeds the interim threshold and therefore would be required to prepare a GHG emissions analysis. (New Issue)
<input type="checkbox"/>	9	HISTORICAL RESOURCES (ARCHAEOLOGY) -- INFORMATIONAL ONLY NO RESPONSE NEEDED--  The project site is not located on the City's Historical Resources Sensitivity Map. City staff does not recommend any additional archaeological evaluation or mitigation for the project. All pertinent information will be included within the appropriate environmental document. EAS has no further comments related to this issue. (New Issue)
<input type="checkbox"/>	10	HISTORICAL RESOURCES (BUILT ENVIRONMENT)- Per the submitted plans, the existing structures on the project site were built in 1970. Therefore, a potential Historical Resource Review for on development proposed for any parcel containing a structure over 45 years old as required by San Diego Municipal Code Section 143.0212.  EAS defers to Plan-Historic on historical resources (built environment) issues. At this time, Plan-Historic is requesting additional information. Please refer to Plan - Historic comments for additional information and/or clarification. (New Issue)
<input type="checkbox"/>	11	HYDROLOGY/DRAINAGE- EAS defers to LDR Engineering Review on hydrology and/or drainage issues. At this time Engineering review staff is requesting an updated version of the drainage study, please see LDR Engineering comments for more information. Please provide a copy of those studies to EAS with the next submittal. Staff will coordinate with LDR Engineering Review to assess potential impacts and determine what if any mitigation is necessary. (New Issue)
<input type="checkbox"/>	12	NOISE- An acoustical analysis, prepared in accordance with the City's "Acoustical Report Guidelines," is required to determine if any impacts would occur due to project implementation. Additionally, the noise report shall evaluate the project's consistency with the General Plan Noise Element. (New Issue)
<input type="checkbox"/>	13	If there is a potential for proposed uses to be incompatible with exterior noise levels at outdoor amenities or interior areas, measures must be included as project design features in order to ensure consistency with the General Plan Noise Element (i.e., setbacks, use of double-paned glass, noise walls/berms and other noise attenuation techniques). Include tables within the noise study, which show the existing, and future noise levels of dB(A) and any increased noise levels over dB(A) in 3 dB(A) increments along affected roads. (New Issue)
<input type="checkbox"/>	14	The analysis should discuss how the project would conform to the City of San Diego Municipal Code Noise and Abatement Control Ordinance §59.5.01. Additionally, construction noise may impact surrounding uses and the technical study should include a discussion regarding this potential impact.  The technical study should also discuss whether the project is located in an area affected by aircraft noise and, if so, would land uses proposed by the project be compatible with an adopted Airport Land Use Compatibility Plan. (New Issue)
<input type="checkbox"/>	15	PALEONTOLOGICAL RESOURCES- According to the Geology of the San Diego Metropolitan Area, California (1975) published by the California Division of Mines and Geology, the project site appears to be underlain by Santiago Peak Volcanics, which is assigned a low to moderate sensitivity rating for paleontological resources. (New Issue)
<input type="checkbox"/>	16	Paleontological monitoring during grading activities may be required if it is determined that the project's earth movement quantity exceeds the Paleontological threshold (if greater than 1,000 cubic yards and ten feet deep for formations with a high sensitivity rating, and if greater than 2,000 cubic yards and ten feet deep for formation with a moderate sensitivity rating). Please be aware that monitoring may also be required for shallow grading (less than ten feet) when a site has been previously graded and/or unweathered formations are present at the surface. (New Issue)
<input type="checkbox"/>	17	Upon next submittal, please provide the total amount of grading and/or ground disturbance (import/export, amount of fill, and depth of cut from existing grade including all basement areas and footings etc.) proposed for the project on the project plans. (New Issue)





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<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	18	<b>PUBLIC SERVICES (FIRE/POLICE)-</b> According to the City of San Diego Significance Determination Thresholds, Public Services and Facilities, police and fire services should review if the project exceeds 75 dwelling units or 100,000 square feet of non residential construction. This project exceeds this threshold and must be reviewed by police and fire services.  (New Issue)
<input type="checkbox"/>	19	Police and Fire services will be required as a reviewer next cycle. EAS defers to Police and Fire on any issues pertaining to police and fire services; please refer to Police and Fire comments for additional information and/or clarification. (New Issue)
<input type="checkbox"/>	20	<b>PUBLIC UTILITIES (SOLID WASTE)-</b> The California Public Resources Code requires each city within the state to divert at least 50 percent of its solid waste from landfill disposal through source reduction, recycling, composting, and transformation. The City of San Diego has enacted codes and policies aimed at helping achieve a 75 percent diversion level. Projections indicate that diversion rates achieved by the various City of San Diego regulations and ordinances alone will not be sufficient to achieve the 75 percent diversion level. (New Issue)
<input type="checkbox"/>	21	At this rate of waste disposal, the City's only landfill, the Miramar Landfill, will be filled to capacity by 2016, making efforts that preserve landfill space especially important. Based on the City of San Diego's Significance Determination Thresholds, a project that includes 40,000 square-feet or more of building space may generate 60 tons of waste or more and are considered to have a cumulative impact on solid waste facilities. (New Issue)
<input type="checkbox"/>	22	Construction of project would exceed the threshold for solid waste generation; therefore the project must prepare a conceptual waste management plan that is reviewed and accepted by Environmental Services Department and EAS. Please refer to the City of San Diego Significance Thresholds for what items and/or information is required in the waste management plan.  While all projects are required to comply with the City's waste management ordinances, cumulative impacts are mitigated to below a level of significance through the implementation of the project-specific waste management plan. (New Issue)
<input type="checkbox"/>	23	<b>TRANSPORTATION/TRAFFIC-</b> Transportation deemed a transportation impact study will be required; refer to their comments for further direction. Please also provide EAS with a copy of the study. EAS will coordinate with Transportation to determine what, if any, impacts and/or mitigation would be required.  (New Issue)
<input type="checkbox"/>	24	As the review progresses, please be aware that any revisions to the traffic study may require changes to other technical studies (i.e., air quality, GHG, noise) in order to incorporate revised information to ensure consistency. Furthermore, based on the analysis/conclusions, new studies and/or analysis may need to be requested based on locale of impact. (New Issue)
<input type="checkbox"/>	25	<b>PUBLIC UTILITIES (WATER SUPPLY ASSESSMENT)-</b> The proposed project would exceed the thresholds as identified in Senate Bill 610 and 221. Senate Bill 610 requires that the environmental document prepared for a project of this size contain a discussion regarding the availability of water to meet the projected water demands of the proposed project for a 20-year planning horizon, including single and multiple dry years. Senate Bill 221 requires the decision-maker to make a finding that the project's water demands for the planning horizon be met before approving a Tentative Map. (New Issue)
<input type="checkbox"/>	26	EAS will coordinate with the applicant and the Public Utilities Department in order to process the necessary water availability report. At this time a memo has been prepared initiating the process with the Public Utilities Department. Should additional information be required, staff will contact the applicant. (New Issue)
<input type="checkbox"/>	27	<b>WATER QUALITY-</b> EAS defers to LDR Engineering Review on water quality issues. At this time Engineering review staff is requesting an updated version of the Storm Water Quality Management Plan (SWQMP), please see LDR Engineering comments for more information. Please provide a copy of those studies to EAS with the next submittal. Staff will coordinate with LDR Engineering Review to assess potential impacts and determine what if any mitigation is necessary. (New Issue)
<input type="checkbox"/>	28	<b>ENVIRONMENTAL DETERMINATION-</b> Until the requested information has been provided, staff is not able to complete the environmental review for the project and the environmental processing timeline will be held in abeyance. EAS will coordinate with the other reviewers as the review progresses regarding any additional potential environmental impacts. (New Issue)
<input type="checkbox"/>	29	Please be aware that the environmental review may change in response to any project changes and/or new information. Additionally, the new information may lead to the requirement of new and/or additional technical studies. A determination as to the appropriate environmental document will be made based on all reviewed and submitted information. (New Issue)







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## Review Information

<b>Cycle Type:</b> 1 Submitted (Multi-Discipline)	<b>Submitted:</b> 02/05/2016	Deemed Complete on 02/08/2016
<b>Reviewing Discipline:</b> LDR-Landscaping	<b>Cycle Distributed:</b> 02/08/2016	
<b>Reviewer:</b> Radcliffe-Meyers, Lori	<b>Assigned:</b> 02/10/2016	
(619) 446-5129	<b>Started:</b> 03/10/2016	
Lradcliffeme@sandiego.gov	<b>Review Due:</b> 03/15/2016	
<b>Hours of Review:</b> 6.00	<b>Completed:</b> 03/14/2016	<b>COMPLETED ON TIME</b>
<b>Next Review Method:</b> Submitted (Multi-Discipline)	<b>Closed:</b> 04/04/2016	

- . The review due date was changed to 04/04/2016 from 03/18/2016 per agreement with customer.
- . The reviewer has indicated they want to review this project again. Reason chosen by the reviewer: First Review Issues.
- . We request a 2nd complete submittal for LDR-Landscaping on this project as: Submitted (Multi-Discipline).
- . The reviewer has requested more documents be submitted.
- . Your project still has 13 outstanding review issues with LDR-Landscaping (all of which are new).
- . Last month LDR-Landscaping performed 53 reviews, 71.7% were on-time, and 32.7% were on projects at less than < 3 complete submittals.

## 1st Review Cycle 1 03/10/16

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	1	Scope of Work - A VTM, PDP and SDP for the redevelopment of an existing rental complex for the construction of apartments, triplex's, townhomes and single family dwelling units located in the Rancho Penasquitos Community. (New Issue)
<input type="checkbox"/>	2	Bioretention Basins (sht. 6) - Grading and Drainage Plan legend refers to sheet 2 for the bioretention detail. Detail is not shown on sheet 2, detail appears on sheet 3. The Landscape Development Plan shows proposed trees planted within the bioretention basins. Trees proposed in the bioretention basins should have access to native soils in order to reach their full-growth potential. Cont. Below..... (New Issue)
<input type="checkbox"/>	3	Detail shows the basins are lined with an impermeable liner, please reconfigure the liner as necessary to allow for a 40 s.f. root zone access to native soils. If the proposed trees are not within the bioretention area please notate the extent of the area on the Landscape Development Plan (sht. 10). (New Issue)
<input type="checkbox"/>	4	Landscape Development Plan (sht. 10) - Existing Street Tree symbol is very light and hard to distinguish on the plans. Please revise the line weight to ensure trees are visible. (New Issue)
<input type="checkbox"/>	5	Landscape Development Plan (sht. 10) - Ensure text is legible. Areas of text are shown as a symbol. (New Issue)
<input type="checkbox"/>	6	Landscape Development Plan (sht. 15) - Water Budget - For the MAWA calculation please change the ETAF from the .45 to the required .55. The .45 is only for the SLA not the total landscape area. (New Issue)
<input type="checkbox"/>	7	Landscape Development Plan (sht. 15) - VUA graphic representation on the plan is confusing. Ensure all areas that are considered VUA are graphically represented on the plan. (New Issue)
<input type="checkbox"/>	8	Landscape Development Plan (sht. 15) - Please review SDMC 142.0406(c) for VUA requirements when the VUA is located in the street yard. (New Issue)
<input type="checkbox"/>	9	Landscape Development Plan (sht. 16) - The remaining yard calculation needs to be revised. Remaining yard is the area between the setback line and the nearest parallel property line and does not include any area that is considered VUA. Adjust graphic and calculation to accurately reflect the remaining yard. (New Issue)
<input type="checkbox"/>	10	Landscape Development Plan (sht. 16) - Remaining Yard Calculations-Once the calculation has been adjusted to correctly reflect the remaining yard area, points provided may not meet the required points. To help achieve the points required the proposed interior courtyard plantings may be used to help meet the remaining yard point requirements. (New Issue)





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<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	11	Provide the following note on the Landscape Development Plan: MINIMUM TREE SEPARATION DISTANCE Traffic signals / stop signs - 20 feet Underground utility lines - 5 feet (10' for sewer) Above ground utility structures - 10 feet Driveway (entries) - 10 feet Intersections (intersecting curb lines of two streets) - 25 feet  (New Issue)
<input type="checkbox"/>	12	Provide the following note on the Landscape Development Plan: "A minimum root zone of 40sf in area shall be provided for all trees. The minimum dimension for this area shall be 5 feet, per SDMC 142.0403(b)(5)."  (New Issue)
<input type="checkbox"/>	13	Pending a redesign and/or comments from other reviewing disciplines, Landscape staff reserves the right to provide additional comments on subsequent review cycles.  (New Issue)







THE CITY OF SAN DIEGO  
Development Services Department  
1222 First Avenue, San Diego, CA 92101-4154

L64A-003A

## Review Information

<b>Cycle Type:</b> 1 Submitted (Multi-Discipline)	<b>Submitted:</b> 02/05/2016	Deemed Complete on 02/08/2016
<b>Reviewing Discipline:</b> LDR-Engineering Review	<b>Cycle Distributed:</b> 02/08/2016	
<b>Reviewer:</b> Canning, Jack	<b>Assigned:</b> 02/08/2016	
(619) 446-5425	<b>Started:</b> 03/09/2016	
jcanning@sandiego.gov	<b>Review Due:</b> 03/15/2016	
<b>Hours of Review:</b> 10.00	<b>Completed:</b> 03/11/2016	<b>COMPLETED ON TIME</b>
<b>Next Review Method:</b> Submitted (Multi-Discipline)	<b>Closed:</b> 04/04/2016	

- . The review due date was changed to 04/04/2016 from 03/18/2016 per agreement with customer.
- . The reviewer has indicated they want to review this project again. Reason chosen by the reviewer: First Review Issues.
- . We request a 2nd complete submittal for LDR-Engineering Review on this project as: Submitted (Multi-Discipline).
- . The reviewer has requested more documents be submitted.
- . Your project still has 37 outstanding review issues with LDR-Engineering Review (all of which are new).
- . Last month LDR-Engineering Review performed 73 reviews, 84.9% were on-time, and 44.3% were on projects at less than < 3 complete submittals.

## Engineering 1st Review

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	1	The Engineering Review Section has reviewed the subject development and have the following comments that need to be addressed prior to a Public Hearing. Upon resubmittal, we will complete our review of the Site Development Permit Plans.
		(New Issue)
<input type="checkbox"/>	2	The San Diego Water Board adopted Order No. R9-2013-0001, NPDES No. CAS0109266, National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region. This project will be required to adhere to the City of San Diego Storm Water Standards in effect at the time of approval of ministerial permit. The new Storm Water Development Regulations became effective on February 16, 2016 and this project will be subject to those regulations.
		(New Issue)
<input type="checkbox"/>	3	This Priority Development Project is required to retain 85th Percentile storm event. The definition of retain will be to infiltrate or store the volume. If applicant does not want to infiltrate or store the volume, they can use Bioretention to treat 1.5 times the volume or use the Percent Capture Method to hold 75% of Design Capture Volume. This Priority Development Project will be required to calculate BMP size for Hydromodification based on pre-development condition.
		(New Issue)
<input type="checkbox"/>	4	This project proposes to increase by more than 20%, the storm water runoff from the project site to the Cal Trans Interstate Right-of-Way. This will require review and approval of the Drainage Study by Cal Trans. Submit documentation on the next submittal tha Cal Trans supports the proposes 20% increase.
		(continued below) (New Issue)
<input type="checkbox"/>	5	Submit documentation that addresses the adequacy of the down stream Cal Trans storm drain system(s) and which demonstrates that no adverse impacts will occur to these systems as a result of the increased runoff from the proposed development. If impacts are anticipated, state the measures that must be taken to mitigate such impacts.
		(New Issue)
<input type="checkbox"/>	6	Revise the Grading Plans Sheets 6 thru 8. Add a note that states: At the storm water discharge locations, suitable energy dissipaters are to be installed to reduce the discharge to non-erodible velocities.
		(New Issue)
<input type="checkbox"/>	7	Revise the Cover Sheet 1. Revise the Bench Mark elevation per the City of San Diego Vertical Control Book. Correct elevation is 618.875. Add the required MSL Datum.
		(New Issue)
<input type="checkbox"/>	8	Revise the Grading Plans Sheets 6 thru 8. Call out the applicant shall construct current City Standard curb ramps Standard Drawing SDG-130 and SDG-132 with truncated domes at all signalized project entrances.
		(New Issue)

For questions regarding the 'LDR-Engineering Review' review, please call Jack Canning at (619) 446-5425. Project Nbr: 470158 / Cycle: 1





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<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	9	Revise the Grading Plans Sheets 6 thru 8. Plans show curb return entrances to the project site, which is not acceptable. Curb return access shall only be located at signalized entrances. Revise all curb return project access, not at signalized entrances, to a current City Standard maximum 25 feet driveway.  (New Issue)
<input type="checkbox"/>	10	Revise the Grading Plans Sheets 6 thru 8. Add the visibility area triangles, per San Diego Municipal Code Diagram 113-02SS, at all project entrances on Carmel Mountain Road. For the signalized entrances, the visibility area two sides of the triangle shall extend along the intersecting property lines for 25 feet and the third side is a diagonal line that connects the two. (continued below) (New Issue)
<input type="checkbox"/>	11	For the driveways, the visibility area shall extend 10 feet inward along the driveway and along the property line. Add a note that states: No obstruction including landscaping or solid walls in the visibility area shall exceed 3 feet in height.  (New Issue)
<input type="checkbox"/>	12	Revise the Cover Sheet 1. Add the following 3 Storm Water notes:  1. Prior to the issuance of any construction permit, the applicant shall submit a Technical Report that will be subject to final review and approval by the City Engineer, based on the Storm Water Standards in effect at the time of the construction permit issuance.  (New Issue)
<input type="checkbox"/>	13	2. Development of this project shall comply with all storm water construction requirements of the State Construction General Permit, Order No. 2009-00090DWQ, or subsequent order, and the Municipal Storm Water Permit, Order No. R9-2007-0001, or subsequent order. In accordance with Order No. 2009-0009DWQ, or subsequent order, a Risk Level Determination shall be calculated for the site and a Storm Water Pollution Prevention Plan (SWPPP) shall be implemented concurrently with the commencement of grading activities.  (New Issue)
<input type="checkbox"/>	14	3. Prior to issuance of a grading or a construction permit, a copy of the Notice of Intent (NOI) with a valid Waste Discharge ID number (WDID#) shall be submitted to the City of San Diego as a proof of enrollment under the Construction General Permit. When ownership of the entire site or portions of the site changes prior to filing of the Notice of Termination (NOT), a revised NOI shall be submitted electronically to the State Water Resources Board in accordance with the provisions as set forth in Section II.C of Order No. 2009-0009-DWQ and a copy shall be submitted to the City.  (New Issue)
<input type="checkbox"/>	15	Development Permit Conditions will be determined on the next submittal when all requested information is provided.  (New Issue)
<input type="checkbox"/>	16	The Subdivider shall underground existing and/or proposed public utility systems and service facilities in accordance with the San Diego Municipal Code  (New Issue)
<input type="checkbox"/>	17	Revise the Cover Sheet 1. Call out Tentative Map No.1669785  (New Issue)
<input type="checkbox"/>	18	Revise the Cover Sheet 1 Legend. Change Property Boundary to Property Line/TM Boundary. List only those symbols that are shown on the plan view.  (New Issue)
<input type="checkbox"/>	19	Revise the Cover Sheet 1. Add a signature block for the owners listed in the Title Report. The owner needs to sign the TM Exhibit.  (New Issue)
<input type="checkbox"/>	20	Revise the Cover Sheet 1. Add a Mapping and Monumentation Note: All property corners will be set and a four lot final map will be filed upon approval of the tentative map. A detailed procedure of survey will be shown on the final map.  (New Issue)
<input type="checkbox"/>	21	Revise the Cover Sheet 1. State/show number of proposed lots.  (New Issue)
<input type="checkbox"/>	22	Revise the Cover Sheet 1. Add the legal description.  (New Issue)





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<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	23	Revise the Cover Sheet 1. Add existing and proposed street lights, nearest the project site, in both directions and on both sides of Carmel Mountain Road and the proposed internal private driveways. Include spacing between the street lights & the project site. If a street light is within the abutting project frontage, include the type of light standard, wattage & type of luminaire (low/high pressure sodium). A determination will be made if the project is in compliance with current street light standards according to the City of San Diego Street Design Manual and Council Policy 200-18.
		(New Issue)
<input type="checkbox"/>	24	Revise the Cover Sheet 1 Lambert Coordinates. Correct coordinates are 292-1740.
		(New Issue)
<input type="checkbox"/>	25	Tentative Map Conditions will be determined on the next submittal when all requested information is provided.
		(New Issue)
<input type="checkbox"/>	26	Additional comments may be recommended pending further review of any redesign of this project. These comments are not exclusive. Should you have any questions or comments, please call Jack Canning at 619 446-5425.
		(New Issue)

## WQTR/SWQMP

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	27	The San Diego Water Board adopted Order No. R9-2013-0001, NPDES No. CAS0109266, National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region. This project will be required to adhere to the new Storm Water Development Regulations.
		(New Issue)
<input type="checkbox"/>	28	The applicant shall revise the Title of the document and submit an electronic and hard copy of a Storm Water Quality Management Plan (SWQMP) consistent with the City of San Diego's Storm Water Standards. Required elements of a SWQMP are provided in Appendix A on this manual. Details supporting all decisions made in accordance with Chapter 4 requirements shall be documented in the SWQMP.
		(New Issue)
<input type="checkbox"/>	29	The SWQMP shall include a completed Submittal Template per Appendix A of the revised Storm Water Standards.
		(New Issue)
<input type="checkbox"/>	30	The SWQMP shall discuss how the project will meet the requirements of the Regional Water Quality Control Board Order R9-2013-0001. Add a discussion, exhibits and calculations to show how the project will retain the 85th Percentile storm event. Add a discussion how the project will use Bioretention to treat 1.5 times the DCV or use the Percent Capture Method to hold 75% of the Design Capture Volume.
		(New Issue)
<input type="checkbox"/>	31	The project will be required to add to a SWQMP, a completed Applicability of Hydromodification Management BMP Requirements Figure 1-2 to determine if the proposed project is subject to hydromodification criteria among other requirements. If applicable, hydromodification management facilities shall be required to mitigate project-related increases to discharge rates and durations.
		(New Issue)
<input type="checkbox"/>	32	Project must perform and report feasibility analysis for infiltration with respect to geotechnical and groundwater conditions. Applicant shall submit a completed Worksheet C.4-1: Categorization of Infiltration Feasibility Condition. All supporting studies, calculations, maps, data sources, etc must be included with the completed Worksheet.
		(New Issue)
<input type="checkbox"/>	33	If the project proposes a reduction credit in the Design Capture Volume by proposing Site Design Tree BMPs, please note the maximum amount of credit achieved by implementing trees shall be 25%. Submit a Site Plan that clearly shows where the trees credits are located. Add details that clearly show a connectivity of the impervious area to trees proposes. Add details that clearly show the trees receive runoff from the impervious areas.
		(New Issue)





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<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	34	The reduction shall be calculated in terms of 30% of the soil volume installed for the tree, per City of San Diego Landscape Design Standards. An example of a reduction credit would be a proposed tree with a soil volume of $216 \text{ cf} \times 0.3 = 72 \text{ cf}$ of reduction of the DCV.

(New Issue)

## Drainage Study

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	35	Revise the Drainage Study to adhere to the new 2016 Storm Water Standards.
		(New Issue)
<input type="checkbox"/>	36	Submit documentation that addresses the adequacy of the down stream Cal Trans storm drain system(s) and which demonstrates that no adverse impacts will occur to these systems as a result of the increased runoff from the proposed development. If impacts are anticipated, state the measures that must be taken to mitigate such impacts.
		(New Issue)
<input type="checkbox"/>	37	Add a discussion to the Drainage Study stating if the proposed project is required to obtain approval from the Regional Water Quality Control Board Under Federal Clean Water Act (CWA) section 401 or 404. A complete explanation must be provided. Please note, if the proposed project is subject to regulations as set forth in CWA 401/404, approval from the California Regional Water Quality Control Board must be obtained prior to permit issuance.

(New Issue)





L64A-003A

THE CITY OF SAN DIEGO  
Development Services Department  
1222 First Avenue, San Diego, CA 92101-4154

## Review Information

<b>Cycle Type:</b> 1 Submitted (Multi-Discipline)	<b>Submitted:</b> 02/05/2016	Deemed Complete on 02/08/2016
<b>Reviewing Discipline:</b> LDR-Transportation Dev	<b>Cycle Distributed:</b> 02/08/2016	
<b>Reviewer:</b> Lundquist, Jim	<b>Assigned:</b> 02/09/2016	
(619) 446-5396	<b>Started:</b> 03/14/2016	
jlundquist@sandiego.gov	<b>Review Due:</b> 04/04/2016	
<b>Hours of Review:</b> 44.00	<b>Completed:</b> 03/25/2016	<b>COMPLETED ON TIME</b>
<b>Next Review Method:</b> Submitted (Multi-Discipline)	<b>Closed:</b> 04/04/2016	

- . The review due date was changed to 04/04/2016 from 03/18/2016 per agreement with customer.
- . The reviewer has indicated they want to review this project again. Reason chosen by the reviewer: Partial Response to Cmnts/Regs.
- . We request a 2nd complete submittal for LDR-Transportation Dev on this project as: Submitted (Multi-Discipline).
- . The reviewer has requested more documents be submitted.
- . Your project still has 18 outstanding review issues with LDR-Transportation Dev (all of which are new).
- . Last month LDR-Transportation Dev performed 45 reviews, 57.8% were on-time, and 25.6% were on projects at less than < 3 complete submittals.

24006477 3/15/16

**Issue**  
**Cleared? Num Issue Text**

- |                          |   |  |
|--------------------------|---|--|
| <input type="checkbox"/> | 1 | Transportation Impact Study:   |
|                          |   | The proposed 99 SFR and 465 MFR project is estimated to generate 4611 average daily trips (ADT), with 369 AM peak-hour trips (74-in:295-out) and 461 PM peak-hour trips (322-in:139-out). A credit for existing uses would be allowed. A transportation impact study will be required. Pending review and approval of the study, mitigation for project impacts may be required. Please scope the study with DSD Transportation Development staff prior to its preparation.<br>(New Issue)   |
| <input type="checkbox"/> | 2 | Carmel Mountain Road is classified as a four lane major. The City of San Diego Street Design Manual identifies a four Lane Major with a 15 ft urban parkway (U-4b) on both sides and a noncontiguous sidewalk. Additional dedication and improvements may be required. (New Issue)   |
| <input type="checkbox"/> | 3 | The Owner shall relinquish abutter's rights onto Interstate 15 to the satisfaction of the City Engineer. If this has already been done, please show it on the VTm. (New Issue)   |
| <input type="checkbox"/> | 4 | The City of San Diego Street Design Manual, Geometric Design Standards E.4.a, states "Cul-de-sacs ... over 150 feet in length and dead-end alleys require a turn around..."<br><br>Per the City's Land Development Code (LDC) Section 142.0560 (d) (3), "[Drive] aisles that do not provide through circulation shall provide a turnaround area at the end of the aisle that is clearly marked to prohibit parking and that has a minimum area equivalent to a parking space."<br><br>There appear to be many locations on the site plan which will require a turn around. (New Issue)                       |
| <input type="checkbox"/> | 5 | LDC 113.0273 requires appropriate visibility triangles at the proposed driveways onto Carmel Mountain Road. Clearly demonstrate provision of adequate sight distance (including vertical and horizontal as appropriate) at all project driveways. No fences/shrubs higher than 36 inches in height are permitted in the visibility areas of the proposed driveways and street intersections and clearly note on the plans that no walls higher than 36 inches will be proposed in the visibility areas. Also, provide top and bottom elevations of any proposed fences/shrubs in those areas.<br>(New Issue) |
| <input type="checkbox"/> | 6 | City's Land Development Code (LDC Table 142-05L) identifies a width between 20 to 25 feet wide to serve a multiple dwelling unit two-way driveway. Note that a median in the driveway is not allowed. Please redesign to meet this requirement.<br>(New Issue)   |
| <input type="checkbox"/> | 7 | Curb returns are not permitted at the proposed access points unless they are located at a signalized intersection. All other proposed driveways/access points must be standard driveway SDG-160 and perpendicular to the right-of-way.<br><br>The project shall close all non-utilized driveways and replace them with full-height curb, gutter, and sidewalk.<br>(New Issue)  |
| <input type="checkbox"/> | 8 | The Transportation Impact Study (TIS) will address the access locations onto Carmel Mountain Road. The TIS will review the number, full or right turn in-right turn out only and the requirements for a traffic signal at all proposed access locations. Note that Driveways A and B may not be approved with full access. (New Issue)   |





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<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	9	The City's Land Development Code (LDC) 142.0525(d) states any dwelling unit with a garage that does not provide a driveway that is at least 20 feet long, measured from the back of the sidewalk to that portion of the driveway most distant from the sidewalk, as illustrated in Diagram 142-05A, shall provide one additional parking space. These parking spaces may be on-street/private driveway, abutting the subject property. (New Issue)
<input type="checkbox"/>	10	On the site plan, provide the calculations for all required parking. Provide and clearly label all proposed automobile, accessible, motorcycle and bicycle parking spaces and loading docks on the plans. (New Issue)
<input type="checkbox"/>	11	On-site pedestrian circulation should be shown on the plans. Sidewalks should be non-contiguous to the curb. (New Issue)
<input type="checkbox"/>	12	Clearly show the location(s) of all required Loading Area(s) per SDMC Section 142.1010. All required off-street loading spaces should have a minimum length of 35 feet, a minimum width of 12 feet, and a minimum vertical clearance of 14 feet including entrances and exits. The location of the off-street loading space should not require backing into or out of the public street. (New Issue)
<input type="checkbox"/>	13	Any gate should be located and operated to allow any expected gate queue to be accommodated without blocking the sidewalk or the public street. (New Issue)
<input type="checkbox"/>	14	Add the visibility area triangles, per San Diego Municipal Code Diagram 113-02SS, for the proposed driveways on Carmel Mountain Road The visibility area shall be shown on private property and extend 25 feet inward along the driveway and along the property line at signalized driveways, 10 feet at unsignalized driveways. A diagonal line connects the two. Add a note that states: No obstruction including landscaping or solid walls in the visibility area shall exceed 3 feet in height. (New Issue)
<input type="checkbox"/>	15	City's Land Development Code (LDC) 142.0525(c)(1) calls for 20% common area parking for multiple dwelling unit developments in the Planned Urbanized Communities. City's Land Development Code (LDC) 142.0525(c)(2) requires all common area parking that is provided off-street must be clearly identified and reserved for visitors. (New Issue)
<input type="checkbox"/>	16	Provide sidewalks on both sides of all driveways. (New Issue)
<input type="checkbox"/>	17	Traffic Control Permit required

Prior to any work starting in the City street right-of-way, the applicant shall apply for a "Public Right-of-Way Permit for Traffic Control."

Additional information on this requirement may be found at this web site:

<http://www.sandiego.gov/development-services/industry/trafficcontrol.shtml> (New Issue)

- ☐ 18 Additional comments and conditions may be provided pending further review or redesign of this project. (New Issue)





L64A-003A

## Review Information

**Cycle Type:** 1 Submitted (Multi-Discipline) **Submitted:** 02/05/2016 Deemed Complete on 02/08/2016  
**Reviewing Discipline:** Plan-Facilities Financing **Cycle Distributed:** 02/08/2016  
**Reviewer:** Strong-Williams, Charlotte **Assigned:** 02/09/2016  
 (619) 533-3683 **Started:** 02/19/2016  
 CSWilliams@sandiego.gov **Review Due:** 03/08/2016  
**Hours of Review:** 1.00 **Completed:** 02/19/2016 **COMPLETED ON TIME**  
**Next Review Method:** Submitted (Multi-Discipline) **Closed:** 04/04/2016

- . The review due date was changed to 04/04/2016 from 03/18/2016 per agreement with customer.
- . We request a 2nd complete submittal for Plan-Facilities Financing on this project as: Submitted (Multi-Discipline).
- . The reviewer has requested more documents be submitted.
- . Last month Plan-Facilities Financing performed 78 reviews, 89.7% were on-time, and 96.2% were on projects at less than < 3 complete submittals.

### Proposed FBA Fees

#### Building Permit - Residential

##### DIF/FBA-Residential

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input checked="" type="checkbox"/>	1	Development Impact Fees (DIF) and/or Facilities Benefit Assessments (FBA) are required at building permit issuance based on increased residential development and/or a change to existing land use. The currently adopted Rancho Peñasquitos DIF and/or FBA rate for residential development is \$31,590 per single-dwelling unit and/or \$22,114 per multi-dwelling unit. If you have any questions, please contact Charlette Strong Williams, Project Manager, at (619) 533-3683. (New Issue)

##### Standard Public Notices

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input checked="" type="checkbox"/>	2	Fees are subject to increase at the beginning of each new fiscal year (July 1), and/or upon Council approval of an update to the Public Facilities Financing Plan, and/or upon a change in project scope. (New Issue)
<input checked="" type="checkbox"/>	3	Upon payment of any DIF, FBA, and/or RTCIP the 90-day protest period in which you may protest these impact fees under Government Code Section 66020 will begin. A written protest must be filed with the City Clerk pursuant to Government Code Section 66020. The protest procedures under Section 66020 are additional to other procedures authorized or required under the San Diego Municipal Code. (New Issue)
<input checked="" type="checkbox"/>	4	The Facilities Financing Issues Report was sent to the project Point of Contact. The required impact fees have been added to the project. Facilities Financing has "signed off" the job and the building plan set routed to Facilities Financing has been recycled. A stamp transfer is not necessary. If there is a future change in the project scope or use, new plans and a review should be routed to Facilities Financing to determine if changes are necessary to the impact fees. (New Issue)

##### Fee Deferrals

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input checked="" type="checkbox"/>	5	The City Council approved Ordinance Number O-20419, which allows the applicant to request a deferral of Development Impact Fees (DIF) or Facilities Benefit Assessments (FBA). A Fee Deferral Agreement must be processed by the applicant, properly executed, duly recorded, and the applicable administration fee paid to defer the collection of DIF or FBA. The DIF or FBA can be deferred for a maximum period of two years, or until request for Final Inspection, whichever occurs earlier. The Final Inspection shall not be scheduled until the applicable DIF or FBA are paid. (New Issue)

##### RTCIP

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input checked="" type="checkbox"/>	6	RTCIP Fees on residential development are required at building permit issuance. These fees were established to ensure that new Development invests in the Region's transportation system to offset the negative impact of growth on congestion and mobility. The current City RTCIP Fee is \$2,691 per single-dwelling unit and/or \$2,153 per multi-dwelling unit. On-site affordable housing units are exempt from the City RTCIP Fee. To qualify for this exemption, a recorded Affordable Housing Agreement with the Housing Commission must be submitted to Facilities Financing prior to building permit issuance. (New Issue)

##### Credit for Demolition

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
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# Cycle Issues



THE CITY OF SAN DIEGO  
Development Services Department  
1222 First Avenue, San Diego, CA 92101-4154

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<u>Issue</u>		
<u>Cleared?</u>	<u>Num</u>	<u>Issue Text</u>
<input checked="" type="checkbox"/>	7	Two weeks prior to building permit issuance, email the following documentation to Facilities Financing in order to be considered for impact fee credit for demolition of building(s) on the site: (1) A copy of a completed Demolition/Removal Permit and (2) the Residential (619-236-3771) or Commercial-Industrial (858-505-6262) Building Record from the San Diego County Assessor's Office, which is released to the owner only. (New Issue)

## Additional Comments

<u>Issue</u>		
<u>Cleared?</u>	<u>Num</u>	<u>Issue Text</u>
<input checked="" type="checkbox"/>	8	No fee's will be required for this review as it is a Discretionary review. Please refer to Proposed FBA Fees comments for information regarding potential fees that will be assessed once a ministerial permit is submitted to build the 564 units.  (New Issue)







# Cycle Issues

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THE CITY OF SAN DIEGO  
Development Services Department  
1222 First Avenue, San Diego, CA 92101-4154

## Review Information

<b>Cycle Type:</b>	1 Submitted (Multi-Discipline)	<b>Submitted:</b>	02/05/2016	Deemed Complete on 02/08/2016
<b>Reviewing Discipline:</b>	Community Planning Group	<b>Cycle Distributed:</b>	02/08/2016	
<b>Reviewer:</b>	Tirandazi, Firouzeh	<b>Assigned:</b>	02/16/2016	
	(619) 446-5325	<b>Started:</b>	02/16/2016	
	ftirandazi@sandiego.gov	<b>Review Due:</b>	03/15/2016	
<b>Hours of Review:</b>	0.25	<b>Completed:</b>	02/16/2016	<b>COMPLETED ON TIME</b>
<b>Next Review Method:</b>	Submitted (Multi-Discipline)	<b>Closed:</b>	04/04/2016	

- . The review due date was changed to 04/04/2016 from 03/18/2016 per agreement with customer.
- . The reviewer has indicated they want to review this project again. Reason chosen by the reviewer: First Review Issues.
- . We request a 2nd complete submittal for Community Planning Group on this project as: Submitted (Multi-Discipline).
- . The reviewer has requested more documents be submitted.
- . Your project still has 1 outstanding review issues with Community Planning Group (all of which are new).
- . Last month Community Planning Group performed 59 reviews, 39.0% were on-time, and 47.5% were on projects at less than < 3 complete submittals.

## 1st Review

		<u>Issue</u>
<u>Cleared?</u>	<u>Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	1	Please contact the Chair for the Rancho De Los Penasquitos Planning Board, (as identified in the assessment letter) to make arrangements to present your project for review at their next available meeting. This Community Plannig Group is officially recognized by the City as a representative of the community, and an advisor to the City in actions that would affect the community. The Development Services Department has notified the group of your request and has sent them a copy of your project plans and documents. (New Issue)





THE CITY OF SAN DIEGO  
Development Services Department  
1222 First Avenue, San Diego, CA 92101-4154

L64A-003A

## Review Information

<b>Cycle Type:</b> 1 Submitted (Multi-Discipline)	<b>Submitted:</b> 02/05/2016	Deemed Complete on 02/08/2016
<b>Reviewing Discipline:</b> PUD-Water & Sewer Dev	<b>Cycle Distributed:</b> 02/08/2016	
<b>Reviewer:</b> Purdy, Jay	<b>Assigned:</b> 02/08/2016	
(619) 446-5456	<b>Started:</b> 03/15/2016	
JPurdy@sandiego.gov	<b>Review Due:</b> 03/15/2016	
<b>Hours of Review:</b> 6.00	<b>Completed:</b> 03/15/2016	<b>COMPLETED ON TIME</b>
<b>Next Review Method:</b> Submitted (Multi-Discipline)	<b>Closed:</b> 04/04/2016	

- . The review due date was changed to 04/04/2016 from 03/18/2016 per agreement with customer.
- . The reviewer has indicated they want to review this project again. Reason chosen by the reviewer: First Review Issues.
- . We request a 2nd complete submittal for PUD-Water & Sewer Dev on this project as: Submitted (Multi-Discipline).
- . The reviewer has requested more documents be submitted.
- . Your project still has 4 outstanding review issues with PUD-Water & Sewer Dev (all of which are new).
- . Last month PUD-Water & Sewer Dev performed 112 reviews, 88.4% were on-time, and 71.8% were on projects at less than < 3 complete submittals.

## Informational Items:

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input checked="" type="checkbox"/>	1	All proposed publicly maintained water and sewer facilities must be designed and constructed in accordance with the criteria established within the City of San Diego's most current water and sewer facility design guidelines, regulations, standards, and practices pertaining thereto.
		(New Issue) [Recommended]
<input checked="" type="checkbox"/>	2	Water and sewer capacity charges will be due at the time of building permit issuance. Capacity charges, as well as service and meter size, are determined by the Water Meter Data Card which is completed during the building plan review process. Any questions regarding water and sewer capacity fees should be addressed to Information and Application Services (619-446-5000).
		(New Issue) [Recommended]
<input checked="" type="checkbox"/>	3	Please direct any questions you may have regarding the information, comments or conditions contained in this review to Jay Purdy via email at jpurdy@sandiego.gov.
		(New Issue) [Recommended]

## Comments:

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	4	If more than two (2) fire hydrants or thirty (30) dwelling units are located on a dead-end water main utilized by the development, the Subdivider shall install a redundant water system in a manner satisfactory to the Public Utilities Director and the City Engineer.
		Over 30 dwelling units on Private Driveway "J" and "K" appear to be in conflict with this condition. Please revise for your next submittal and check the plan to ensure that no other similar issues exist. (New Issue)
<input type="checkbox"/>	5	Please submit a Sewer Study and Water Study. (New Issue)
<input type="checkbox"/>	6	Please evaluate all existing public sewer easements which cross over or are contiguous to the subject property to ensure that they comply with current easement requirements as laid out in Chapter 3 of the City's current Sewer Design Guide.
		For those easements that do not comply with current standards, please propose new easements of appropriate width.
		For those easements that do not currently have sewer facilities, and for which no future sewer facilities are anticipated, please propose to vacate the existing easement. (New Issue)
<input type="checkbox"/>	7	On both the Site Plan and Landscape Plan, please include the following note "No trees or shrubs whose height will 3' at maturity shall be installed or retained within 5' of any publicly maintained water facilities or within 10' of any publicly maintained sewer facilities."
		While this note was included on the Site Plans, it omitted the words "or retained". (New Issue)





L64A-003A

## Review Information

<b>Cycle Type:</b> 1 Submitted (Multi-Discipline)	<b>Submitted:</b> 02/05/2016	Deemed Complete on 02/08/2016
<b>Reviewing Discipline:</b> Plan-Long Range Planning	<b>Cycle Distributed:</b> 02/08/2016	
<b>Reviewer:</b> Prinz, Michael	<b>Assigned:</b> 02/09/2016	
(619) 533-5931	<b>Started:</b> 03/08/2016	
Mprinz@sandiego.gov	<b>Review Due:</b> 03/15/2016	
<b>Hours of Review:</b> 11.00	<b>Completed:</b> 03/15/2016	<b>COMPLETED ON TIME</b>
<b>Next Review Method:</b> Submitted (Multi-Discipline)	<b>Closed:</b> 04/04/2016	

- . The review due date was changed to 04/04/2016 from 03/18/2016 per agreement with customer.
- . The reviewer has indicated they want to review this project again. Reason chosen by the reviewer: First Review Issues.
- . We request a 2nd complete submittal for Plan-Long Range Planning on this project as: Submitted (Multi-Discipline).
- . The reviewer has requested more documents be submitted.
- . Your project still has 15 outstanding review issues with Plan-Long Range Planning (all of which are new).
- . Last month Plan-Long Range Planning performed 22 reviews, 68.2% were on-time, and 35.3% were on projects at less than < 3 complete submittals.

## Summary and Land Use

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	1	The proposed project, to develop 564 residential units on 41.45 acres is located in the Rancho Penasquitos community planning area. The project site has a land use designation of Residential. The proposed project's use would be consistent with the community plan land use designation. (New Issue)
<input type="checkbox"/>	2	The proposed project site has a land use designation of 'Residential' as identified in the Community Plan Land Use Map (Figure 4). The site is identified as Medium Density Residential (allowing 10-22 dwelling units per developable acre) in the Neighborhood Planning Element of the Community Plan (Figure 11). The site is zoned RM-1-1, which allows approximately 15 dwelling units per acre. (New Issue)
<input type="checkbox"/>	3	The proposed project would have a density of just under 14 dwelling units per acre, consistent with the Medium Density residential designation identified in the Village area of the Neighborhood Planning Element (Figure 11) and the RM-1-1 zone. (New Issue)
<input type="checkbox"/>	4	The Neighborhood Planning Element provides a summary of the land use, transportation, housing, and urban design recommendations for each neighborhood. These recommendations focus on the specific needs of the neighborhoods, providing a more detailed analysis of the community based upon a neighborhood specific study completed prior to adoption of the Community Plan. (New Issue)

## Affordable Housing

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	5	The proposed project does not appear to be consistent with the Plan direction to preserve the site for low- and moderate-income housing. The plan states that "redevelopment of the multifamily areas of the neighborhood should provide low- and moderate-income housing." (New Issue)
<input type="checkbox"/>	6	The existing multi-family development on the project site has a total of 332 units, 213 of which are Section 8 assisted living units. The Balanced Communities Section of the General Plan Land Use Element identifies the need to "provide affordable housing opportunities within the community to help offset the displacement of the existing population." (New Issue)
<input type="checkbox"/>	7	Please identify how the proposed project will help implement the Community Plan and General Plan policies stated above. (New Issue)

## Building Height

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	8	The Plan states that building heights should be limited to 30 feet on properties designated Medium Density Residential. As identified in the Plan, projects within the Village should consider the impact on views and the visual quality of structures. The proposed project should demonstrate that a deviation from the 30 foot maximum structure height of the zone would not adversely impact important community viewsheds. (New Issue)

## Landscaping

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
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THE CITY OF SAN DIEGO  
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<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	9	The Plan states that 'all new subdivision maps should clearly define short- and long-term landscaping maintenance responsibilities. Homeowners' associations, assessment districts or some other process should be established in all new subdivisions to maintain landscaping within residential areas. The proposed project identifies the Homeowners' association as the responsible party for landscape maintenance of the amenity space, interior parkways, and slopes - consistent with Community Plan policy. (New Issue)

## General Plan Policy

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	10	The project should identify and use sustainable building methods in accordance with the sustainable development policies in the General Plan Conservation Element. (New Issue)
<input type="checkbox"/>	11	As identified in the General Plan Urban Design element, streets or internal driveways should be designed to improve walkability, strengthen connectivity, and enhance community identity. The project should utilize a grid or modified-grid system to enhance connectivity within the site. (New Issue)
<input type="checkbox"/>	12	The current internal driveway network should be revised to establish a more unified grid network that enhances pedestrian connectivity and access to the amenities within the site. (New Issue)
<input type="checkbox"/>	13	Please provide enhanced paving at all pedestrian crossings within the project. (New Issue)
<input type="checkbox"/>	14	The General Plan Noise Element identifies multi-family residential development as being conditionally compatible up to 70 dB provided that the structure attenuates exterior noise to 45 dB for interior noise level. Please identify where existing and future roadway noise exceeds 70 dB and identify any attenuation measures that may be needed. (New Issue)

## Penasquitos Village Park

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	15	The Rancho Penasquitos Planning Board requested the project applicant to consider building the Penasquitos Village Park identified in the Community Plan. If the applicant is interested in pursuing this effort as a component of the public facilities financing commitment, please coordinate with Nicholas Ferracone (Park Planning) and Charlette Strong-Williams (Facilities Financing). They are the appropriate staff to discuss park development agreements and reimbursement agreements. (New Issue)





L64A-003A

## Review Information

<b>Cycle Type:</b> 1 Submitted (Multi-Discipline)	<b>Submitted:</b> 02/05/2016	Deemed Complete on 02/08/2016
<b>Reviewing Discipline:</b> LDR-Geology	<b>Cycle Distributed:</b> 02/08/2016	
<b>Reviewer:</b> Washburn, Jacobe	<b>Assigned:</b> 02/09/2016	
(619) 446-5075	<b>Started:</b> 02/11/2016	
jwashburn@sandiego.gov	<b>Review Due:</b> 03/15/2016	
<b>Hours of Review:</b> 3.00	<b>Completed:</b> 03/15/2016	<b>COMPLETED ON TIME</b>
<b>Next Review Method:</b> Submitted (Multi-Discipline)	<b>Closed:</b> 04/04/2016	

- . The review due date was changed to 04/04/2016 from 03/18/2016 per agreement with customer.
- . The reviewer has indicated they want to review this project again. Reason chosen by the reviewer: First Review Issues.
- . We request a 2nd complete submittal for LDR-Geology on this project as: Submitted (Multi-Discipline).
- . The reviewer has requested more documents be submitted.
- . Your project still has 6 outstanding review issues with LDR-Geology (all of which are new).
- . Last month LDR-Geology performed 77 reviews, 87.0% were on-time, and 77.1% were on projects at less than < 3 complete submittals.

## 470158-1 (3/10/2016)

### References

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	1	Geotechnical 40-scale Rough Grading Plan Review, "Pacific Village", City of San Diego, California, prepared by LGC Geotechnical, Inc., dated January 18, 2016 (their project no. 15198-01).
		(New Issue)
<input type="checkbox"/>	2	Pacific Village, Vesting Tentative Map, Planned Development Permit, Site Development Permit, prepared by Latitude 33 Planning & Engineering, original date February 3, 2016.
		(New Issue)

### Comments

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	3	Submit an addendum geotechnical report or update letter that specifically addresses the proposed development for the purposes of environmental review and the following:
		(New Issue)
<input type="checkbox"/>	4	If it is the intent of the geotechnical consultant to use the geotechnical investigation and test data prepared by Petra Geosciences (2015), the geotechnical consultant should clarify that they agree with the data, findings, and conclusions contained in that report.
		(New Issue)
<input type="checkbox"/>	5	Provide a complete copy of the geotechnical report prepared by Petra Geosciences (2015) referenced the submitted geotechnical report prepared by LGC Geotechnical, Inc.
		(New Issue)
<input type="checkbox"/>	6	The project's geotechnical consultant should provide a conclusion regarding if the proposed development will destabilize or result in settlement of adjacent properties or the city Right-of-Way.
		(New Issue)





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## Review Information

<b>Cycle Type:</b> 1 Submitted (Multi-Discipline)	<b>Submitted:</b> 02/05/2016	Deemed Complete on 02/08/2016
<b>Reviewing Discipline:</b> Park & Rec	<b>Cycle Distributed:</b> 02/08/2016	
<b>Reviewer:</b> Ferracone, Nicholas (619) 525-8261 Nferracone@sandiego.gov	<b>Assigned:</b> 02/08/2016	
	<b>Started:</b> 03/17/2016	
<b>Hours of Review:</b> 100.00	<b>Review Due:</b> 03/15/2016	
<b>Next Review Method:</b> Submitted (Multi-Discipline)	<b>Completed:</b> 03/17/2016	<b>COMPLETED LATE</b>
	<b>Closed:</b> 04/04/2016	

- . The review due date was changed to 04/04/2016 from 03/18/2016 per agreement with customer.
- . The reviewer has indicated they want to review this project again. Reason chosen by the reviewer: First Review Issues.
- . We request a 2nd complete submittal for Park & Rec on this project as: Submitted (Multi-Discipline).
- . The reviewer has requested more documents be submitted.
- . Your project still has 2 outstanding review issues with Park & Rec (all of which are new).
- . Last month Park & Rec performed 32 reviews, 71.9% were on-time, and 77.4% were on projects at less than < 3 complete submittals.

## First Review

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input checked="" type="checkbox"/>	1	The adopted community plan allows for residential development at the project site at the proposed density. Since the development proposed is within that density threshold, the park portion of the current per-unit Facilities Benefit Assessment (FBA), to be paid at the time of building permit issuance, provides for public facilities required to support the population of the community at build-out. Those figures have been provided in comments from Facilities Financing. No additional park fees are required. (New Issue)
<input type="checkbox"/>	2	It appears that the project is located within area mapped as the Penasquitos East Maintenance Assessment District (MAD). Coordination with the MAD will be required. Contact Joe Storniolo at 619-685-1321. (New Issue)
<input type="checkbox"/>	3	It is understood that this is the first submittal in the discretionary permit process. Project comments were based on the level of information provided. As project scope and drawings are modified, staff requests appropriate resubmittals to Park Planning and reserves the right to modify and expand comment on the updated project and/or project scope revisions. (New Issue)



# Cycle Issues



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## Review Information

<b>Cycle Type:</b>	1 Submitted (Multi-Discipline)	<b>Submitted:</b>	02/05/2016	Deemed Complete on 02/08/2016
<b>Reviewing Discipline:</b>	Fire-Plan Review	<b>Cycle Distributed:</b>	02/08/2016	
<b>Reviewer:</b>	Sylvester, Brenda	<b>Assigned:</b>	02/09/2016	
	(619) 446-5449	<b>Started:</b>	03/16/2016	
	bsylvester@sandiego.gov	<b>Review Due:</b>	03/15/2016	
<b>Hours of Review:</b>	1.00	<b>Completed:</b>	03/16/2016	<b>COMPLETED LATE</b>
<b>Next Review Method:</b>	Submitted (Multi-Discipline)	<b>Closed:</b>	04/04/2016	

- . The review due date was changed to 04/04/2016 from 03/18/2016 per agreement with customer.
- . We request a 2nd complete submittal for Fire-Plan Review on this project as: Submitted (Multi-Discipline).
- . The reviewer has requested more documents be submitted.
- . Last month Fire-Plan Review performed 52 reviews, 75.0% were on-time, and 91.8% were on projects at less than < 3 complete submittals.

## Fire Department Issues

<u>Cleared?</u>	<u>Num</u>	<u>Issue Text</u>
<input checked="" type="checkbox"/>	1	No corrections or issues based on this submittal. (New Issue)



# Cycle Issues



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## Review Information

<b>Cycle Type:</b>	1 Submitted (Multi-Discipline)	<b>Submitted:</b>	02/05/2016	Deemed Complete on 02/08/2016
<b>Reviewing Discipline:</b>	MCAS Miramar	<b>Cycle Distributed:</b>	02/08/2016	
<b>Reviewer:</b>	Tirandazi, Firouzeh	<b>Assigned:</b>	02/16/2016	
	(619) 446-5325	<b>Started:</b>	03/23/2016	
	ftirandazi@sandiego.gov	<b>Review Due:</b>	03/15/2016	
<b>Hours of Review:</b>	0.25	<b>Completed:</b>	03/23/2016	<b>COMPLETED LATE</b>
<b>Next Review Method:</b>	Conditions	<b>Closed:</b>	04/04/2016	

- . The review due date was changed to 04/04/2016 from 03/18/2016 per agreement with customer.
- . We request a 2nd complete submittal for MCAS Miramar on this project as: Conditions.
- . The reviewer has requested more documents be submitted.
- . Last month MCAS Miramar performed 3 reviews, 33.3% were on-time, and 66.7% were on projects at less than < 3 complete submittals.

## 1st review

<u>Issue</u>		
<u>Cleared?</u>	<u>Num</u>	<u>Issue Text</u>
<input checked="" type="checkbox"/>	1	In it's letter dated March 22, 2016, MCAS Miramar has determined that the proposed project is consistent with AICUZ noise and safety compatibility guidelines, and the proposed height of the new structure does not appear to penetrate the Federal Aviation Administration (FAA) Part 77 Outer Horizontal Surface and/or any Terminal Instrument Procedures (TERPS) surfaces. (New Issue)
<input checked="" type="checkbox"/>	2	MCAS Miramar has commented that occupants will routinely see and hear military aircraft and experience varying degrees of noise and vibration. Consequently, it recommends full disclosure of noise and visual impacts to all initial and subsequent purchasers, lessees, or other potential occupants. (New Issue)
<input checked="" type="checkbox"/>	3	For questions or additional information please contact the reviewer, Kristin Camper at (858) 577-6603. (New Issue)





# Cycle Issues



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## Review Information

<b>Cycle Type:</b> 1 Submitted (Multi-Discipline)	<b>Submitted:</b> 02/05/2016	Deemed Complete on 02/08/2016
<b>Reviewing Discipline:</b> Plan-Historic	<b>Cycle Distributed:</b> 02/08/2016	
<b>Reviewer:</b> Pekarek, Camille	<b>Assigned:</b> 02/12/2016	
(619) 236-7173	<b>Started:</b> 03/15/2016	
CLPekarek@sandiego.gov	<b>Review Due:</b> 03/15/2016	
<b>Hours of Review:</b> 0.50	<b>Completed:</b> 03/15/2016	<b>COMPLETED ON TIME</b>
<b>Next Review Method:</b> Submitted (Multi-Discipline)	<b>Closed:</b> 04/04/2016	

- . The review due date was changed to 04/04/2016 from 03/18/2016 per agreement with customer.
- . The reviewer has indicated they want to review this project again. Reason chosen by the reviewer: First Review Issues.
- . We request a 2nd complete submittal for Plan-Historic on this project as: Submitted (Multi-Discipline).
- . The reviewer has requested more documents be submitted.
- . Your project still has 10 outstanding review issues with Plan-Historic (all of which are new).
- . Last month Plan-Historic performed 262 reviews, 92.4% were on-time, and 95.3% were on projects at less than < 3 complete submittals.

## 3-15-2016

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
-----------------	------------------	-------------------

- |                                     |   |  |
|-------------------------------------|---|--|
| <input checked="" type="checkbox"/> | 1 | The property located at 10955 Carmel Mountain Road, APN 313-030-1500, is not an individually designated resource and is not located within a designated historic district. However, San Diego Municipal Code Section 143.0212 requires City staff to review all projects impacting a parcel that contains a structure 45 years old or older to determine whether a potentially significant historical resource exists on site prior to issuance of a permit. (Info Only, No Response Required) (New Issue) |
| <input checked="" type="checkbox"/> | 2 | During this review buildings are evaluated for eligibility under local designation criteria. The designation criteria and guidelines for their application can be found on the City's website:<br><br><a href="http://www.sandiego.gov/planning/programs/historical/pdf/201102criteria-guidelines.pdf">http://www.sandiego.gov/planning/programs/historical/pdf/201102criteria-guidelines.pdf</a><br>(Informational Only; No Response or Action Required) (New Issue)                                      |
| <input checked="" type="checkbox"/> | 3 | More information regarding this review process can be found in Information Bulletin 580:<br><br><a href="http://www.sandiego.gov/development-services/pdf/industry/infobulletin/ib580.pdf">http://www.sandiego.gov/development-services/pdf/industry/infobulletin/ib580.pdf</a><br>(Informational Only; No Response or Action Required) (New Issue)  |
| <input checked="" type="checkbox"/> | 4 | If City staff determines after review of these documents that no potentially significant historical resource exists on site, the parcel will be exempt from further historical review for five years from this date unless new information is provided that speaks to the building's eligibility for designation. (Informational Only; No Response or Action Required) (New Issue)   |
| <input checked="" type="checkbox"/> | 5 | If City staff determines that a potentially significant historical resource exists on the site, all modifications and additions will be evaluated to determine consistency with the Secretary of the Interior's Standards for Treatment of Historic Properties (Standards). If the proposed project is consistent with the Standards, the permit process may proceed and the parcel will require additional review for all future modifications. (continued...) (New Issue)                                |
| <input checked="" type="checkbox"/> | 6 | (...continued) If the proposed project is not consistent with the Standards, the applicant may redesign the project or prepare a historic report that evaluates the building's integrity and eligibility under all designation criteria. (Informational Only; No Response or Action Required) (New Issue)  |
| <input type="checkbox"/>            | 7 | Staff cannot make a determination with the information provided please provide the following documents: (New Issue)  |
| <input type="checkbox"/>            | 8 | Adequate photo documentation of the property has not been provided. Provide a photo survey for all buildings on the property. The photo survey must include a photo key showing all building footprints and the location that each photo was taken from. The survey must provide clear, color photos showing each elevation as well as a view from the street showing street number. Photographs must be provided as quality color prints no smaller than 4"x6", and digitally on a CD-ROM. (New Issue)    |
| <input type="checkbox"/>            | 9 | A complete copy of the Assessor's Building Record must be provided. This document is available at the County Assessor's Office and includes information such as the date of construction, materials, date of alterations, and a dimensioned footprint of the building(s) and subsequent additions. The owner's written consent is required in order to obtain this document from the County. (New Issue)   |

For questions regarding the 'Plan-Historic' review, please call Camille Pekarek at (619) 236-7173. Project Nbr: 470158 / Cycle: 1

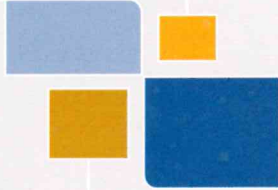




L64A-003A

<u>Cleared?</u>	<u>Issue Num</u>	<u>Issue Text</u>
<input type="checkbox"/>	10	Discretionary projects are required to submit all documentation identified in Information Bulletin 580, Section II.D. Please review the Bulletin and provide all documentation not provided with this submittal, including: (New Issue)
<input type="checkbox"/>	11	Written description of the property including architectural style, materials, features, setting & related structures. (New Issue)
<input type="checkbox"/>	12	Written description of any known alterations including dates & the architect/builder associated with the alterations. (New Issue)
<input type="checkbox"/>	13	Notice of Completion - typically provided as part of a chain of title search. It can also be found at the County Administration Center, 1600 Pacific Highway, Room 103, San Diego CA 92101. If a Notice of Completion cannot be located, add the following note on the Building Record: "Notice of Completion cannot be located." (New Issue)
<input type="checkbox"/>	14	Chain of Title - available through title search companies or by conducting research at the County Administration Center. The Chain of Title must be in tabular format, listing the property's conveyance from seller to buyer (with date) since construction through the present day. Please note that deed copies do not satisfy this requirement. (New Issue)
<input type="checkbox"/>	15	Historic photographs - available at San Diego Historical Society Archives and through research. Please note in writing if historical photographs cannot be located. (New Issue)
<input type="checkbox"/>	16	Sanborn Maps for all published years, available at San Diego Public Library or San Diego Historical Society Archives. Please note in writing if the property is not mapped in any published year of the Sanborn Maps. (New Issue)





***FEASIBILITY/DUE-DILIGENCE GEOTECHNICAL  
ASSESSMENT REPORT  
RANCHO PENASQUITOS PROJECT  
SITE AT SOUTHWEST INTERSECTION OF FREEWAY 15  
AND CARMEL MOUNTAIN ROAD  
SAN DIEGO, CALIFORNIA***

***LENNAR HOMES OF CALIFORNIA***

***JULY 15, 2015  
J.N. 15-261***

July 15, 2015  
J.N. 15-261

Mr. David Stearn  
**LENNAR HOMES OF CALIFORNIA**  
25 Enterprise, Suite 300  
Aliso Viejo, CA 92656

**Subject: Feasibility/Due-Diligence Geotechnical Assessment Report, *Rancho Penasquitos Project*, Site at Southwest Intersection of Freeway 15 and Carmel Mountain Road, San Diego, California**

Dear Mr. Stearn:

In accordance with your request, **Petra Geosciences, Inc. (Petra)** has performed a geotechnical feasibility/due-diligence assessment of the subject site for development of the proposed residential dwellings. This report presents our findings and professional opinions with respect to the geotechnical feasibility of the proposed development, geotechnical constraints that should be taken into consideration during development of the site and potential mitigation measures to bring the site to compliance from a geotechnical engineering viewpoint. It should be noted that this geotechnical assessment does not necessarily address soil contamination or other environmental issues affecting the property.

The subject site, Penasquitos Village, is located at 10955 Carmel Mountain Road, adjacent the east side of Carmel Mountain Road approximately 1500 feet south-southwest of the intersection of Interstate 15 and Carmel Mountain Road in Rancho Penasquitos, San Diego County, California. A site location map is included as Figure 1.

## **DUE-DILIGENCE ASSESSMENT**

### **Literature Review**

Petra has reviewed available published and unpublished geologic maps and online aerial imagery in the vicinity of the project site.

### **Site Reconnaissance**

A representative of Petra conducted a site reconnaissance and performed photo documentation on June 9, 2015 to observe the current surface conditions at the subject site. The purpose of the site reconnaissance was to observe and document the current surficial conditions of the site.

### **Subsurface Investigation**

Four Cone Penetrometer Test soundings (CPT-1 and CPT-1A through CPT-3) were advanced to a depth of approximately 8 feet below existing grade (refusal) on June 17, 2015. In addition, a supplemental subsurface exploration program was conducted within the site by representatives of Petra on June 25 and July 3, 2015. The field investigation included the excavation of 9 exploratory borings (B-1 through B-9) to a maximum depth of approximately 15 feet below the existing grades, utilizing a truck mounted hollow-stem auger drill rig. Following our exploration, the exploratory borings were loosely backfilled with the soil cuttings. The approximate locations of the exploratory borings and CPT soundings are shown on Figure 3 and 4.

Relatively undisturbed ring and disturbed bulk samples of representative earth materials were collected from the exploratory borings for classification, laboratory testing and engineering analyses. Undisturbed samples were obtained using a 3-inch outside diameter modified California split-spoon soil sampler lined with brass rings. The soil sampler was driven with successive 30-inch drops of a free-fall, 140-pound automatic trip hammer. The central portions of the driven-core samples were placed in sealed containers and transported to our laboratory for testing. The number of blows required to drive the split-spoon sampler 18 inches into the soil were recorded for each 6-inch driving increment; however, the number of blows required to drive the sampler for the final 12 inches was noted in the boring logs as Blows per Foot.

### **Laboratory Testing**

The laboratory testing program included the determination of in-situ dry density and moisture content, maximum dry density and optimum moisture content, expansion index and general corrosion potential (sulfate, chloride, pH, and resistivity). A description of laboratory test methods and summaries of the laboratory test data are presented in Appendix B and the in-situ dry density and moisture content results are presented on the boring logs (Appendix A).

## **FINDINGS**

### **Proposed Construction**

At this time, no specific development plans have been provided for our review. However, it is assumed structures will utilize typical wood-frame or masonry block construction with either conventional or post-tension slab-on-ground foundation systems. Building loads are assumed to be typical for this type of relatively light residential construction.

### **Site Reconnaissance**

A representative of Petra conducted a site reconnaissance and performed photo documentation on June 9, 2015 to observe the current surface conditions at the subject site. The subject site is an irregular-shaped property comprised of approximately 41.5-acres. The site is bounded by a commercial shopping center on the north, Interstate 15 (I-15) along the east, residential developments on the south and Carmel Mountain Road adjacent along the west. The attached Figure 2 shows the approximate boundaries of the site.

Topographically, site elevations range between approximately 586± above mean sea level (msl) within the southeast portion of the site to approximately 625± feet msl within the west-northwest portion of the site. The site contains single-story garden apartment buildings, which are wood-frame and stucco buildings, trash enclosures, storage sheds, appurtenant streets and sidewalks, utilities and open space (greenbelt) areas.

A light to locally heavy amount of vegetation covered the site which included grass, weeds, brush and mature trees throughout the greenbelt areas. A 16-inch high priority gas line belonging to San Diego Gas and Electric (SDG&E) extends through the southern portion of the site in a northeast-southwest direction. A sewer line easement is located along the eastern portion of the property adjacent the ascending slope to Interstate 15. Scattered debris was observed throughout the site. The debris consists of minor household trash, with minor amount of windblown trash.

### **Groundwater**

Groundwater was not encountered in any of the nine exploratory borings, drilled to a maximum depth of approximately 15 feet below grade. The site is not located within a defined Groundwater Basin, (California Department of Water Resources, [CDWR], 2015). No groundwater wells were listed within the subject site on the CDWR Water Data Library (CDWR, 2015). Groundwater depth varies within the area and though flow direction beneath the subject site is unknown it is believed to be toward the west-southwest.

### **Regional Geologic Setting**

Geologically, the site lies within the Peninsular Ranges Geomorphic Province. The Peninsular Range region is underlain primarily of plutonic rock of the Southern California Batholith. These rocks formed from the cooling of molten magma deep within the earth's crust. Intense heat associated with these plutonic magma metamorphosed the ancient sedimentary rocks into which the plutons intruded. The Peninsular Range Geomorphic Province is generally characterized by alleviated basins, elevated erosion surfaces and northwest trending faults.



### **Local Geology and Subsurface Soil Conditions**

More specifically, the subject site lies within the San Diego Embayment, which is a down-dropped structural block, encompassing the western portion of San Diego County from south of Carlsbad, east to Rancho Bernardo and south into the northern portion of the Republic of Mexico. According to the Geology of The San Diego Metropolitan Area, California, Bulletin 200, Poway Quadrangle (Kennedy and Peterson 1975), the site is underlain by Quaternary-age alluvium and slopewash deposits, which are, in turn, underlain by granitic bedrock. Although not typically shown on regional-scale geologic maps, artificial fill materials also occur locally where previously existing natural grades have been raised as part of urbanization.

### **Faulting**

Based on our review of published geologic maps, no faults are known to project through the property and no portion of the site lies within an Earthquake Fault Hazard Zone as designated by the State of California pursuant to the Alquist-Priolo Earthquake Zoning Act. The closest known active earthquake fault is the Rose Canyon Fault Zone which has been mapped approximately 12 miles to the west-southwest of the site (CDMG, 1986).

### **Strong Ground Motions**

The site is located in a seismically active area of Southern California and will likely be subjected to very strong seismically-related ground shaking during the anticipated life span of the project. Structures within the site should therefore be designed and constructed to resist the effects of strong ground motion in accordance with the 2013 California Building Code (CBC).

### **Investigation Results**

As stated earlier, our field investigation included four Cone Penetrometer Test soundings (CPT-1 and CPT-1A through CPT-3) advanced to a depth of approximately 8 feet below existing grade (refusal). In addition, a supplemental subsurface exploration program was conducted which included the excavation of 9 exploratory borings (B-1 through B-9) to a maximum depth of approximately 15 feet below the existing grades, utilizing a truck mounted hollow-stem auger drill rig. Following our exploration, the exploratory borings were loosely backfilled with the soil cuttings. The following presents the results of our subsurface and laboratory investigations.

### Subsurface Conditions

Several geologic units were encountered during our investigation of the site. The earth materials encountered within our exploratory borings consist of topsoil, undocumented fill, old alluvial deposits and Cretaceous age bedrock of the Southern California Batholith. These units, from younger to older, are described below.

Topsoil: – Topsoil mantles the site within the greenbelt areas. These soils were comprised of fine to medium silty sands that were light to medium brown, slightly moist to moist and loose with organics.

Undocumented Fill: – Undocumented fill was encountered within six of the borings (B-1, B-2, B-4, B-5 B-7 and B-9) underlying the topsoil. These soils were comprised of clayey sands, clay, clayey silt, sandy silt and silty sands that were light to dark brown, light gray, reddish brown, dry to moist and stiff/dense to very dense with some gravel.

Old Alluvial Deposits (Qoal): – Old alluvial deposits were encountered within three of the borings (B-2, B-3 and B-4) underlying the topsoil and/or undocumented fill. These soils were fine- to coarse-grained silty sand, silty clay, sandy clay and clayey sand. These soil deposits were observed to be light brown, orange brown, light gray brown and black, dry to wet and medium dense to very dense and stiff to hard.

Granitic Bedrock: - Cretaceous age granitic bedrock was observed within the bottom of each boring. The granitic rock was light to medium brown, reddish brown, orange brown and dark gray, weathered, locally friable and moderately hard.

### Laboratory Tests

Limited laboratory testing was conducted on various representative of undisturbed and bulk soil samples collected from the exploratory boring locations for engineering properties. Based on the laboratory testing conducted, site soils have a low to medium expansion potential (Expansion Index ranging from 40 to 61) with a low Plasticity Index (PI of 15). Limited testing also found site soils have a negligible corrosion potential to concrete materials (soluble sulfate of 0.0024 to 0.0506 percent); low exposure to chlorides (soluble chloride content of 96 to 141 ppm); and are corrosive to severely corrosive to buried metallic elements (soil pH of 7.5 to 8.0, and minimum resistivity ranging from 850 to 1,600 ohm/cm). Testing for in-situ dry density and moisture content are presented on the boring logs and the remaining results are presented in Appendix B.

### CPT Field Testing and Analysis

Petra has conducted four CPT soundings to a depth of 8 feet (refusal) to evaluate the soil lithology at the site for liquefaction potential. The soundings were performed by Kehoe Testing and Engineering (KTE) using an integrated electronic cone system manufactured by Vertek. The CPT soundings were performed in accordance with ASTM standards (D5778) and were advanced using a 30-ton truck-mounted CPT rig.



The liquefaction potential for the site is considered very low due to the shallow depth to bedrock. The summary results of the cone penetration test data by KTE is provided in Appendix C.

### **CONCLUSIONS AND RECOMMENDATIONS**

Based on our site reconnaissance, supplemental exploratory borings and CPT investigation, supplemental laboratory testing and literature review of the previous consultant's report, development of the subject project site is considered feasible from a geotechnical engineering standpoint. It is recommended that the following geotechnical issues be considered by the Client during this due diligence period.

#### **Primary Geotechnical Issues**

Our professional opinion, from a geotechnical engineering viewpoint, regarding various aspects of site condition and/or proposed development is presented herein. The following presents the salient points of our due diligence assessment that we recommend be considered for future site development.

- **Grading Plan Review Report:** A formal geotechnical review of the rough grading plans should be performed during final grading plan approval. This report should include updated recommendations for site rough grading, post-grading improvements and preliminary building foundation design based on the current 2013 California Building Code.
- **Demolition, Clearing and Grubbing:** The debris from any existing site improvements to be demolished is to be removed from the site. In addition, underground structures such as pipes, utility lines, or other unknown structures may be found below current grades. All organic roots, miscellaneous trash and/or debris would likely need to be removed from the engineered fills by hand during grading, i.e., root pickers and hauled off site.
- **Removal of Unsuitable Soil Materials:** Based on the sample data from the exploratory borings, remedial removals across the site may be on the order of 3 to 5 feet below existing grades for building pad areas with a preliminary estimate average of approximately 3 feet below existing grades. Remedial removals in street, park site and landscape areas may be reduced to approximately 2 feet below grades. The remedial removal bottoms should also be processed in-place to achieve no less than 90 percent relative compaction prior to fill placement. Setbacks for remedial grading should be considered for protecting any existing masonry walls or other improvements to remain in-place surrounding the perimeter of the site. The undocumented fill observed within the borings in the southern portion of the site appear to be suitable to leave in place subject to remedial grading described above. However, further evaluation of the undocumented fills will be necessary during grading operations.
- **Suitability of Onsite Soils for Fill:** All onsite soils consisting of "clean" undocumented fill and native alluvium and bedrock are considered suitable for use in engineering fill provided they are free of organics or other deleterious materials. The near-surface site soils may be in a very dry condition and may need to be pre-watered to bring the site soils to near optimum conditions at the onset of grading. Very moist soils may also be locally encountered and may need to be dried back to near optimum moistures during the grading operation.

- Expansion and Corrosion Potential of Site Soils: Laboratory data indicated a low to medium expansion potential for site soils. The soil corrosivity testing yielded a negligible exposure to sulfate attack and a low exposure to chlorides, but corrosive to severely corrosive to buried ferrous metals. Since site grading remains to be completed, additional sampling and laboratory testing is recommended for expansion and general corrosion potential once rough grading is complete. For the purposes of providing final foundation and other design recommendations, site soils should be considered to have a low to medium expansion potential.
- Importing of Fill: No grading quantities have been provided, however we anticipate that the civil design concept will attempt to balance the site from a grading standpoint. Any rough quantity calculations should include potential shrinkage of site soils when removed and recompacted as engineered fill. In the event that import soils are need to complete site grading, then the potential source should be evaluated prior to importing to the site such that non-expansive, low corrosive soils that are free of deleterious materials will be used.
- Pavement Design: Final pavement design should be provided at the completion of street grading based on final sampling and testing of subgrade soils for R-value. Any clayey native or imported soils used within street subgrade areas could increase the pavement design.
- Infiltration Rate: Field percolation or infiltration testing will need to be performed at or near the bottoms of any proposed water quality basins for design for onsite infiltration. Preliminary field testing may be conduction during the design phase of the project.

### **REPORT LIMITATIONS**

This report is based on the existing conditions of the subject property and the geotechnical observations made during our site reconnaissance, literature review of the previous consultant's report, and our limited field investigations and laboratory testing. It should be noted that the soil conditions observed in our exploratory borings are believed to be representative of the general site conditions; however, soil and groundwater conditions can vary in characteristics between excavations, both laterally and vertically. The conclusions and opinions contained in this report are based on the results of the described geotechnical evaluations and represent our professional judgment. This report has been prepared consistent with that level of care being provided by other professionals providing similar services at the same locale and in the same time period. The contents of this report are professional opinions and as such, are not to be considered a guaranty or warranty.

This report should be reviewed and updated after a period of one year or if the site ownership or project concept changes from that described herein. This report has not been prepared for use by parties or projects other than those named or described herein. This report may not contain sufficient information for other parties or other purposes.

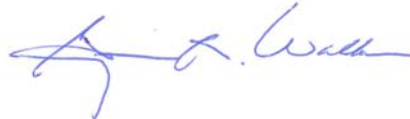
This opportunity to be of service is sincerely appreciated. If you have any additional questions or concerns, please feel free contact this office.

Respectfully submitted,

**PETRA GEOSCIENCES, INC.**



Jonathan Cain  
Associate Geologist



Grayson R. Walker, GE  
Principal Engineer  
GE 871



JC/GRW/nbc

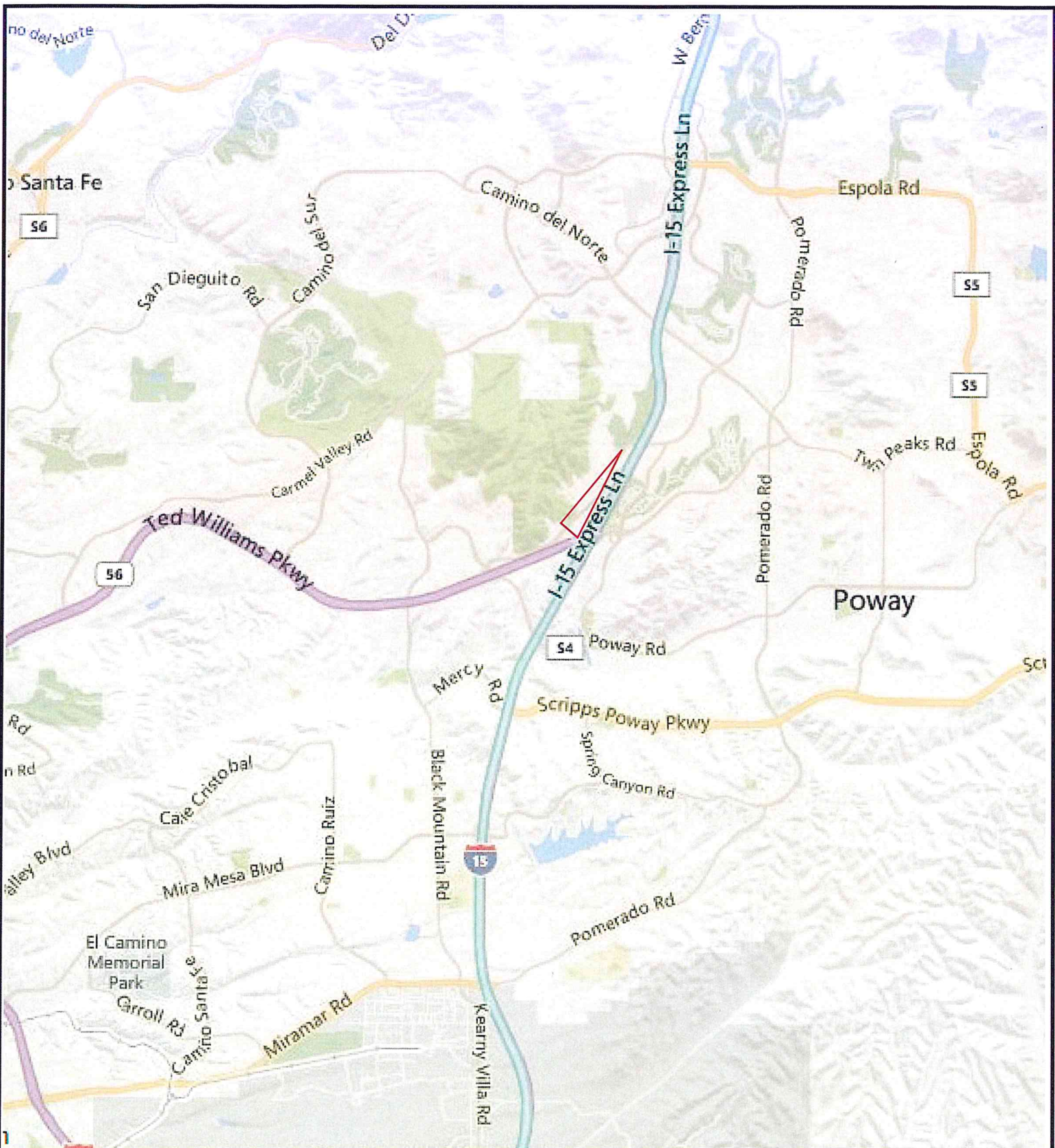
Attachments:   References  
                    Figure 1 – Site Location Map  
                    Figure 2 – Exploration Location Map  
                    Figures 3 & 4 – Exploration Location Map  
                    Appendix A – Boring Logs  
                    Appendix B – Laboratory Testing Criteria  
                    Appendix C – CPT Data

## FIGURES

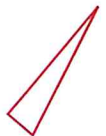
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#### LEGEND



- Approximate Site Location



#### PETRA GEOSCIENCES, INC.

40880 COUNTY CENTER DRIVE, SUITE R  
TEMECULA, CALIFORNIA 92591  
PHONE: (951) 600-9271

COSTA MESA

MURRIETA

PALM DESERT

SANTA CLARITA

#### Site Location Map

CARMEL MOUNTAIN RANCH  
RIVERSIDE COUNTY, CALIFORNIA

DATE: July 2015

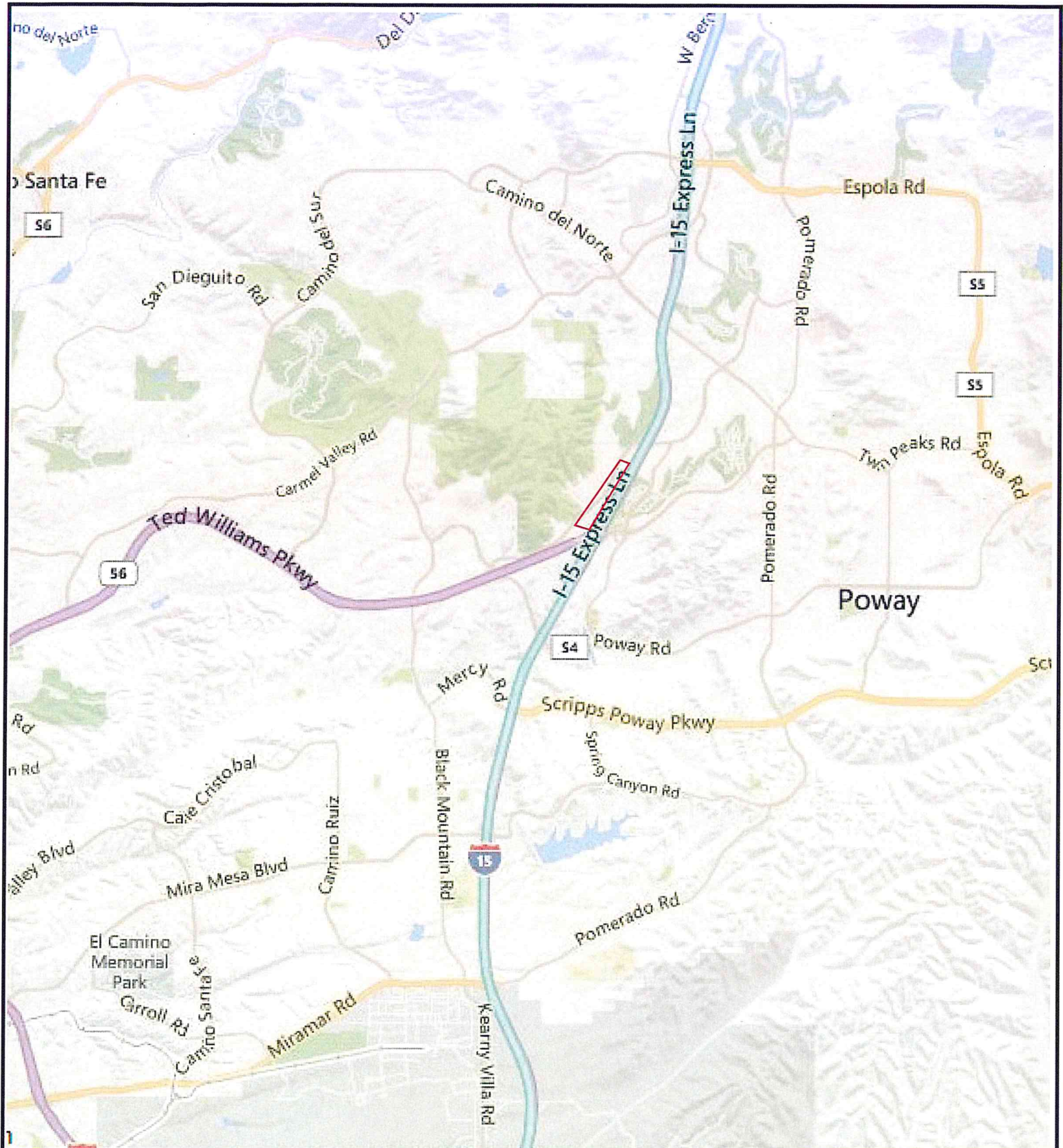
J.N.: 15-261

DWG BY: OLH

SCALE: NTS

**Figure 1**





**LEGEND**



- Approximate Site Location



**PETRA GEOSCIENCES, INC.**

40880 COUNTY CENTER DRIVE, SUITE R  
TEMECULA, CALIFORNIA 92591  
PHONE: (951) 600-9271

COSTA MESA

MURRIETA

PALM DESERT

SANTA CLARITA

**Site Location Map**

CARMEL MOUNTAIN RANCH  
RIVERSIDE COUNTY, CALIFORNIA

DATE: July 2015

J.N.: 15-261

DWG BY: OLH

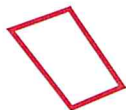
SCALE: NTS

**Figure 1**





#### LEGEND



- Approximate Site Location



**PETRA GEOSCIENCES, INC.**

40880 COUNTY CENTER DRIVE, SUITE R  
TEMECULA, CALIFORNIA 92591  
PHONE: (951) 600-9271

COSTA MESA

MURRIETA

PALM DESERT

SANTA CLARITA

#### Site Boundary Map

CARMEL MOUNTAIN RANCH  
SAN DIEGO COUNTY, CALIFORNIA

DATE: July 2015

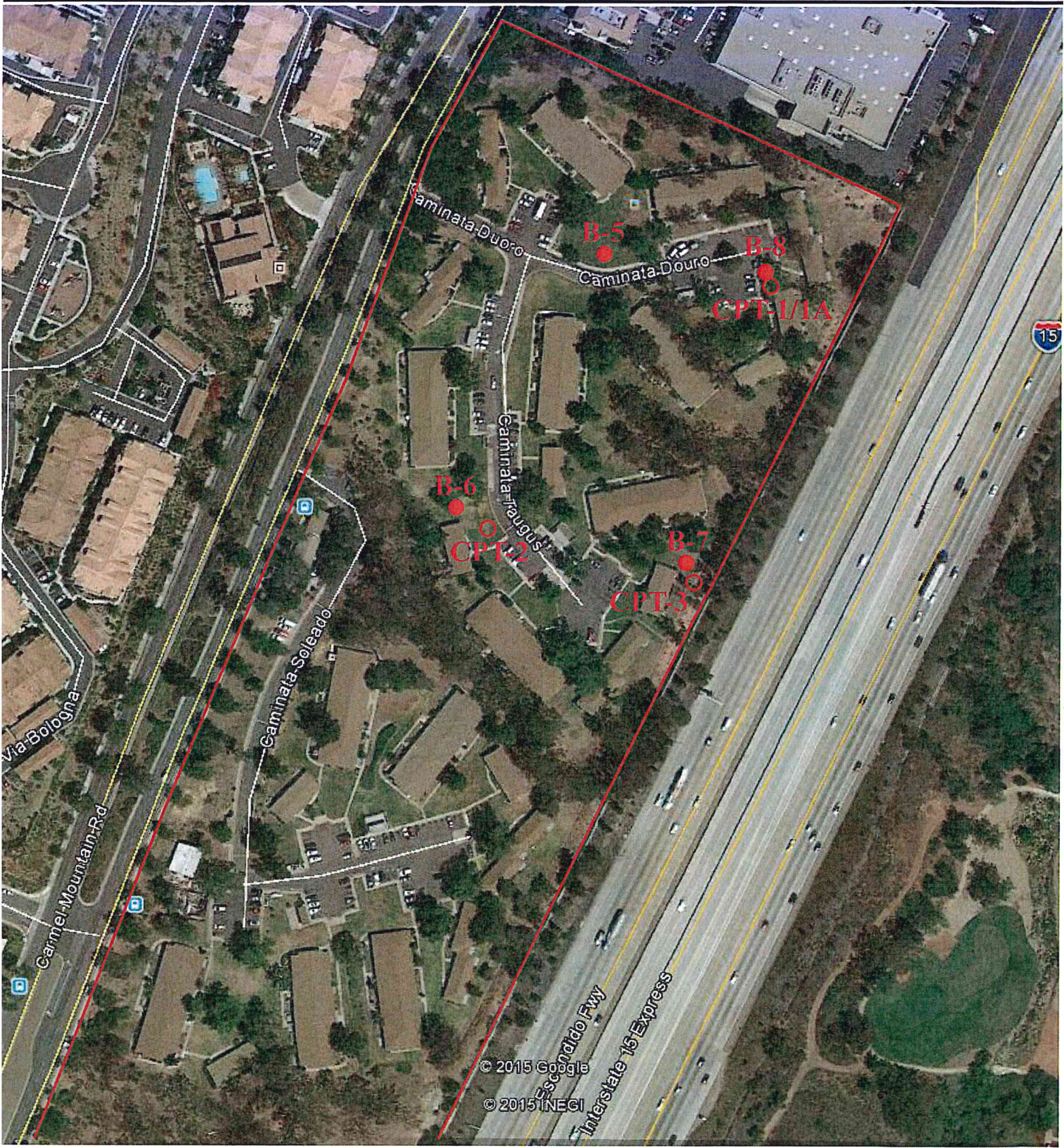
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DWG BY: OLH

SCALE: NTS

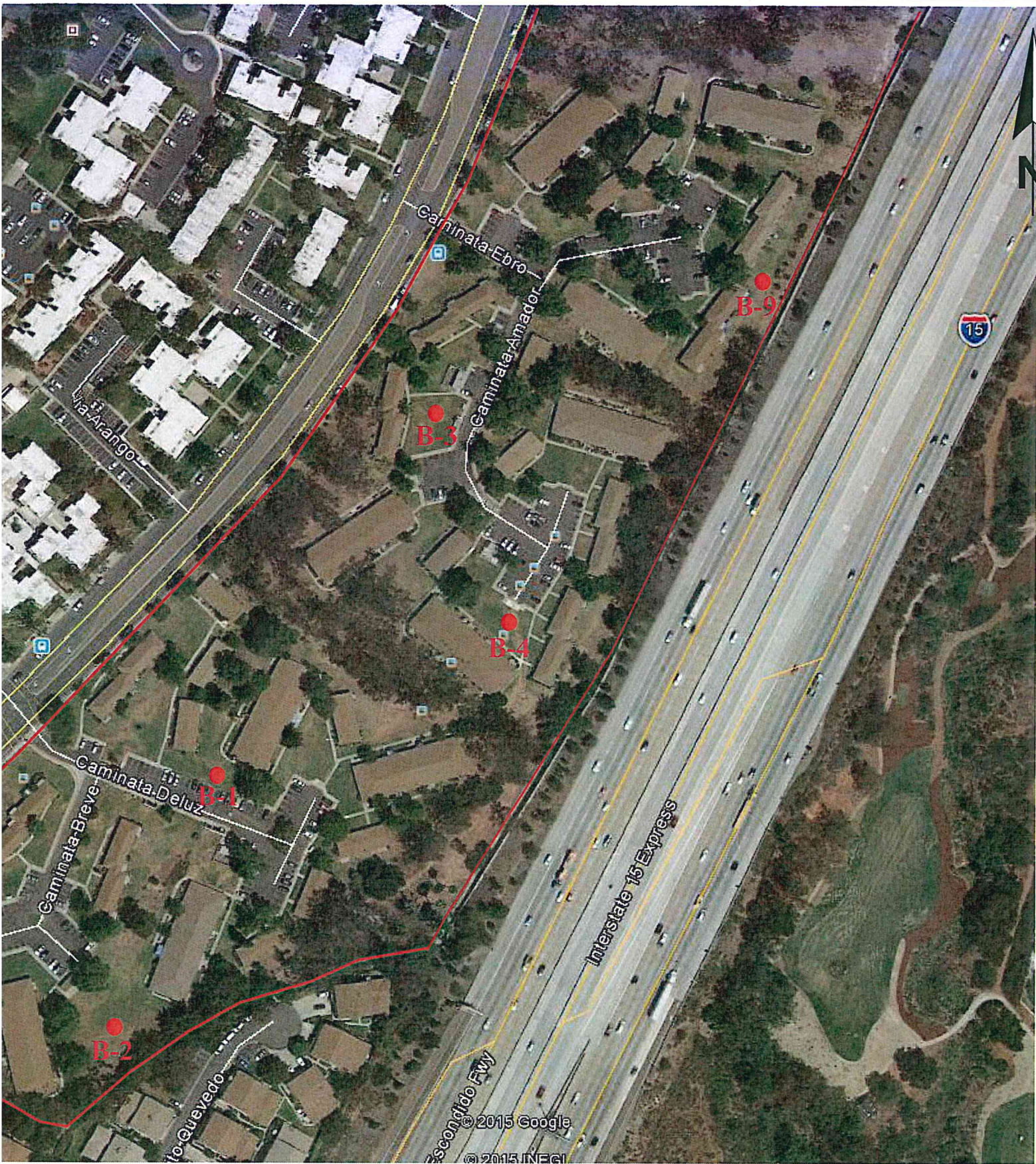
**Figure 2**





ty  
oratory Boring  
Boring







# APPENDIX A

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## BORING LOGS

# EXPLORATION LOG

Project: <b>Rancho Penasquitos</b>				Boring No.: <b>B-1</b>					
Location: <b>Carmel Mountain Road</b>				Elevation: <b>595(±)</b>					
Job No.: <b>15-261</b>		Client: <b>Lennar Homes</b>		Date: <b>6/25/15</b>					
Drill Method: <b>Hollow-Stem Auger</b>		Driving Weight: <b>140 lbs / 30 in</b>		Logged By: <b>EL</b>					
Depth (Feet)	Lith- ology	Material Description	W a t e r	Samples			Laboratory Tests		
				Blows Per Foot	C o r e	B u l k	Moisture Content (%)	Dry Density (pcf)	Other Lab Tests
		<b>TOPSOIL</b> Clayey SAND (SC): medium brown to reddish brown, slightly moist, dense; with gravel, grass on surface, roots.							
		<b>UNDOCUMENTED FILL (Uaf)</b> Clayey SAND (SC): medium brown to reddish brown, slightly moist, dense; with gravel.		44			9.2	108.5	
		Clayey SILT (ML): dark brown to black, moist, stiff; with gravel.		24			13.5	112.7	
5		CLAY (CL): orange to reddish brown, moist, stiff; with gravel.		24			16.0	91.9	
		Clayey SAND/SAND (SC/SP): medium brown, moist, dense; minor relict granitic fragments.		44			11.0	114.4	
10		<b>BEDROCK - Granitics (Kgr)</b> Granitic Bedrock (Kgr): reddish brown, moderatelly hard; weathered.							
		Total Depth 14 Feet Practical Refusal No Groundwater Hole Backfilled with Bentonite and Soil.							

PLATE A-1

Petra Geotechnical, Inc.

EXPLORATION LOG - V2 15-261.GPJ PETRA.GDT 7/15/15

# EXPLORATION LOG

Project: <b>Rancho Penasquitos</b>				Boring No.: <b>B-2</b>					
Location: <b>Carmel Mountain Road</b>				Elevation: <b>598(±)</b>					
Job No.: <b>15-261</b>		Client: <b>Lennar Homes</b>		Date: <b>6/25/15</b>					
Drill Method: <b>4" Solid Stem</b>		Driving Weight: <b>140 lbs / 30 in</b>		Logged By: <b>EL</b>					
Depth (Feet)	Lith- ology	Material Description	W a t e r	Samples			Laboratory Tests		
				Blows Per Foot	C o r e	B u l k	Moisture Content (%)	Dry Density (pcf)	Other Lab Tests
5		<b>TOPSOIL</b> Silty SAND(SM): light brown, dry, dense; occasional small gravel, grass on surface, roots.							
		<b>UNDOCUMENTED FILL (Uaf)</b> Silty SAND(SM): light brown, dry, dense; occasional small gravel.							
		Clayey SAND (SC): light brown, dry, dense; gravel.	42			8.4			
		<b>OLDER ALLUVIUM (Qoal)</b> Silty SAND (SM): light brown, dry, very dense; with minor clay, fine to coarse grain, no obvious porosity.	50-5"			9.1	119.2		
			30			7.7	109.7		
		50-1"							
		50-5"			6.8	106.1			
		<b>BEDROCK - Granitics (Kgr)</b> Granitic Bedrock (Kgr): reddish brown, moderately hard; weathered.							
		Total Depth 9.5 Feet Practiac Refusal No Groundwater Hole Backfilled with Bentonite and Soil.							

EXPLORATION LOG - V2 15-261.GPJ PETRA.GDT 7/14/15

PLATE A-2

Petra Geotechnical, Inc.

# EXPLORATION LOG

Project: <b>Rancho Penasquitos</b>			Boring No.: <b>B-3</b>						
Location: <b>Carmel Mountain Road</b>			Elevation: <b>600(±)</b>						
Job No.: <b>15-261</b>		Client: <b>Lennar Homes</b>	Date: <b>6/25/15</b>						
Drill Method: <b>Hollow-Stem Auger</b>		Driving Weight: <b>140 lbs / 30 in</b>	Logged By: <b>EL</b>						
Depth (Feet)	Lith- ology	Material Description	W a t e r	Samples		Laboratory Tests			
				Blows Per Foot	C o r e	B u l k	Moisture Content (%)	Dry Density (pcf)	Other Lab Tests
		<b>TOPSOIL</b> Silty SAND(SM): light brown, dry, dense; occasional small gravel, grass on surface, roots.							
		<b>OLDER ALLUVIUM (Qoal)</b> Silty CLAY (CL): mottled, light grey brown and orange brown, dry, hard; brittle.		50-3"			12.2	110.7	MAX, EI, COR
5		Sandy CLAY (CL): orange brown-light gray to brown, slightly moist, hard; occasionally smal gravel, no visible porosity.		50-5"			16.3	114.3	
				83			8.5	119.6	
				23					
				50-5"			12.0	117.6	
10		Increase gravel content at 9'.							
15		<b>BEDROCK - Granitics (Kgr)</b> Granitic Bedrock (Kgr): reddish brown, moderatelly hard; weathered.					6.6	102.0	
		Total Depth 15 Feet Practical Refusal No Groundwater Hole Backfilled with Bentonite and Soil.							

MAX,  
EI,  
COR

EXPLORATION LOG - V2 15-261.GPJ PETRA.GDT 7/14/15

PLATE A-3

Petra Geotechnical, Inc.



# EXPLORATION LOG


Project: <b>Rancho Penasquitos</b>				Boring No.: <b>B-4</b>					
Location: <b>Carmel Mountain Road</b>				Elevation: <b>587(±)</b>					
Job No.: <b>15-261</b>		Client: <b>Lennar Homes</b>		Date: <b>6/25/15</b>					
Drill Method: <b>4" Solid Stem</b>		Driving Weight: <b>140 lbs / 30 in</b>		Logged By: <b>EL</b>					
Depth (Feet)	Lith- ology	Material Description	W a t e r	Samples			Laboratory Tests		
				Blows Per Foot	C o r e	B u l k	Moisture Content (%)	Dry Density (pcf)	Other Lab Tests
		<b>TOPSOIL</b> Clayey SAND/Silty SAND (SC/SM): light brown and orange brown, slightly moist, medium dense; with small gravel, grass on surface, roots.							
		<b>UNDOCUMENTED FILL (Uaf)</b> Clayey SAND/Silty SAND (SC/SM): light brown and orange brown, slightly moist, dense; with small gravel.		46			7.9	114.7	
		<b>OLDER ALLUVIUM (Qoal)</b> Silty CLAY (CL): brown and black, wet, stiff; pliable, local sand layer.		18			22.7	100.8	
5		Minor seepage at 5 feet.							
		Clayey SILT/Silty SAND (ML/SM): medium brown, orange and light gray, moist, hard; occasionally small gravel, oxidized.		55			15.1	113.8	
				52			15.1	113.6	
10		Silty SAND (SM): brown with orange mottling, moist, very dense; fine to coarse-grain with gravel.		57			11.7	119.9	
		<b>BEDROCK - Granitics (Kgr)</b> Granitic Bedrock (Kgr): reddish brown, moderatelly hard; weathered.							
		Total Depth 12.5 Feet Practical Refusal Water Seepage 5 feet Hole Backfilled with Bentonite and Soil.							

EXPLORATION LOG - V2 15-261.GPJ PETRA.GDT 7/14/15

PLATE A-4

Petra Geotechnical, Inc.

# EXPLORATION LOG

Project: <b>Rancho Penasquitos</b>			Boring No.: <b>B-5</b>						
Location: <b>Carmel Mountain Road</b>			Elevation: <b>610(±)</b>						
Job No.: <b>15-261</b>		Client: <b>Lennar Homes</b>	Date: <b>6/26/15</b>						
Drill Method: <b>4" Solid Stem</b>		Driving Weight: <b>140 lbs / 30 in</b>	Logged By: <b>EL</b>						
Depth (Feet)	Lith- ology	Material Description	W a t e r	Samples			Laboratory Tests		
				Blows Per Foot	C o r e	B u l k	Moisture Content (%)	Dry Density (pcf)	Other Lab Tests
5		<b>TOPSOIL</b> Sandy GRAVEL (GS): light brown and light gray, loose, dry; grass on surface, roots.							
		<b>UNDOCUMENTED FILL (Uaf)</b> Sandy GRAVEL (GS): light brown and light gray, loose, dry;.	37			11.9	122.1		
		<b>BEDROCK - Granitics (Kgr)</b> Granitic Bedrock (Kgr): reddish brown, slightly moist, moderately hard; highly weathered, small mica or gypsum crystals. Orange brown, slightly moist, hard; mafic.	13 50-5"			8.8	122.4		
			44 50-3"			6.0	129.3		
		Total Depth 6.5 Feet No Ground water Hole Backfilled with Bentonite and Soil.							

EXPLORATION LOG - V2 15-261.GPJ PETRA.GDT 7/14/15

PLATE A-5

Petra Geotechnical, Inc.

# EXPLORATION LOG

Project: <b>Rancho Penasquitos</b>				Boring No.: <b>B-6</b>					
Location: <b>Carmel Mountain Road</b>				Elevation: <b>604(±)</b>					
Job No.: <b>15-261</b>		Client: <b>Lennar Homes</b>		Date: <b>7/2/15</b>					
Drill Method: <b>Hollow-Stem Auger</b>		Driving Weight: <b>140 lbs / 30 in</b>		Logged By: <b>EL</b>					
Depth (Feet)	Lith- ology	Material Description	W a t e r	Samples			Laboratory Tests		
				Blows Per Foot	C o r e	B u l k	Moisture Content (%)	Dry Density (pcf)	Other Lab Tests
5		<b>TOPSOIL</b> Clayey SAND/Silty SAND (SC/SM): light brown and orange brown, slightly moist, medium dense; with small gravel,grass on surface, roots.		48			10.6	108.4	MAX, EI, COR
		<b>BEDROCK - Granitics (Kgr)</b> Granitic Bedrock (Kgr): orange brown, slightly moist, moderatelly hard; highly weathered, decomposed. Orange brown, gray and black, slightly moist, hard.		50			12.4	110.5	
		Gray brown.		27' 50-5			9.0	116.9	
		Total Depth 6 Feet No Groundwater Hole Backfilled with Bentonite and Soil.							



# EXPLORATION LOG



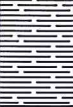





Project: <b>Rancho Penasquitos</b>				Boring No.: <b>B-7</b>					
Location: <b>Carmel Mountain Road</b>				Elevation: <b>595(±)</b>					
Job No.: <b>15-261</b>		Client: <b>Lennar Homes</b>		Date: <b>7/2/15</b>					
Drill Method: <b>Hollow-Stem Auger</b>		Driving Weight: <b>140 lbs / 30 in</b>		Logged By: <b>EL</b>					
Depth (Feet)	Lith- ology	Material Description	W a t e r	Samples			Laboratory Tests		
				Blows Per Foot	C o r e	B u l k	Moisture Content (%)	Dry Density (pcf)	Other Lab Tests
		<u><b>TOPSOIL</b></u> Silty SAND (SM): brown , slightly moist, dense; grass on surface, roots.		50-5"			6.2	125.4	
		<u><b>UNDOCUMENTED FILL (Uaf)</b></u> Silty SAND (SM): brown , slightly moist, dense.							
		<u><b>BEDROCK - Granitics (Kgr)</b></u> Granitic Bedrock (Kgr): orange brown, slightly moist, moderately hard; highly weathered, friable.		0.5					
		Total Depth 3.5 Feet Practical Refusal No Groundwater Hole Backfilled with Bentonite and Soil.							

PLATE A-7

Petra Geotechnical, Inc.

EXPLORATION LOG - V2 15-261.GPJ PETRA.GDT 7/14/15

# EXPLORATION LOG

Project: <b>Rancho Penasquitos</b>				Boring No.: <b>B-8</b>					
Location: <b>Carmel Mountain Road</b>				Elevation: <b>606(±)</b>					
Job No.: <b>15-261</b>		Client: <b>Lennar Homes</b>		Date: <b>7/2/15</b>					
Drill Method: <b>Hollow-Stem Auger</b>		Driving Weight: <b>140 lbs / 30 in</b>		Logged By: <b>EL</b>					
Depth (Feet)	Lith- ology	Material Description	W a t e r	Samples			Laboratory Tests		
				Blows Per Foot	C o r e	B u l k	Moisture Content (%)	Dry Density (pcf)	Other Lab Tests
		<b>TOPSOIL</b>							
		Silty SAND (SM): brown , slightly moist, dense; grass on surface, roots.							
		<b>BEDROCK - Granitics (Kgr)</b>							
		Granitic Bedrock (Kgr): medium to light brown, slightly moist, moderately hard; highly weathered, friable.		39			6.4	116.3	
		Total Depth 3 Feet		50-3"					
		Practical Refusal							
		No Groundwater							
		Hole Backfilled with Bentonite and Soil.							

EXPLORATION LOG - V2 15-261.GPJ PETRA.GDT 7/14/15

PLATE A-8

**Petra Geotechnical, Inc.**

# EXPLORATION LOG

Project: <b>Rancho Penasquitos</b>			Boring No.: <b>B-9</b>						
Location: <b>Carmel Mountain Road</b>			Elevation: <b>599(±)</b>						
Job No.: <b>15-261</b>		Client: <b>Lennar Homes</b>	Date: <b>7/2/15</b>						
Drill Method: <b>Hollow-Stem Auger</b>		Driving Weight: <b>140 lbs / 30 in</b>	Logged By: <b>EL</b>						
Depth (Feet)	Lith- ology	Material Description	W a t e r	Samples		Laboratory Tests			
				Blows Per Foot	C o r e	B u l k	Moisture Content (%)	Dry Density (pcf)	Other Lab Tests
		<b>TOPSOIL</b> Clayey SAND (SC): medium brown to reddish brown, slightly moist, loose; with gravel, grass on surface, roots.		47			3.9	113.3	MAX. EI, COR
		<b>UNDOCUMENTED FILL (Uaf)</b> Clayey SAND (SC): brown, slightly moist, medium dense.		30			4.8	114.7	
5		Sandy SILT/Silty SAND (ML/SM): brown, slightly moist, very stiff; ocassional small gravel, fine mica or gypsum.		45			9.0	108.9	
		<b>BEDROCK - Granitics (Kgr)</b> Granitic Bedrock (Kgr): brown, dark gray and black, dry to slightly moist, moderatelly hard; highly weathered, friable.		22 50-3"			4.8	123.6	
10				50-5"			3.7	111.7	
Total Depth 10.5 Feet Practical Refusal No Groundwater Hole Backfilled with Bentonite and Soil.									

EXPLORATION LOG - V2 15-261.GPJ PETRA.GDT 7/14/15

PLATE A-9

Petra Geotechnical, Inc.

## APPENDIX B

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### LABORATORY TESTING CRITERIA



## APPENDIX B

### Laboratory Test Criteria

#### Soil Classification

Soils encountered within the exploratory borings were initially classified in the field in general accordance with the visual-manual procedures of the Unified Soil Classification System (ASTM D2488). The samples were re-examined in the laboratory and the classifications reviewed and then revised where appropriate. The assigned group symbols are presented in the Boring Logs (Appendix A).

#### In-Situ Moisture and Density

Moisture content and unit dry density of in-place soils were determined in representative strata. Test data are summarized in the Boring Logs (Appendix A).

#### Maximum Dry Density and Optimum Moisture Content

The maximum dry density and optimum moisture content of the on-site soils were determined for selected bulk samples in accordance with current version of ASTM D 1557. The results of these tests are presented in the following table.

#### Expansion Index

The expansion index of onsite soils was determined per ASTM D4829. The expansion index and expansion potential are presented in the following table.

#### Grain Size Distribution

Grain size analysis was performed on bulk samples of onsite soils in accordance with the current versions of Test Method ASTM D 136 and/or Test Method ASTM D 422. The test result is graphically presented on Plates B-1 thru B-3.

#### Atterberg Limits

Atterberg Limit tests (Liquid Limit and Plastic Limit) were performed on selected samples to verify visual classifications. These tests were performed in accordance with ASTM D4318. Test results are presented in the following table.

#### Soil Corrosivity

Chemical analyses were performed on a selected sample to determine concentrations of soluble sulfate and chloride, as well as pH and resistivity. These tests were performed in accordance with California Test Method Nos. 417 (sulfate), 422 (chloride) and 643 (pH and resistivity). Test results are presented in the following table.

### MAXIMUM DRY DENSITY

Boring/Depth (feet)	Soil Type	Optimum Moisture <sup>1</sup> (%)	Maximum Dry Density <sup>1</sup> (pcf)
B-3 @ 5-15	Sandy Clay (CL)	11.5	126.5
B-6 @ 0-5	Sandy Clay (CL)	10.5	128.5
B-9 @ 0-5	Clayey SAND (SC)	8.5	136.5

### EXPANSION INDEX

Boring/Depth (feet)	Soil Type	Expansion <sup>2</sup> Index	Expansion <sup>3</sup> Potential
B-3 @ 5-15	Sandy Clay (CL)	42	Low
B-6 @ 0-5	Sandy Clay (CL)	61	Medium
B-9 @ 0-5	Clayey SAND (SC)	40	Low

### ATTERBERG LIMITS

Boring/Depth (feet)	Soil Type	Liquid <sup>4</sup> Limit	Plastic <sup>4</sup> Limit	Plasticity Index <sup>4</sup>
B-6 @ 0-5	Sandy Clay (CL)	34	19	15

### CORROSIVITY

Boring/Depth (feet)	Sulfate <sup>5</sup> (%)	Chloride <sup>6</sup> (ppm)	pH <sup>7</sup>	Resistivity <sup>7</sup> (ohm-cm)	Corrosivity Potential
B-3 @ 5-15	0.0156	126	7.5	1,000	concrete: not applicable steel: severely corrosive
B-6 @ 0-5	0.0506	141	8.0	850	concrete: not applicable steel: severely corrosive
B-9 @ 0-5	0.0024	96	7.8	1,600	concrete: not applicable steel: corrosive

(1) PER ASTM D1557

(2) PER ASTM D4829

(3) PER 2010 CBC SECTION 1802.3.2

(4) PER ASTM D4318

(5) PER CALIFORNIA TEST METHOD NO. 417

(6) PER CALIFORNIA TEST METHOD NO. 422

(7) PER CALIFORNIA TEST METHOD NO. 643

## APPENDIX C

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CPT DATA

# **SUMMARY OF CONE PENETRATION TEST DATA**

Project:

**Caminata Taugus  
San Diego, CA  
June 17, 2015**

Prepared for:

**Mr. Jon Cain  
Petra Geotechnical, Inc.  
40880 County Center Drive, Ste R  
Temecula, CA 92591  
Office (951) 600-9271 / Fax (951) 600-9215**

Prepared by:



**KEHOE TESTING & ENGINEERING**

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Huntington Beach, CA 92649-1518  
Office (714) 901-7270 / Fax (714) 901-7289  
[www.kehoetesting.com](http://www.kehoetesting.com)



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- 1. INTRODUCTION**
- 2. SUMMARY OF FIELD WORK**
- 3. FIELD EQUIPMENT & PROCEDURES**
- 4. CONE PENETRATION TEST DATA & INTERPRETATION**

### **APPENDIX**

- CPT Plots
- CPT Classification/Soil Behavior Chart
- Interpretation Output (CPeT-IT)
- CPeT-IT Calculation Formulas

# SUMMARY OF CONE PENETRATION TEST DATA

## 1. INTRODUCTION

This report presents the results of a Cone Penetration Test (CPT) program carried out for the project located at Caminata Taugus in San Diego, California. The work was performed by Kehoe Testing & Engineering (KTE) on June 17, 2015. The scope of work was performed as directed by Petra Geotechnical, Inc. personnel.

## 2. SUMMARY OF FIELD WORK

The fieldwork consisted of performing CPT soundings at four locations to determine the soil lithology. Groundwater measurements and hole collapse depths provided in **TABLE 2.1** are for information only. The readings indicate the apparent depth to which the hole is open and the apparent water level (if encountered) in the CPT probe hole at the time of measurement upon completion of the CPT. KTE does not warranty the accuracy of the measurements and the reported water levels may not represent the true or stabilized groundwater levels.

LOCATION	DEPTH OF CPT (ft)	COMMENTS/NOTES:
CPT-1	5	Refusal, hole open to 4 ft (dry)
CPT-1A	7	Refusal, hole open to 7 ft (dry)
CPT-2	5	Refusal, hole open to 4 ft (dry)
CPT-3	8	Refusal, hole open to 7 ft (dry)

**TABLE 2.1 - Summary of CPT Soundings**

## 3. FIELD EQUIPMENT & PROCEDURES

The CPT soundings were carried out by **KTE** using an integrated electronic cone system manufactured by Vertek. The CPT soundings were performed in accordance with ASTM standards (D5778). The cone penetrometers were pushed using a 30-ton CPT rig. The cone used during the program was a 10 cm<sup>2</sup> cone and recorded the following parameters at approximately 2.5 cm depth intervals:

- Cone Resistance (qc)
- Sleeve Friction (fs)
- Dynamic Pore Pressure (u)
- Inclination
- Penetration Speed

The above parameters were recorded and viewed in real time using a laptop computer. Data is stored at the KTE office for future analysis and reference. A complete set of baseline readings was taken prior to each sounding to determine temperature shifts and any zero load

offsets. Monitoring base line readings ensures that the cone electronics are operating properly.

#### **4. CONE PENETRATION TEST DATA & INTERPRETATION**

The Cone Penetration Test data is presented in graphical form in the attached Appendix. These plots were generated using the CPeT-IT program. Penetration depths are referenced to ground surface. The soil classification on the CPT plots is derived from the attached CPT Classification Chart (Robertson) and presents major soil lithologic changes. The stratigraphic interpretation is based on relationships between cone resistance ( $q_c$ ), sleeve friction ( $f_s$ ), and penetration pore pressure ( $u$ ). The friction ratio ( $R_f$ ), which is sleeve friction divided by cone resistance, is a calculated parameter that is used along with cone resistance to infer soil behavior type. Generally, cohesive soils (clays) have high friction ratios, low cone resistance and generate excess pore water pressures. Cohesionless soils (sands) have lower friction ratios, high cone bearing and generate little (or negative) excess pore water pressures.

Tables of basic CPT output from the interpretation program CPeT-IT are provided for CPT data averaged over one foot intervals in the Appendix. Spreadsheet files of the averaged basic CPT output and averaged estimated geotechnical parameters are also included for use in further geotechnical analysis. We recommend a geotechnical engineer review the assumed input parameters and the calculated output from the CPeT-IT program. A summary of the equations used for the tabulated parameters is provided in the Appendix.

It should be noted that it is not always possible to clearly identify a soil type based on  $q_c$ ,  $f_s$  and  $u$ . In these situations, experience, judgement and an assessment of the pore pressure data should be used to infer the soil behavior type.

If you have any questions regarding this information, please do not hesitate to call our office at (714) 901-7270.

Sincerely,

**KEHOE TESTING & ENGINEERING**



Richard W. Koester, Jr.  
General Manager

## **APPENDIX**

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**Caminata Taugus  
San Diego, CA  
June 17, 2015**

Prepared for:

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Sincerely,

**KEHOE TESTING & ENGINEERING**



Richard W. Koester, Jr.  
General Manager



## **APPENDIX**

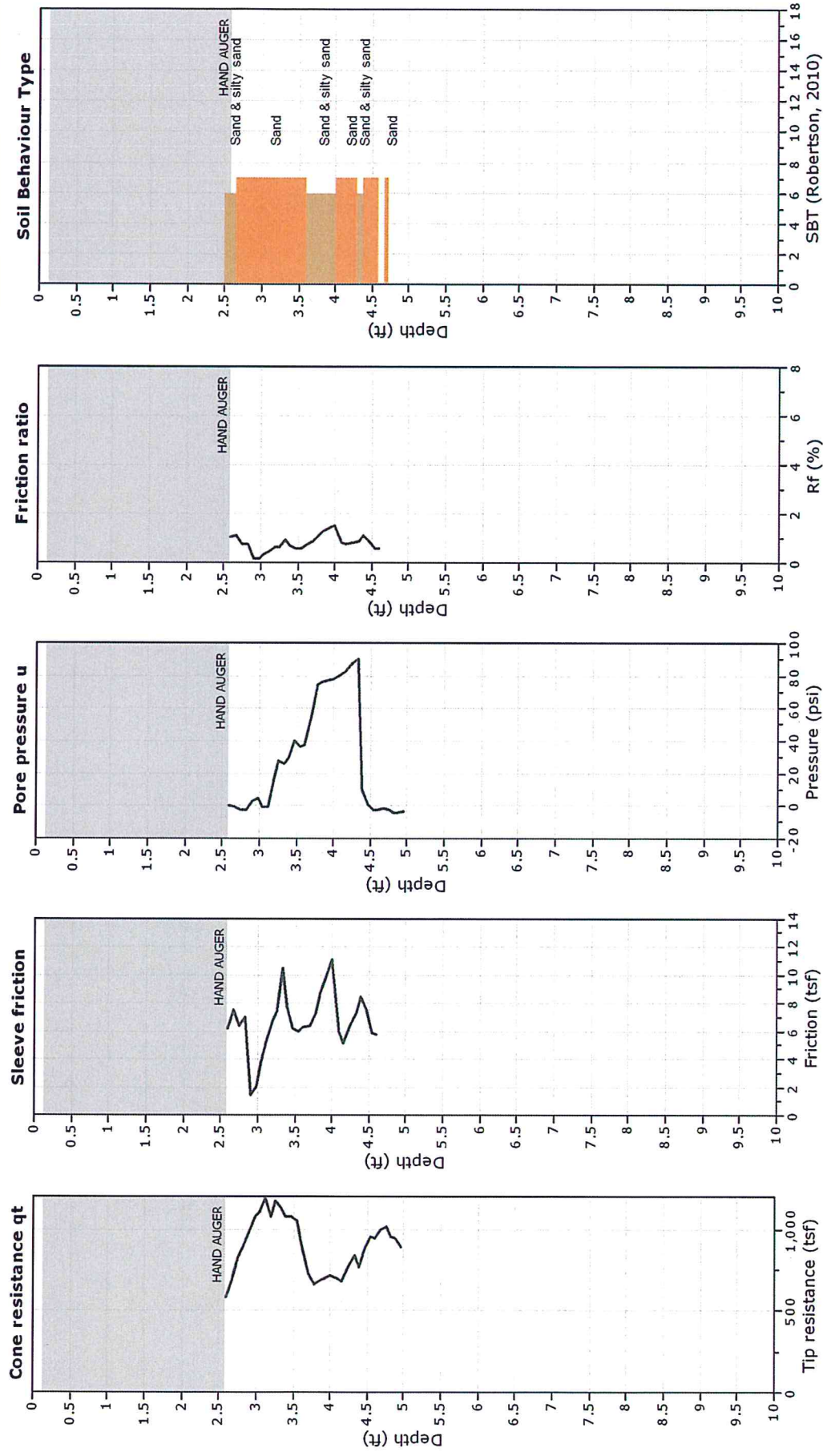


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www.kehoetesting.com

**Project:** Petra Geotechnical, Inc.  
**Location:** Caminata Taugus San Diego, CA

**CPT: CPT-1**

Total depth: 4.95 ft, Date: 6/17/2015  
Cone Type: Vertek



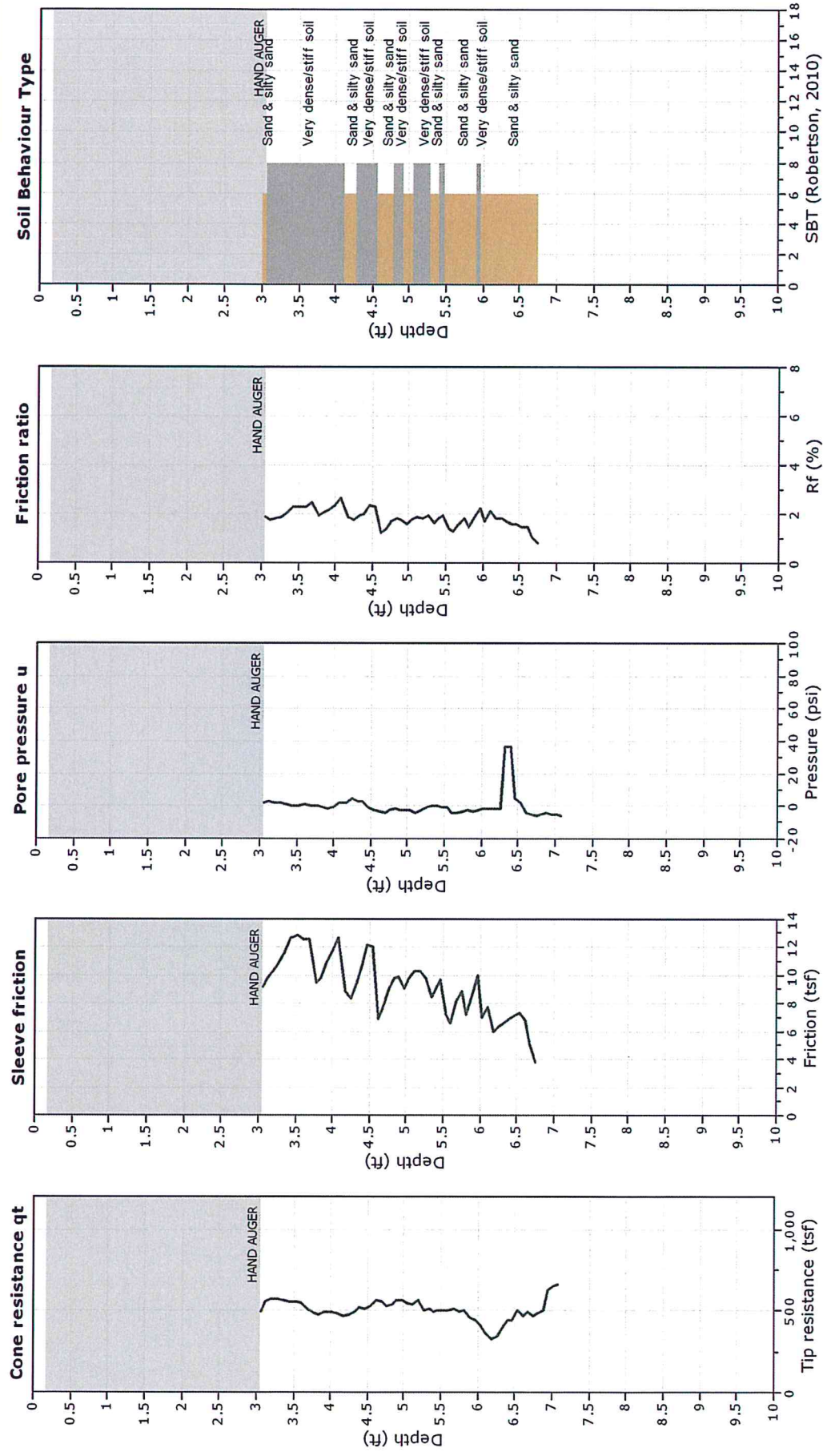


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**Project:** Petra Geotechnical, Inc.  
**Location:** Caminata Taugus San Diego, CA

**CPT: CPT-1A**

Total depth: 7.08 ft, Date: 6/17/2015  
Cone Type: Vertek





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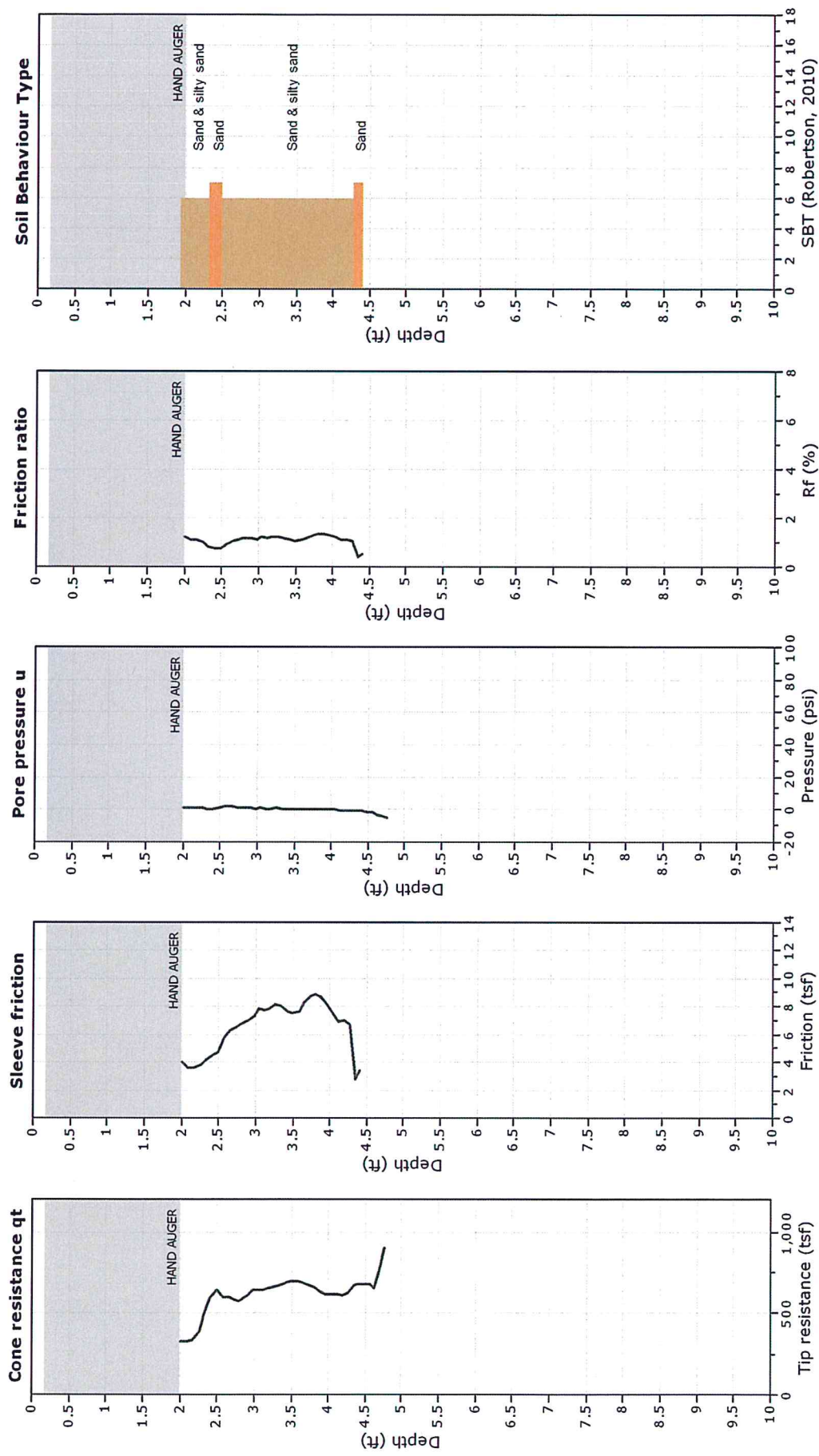
Project: Petra Geotechnical, Inc.

Location: Caminata Taugus San Diego, CA

CPT: CPT-2

Total depth: 4.76 ft, Date: 6/17/2015

Cone Type: Vertek





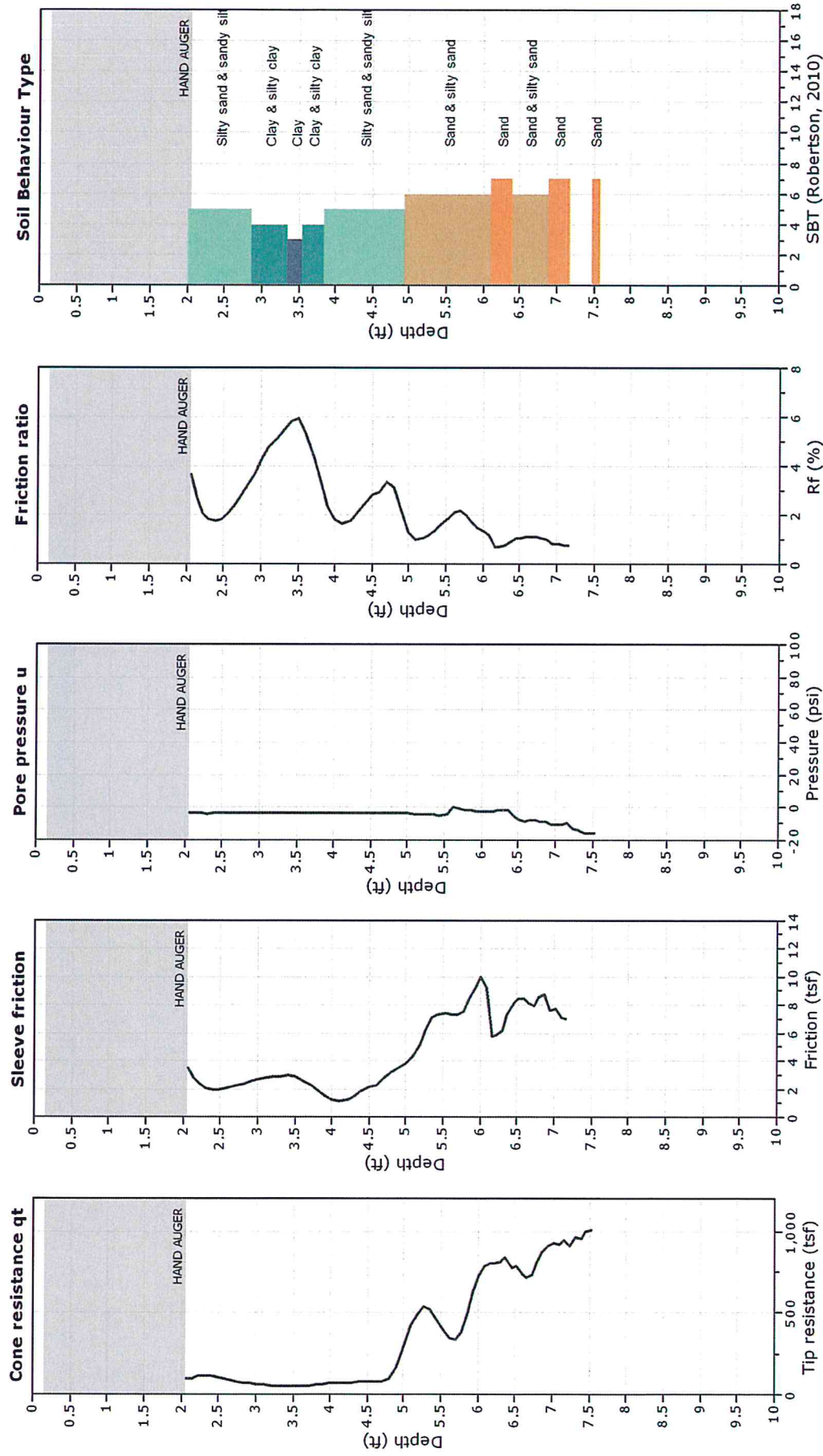


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**Project:** Petra Geotechnical, Inc.  
**Location:** Caminata Taugus San Diego, CA

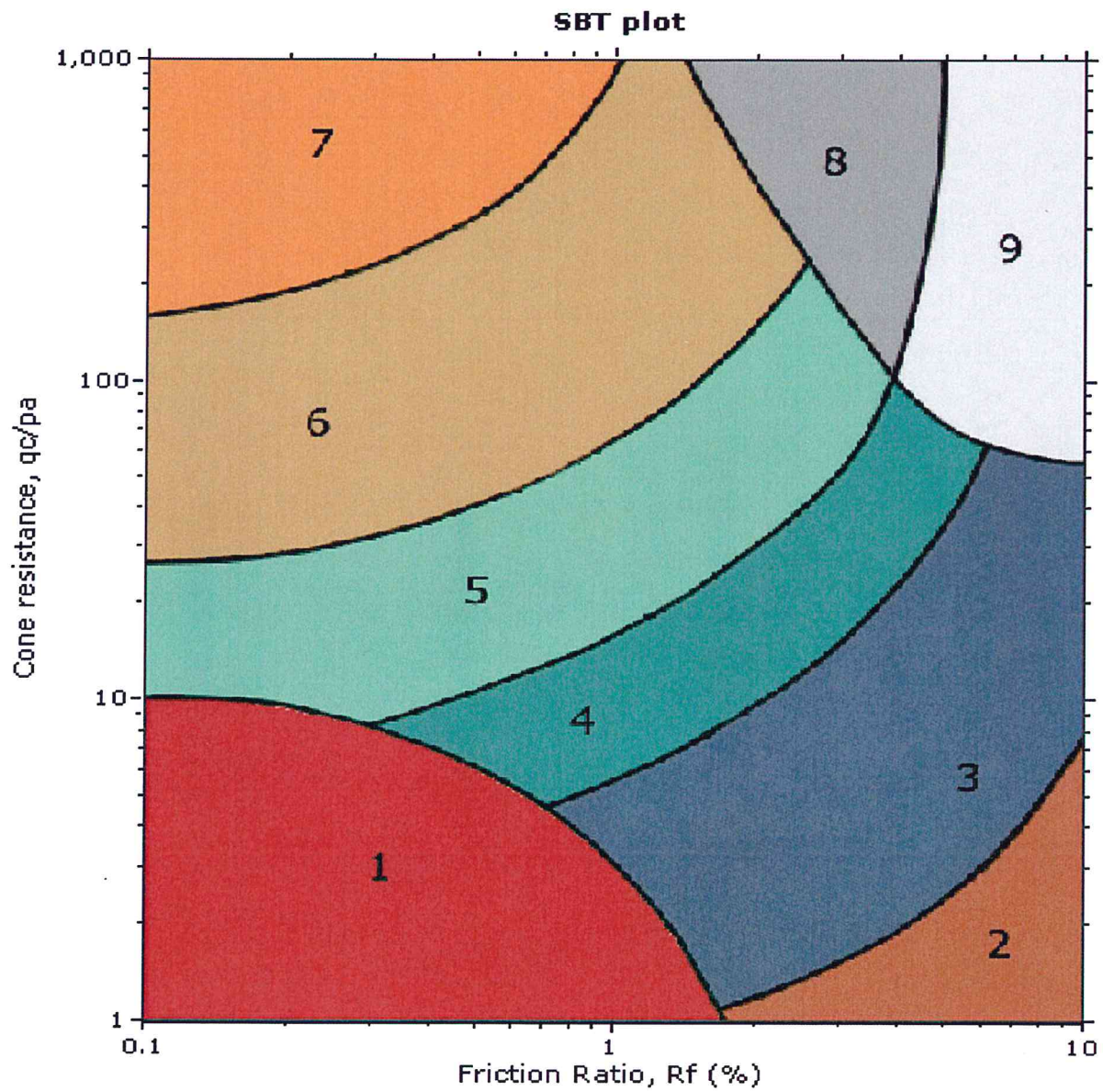
**CPT: CPT-3**

Total depth: 7.52 ft, Date: 6/17/2015  
Cone Type: Vertek





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**SBT legend**

- |                           |                              |                                   |
|---------------------------|------------------------------|-----------------------------------|
| 1. Sensitive fine grained | 4. Clayey silt to silty clay | 7. Gravelly sand to sand          |
| 2. Organic material       | 5. Silty sand to sandy silt  | 8. Very stiff sand to clayey sand |
| 3. Clay to silty clay     | 6. Clean sand to silty sand  | 9. Very stiff fine grained        |

Depth (ft)	CPT-1 In situ data				Basic output data															
	qc (tsf)	fs (tsf)	u (psi)	Other	qt (tsf)	Rf(%)	SBT	Ic SBT	$\bar{a}$ (pcf)	$\sigma_v$ (tsf)	u0 (tsf)	$\sigma'_{vo}$ (tsf)	Qt1	Fr (%)	Bq	SBTn	n	Cn	Ic	Qtn
1	94.3	0.32	0.45	-0.5	94.3136	0.3393	6	1.69518	113.0233	0.05651	0	0.0565	1667.9	0.3395	0.0003	7	0.3536	2.8177	1.3074	251.0028
2	149.3	1.15	-0.61	-0.62	149.282	0.7704	6	1.72295	123.5032	0.11826	0	0.1183	1261.3	0.771	-3E-04	6	0.4087	2.4486	1.4471	345.1777
3	1086.7	2.57	3.04	-0.52	1086.79	0.2365	7	0.75013	134.2289	0.18538	0	0.1854	5861.6	0.2365	0.0002	7	0.124	1.241	0.6969	>1,000
4	712.3	11.16	78.22	0.13	714.665	1.5616	6	1.55187	137.28	0.25402	0	0.254	2812.4	1.5621	0.0079	8	0.4197	1.8201	1.464	>1,000

Depth (ft)	CPT-1A		In situ data				Basic output data													
	qc (tsf)	fs (tsf)	u (psi)	Other	qt (tsf)	Rf(%)	SBT	Ic SBT	$\bar{a}$ (pcf)	$\sigma_v$ (tsf)	u0 (tsf)	$\sigma'_{vo}$ (tsf)	Qt1	Fr (%)	Bq	SBTn	n	Cn	Ic	Qtn
1	103.3	0.56	2.7	-0.68	103.382	0.5417	6	1.76076	117.3419	0.05867	0	0.0587	1761.1	0.542	0.0019	6	0.3778	2.9827	1.3862	291.255
2	300.8	5.49	2.73	-1.26	300.883	1.8246	6	1.79622	136.6504	0.127	0	0.127	2368.2	1.8254	0.0007	8	0.4627	2.6672	1.5946	758.1308
3	440.9	8.6	2.53	-2.15	440.977	1.9502	6	1.73293	137.28	0.19564	0	0.1956	2253.1	1.9511	0.0004	8	0.4662	2.1965	1.5936	914.9879
4	498.1	11.67	-0.91	-3.42	498.072	2.343	8	1.77848	137.28	0.26428	0	0.2643	1883.7	2.3443	-1E-04	8	0.4972	1.9931	1.6662	937.6961
5	559.3	9.37	-2.42	-4.08	559.227	1.6755	6	1.62588	137.28	0.33292	0	0.3329	1678.8	1.6765	-3E-04	8	0.4506	1.6838	1.5355	889.4058
6	423.3	8.36	-1.68	-5.1	423.249	1.9752	6	1.74653	137.28	0.40156	0	0.4016	1053	1.9771	-3E-04	8	0.4986	1.6211	1.6529	647.8242
7	651.9	0	-4.95	-3.97	651.75	0	0	0	120.9	0.46201	0	0.462	1409.7	0	-6E-04	0	1	2.2903	0	0



Depth (ft)	CPT-2 In situ data				Basic output data															
	qc (tsf)	fs (tsf)	u (psi)	Other	qt (tsf)	Rf(%)	SBT	Ic SBT	$\bar{a}$ (pcf)	$\phi_v$ (tsf)	u0 (tsf)	$\phi'_v$ (tsf)	Qt1	Fr (%)	Bq	SBTn	n	Cn	Ic	Qtn
1	136.5	1.31	0.81	1.1	136.524	0.9595	6	1.81458	124.2385	0.06212	0	0.0621	2196.8	0.96	0.0004	6	0.416	3.2521	1.4709	419.4188
2	322.7	3.96	0.96	0.5	322.729	1.227	6	1.6385	134.431	0.12933	0	0.1293	2494.3	1.2275	0.0002	6	0.4059	2.3469	1.4465	715.5436
3	646.1	7.53	0.75	-0.85	646.123	1.1654	6	1.45711	137.28	0.19797	0	0.198	3262.7	1.1658	8E-05	6	0.3739	1.8714	1.351	>1,000
4	614.3	7.79	0.18	-0.72	614.305	1.2681	6	1.49979	137.28	0.26661	0	0.2666	2303.1	1.2687	2E-05	6	0.3973	1.7291	1.4038	>1,000

CPT-3			In situ data				Basic output data														
Depth (ft)	qc (tsf)	fs (tsf)	u (psi)	Other	qt (tsf)	Rf(%)	SBT	Ic SBT	$\bar{a}$ (pcf)	$\acute{o},v$ (tsf)	u0 (tsf)	$\acute{o}',vo$ (tsf)	Qt1	Fr (%)	Bq	SBTn	n	Cn	Ic	Qtn	
1	72.3	0.92	-0.55	-0.27	72.2834	1.2728	5	2.10471	120.1016	0.06005	0	0.0601	1202.7	1.2738	-6E-04	6	0.4901	4.0801	1.6754	278.4977	
2	100.1	4.27	-3.48	-0.54	99.9948	4.2702	9	2.37862	132.1247	0.12611	0	0.1261	791.9	4.2756	-0.003	8	0.6396	3.8976	2.0601	367.8708	
3	64.1	2.68	-3.22	-0.61	64.0026	4.1873	4	2.49864	127.6282	0.18993	0	0.1899	335.98	4.1998	-0.004	8	0.6905	3.2741	2.1856	197.4545	
4	67.9	1.24	-3.21	-0.73	67.8029	1.8288	5	2.22786	122.1296	0.25099	0	0.251	269.14	1.8356	-0.003	6	0.6097	2.4043	1.9622	153.4923	
5	301.2	3.83	-3.35	-0.85	301.099	1.272	6	1.66918	134.0175	0.318	0	0.318	945.85	1.2734	-8E-04	6	0.4505	1.7187	1.538	488.5618	
6	709.4	9.91	-2.56	-0.41	709.323	1.3971	6	1.50937	137.28	0.38664	0	0.3866	1833.6	1.3979	-3E-04	8	0.4174	1.5222	1.4413	>1,000	
7	920.7	7.66	-10.36	0.84	920.387	0.8323	7	1.25765	137.28	0.45528	0	0.4553	2020.6	0.8327	-8E-04	7	0.3331	1.3243	1.2115	>1,000	

Presented below is a list of formulas used for the estimation of various soil properties. The formulas are presented in SI unit system and assume that all components are expressed in the same units.

**:: Unit Weight,  $g$  (kN/m<sup>3</sup>) ::**

$$g = g_w \cdot \left( 0.27 \cdot \log(R_f) + 0.36 \cdot \log\left(\frac{q_t}{p_a}\right) + 1.236 \right)$$

where  $g_w$  = water unit weight

**:: Permeability,  $k$  (m/s) ::**

$$I_c < 3.27 \text{ and } I_c > 1.00 \text{ then } k = 10^{0.952 - 3.04 \cdot I_c}$$

$$I_c \leq 4.00 \text{ and } I_c > 3.27 \text{ then } k = 10^{-4.52 - 1.37 \cdot I_c}$$

**::  $N_{SPT}$  (blows per 30 cm) ::**

$$N_{60} = \left( \frac{q_c}{p_a} \right) \cdot \frac{1}{10^{1.1268 - 0.2817 \cdot I_c}}$$

$$N_{I(60)} = Q_{tn} \cdot \frac{1}{10^{1.1268 - 0.2817 \cdot I_c}}$$

**:: Young's Modulus,  $E_s$  (MPa) ::**

$$(q_t - \sigma_v) \cdot 0.015 \cdot 10^{0.55 \cdot I_c + 1.68}$$

(applicable only to  $I_c < I_{c\_cutoff}$ )

**:: Relative Density,  $D_r$  (%) ::**

$$100 \cdot \sqrt{\frac{Q_{tn}}{k_{DR}}} \quad \text{(applicable only to SBT}_n\text{: 5, 6, 7 and 8 or } I_c < I_{c\_cutoff}\text{)}$$

**:: State Parameter,  $\psi$  ::**

$$\psi = 0.56 - 0.33 \cdot \log(Q_{tn,CS})$$

**:: Peak drained friction angle,  $\phi$  (°) ::**

$$\phi = 17.60 + 11 \cdot \log(Q_{tn})$$

(applicable only to SBT<sub>n</sub>: 5, 6, 7 and 8)

**:: 1-D constrained modulus,  $M$  (MPa) ::**

If  $I_c > 2.20$

$$\alpha = 14 \text{ for } Q_{tn} > 14$$

$$\alpha = Q_{tn} \text{ for } Q_{tn} \leq 14$$

$$M_{CPT} = \alpha \cdot (q_t - \sigma_v)$$

If  $I_c \leq 2.20$

$$M_{CPT} = (q_t - \sigma_v) \cdot 0.0188 \cdot 10^{0.55 \cdot I_c + 1.68}$$

**:: Small strain shear Modulus,  $G_0$  (MPa) ::**

$$G_0 = (q_t - \sigma_v) \cdot 0.0188 \cdot 10^{0.55 \cdot I_c + 1.68}$$

**:: Shear Wave Velocity,  $V_s$  (m/s) ::**

$$V_s = \left( \frac{G_0}{\rho} \right)^{0.50}$$

**:: Undrained peak shear strength,  $S_u$  (kPa) ::**

$$N_{kt} = 10.50 + 7 \cdot \log(F_r) \text{ or user defined}$$

$$S_u = \frac{(q_t - \sigma_v)}{N_{kt}}$$

(applicable only to SBT<sub>n</sub>: 1, 2, 3, 4 and 9 or  $I_c > I_{c\_cutoff}$ )

**:: Remolded undrained shear strength,  $S_u(rem)$  (kPa) ::**

$$S_{u(rem)} = f_s \quad \text{(applicable only to SBT}_n\text{: 1, 2, 3, 4 and 9 or } I_c > I_{c\_cutoff}\text{)}$$

**:: Overconsolidation Ratio, OCR ::**

$$k_{OCR} = \left[ \frac{Q_{tn}^{0.20}}{0.25 \cdot (10.50 + 7 \cdot \log(F_r))} \right]^{1.25} \text{ or user defined}$$

$$OCR = k_{OCR} \cdot Q_{tn}$$

(applicable only to SBT<sub>n</sub>: 1, 2, 3, 4 and 9 or  $I_c > I_{c\_cutoff}$ )

**:: In situ Stress Ratio,  $K_0$  ::**

$$K_0 = (1 - \sin \phi') \cdot OCR^{\sin \phi'}$$

(applicable only to SBT<sub>n</sub>: 1, 2, 3, 4 and 9 or  $I_c > I_{c\_cutoff}$ )

**:: Soil Sensitivity,  $S_t$  ::**

$$S_t = \frac{N_s}{F_r}$$

(applicable only to SBT<sub>n</sub>: 1, 2, 3, 4 and 9 or  $I_c > I_{c\_cutoff}$ )

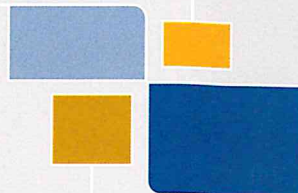
**:: Effective Stress Friction Angle,  $\phi'$  (°) ::**

$$\phi' = 29.5^\circ \cdot B_q^{0.121} \cdot (0.256 + 0.336 \cdot B_q + \log Q_t)$$

(applicable for  $0.10 < B_q < 1.00$ )

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# **GREENHOUSE GAS ASSESSMENT**

## **Pacific Village Residential Development City of San Diego**

**City Project No. 470158**

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**October 1, 2016**

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## **LIST OF ACRONYMS**

Assembly Bill 32 (AB32)

Business as Usual (BAU)

California Air Pollution Control Officers Association's (CAPCOA)

California Air Resource Board (CARB)

California Environmental Quality Act (CEQA)

Carbon Dioxide (CO<sub>2</sub>)

Cubic Yards (CY)

Environmental Protection Agency (EPA)

Green House Gas (GHG)

International Residential Code (IRC)

Low Carbon Fuel Standard (LCFS)

Methane (CH<sub>4</sub>)

Nitrous Oxide (N<sub>2</sub>O)

San Diego Air Basin (SDAB)

San Diego Air Pollution Control District (SDAPCD)

Senate Bill 97 (SB97)

Vehicle Miles Traveled (VMT)

## **EXECUTIVE SUMMARY**

This analysis has been completed in order to quantify Greenhouse Gas (GHG) emissions from the project site and was prepared according to guidelines established within the California Global Warming Solutions Act of 2006 – Assembly Bill 32 (AB32), Senate Bill 97 (SB97), California Environmental Quality Act (CEQA). Greenhouse Gases analyzed in this study are Carbon Dioxide (CO<sub>2</sub>), Methane (CH<sub>4</sub>), and Nitrous Oxide (N<sub>2</sub>O). To simplify greenhouse gas calculations, both CH<sub>4</sub> and N<sub>2</sub>O are converted to equivalent amounts of CO<sub>2</sub> and are identified as CO<sub>2</sub>e.

The existing use of the property serves a 332-unit apartment complex which was constructed in 1970. The Project proposes the redevelopment of this 41-acre rental complex currently known as Penasquitos Village with 601 DU. Three (3) distinct housing types are proposed. The “for sale” component proposes 99 single-family cluster homes, 105 multi-family tri-plex units, and 120 town homes and 277 apartments for a total of 601 units. All phases (i.e. grading, paving and construction) of the proposed Project are anticipated to start in mid-2017 and potentially be completed by the end of 2020.

The proposed project will emit GHGs directly through the burning of carbon-based fuels such as gasoline and natural gas as well as indirectly through usage of electricity, water and from the anaerobic bacterial breakdown of organic solid waste. The proposed project would generate approximately 6,341.82 MT of CO<sub>2</sub>e however the existing project which would have already been considered within baseline emissions would not be considered a project increase. The existing project generates 3,250.97 MT CO<sub>2</sub>e in 2016. Given this, the proposed project would only add 3,090.85 MT of CO<sub>2</sub>e each year under Business as Usual (BAU) using a year 2010 reference point which exceeds California Air Pollution Control Officers Association’s (CAPCOA) 900 Metric Ton per year thresholds and would require design features to reduce levels to below significant or at least a 15% reduction over BAU in 2020 per the City’s Climate Action Plan (CAP).

Regulatory measures such as Pavley II rules and California’s Low Carbon Fuel Standards, mixed use design, low flow water fixtures and the latest Title 24 Building standards will reduce CO<sub>2</sub>e emission by up to 1,775.45 Metric Tons per year reducing project emissions to 1,315.40 MT per year. These CO<sub>2</sub>e measures would reduce emissions by as much as 57.4% which would meet the goals of AB 32 and CEQA and would not result in the creation of any significant impacts.

### 2020 Efficiency Metric Analysis of Significance

A service population-based analysis was also conducted to identify an efficiency target as necessary to meet the State’s GHG reduction goals as set forth in Executive Order S-3-05, Executive Order B-30-15, and AB 32 to achieve the following GHG reductions: 1) reduce

emissions to 1990 levels by 2020; 2) reduce emissions to 40% below 1990 levels by 2030; and 3) reduce emissions to 80% below 1990 levels by 2050. A service population-based analysis establishes an efficiency target based on total service population (i.e., residents plus employees) within a given area. The purpose of this supplemental analysis is to provide additional project-level analysis of the GHG emissions associated with the Project in response to the California Supreme Court's decision published on November 30, 2015 in *Center for Biological Diversity v. California Department of Fish and Wildlife* (Case No. 217763) (the Newhall Ranch Case), which permits lead agencies to either use the business as usual (BAU) methodology with supplemental information about the relationship between a project and the assumptions in the state's Scoping Plan or to use other methodologies. Given the difficulties associated with trying to provide supplemental information about the relationship between the Project and the assumptions in the state's Scoping Plan for achieving state GHG reduction targets by 2020, this analysis used the following method to clarify and confirm whether the Project's GHG emissions impacts are cumulatively considerable and whether impacts are less than significant.

Based on the City of San Diego data available from SANDAG and the City's Climate Action Plan, an efficiency ratio of 4.64 MT CO<sub>2</sub>e/year/service person is required to meet the 2020 CAP goals and an efficiency ratio of 3.02 MT CO<sub>2</sub>e per service person is required in 2030. The proposed project would demolish and remove 332 units and then construct 601 residential units or add 269 units. It is anticipated that each residential unit will have 2.71 people per SANDAG's Series 12 Regional Growth Forecast for the year 2020. Therefore, the net increase in service population of the project would be 729 or  $(2.71 \times 269)$ . Based on the project's reduced GHG emissions of 1,315.40 MT and a net increase in service population of 729, the project would have an efficiency ratio of 1.80 MT CO<sub>2</sub>e/year/service population. Accordingly, because the project's efficiency ratio is below the required 2020 and 2030 thresholds of 4.64 and the 3.02 MT CO<sub>2</sub>e/year/service population, the project would meet the City's CAP goals and would not require further mitigation than proposed in this report.

## **1.0 INTRODUCTION**

### **1.1 Purpose of this Study**

The purpose of this Green House Gas Assessment (GHG) is to show conformance to the California Global Warming Solutions Act of 2006 – Assembly Bill 32 (AB32) and Senate Bill 97 (SB97). AB32 requires that by 2020 the state's greenhouse gas emissions be reduced to 1990 levels and SB97 a "companion" bill directed amendments to the California Environmental Quality Act (CEQA) statute to specifically establish that GHG emissions and their impacts are appropriate subjects for CEQA analysis. Should impacts be determined, the intent of this study would be to recommend suitable design measures to bring the project to a level considered less than significant.

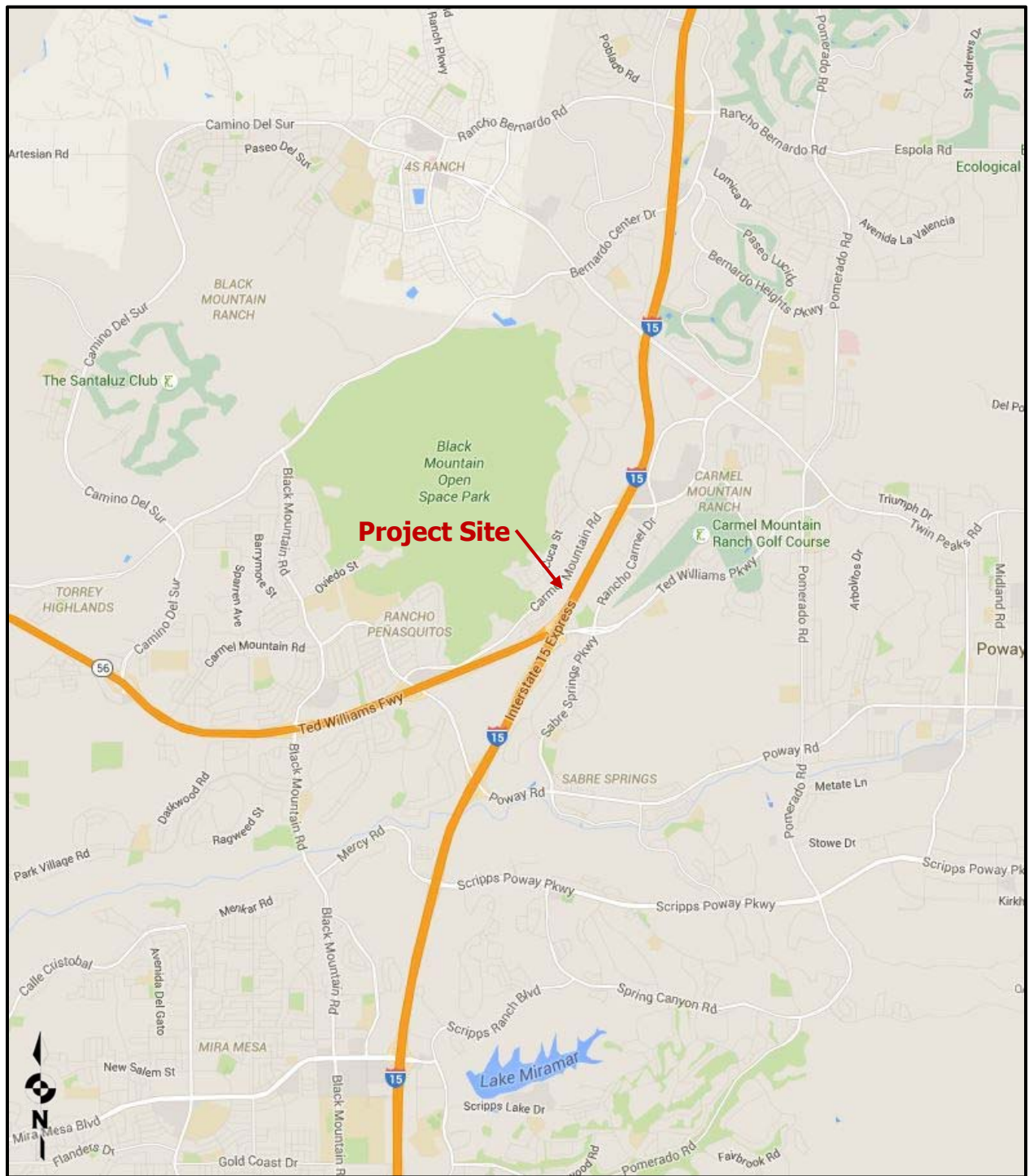
### **1.2 Project Location**

The site is immediately west of Interstate 15 (I-15), east of Carmel Mountain Road, south of the Peñasquitos Drive Shopping Center, and north of the multi-family development, Peñasquitos Villas, within the Community of Rancho Peñasquitos in the City of San Diego. A general project vicinity map is shown in Figure 1–A on the following page.

### **1.3 Project Description**

The existing use of the property serves a 332-unit apartment complex which was constructed in 1970. The Project proposes the redevelopment of this 41-acre rental complex currently known as Penasquitos Village with 601 DU. Three (3) distinct housing types are proposed. The "for sale" component proposes 99 single-family cluster homes, 105 multi-family tri-plex units, and 120 town homes and 277 apartments for a total of 601 units. The project development plan is shown on Figure 1-B on Page 3 of this report.

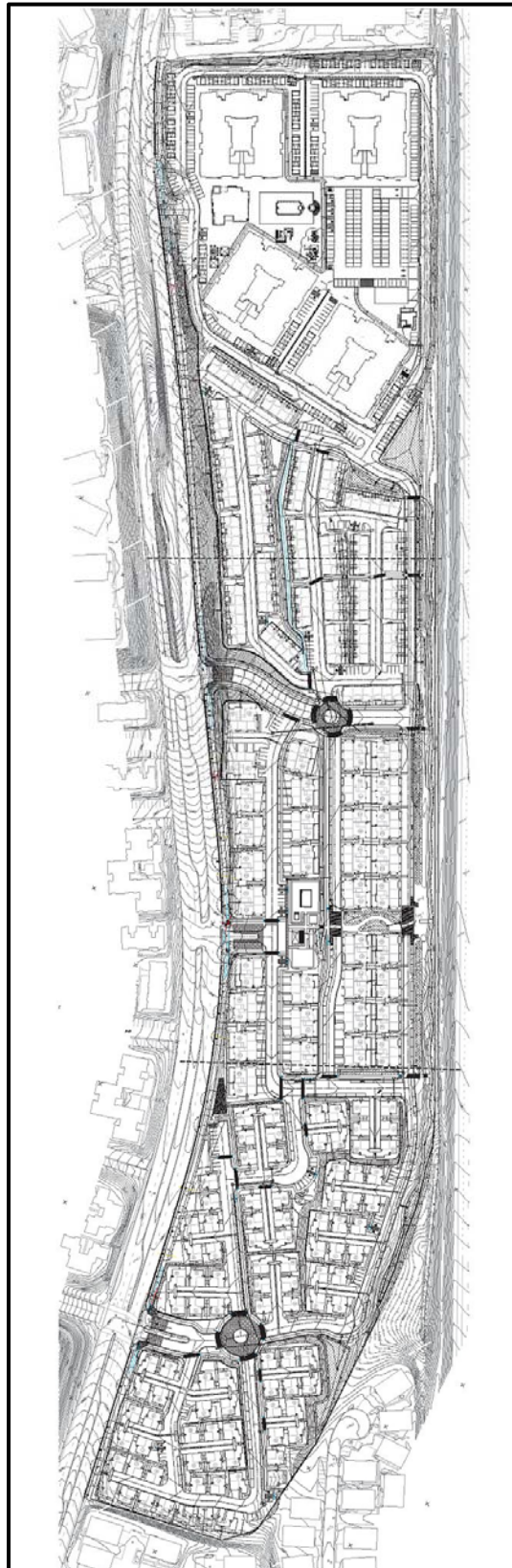
**Figure 1-A: Project Vicinity Map**



Source: (Google, 2016)



**Figure 1-B: Proposed Project Site Development Plan**



Source: (Latitude 33, 2016)

## **2.0 EXISTING ENVIRONMENTAL SETTING**

### **2.1 Understanding Greenhouse Gasses**

GHGs such as water vapor and carbon dioxide are abundant in the earth's atmosphere and they absorb and emit thermal infrared radiation which acts like an insulator to the planet. Without these gases, the earth's ambient temperature would either be extremely hot during the day or blistering cold at night. However, because these gases can both absorb and emit heat, the earth's temperature does not sway too far in either direction.

Over the years as human activities require the use of burning fossil fuels, stored carbon is released into the air in the form of CO<sub>2</sub> and to a much lesser extent CO. Additionally, over the years scientists have measured this rise in CO<sub>2</sub> and fear that it may be heating the planet too. Additionally, it is thought that other GHGs such as CH<sub>4</sub> and N<sub>2</sub>O are to blame.

GHGs of concern as analyzed in this study are CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O. To simplify GHG calculations, both CH<sub>4</sub> and N<sub>2</sub>O can be converted to an equivalent amount of CO<sub>2</sub> or CO<sub>2</sub>e. CO<sub>2</sub>e is calculated by multiplying the calculated levels of CH<sub>4</sub> and N<sub>2</sub>O by a Global Warming Potential (GWP). The U.S. Environmental Protection Agency publishes GWPs for various GHGs, and reports that the GWPs for CH<sub>4</sub> and N<sub>2</sub>O are 21 and 310, respectively.

### **2.2 Existing Setting**

The Project site lies in the in the northern part of San Diego within the Scrips Ranch area of the City which is within the San Diego Air Basin (SDAB). The overall site consists of a developed land use consisting of 332 apartment units. Elevations within this area range from approximately 600 feet above Mean Sea Level (MSL) at its southern terminus to approximately 615 feet MSL towards the north of the project site.

The proposed project is surrounded by residential to the west and south, commercial to the north and Interstate 15 and residential to the east. The project site would have access to the MTS Bus Line route 20 (MTS, 2016) just along Carmel Mountain Road which connects North San Diego to Route 110 to Downtown San Diego.

### **2.3 Climate and Meteorology**

Climate within the San Diego Air Basin (SDAB) area often varies dramatically over short geographical distances with cooler temperatures on the western coast gradually warming to the east as prevailing winds from the west heats up. Most of southern California is dominated by high-pressure systems for much of the year, which keeps San Diego mostly

sunny and warm. Typically, during the winter months, the high pressure system drops to the south and brings cooler, moister weather from the north. It is common for inversion layers to develop within high-pressure areas, which mostly define pressure patterns over the SDAB. These inversions are caused when a thin layer of the atmosphere increases in temperature with height. An inversion acts like a lid preventing vertical mixing of air through convective overturning.

Meteorological trends within the City of San Diego in the geographical area near Poway produce daytime highs typically ranging between 69°F in the winter to approximately 90°F in the summer with August usually being the hottest month. Median temperatures range from approximately 53°F in the winter to approximately 75°F in the summer. The average humidity is approximately 64% in the winter and about 74% in the summer (City-Data, 2016).



### 3.0 **CLIMATE CHANGE REGULATORY ENVIRONMENT**

#### 3.1 Regulatory Standards (Assembly Bill 32)

The Global Warming Solutions Act of 2006 (AB 32), requires that by 2020 the state's greenhouse gas emissions be reduced to 1990 levels or from about 545 metric tons as projected as a 2020 baseline to 427 metric tons which would be required to meet the goal. Significance thresholds have not been adopted but are currently being discussed. AB 32 is specific as to when thresholds shall be defined. The pertinent sections are referenced within Part 4 of AB 32 Titled *Greenhouse Gas Emissions Reductions* are shown below:

Section 38560.5 (b) states:

*On or before January 1, 2010, the state board shall adopt regulations to implement the measures identified on the list published pursuant to subdivision (a).*

Section 38562 states:

*(A) On or before January 1, 2011, the state board shall adopt greenhouse gas emission limits and emission reduction measures by regulation to achieve the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions in furtherance of achieving the statewide greenhouse gas emissions limit, to become operative beginning on January 1, 2012.*

*(B) In adopting regulations pursuant to this section and Part 5 (commencing with Section (38570), to the extent feasible and in furtherance of achieving the statewide greenhouse gas emissions limit, the state board shall do all of the following:*

- 1. Design the regulations, including distribution of emissions allowances where appropriate, in a manner that is equitable, seeks to minimize costs and maximize the total benefits to California, and encourages early action to reduce greenhouse gas emissions.*
- 2. Ensure that activities undertaken to comply with the regulations do not disproportionately impact low-income communities.*
- 3. Ensure that entities that have voluntarily reduced their greenhouse gas emissions prior to the implementation of this section receive appropriate credit for early voluntary reductions.*
- 4. Ensure that activities undertaken pursuant to the regulations complement, and do not interfere with, efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminant emissions.*
- 5. Consider cost-effectiveness of these regulations.*
- 6. Consider overall societal benefits, including reductions in other air pollutants, diversification of energy sources, and other benefits to the economy, environment, and public health.*
- 7. Minimize the administrative burden of implementing and complying with these regulations.*
- 8. Minimize leakage.*
- 9. Consider the significance of the contribution of each source or category of sources to statewide emissions of greenhouse gases.*

*(C) In furtherance of achieving the statewide greenhouse gas emissions limit, by January 1, 2011, the state board may adopt a regulation that establishes a system of market-based declining annual aggregate emission limits for sources or categories of sources that emit greenhouse gas emissions, applicable from January 1, 2012, to December 31, 2020, inclusive, that the state board determines will achieve the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions, in the aggregate, from those sources or categories of sources.*

*(D) Any regulation adopted by the state board pursuant to this part or Part 5 (commencing with Section 38570) shall ensure all of the following:*

- 1. The greenhouse gas emission reductions achieved are real, permanent, quantifiable, verifiable, and enforceable by the state board.*
- 2. For regulations pursuant to Part 5 (commencing with Section 38570), the reduction is in addition to any greenhouse gas emission reduction otherwise required by law or regulation, and any other greenhouse gas emission reduction that otherwise would occur.*
- 3. If applicable, the greenhouse gas emission reduction occurs over the same time period and is equivalent in amount to any direct emission reduction required pursuant to this division.*

### 3.2 Regulatory Standards (Assembly Bill 341)

This bill makes a legislative declaration that it is the policy goal of the state that not less than 75% of solid waste generated be source reduced, recycled, or composted by the year 2020, and would require the Department of Resources Recycling and Recovery, by January 1, 2014, to provide a report to the Legislature that provides strategies to achieve that policy goal and also includes other specified information and recommendations.

This bill will increase diversion requirements by an additional 25% over Business as Usual as was defined under AB 939 and SB 1322 which were signed into law as the Integrated Waste Management Act of 1989, which as of the year 2000 only required 50 percent diversion.

### 3.3 Regulatory Standards (Senate Bill 97)

SB 97 requires the Office of Planning and Research to prepare and transmit to the Resources Agency, guidelines and directed amendments to the CEQA statute specifically for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions.

### 3.4 Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (GPO, 2007) is an energy policy law adopted by congress which consists mainly of provisions designed to increase energy efficiency and the availability of renewable energy. The law will require automakers to boost fleet wide gas mileage averages from the current 25 mpg to 35 mpg by 2020, which will

reduce energy needs by 28.5%. This fleet wide average is known as the Corporate Average Fuel Economy (CAFE) standard.

### 3.5 AB 1493 (Pavley Standards)

AB 1493 regulations are similar to CAFE Standards but are expected to produce a GHG benefit greater than that of the CAFE Standards doubling the amount of GHGs saved under CAFE. The Pavley rules (also referred to as California Standards) are designed to regulate GHG emissions while the federal standards are aimed at reducing the nation's fuel consumption.

Under Pavley I, starting with vehicles produced in 2009, manufacturers have the flexibility in meeting California standards through a combination of reducing tailpipe emissions of CO<sub>2</sub>, N<sub>2</sub>O, CH<sub>4</sub> and hydrofluorocarbons from vehicle air conditioning systems. Furthermore, the California standards are estimated to increase fuel efficiency to 35.7 miles per gallon by 2016, and under more stringent emission limits (Pavley II), would increase efficiency to 42.5 miles per gallon by 2020 (California Air Resource Board, 2013).

### 3.6 Advanced Clean Car Program

Pavley II along with other Low-Emission Vehicle (LEV) regulations including new approaches to increase zero emission vehicles and hybrids have since been combined into a single program termed Advanced Clean Cars (California Air Resource Board, 2014). The new effort uses a number of emission control programs to reduce smog, soot and global warming and would be in effect from 2017 to 2015. This program is estimated to reduce GHGs by 4.0 million metric tons or roughly 2.4% beyond that of Pavley I (California Air Resource Board, 2011).

### 3.7 Vehicle Efficiency Measures

Vehicle efficiency measures within the Scoping Plan include Low Friction Oil, Tire Pressure Regulation, Tire Tread Program, and Solar Reflective Automotive Paint and specialized window glazing to reduce GHGs by 4.5 MMTCO<sub>2</sub>e in 2020. To date, however, some of these reduction measures are still under review with the exception of the Tire Pressure Regulations which are estimated to remove 0.6 MMTCO<sub>2</sub>e.

### 3.8 Executive Order S-01-07

Executive Order S-01-07 was signed by Governor Arnold Schwarzenegger in January 2007 and is effectively known as the Low Carbon Fuel Standard (LCFS). The Executive Order

seeks to reduce the carbon intensity of California's passenger vehicle fuels by at least 10% by 2020. The LCFS will require fuel providers in California to ensure that the mix of fuel they sell into the California market meet, on average, a declining standard for GHG emissions measured in CO<sub>2</sub>e grams per unit of fuel energy sold.

### 3.9 Executive Order S-3-05

Executive Order S-3-05 was signed by Governor Arnold Schwarzenegger in June 2005. That the following greenhouse gas emission reduction targets are hereby established for California: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels.

### 3.10 Executive Order B-30-15

Executive Order B-30-15 was signed by Governor Edmund Brown Jr. in April 2015. The executive order seeks to establish a California greenhouse gas reduction target of 40 percent below 1990 levels by 2030 which would help the state meet targets of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050 covered under EO S-3-05 (Office of Governor Edmund G. Brown Jr., 2015).

### 3.11 Executive Order S-14-08

Executive Order S-14-08 was signed by Governor Arnold Schwarzenegger and is effectively known as the Renewable Portfolio Standard (RPS). According to S-14-08, the RPS will require that all retail sellers of electricity shall serve 33 percent of their load with renewable energy by 2020. State government agencies are hereby directed to take all appropriate actions to implement this target in all regulatory proceedings, including siting, permitting, and procurement for renewable energy power plants and transmission lines.

Section 913.6 was added in 2011 to the Public Utilities Code by Governor Brown which was signed by the senate and requires the California Public Utilities Commission (CPUC or Commission), in consultation with the California Energy Commission (CEC), to report to the Legislature by January 1 of every even-numbered year on all of the following:

- (a) The progress and status of RPS procurement;*
- (b) The status of permitting and siting RPS resources and transmission facilities;*
- (c) The projected ability of each electrical corporation to meet the RPS requirements pursuant to the cost limitations established by Section 399.15(d)*
- (d) barriers to, and recommendations for achieving the RPS requirements.*

Based on the latest Biennial RPS Program Update per the Section 931.6 requirements, San Diego Gas and Electric will utilize 43.1% RPS in 2020 which is over 10% higher than required by the state (California Public Utilities Commission, 2016).

It should be noted that Governor Jerry Brown is committed to increasing this regulation such that the renewable portfolio in 2030 would be at least 50%. This commitment was entered into agreement with multiple international states signed on May 19, 2015 by California. (Subnational Global Climate Leadership Memorandum of Understanding, 2015). Though this is not law, for purposes of speculative GHG forecasting into 2030 and 2050, it's reasonable to assume that it will be a requirement.

### 3.12 Title 24 Standards

The California Energy Code, or Title 24, Part 6 of the California Code of Regulations, also titled The Energy Efficiency Standards for Residential and Nonresidential 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 (Wikipedia).

The Energy Commission adopted the 2008 changes to the Building Energy Efficiency Standards for some of the following reasons and would reduce both Natural Gas and Electrical demand:

- 1. To provide California with an adequate, reasonably-priced, and environmentally-sound supply of energy.*
- 2. To respond to Assembly Bill 32, the Global Warming Solutions Act of 2006, which mandates that California must reduce its greenhouse gas emissions to 1990 levels by 2020.*
- 3. To pursue California energy policy that energy efficiency is the resource of first choice for meeting California's energy needs.*
- 4. To act on the findings of California's Integrated Energy Policy Report (IEPR) that Standards are the most cost effective means to achieve energy efficiency, expects the Building Energy Efficiency Standards to continue to be upgraded over time to reduce electricity and peak demand, and recognizes the role of the Standards in reducing energy related to meeting California's water needs and in reducing greenhouse gas emissions.*
- 5. To meet the West Coast Governors' Global Warming Initiative commitment to include aggressive energy efficiency measures into updates of state building codes.*
- 6. To meet the Executive Order in the Green Building Initiative to improve the energy efficiency of nonresidential buildings through aggressive standards.*

Title 24 2008 has been found reduce electrical emissions by 22.7% when comparing prototype buildings built to the minimum standards in 2005 and then comparing the prototypes within duplicate models built to standards in 2008. (Architectural Energy Corporation for California Energy Commission, November 7, 2007)

The latest standards are Title 24 2013 and are effective as of July 1, 2014. Looking at the entire construction outlook for low-rise single-family detached homes, electricity use is reduced by 36.4 percent and 23.3 percent for multi-family uses and natural gas consumption is reduced by 6.5 percent for single family developments and 3.8% for multi-family structures (Architectural Energy Corporation (AEC), 2013). Nonresidential Newly Constructed Buildings would have a reduction from the 2008 Standards of 21.8 percent for electricity and 16.8 percent for natural gas. It should be noted that these reductions would be for Title 24 energy sources such as heating, cooling and lighting.

### 3.13 California Environmental Quality Act (CEQA) Significance Thresholds

As directed by SB 97, the Natural Resources Agency adopted Amendments to Title 14 Division 6 Chapter 3 CEQA Guidelines for greenhouse gas emissions on December 30, 2009. On February 16, 2010, the Office of Administrative Law approved the Amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The amendments became effective on March 18, 2010. The pertinent sections are shown below:  
*Section 15064.4 - Determining the Significance of Impacts from Greenhouse Gas*

- (a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. 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. A lead agency shall have discretion to determine, in the context of a particular project, whether to:*
- 1. Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model or methodology it considers most appropriate provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; and/or*
  - 2. Rely on a qualitative analysis or performance-based standards.*
- (b) A lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:*
- 1. The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;*
  - 2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.*

3. *The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.*

*General Questions recommended within the environmental checklist are:*

- (a) Will the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- (b) Will the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

### 3.14 Scoping Plan Measures

In response to AB 32, California Air Resource Board (ARB) developed the Climate Change Scoping Plan. In that plan, ARB developed GHG emission reduction strategies which expanded energy efficiency programs, increased utility renewable energy requirements, developed clean car standards and LCFS, developed the cap-and-trade program, and identified adopted discretionary measures to assist the state in meeting the 2020 limits established by AB 32.

In May 2014, the ARB adopted the first update to the original Scoping Plan which was necessary to establish long-term GHG policies to make deep GHG emission reductions to achieve an 80% reduction below 1990 levels by 2050. The update includes key recommendations for six key economic sectors (energy, transportation, agriculture, water, waste management, and natural and working lands) as well as short-lived climate pollutants, green buildings, and the Cap-and-Trade Program. The findings largely affect regulatory measures that will indirectly reduce GHG emissions and generate a need to update local policies.

### 3.15 City of San Diego Thresholds of Significance

The City of San Diego relies on significance screening thresholds published by CAPCOA for determining the need for additional analyses and mitigation for GHG-related impacts under CEQA which suggest projects producing less than 900 metric tons would be considered less than significant (California Air Pollution Control Officers Association, 2008). Projects producing more than 900 metric tons per year of GHGs produce an inventory of project gases and demonstrate reasonable mitigation measures necessary to reduce GHG's by 15% from business as usual (BAU) from a 2010 baseline. The CAP also includes reduction targets



to reduce emissions below the 2010 baseline by 40 percent by 2030, and 50 percent by 2035. Finally, by meeting the 2020 and 2035 targets, the City will maintain its trajectory to meet its proportional share of the 2050 state target (City of San Diego, 2015).

The CAP further defines the BAU 2010 baseline as a regulatory snapshot of the world in 2010, and projects emissions into the future based on expected changes to population and economic activity. It assumes that all other variables, such as policies to reduce emissions, remain constant at 2010 levels through 2035. For example, in 2010 about 12 percent of electricity supplied to the City was from renewable sources and was assumed to do so through 2035.

#### *Efficiency Metric (Per Service Population)*

The intent of AB 32 is to accommodate a population and economic growth in California, but in a way that achieves a lower rate of GHG emissions statewide. One commonly-accepted approach for addressing the potential significance of a project's impacts due to GHG emissions is to demonstrate a reduced rate of emissions per service population (i.e., GHG emissions per capita based on the number of residents and employees) as compared to the existing rate of emissions per service population for the local area. Another very commonly-accepted approach is the Performance-Based Percent Reduction Target threshold approach which would require a project to meet a percent reduction target based on the average reductions needed from the BAU emissions from all GHG sources. Using the 2020 target, this approach would require all discretionary projects to achieve a certain percent reduction from projected business-as-usual emissions in order to be considered less than significant. A more restrictive target could be established in the future to address 2030 and 2050 targets using the same methodology.

A number of air districts in the State of California have recommended or adopted efficiency metric or "service population" thresholds as a method for analyzing cumulative GHG emissions and significance of impacts under CEQA. A project's "service population" refers to a project's residents plus employees that would be generated by the proposed project's development. This efficiency metric is expressed as MT CO<sub>2</sub>e per service population per year (MT CO<sub>2</sub>e/year/service population).

Service population is a term used to express the total GHG emissions associated with a project or study area, divided by the total population and employment forecasted for the local study area. The service population for projects that accommodate only employment and no residences would be the total number of employees accommodated at build-out. Projects that accommodate population (i.e. housing projects) would estimate the number of residents accommodated at full occupancy. Projects, such as the proposed, would estimate



both the number of residents and employees. Net annual emissions would consider plans and projects that reduce emissions through selection of a project site and adding land use diversity that reduces cumulative area-wide vehicle miles travelled (VMT) with and without the project, GHG-efficient project design features, and other on-site strategies, as well as taking actions off-site and the impact on the project from the state's implementation of GHG-reducing programs and regulations. Net emissions represent the total after cumulative emissions are calculated less these GHG-reducing programs, features and measures.

Through the per-capita and performance-based percent reduction approaches, individual projects can demonstrate that project-specific emissions would not interfere with California's ability to accommodate expected population growth and achieve economic development objectives while also abiding by AB 32's emissions target and supporting efforts to reduce emissions beyond 2020. The service population approach allows lead agencies to assess whether any given project or plan would interfere with the State's ability to accommodate population and employment growth that is consistent with the AB 32 Statewide Target, while also accounting for existing sources of GHG emissions and their potential for cumulatively inhibiting the ability of the State and local agencies to achieve the objectives of AB 32. CARB approved the Scoping Plan in 2008, with the most recent update occurring in May 2014. The Scoping Plan provides guidance for local communities to meet AB 32 and EO S-3-05 targets. The Scoping Plan adopted a quantified cap on GHG emission representing 1990 emission levels, instituted a schedule to meet the emission cap, and developed tracking, reporting, and enforcement tools to assist the State in meeting the required GHG emission reductions. The Scoping Plan recommends that local governments target 2020 emissions at 15% below 2005 levels to account for emissions growth since 1990, as a proxy for 1990 emissions, since few localities have conducted a detailed GHG emissions inventory to estimate 1990 emission levels.

The City of San Diego recently determined that it would need to reduce citywide GHG emissions to 11,037,244 MT CO<sub>2</sub>e by 2020 in order to provide its fair share of GHG reductions to assist the state in meeting the state's AB 32 emissions target for 2020 (City of San Diego, 2015). According to the San Diego Association of Government (SANDAG) populations and employment forecasts, the City's 2020 forecast population and civilian employment will be 2,381,233 (SANDAG, 2015). Based on a 11,037,244 MT CO<sub>2</sub>E citywide 2020 emissions limit and a forecasted service population of 2,381,233, the maximum emissions each service person can emit is 4.64 MT CO<sub>2</sub>e or 11,037,244 MT CO<sub>2</sub>E / 2,381,233 SP. Similarly the 2030 CAP emission goals of 7,790,996 MT CO<sub>2</sub>e with a SANDAG projected 2030 service population of 2,582,652 would limit each service person to 3.02 MT CO<sub>2</sub>e per year in 2030 to achieve 2030 goals.

## 4.0 METHODOLOGY

### 4.1 Construction CO<sub>2</sub>e Emissions Calculation Methodology

Construction of the proposed project is expected to start sometime in the middle of 2017. The project would start with the demolition of all onsite structures (approximately 332,000 SF). After all demolition is complete and all waste and debris is hauled offsite, the project would prepare the site and complete all the necessary grading and start building the units. The project is assumed to be fully constructed in 2020 but could take longer depending on market demands. For purposes of analysis however, a worst case year of 2020 was assumed. Table 4.1 below describes the construction equipment and durations assumed within this report.

**Table 4.1: Expected Construction Equipment**

Equipment Identification	Proposed Start	Proposed Completion	Quantity	Work Days
<b>Demolition</b>	5/1/2017	7/15/2017		55
Concrete/Industrial Saws			1	
Excavators			3	
Rubber Tired Dozers			2	
<b>Site Preparation</b>	7/16/2017	8/15/2017		22
Rubber Tired Dozers			3	
Tractors/Loaders/Backhoes			4	
<b>Grading</b>	8/16/2017	10/15/2017		43
Excavators			2	
Graders			1	
Rubber Tired Dozers			1	
Scrapers			2	
Tractors/Loaders/Backhoes			2	
<b>Paving</b>	10/16/2017	12/1/2017		35
Pavers			2	
Paving Equipment			2	
Rollers			2	
<b>Building Construction</b>	12/2/2017	10/1/2020		739
Cranes			1	
Forklifts			3	
Generator Sets			1	
Tractors/Loaders/Backhoes			3	
Welders			1	
<b>Architectural Coating</b>	5/1/2018	10/1/2020		633
<b>Total Days</b>				894
This equipment list is based upon equipment inventory within CALEEMOD 2013.2.2. The quantity and types are based upon assumptions from Projects of similar size and scope in the City of San Diego.				

## 4.2 Operational Emissions Calculation Methodology

Once construction is completed the proposed project would generate air quality and GHG emissions from daily operations which would include sources such as Area, Energy, Mobile, Solid waste and Water uses, which are calculated within CalEEMod. Area Sources include usage of fireplaces, consumer products, landscaping and architectural coatings as part of regular maintenance.

The existing use of the property serves a 332-unit apartment complex which was constructed in 1970 and is assumed to have a service population of 900 residents. The Project proposes the redevelopment of this 41-acre rental complex currently known as Penasquitos Village with 601 DU and would likely have a service population of 1,629 residents. Also, it should be noted that the existing 332 unit apartment complex, which was constructed in 1970 would have operated using inefficient construction technologies and the new development would significantly increase building efficiency to include water usage. Also, none of the existing facilities have fireplaces. The existing use CalEEMod calculations are shown in **Attachment A** to this report. The proposed project's estimated emissions are shown in **Attachment B** to this report.

Solid waste generated in the form of trash is also considered within this analysis as the decomposition of organic material breaks down to form GHGs. GHGs from water are also indirectly generated through the conveyance of the resource via pumping throughout the state and as necessary for wastewater treatment.

Finally, the project would also generate GHG through the use of carbon fuel burning vehicles for transportation. The Project traffic engineer estimated that there will be 4,452 daily trips once the project is constructed however, would only add 1,796 trips which were broken down within the Project traffic study (LLG Engineers, 2016). The proposed project's estimated traffic numbers were utilized within the CalEEMod analysis. As mentioned above, the annual CalEEMod inputs are attached to this report.

## 5.0 FINDINGS

### 5.1 Project Related Construction Emissions

Utilizing the CALEEMOD 2013.2.2 inputs for the model as shown in Table 4.1 above, we find that grading and construction of the project will produce approximately 2,764.04 MT of CO<sub>2</sub>e over the construction life of the project. Given the fact that the total emissions will ultimately contribute to 2020 cumulative levels, it is acceptable to average the total construction emissions over a 30-year period which would yield an average of 92.13 MT each year. A summary of the construction emissions is shown in Table 5.1.

**Table 5.1: Expected Annual Construction CO<sub>2</sub>e Emissions Summary**

Year	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e (MT)
2017	0.00	753.60	753.60	0.15	0.00	756.69
2018	0.00	806.08	806.08	0.09	0.00	808.03
2019	0.00	787.73	787.73	0.09	0.00	789.64
2020	0.00	408.47	408.47	0.06	0.00	409.67
<b>Total</b>	<b>0.00</b>	<b>2,755.88</b>	<b>2,755.88</b>	<b>0.39</b>	<b>0.00</b>	<b>2,764.04</b>
<b>Yearly Average Construction Emissions (Metric Tons/year over 30 years)</b>						<b>92.13</b>
Expected Construction emissions are based upon CalEEMod modeling assumptions for equipment and durations listed in Table 4.1 above.						

### 5.2 Existing Project Related Operational Emissions

As previously discussed, emissions generated from area, energy, mobile, solid waste and water uses from the existing project which was constructed in 1970 was also calculated within CalEEMod to show baseline emissions. CalEEMod is largely based on manual and default settings within CalEEMod as explained in Section 4 of this report. These settings which are automatically populated throughout the model are based on the inputted land use and intensities expected at the project site. Statewide averages for utility emissions were utilized for the calculations throughout the model but were adjusted to meet the latest renewable portfolio metrics. The calculated operational emissions for the project were taken at the 2016 scenario. Table 5.2 on the following page shows the estimated emissions from the existing 332 unit operational scenario.

**Table 5.2: Existing 332-Unit Operational Emissions Summary MT/Year**

Year	Bio-CO <sub>2</sub>	NBio-CO <sub>2</sub>	Total CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e (MT/Yr)
Area	0.00	4.03	4.03	0.00	0.00	4.11
Energy	0.00	600.98	600.98	0.02	0.01	603.58
Mobile	0.00	2,184.23	2,184.23	0.10	0.00	2,186.30
Waste	31.00	0.00	31.00	1.83	0.00	69.47
Water	6.86	141.56	148.43	0.71	0.02	168.87
CalEEMod Total (MT/Year)						3,032.34
CalEEMod Estimates within the Model remove emissions for LCFS -10% Reduction						218.63
<b>Total</b>						<b>3,250.97</b>
Data is presented in decimal format and may have rounding errors.						

### 5.3 Proposed Project Related Operation Vehicular Emissions

Similar to the existing project, emissions generated from project (area, energy, mobile, solid waste and water uses) were calculated within CalEEMod. The calculated operational emissions for the proposed project scenario without any reductions from State and Local regulations are identified in Table 5.3 below. Based on this, the project would likely add 6,341.82 MT CO<sub>2</sub>e once fully operational in 2020. It should be noted however, that the existing project (which would be considered within the 2010 baseline calculated within the City's CAP) generates 3,250.97 MT CO<sub>2</sub>e per year. Therefore, the proposed project would add only 3,090.97 MT CO<sub>2</sub>e each year to the 2020 scenario.

**Table 5.3: Proposed 601-Unit Operational Emissions Summary MT/Year**

Year	Bio-CO <sub>2</sub>	NBio-CO <sub>2</sub>	Total CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e (MT/Yr)
Area	620.81	267.65	888.45	0.58	0.05	915.77
Energy	0.00	1,348.98	1,348.98	0.04	0.02	1,354.86
Mobile	0.00	3,210.34	3,210.34	0.13	0.00	3,213.04
Waste	70.43	0.00	70.43	4.16	0.00	157.83
Water	11.66	240.49	252.14	1.21	0.03	286.88
CalEEMod Total (MT/Year)						5,928.38
CalEEMod Estimates within the Model remove emissions for LCFS -10% Reduction						305.28
Construction Emission (Table 5.1)						92.13
<b>601 Unit Total</b>						<b>6,341.82</b>
<b>Existing 332 Unit Total</b>						<b>-3,250.97</b>
<b>Project Increase over BAU</b>						<b>3,090.85</b>
Data is presented in decimal format and may have rounding errors.						

#### 5.4 Project-Related Vehicular Emission Reduction Strategies

Due to the fact that the State of California will require vehicle manufacturers to cut emissions of vehicles under the Advanced Clean Cars program (formerly known as Pavley II and LEV III rules), vehicular emissions are expected to be reduced drastically through 2020 and beyond. Based on ARB-recommended reduction measures, the proposed Project would expect to see GHG emissions reduced by 10% from LCFS, 2.47% from advanced clean cars under vehicle efficiency measures. With the Exception of LCFS, CalEEMod doesn't provide direct calculation algorithms to apply these reductions. Given this, the reductions are post processed to avoid confusion. Advanced Clean Cars would remove 79.362 MT. Furthermore, the effects of LCFS would reduce emissions by 10% or 321.304 MT.

#### 5.5 Indirect Electricity and Natural Gas Design Features

The City of San Diego will require the contractor to utilize the most current building code at the time building permits are issued. As of now, the project would be required to utilize Title 24 (2013). Given this, single-family detached and multi-family home tile 24 electrical use is reduced by 36.4 and 23.3 percent respectively and natural gas consumption is reduced by 6.5 and 3.8 percent respectively. CalEEMod was updated to include these reductions and modeled separately. Furthermore, Title 24 lighting requirements would reduce lighting energy usage intensity by 25% (University of California, Davis, 2015) and was also incorporated within the T24 analysis. Based on this, the Title 24 reductions would reduce emissions by 79.59 MT per year.

#### 5.6 Electrical Utility Reduction Measures

SDGE (the proposed project's energy provider) has calculated and projected that 43.1% of the energy supplied to their customers from renewable sources by 2020 which is roughly 10% higher than is required under S-14-08 (California Public Utilities Commission, 2016). For purposes of this analysis and based on the CAP it is assumed that 12% RPS is in place in 2010. CalEEMod doesn't provide direct calculation algorithms to apply these reductions, so they are post processed using a 31.1% reduction and shown in the final mitigation table below. Based on this, RPS reductions would be 273.96 MT in 2020.

#### 5.7 Water Reductions

The project will be required to install all water fixtures compliant with the 2013 California Green Building Standards codes. As such, CalEEMod was updated to include Low Flow fixtures in the mitigation section. Based on this, the project would reduce GHG emissions by

24.348 MT per year. Furthermore, offsite effects of RPS requirements for utility providers would further reduce GHG emissions from water sources by 49.086 MT.

#### 5.8 Project Related Solid Waste Emissions Reductions

Under AB 341, the Project would ultimately be required to increase diversion of waste from landfills to recycling centers by 75% or 25% more than requirements set forth under the Integrated Waste Management Act of 1989 which was considered BAU. The Project would provide separate waste containers to allow for simpler material separations or the Project would pay for a waste collection service that recycles the materials in accordance with AB 341. All green waste will be diverted from landfills and recycled as mulch. For purposes of this analysis, only a 25% reduction in GHGs was applied as a conservative reduction calculation approach. This effort would reduce GHGs by 39.46 metric tons as calculated by CalEEMod.

#### 5.9 Area Source Reductions

The project would be conditioned to not install hearth options within any of the units. Based on this, eliminating fireplace usage will significantly reduce GHG emissions each year. This effort would reduce GHGs by as much as 908.334 MT as calculated by CalEEMod.

#### 5.10 Reduced GHG Emissions

Combining regulatory reductions and design measures such as Advanced Clean Cars, Low Carbon Fuel Standards, utility renewable portfolio requirements, implementing Title 24 (2013), reducing water consumption through low flow technologies and water saving landscaping practices as well as a mixed use design, the project would see reduced GHG emissions by 1,775.45 MT for a total of 1,315.40 MT CO<sub>2</sub>e per year after mitigation. A reduction of this size would represent a 57.4% reduction to BAU which is greater than the 15% required within the City's CAP. All modeled emission reductions are shown in **Attachment C** to this report.

Therefore, the project conforms to the goals of AB 32 and would not result in any direct GHG impacts, and cumulative GHG impacts would be reduced to below a level of significance. Since the project would reduce emissions by 57.4% in 2020 through mitigation, it is assumed that the project would comply with 2030 and 2050 years as well. Table 5.4 on the following page summarizes these reductions.

## 2020 Efficiency Metric Analysis of Significance

A service population-based analysis was also conducted to identify an efficiency target as necessary to meet the State's GHG reduction goals as set forth in Executive Order S-3-05, Executive Order B-30-15, and AB 32 to achieve the following GHG reductions: 1) reduce emissions to 1990 levels by 2020; 2) reduce emissions to 40% below 1990 levels by 2030; and 3) reduce emissions to 80% below 1990 levels by 2050. A service population-based analysis establishes an efficiency target based on total service population (i.e., residents plus employees) within a given area.

The purpose of this analysis is to provide additional project-level analysis of the GHG emissions associated with the Project in response to the California Supreme Court's decision published on November 30, 2015 in *Center for Biological Diversity v. California Department of Fish and Wildlife* (Case No. 217763) (the Newhall Ranch Case), which permits lead agencies to either use the business as usual (BAU) methodology with supplemental information about the relationship between a project and the assumptions in the state's Scoping Plan or to use other methodologies. Given the difficulties associated with trying to provide supplemental information about the relationship between the Project and the assumptions in the state's Scoping Plan for achieving state GHG reduction targets by 2020, this analysis used the following method to clarify and confirm whether the Project's GHG emissions impacts are cumulatively considerable and whether impacts are less than significant.

Based on the City of San Diego data available from SANDAG and the City's Climate Action Plan, an efficiency ratio of 4.64 MT CO<sub>2</sub>e/year/service person is required to meet the 2020 CAP goals and an efficiency ratio of 3.02 MT CO<sub>2</sub>e per service person is required in 2030. The proposed project would demolish and remove 332 units and then construct 601 residential units or add 269 units. It is anticipated that each residential unit will have 2.71 people per SANDAG's Series 12 Regional Growth Forecast for the year 2020. Therefore, the net increase in service population of the project would be 729 or (2.71\*269). Based on the project's reduced GHG emissions of 1,315.40 MT and a net increase in service population of 729, the project would have an efficiency ratio of 1.80 MT CO<sub>2</sub>e/year/service population. Accordingly, because the project's efficiency ratio is below the required 2020 and 2030 thresholds of 4.64 and 3.02 MT CO<sub>2</sub>e/year/service population, the project would meet the City's CAP goals and would not require further mitigation than proposed in this report.



**Table 5.4: Project Related 2020 GHG Emissions**

<b>CO<sub>2</sub>e Generator (Unmitigated)</b>	<b>Total Project CO<sub>2</sub>e Emissions</b>
	<b>(Metric Tons)</b>
Area (Project)	915.773
Electricity (MF)	649.624
Electricity (SF)	231.289
Natural Gas (MF)	326.963
Natural Gas (SF)	146.983
Mobile (Emissions including LCFS as reported from CalEEMod)	3,213.035
Mobile (CalEEMod removed these emissions from calculations though they would exist prior to LCFS - 10%)	321.304
Waste	157.833
Water	286.878
Construction (Amortized over 30 years)	92.135
<b>Total</b>	<b>6,341.815</b>
<b>CO<sub>2</sub>e Mitigation and Reductions Methodology</b>	<b>CO<sub>2</sub>e Reduction (Metric Tons)</b>
Area - Mitigation Measures - wood burning hearths shall not be used. The project will be conditioned to only include natural gas burning hearth options – (Calculated in CalEEMod)	-908.334
Energy - Electricity – Renewable Portfolio will reduce emissions by 43.1% in 2020 or 31.1 % over 2010 baseline.	-273.964
Energy - Electricity - Project will be required to implement Title 24 2013 standards	-62.420
Energy – Natural Gas - Project will be required to implement Title 24 2013 standards	-17.179
Mobile - Pavely II Plus Tire Pressure Regulations - 2.47% combined reduction	-79.362
Mobile – LCFS reductions reduce emissions by 10%	-321.304
Waste – Project would install recycling bins to and would increase recycling to 75% diversion. – Reduction factor of 25% applied – (Mitigation calculated within CalEEMod)	-39.458
Water – Renewable Portfolio will reduce emissions by 43.1% in 2020 or 31.1 % over 2010 baseline	-49.086
Water – Project would install low flow water fixtures for interior use (Mitigation calculated in CalEEMod)	-24.348
<b>Proposed Project Mitigation Reductions</b>	<b>-1,775.45</b>
<b>Proposed 601-Unit Project Emissions (Unmitigated) - Total</b>	<b>6,341.82</b>
<b>Proposed 332-Unit Baseline Emissions (Unmitigated) - Total</b>	<b>-3,250.97</b>
<b>Proposed Project Increase</b>	<b>1,315.40</b>
<b>Proposed Project Mitigation Reductions</b>	<b>-1,775.45</b>
<b>Proposed 601-Unit Project Emissions (Mitigated) - Total</b>	<b>1,315.40</b>
<b>Combined CO<sub>2</sub>e Reduction (%) considering Existing Project accounted for in 2010 baseline</b>	<b>57.4%</b>
<b>Proposed 601-Unit Project Emissions (Mitigated) - Total</b>	<b>1,315.40</b>
<b>Proposed Increase in Service Population (persons)</b>	<b>729</b>
<b>Efficiency Threshold - Project Emissions/Year/Service Population</b>	<b>1.80</b>

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**ATTACHMENT A**

Existing 332 Unit - CalEEMod Annual Emission Model

**Penasquitos Village. (Existing)**  
**San Diego County, Annual**

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	332.00	Dwelling Unit	41.00	332,000.00	950

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	40
<b>Climate Zone</b>	13			<b>Operational Year</b>	2016
<b>Utility Company</b>	San Diego Gas & Electric				
<b>CO2 Intensity (lb/MWhr)</b>	720.49	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project Site is 41 acres

Construction Phase - No Construction

Off-road Equipment - No Construction

Trips and VMT - no trips

Demolition -

Vehicle Trips - Per Traffic Study and 5.8 miles per trip

Woodstoves - No Fireplaces

Area Coating - 150 g.l.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	50.00	1.00
tblFireplaces	FireplaceDayYear	82.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	NumberGas	182.60	0.00
tblFireplaces	NumberNoFireplace	33.20	332.00
tblFireplaces	NumberWood	116.20	0.00
tblLandUse	LotAcreage	20.75	41.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblVehicleTrips	HO_TL	7.50	5.80
tblVehicleTrips	HS_TL	7.30	5.80
tblVehicleTrips	HW_TL	10.80	5.80
tblVehicleTrips	ST_TR	7.16	8.00
tblVehicleTrips	SU_TR	6.07	8.00
tblVehicleTrips	WD_TR	6.59	8.00
tblWoodstoves	NumberCatalytic	16.60	0.00
tblWoodstoves	NumberNoncatalytic	16.60	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00

## 2.0 Emissions Summary

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## 2.1 Overall Construction

### Unmitigated Construction

[illegible]

### Mitigated Construction

[illegible][illegible]

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.8947	0.0292	2.4995	1.3000e-004		0.0135	0.0135		0.0135	0.0135	0.0000	4.0268	4.0268	4.1000e-003	0.0000	4.1129
Energy	0.0204	0.1745	0.0743	1.1100e-003		0.0141	0.0141		0.0141	0.0141	0.0000	600.9828	600.9828	0.0199	7.0300e-003	603.5797
Mobile	1.6273	3.1711	15.0674	0.0276	1.8723	0.0384	1.9107	0.5008	0.0353	0.5360	0.0000	2,184.2263	2,184.2263	0.0987	0.0000	2,186.2979
Waste						0.0000	0.0000		0.0000	0.0000	31.0008	0.0000	31.0008	1.8321	0.0000	69.4748
Water						0.0000	0.0000		0.0000	0.0000	6.8626	141.5626	148.4251	0.7106	0.0178	168.8714
<b>Total</b>	<b>3.5424</b>	<b>3.3749</b>	<b>17.6411</b>	<b>0.0289</b>	<b>1.8723</b>	<b>0.0660</b>	<b>1.9383</b>	<b>0.5008</b>	<b>0.0629</b>	<b>0.5636</b>	<b>37.8633</b>	<b>2,930.7984</b>	<b>2,968.6618</b>	<b>2.6653</b>	<b>0.0249</b>	<b>3,032.3367</b>

## 2.2 Overall Operational

### Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.8947	0.0292	2.4995	1.3000e-004		0.0135	0.0135		0.0135	0.0135	0.0000	4.0268	4.0268	4.1000e-003	0.0000	4.1129
Energy	0.0204	0.1745	0.0743	1.1100e-003		0.0141	0.0141		0.0141	0.0141	0.0000	600.9828	600.9828	0.0199	7.0300e-003	603.5797
Mobile	1.6273	3.1711	15.0674	0.0276	1.8723	0.0384	1.9107	0.5008	0.0353	0.5360	0.0000	2,184.2263	2,184.2263	0.0987	0.0000	2,186.2979
Waste						0.0000	0.0000		0.0000	0.0000	31.0008	0.0000	31.0008	1.8321	0.0000	69.4748
Water						0.0000	0.0000		0.0000	0.0000	6.8626	141.5626	148.4251	0.7104	0.0178	168.8605
<b>Total</b>	<b>3.5424</b>	<b>3.3749</b>	<b>17.6411</b>	<b>0.0289</b>	<b>1.8723</b>	<b>0.0660</b>	<b>1.9383</b>	<b>0.5008</b>	<b>0.0629</b>	<b>0.5636</b>	<b>37.8633</b>	<b>2,930.7984</b>	<b>2,968.6618</b>	<b>2.6652</b>	<b>0.0248</b>	<b>3,032.3258</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.08</b>	<b>0.00</b>

## 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	1/1/2017	1/2/2017	5	1	

Acres of Grading (Site Preparation Phase): 0



**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

## OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	0.00	81	0.7

### 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	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

### 3.2 Demolition - 2017

### Unmitigated Construction On-Site

[illegible]



### 3.2 Demolition - 2017

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	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	0.0000	0.0000
Worker	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	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

### 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	tons/yr										MT/yr					
Mitigated	1.6273	3.1711	15.0674	0.0276	1.8723	0.0384	1.9107	0.5008	0.0353	0.5360	0.0000	2,184.226 3	2,184.226 3	0.0987	0.0000	2,186.297 9
Unmitigated	1.6273	3.1711	15.0674	0.0276	1.8723	0.0384	1.9107	0.5008	0.0353	0.5360	0.0000	2,184.226 3	2,184.226 3	0.0987	0.0000	2,186.297 9

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,656.00	2,656.00	2656.00	4,979,421	4,979,421
Total	2,656.00	2,656.00	2,656.00	4,979,421	4,979,421

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	5.80	5.80	5.80	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.510118	0.073510	0.192396	0.133166	0.036737	0.005265	0.012605	0.021642	0.001847	0.002083	0.006548	0.000610	0.003471

## 5.0 Energy Detail

### 4.4 Fleet Mix

Historical Energy Use: Y

## 5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	398.8869	398.8869	0.0161	3.3200e-003	400.2539
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	398.8869	398.8869	0.0161	3.3200e-003	400.2539
NaturalGas Mitigated	0.0204	0.1745	0.0743	1.1100e-003		0.0141	0.0141		0.0141	0.0141	0.0000	202.0959	202.0959	3.8700e-003	3.7100e-003	203.3258
NaturalGas Unmitigated	0.0204	0.1745	0.0743	1.1100e-003		0.0141	0.0141		0.0141	0.0141	0.0000	202.0959	202.0959	3.8700e-003	3.7100e-003	203.3258

## 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	tons/yr										MT/yr					
Apartments Low Rise	3.78713e+006	0.0204	0.1745	0.0743	1.1100e-003		0.0141	0.0141		0.0141	0.0141	0.0000	202.0959	202.0959	3.8700e-003	3.7100e-003	203.3258
<b>Total</b>		<b>0.0204</b>	<b>0.1745</b>	<b>0.0743</b>	<b>1.1100e-003</b>		<b>0.0141</b>	<b>0.0141</b>		<b>0.0141</b>	<b>0.0141</b>	<b>0.0000</b>	<b>202.0959</b>	<b>202.0959</b>	<b>3.8700e-003</b>	<b>3.7100e-003</b>	<b>203.3258</b>

## 5.2 Energy by Land Use - NaturalGas

### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	3.78713e+006	0.0204	0.1745	0.0743	1.1100e-003		0.0141	0.0141		0.0141	0.0141	0.0000	202.0959	202.0959	3.8700e-003	3.7100e-003	203.3258
<b>Total</b>		<b>0.0204</b>	<b>0.1745</b>	<b>0.0743</b>	<b>1.1100e-003</b>		<b>0.0141</b>	<b>0.0141</b>		<b>0.0141</b>	<b>0.0141</b>	<b>0.0000</b>	<b>202.0959</b>	<b>202.0959</b>	<b>3.8700e-003</b>	<b>3.7100e-003</b>	<b>203.3258</b>

## 5.3 Energy by Land Use - Electricity

### Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.22055e+006	398.8869	0.0161	3.3200e-003	400.2539
<b>Total</b>		<b>398.8869</b>	<b>0.0161</b>	<b>3.3200e-003</b>	<b>400.2539</b>

## 5.3 Energy by Land Use - Electricity

### Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.22055e+006	398.8869	0.0161	3.3200e-003	400.2539
<b>Total</b>		<b>398.8869</b>	<b>0.0161</b>	<b>3.3200e-003</b>	<b>400.2539</b>

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.8947	0.0292	2.4995	1.3000e-004		0.0135	0.0135		0.0135	0.0135	0.0000	4.0268	4.0268	4.1000e-003	0.0000	4.1129
Unmitigated	1.8947	0.0292	2.4995	1.3000e-004		0.0135	0.0135		0.0135	0.0135	0.0000	4.0268	4.0268	4.1000e-003	0.0000	4.1129

**6.2 Area by SubCategory****Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.5194					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2966					0.0000	0.0000		0.0000	0.0000	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	0.0787	0.0292	2.4995	1.3000e-004		0.0135	0.0135		0.0135	0.0135	0.0000	4.0268	4.0268	4.1000e-003	0.0000	4.1129
<b>Total</b>	<b>1.8947</b>	<b>0.0292</b>	<b>2.4995</b>	<b>1.3000e-004</b>		<b>0.0135</b>	<b>0.0135</b>		<b>0.0135</b>	<b>0.0135</b>	<b>0.0000</b>	<b>4.0268</b>	<b>4.0268</b>	<b>4.1000e-003</b>	<b>0.0000</b>	<b>4.1129</b>



## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.5194					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2966					0.0000	0.0000		0.0000	0.0000	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	0.0787	0.0292	2.4995	1.3000e-004		0.0135	0.0135		0.0135	0.0135	0.0000	4.0268	4.0268	4.1000e-003	0.0000	4.1129
<b>Total</b>	<b>1.8947</b>	<b>0.0292</b>	<b>2.4995</b>	<b>1.3000e-004</b>		<b>0.0135</b>	<b>0.0135</b>		<b>0.0135</b>	<b>0.0135</b>	<b>0.0000</b>	<b>4.0268</b>	<b>4.0268</b>	<b>4.1000e-003</b>	<b>0.0000</b>	<b>4.1129</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	148.4251	0.7104	0.0178	168.8605
Unmitigated	148.4251	0.7106	0.0178	168.8714

## 7.2 Water by Land Use

### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	21.6311 / 13.637	148.4251	0.7106	0.0178	168.8714
<b>Total</b>		<b>148.4251</b>	<b>0.7106</b>	<b>0.0178</b>	<b>168.8714</b>

### Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	21.6311 / 13.637	148.4251	0.7104	0.0178	168.8605
<b>Total</b>		<b>148.4251</b>	<b>0.7104</b>	<b>0.0178</b>	<b>168.8605</b>

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	31.0008	1.8321	0.0000	69.4748
Mitigated	31.0008	1.8321	0.0000	69.4748

**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	152.72	31.0008	1.8321	0.0000	69.4748
<b>Total</b>		<b>31.0008</b>	<b>1.8321</b>	<b>0.0000</b>	<b>69.4748</b>

## 8.2 Waste by Land Use

### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	152.72	31.0008	1.8321	0.0000	69.4748
<b>Total</b>		<b>31.0008</b>	<b>1.8321</b>	<b>0.0000</b>	<b>69.4748</b>

## 9.0 Operational Offroad

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

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**ATTACHMENT B**

Proposed 601 Unit - CalEEMod Annual Emission Model Without Reductions

**Pacific Village - Proposed Project**  
**San Diego County, Annual**

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	277.00	Dwelling Unit	12.00	277,000.00	792
Condo/Townhouse	225.00	Dwelling Unit	25.50	225,000.00	644
Single Family Housing	99.00	Dwelling Unit	11.80	178,200.00	283

### 1.2 Other Project Characteristics

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

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 41 acres

Construction Phase - PS

Off-road Equipment -

Trips and VMT -

Demolition -

Grading - 41 acres

Architectural Coating - 150 g.l.

Vehicle Trips - Traffic Gen

Woodstoves - No Fire Places

Area Coating - 150 g.l.

Energy Use -

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	150.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaCoating	Area_EF_Nonresidential_Interior	250	150
tblAreaCoating	Area_EF_Residential_Exterior	250	150

tblAreaCoating	Area_EF_Residential_Interior	250	150
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00



tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblGrading	AcresOfGrading	187.50	41.00
tblGrading	AcresOfGrading	0.00	41.00
tblLandUse	LotAcreage	17.31	12.00
tblLandUse	LotAcreage	14.06	25.50
tblLandUse	LotAcreage	32.14	11.80
tblProjectCharacteristics	OperationalYear	2014	2020
tblTripsAndVMT	VendorTripNumber	64.00	60.00
tblTripsAndVMT	WorkerTripNumber	397.00	370.00
tblTripsAndVMT	WorkerTripNumber	79.00	74.00
tblVehicleTrips	HO_TL	7.50	5.80
tblVehicleTrips	HO_TL	7.50	5.80
tblVehicleTrips	HO_TL	7.50	5.80
tblVehicleTrips	HS_TL	7.30	5.80

tblVehicleTrips	HS_TL	7.30	5.80
tblVehicleTrips	HS_TL	7.30	5.80
tblVehicleTrips	HW_TL	10.80	5.80
tblVehicleTrips	HW_TL	10.80	5.80
tblVehicleTrips	HW_TL	10.80	5.80
tblVehicleTrips	ST_TR	7.16	6.00
tblVehicleTrips	ST_TR	7.16	8.00
tblVehicleTrips	ST_TR	10.08	10.00
tblVehicleTrips	SU_TR	6.07	6.00
tblVehicleTrips	SU_TR	6.07	8.00
tblVehicleTrips	SU_TR	8.77	10.00
tblVehicleTrips	WD_TR	6.59	6.00
tblVehicleTrips	WD_TR	6.59	8.00
tblVehicleTrips	WD_TR	9.57	10.00
tblWater	IndoorWaterUseRate	18,047,665.10	15,636,966.15
tblWater	OutdoorWaterUseRate	11,377,875.82	9,858,087.35

## 2.0 Emissions Summary

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## 2.1 Overall Construction

### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.6777	6.3960	5.5362	8.6700e-003	0.9061	0.3201	1.2262	0.3566	0.2969	0.6535	0.0000	753.6043	753.6043	0.1470	0.0000	756.6916
2018	0.5612	3.8344	4.9563	0.0101	0.4381	0.2069	0.6451	0.1175	0.1943	0.3118	0.0000	806.0761	806.0761	0.0933	0.0000	808.0343
2019	0.5049	3.4655	4.7220	0.0101	0.4381	0.1790	0.6171	0.1175	0.1681	0.2855	0.0000	787.7312	787.7312	0.0910	0.0000	789.6415
2020	6.6339	1.7865	2.4880	5.3100e-003	0.2093	0.0909	0.3002	0.0561	0.0852	0.1412	0.0000	408.4650	408.4650	0.0573	0.0000	409.6689
<b>Total</b>	<b>8.3777</b>	<b>15.4825</b>	<b>17.7025</b>	<b>0.0342</b>	<b>1.9917</b>	<b>0.7968</b>	<b>2.7885</b>	<b>0.6476</b>	<b>0.7444</b>	<b>1.3920</b>	<b>0.0000</b>	<b>2,755.8766</b>	<b>2,755.8766</b>	<b>0.3886</b>	<b>0.0000</b>	<b>2,764.0363</b>

## 2.1 Overall Construction

### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.1768	0.8785	4.5235	8.6700e-003	0.9061	8.9900e-003	0.9151	0.3566	8.3700e-003	0.3650	0.0000	753.6037	753.6037	0.1470	0.0000	756.6910
2018	0.2555	1.0897	4.9405	0.0101	0.4381	0.0127	0.4508	0.1175	0.0118	0.1292	0.0000	806.0758	806.0758	0.0933	0.0000	808.0339
2019	0.2406	1.0204	4.7600	0.0101	0.4381	0.0121	0.4502	0.1175	0.0112	0.1286	0.0000	787.7308	787.7308	0.0910	0.0000	789.6411
2020	6.4982	0.4451	2.5928	5.3100e-003	0.2093	5.1500e-003	0.2145	0.0561	4.7900e-003	0.0609	0.0000	408.4648	408.4648	0.0573	0.0000	409.6687
Total	7.1712	3.4338	16.8167	0.0342	1.9917	0.0389	2.0306	0.6476	0.0361	0.6837	0.0000	2,755.8751	2,755.8751	0.3886	0.0000	2,764.0347

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	14.40	77.82	5.00	0.00	0.00	95.12	27.18	0.00	95.15	50.88	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	tons/yr										MT/yr					
Area	41.1418	0.5634	50.9326	0.0184		6.5513	6.5513		6.5511	6.5511	620.8076	267.6471	888.4546	0.5800	0.0488	915.7725
Energy	0.0476	0.4068	0.1731	2.6000e-003		0.0329	0.0329		0.0329	0.0329	0.0000	1,348.9829	1,348.9829	0.0444	0.0160	1,354.8583
Mobile	2.1430	3.8321	19.1803	0.0463	3.1385	0.0545	3.1930	0.8394	0.0503	0.8897	0.0000	3,210.3414	3,210.3414	0.1283	0.0000	3,213.0352
Waste						0.0000	0.0000		0.0000	0.0000	70.4277	0.0000	70.4277	4.1622	0.0000	157.8331
Water						0.0000	0.0000		0.0000	0.0000	11.6581	240.4858	252.1439	1.2071	0.0303	286.8780
<b>Total</b>	<b>43.3324</b>	<b>4.8023</b>	<b>70.2860</b>	<b>0.0673</b>	<b>3.1385</b>	<b>6.6387</b>	<b>9.7772</b>	<b>0.8394</b>	<b>6.6343</b>	<b>7.4737</b>	<b>702.8934</b>	<b>5,067.4572</b>	<b>5,770.3506</b>	<b>6.1219</b>	<b>0.0951</b>	<b>5,928.3770</b>

## 2.2 Overall Operational

### Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.4313	0.0518	4.4773	2.4000e-004		0.0246	0.0246		0.0246	0.0246	0.0000	7.2894	7.2894	7.1100e-003	0.0000	7.4387
Energy	0.0476	0.4068	0.1731	2.6000e-003		0.0329	0.0329		0.0329	0.0329	0.0000	1,348.9829	1,348.9829	0.0444	0.0160	1,354.8583
Mobile	2.1430	3.8321	19.1803	0.0463	3.1385	0.0545	3.1930	0.8394	0.0503	0.8897	0.0000	3,210.3414	3,210.3414	0.1283	0.0000	3,213.0352
Waste						0.0000	0.0000		0.0000	0.0000	52.8208	0.0000	52.8208	3.1216	0.0000	118.3748
Water						0.0000	0.0000		0.0000	0.0000	9.3265	209.2114	218.5379	0.9662	0.0243	246.3680
<b>Total</b>	<b>5.6219</b>	<b>4.2906</b>	<b>23.8307</b>	<b>0.0491</b>	<b>3.1385</b>	<b>0.1120</b>	<b>3.2505</b>	<b>0.8394</b>	<b>0.1078</b>	<b>0.9472</b>	<b>62.1473</b>	<b>4,775.8252</b>	<b>4,837.9724</b>	<b>4.2675</b>	<b>0.0403</b>	<b>4,940.0749</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>87.03</b>	<b>10.65</b>	<b>66.09</b>	<b>26.97</b>	<b>0.00</b>	<b>98.31</b>	<b>66.75</b>	<b>0.00</b>	<b>98.37</b>	<b>87.33</b>	<b>91.16</b>	<b>5.75</b>	<b>16.16</b>	<b>30.29</b>	<b>57.64</b>	<b>16.67</b>

## 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	1/1/2017	3/10/2017	5	50	
2	Site Preparation	Site Preparation	3/11/2017	4/21/2017	5	30	
3	Grading	Grading	4/22/2017	8/4/2017	5	75	
4	Building Construction	Building Construction	8/5/2017	6/5/2020	5	740	
5	Paving	Paving	6/6/2020	8/21/2020	5	55	
6	Architectural Coating	Architectural Coating	8/22/2020	11/6/2020	5	55	

**Acres of Grading (Site Preparation Phase): 41**

**Acres of Grading (Grading Phase): 41**

**Acres of Paving: 0**

**Residential Indoor: 1,377,405; Residential Outdoor: 459,135; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**



Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	1,510.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	370.00	60.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	74.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

### 3.2 Demolition - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1654	0.0000	0.1654	0.0251	0.0000	0.0251	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1012	1.0674	0.8473	1.0000e-003		0.0531	0.0531		0.0495	0.0495	0.0000	91.5455	91.5455	0.0251	0.0000	92.0729
<b>Total</b>	<b>0.1012</b>	<b>1.0674</b>	<b>0.8473</b>	<b>1.0000e-003</b>	<b>0.1654</b>	<b>0.0531</b>	<b>0.2186</b>	<b>0.0251</b>	<b>0.0495</b>	<b>0.0745</b>	<b>0.0000</b>	<b>91.5455</b>	<b>91.5455</b>	<b>0.0251</b>	<b>0.0000</b>	<b>92.0729</b>

**3.2 Demolition - 2017****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0148	0.1955	0.1730	5.6000e-004	0.0129	2.5400e-003	0.0154	3.5400e-003	2.3400e-003	5.8700e-003	0.0000	50.6920	50.6920	3.5000e-004	0.0000	50.6994
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	0.0000	0.0000
Worker	1.1700e-003	1.5400e-003	0.0146	4.0000e-005	3.0100e-003	2.0000e-005	3.0300e-003	8.0000e-004	2.0000e-005	8.2000e-004	0.0000	2.6941	2.6941	1.4000e-004	0.0000	2.6970
<b>Total</b>	<b>0.0160</b>	<b>0.1970</b>	<b>0.1876</b>	<b>6.0000e-004</b>	<b>0.0159</b>	<b>2.5600e-003</b>	<b>0.0185</b>	<b>4.3400e-003</b>	<b>2.3600e-003</b>	<b>6.6900e-003</b>	<b>0.0000</b>	<b>53.3862</b>	<b>53.3862</b>	<b>4.9000e-004</b>	<b>0.0000</b>	<b>53.3964</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1654	0.0000	0.1654	0.0251	0.0000	0.0251	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0119	0.0513	0.5956	1.0000e-003		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	91.5454	91.5454	0.0251	0.0000	92.0728
<b>Total</b>	<b>0.0119</b>	<b>0.0513</b>	<b>0.5956</b>	<b>1.0000e-003</b>	<b>0.1654</b>	<b>2.4000e-004</b>	<b>0.1657</b>	<b>0.0251</b>	<b>2.4000e-004</b>	<b>0.0253</b>	<b>0.0000</b>	<b>91.5454</b>	<b>91.5454</b>	<b>0.0251</b>	<b>0.0000</b>	<b>92.0728</b>

**3.2 Demolition - 2017****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0148	0.1955	0.1730	5.6000e-004	0.0129	2.5400e-003	0.0154	3.5400e-003	2.3400e-003	5.8700e-003	0.0000	50.6920	50.6920	3.5000e-004	0.0000	50.6994
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	0.0000	0.0000
Worker	1.1700e-003	1.5400e-003	0.0146	4.0000e-005	3.0100e-003	2.0000e-005	3.0300e-003	8.0000e-004	2.0000e-005	8.2000e-004	0.0000	2.6941	2.6941	1.4000e-004	0.0000	2.6970
<b>Total</b>	<b>0.0160</b>	<b>0.1970</b>	<b>0.1876</b>	<b>6.0000e-004</b>	<b>0.0159</b>	<b>2.5600e-003</b>	<b>0.0185</b>	<b>4.3400e-003</b>	<b>2.3600e-003</b>	<b>6.6900e-003</b>	<b>0.0000</b>	<b>53.3862</b>	<b>53.3862</b>	<b>4.9000e-004</b>	<b>0.0000</b>	<b>53.3964</b>

**3.3 Site Preparation - 2017****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2927	0.0000	0.2927	0.1513	0.0000	0.1513	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0726	0.7763	0.5910	5.9000e-004		0.0413	0.0413		0.0380	0.0380	0.0000	54.4731	54.4731	0.0167	0.0000	54.8236
<b>Total</b>	<b>0.0726</b>	<b>0.7763</b>	<b>0.5910</b>	<b>5.9000e-004</b>	<b>0.2927</b>	<b>0.0413</b>	<b>0.3340</b>	<b>0.1513</b>	<b>0.0380</b>	<b>0.1893</b>	<b>0.0000</b>	<b>54.4731</b>	<b>54.4731</b>	<b>0.0167</b>	<b>0.0000</b>	<b>54.8236</b>

### 3.3 Site Preparation - 2017

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	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	0.0000	0.0000
Worker	8.4000e-004	1.1100e-003	0.0105	3.0000e-005	2.1700e-003	2.0000e-005	2.1800e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.9398	1.9398	1.0000e-004	0.0000	1.9419
<b>Total</b>	<b>8.4000e-004</b>	<b>1.1100e-003</b>	<b>0.0105</b>	<b>3.0000e-005</b>	<b>2.1700e-003</b>	<b>2.0000e-005</b>	<b>2.1800e-003</b>	<b>5.8000e-004</b>	<b>1.0000e-005</b>	<b>5.9000e-004</b>	<b>0.0000</b>	<b>1.9398</b>	<b>1.9398</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>1.9419</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2927	0.0000	0.2927	0.1513	0.0000	0.1513	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1400e-003	0.0309	0.3186	5.9000e-004		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	54.4730	54.4730	0.0167	0.0000	54.8235
<b>Total</b>	<b>7.1400e-003</b>	<b>0.0309</b>	<b>0.3186</b>	<b>5.9000e-004</b>	<b>0.2927</b>	<b>1.4000e-004</b>	<b>0.2929</b>	<b>0.1513</b>	<b>1.4000e-004</b>	<b>0.1515</b>	<b>0.0000</b>	<b>54.4730</b>	<b>54.4730</b>	<b>0.0167</b>	<b>0.0000</b>	<b>54.8235</b>

**3.3 Site Preparation - 2017****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	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	0.0000	0.0000
Worker	8.4000e-004	1.1100e-003	0.0105	3.0000e-005	2.1700e-003	2.0000e-005	2.1800e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.9398	1.9398	1.0000e-004	0.0000	1.9419
<b>Total</b>	<b>8.4000e-004</b>	<b>1.1100e-003</b>	<b>0.0105</b>	<b>3.0000e-005</b>	<b>2.1700e-003</b>	<b>2.0000e-005</b>	<b>2.1800e-003</b>	<b>5.8000e-004</b>	<b>1.0000e-005</b>	<b>5.9000e-004</b>	<b>0.0000</b>	<b>1.9398</b>	<b>1.9398</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>1.9419</b>

**3.4 Grading - 2017****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2476	0.0000	0.2476	0.1265	0.0000	0.1265	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2287	2.6097	1.7552	2.3100e-003		0.1244	0.1244		0.1144	0.1144	0.0000	214.7772	214.7772	0.0658	0.0000	216.1592
<b>Total</b>	<b>0.2287</b>	<b>2.6097</b>	<b>1.7552</b>	<b>2.3100e-003</b>	<b>0.2476</b>	<b>0.1244</b>	<b>0.3720</b>	<b>0.1265</b>	<b>0.1144</b>	<b>0.2409</b>	<b>0.0000</b>	<b>214.7772</b>	<b>214.7772</b>	<b>0.0658</b>	<b>0.0000</b>	<b>216.1592</b>

**3.4 Grading - 2017****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	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	0.0000	0.0000
Worker	2.3300e-003	3.0900e-003	0.0292	7.0000e-005	6.0100e-003	4.0000e-005	6.0600e-003	1.6000e-003	4.0000e-005	1.6400e-003	0.0000	5.3883	5.3883	2.7000e-004	0.0000	5.3940
<b>Total</b>	<b>2.3300e-003</b>	<b>3.0900e-003</b>	<b>0.0292</b>	<b>7.0000e-005</b>	<b>6.0100e-003</b>	<b>4.0000e-005</b>	<b>6.0600e-003</b>	<b>1.6000e-003</b>	<b>4.0000e-005</b>	<b>1.6400e-003</b>	<b>0.0000</b>	<b>5.3883</b>	<b>5.3883</b>	<b>2.7000e-004</b>	<b>0.0000</b>	<b>5.3940</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2476	0.0000	0.2476	0.1265	0.0000	0.1265	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0284	0.1229	1.3042	2.3100e-003		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	214.7770	214.7770	0.0658	0.0000	216.1589
<b>Total</b>	<b>0.0284</b>	<b>0.1229</b>	<b>1.3042</b>	<b>2.3100e-003</b>	<b>0.2476</b>	<b>5.7000e-004</b>	<b>0.2481</b>	<b>0.1265</b>	<b>5.7000e-004</b>	<b>0.1271</b>	<b>0.0000</b>	<b>214.7770</b>	<b>214.7770</b>	<b>0.0658</b>	<b>0.0000</b>	<b>216.1589</b>

**3.4 Grading - 2017****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	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	0.0000	0.0000
Worker	2.3300e-003	3.0900e-003	0.0292	7.0000e-005	6.0100e-003	4.0000e-005	6.0600e-003	1.6000e-003	4.0000e-005	1.6400e-003	0.0000	5.3883	5.3883	2.7000e-004	0.0000	5.3940
<b>Total</b>	<b>2.3300e-003</b>	<b>3.0900e-003</b>	<b>0.0292</b>	<b>7.0000e-005</b>	<b>6.0100e-003</b>	<b>4.0000e-005</b>	<b>6.0600e-003</b>	<b>1.6000e-003</b>	<b>4.0000e-005</b>	<b>1.6400e-003</b>	<b>0.0000</b>	<b>5.3883</b>	<b>5.3883</b>	<b>2.7000e-004</b>	<b>0.0000</b>	<b>5.3940</b>

**3.5 Building Construction - 2017****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1629	1.3863	0.9518	1.4100e-003		0.0935	0.0935		0.0878	0.0878	0.0000	125.7265	125.7265	0.0309	0.0000	126.3763
<b>Total</b>	<b>0.1629</b>	<b>1.3863</b>	<b>0.9518</b>	<b>1.4100e-003</b>		<b>0.0935</b>	<b>0.0935</b>		<b>0.0878</b>	<b>0.0878</b>	<b>0.0000</b>	<b>125.7265</b>	<b>125.7265</b>	<b>0.0309</b>	<b>0.0000</b>	<b>126.3763</b>

### 3.5 Building Construction - 2017

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	0.0000	0.0000
Vendor	0.0328	0.2751	0.4074	7.5000e-004	0.0205	3.9400e-003	0.0244	5.8600e-003	3.6200e-003	9.4800e-003	0.0000	66.8115	66.8115	5.0000e-004	0.0000	66.8221
Worker	0.0604	0.0800	0.7562	1.9200e-003	0.1558	1.1600e-003	0.1569	0.0414	1.0700e-003	0.0425	0.0000	139.5563	139.5563	7.1000e-003	0.0000	139.7052
<b>Total</b>	<b>0.0932</b>	<b>0.3551</b>	<b>1.1636</b>	<b>2.6700e-003</b>	<b>0.1763</b>	<b>5.1000e-003</b>	<b>0.1814</b>	<b>0.0473</b>	<b>4.6900e-003</b>	<b>0.0519</b>	<b>0.0000</b>	<b>206.3677</b>	<b>206.3677</b>	<b>7.6000e-003</b>	<b>0.0000</b>	<b>206.5273</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0171	0.1170	0.9141	1.4100e-003		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	125.7264	125.7264	0.0309	0.0000	126.3762
<b>Total</b>	<b>0.0171</b>	<b>0.1170</b>	<b>0.9141</b>	<b>1.4100e-003</b>		<b>3.2000e-004</b>	<b>3.2000e-004</b>		<b>3.2000e-004</b>	<b>3.2000e-004</b>	<b>0.0000</b>	<b>125.7264</b>	<b>125.7264</b>	<b>0.0309</b>	<b>0.0000</b>	<b>126.3762</b>



### 3.5 Building Construction - 2017

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	0.0000	0.0000
Vendor	0.0328	0.2751	0.4074	7.5000e-004	0.0205	3.9400e-003	0.0244	5.8600e-003	3.6200e-003	9.4800e-003	0.0000	66.8115	66.8115	5.0000e-004	0.0000	66.8221
Worker	0.0604	0.0800	0.7562	1.9200e-003	0.1558	1.1600e-003	0.1569	0.0414	1.0700e-003	0.0425	0.0000	139.5563	139.5563	7.1000e-003	0.0000	139.7052
<b>Total</b>	<b>0.0932</b>	<b>0.3551</b>	<b>1.1636</b>	<b>2.6700e-003</b>	<b>0.1763</b>	<b>5.1000e-003</b>	<b>0.1814</b>	<b>0.0473</b>	<b>4.6900e-003</b>	<b>0.0519</b>	<b>0.0000</b>	<b>206.3677</b>	<b>206.3677</b>	<b>7.6000e-003</b>	<b>0.0000</b>	<b>206.5273</b>

### 3.5 Building Construction - 2018

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3483	3.0355	2.2880	3.5000e-003		0.1950	0.1950		0.1833	0.1833	0.0000	308.9844	308.9844	0.0756	0.0000	310.5723
<b>Total</b>	<b>0.3483</b>	<b>3.0355</b>	<b>2.2880</b>	<b>3.5000e-003</b>		<b>0.1950</b>	<b>0.1950</b>		<b>0.1833</b>	<b>0.1833</b>	<b>0.0000</b>	<b>308.9844</b>	<b>308.9844</b>	<b>0.0756</b>	<b>0.0000</b>	<b>310.5723</b>

**3.5 Building Construction - 2018****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	0.0000	0.0000
Vendor	0.0766	0.6175	0.9680	1.8500e-003	0.0509	9.0800e-003	0.0600	0.0146	8.3500e-003	0.0229	0.0000	163.2212	163.2212	1.2300e-003	0.0000	163.2470
Worker	0.1364	0.1814	1.7004	4.7600e-003	0.3872	2.8300e-003	0.3900	0.1029	2.6200e-003	0.1055	0.0000	333.8705	333.8705	0.0164	0.0000	334.2150
<b>Total</b>	<b>0.2129</b>	<b>0.7989</b>	<b>2.6683</b>	<b>6.6100e-003</b>	<b>0.4381</b>	<b>0.0119</b>	<b>0.4501</b>	<b>0.1175</b>	<b>0.0110</b>	<b>0.1284</b>	<b>0.0000</b>	<b>497.0917</b>	<b>497.0917</b>	<b>0.0176</b>	<b>0.0000</b>	<b>497.4620</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0426	0.2909	2.2721	3.5000e-003		7.9000e-004	7.9000e-004		7.9000e-004	7.9000e-004	0.0000	308.9841	308.9841	0.0756	0.0000	310.5720
<b>Total</b>	<b>0.0426</b>	<b>0.2909</b>	<b>2.2721</b>	<b>3.5000e-003</b>		<b>7.9000e-004</b>	<b>7.9000e-004</b>		<b>7.9000e-004</b>	<b>7.9000e-004</b>	<b>0.0000</b>	<b>308.9841</b>	<b>308.9841</b>	<b>0.0756</b>	<b>0.0000</b>	<b>310.5720</b>

**3.5 Building Construction - 2018****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	0.0000	0.0000
Vendor	0.0766	0.6175	0.9680	1.8500e-003	0.0509	9.0800e-003	0.0600	0.0146	8.3500e-003	0.0229	0.0000	163.2212	163.2212	1.2300e-003	0.0000	163.2470
Worker	0.1364	0.1814	1.7004	4.7600e-003	0.3872	2.8300e-003	0.3900	0.1029	2.6200e-003	0.1055	0.0000	333.8705	333.8705	0.0164	0.0000	334.2150
<b>Total</b>	<b>0.2129</b>	<b>0.7989</b>	<b>2.6683</b>	<b>6.6100e-003</b>	<b>0.4381</b>	<b>0.0119</b>	<b>0.4501</b>	<b>0.1175</b>	<b>0.0110</b>	<b>0.1284</b>	<b>0.0000</b>	<b>497.0917</b>	<b>497.0917</b>	<b>0.0176</b>	<b>0.0000</b>	<b>497.4620</b>

**3.5 Building Construction - 2019****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3069	2.7359	2.2342	3.5000e-003		0.1677	0.1677		0.1577	0.1577	0.0000	305.5302	305.5302	0.0743	0.0000	307.0913
<b>Total</b>	<b>0.3069</b>	<b>2.7359</b>	<b>2.2342</b>	<b>3.5000e-003</b>		<b>0.1677</b>	<b>0.1677</b>		<b>0.1577</b>	<b>0.1577</b>	<b>0.0000</b>	<b>305.5302</b>	<b>305.5302</b>	<b>0.0743</b>	<b>0.0000</b>	<b>307.0913</b>

### 3.5 Building Construction - 2019

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	0.0000	0.0000
Vendor	0.0715	0.5619	0.9238	1.8500e-003	0.0509	8.4400e-003	0.0594	0.0146	7.7700e-003	0.0223	0.0000	160.4088	160.4088	1.2000e-003	0.0000	160.4339
Worker	0.1265	0.1676	1.5640	4.7600e-003	0.3872	2.8100e-003	0.3900	0.1029	2.6000e-003	0.1055	0.0000	321.7922	321.7922	0.0154	0.0000	322.1162
<b>Total</b>	<b>0.1980</b>	<b>0.7295</b>	<b>2.4878</b>	<b>6.6100e-003</b>	<b>0.4381</b>	<b>0.0113</b>	<b>0.4494</b>	<b>0.1175</b>	<b>0.0104</b>	<b>0.1278</b>	<b>0.0000</b>	<b>482.2010</b>	<b>482.2010</b>	<b>0.0166</b>	<b>0.0000</b>	<b>482.5502</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0426	0.2909	2.2721	3.5000e-003		7.9000e-004	7.9000e-004		7.9000e-004	7.9000e-004	0.0000	305.5299	305.5299	0.0743	0.0000	307.0909
<b>Total</b>	<b>0.0426</b>	<b>0.2909</b>	<b>2.2721</b>	<b>3.5000e-003</b>		<b>7.9000e-004</b>	<b>7.9000e-004</b>		<b>7.9000e-004</b>	<b>7.9000e-004</b>	<b>0.0000</b>	<b>305.5299</b>	<b>305.5299</b>	<b>0.0743</b>	<b>0.0000</b>	<b>307.0909</b>

**3.5 Building Construction - 2019****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	0.0000	0.0000
Vendor	0.0715	0.5619	0.9238	1.8500e-003	0.0509	8.4400e-003	0.0594	0.0146	7.7700e-003	0.0223	0.0000	160.4088	160.4088	1.2000e-003	0.0000	160.4339
Worker	0.1265	0.1676	1.5640	4.7600e-003	0.3872	2.8100e-003	0.3900	0.1029	2.6000e-003	0.1055	0.0000	321.7922	321.7922	0.0154	0.0000	322.1162
<b>Total</b>	<b>0.1980</b>	<b>0.7295</b>	<b>2.4878</b>	<b>6.6100e-003</b>	<b>0.4381</b>	<b>0.0113</b>	<b>0.4494</b>	<b>0.1175</b>	<b>0.0104</b>	<b>0.1278</b>	<b>0.0000</b>	<b>482.2010</b>	<b>482.2010</b>	<b>0.0166</b>	<b>0.0000</b>	<b>482.5502</b>

**3.5 Building Construction - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1193	1.0782	0.9497	1.5100e-003		0.0629	0.0629		0.0591	0.0591	0.0000	130.3172	130.3172	0.0318	0.0000	130.9839
<b>Total</b>	<b>0.1193</b>	<b>1.0782</b>	<b>0.9497</b>	<b>1.5100e-003</b>		<b>0.0629</b>	<b>0.0629</b>		<b>0.0591</b>	<b>0.0591</b>	<b>0.0000</b>	<b>130.3172</b>	<b>130.3172</b>	<b>0.0318</b>	<b>0.0000</b>	<b>130.9839</b>

**3.5 Building Construction - 2020****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	0.0000	0.0000
Vendor	0.0293	0.2072	0.3863	8.0000e-004	0.0221	3.2800e-003	0.0253	6.3100e-003	3.0100e-003	9.3200e-003	0.0000	67.8609	67.8609	5.0000e-004	0.0000	67.8714
Worker	0.0518	0.0678	0.6328	2.0600e-003	0.1676	1.2200e-003	0.1689	0.0446	1.1300e-003	0.0457	0.0000	133.7059	133.7059	6.3500e-003	0.0000	133.8393
<b>Total</b>	<b>0.0811</b>	<b>0.2750</b>	<b>1.0191</b>	<b>2.8600e-003</b>	<b>0.1897</b>	<b>4.5000e-003</b>	<b>0.1942</b>	<b>0.0509</b>	<b>4.1400e-003</b>	<b>0.0550</b>	<b>0.0000</b>	<b>201.5668</b>	<b>201.5668</b>	<b>6.8500e-003</b>	<b>0.0000</b>	<b>201.7108</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0185	0.1259	0.9837	1.5100e-003		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	130.3170	130.3170	0.0318	0.0000	130.9838
<b>Total</b>	<b>0.0185</b>	<b>0.1259</b>	<b>0.9837</b>	<b>1.5100e-003</b>		<b>3.4000e-004</b>	<b>3.4000e-004</b>		<b>3.4000e-004</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>130.3170</b>	<b>130.3170</b>	<b>0.0318</b>	<b>0.0000</b>	<b>130.9838</b>

### 3.5 Building Construction - 2020

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	0.0000	0.0000
Vendor	0.0293	0.2072	0.3863	8.0000e-004	0.0221	3.2800e-003	0.0253	6.3100e-003	3.0100e-003	9.3200e-003	0.0000	67.8609	67.8609	5.0000e-004	0.0000	67.8714
Worker	0.0518	0.0678	0.6328	2.0600e-003	0.1676	1.2200e-003	0.1689	0.0446	1.1300e-003	0.0457	0.0000	133.7059	133.7059	6.3500e-003	0.0000	133.8393
<b>Total</b>	<b>0.0811</b>	<b>0.2750</b>	<b>1.0191</b>	<b>2.8600e-003</b>	<b>0.1897</b>	<b>4.5000e-003</b>	<b>0.1942</b>	<b>0.0509</b>	<b>4.1400e-003</b>	<b>0.0550</b>	<b>0.0000</b>	<b>201.5668</b>	<b>201.5668</b>	<b>6.8500e-003</b>	<b>0.0000</b>	<b>201.7108</b>

### 3.6 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	tons/yr										MT/yr					
Off-Road	0.0366	0.3791	0.3947	6.1000e-004		0.0203	0.0203		0.0187	0.0187	0.0000	53.9057	53.9057	0.0174	0.0000	54.2718
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0366</b>	<b>0.3791</b>	<b>0.3947</b>	<b>6.1000e-004</b>		<b>0.0203</b>	<b>0.0203</b>		<b>0.0187</b>	<b>0.0187</b>	<b>0.0000</b>	<b>53.9057</b>	<b>53.9057</b>	<b>0.0174</b>	<b>0.0000</b>	<b>54.2718</b>

**3.6 Paving - 2020****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	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	0.0000	0.0000
Worker	1.0200e-003	1.3400e-003	0.0125	4.0000e-005	3.3100e-003	2.0000e-005	3.3300e-003	8.8000e-004	2.0000e-005	9.0000e-004	0.0000	2.6383	2.6383	1.3000e-004	0.0000	2.6409
<b>Total</b>	<b>1.0200e-003</b>	<b>1.3400e-003</b>	<b>0.0125</b>	<b>4.0000e-005</b>	<b>3.3100e-003</b>	<b>2.0000e-005</b>	<b>3.3300e-003</b>	<b>8.8000e-004</b>	<b>2.0000e-005</b>	<b>9.0000e-004</b>	<b>0.0000</b>	<b>2.6383</b>	<b>2.6383</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>2.6409</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.5500e-003	0.0327	0.4655	6.1000e-004		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	53.9056	53.9056	0.0174	0.0000	54.2717
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>7.5500e-003</b>	<b>0.0327</b>	<b>0.4655</b>	<b>6.1000e-004</b>		<b>1.5000e-004</b>	<b>1.5000e-004</b>		<b>1.5000e-004</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>53.9056</b>	<b>53.9056</b>	<b>0.0174</b>	<b>0.0000</b>	<b>54.2717</b>



**3.6 Paving - 2020****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	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	0.0000	0.0000
Worker	1.0200e-003	1.3400e-003	0.0125	4.0000e-005	3.3100e-003	2.0000e-005	3.3300e-003	8.8000e-004	2.0000e-005	9.0000e-004	0.0000	2.6383	2.6383	1.3000e-004	0.0000	2.6409
<b>Total</b>	<b>1.0200e-003</b>	<b>1.3400e-003</b>	<b>0.0125</b>	<b>4.0000e-005</b>	<b>3.3100e-003</b>	<b>2.0000e-005</b>	<b>3.3300e-003</b>	<b>8.8000e-004</b>	<b>2.0000e-005</b>	<b>9.0000e-004</b>	<b>0.0000</b>	<b>2.6383</b>	<b>2.6383</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>2.6409</b>

**3.7 Architectural Coating - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	6.3843					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6600e-003	0.0463	0.0504	8.0000e-005		3.0500e-003	3.0500e-003		3.0500e-003	3.0500e-003	0.0000	7.0215	7.0215	5.4000e-004	0.0000	7.0329
<b>Total</b>	<b>6.3909</b>	<b>0.0463</b>	<b>0.0504</b>	<b>8.0000e-005</b>		<b>3.0500e-003</b>	<b>3.0500e-003</b>		<b>3.0500e-003</b>	<b>3.0500e-003</b>	<b>0.0000</b>	<b>7.0215</b>	<b>7.0215</b>	<b>5.4000e-004</b>	<b>0.0000</b>	<b>7.0329</b>

### 3.7 Architectural Coating - 2020

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	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	0.0000	0.0000
Worker	5.0400e-003	6.6000e-003	0.0616	2.0000e-004	0.0163	1.2000e-004	0.0164	4.3400e-003	1.1000e-004	4.4500e-003	0.0000	13.0156	13.0156	6.2000e-004	0.0000	13.0286
<b>Total</b>	<b>5.0400e-003</b>	<b>6.6000e-003</b>	<b>0.0616</b>	<b>2.0000e-004</b>	<b>0.0163</b>	<b>1.2000e-004</b>	<b>0.0164</b>	<b>4.3400e-003</b>	<b>1.1000e-004</b>	<b>4.4500e-003</b>	<b>0.0000</b>	<b>13.0156</b>	<b>13.0156</b>	<b>6.2000e-004</b>	<b>0.0000</b>	<b>13.0286</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	6.3843					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.2000e-004	3.5400e-003	0.0504	8.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	7.0214	7.0214	5.4000e-004	0.0000	7.0329
<b>Total</b>	<b>6.3851</b>	<b>3.5400e-003</b>	<b>0.0504</b>	<b>8.0000e-005</b>		<b>2.0000e-005</b>	<b>2.0000e-005</b>		<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>7.0214</b>	<b>7.0214</b>	<b>5.4000e-004</b>	<b>0.0000</b>	<b>7.0329</b>

### 3.7 Architectural Coating - 2020

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	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	0.0000	0.0000
Worker	5.0400e-003	6.6000e-003	0.0616	2.0000e-004	0.0163	1.2000e-004	0.0164	4.3400e-003	1.1000e-004	4.4500e-003	0.0000	13.0156	13.0156	6.2000e-004	0.0000	13.0286
<b>Total</b>	<b>5.0400e-003</b>	<b>6.6000e-003</b>	<b>0.0616</b>	<b>2.0000e-004</b>	<b>0.0163</b>	<b>1.2000e-004</b>	<b>0.0164</b>	<b>4.3400e-003</b>	<b>1.1000e-004</b>	<b>4.4500e-003</b>	<b>0.0000</b>	<b>13.0156</b>	<b>13.0156</b>	<b>6.2000e-004</b>	<b>0.0000</b>	<b>13.0286</b>

### 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	tons/yr										MT/yr					
Mitigated	2.1430	3.8321	19.1803	0.0463	3.1385	0.0545	3.1930	0.8394	0.0503	0.8897	0.0000	3,210.3414	3,210.3414	0.1283	0.0000	3,213.0352
Unmitigated	2.1430	3.8321	19.1803	0.0463	3.1385	0.0545	3.1930	0.8394	0.0503	0.8897	0.0000	3,210.3414	3,210.3414	0.1283	0.0000	3,213.0352

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,662.00	1,662.00	1662.00	3,115,888	3,115,888
Condo/Townhouse	1,800.00	1,800.00	1800.00	3,374,608	3,374,608
Single Family Housing	990.00	990.00	990.00	1,856,034	1,856,034
Total	4,452.00	4,452.00	4,452.00	8,346,529	8,346,529

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	5.80	5.80	5.80	41.60	18.80	39.60	86	11	3
Condo/Townhouse	5.80	5.80	5.80	41.60	18.80	39.60	86	11	3
Single Family Housing	5.80	5.80	5.80	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

## 5.0 Energy Detail

### 5.1 Fleet Mix

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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	877.9041	877.9041	0.0353	7.3100e-003	880.9126
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	877.9041	877.9041	0.0353	7.3100e-003	880.9126
NaturalGas Mitigated	0.0476	0.4068	0.1731	2.6000e-003		0.0329	0.0329		0.0329	0.0329	0.0000	471.0788	471.0788	9.0300e-003	8.6400e-003	473.9457
NaturalGas Unmitigated	0.0476	0.4068	0.1731	2.6000e-003		0.0329	0.0329		0.0329	0.0329	0.0000	471.0788	471.0788	9.0300e-003	8.6400e-003	473.9457

## 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	tons/yr										MT/yr					
Condo/Townhouse	3.10299e+006	0.0167	0.1430	0.0608	9.1000e-004		0.0116	0.0116		0.0116	0.0116	0.0000	165.5872	165.5872	3.1700e-003	3.0400e-003	166.5949
Single Family Housing	2.7377e+006	0.0148	0.1262	0.0537	8.1000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	146.0939	146.0939	2.8000e-003	2.6800e-003	146.9830
Apartments Low Rise	2.987e+006	0.0161	0.1376	0.0586	8.8000e-004		0.0111	0.0111		0.0111	0.0111	0.0000	159.3978	159.3978	3.0600e-003	2.9200e-003	160.3679
<b>Total</b>		<b>0.0476</b>	<b>0.4068</b>	<b>0.1731</b>	<b>2.6000e-003</b>		<b>0.0329</b>	<b>0.0329</b>		<b>0.0329</b>	<b>0.0329</b>	<b>0.0000</b>	<b>471.0788</b>	<b>471.0788</b>	<b>9.0300e-003</b>	<b>8.6400e-003</b>	<b>473.9457</b>

## 5.2 Energy by Land Use - NaturalGas

### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	3.10299e+006	0.0167	0.1430	0.0608	9.1000e-004		0.0116	0.0116		0.0116	0.0116	0.0000	165.5872	165.5872	3.1700e-003	3.0400e-003	166.5949
Single Family Housing	2.7377e+006	0.0148	0.1262	0.0537	8.1000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	146.0939	146.0939	2.8000e-003	2.6800e-003	146.9830
Apartments Low Rise	2.987e+006	0.0161	0.1376	0.0586	8.8000e-004		0.0111	0.0111		0.0111	0.0111	0.0000	159.3978	159.3978	3.0600e-003	2.9200e-003	160.3679
<b>Total</b>		<b>0.0476</b>	<b>0.4068</b>	<b>0.1731</b>	<b>2.6000e-003</b>		<b>0.0329</b>	<b>0.0329</b>		<b>0.0329</b>	<b>0.0329</b>	<b>0.0000</b>	<b>471.0788</b>	<b>471.0788</b>	<b>9.0300e-003</b>	<b>8.6400e-003</b>	<b>473.9457</b>

## 5.3 Energy by Land Use - Electricity

### Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.0058e+006	328.7027	0.0132	2.7400e-003	329.8291
Condo/Townhouse	975195	318.7023	0.0128	2.6500e-003	319.7944
Single Family Housing	705303	230.4991	9.2800e-003	1.9200e-003	231.2890
<b>Total</b>		<b>877.9041</b>	<b>0.0353</b>	<b>7.3100e-003</b>	<b>880.9126</b>

### 5.3 Energy by Land Use - Electricity

#### Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.0058e+006	328.7027	0.0132	2.7400e-003	329.8291
Condo/Townhouse	975195	318.7023	0.0128	2.6500e-003	319.7944
Single Family Housing	705303	230.4991	9.2800e-003	1.9200e-003	231.2890
<b>Total</b>		<b>877.9041</b>	<b>0.0353</b>	<b>7.3100e-003</b>	<b>880.9126</b>

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.4313	0.0518	4.4773	2.4000e-004		0.0246	0.0246		0.0246	0.0246	0.0000	7.2894	7.2894	7.1100e-003	0.0000	7.4387
Unmitigated	41.1418	0.5634	50.9326	0.0184		6.5513	6.5513		6.5511	6.5511	620.8076	267.6471	888.4546	0.5800	0.0488	915.7725

**6.2 Area by SubCategory****Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.6384					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.6565					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	37.7105	0.5116	46.4552	0.0182		6.5267	6.5267		6.5265	6.5265	620.8076	260.3576	881.1652	0.5729	0.0488	908.3339
Landscaping	0.1363	0.0518	4.4773	2.4000e-004		0.0246	0.0246		0.0246	0.0246	0.0000	7.2894	7.2894	7.1100e-003	0.0000	7.4387
<b>Total</b>	<b>41.1418</b>	<b>0.5634</b>	<b>50.9326</b>	<b>0.0184</b>		<b>6.5513</b>	<b>6.5513</b>		<b>6.5511</b>	<b>6.5511</b>	<b>620.8076</b>	<b>267.6471</b>	<b>888.4546</b>	<b>0.5800</b>	<b>0.0488</b>	<b>915.7725</b>



## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.6384					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.6565					0.0000	0.0000		0.0000	0.0000	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	0.1363	0.0518	4.4773	2.4000e-004		0.0246	0.0246		0.0246	0.0246	0.0000	7.2894	7.2894	7.1100e-003	0.0000	7.4387
<b>Total</b>	<b>3.4313</b>	<b>0.0518</b>	<b>4.4773</b>	<b>2.4000e-004</b>		<b>0.0246</b>	<b>0.0246</b>		<b>0.0246</b>	<b>0.0246</b>	<b>0.0000</b>	<b>7.2894</b>	<b>7.2894</b>	<b>7.1100e-003</b>	<b>0.0000</b>	<b>7.4387</b>

## 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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	218.5379	0.9662	0.0243	246.3680
Unmitigated	252.1439	1.2071	0.0303	286.8780

## 7.2 Water by Land Use

### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	15.637 / 9.85809	107.2953	0.5137	0.0129	122.0757
Condo/Townhouse	14.6597 / 9.24196	100.5893	0.4816	0.0121	114.4460
Single Family Housing	6.45025 / 4.06646	44.2593	0.2119	5.3100e-003	50.3562
<b>Total</b>		<b>252.1439</b>	<b>1.2071</b>	<b>0.0303</b>	<b>286.8780</b>

## 7.2 Water by Land Use

### Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	12.5096 / 9.85809	92.9949	0.4111	0.0104	104.8374
Condo/Townhouse	11.7277 / 9.24196	87.1827	0.3854	9.7000e-003	98.2851
Single Family Housing	5.1602 / 4.06646	38.3604	0.1696	4.2700e-003	43.2454
<b>Total</b>		<b>218.5379</b>	<b>0.9662</b>	<b>0.0243</b>	<b>246.3680</b>

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	52.8208	3.1216	0.0000	118.3748
Unmitigated	70.4277	4.1622	0.0000	157.8331

**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	127.42	25.8651	1.5286	0.0000	57.9654
Condo/Townhouse	103.5	21.0096	1.2416	0.0000	47.0838
Single Family Housing	116.03	23.5530	1.3919	0.0000	52.7839
<b>Total</b>		<b>70.4277</b>	<b>4.1622</b>	<b>0.0000</b>	<b>157.8331</b>

## 8.2 Waste by Land Use

### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	95.565	19.3988	1.1464	0.0000	43.4740
Condo/Townhouse	77.625	15.7572	0.9312	0.0000	35.3128
Single Family Housing	87.0225	17.6648	1.0440	0.0000	39.5879
<b>Total</b>		<b>52.8208</b>	<b>3.1216</b>	<b>0.0000</b>	<b>118.3748</b>

## 9.0 Operational Offroad

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

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## **ATTACHMENT C**

Proposed 601 Unit - CalEEMod Annual Emission Model with Reductions

**Pacific Village - Proposed Project with T24 Reductions**  
**San Diego County, Annual**

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	277.00	Dwelling Unit	12.00	277,000.00	792
Condo/Townhouse	225.00	Dwelling Unit	25.50	225,000.00	644
Single Family Housing	99.00	Dwelling Unit	11.80	178,200.00	283

### 1.2 Other Project Characteristics

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

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 41 acres

Construction Phase -

Off-road Equipment -

Trips and VMT -

Demolition -

Grading - 41 acres

Architectural Coating - 150 g.l.

Vehicle Trips - Traffic Gen

Woodstoves - No Fire Places

Area Coating - 150 g.l.

Energy Use - T24 Corrections SFE - 36.4%, MFE - 23.3%, SFNG - 6.5%, MFNG - 3.8%, Lighting Energy Intensity 25%

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	150.00
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3



tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
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tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblEnergyUse	LightingElect	810.36	607.77
tblEnergyUse	LightingElect	1,001.10	750.83
tblEnergyUse	LightingElect	1,608.84	1,206.63
tblEnergyUse	T24E	184.75	141.70
tblEnergyUse	T24E	206.69	158.53
tblEnergyUse	T24E	425.62	270.69
tblEnergyUse	T24NG	8,285.40	7,970.55
tblEnergyUse	T24NG	10,789.48	10,379.48
tblEnergyUse	T24NG	21,834.49	20,415.25
tblGrading	AcresOfGrading	187.50	41.00
tblGrading	AcresOfGrading	0.00	41.00
tblLandUse	LotAcreage	17.31	12.00
tblLandUse	LotAcreage	14.06	25.50
tblLandUse	LotAcreage	32.14	11.80
tblProjectCharacteristics	OperationalYear	2014	2020
tblTripsAndVMT	VendorTripNumber	64.00	60.00
tblTripsAndVMT	WorkerTripNumber	397.00	370.00

tblTripsAndVMT	WorkerTripNumber	79.00	74.00
tblVehicleTrips	HO_TL	7.50	5.80
tblVehicleTrips	HO_TL	7.50	5.80
tblVehicleTrips	HO_TL	7.50	5.80
tblVehicleTrips	HS_TL	7.30	5.80
tblVehicleTrips	HS_TL	7.30	5.80
tblVehicleTrips	HS_TL	7.30	5.80
tblVehicleTrips	HW_TL	10.80	5.80
tblVehicleTrips	HW_TL	10.80	5.80
tblVehicleTrips	HW_TL	10.80	5.80
tblVehicleTrips	ST_TR	7.16	6.00
tblVehicleTrips	ST_TR	7.16	8.00
tblVehicleTrips	ST_TR	10.08	10.00
tblVehicleTrips	SU_TR	6.07	6.00
tblVehicleTrips	SU_TR	6.07	8.00
tblVehicleTrips	SU_TR	8.77	10.00
tblVehicleTrips	WD_TR	6.59	6.00
tblVehicleTrips	WD_TR	6.59	8.00
tblVehicleTrips	WD_TR	9.57	10.00

## 2.0 Emissions Summary

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**2.1 Overall Construction****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.6777	6.3960	5.5362	8.6700e-003	0.9061	0.3201	1.2262	0.3566	0.2969	0.6535	0.0000	753.6043	753.6043	0.1470	0.0000	756.6916
2018	0.5612	3.8344	4.9563	0.0101	0.4381	0.2069	0.6451	0.1175	0.1943	0.3118	0.0000	806.0761	806.0761	0.0933	0.0000	808.0343
2019	0.5049	3.4655	4.7220	0.0101	0.4381	0.1790	0.6171	0.1175	0.1681	0.2855	0.0000	787.7312	787.7312	0.0910	0.0000	789.6415
2020	6.6339	1.7865	2.4880	5.3100e-003	0.2093	0.0909	0.3002	0.0561	0.0852	0.1412	0.0000	408.4650	408.4650	0.0573	0.0000	409.6689
<b>Total</b>	<b>8.3777</b>	<b>15.4825</b>	<b>17.7025</b>	<b>0.0342</b>	<b>1.9917</b>	<b>0.7968</b>	<b>2.7885</b>	<b>0.6476</b>	<b>0.7444</b>	<b>1.3920</b>	<b>0.0000</b>	<b>2,755.8766</b>	<b>2,755.8766</b>	<b>0.3886</b>	<b>0.0000</b>	<b>2,764.0363</b>

## 2.1 Overall Construction

### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.1768	0.8785	4.5235	8.6700e-003	1.0751	8.9900e-003	1.0841	0.3981	8.3700e-003	0.4065	0.0000	753.6037	753.6037	0.1470	0.0000	756.6910
2018	0.2555	1.0897	4.9405	0.0101	0.8102	0.0127	0.8229	0.2088	0.0118	0.2206	0.0000	806.0758	806.0758	0.0933	0.0000	808.0339
2019	0.2406	1.0204	4.7600	0.0101	0.8102	0.0121	0.8222	0.2088	0.0112	0.2199	0.0000	787.7308	787.7308	0.0910	0.0000	789.6411
2020	6.4982	0.4451	2.5928	5.3100e-003	0.3874	5.1500e-003	0.3925	0.0998	4.7900e-003	0.1046	0.0000	408.4648	408.4648	0.0573	0.0000	409.6687
Total	7.1712	3.4338	16.8167	0.0342	3.0829	0.0389	3.1218	0.9154	0.0361	0.9515	0.0000	2,755.8751	2,755.8751	0.3886	0.0000	2,764.0347

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	14.40	77.82	5.00	0.00	-54.79	95.12	-11.95	-41.36	95.15	31.64	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	tons/yr										MT/yr					
Area	41.5674	0.5634	50.9326	0.0184		6.5513	6.5513		6.5511	6.5511	620.8076	267.6471	888.4546	0.5800	0.0488	915.7725
Energy	0.0459	0.3920	0.1668	2.5000e-003		0.0317	0.0317		0.0317	0.0317	0.0000	1,269.7015	1,269.7015	0.0415	0.0151	1,275.2598
Mobile	2.1430	3.8321	19.1803	0.0463	5.8217	0.0545	5.8762	1.4980	0.0503	1.5483	0.0000	3,210.3414	3,210.3414	0.1283	0.0000	3,213.0352
Waste						0.0000	0.0000		0.0000	0.0000	70.4277	0.0000	70.4277	4.1622	0.0000	157.8331
Water						0.0000	0.0000		0.0000	0.0000	12.4229	256.2623	268.6852	1.2863	0.0323	305.6980
<b>Total</b>	<b>43.7563</b>	<b>4.7875</b>	<b>70.2797</b>	<b>0.0672</b>	<b>5.8217</b>	<b>6.6375</b>	<b>12.4592</b>	<b>1.4980</b>	<b>6.6331</b>	<b>8.1311</b>	<b>703.6582</b>	<b>5,003.9523</b>	<b>5,707.6105</b>	<b>6.1982</b>	<b>0.0962</b>	<b>5,867.5985</b>

## 2.2 Overall Operational

### Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.8569	0.0518	4.4773	2.4000e-004		0.0246	0.0246		0.0246	0.0246	0.0000	7.2894	7.2894	7.1100e-003	0.0000	7.4387
Energy	0.0459	0.3920	0.1668	2.5000e-003		0.0317	0.0317		0.0317	0.0317	0.0000	1,269.7015	1,269.7015	0.0415	0.0151	1,275.2598
Mobile	2.1430	3.8321	19.1803	0.0463	5.8217	0.0545	5.8762	1.4980	0.0503	1.5483	0.0000	3,210.3414	3,210.3414	0.1283	0.0000	3,213.0352
Waste						0.0000	0.0000		0.0000	0.0000	52.8208	0.0000	52.8208	3.1216	0.0000	118.3748
Water						0.0000	0.0000		0.0000	0.0000	9.9383	222.9363	232.8746	1.0296	0.0259	262.5304
<b>Total</b>	<b>6.0458</b>	<b>4.2759</b>	<b>23.8244</b>	<b>0.0490</b>	<b>5.8217</b>	<b>0.1108</b>	<b>5.9325</b>	<b>1.4980</b>	<b>0.1066</b>	<b>1.6046</b>	<b>62.7591</b>	<b>4,710.2686</b>	<b>4,773.0277</b>	<b>4.3281</b>	<b>0.0410</b>	<b>4,876.6388</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>86.18</b>	<b>10.69</b>	<b>66.10</b>	<b>27.01</b>	<b>0.00</b>	<b>98.33</b>	<b>52.38</b>	<b>0.00</b>	<b>98.39</b>	<b>80.27</b>	<b>91.08</b>	<b>5.87</b>	<b>16.37</b>	<b>30.17</b>	<b>57.34</b>	<b>16.89</b>

## 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	1/1/2017	3/10/2017	5	50	
2	Site Preparation	Site Preparation	3/11/2017	4/21/2017	5	30	
3	Grading	Grading	4/22/2017	8/4/2017	5	75	
4	Building Construction	Building Construction	8/5/2017	6/5/2020	5	740	
5	Paving	Paving	6/6/2020	8/21/2020	5	55	
6	Architectural Coating	Architectural Coating	8/22/2020	11/6/2020	5	55	

**Acres of Grading (Site Preparation Phase): 41**

**Acres of Grading (Grading Phase): 41**

**Acres of Paving: 0**

**Residential Indoor: 1,377,405; Residential Outdoor: 459,135; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**



Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	1,510.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	370.00	60.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	74.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

### 3.2 Demolition - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1654	0.0000	0.1654	0.0251	0.0000	0.0251	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1012	1.0674	0.8473	1.0000e-003		0.0531	0.0531		0.0495	0.0495	0.0000	91.5455	91.5455	0.0251	0.0000	92.0729
<b>Total</b>	<b>0.1012</b>	<b>1.0674</b>	<b>0.8473</b>	<b>1.0000e-003</b>	<b>0.1654</b>	<b>0.0531</b>	<b>0.2186</b>	<b>0.0251</b>	<b>0.0495</b>	<b>0.0745</b>	<b>0.0000</b>	<b>91.5455</b>	<b>91.5455</b>	<b>0.0251</b>	<b>0.0000</b>	<b>92.0729</b>

**3.2 Demolition - 2017****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0148	0.1955	0.1730	5.6000e-004	0.0129	2.5400e-003	0.0154	3.5400e-003	2.3400e-003	5.8700e-003	0.0000	50.6920	50.6920	3.5000e-004	0.0000	50.6994
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	0.0000	0.0000
Worker	1.1700e-003	1.5400e-003	0.0146	4.0000e-005	3.0100e-003	2.0000e-005	3.0300e-003	8.0000e-004	2.0000e-005	8.2000e-004	0.0000	2.6941	2.6941	1.4000e-004	0.0000	2.6970
<b>Total</b>	<b>0.0160</b>	<b>0.1970</b>	<b>0.1876</b>	<b>6.0000e-004</b>	<b>0.0159</b>	<b>2.5600e-003</b>	<b>0.0185</b>	<b>4.3400e-003</b>	<b>2.3600e-003</b>	<b>6.6900e-003</b>	<b>0.0000</b>	<b>53.3862</b>	<b>53.3862</b>	<b>4.9000e-004</b>	<b>0.0000</b>	<b>53.3964</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1654	0.0000	0.1654	0.0251	0.0000	0.0251	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0119	0.0513	0.5956	1.0000e-003		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	91.5454	91.5454	0.0251	0.0000	92.0728
<b>Total</b>	<b>0.0119</b>	<b>0.0513</b>	<b>0.5956</b>	<b>1.0000e-003</b>	<b>0.1654</b>	<b>2.4000e-004</b>	<b>0.1657</b>	<b>0.0251</b>	<b>2.4000e-004</b>	<b>0.0253</b>	<b>0.0000</b>	<b>91.5454</b>	<b>91.5454</b>	<b>0.0251</b>	<b>0.0000</b>	<b>92.0728</b>

**3.2 Demolition - 2017****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0148	0.1955	0.1730	5.6000e-004	0.0226	2.5400e-003	0.0251	5.9200e-003	2.3400e-003	8.2600e-003	0.0000	50.6920	50.6920	3.5000e-004	0.0000	50.6994
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	0.0000	0.0000
Worker	1.1700e-003	1.5400e-003	0.0146	4.0000e-005	5.6100e-003	2.0000e-005	5.6300e-003	1.4400e-003	2.0000e-005	1.4600e-003	0.0000	2.6941	2.6941	1.4000e-004	0.0000	2.6970
<b>Total</b>	<b>0.0160</b>	<b>0.1970</b>	<b>0.1876</b>	<b>6.0000e-004</b>	<b>0.0282</b>	<b>2.5600e-003</b>	<b>0.0308</b>	<b>7.3600e-003</b>	<b>2.3600e-003</b>	<b>9.7200e-003</b>	<b>0.0000</b>	<b>53.3862</b>	<b>53.3862</b>	<b>4.9000e-004</b>	<b>0.0000</b>	<b>53.3964</b>

**3.3 Site Preparation - 2017****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2927	0.0000	0.2927	0.1513	0.0000	0.1513	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0726	0.7763	0.5910	5.9000e-004		0.0413	0.0413		0.0380	0.0380	0.0000	54.4731	54.4731	0.0167	0.0000	54.8236
<b>Total</b>	<b>0.0726</b>	<b>0.7763</b>	<b>0.5910</b>	<b>5.9000e-004</b>	<b>0.2927</b>	<b>0.0413</b>	<b>0.3340</b>	<b>0.1513</b>	<b>0.0380</b>	<b>0.1893</b>	<b>0.0000</b>	<b>54.4731</b>	<b>54.4731</b>	<b>0.0167</b>	<b>0.0000</b>	<b>54.8236</b>

**3.3 Site Preparation - 2017****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	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	0.0000	0.0000
Worker	8.4000e-004	1.1100e-003	0.0105	3.0000e-005	2.1700e-003	2.0000e-005	2.1800e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.9398	1.9398	1.0000e-004	0.0000	1.9419
<b>Total</b>	<b>8.4000e-004</b>	<b>1.1100e-003</b>	<b>0.0105</b>	<b>3.0000e-005</b>	<b>2.1700e-003</b>	<b>2.0000e-005</b>	<b>2.1800e-003</b>	<b>5.8000e-004</b>	<b>1.0000e-005</b>	<b>5.9000e-004</b>	<b>0.0000</b>	<b>1.9398</b>	<b>1.9398</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>1.9419</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2927	0.0000	0.2927	0.1513	0.0000	0.1513	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1400e-003	0.0309	0.3186	5.9000e-004		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	54.4730	54.4730	0.0167	0.0000	54.8235
<b>Total</b>	<b>7.1400e-003</b>	<b>0.0309</b>	<b>0.3186</b>	<b>5.9000e-004</b>	<b>0.2927</b>	<b>1.4000e-004</b>	<b>0.2929</b>	<b>0.1513</b>	<b>1.4000e-004</b>	<b>0.1515</b>	<b>0.0000</b>	<b>54.4730</b>	<b>54.4730</b>	<b>0.0167</b>	<b>0.0000</b>	<b>54.8235</b>

### 3.3 Site Preparation - 2017

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	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	0.0000	0.0000
Worker	8.4000e-004	1.1100e-003	0.0105	3.0000e-005	4.0400e-003	2.0000e-005	4.0600e-003	1.0400e-003	1.0000e-005	1.0500e-003	0.0000	1.9398	1.9398	1.0000e-004	0.0000	1.9419
<b>Total</b>	<b>8.4000e-004</b>	<b>1.1100e-003</b>	<b>0.0105</b>	<b>3.0000e-005</b>	<b>4.0400e-003</b>	<b>2.0000e-005</b>	<b>4.0600e-003</b>	<b>1.0400e-003</b>	<b>1.0000e-005</b>	<b>1.0500e-003</b>	<b>0.0000</b>	<b>1.9398</b>	<b>1.9398</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>1.9419</b>

### 3.4 Grading - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2476	0.0000	0.2476	0.1265	0.0000	0.1265	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2287	2.6097	1.7552	2.3100e-003		0.1244	0.1244		0.1144	0.1144	0.0000	214.7772	214.7772	0.0658	0.0000	216.1592
<b>Total</b>	<b>0.2287</b>	<b>2.6097</b>	<b>1.7552</b>	<b>2.3100e-003</b>	<b>0.2476</b>	<b>0.1244</b>	<b>0.3720</b>	<b>0.1265</b>	<b>0.1144</b>	<b>0.2409</b>	<b>0.0000</b>	<b>214.7772</b>	<b>214.7772</b>	<b>0.0658</b>	<b>0.0000</b>	<b>216.1592</b>

**3.4 Grading - 2017****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	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	0.0000	0.0000
Worker	2.3300e-003	3.0900e-003	0.0292	7.0000e-005	6.0100e-003	4.0000e-005	6.0600e-003	1.6000e-003	4.0000e-005	1.6400e-003	0.0000	5.3883	5.3883	2.7000e-004	0.0000	5.3940
<b>Total</b>	<b>2.3300e-003</b>	<b>3.0900e-003</b>	<b>0.0292</b>	<b>7.0000e-005</b>	<b>6.0100e-003</b>	<b>4.0000e-005</b>	<b>6.0600e-003</b>	<b>1.6000e-003</b>	<b>4.0000e-005</b>	<b>1.6400e-003</b>	<b>0.0000</b>	<b>5.3883</b>	<b>5.3883</b>	<b>2.7000e-004</b>	<b>0.0000</b>	<b>5.3940</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2476	0.0000	0.2476	0.1265	0.0000	0.1265	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0284	0.1229	1.3042	2.3100e-003		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	214.7770	214.7770	0.0658	0.0000	216.1589
<b>Total</b>	<b>0.0284</b>	<b>0.1229</b>	<b>1.3042</b>	<b>2.3100e-003</b>	<b>0.2476</b>	<b>5.7000e-004</b>	<b>0.2481</b>	<b>0.1265</b>	<b>5.7000e-004</b>	<b>0.1271</b>	<b>0.0000</b>	<b>214.7770</b>	<b>214.7770</b>	<b>0.0658</b>	<b>0.0000</b>	<b>216.1589</b>

**3.4 Grading - 2017****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	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	0.0000	0.0000
Worker	2.3300e-003	3.0900e-003	0.0292	7.0000e-005	0.0112	4.0000e-005	0.0113	2.8800e-003	4.0000e-005	2.9200e-003	0.0000	5.3883	5.3883	2.7000e-004	0.0000	5.3940
<b>Total</b>	<b>2.3300e-003</b>	<b>3.0900e-003</b>	<b>0.0292</b>	<b>7.0000e-005</b>	<b>0.0112</b>	<b>4.0000e-005</b>	<b>0.0113</b>	<b>2.8800e-003</b>	<b>4.0000e-005</b>	<b>2.9200e-003</b>	<b>0.0000</b>	<b>5.3883</b>	<b>5.3883</b>	<b>2.7000e-004</b>	<b>0.0000</b>	<b>5.3940</b>

**3.5 Building Construction - 2017****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1629	1.3863	0.9518	1.4100e-003		0.0935	0.0935		0.0878	0.0878	0.0000	125.7265	125.7265	0.0309	0.0000	126.3763
<b>Total</b>	<b>0.1629</b>	<b>1.3863</b>	<b>0.9518</b>	<b>1.4100e-003</b>		<b>0.0935</b>	<b>0.0935</b>		<b>0.0878</b>	<b>0.0878</b>	<b>0.0000</b>	<b>125.7265</b>	<b>125.7265</b>	<b>0.0309</b>	<b>0.0000</b>	<b>126.3763</b>



**3.5 Building Construction - 2017****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	0.0000	0.0000
Vendor	0.0328	0.2751	0.4074	7.5000e-004	0.0205	3.9400e-003	0.0244	5.8600e-003	3.6200e-003	9.4800e-003	0.0000	66.8115	66.8115	5.0000e-004	0.0000	66.8221
Worker	0.0604	0.0800	0.7562	1.9200e-003	0.1558	1.1600e-003	0.1569	0.0414	1.0700e-003	0.0425	0.0000	139.5563	139.5563	7.1000e-003	0.0000	139.7052
<b>Total</b>	<b>0.0932</b>	<b>0.3551</b>	<b>1.1636</b>	<b>2.6700e-003</b>	<b>0.1763</b>	<b>5.1000e-003</b>	<b>0.1814</b>	<b>0.0473</b>	<b>4.6900e-003</b>	<b>0.0519</b>	<b>0.0000</b>	<b>206.3677</b>	<b>206.3677</b>	<b>7.6000e-003</b>	<b>0.0000</b>	<b>206.5273</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0171	0.1170	0.9141	1.4100e-003		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	125.7264	125.7264	0.0309	0.0000	126.3762
<b>Total</b>	<b>0.0171</b>	<b>0.1170</b>	<b>0.9141</b>	<b>1.4100e-003</b>		<b>3.2000e-004</b>	<b>3.2000e-004</b>		<b>3.2000e-004</b>	<b>3.2000e-004</b>	<b>0.0000</b>	<b>125.7264</b>	<b>125.7264</b>	<b>0.0309</b>	<b>0.0000</b>	<b>126.3762</b>

**3.5 Building Construction - 2017****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	0.0000	0.0000
Vendor	0.0328	0.2751	0.4074	7.5000e-004	0.0353	3.9400e-003	0.0392	9.4900e-003	3.6200e-003	0.0131	0.0000	66.8115	66.8115	5.0000e-004	0.0000	66.8221
Worker	0.0604	0.0800	0.7562	1.9200e-003	0.2907	1.1600e-003	0.2918	0.0745	1.0700e-003	0.0756	0.0000	139.5563	139.5563	7.1000e-003	0.0000	139.7052
<b>Total</b>	<b>0.0932</b>	<b>0.3551</b>	<b>1.1636</b>	<b>2.6700e-003</b>	<b>0.3259</b>	<b>5.1000e-003</b>	<b>0.3310</b>	<b>0.0840</b>	<b>4.6900e-003</b>	<b>0.0887</b>	<b>0.0000</b>	<b>206.3677</b>	<b>206.3677</b>	<b>7.6000e-003</b>	<b>0.0000</b>	<b>206.5273</b>

**3.5 Building Construction - 2018****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3483	3.0355	2.2880	3.5000e-003		0.1950	0.1950		0.1833	0.1833	0.0000	308.9844	308.9844	0.0756	0.0000	310.5723
<b>Total</b>	<b>0.3483</b>	<b>3.0355</b>	<b>2.2880</b>	<b>3.5000e-003</b>		<b>0.1950</b>	<b>0.1950</b>		<b>0.1833</b>	<b>0.1833</b>	<b>0.0000</b>	<b>308.9844</b>	<b>308.9844</b>	<b>0.0756</b>	<b>0.0000</b>	<b>310.5723</b>

### 3.5 Building Construction - 2018

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	0.0000	0.0000
Vendor	0.0766	0.6175	0.9680	1.8500e-003	0.0509	9.0800e-003	0.0600	0.0146	8.3500e-003	0.0229	0.0000	163.2212	163.2212	1.2300e-003	0.0000	163.2470
Worker	0.1364	0.1814	1.7004	4.7600e-003	0.3872	2.8300e-003	0.3900	0.1029	2.6200e-003	0.1055	0.0000	333.8705	333.8705	0.0164	0.0000	334.2150
<b>Total</b>	<b>0.2129</b>	<b>0.7989</b>	<b>2.6683</b>	<b>6.6100e-003</b>	<b>0.4381</b>	<b>0.0119</b>	<b>0.4501</b>	<b>0.1175</b>	<b>0.0110</b>	<b>0.1284</b>	<b>0.0000</b>	<b>497.0917</b>	<b>497.0917</b>	<b>0.0176</b>	<b>0.0000</b>	<b>497.4620</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0426	0.2909	2.2721	3.5000e-003		7.9000e-004	7.9000e-004		7.9000e-004	7.9000e-004	0.0000	308.9841	308.9841	0.0756	0.0000	310.5720
<b>Total</b>	<b>0.0426</b>	<b>0.2909</b>	<b>2.2721</b>	<b>3.5000e-003</b>		<b>7.9000e-004</b>	<b>7.9000e-004</b>		<b>7.9000e-004</b>	<b>7.9000e-004</b>	<b>0.0000</b>	<b>308.9841</b>	<b>308.9841</b>	<b>0.0756</b>	<b>0.0000</b>	<b>310.5720</b>

**3.5 Building Construction - 2018****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	0.0000	0.0000
Vendor	0.0766	0.6175	0.9680	1.8500e-003	0.0877	9.0800e-003	0.0968	0.0236	8.3500e-003	0.0320	0.0000	163.2212	163.2212	1.2300e-003	0.0000	163.2470
Worker	0.1364	0.1814	1.7004	4.7600e-003	0.7225	2.8300e-003	0.7253	0.1852	2.6200e-003	0.1878	0.0000	333.8705	333.8705	0.0164	0.0000	334.2150
<b>Total</b>	<b>0.2129</b>	<b>0.7989</b>	<b>2.6683</b>	<b>6.6100e-003</b>	<b>0.8102</b>	<b>0.0119</b>	<b>0.8221</b>	<b>0.2088</b>	<b>0.0110</b>	<b>0.2198</b>	<b>0.0000</b>	<b>497.0917</b>	<b>497.0917</b>	<b>0.0176</b>	<b>0.0000</b>	<b>497.4620</b>

**3.5 Building Construction - 2019****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3069	2.7359	2.2342	3.5000e-003		0.1677	0.1677		0.1577	0.1577	0.0000	305.5302	305.5302	0.0743	0.0000	307.0913
<b>Total</b>	<b>0.3069</b>	<b>2.7359</b>	<b>2.2342</b>	<b>3.5000e-003</b>		<b>0.1677</b>	<b>0.1677</b>		<b>0.1577</b>	<b>0.1577</b>	<b>0.0000</b>	<b>305.5302</b>	<b>305.5302</b>	<b>0.0743</b>	<b>0.0000</b>	<b>307.0913</b>

**3.5 Building Construction - 2019****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	0.0000	0.0000
Vendor	0.0715	0.5619	0.9238	1.8500e-003	0.0509	8.4400e-003	0.0594	0.0146	7.7700e-003	0.0223	0.0000	160.4088	160.4088	1.2000e-003	0.0000	160.4339
Worker	0.1265	0.1676	1.5640	4.7600e-003	0.3872	2.8100e-003	0.3900	0.1029	2.6000e-003	0.1055	0.0000	321.7922	321.7922	0.0154	0.0000	322.1162
<b>Total</b>	<b>0.1980</b>	<b>0.7295</b>	<b>2.4878</b>	<b>6.6100e-003</b>	<b>0.4381</b>	<b>0.0113</b>	<b>0.4494</b>	<b>0.1175</b>	<b>0.0104</b>	<b>0.1278</b>	<b>0.0000</b>	<b>482.2010</b>	<b>482.2010</b>	<b>0.0166</b>	<b>0.0000</b>	<b>482.5502</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0426	0.2909	2.2721	3.5000e-003		7.9000e-004	7.9000e-004		7.9000e-004	7.9000e-004	0.0000	305.5299	305.5299	0.0743	0.0000	307.0909
<b>Total</b>	<b>0.0426</b>	<b>0.2909</b>	<b>2.2721</b>	<b>3.5000e-003</b>		<b>7.9000e-004</b>	<b>7.9000e-004</b>		<b>7.9000e-004</b>	<b>7.9000e-004</b>	<b>0.0000</b>	<b>305.5299</b>	<b>305.5299</b>	<b>0.0743</b>	<b>0.0000</b>	<b>307.0909</b>

### 3.5 Building Construction - 2019

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	0.0000	0.0000
Vendor	0.0715	0.5619	0.9238	1.8500e-003	0.0877	8.4400e-003	0.0961	0.0236	7.7700e-003	0.0314	0.0000	160.4088	160.4088	1.2000e-003	0.0000	160.4339
Worker	0.1265	0.1676	1.5640	4.7600e-003	0.7225	2.8100e-003	0.7253	0.1852	2.6000e-003	0.1878	0.0000	321.7922	321.7922	0.0154	0.0000	322.1162
<b>Total</b>	<b>0.1980</b>	<b>0.7295</b>	<b>2.4878</b>	<b>6.6100e-003</b>	<b>0.8102</b>	<b>0.0113</b>	<b>0.8214</b>	<b>0.2088</b>	<b>0.0104</b>	<b>0.2192</b>	<b>0.0000</b>	<b>482.2010</b>	<b>482.2010</b>	<b>0.0166</b>	<b>0.0000</b>	<b>482.5502</b>

### 3.5 Building Construction - 2020

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1193	1.0782	0.9497	1.5100e-003		0.0629	0.0629		0.0591	0.0591	0.0000	130.3172	130.3172	0.0318	0.0000	130.9839
<b>Total</b>	<b>0.1193</b>	<b>1.0782</b>	<b>0.9497</b>	<b>1.5100e-003</b>		<b>0.0629</b>	<b>0.0629</b>		<b>0.0591</b>	<b>0.0591</b>	<b>0.0000</b>	<b>130.3172</b>	<b>130.3172</b>	<b>0.0318</b>	<b>0.0000</b>	<b>130.9839</b>

**3.5 Building Construction - 2020****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	0.0000	0.0000
Vendor	0.0293	0.2072	0.3863	8.0000e-004	0.0221	3.2800e-003	0.0253	6.3100e-003	3.0100e-003	9.3200e-003	0.0000	67.8609	67.8609	5.0000e-004	0.0000	67.8714
Worker	0.0518	0.0678	0.6328	2.0600e-003	0.1676	1.2200e-003	0.1689	0.0446	1.1300e-003	0.0457	0.0000	133.7059	133.7059	6.3500e-003	0.0000	133.8393
<b>Total</b>	<b>0.0811</b>	<b>0.2750</b>	<b>1.0191</b>	<b>2.8600e-003</b>	<b>0.1897</b>	<b>4.5000e-003</b>	<b>0.1942</b>	<b>0.0509</b>	<b>4.1400e-003</b>	<b>0.0550</b>	<b>0.0000</b>	<b>201.5668</b>	<b>201.5668</b>	<b>6.8500e-003</b>	<b>0.0000</b>	<b>201.7108</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0185	0.1259	0.9837	1.5100e-003		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	130.3170	130.3170	0.0318	0.0000	130.9838
<b>Total</b>	<b>0.0185</b>	<b>0.1259</b>	<b>0.9837</b>	<b>1.5100e-003</b>		<b>3.4000e-004</b>	<b>3.4000e-004</b>		<b>3.4000e-004</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>130.3170</b>	<b>130.3170</b>	<b>0.0318</b>	<b>0.0000</b>	<b>130.9838</b>

### 3.5 Building Construction - 2020

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	0.0000	0.0000
Vendor	0.0293	0.2072	0.3863	8.0000e-004	0.0380	3.2800e-003	0.0412	0.0102	3.0100e-003	0.0132	0.0000	67.8609	67.8609	5.0000e-004	0.0000	67.8714
Worker	0.0518	0.0678	0.6328	2.0600e-003	0.3128	1.2200e-003	0.3140	0.0802	1.1300e-003	0.0813	0.0000	133.7059	133.7059	6.3500e-003	0.0000	133.8393
<b>Total</b>	<b>0.0811</b>	<b>0.2750</b>	<b>1.0191</b>	<b>2.8600e-003</b>	<b>0.3508</b>	<b>4.5000e-003</b>	<b>0.3553</b>	<b>0.0904</b>	<b>4.1400e-003</b>	<b>0.0945</b>	<b>0.0000</b>	<b>201.5668</b>	<b>201.5668</b>	<b>6.8500e-003</b>	<b>0.0000</b>	<b>201.7108</b>

### 3.6 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	tons/yr										MT/yr					
Off-Road	0.0366	0.3791	0.3947	6.1000e-004		0.0203	0.0203		0.0187	0.0187	0.0000	53.9057	53.9057	0.0174	0.0000	54.2718
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0366</b>	<b>0.3791</b>	<b>0.3947</b>	<b>6.1000e-004</b>		<b>0.0203</b>	<b>0.0203</b>		<b>0.0187</b>	<b>0.0187</b>	<b>0.0000</b>	<b>53.9057</b>	<b>53.9057</b>	<b>0.0174</b>	<b>0.0000</b>	<b>54.2718</b>



**3.6 Paving - 2020****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	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	0.0000	0.0000
Worker	1.0200e-003	1.3400e-003	0.0125	4.0000e-005	3.3100e-003	2.0000e-005	3.3300e-003	8.8000e-004	2.0000e-005	9.0000e-004	0.0000	2.6383	2.6383	1.3000e-004	0.0000	2.6409
<b>Total</b>	<b>1.0200e-003</b>	<b>1.3400e-003</b>	<b>0.0125</b>	<b>4.0000e-005</b>	<b>3.3100e-003</b>	<b>2.0000e-005</b>	<b>3.3300e-003</b>	<b>8.8000e-004</b>	<b>2.0000e-005</b>	<b>9.0000e-004</b>	<b>0.0000</b>	<b>2.6383</b>	<b>2.6383</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>2.6409</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.5500e-003	0.0327	0.4655	6.1000e-004		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	53.9056	53.9056	0.0174	0.0000	54.2717
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>7.5500e-003</b>	<b>0.0327</b>	<b>0.4655</b>	<b>6.1000e-004</b>		<b>1.5000e-004</b>	<b>1.5000e-004</b>		<b>1.5000e-004</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>53.9056</b>	<b>53.9056</b>	<b>0.0174</b>	<b>0.0000</b>	<b>54.2717</b>

**3.6 Paving - 2020****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	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	0.0000	0.0000
Worker	1.0200e-003	1.3400e-003	0.0125	4.0000e-005	6.1700e-003	2.0000e-005	6.2000e-003	1.5800e-003	2.0000e-005	1.6000e-003	0.0000	2.6383	2.6383	1.3000e-004	0.0000	2.6409
<b>Total</b>	<b>1.0200e-003</b>	<b>1.3400e-003</b>	<b>0.0125</b>	<b>4.0000e-005</b>	<b>6.1700e-003</b>	<b>2.0000e-005</b>	<b>6.2000e-003</b>	<b>1.5800e-003</b>	<b>2.0000e-005</b>	<b>1.6000e-003</b>	<b>0.0000</b>	<b>2.6383</b>	<b>2.6383</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>2.6409</b>

**3.7 Architectural Coating - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	6.3843					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6600e-003	0.0463	0.0504	8.0000e-005		3.0500e-003	3.0500e-003		3.0500e-003	3.0500e-003	0.0000	7.0215	7.0215	5.4000e-004	0.0000	7.0329
<b>Total</b>	<b>6.3909</b>	<b>0.0463</b>	<b>0.0504</b>	<b>8.0000e-005</b>		<b>3.0500e-003</b>	<b>3.0500e-003</b>		<b>3.0500e-003</b>	<b>3.0500e-003</b>	<b>0.0000</b>	<b>7.0215</b>	<b>7.0215</b>	<b>5.4000e-004</b>	<b>0.0000</b>	<b>7.0329</b>

### 3.7 Architectural Coating - 2020

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	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	0.0000	0.0000
Worker	5.0400e-003	6.6000e-003	0.0616	2.0000e-004	0.0163	1.2000e-004	0.0164	4.3400e-003	1.1000e-004	4.4500e-003	0.0000	13.0156	13.0156	6.2000e-004	0.0000	13.0286
<b>Total</b>	<b>5.0400e-003</b>	<b>6.6000e-003</b>	<b>0.0616</b>	<b>2.0000e-004</b>	<b>0.0163</b>	<b>1.2000e-004</b>	<b>0.0164</b>	<b>4.3400e-003</b>	<b>1.1000e-004</b>	<b>4.4500e-003</b>	<b>0.0000</b>	<b>13.0156</b>	<b>13.0156</b>	<b>6.2000e-004</b>	<b>0.0000</b>	<b>13.0286</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	6.3843					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.2000e-004	3.5400e-003	0.0504	8.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	7.0214	7.0214	5.4000e-004	0.0000	7.0329
<b>Total</b>	<b>6.3851</b>	<b>3.5400e-003</b>	<b>0.0504</b>	<b>8.0000e-005</b>		<b>2.0000e-005</b>	<b>2.0000e-005</b>		<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>7.0214</b>	<b>7.0214</b>	<b>5.4000e-004</b>	<b>0.0000</b>	<b>7.0329</b>

### 3.7 Architectural Coating - 2020

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	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	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	0.0000	0.0000
Worker	5.0400e-003	6.6000e-003	0.0616	2.0000e-004	0.0305	1.2000e-004	0.0306	7.8000e-003	1.1000e-004	7.9100e-003	0.0000	13.0156	13.0156	6.2000e-004	0.0000	13.0286
<b>Total</b>	<b>5.0400e-003</b>	<b>6.6000e-003</b>	<b>0.0616</b>	<b>2.0000e-004</b>	<b>0.0305</b>	<b>1.2000e-004</b>	<b>0.0306</b>	<b>7.8000e-003</b>	<b>1.1000e-004</b>	<b>7.9100e-003</b>	<b>0.0000</b>	<b>13.0156</b>	<b>13.0156</b>	<b>6.2000e-004</b>	<b>0.0000</b>	<b>13.0286</b>

### 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	tons/yr										MT/yr					
Mitigated	2.1430	3.8321	19.1803	0.0463	5.8217	0.0545	5.8762	1.4980	0.0503	1.5483	0.0000	3,210.3414	3,210.3414	0.1283	0.0000	3,213.0352
Unmitigated	2.1430	3.8321	19.1803	0.0463	5.8217	0.0545	5.8762	1.4980	0.0503	1.5483	0.0000	3,210.3414	3,210.3414	0.1283	0.0000	3,213.0352

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,662.00	1,662.00	1662.00	3,115,888	3,115,888
Condo/Townhouse	1,800.00	1,800.00	1800.00	3,374,608	3,374,608
Single Family Housing	990.00	990.00	990.00	1,856,034	1,856,034
Total	4,452.00	4,452.00	4,452.00	8,346,529	8,346,529

## 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	5.80	5.80	5.80	41.60	18.80	39.60	86	11	3
Condo/Townhouse	5.80	5.80	5.80	41.60	18.80	39.60	86	11	3
Single Family Housing	5.80	5.80	5.80	41.60	18.80	39.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

## 5.0 Energy Detail

### 2.4 Fleet Mix

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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	815.6974	815.6974	0.0328	6.7900e-003	818.4927
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	815.6974	815.6974	0.0328	6.7900e-003	818.4927
NaturalGas Mitigated	0.0459	0.3920	0.1668	2.5000e-003		0.0317	0.0317		0.0317	0.0317	0.0000	454.0041	454.0041	8.7000e-003	8.3200e-003	456.7671
NaturalGas Unmitigated	0.0459	0.3920	0.1668	2.5000e-003		0.0317	0.0317		0.0317	0.0317	0.0000	454.0041	454.0041	8.7000e-003	8.3200e-003	456.7671

## 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	tons/yr										MT/yr					
Condo/Townhouse	3.01074e+006	0.0162	0.1387	0.0590	8.9000e-004		0.0112	0.0112		0.0112	0.0112	0.0000	160.6644	160.6644	3.0800e-003	2.9500e-003	161.6421
Single Family Housing	2.59719e+006	0.0140	0.1197	0.0509	7.6000e-004		9.6800e-003	9.6800e-003		9.6800e-003	9.6800e-003	0.0000	138.5960	138.5960	2.6600e-003	2.5400e-003	139.4395
Apartments Low Rise	2.89979e+006	0.0156	0.1336	0.0569	8.5000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	154.7438	154.7438	2.9700e-003	2.8400e-003	155.6855
<b>Total</b>		<b>0.0459</b>	<b>0.3920</b>	<b>0.1668</b>	<b>2.5000e-003</b>		<b>0.0317</b>	<b>0.0317</b>		<b>0.0317</b>	<b>0.0317</b>	<b>0.0000</b>	<b>454.0041</b>	<b>454.0041</b>	<b>8.7100e-003</b>	<b>8.3300e-003</b>	<b>456.7671</b>

## 5.2 Energy by Land Use - NaturalGas

### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	3.01074e+006	0.0162	0.1387	0.0590	8.9000e-004		0.0112	0.0112		0.0112	0.0112	0.0000	160.6644	160.6644	3.0800e-003	2.9500e-003	161.6421
Single Family Housing	2.59719e+006	0.0140	0.1197	0.0509	7.6000e-004		9.6800e-003	9.6800e-003		9.6800e-003	9.6800e-003	0.0000	138.5960	138.5960	2.6600e-003	2.5400e-003	139.4395
Apartments Low Rise	2.89979e+006	0.0156	0.1336	0.0569	8.5000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	154.7438	154.7438	2.9700e-003	2.8400e-003	155.6855
<b>Total</b>		<b>0.0459</b>	<b>0.3920</b>	<b>0.1668</b>	<b>2.5000e-003</b>		<b>0.0317</b>	<b>0.0317</b>		<b>0.0317</b>	<b>0.0317</b>	<b>0.0000</b>	<b>454.0041</b>	<b>454.0041</b>	<b>8.7100e-003</b>	<b>8.3300e-003</b>	<b>456.7671</b>

## 5.3 Energy by Land Use - Electricity

### Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	937753	306.4659	0.0123	2.5500e-003	307.5161
Condo/Townhouse	908048	296.7581	0.0119	2.4700e-003	297.7751
Single Family Housing	650146	212.4734	8.5500e-003	1.7700e-003	213.2015
<b>Total</b>		<b>815.6974</b>	<b>0.0328</b>	<b>6.7900e-003</b>	<b>818.4927</b>

### 5.3 Energy by Land Use - Electricity

#### Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	937753	306.4659	0.0123	2.5500e-003	307.5161
Condo/Townhouse	908048	296.7581	0.0119	2.4700e-003	297.7751
Single Family Housing	650146	212.4734	8.5500e-003	1.7700e-003	213.2015
<b>Total</b>		<b>815.6974</b>	<b>0.0328</b>	<b>6.7900e-003</b>	<b>818.4927</b>

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.8569	0.0518	4.4773	2.4000e-004		0.0246	0.0246		0.0246	0.0246	0.0000	7.2894	7.2894	7.1100e-003	0.0000	7.4387
Unmitigated	41.5674	0.5634	50.9326	0.0184		6.5513	6.5513		6.5511	6.5511	620.8076	267.6471	888.4546	0.5800	0.0488	915.7725



## 6.2 Area by SubCategory

### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.0641					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.6565					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	37.7105	0.5116	46.4552	0.0182		6.5267	6.5267		6.5265	6.5265	620.8076	260.3576	881.1652	0.5729	0.0488	908.3339
Landscaping	0.1363	0.0518	4.4773	2.4000e-004		0.0246	0.0246		0.0246	0.0246	0.0000	7.2894	7.2894	7.1100e-003	0.0000	7.4387
<b>Total</b>	<b>41.5674</b>	<b>0.5634</b>	<b>50.9326</b>	<b>0.0184</b>		<b>6.5513</b>	<b>6.5513</b>		<b>6.5511</b>	<b>6.5511</b>	<b>620.8076</b>	<b>267.6471</b>	<b>888.4546</b>	<b>0.5800</b>	<b>0.0488</b>	<b>915.7725</b>

## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.0641					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.6565					0.0000	0.0000		0.0000	0.0000	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	0.1363	0.0518	4.4773	2.4000e-004		0.0246	0.0246		0.0246	0.0246	0.0000	7.2894	7.2894	7.1100e-003	0.0000	7.4387
<b>Total</b>	<b>3.8569</b>	<b>0.0518</b>	<b>4.4773</b>	<b>2.4000e-004</b>		<b>0.0246</b>	<b>0.0246</b>		<b>0.0246</b>	<b>0.0246</b>	<b>0.0000</b>	<b>7.2894</b>	<b>7.2894</b>	<b>7.1100e-003</b>	<b>0.0000</b>	<b>7.4387</b>

## 7.0 Water Detail

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### 7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	232.8746	1.0296	0.0259	262.5304
Unmitigated	268.6852	1.2863	0.0323	305.6980

## 7.2 Water by Land Use

### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	18.0477 / 11.3779	123.8366	0.5928	0.0149	140.8958
Condo/Townhouse	14.6597 / 9.24196	100.5893	0.4816	0.0121	114.4460
Single Family Housing	6.45025 / 4.06646	44.2593	0.2119	5.3100e-003	50.3562
<b>Total</b>		<b>268.6852</b>	<b>1.2863</b>	<b>0.0323</b>	<b>305.6980</b>

## 7.2 Water by Land Use

### Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	14.4381 / 11.3779	107.3316	0.4745	0.0120	120.9999
Condo/Townhouse	11.7277 / 9.24196	87.1827	0.3854	9.7000e-003	98.2851
Single Family Housing	5.1602 / 4.06646	38.3604	0.1696	4.2700e-003	43.2454
<b>Total</b>		<b>232.8746</b>	<b>1.0296</b>	<b>0.0259</b>	<b>262.5304</b>

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	52.8208	3.1216	0.0000	118.3748
Unmitigated	70.4277	4.1622	0.0000	157.8331

**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	127.42	25.8651	1.5286	0.0000	57.9654
Condo/Townhouse	103.5	21.0096	1.2416	0.0000	47.0838
Single Family Housing	116.03	23.5530	1.3919	0.0000	52.7839
<b>Total</b>		<b>70.4277</b>	<b>4.1622</b>	<b>0.0000</b>	<b>157.8331</b>

## 8.2 Waste by Land Use

### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	95.565	19.3988	1.1464	0.0000	43.4740
Condo/Townhouse	77.625	15.7572	0.9312	0.0000	35.3128
Single Family Housing	87.0225	17.6648	1.0440	0.0000	39.5879
<b>Total</b>		<b>52.8208</b>	<b>3.1216</b>	<b>0.0000</b>	<b>118.3748</b>

## 9.0 Operational Offroad

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

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# Memorandum

DATE: April 25, 2016 FILE: 1323.10

TO: Planning Department, City of San Diego, 1222 1<sup>st</sup> Avenue, San Diego, CA 92121

FROM: Melissa Krause

SUBJECT: Potential Historical Resource Review for Pacific Village (PTS# 470158)

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On behalf of our client, Village Peñasquitos, LP and Lennar Homes of California, we are pleased to submit the Potential Historical Resource Review Packet to you for review. The Pacific Village project proposes 564 multi-family residential units consisting of 99 single-family cluster units, 105 triplex units, 120 3-story townhouses, and 240 apartments on 41.45 acres. This project proposes the demolition of 60 buildings, including an office, storage and laundry facilities. Due to the scope of this project, the applicant has been communicating with historic staff in order to correctly submit the required documents. This packet has been prepared according to instruction given by historic staff and direction from Info Bulletin 580.

Building records for all 59 residential buildings and 1 office building with 10 laundry structures, and 3 storage structures were obtained from the County of San Diego and are included in this package (Attachment A).

The photographic survey (Attachment B) contains elevations of a sampling of 8 existing buildings, selected based on the building model and architecture. There are three basic residential models described in the building records as models A, B, and C. Model C has two different architectural finishes: one with a stone façade and one with a painted brick façade. Therefore, elevations of two buildings for each of the 4 building types are provided.

The site plan (Attachment C) shows the existing buildings and grades. The applicant has coordinated directly with historic Staff and it was deemed this site plan is acceptable.

The additional documents required for discretionary review projects have been included (Attachment D) with the exception of the Sanborn Maps and List of Occupants. The Sanborn Maps were not published after 1956 and the existing structures were built in 1970, therefore the existing structures do not appear on any Sanborn Maps. The List of Occupants was not included because the address for this property was not found in any of the directories from 1968-1984, when the last directory was published. The research assistant at the San Diego History Center informed the applicant that many times properties that were not in the center of the city at the time of the publication of the directories, were not recorded.

List of Attachments:

- A. Building Records
- B. Photographic Survey (hard copy and CD included)
- C. Site Plan
- D. Additional Documents for Discretionary Projects
  - 1. Written Description of Property
  - 2. Written Description of Alterations
  - 3. Notice of Completion
  - 4. Chain of Title
  - 5. List of Occupants
  - 6. Historical Photographs
  - 7. Sanborn Maps



# ATTACHMENT A.

Building Records





CLASS & SHAPE
CONSTRUCTION
STRUCTURAL
EXTERIOR
ROOF
HEATING
RATING (E, G, A, F, P)
ROOMS
FLOORS
FLOOR FINISH
INTERIOR FINISH

Light
Sub-Standard
Standard
Above-Standard
Special

Frame
Box
Conc. Blk.
6"
8"
Adobe
Brick
Slump Blk.
Floor Joist:
Conc. Blk.
Brick
Wood
Piers
Concrete Floor
Insulated Ceil'gs
Insulated Walls
Light
Heavy

Siding
Ply. & Batts
Routed Ply.
Shingle
Shake
B & B
T & G
Brick
Stone
D.H.
Casem't
M.S.
Lvr.
Slid. Gl. Door

Flat
4/4
Pitch
4/4
Hip
4/4
Shed
4/4
Encl. Eaves
Dormers
Raft.
"x"
Gutters
Sm. Rk
Shingle
Shake
Tile
Compo.
Compo. Shingle

Forced
Wall
Floor
Elect. Rad.
Thermo.
Painted Cabs
Oven & Plate
Dishwasher
Break. Bar
Pantry
Refrig.
Ton.
Lumin. Ceil.
Bl-in BBQ
Heat Pump

Wiring
Elect. Fix.
Plumbing
KITCH. DETAILS
Nat. Fin. Cabs
Living
Dining
Family
Bed
Bed
Kitchen
Bain Bd

B
1
2
All
Ent. Hall
Living
Dining
Family
Bed
Bed
Kitchen
Bain Bd

Material
Grade
Dry

Lgth: 12
Ft.
Splish:

DESCRIPTION OF BUILDING

Builder
Per. No.
Date
Amount

E2153
A-7
70800
8/22/68
1969
1970

CONSTRUCTION RECORD

EFFECT. APPR.
YEAR
YEAR

5/14/70
1969
1970

Unit
Area
Unit
Cost

7320
9.30
68076

7320
.40
2928

TOTAL
71004

NORMAL % GOOD
10.0

R.C.I.N.D.
71004
104731

A-31 Rev. 1-68

COMPUTATION

Unit
Area
Unit
Cost

7320
9.30
68076

7320
.40
2928

TOTAL
71004

NORMAL % GOOD
10.0

R.C.I.N.D.
71004
104731

A-31 Rev. 1-68

FIXTURES

FI. No.
Floors
Walls
We. Latub
Type
Grade
Shower

1
10
Dry
1
1
Mod
A
X
X

SPECIAL FEATURES

PULLMANS
NO.
LGTH.

Dressing Area
Wet Bar
Walk-in Closets

MISCELLANEOUS

STRUCTURES	SIZE	Unit Cost	COST
COMPUTATIONS			
D	28 x 3 = 84		
	48 x 149 = 7152		
	28 x 3 = 84		
	7320		
REMARKS:			

4- 1 BR, 1 BA, UNITS  
6- 2 BR, 1 BA, UNITS

Ap-A

571

70

10

28

RESIDENTIAL BUILDING RECORD

DESCRIPTION OF BUILDING										PARCEL	
CLASS & SHAPE	CONSTRUCTION	STRUCTURAL	EXTERIOR	ROOF	HEATING	RATING (E, G, A, F, P)	ROOMS	FLOORS	FLOOR FINISH	INTERIOR FINISH	
D.S. 5	Light	X Frame	X Stucco	Flat 1/4 Pitch	X Forced	A Wiring	All	2	Material	Walls	
	Sub-Standard	Box		X Gable 1/4	Wall	A Elect. Fix.			Carpet	Ceilings	
	X Standard	Conc. Blk.	Siding "x"	Hip 1/4	Floor	A Plumbing				DRY	
	Above-Standard	6" 8"	Ply. & Battis	Shed 1/4	Elect. Rad.	KITCH. DETAILS	Ent. Hall				
	Special	Adobe	Routed Ply.	Encl. Eaves	X Thermo.	X Nat. Fin. Cabs	Living				
	FOUNDATION	Brick	Shingle	Dormers			Painted Cabs	Dining			
		Slump Blk.	Shake	Refr. "x"			X Oven & Plate	Family			
		Floor Joists	B & B	T & G	Gutters	Fireplace	Dishwasher	Bed			
		Conc. Blk.			Sm. Rk	COOLING	Break. Bar	Bed			
		Brick			Shingle	Refrig. Ten	Pantry				
Duplex	Wood		Brick	X Shake	Lumin. Ceil.						
X Apartment	Piers	Concrete Floor	WINDOWS	Title	Wall Unit	Blt-in BBQ					
Material			D.H.	Casem't	Heat Pump	Kitchen					
			M.S.	Lvr.		Brain Bd					
1/2 Units	Light	Heavy	Insulated Ceilings	X Slid. Gl. Door	Compo. Shingle						
BATH DETAIL											
FINISH											
FIXTURES											
SPECIAL FEATURES											
PULLMANS											
NO. LGTH. FIN.											
Dressing Area											
Wet Bar											
Walk-in Closets											

COMPUTATION

Appraiser & Date	Unit	Area	Unit Cost	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost
H. Howard 8/23/70														
PER. No. 1	3216	900	28944	1430	45989									
AC.	3216	40	1286	75	2410									
TOTAL			30230		48399									
NORMAL % GOOD			100		97									
R.C.L.N.D.			30230		46947									

50 A-11 Rev 1-68

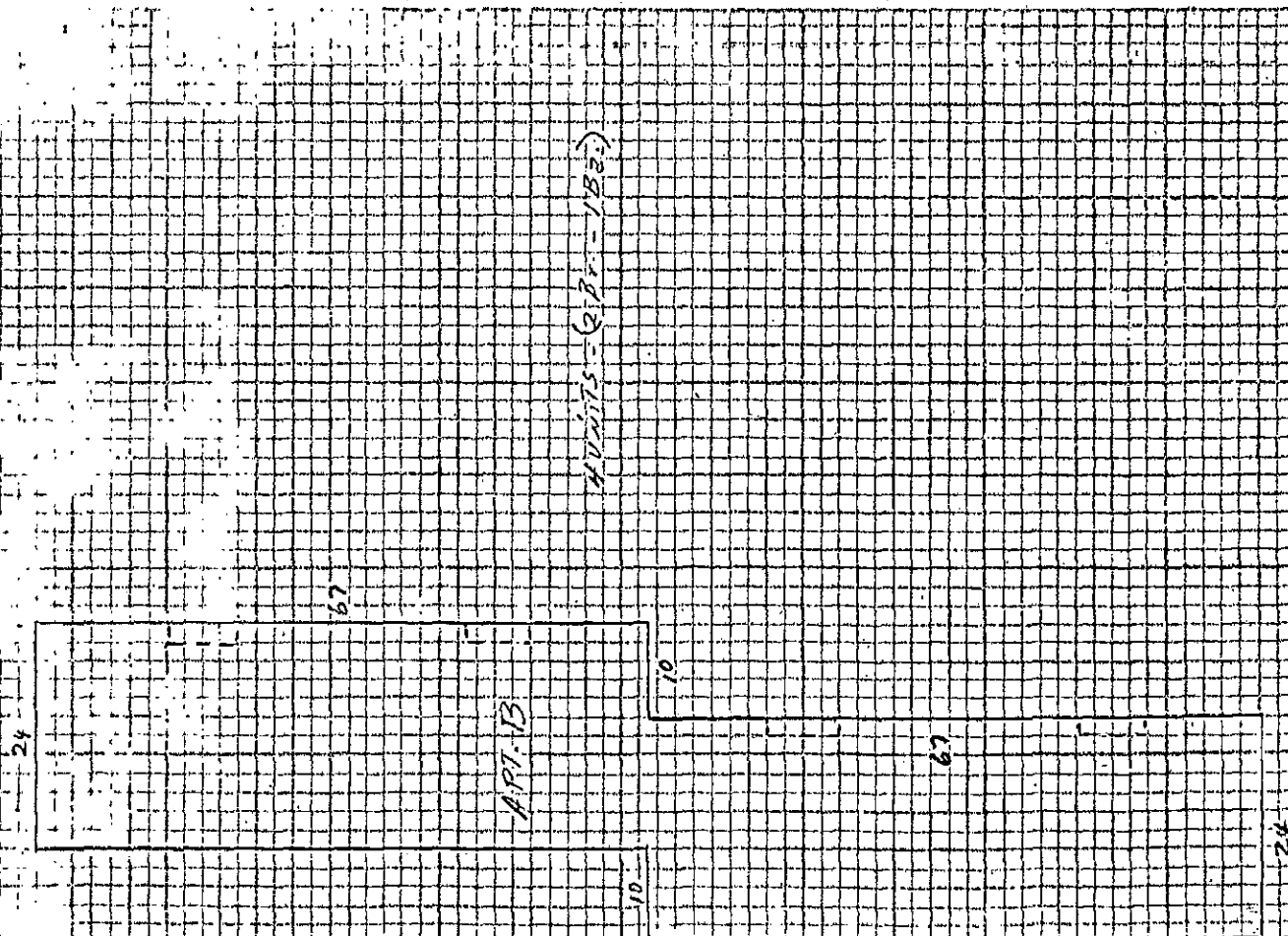
[illegible]

D

$$24 \times 67 = 1608$$
$$24 \times 67 = 1608$$
$$\frac{32164}{804} \div 4$$

REMARKS:

REMARKS:



## RESIDENTIAL BUILDING RECORD

[illegible]

## COMPUTATION

[illegible]



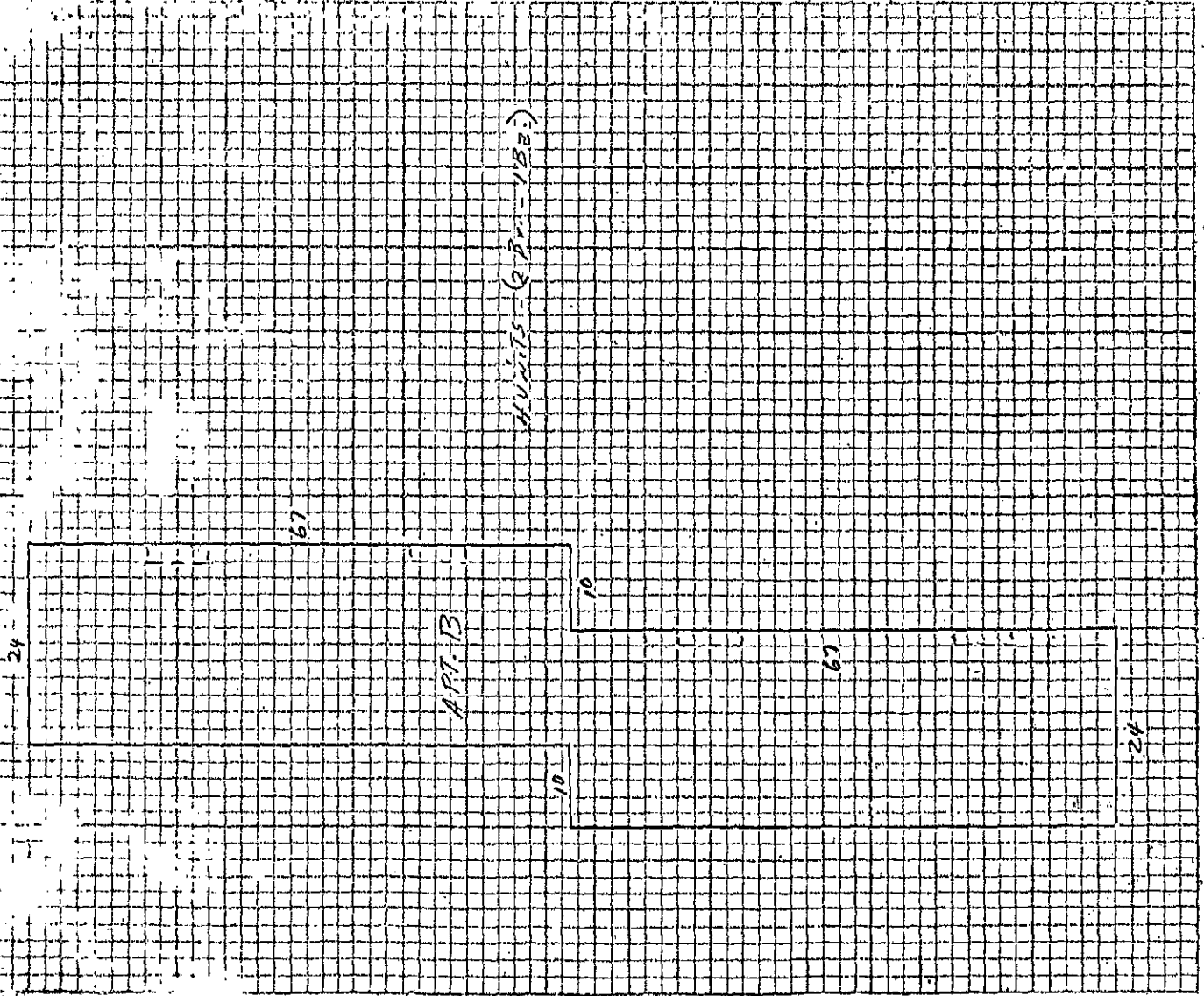
STRUCTURES	SIZE	Unit Cost	COST
------------	------	-----------	------

[illegible]

D

$$24 \times 67 = 1608$$
$$24 \times 67 = \underline{1608}$$
$$\underline{32164}$$

REMARKS: ① Permit to repair damage - Apprsg corrected 5/13/71 NF

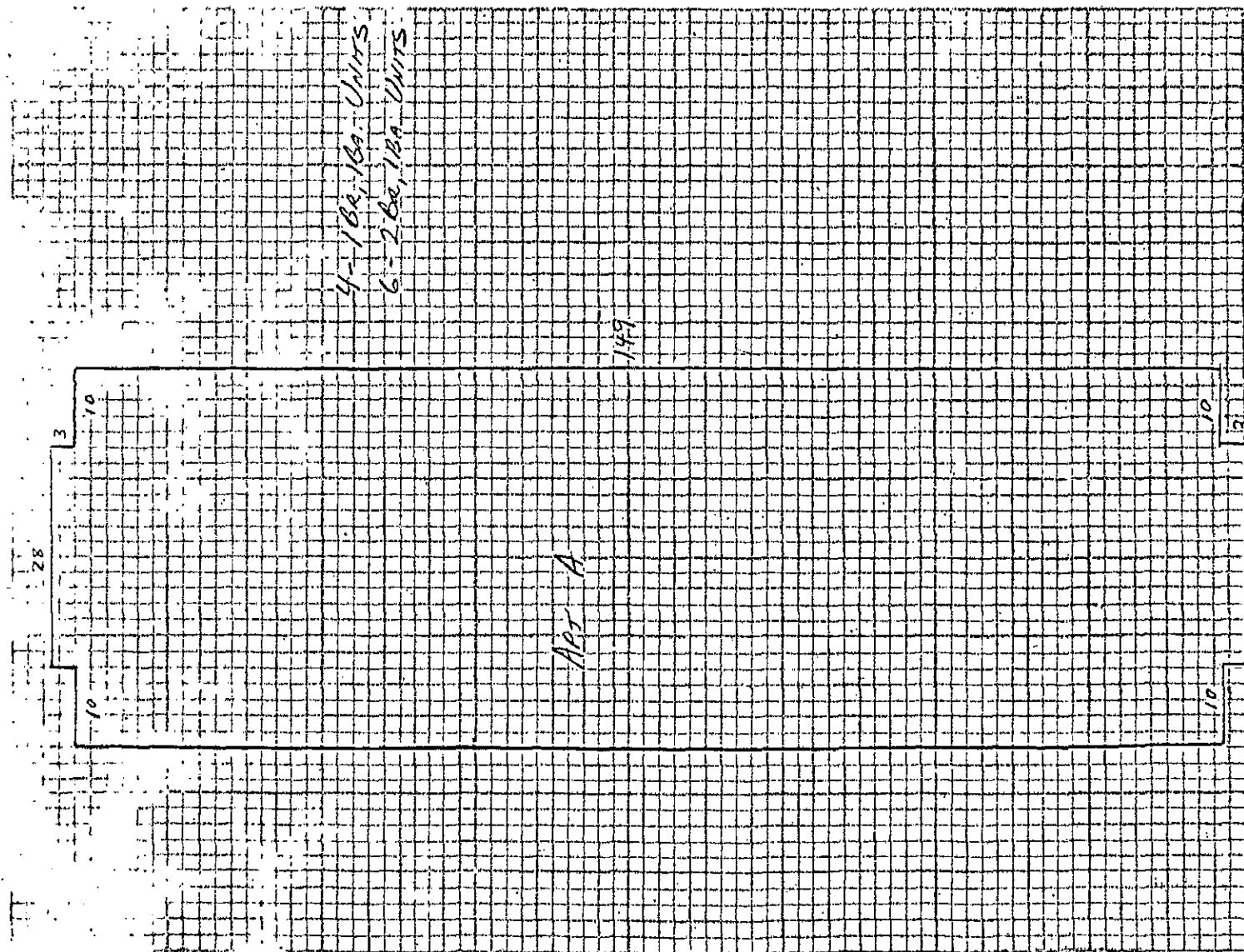


RESIDENTIAL BUILDING RECORD										PARCEL							
DESCRIPTION OF BUILDING																	
CLASS & SHAPE	CONSTRUCTION	STRUCTURAL	EXTERIOR		ROOF		HEATING	RATING (E, G, A, F, P)	ROOMS	FLOORS		FLOOR FINISH		INTERIOR FINISH			
			Stucco	Shingle	Flat	Pitch				Forced	B1	2	Material	Grade	Walls	Ceilings	
D.S.S. / Stories	<input checked="" type="checkbox"/> Light	<input checked="" type="checkbox"/> Frame	<input checked="" type="checkbox"/> Box	<input checked="" type="checkbox"/> Siding	<input checked="" type="checkbox"/> Hip	<input checked="" type="checkbox"/> Gable	<input checked="" type="checkbox"/> Forced	<input checked="" type="checkbox"/> Wiring	All	<input checked="" type="checkbox"/> Vinyl	<input checked="" type="checkbox"/> Dry	<input checked="" type="checkbox"/> Vinyl	<input checked="" type="checkbox"/> Dry	<input checked="" type="checkbox"/> Vinyl	<input checked="" type="checkbox"/> Dry		
	<input checked="" type="checkbox"/> Sub-Standard	<input checked="" type="checkbox"/> Conc. Blk.	<input checked="" type="checkbox"/> Ply. & Batts	<input checked="" type="checkbox"/> Encl. Eaves	<input checked="" type="checkbox"/> Shed	<input checked="" type="checkbox"/> Encl. Eaves	<input checked="" type="checkbox"/> Floor	<input checked="" type="checkbox"/> Elect. Rad.	Ent. Hall	<input checked="" type="checkbox"/> Kitchen	<input checked="" type="checkbox"/> Bath	<input checked="" type="checkbox"/> Kitchen	<input checked="" type="checkbox"/> Bath	<input checked="" type="checkbox"/> Kitchen	<input checked="" type="checkbox"/> Bath		
	<input checked="" type="checkbox"/> Above-Standard	<input checked="" type="checkbox"/> 6"	<input checked="" type="checkbox"/> 8"	<input checked="" type="checkbox"/> Routed Ply.	<input checked="" type="checkbox"/> Shingle	<input checked="" type="checkbox"/> Shingle	<input checked="" type="checkbox"/> Elect. Rad.	<input checked="" type="checkbox"/> Thermo.	Living	<input checked="" type="checkbox"/> Dining	<input checked="" type="checkbox"/> Family	<input checked="" type="checkbox"/> Bed	<input checked="" type="checkbox"/> Bed	<input checked="" type="checkbox"/> Bed	<input checked="" type="checkbox"/> Bed		
	<input checked="" type="checkbox"/> Special	<input checked="" type="checkbox"/> Brick	<input checked="" type="checkbox"/> Slump Blk.	<input checked="" type="checkbox"/> Shake	<input checked="" type="checkbox"/> B & B	<input checked="" type="checkbox"/> T & G	<input checked="" type="checkbox"/> Fireplaces	<input checked="" type="checkbox"/> Oven & Plate	Dishwasher	Break. Bar	Pantry	Lumin. Ceil.	Bl-in BBQ	Heat Pump	Compo.	Compo. Shingle	
	<input checked="" type="checkbox"/> FOUNDATION	<input checked="" type="checkbox"/> Concrete	<input checked="" type="checkbox"/> Conc. Blk.	<input checked="" type="checkbox"/> Brick	<input checked="" type="checkbox"/> Stone	<input checked="" type="checkbox"/> Shingle	<input checked="" type="checkbox"/> Refrig.	<input checked="" type="checkbox"/> Wall Unit	Heat Pump	Compo.	Compo. Shingle	Slid. Gl. Door	Slid. Gl. Door	Slid. Gl. Door	Slid. Gl. Door	Slid. Gl. Door	
	<input checked="" type="checkbox"/> Single	<input checked="" type="checkbox"/> Double	<input checked="" type="checkbox"/> Duplex	<input checked="" type="checkbox"/> Apartment	<input checked="" type="checkbox"/> Flat-Court	<input checked="" type="checkbox"/> Motel	<input checked="" type="checkbox"/> 10 Units	<input checked="" type="checkbox"/> Bath Detail	<input checked="" type="checkbox"/> Pullmans	<input checked="" type="checkbox"/> LGTH.	<input checked="" type="checkbox"/> FIN.	<input checked="" type="checkbox"/> FIN.	<input checked="" type="checkbox"/> FIN.	<input checked="" type="checkbox"/> FIN.	<input checked="" type="checkbox"/> FIN.	<input checked="" type="checkbox"/> FIN.	
	<input checked="" type="checkbox"/> CONSTRUCTION RECORD	<input checked="" type="checkbox"/> Heavy	<input checked="" type="checkbox"/> Light	<input checked="" type="checkbox"/> Insulated Ceil'gs	<input checked="" type="checkbox"/> Insulated Walls	<input checked="" type="checkbox"/> Slid. Gl. Door	<input checked="" type="checkbox"/> M.S.	<input checked="" type="checkbox"/> Lvr.	<input checked="" type="checkbox"/> D.H.	<input checked="" type="checkbox"/> Casem't	<input checked="" type="checkbox"/> Windows	<input checked="" type="checkbox"/> D.H.	<input checked="" type="checkbox"/> Casem't	<input checked="" type="checkbox"/> Windows	<input checked="" type="checkbox"/> D.H.	<input checked="" type="checkbox"/> Casem't	
	<input checked="" type="checkbox"/> EFFEC. APPR. YEAR	<input checked="" type="checkbox"/> 1969	<input checked="" type="checkbox"/> 1970	<input checked="" type="checkbox"/> 1971	<input checked="" type="checkbox"/> 1972	<input checked="" type="checkbox"/> 1973	<input checked="" type="checkbox"/> 1974	<input checked="" type="checkbox"/> 1975	<input checked="" type="checkbox"/> 1976	<input checked="" type="checkbox"/> 1977	<input checked="" type="checkbox"/> 1978	<input checked="" type="checkbox"/> 1979	<input checked="" type="checkbox"/> 1980	<input checked="" type="checkbox"/> 1981	<input checked="" type="checkbox"/> 1982	<input checked="" type="checkbox"/> 1983	
	<input checked="" type="checkbox"/> Builder	<input checked="" type="checkbox"/> K	<input checked="" type="checkbox"/> G	<input checked="" type="checkbox"/> H	<input checked="" type="checkbox"/> J	<input checked="" type="checkbox"/> L	<input checked="" type="checkbox"/> M	<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> O	<input checked="" type="checkbox"/> P	<input checked="" type="checkbox"/> Q	<input checked="" type="checkbox"/> R	<input checked="" type="checkbox"/> S	<input checked="" type="checkbox"/> T	<input checked="" type="checkbox"/> U	<input checked="" type="checkbox"/> V	
	<input checked="" type="checkbox"/> Per. No.	<input checked="" type="checkbox"/> 70800	<input checked="" type="checkbox"/> 8122/12	<input checked="" type="checkbox"/> 1969	<input checked="" type="checkbox"/> 1970	<input checked="" type="checkbox"/> 1971	<input checked="" type="checkbox"/> 1972	<input checked="" type="checkbox"/> 1973	<input checked="" type="checkbox"/> 1974	<input checked="" type="checkbox"/> 1975	<input checked="" type="checkbox"/> 1976	<input checked="" type="checkbox"/> 1977	<input checked="" type="checkbox"/> 1978	<input checked="" type="checkbox"/> 1979	<input checked="" type="checkbox"/> 1980	<input checked="" type="checkbox"/> 1981	
COMPUTATION																	
Appraiser & Date	A. H. H. 5/14/70		7.6		Unit Cost		Unit Cost		Unit Cost		Unit Cost		Unit Cost		Unit Cost		
Area	7320		9.30		68076		7320		40		2928		71004		71004		
APTS.	7320		9.30		68076		7320		40		2928		71004		71004		
AC	7320		9.30		68076		7320		40		2928		71004		71004		
TOTAL												71004		71004		71004	
NORMAL % GOOD												100		100		100	
R.C.L.N.D.												71004		71004		71004	
50 A-11 Rev. 3-68												284		284		284	

[illegible]

$28 \times 3 = 84$   
 $48 \times 149 = 7152$   
 $28 \times 3 = 84$   
 $7320^d$

REMARKS:





STRUCTURES	SIZE	Unit Cost	COST
------------	------	-----------	------

[illegible]2 units: 2Br<sup>+</sup> - 1Ba<sup>+</sup>

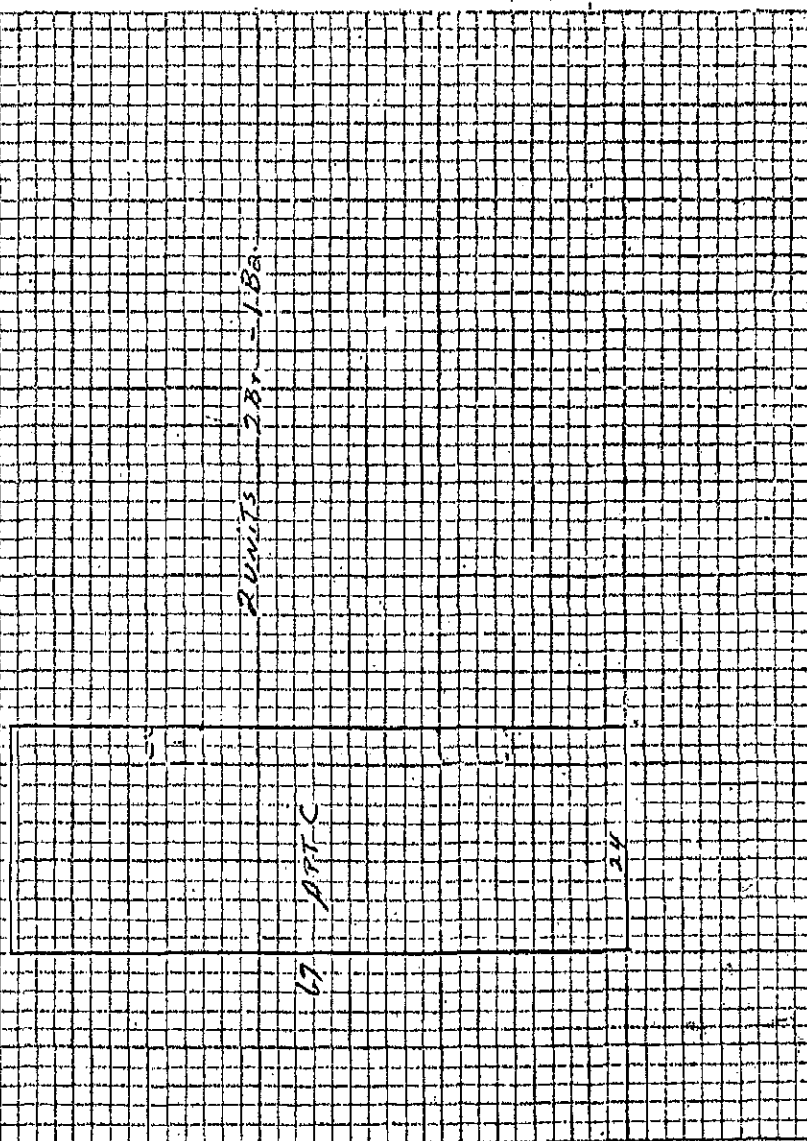
A.P.T.C.

67

24



STRUCTURES	SIZE	Unit Cost	COST
------------	------	-----------	------

[illegible]

[illegible]

COMPUTATION					
Appraiser & Date	Unit	Area	Unit Cost	Cost	
	APTS.	1608d	9.00	14472	
	AC	1608d	40	643	
TOTAL				15115	
NORMAL % GOOD				100	
R.C.L.N.D.				AL 15115	24570



4

$$24 \times 67 = 1608$$

REMARKS:

2 units 2B, -1Ba.

APTC

24.



[illegible]

STRUCTURES	SIZE	Unit Cost	COST
COMPUTATIONS			
28 x 3 = 84			
48 x 149 = 7152			
28 x 3 = 84			
7320 +			
REMARKS:			

$$\begin{array}{r} 28 \times 3 = 84 \\ 48 \times 149 = 7152 \\ 28 \times 3 = 84 \\ \hline 7320^{\text{d}} \end{array}$$

REMARKS:



SHEET 10 OF 60 SHEETS

313-030-15

COUNTY ASSESSOR  
SAN DIEGO CO., CALIFORNIA

RESIDENTIAL BUILDING RECORD

SHEET 10 OF 60 SHEETS

313-030-15

[illegible]

Appraiser & Date		COMPUTATION											
Unit	Area	Unit Cost	Cost	Unit Cost	Cost	Unit Cost	Cost	Unit Cost	Cost	Unit Cost	Cost	Unit Cost	Cost
APIS	1608d	9.00	14472										
AC	1608d	40	643										
TOTAL			15115										
NORMAL % GOOD													
R.C.L.N.O.			15115										
50 A-11 B-11 C-11													

[illegible]

REMARKS:

$$2 \text{ units} \quad 28x = 1 \text{ Ba}$$

67 OPTC

24

110321 A Bldg #111

RESIDENTIAL BORROWING RECORD  
ADDRESS 10756, 58, 60, 62, 64, 66, 68, 70, 72, 74 Ceminata De Luz  
SHEET 17 OF 18

## DESCRIPTION OF BUILDING

[illegible]

	Light	Heavy
10 Units.		
CONSTRUCTION RECORD		

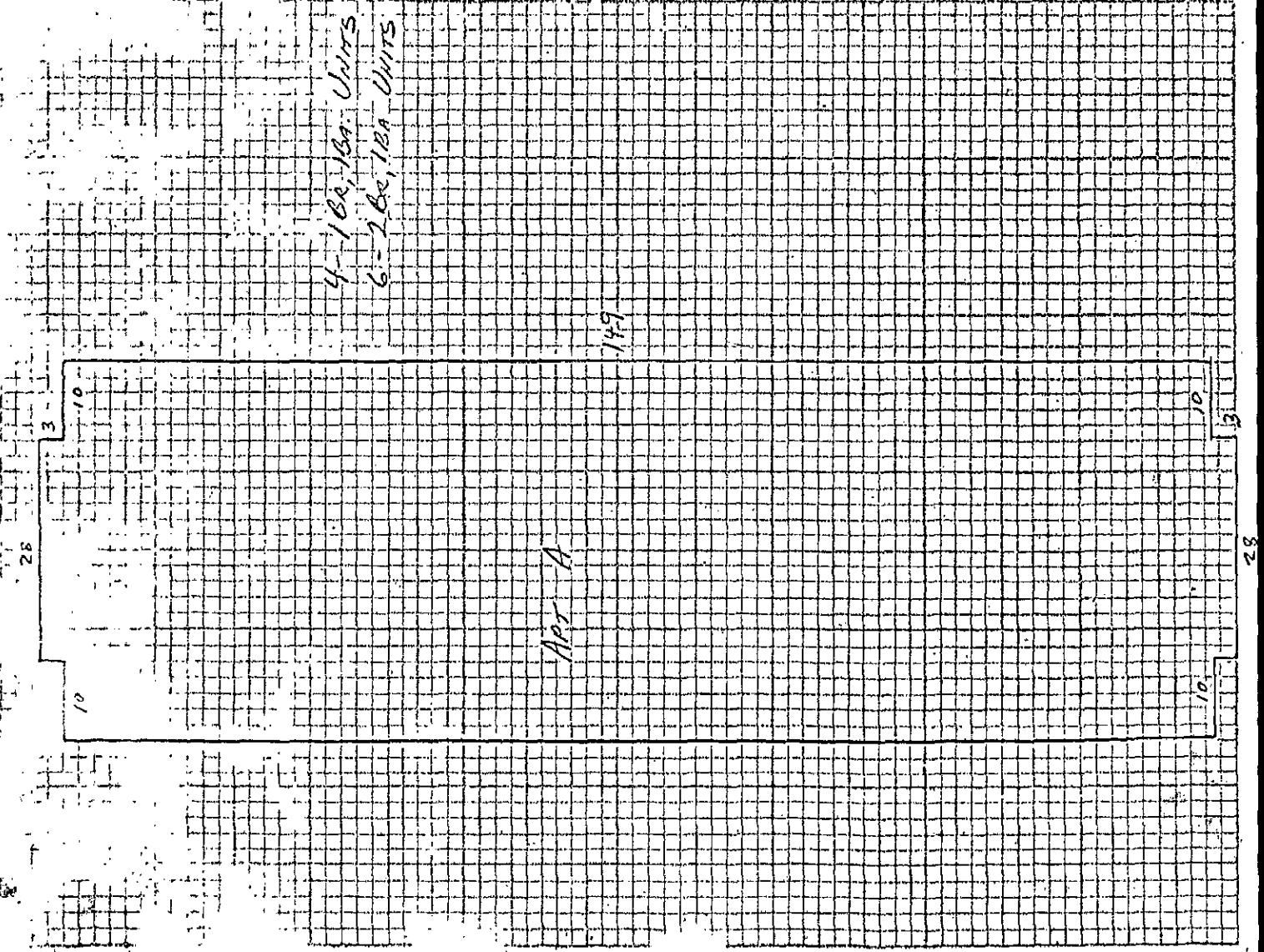
[illegible]

## COMPUTATION

[illegible]

1

STRUCTURES	SIZE	Unit Cost	COST
COMPUTATIONS			
28 x 3 = 84			
48 x 149 = 7152			
28 x 3 = 84			
7370			
REMARKS:			







[illegible]

## COMPUTATIONS

**REMARKS:**



1.7-0PT-C

Model B Blg #13

ADDRESS 10736, 38, 40, 42 Camanita De Luz

DESCRIPTION OF BUILDING

PARCEL

CLASS & SHAPE	CONSTRUCTION	STRUCTURAL	EXTERIOR	ROOF		HEATING	RATING (E, G, A, F, P)	ROOMS	FLOORS		FLOOR FINISH		INTERIOR FINISH																																																																									
				Light	Sub-Standard				Box	Stucco	Flat 1/4	Pitch 1/4	Forced	Wiring	B 1	2	Material	Grade	Walls	Ceilings																																																																		
D.S. 5	X	Frame	X	Siding	Ply. & Batts	Shed 1/4	KITCH. DETAILS	Ent. Hall	X	4	Veneer	A	DRY	Acous.																																																																								
															Foundation	Brick	Slump Blk.	Floor Joists	B & B	T & G	Shingle	Routed Ply.	Encl. Eaves	Dormers	Refr. "x"	Sm. Rk	Lg. Rk	Fireplace	Dishwasher	Oven & Plate	Painted Cabs	Living	Dining	Family	Bed	Bed																																																		
																																					Single	Double	Duplex	X	Apartment	Flat-Court	Motel	Piers	Wood	Brick	Conc. Blk.	X	Concrete	X	Heavy	Light	Insulated Ceil'gs	Insulated Walls	X	Slid. Gl. Door	M.S.	D.H.	Casem't	Tile	Shake	Shingle	Compo. Shingle	Compo. i	Heat Pump	Blt-in BBQ	Lumin. Ceil.	Pantry	Break. Bar	Dishwasher	Oven & Plate	Painted Cabs	Nat. Fin. Cabs	Ent. Hall	Living	Dining	Family	Bed	Bed	Kitchen	Bain Bd	Material	M	Lgth: 12	Fi.	Splash:

COMPUTATION

Appraiser & Date	Unit	Area	Unit Cost		Cost		Unit Cost		Cost		Unit Cost		Cost		Unit Cost		Cost	
			Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost
H. Howard 5/14/70	APLS	3216	9.00	28944														
	AC	3216	40	12864														
TOTAL				30230														
NORMAL % GOOD				100														
R.C.L.N.D.			02	30230														

[illegible]

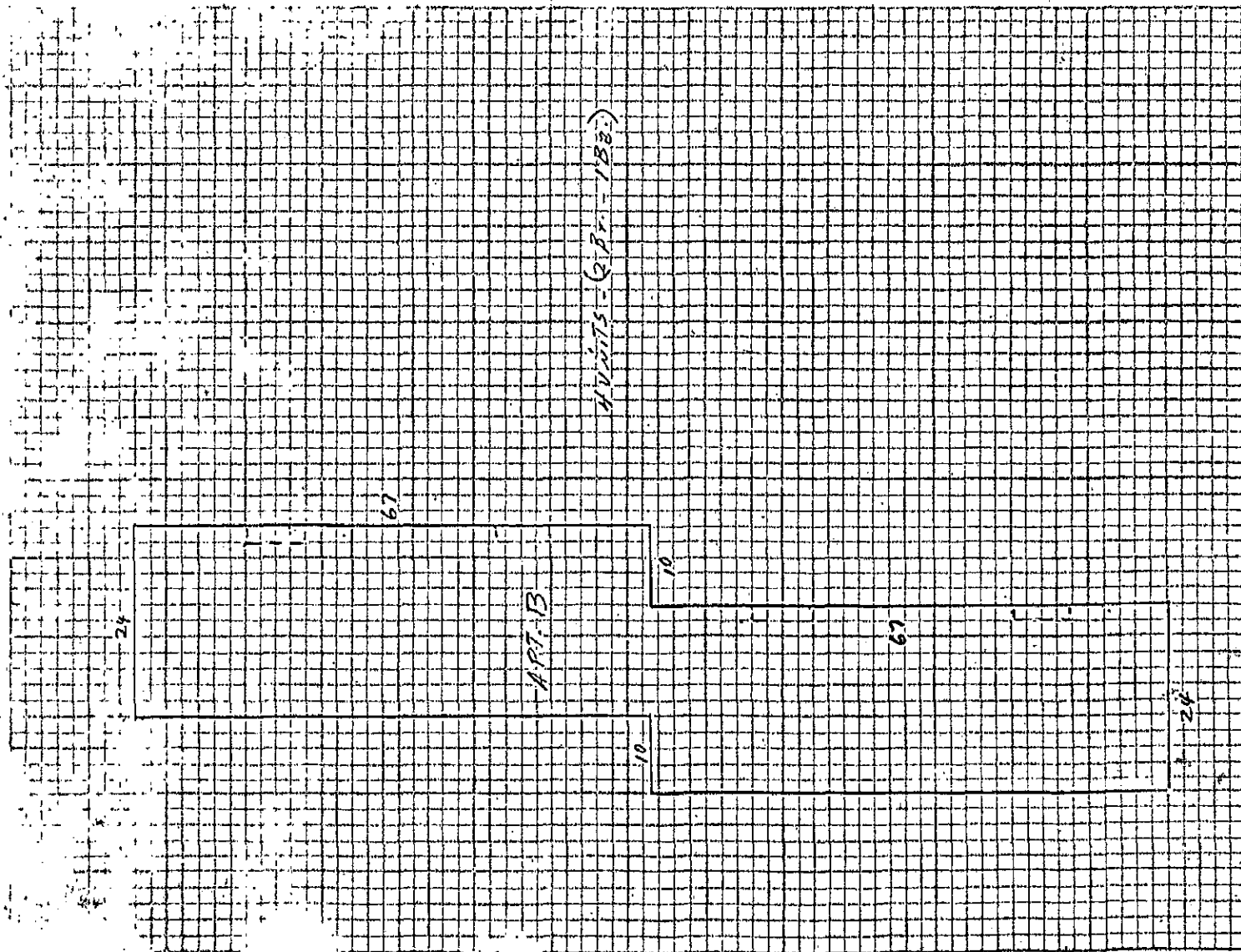
D

$$24 \times 67 = 1608$$
$$24 \times 67 = 1608$$

---

$$\underline{32164}$$

REMARKS:



## RESIDENTIAL BUILDING RECORD

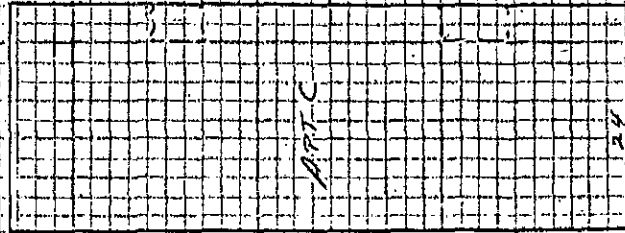
RESIDENTIAL BUILDING RECORD SHEET ~~14~~ OF 60 SHEETS

313-030-15

MODEL C  
ADDRESS 1074-48 Caminita De Luz  
Bogota

[illegible][illegible]

## MISCELLANEOUS STRUCTURES

[illegible]

2 units - 28x - 1 Ba.

27

A.P.T.C

24

SHEET 15 OF 60 SHEETS

SHEET 12 OF 60 SHEETS

[illegible]

## STRUCTURES

**REMARKS:**







STRUCTURES	SIZE	Unit Cost	COST
COMPUTATIONS			
$28 \times 3 =$	84		
$48 \times 149 =$	7152		
$28 \times 3 =$	84		
	7320		
REMARKS:			

4-1 Br, 1 Ba. UNITS  
6-2 Br, 1 Ba. UNITS

ApT A

549

REMARKS:

MODEL B Bldg #77 ADDRESS 14072 747678 Amador Ebro

### DESCRIPTION OF BUILDING

[illegible]

## COMPUTATION

[illegible]

[illegible]

D.  $24 \times 67 = 1608$   
 $24 \times 67 = 1608$   
32160

REMARKS:

## DESCRIPTION OF BUILDING

[illegible]

## COMPUTATION

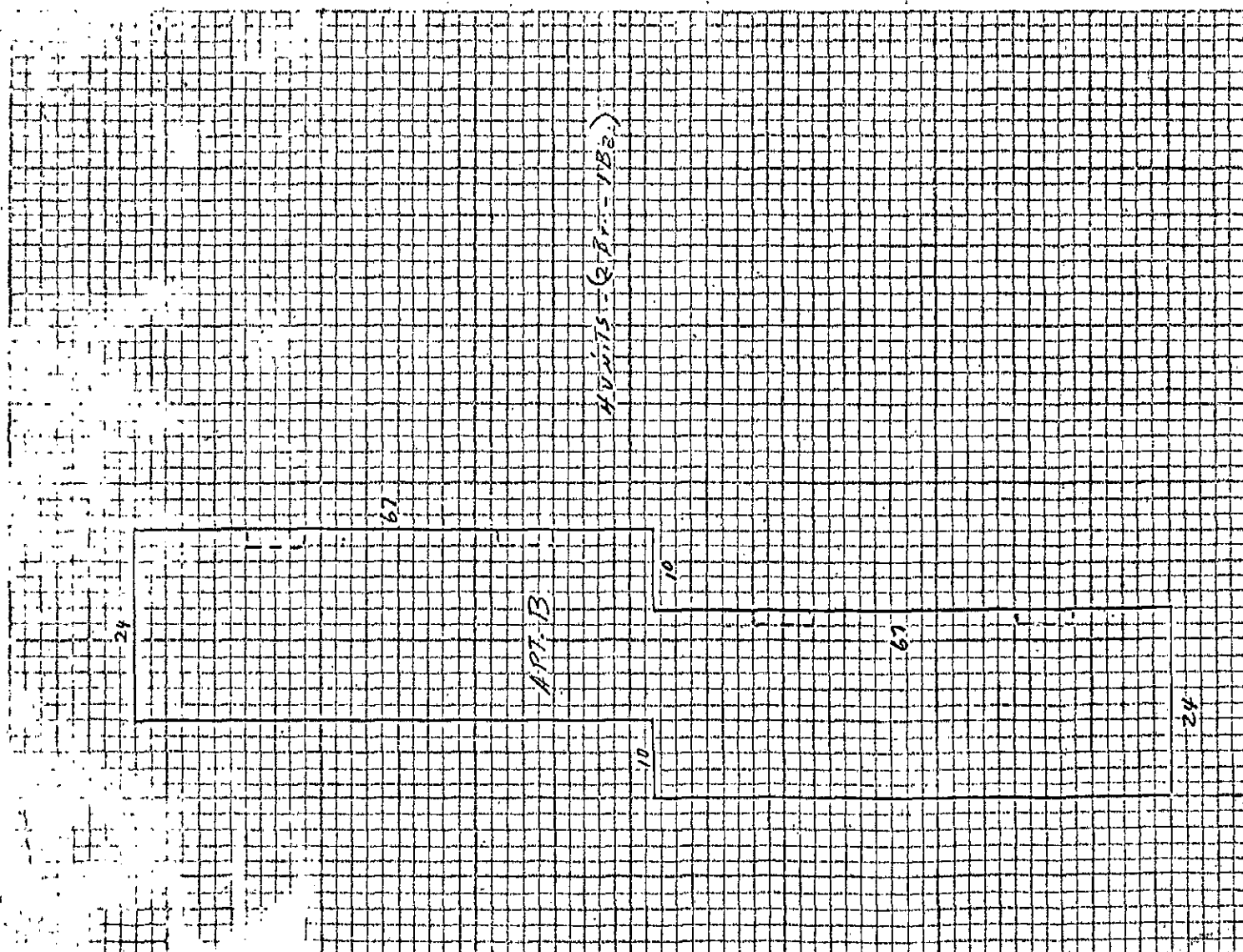
[illegible]

[illegible]

D

$$\begin{array}{r} 24 \times 67 = 1608 \\ 24 \times 67 = 1608 \\ \hline 3216 \end{array}$$

REMARKS:



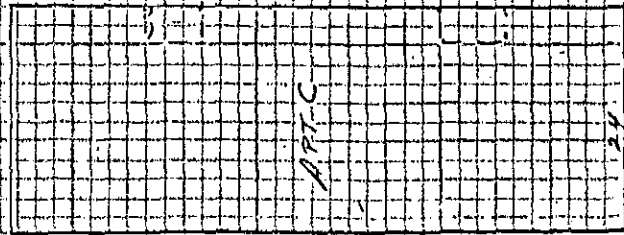
SHEET 19 OF 60 SHEETS

313-030-15

SHEET 19 OF 60 SHEETS

50 4-11 8am 2.45  
9.25  
9.30

## MISCELLANEOUS STRUCTURES

[illegible]

2 units 2 Br -1 Ba

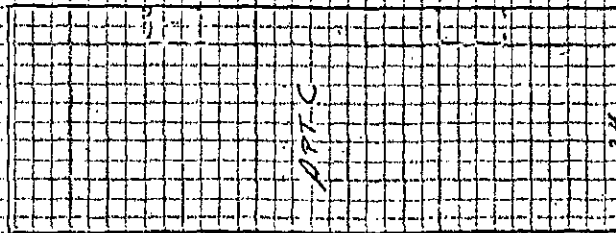
67 APT-C

24





SEMI-COMMUNIST MOVEMENTS

[illegible]
$$2 \text{ units } 2x = 1B^2$$

APTC

2



[illegible]
$$24 \times 67 = 1608$$

REMARKS:

2 units  $2Br^- / Ba$

APTC

24

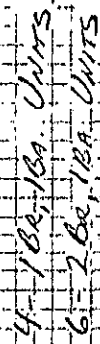


[illegible]

D

$28 \times 3 =$	84
$48 \times 149 =$	7152
$28 \times 3 =$	84
	<u>7320</u>

REMARKS:



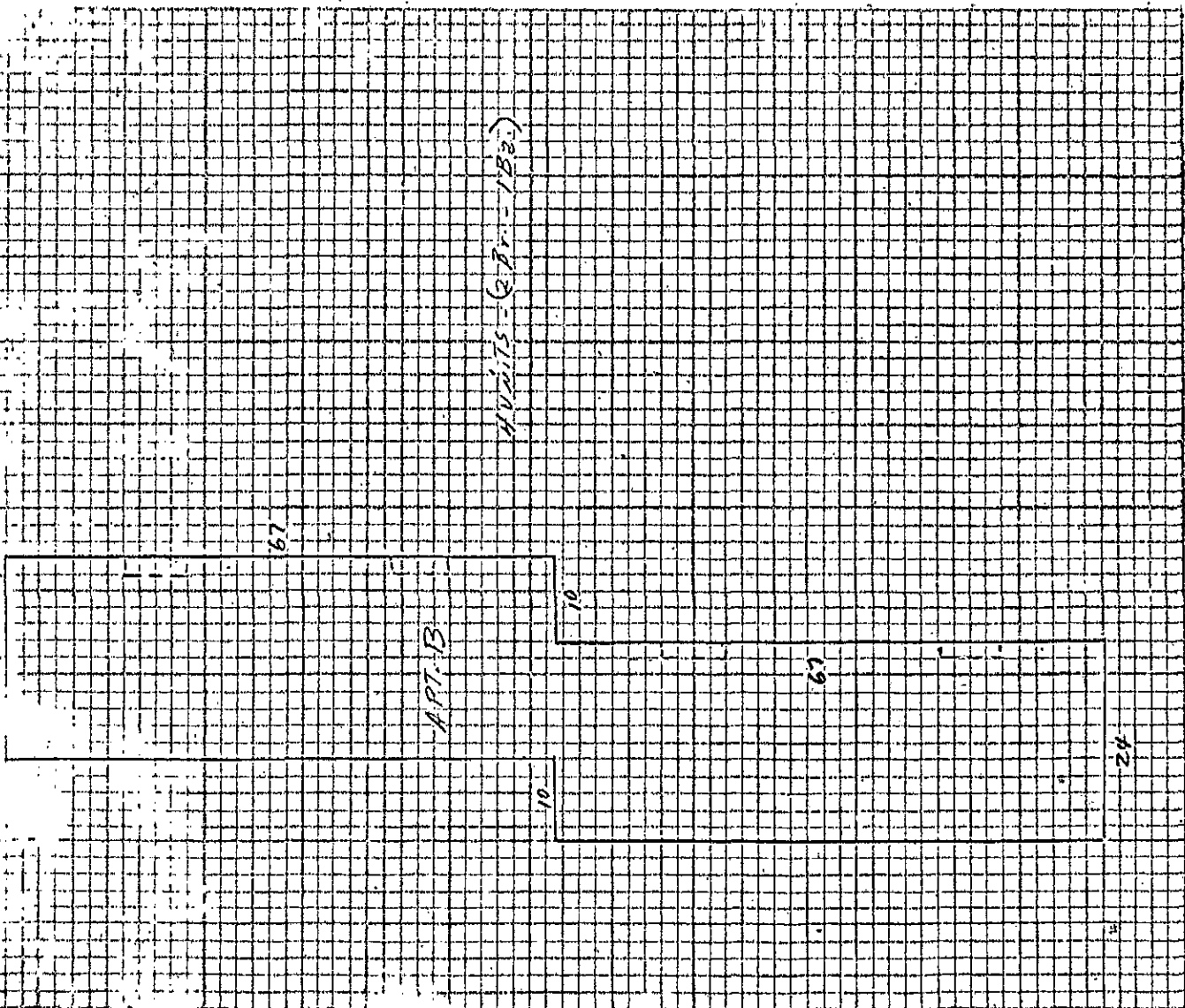
Ap- A

149



# ALSCF1 AIRFOIL STRUCTURES

STRUCTURES	SIZE	Unit Cost	COST
COMPUTATIONS			
D. $24 \times 67 = 1608$			
$24 \times 67 = 1608$			
$\underline{3216}$			
REMARKS:			







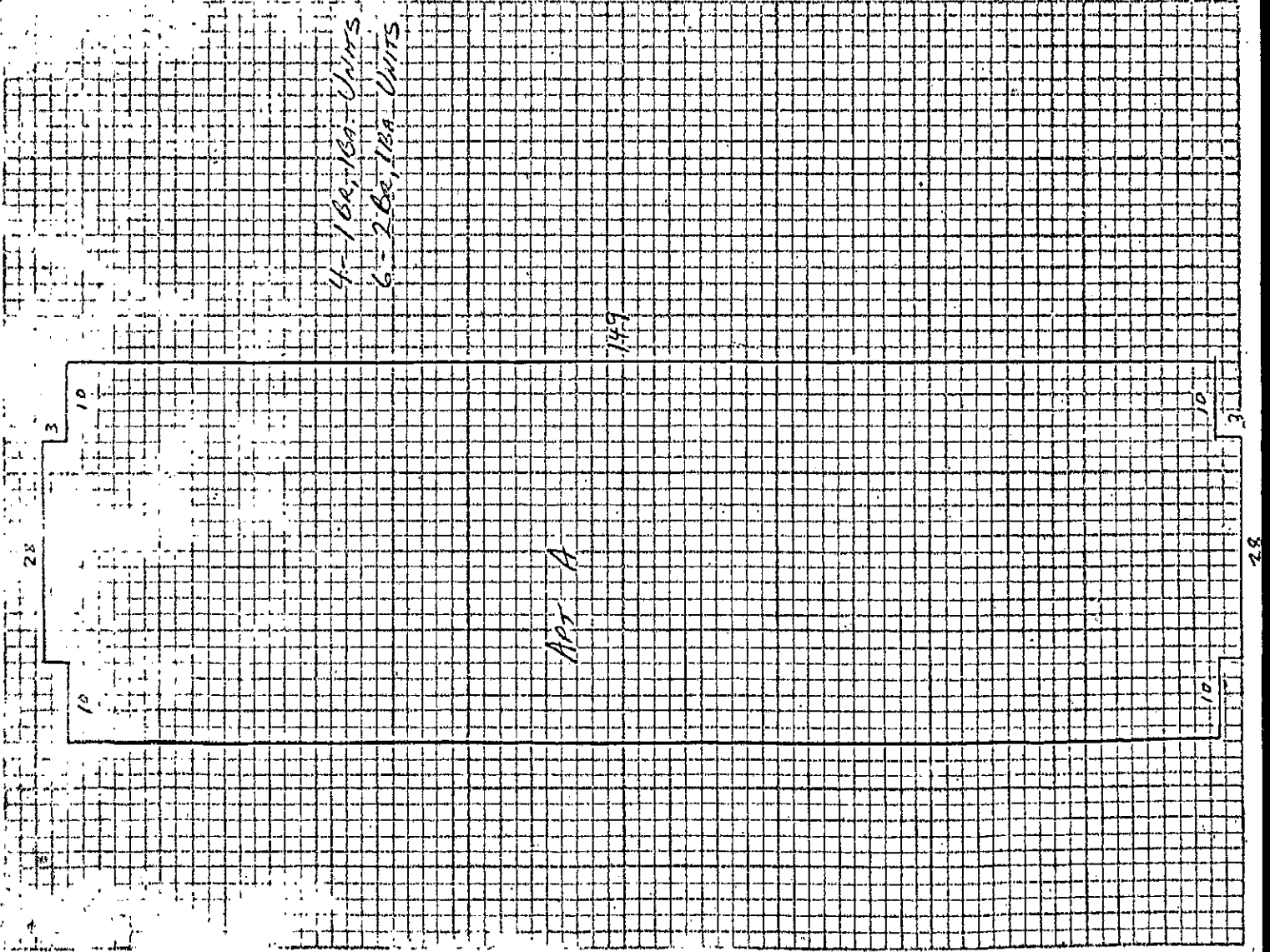
[illegible]

REMARKS:



## MISCELLANEOUS SYMBOLS

STRUCTURES	SIZE	Unit Cost	COST
COMPUTATIONS			
28 x 3 = 84			
48 x 149 = 7152			
28 x 3 = 84			
7320 <sup>d</sup>			
REMARKS:			



## RESIDENTIAL BUILDING RECORD

SHEETS

313-030-15

Model A Day 726

ADDRESS 14/09, 16, 13, 15, 17, 19, 21, 23, 25, 27 Amador Ebro

1

DESCRIPTION OF BUILDING																				PARCEL	
CLASS & SHAPE		CONSTRUCTION		STRUCTURAL		EXTERIOR		ROOF		HEATING		RATING (E, G, A, F, P)		ROOMS		FLOORS		FLOOR FINISH		INTERIOR FINISH	
		Light	Sub-Standard	Frame	Stucco	Flat	4/4 Pitch	X	Forced	X	Wiring	X	All	8	1	2	Material	Grade	Walls	Ceilings	
		X	Standard	Conc. Blk.	Siding	X	4/4	4/4	Wall	4/4	Elect. Fix.	X	Plumbing				Cer. Tile		DRY	Acoust.	
D-5-5			Above-Standard	6"	Ply. & Batts	Shed	4/4	4/4	Elect. Rad.		KITCH. DETAILS		Ent. Hall								
Stories			Special	Adobe	Round Ply.	Encl. Eaves	X	Thermo.	X	Painted Cabs		Living		10							
TYPE				Brick	Shingle	Dormers				Painted Cabs		Dining									
USE		FOUNDATION		Slump Blk.	Shake	Refr. "x"				Oven & Plate		Family									
Single		X	Concrete	Floor Joist	B & B	T & G	Gutters	Fireplace		Dishwasher		Bed		11							
Double			Conc. Blk.				Sm. Rk	Lg. Rk		Break. Bar		Bed									
Duplex			Brick		Brick	Stone	Shingle	COOLING		Pantry											
X Apartment		X	Wood		X	Shake	Tile	Refrig.	Wall Unit	Lumin. Ceil.											
Flat-Court			Piers	X	Concrete Floor	Windows	D.H.	Casem't		Blind in BBQ		Kitchen		10							
Hotel					Insulated Ceil'gs	M.S. Lvr.	Compo. 2	Heat Pump				Brain Bd.									
					Insulated Walls	Slid. Gl. Door	Compo. Single														
10 Units		Light	Heavy																		
		CONSTRUCTION RECORD		EFFECT. APPR.		NORMAL % GOOD		RATING (E, G, A, F, P)		FIXTURES		FINISH		PULLMANS		SPECIAL FEATURES		FIN.		SHOWER	
Builder K & L		Per. No. For		Amount		Date		Age		Remain'g Life		Table		Cond		Arch		Func		Storage Sp.	
E 21630 ATT		70800		8/22/18		1970		8.55		8.55		A		A		A		A		A	

MISCELLANEOUS STRUCTURES			
STRUCTURES	SIZE	Unit Cost	COST
COMPUTATIONS			
28 x 3 =	84		
48 x 149 =	7152		
28 x 3 =	84		
	7320		
REMARKS:			

STRUCTURES	SIZE	Unit Cost	COST
COMPUTATIONS			
$28 \times 3 = 84$			
$48 \times 149 = 7152$			
$28 \times 3 = 84$			
$7320 \div$			
REMARKS:			

$28 \times 3 = 84$   
 $48 \times 149 = 7152$   
 $28 \times 3 = 84$   
7320

REMARKS:

4-10A, 10A: UNITS  
6-20A, 10A: UNITS


Ap- A

149

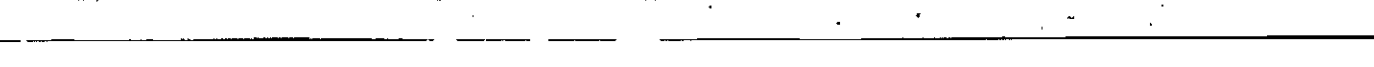


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DESCRIPTION OF BUILDING										PARCEL	
CLASS & SHAPE	CONSTRUCTION	STRUCTURAL	EXTERIOR	ROOF	HEATING	RATING (E, G, A, F, P)	ROOMS	FLOORS	FLOOR FINISH	INTERIOR FINISH	
DS-5 1 Stories	Lights	X Frame	X Srucco	Flat 1/4 Pitch	Forced	A Wiring	All	B 1 2	Material Grade	Walls	
	Sub-Standard	Box		X Gable 1/4 M	Wall	A Elect. Fix.			Material	Ceilings	
	X Standard	Conc. Blk.	Siding "x"	Hip 1/4	Floor	A Plumbing			Material	DRY	
	Above-Standard	6" 8"	Ply. & Batts	Shed 1/4	Elect. Rad.	KITCH. DETAILS	Ent. Hall				
TYPE	Special	Adobe	Routed Ply.	Encl. Eaves	X Thermo.	X Nat. Fin. Cabs	Living				
USE DESIGN	FOUNDATION	Brick	Shingle	Dormers		Painted Cabs	Dining				
		Slump Blk.	Shake	Raft. "x"		X Oven & Plate	Family				
		Floor Joist:	B & B	T & G	Gutters	Fireplace	Dishwasher	Bed			
		Conc. Blk.			Sm. Rk	Lg. Rk	Break. Bar	Bed			
Double			Brick	Stone	COOLING	Pantry					
X Apartment				X Shake	Refrig. Ton	Lumin. Ceil.					
Flat-Court		X Concrete Floor	WINDOWS	Tile	Wall Unit	Blk-in BBQ	Kitchen				
Motel			D.H. Casem't				Brain Bd.				
		X Insulated Ceil'gs	X M.S. Lvr.	Compo. Shingle	Heat Pump						
		X Insulated Walls	X Slid. Gl. Door								
4 Units	Light	Heavy									
BATH DETAIL											
Lgth: 12 Ft. Splash:											
FINISH											
FLOORS											
Walls											
Ceilings											
FIXTURES											
Type											
Grade											
SPECIAL FEATURES											
Dressing Area											
Wet Bar											
Walk-in Closets											
PULLMANS											
NO.											
LGTH.											
FIN.											

COMPUTATION									
Appraiser & Date	Unit	Area	Unit Cost	Cost	Unit Cost	Cost	Unit Cost	Cost	Unit Cost
H. Howard 5/10/70	76								
APTS.	3216	900	28944						
AC.	3216	40	1286						
TOTAL			30230						
NORMAL % GOOD			100						
R.C.L.N.D.			30230						
50 A-11 Rev. 3-68			46947						



STRUCTURES	SIZE	Unit Cost	COST
COMPUTATIONS			
D.			
$24 \times 67 = 1608$			
$24 \times 67 = 1608$			
$\underline{\quad 32164 \quad}$			
REMARKS:			



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[illegible]

50 A-11 Rev. 3-68  
9/27

## MISCELLANEOUS STRUCTURES.

STRUCTURES	SIZE	Unit Cost	COST
COMPUTATIONS			
$28 \times 3 = 84$			
$48 \times 149 = 7152$			
$28 \times 3 = 84$			
$7320^d$			
REMARKS:			



DESCRIPTION OF BUILDING										PARCEL	
CLASS & SHAPE	CONSTRUCTION	STRUCTURAL	EXTERIOR	ROOF	HEATING	RATING (E, G, A, F, P)	ROOMS	FLOORS	FLOOR FINISH	INTERIOR FINISH	
D5.5 1 Stories	Light	X	X	Flat 1/4 Pitch	X	Wiring	All	2	Material	Walls	
	Sub-Standard	Box	X	Gable 1/4 M	Wall	Elect. Fix.			1-2nd	DRY	
	X	Standard	Conc. Blk.	Hip 1/4	Floor	Plumbing					
	Above-Standard	6" 8"	Ply. & Batts	Shed 1/4	Elect. Rad.	KITCH. DETAILS	Ent. Hall				
	Special	Adobe	Routed Ply.	Encl. Eaves	X	X	X	Living			
TYPE	FOUNDATION	Brick	Shingle	Dormers	Thermo.	Painted Cabs	Dining				
	Single	Slump Blk.	Shake	Refr. "x"		X	Family				
	Double	Floor Joists	B & B	Gutters	Fireplace	Dishwasher	Bed				
	Duplex	Conc. Blk.	"	Sm. Rk		Break. Bar	Bed				
	X	Brick	Brick	Shingle	COOLING	Pantry					
USE	WOOD		Shake	Shake	Refrig. Ton	Lumin. Ceil.					
	X	Piers	Concrete Floor	Tile	Wall Unit	Blk-in BBQ					
	Flat-Court		D.H. Casem't	WINDOWS							
	Motel		M.S. Lvr.								
	2 Units	Light	Heavy	Insulated Ceil'gs	X	Heat Pump					
BATH DETAIL											
FINISH											
FLOORS											
Walls											
Ceilings											
Material											
Lgths											
Ft.											
Splash											
FIXTURES											
Type											
Grade											
Shower											
S.T.O.T.G.D.											
Unit											
Cost											
PULLMANS											
NO.											
LGTH.											
SPECIAL FEATURES											
Dressing Area											
Wet Bar											
Walk-in Closets											
Central Vac.											
Excess Glass											

COMPUTATION									
Appraiser & Date	Area	Unit Cost	Cost	Unit Cost	Cost	Unit Cost	Cost	Unit Cost	Cost
APTS.	1608d	9.00	14472						
AC	1608d	40	643						
TOTAL			15115						
NORMAL % GOOD									
R.C.L.N.D.			15115						
24570									

[illegible]
$$24 \times 67 = 1608$$

## COMPUTATIONS

REMARKS:

$$2 \text{ units } 2B, -1Ba$$

67 PPT-C

313-030-15

313-030-15

313-030-15

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ	CA	CB	CC	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR	CS	CT	CU	CV	CW	CX	CY	CZ	DA	DB	DC	DD	DE	DF	DG	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ	DR	DS	DT	DU	DV	DW	DX	DY	DZ	EA	EB	EC	ED	EE	EF	EG	EH	EI	EJ	EK	EL	EM	EN	EO	EP	EQ	ER	ES	ET	EU	EV	EW	EX	EY	EZ	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN	FO	FP	FQ	FR	FS	FT	FU	FV	FW	FX	FY	FZ	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GZ	HA	HB	HC	HD	HE	HF	HG	HH	HI	HJ	HK	HL	HM	HN	HO	HP	HQ	HR	HS	HT	HU	HV	HW	HX	HY	HZ	IA	IB	IC	ID	IE	IF	IG	IH	II	IJ	IK	IL	IM	IN	IO	IP	IQ	IR	IS	IT	IU	IV	IW	IX	IY	IZ	JA	JB	JC	JD	JE	JF	JG	JH	JI	IJ	JK	KL	JM	JN	JO	JP	JQ	JR	JS	JT	JU	JV	JW	JX	JY	JZ	KA	KB	KC	KD	KE	KF	KG	KH	KI	KJ	KK	KL	KM	KN	KO	KP	KQ	KR	KS	KT	KU	KV	KW	KX	KY	KZ	LA	LB	LC	LD	LE	LF	LG	LH	LI	LJ	LK	LL	LM	LN	LO	LP	LQ	LR	LS	LT	LU	LV	LW	LX	LY	LZ	MA	MB	MC	MD	ME	MF	MG	MH	MI	MJ	MK	ML	MM	MN	MO	MP	MQ	MR	MS	MT	MU	MV	MW	MX	MY	MZ	NA	NB	NC	ND	NE	NF	NG	NH	NI	NJ	NK	NL	NM	NN	NO	NP	NQ	NR	NS	NT	NU	NV	NW	NX	NY	NZ	OA	OB	OC	OD	OE	OF	OG	OH	OI	OJ	OK	OL	OM	ON	OO	OP	OQ	OR	OS	OT	OU	OV	OW	OX	OY	OZ	PA	PB	PC	PD	PE	PF	PG	PH	PI	PJ	PK	PL	PM	PN	PO	PP	PQ	PR	PS	PT	PU	PV	PW	PX	PY	PZ	QA	QB	QC	QD	QE	QF	QG	QH	QI	QJ	QK	QL	QM	QN	QO	QP	QQ	QR	QS	QT	QU	QV	QW	QX	QY	QZ	RA	RB	RC	RD	RE	RF	RG	RH	RI	RJ	RK	RL	RM	RN	RO	RP	RQ	RR	RS	RT	RU	RV	RW	RX	RY	RZ	SA	SB	SC	SD	SE	SF	SG	SH	SI	SJ	SK	SL	SM	SN	SO	SP	SQ	SR	SS	ST	SU	SV	SW	SX	SY	SZ	TA	TB	TC	TD	TE	TF	TG	TH	TI	TJ	TK	TL	TM	TN	TO	TP	TQ	TR	TS	TT	TU	th="" tv=""
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STRUCTURES	SIZE	Unit Cost	COST

[illegible]

2 units 2B - 1 Ba

27-PT-C

24

MODEL C	Bldg #32	ADDRESS
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ADDRESS 14110-12 Amador Ebro

1

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1

### DESCRIPTION OF BUILDING

[illegible]

**BATH DETAIL**

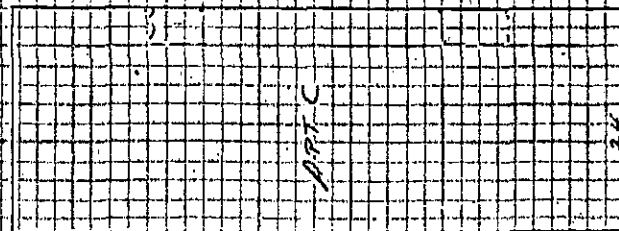
[illegible]

**COMPUTATION**

[illegible]



## MISCELLANEOUS STRUCTURES

[illegible]

2 units 2 Br - 1 Ba.

67-027C



[illegible]

7

$28 \times 3 =$	84
$48 \times 149 =$	7152
$28 \times 3 =$	84
	<u>7370</u>

REMARKS:





[illegible]

COMPUTATIONS	
D	$28 \times 3 = 84$
	$48 \times 149 = 7152$
	$28 \times 3 = 84$
	$7320 \div$
REMARKS:	



DESCRIPTION OF BUILDING
<p>1. Name of building: _____</p> <p>2. Address: _____</p> <p>3. City: _____</p> <p>4. State: _____</p> <p>5. Zip: _____</p> <p>6. Year built: _____</p> <p>7. Number of stories: _____</p> <p>8. Number of units: _____</p> <p>9. Type of building: _____</p> <p>10. Other: _____</p>

[illegible]

## COMPUTATION

[illegible]

MISCELLANEOUS SUBJECTS

[illegible]
$$2 \text{ units} - 2.8r = 1 \text{ Ba}$$

67-087C

24

## RESIDENTIAL BUILDING RECORD

Model A  
Bldg #36

Oped 3705. 2/12/1995

### DESCRIPTION OF BUILDING

[illegible]

## COMPUTATION

[illegible]



STRUCTURES	SIZE	Unit Cost	COST
COMPUTATIONS			
28 x 3 = 84			
48 x 149 = 7152			
28 x 3 = 84			
7370 <sup>d</sup>			
REMARKS:			

REMARKS:

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MOBILE A Bldg. 37

ADDRESS 14219, 21, 23, 25, 27, 29, 31, 33, 35, 37 Camino a La Solaredo

## DESCRIPTION OF BUILDING

[illegible]

## COMPUTATION

[illegible]

[illegible]

4-10R, 10A - UNITS  
6-20R, 10A - UNITS

Ap- A

149

01

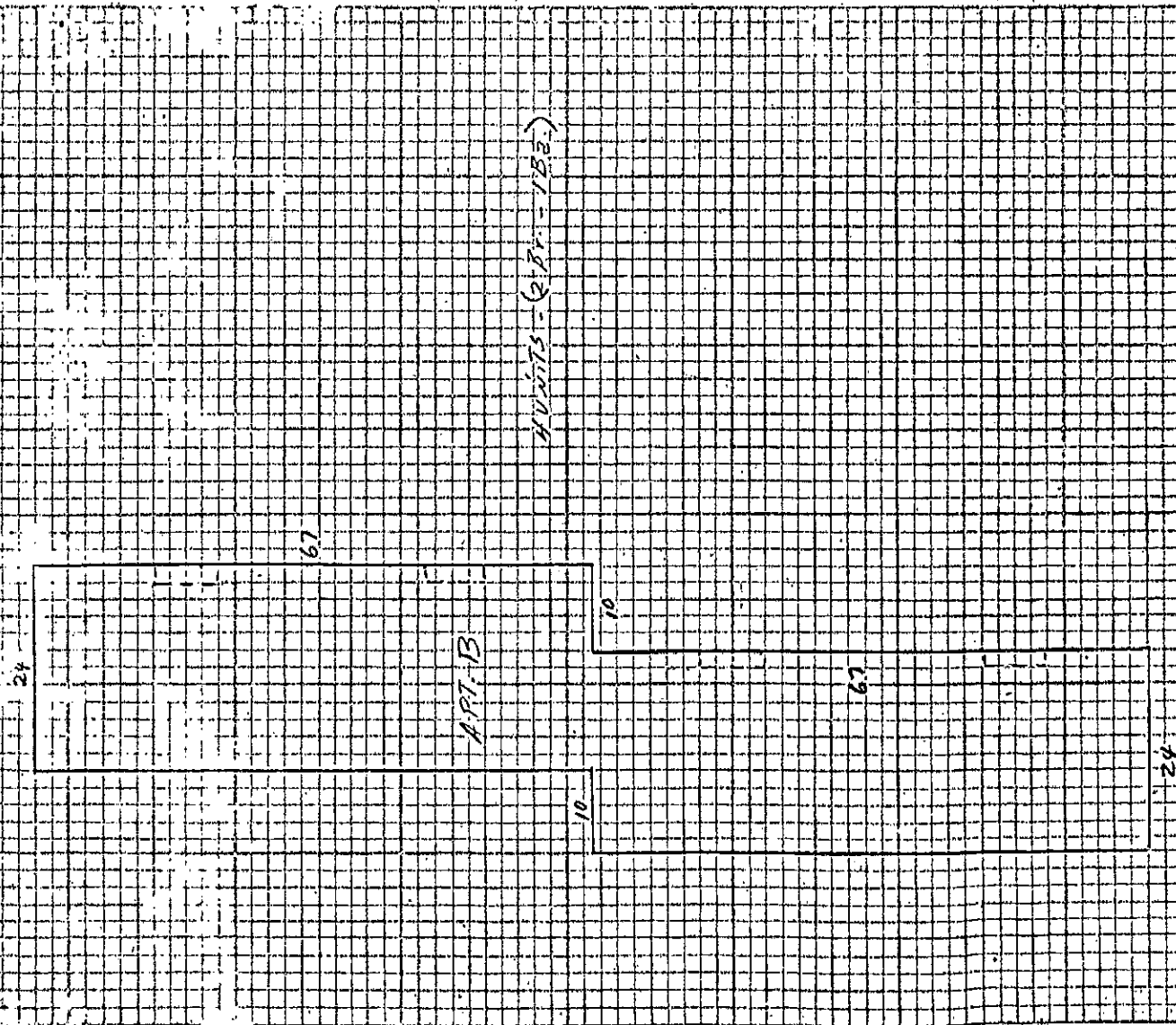
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[illegible]

D.  $24 \times 67 = 1608$   
 $24 \times 67 = 1608$   
32168

REMARKS:



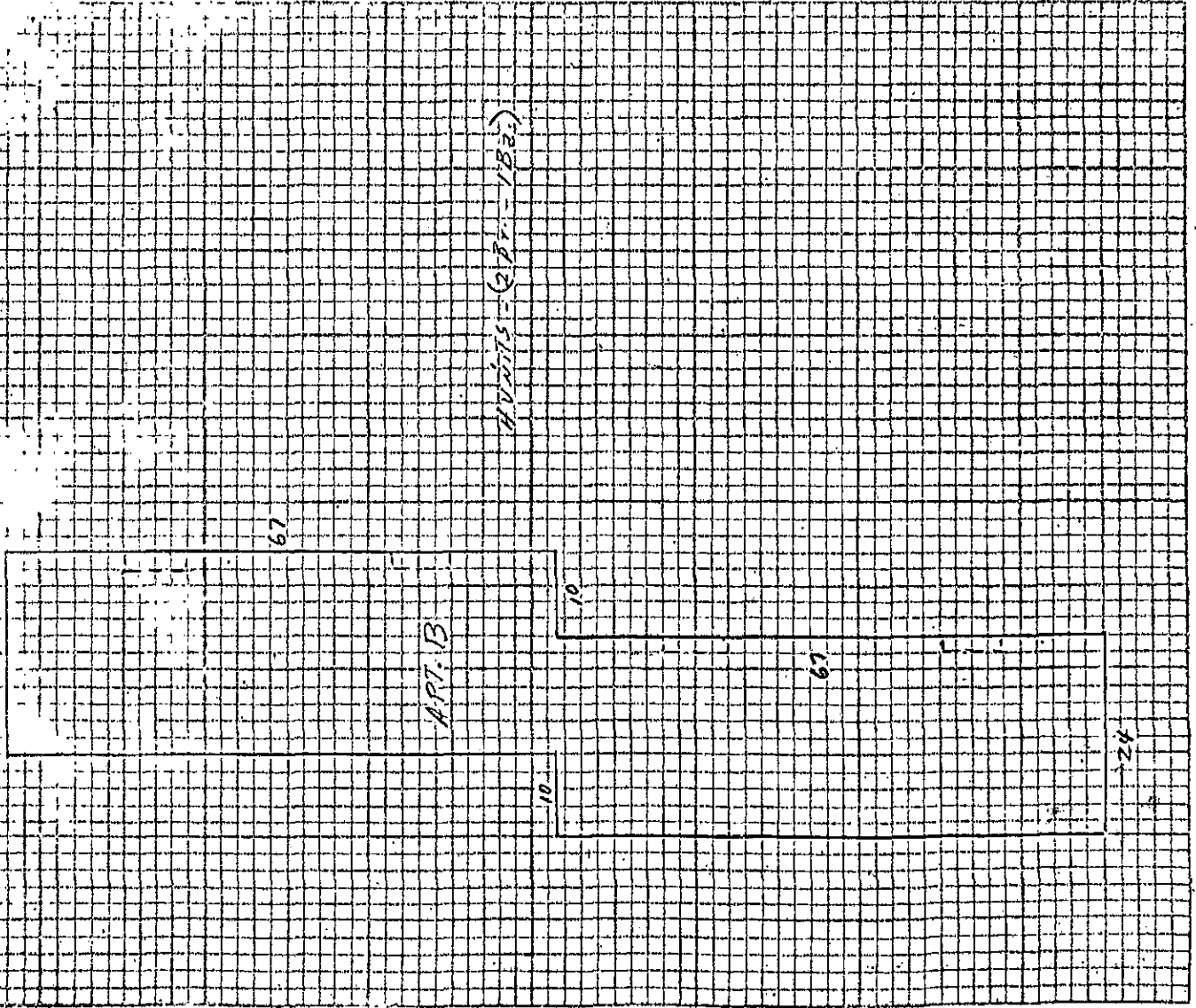
313-030-15

1

## COMPUTATION

## MISCELLANEOUS STRUCTURES

STRUCTURES	SIZE	Unit Cost	COST
COMPUTATIONS			
D			
24x67 = 1608			
24x67 = 1608			
32164			
REMARKS:			







[illegible]

## COMPUTATIONS

REMARKS:

2 units  $2Br - 1Ba$

037C

24

SHEET 4 OF 60 SHEETS

313-030-15

ADDRESS 14232 343638 NO. 42 44 46 48 50. Community College

[illegible]

cost

## COMPUTATIONS

REMARKS:



Model C  
Address 14272-74 Caminita Solado  
Daguerre

002

4

DESCRIPTION OF BUILDING										PARCEL											
CLASS & SHAPE		CONSTRUCTION		STRUCTURAL		EXTERIOR		ROOF		HEATING		RATING (E, G, A, F, P)		ROOMS		FLOORS		FLOOR FINISH		INTERIOR FINISH	
D5-5		Light		Frame		Stucco		Flat 1/4		Forced		Writing		All		2		Material		Walls	
		Sub-Standard		Box		Siding		Gable 1/4		Wall		Elect. Fix.		Elect. Rad.		Kitchen		Material		Ceilings	
		X Standard		Conc. Blk.		Ply. & Batts		Hip 1/4		Floor		Plumbing		Thermo.		Bath		Material		Acous.	
		Above-Standard		6"		Routed Ply.		Shed 1/4		Elect. Rad.		KITCH. DETAILS		Ent. Hall		Material		Material		Material	
		Special		Adobe		Shingle		Encl. Eaves		X Thermo.		X Nat. Fin. Cabs		Living		Material		Material		Material	
				Brick		Shingle		Dormers		X		Painted Cabs		Dining		Material		Material		Material	
				Slump Blk.		Shoke		Raft. "x"		X		Oven & Plate		Family		Material		Material		Material	
				Floor Joists		B & B		T & G		Fireplace		Dishwasher		Bed		Material		Material		Material	
				Conc. Blk.		Brick		Stone		COOLING		Break. Bar		Bed		Material		Material		Material	
				Brick		Shoke		Shingle		Refrig.		Pantry		Kitchen		Material		Material		Material	
				Wood		Shoke		Shoke		Wall Unit		Lumin. Ceil.		Bath		Material		Material		Material	
				Piers		Concrete Floor		WINDOWS		Heat Pump		Blk-in BBQ		Kitchen		Material		Material		Material	
						X		D.H.		X		X		Brain Bd		Material		Material		Material	
						X		Insulated Ceil'gs		Heat Pump		X		Material		Material		Material		Material	
						X		Insulated Walls		X		X		Material		Material		Material		Material	
						X		Slid. Gl. Door		X		X		Material		Material		Material		Material	
						X		Compo. Shingle		X		X		Material		Material		Material		Material	
						X		Compo. Shingle		X		X		Material		Material		Material		Material	
						X		Compo. Shingle		X		X		Material		Material		Material		Material	
						X		Compo. Shingle		X		X		Material		Material		Material		Material	
						X		Compo. Shingle		X		X		Material		Material		Material		Material	
						X		Compo. Shingle		X		X		Material		Material		Material		Material	
						X		Compo. Shingle		X		X		Material		Material		Material		Material	
						X		Compo. Shingle		X		X		Material		Material		Material		Material	
						X		Compo. Shingle		X		X		Material		Material		Material		Material	
						X		Compo. Shingle		X		X		Material		Material		Material		Material	
						X		Compo. Shingle		X		X		Material		Material		Material		Material	
						X		Compo. Shingle		X		X		Material		Material		Material		Material	
						X		Compo. Shingle		X		X		Material		Material		Material		Material	
						X		Compo. Shingle		X		X		Material		Material		Material		Material	
						X		Compo. Shingle		X		X		Material		Material		Material		Material	

[illegible]

REMARKS:

2 units 2B, -18a

APTC

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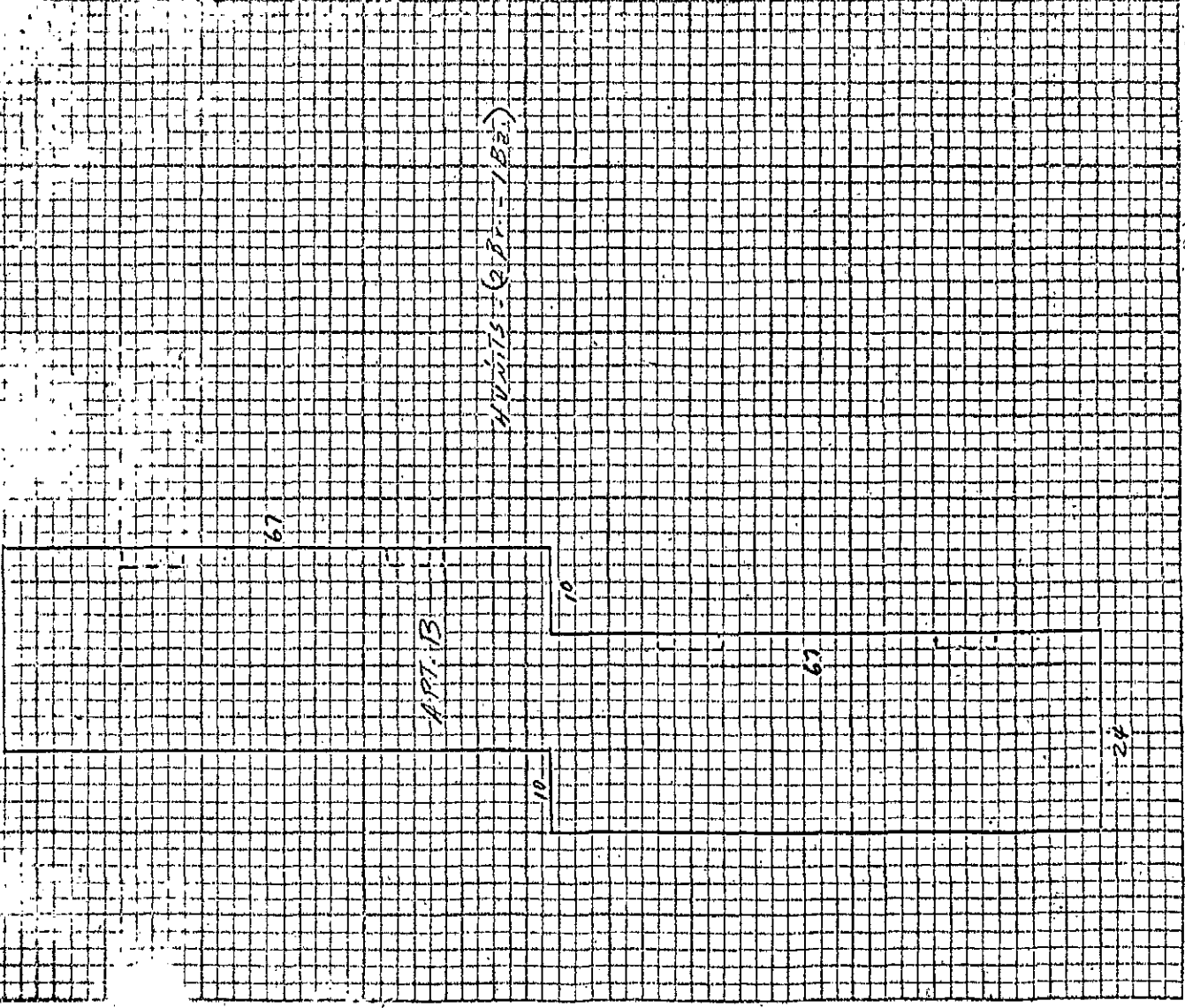


[illegible]



[illegible]

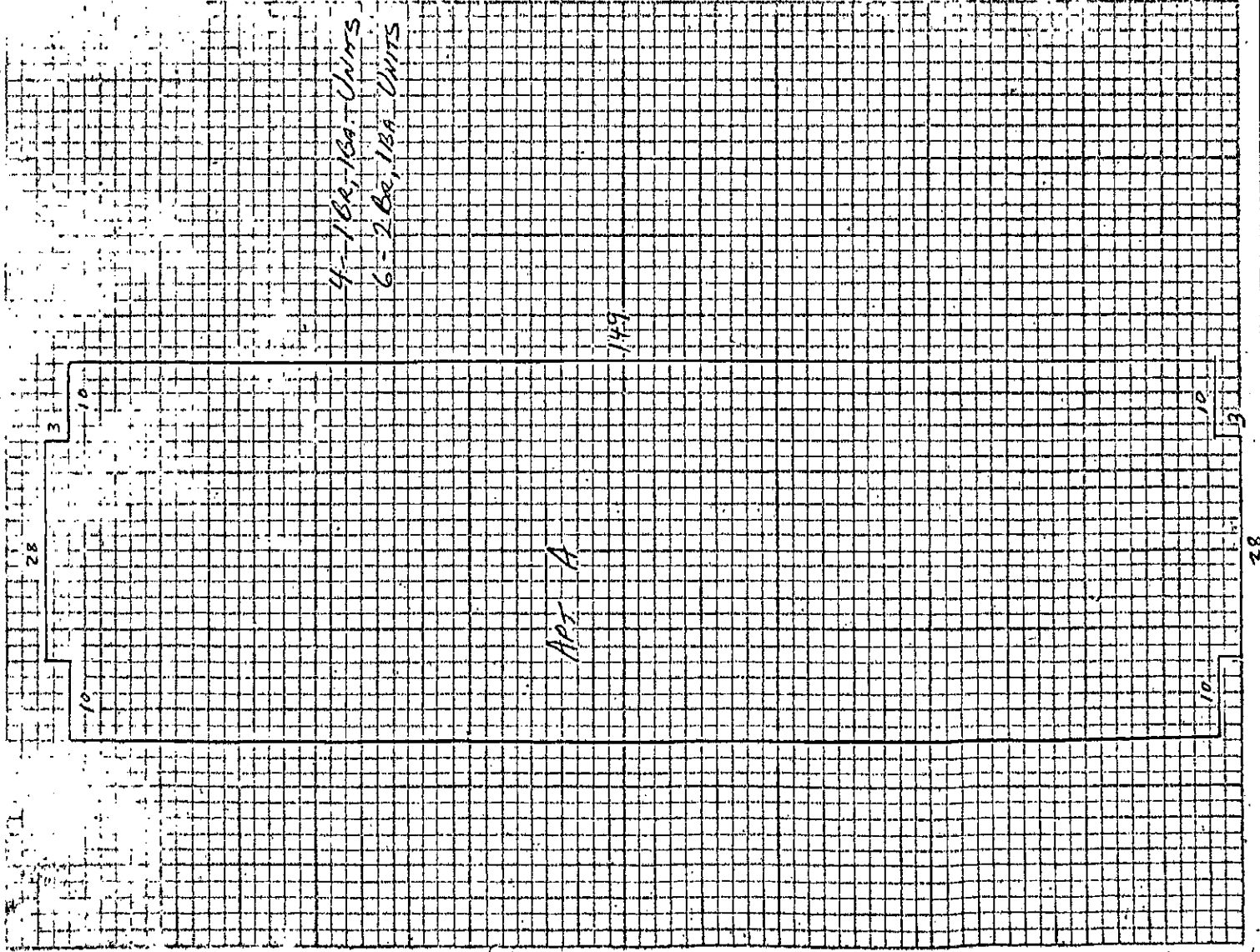
REMARKS:





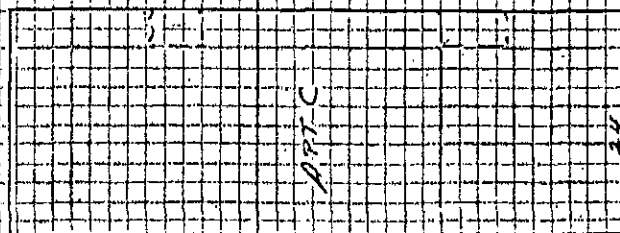
## MISCELLANEOUS STRUCTURES

STRUCTURES	SIZE	Unit Cost	COST
COMPUTATIONS			
D			
28 x 3 =	84		
48 x 149 =	7152		
28 x 3 =	84		
	7320		
REMARKS:			





MISCELLANEOUS SUBJECTS

[illegible]

2 units 2.8x1.6m

67-077C



## MISCELLANEOUS STRUCTURE 3

[illegible]

4-102, 10A-UNITS  
6-202, 10A-UNITS

Ap3-A

1.49





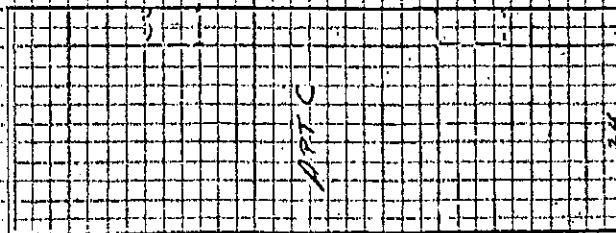
[illegible]

D

$$\begin{array}{r} 24 \times 67 = 1608 \\ 24 \times 67 = 1608 \\ \hline 3216 \end{array}$$



## MISCELLANEOUS STRUCTURES

[illegible]
$$2 \text{ units } 2^{\text{Br}} = 1 \text{ Ba}$$

0.87C

2



[illegible]
$$\begin{array}{r} 28 \times 3 = 84 \\ 48 \times 149 = 7152 \\ 28 \times 3 = 84 \\ \hline 7320 \end{array}$$

REMARKS:

4-102, 10A UNITS  
6-202, 10A UNITS

App-A

571

ADDRESS 14361-63 1 20945

CLASS & SHAPE		CONSTRUCTION		STRUCTURAL		EXTERIOR		ROOF		HEATING		RATING (E, G, A, F, P)		ROOMS		FLOORS		FLOOR FINISH		INTERIOR FINISH			
D5.5 1 Stories	TYPE	Light	Sub-Standard	Frame	Shucco	Flat	1/4 Pitch	Forced	Wiring	Elect. Fix.	Plumbing	KITCH. DETAILS	Ent. Hall	Living	Dining	Family	Bed	Bed	Kitchen	Grain Bd	Material: Vinyl	Length: 12 Ft.	Splash:
		Standard	Box	Conc. Blk.	Siding	Shed	1/4	Elect. Rad.	Thermo.	Painted Cabs	Qvens & Plate	Dishwasher	Break. Bar	Pantry	Lumin. Ceil.	Blk-in BBQ	Blk-in BBQ	Blk-in BBQ	Blk-in BBQ	Blk-in BBQ	Blk-in BBQ	Blk-in BBQ	Blk-in BBQ
		Above-Standard	6" 8"	Adobe	Pl. & Batts	Encl. Eaves	Dormers	Shingle	Shake	B & B	T & G	Shingle	Shake	Tile	TI Trim	Compo.	Compo.	Compo.	Compo.	Compo.	Compo.	Compo.	Compo.
		Special	Brick	Slump Blk.	Floor Joists	Conc. Blk.	Brick	Wood	Piers	Insulated Ceil'g	Insulated Walls	Slid. Gl. Door	Slid. Gl. Door	Slid. Gl. Door	Slid. Gl. Door	Slid. Gl. Door	Slid. Gl. Door	Slid. Gl. Door	Slid. Gl. Door	Slid. Gl. Door	Slid. Gl. Door	Slid. Gl. Door	Slid. Gl. Door
USE	DESIGN	FOUNDATION	Concrete	Concrete	Concrete	Concrete	Concrete	Concrete	Concrete	Concrete	Concrete	Concrete	Concrete	Concrete	Concrete	Concrete	Concrete	Concrete	Concrete	Concrete	Concrete	Concrete	Concrete
Single	Double	Duplex	Apartment	Flat-Court	Motel	2 Units	2 Units	2 Units	2 Units	2 Units	2 Units	2 Units	2 Units	2 Units	2 Units	2 Units	2 Units	2 Units	2 Units	2 Units	2 Units	2 Units	2 Units

CONSTRUCTION RECORD		EFFECT. APPR.		NORM. % GOOD		RATING (E, G, A, F, P)		FIXTURES		SPECIAL FEATURES		COMPUTATION											
Builder	For	Amount	Date	Age	Life	Table	%	Arch. Func.	Con. Storage Sp.	Work	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	
521660	APTS.	15250	5/23/69	1969	1970	8.55	8.55	8.55	8.55	8.55	8.55	8.55	8.55	8.55	8.55	8.55	8.55	8.55	8.55	8.55	8.55	8.55	
TOTAL		15115		15115		15115		15115		15115		15115		15115		15115		15115		15115		15115	
NORMAL % GOOD		15115		15115		15115		15115		15115		15115		15115		15115		15115		15115		15115	
R.C.L.N.D.		15115		15115		15115		15115		15115		15115		15115		15115		15115		15115		15115	

1

67

24

67

24

2 UNITS 28' - 18a

## RESIDENTIAL BUILDING RECORD

[illegible]

Model A Bldg #52

PARCEL

DESCRIPTION OF BUILDING																													
CLASS & SHAPE		CONSTRUCTION		STRUCTURAL		EXTERIOR		ROOF		HEATING		RATING (E, G, A, F, P)		ROOMS		FLOORS		FLOOR FINISH		INTERIOR FINISH									
		Light		X	Stucco		Flat	4	Pitch	X	Forced	X	Wiring	All	B1	2	Material	Grade	Walls	Ceilings									
		Sub-Standard				Box	X	Gable	1/4	1	Wall		Elect. Fix.				Gray Pct	A	DRY	Acoustic									
		X	Standard		Siding	"x"		Hip	4		Floor		Plumbing																
			Above-Standard		Ply. & Battis		Shed	4			Elect. Rad.		KITCH. DETAILS	Ent. Hall															
			Special		Routed Ply.		Encl. Eaves			X	Thermo.	X	Mat. Fin. Cabs	Living	10														
					Shingle		Dormers						Painted Cabs	Dining															
					Shake		Raft. "x"			X	Oven & Plate		Dishwasher	Family															
					B & B		T & G		Gutters		Fireplace		Break. Bar	Bed	1/2														
					Brick		Stone		Shingle		COOLING		Pantry	Bed															
					WINDOWS				Shake		Rafting	Ton	Lumini. Ceil.																
					D.H. Casem't				Tile		Wall Unit		Blt-in BBQ	Kitchen	10		Vinyl	A											
					M.S. Lvr.				Compo.		Heat Pump			Brain Bd	Material: 41														
					X	Insulated Ceil'g	X	Shd. Gl. Door	X	Compo. Shingle																			
					Light	Heavy																							
BATH DETAIL																													
CONSTRUCTION RECORD														FIXTURES															
Builder		K 24-2		EFFECT. APPR.		YEAR		NORM. % GOOD		RATING (E, G, A, F, P)		FI. No.		FLOORS		FINISH		Wc. Lg. Tub		Type		Grade		Shower					
Per. No.		For		Amount		Date		Remain'g		Arch. Func.		Con. Storage Sp.		Work		10		Vinyl		DRY		1 1 1		MOD		A		X X T.	
70800		8/22/68		1969		1970		R-55		A A A A A A		Cup'd Clos. Mash		A A A A A A															
E2143		A9T.																											
																				</									

[illegible]

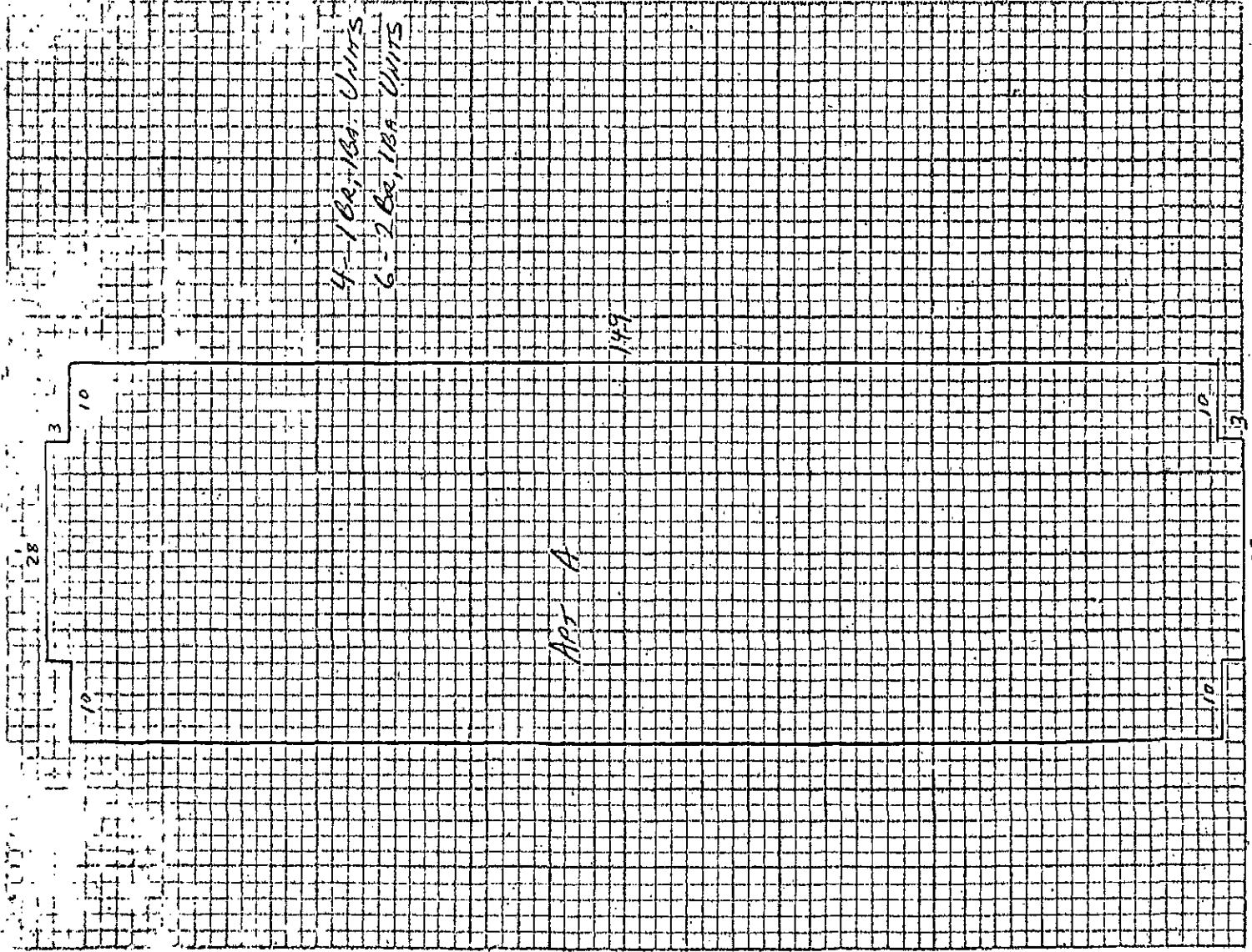


[illegible]

STRUCTURES	SIZE	Unit Cost	COST
COMPUTATIONS			
$28 \times 3 = 84$			
$48 \times 149 = 7152$			
$28 \times 3 = 84$			
$7320^d$			
REMARKS:			

$28 \times 3 = 84$   
 $48 \times 149 = 7152$   
 $28 \times 3 = 84$   
 $7320$

REMARKS:



313-030-15

---

DESCRIPTION OF BUILDING																		PARCEL			
CLASS & SHAPE		CONSTRUCTION		STRUCTURAL		EXTERIOR		ROOF		HEATING		RATING (E, G, A, F, P)		ROOMS		FLOORS		FLOOR FINISH		INTERIOR FINISH	
D-5.5		X		X		X		X		X		X		X		X		X		X	
TYPE		FOUNDATION		Slump Blk.		Shake		Shingle		Shingle		Shingle		Shingle		Shingle		Shingle		Shingle	
Single		X		Concrete		Floor Joists		B & B		J & G		Gutters		Sm. Rd		Lg. Rd		Shingle		Shake	
Double				Concrete Blk.				Brick		Stone		Shingle		Shake		Shingle		Shingle		Shake	
Duplex		X		Apartment		Piers		Concrete Floor		WINDOWS		D.H.		Casement		M.S.		Shd. Gl. Door		Compo. Shingle	
10 Units		Light		Heavy		Insulated Ceil'gs		Insulated Walls		EFFECT. APPR. YEAR		EFFECT. APPR. YEAR		EFFECT. APPR. YEAR		EFFECT. APPR. YEAR		EFFECT. APPR. YEAR		EFFECT. APPR. YEAR	
Builder K 2 1/2		Per. No.		Date		Amount		Date		Amount		Date		Amount		Date		Amount		Date	
E 21635		70800		8/22/68		1969		1970		1970		1970		1970		1970		1970		1970	
AC		7320		9.30		68076		2928		71004		100		71004		100		71004		100	
TOTAL		71004		100		71004		100		71004		100		71004		100		71004		100	
NORMAL % GOOD		71004		100		71004		100		71004		100		71004		100		71004		100	
R.C.L.N.D.		71004		100		71004		100		71004		100		71004		100		71004		100	

COMPUTATION																					
Appraiser & Date		H. Howard		5/16/70		76															
Unit		Area		Unit Cost		Cost		Unit Cost		Cost		Unit Cost		Cost		Unit Cost		Cost		Unit Cost	
APTS		7320		9.30		68076															
AC		7320		.40		2928															

## MISCELLANEOUS STRUCTURES

[illegible]

4-1 Br, 1 Ba, 1 Wms

6-26a, 13a Units

App A

149

一

10

□

22

RESIDENTIAL BUILDING RECORD

PARCEL

DESCRIPTION OF BUILDING

CLASS & SHAPE	CONSTRUCTION	STRUCTURAL	EXTERIOR	ROOF			HEATING	RATING (E, G, A, F, P)	ROOMS	FLOORS		FLOOR FINISH		INTERIOR FINISH	
				Flat	Gable	Hip				Bl	2	Material	Grade	Walls	Ceilings
D5.5 1 Stories TYPE	Light	Frame	Stucco	Flat	4/12	Pitch	Forced	A	All	Bl	2	Material	Grade	Walls	Ceilings
	Sub-Standard	Box		X	Gable	4/12	Wall	A				Carpet	A	DRY	Acous.
	Standard	Conc. Blk.	Sliding		Hip	1/4	Floor	A							
	Above-Standard	6" .8"	Ply. & Batts		Shed	1/4	Elect. Rad.		Ent. Hall						
	Special	Adobe	Routed Ply.		Encl. Eaves		Thermo.		Living						
USE DESIGN	FOUNDATION	Slump Blk.	Shake	Dormers											
	Concrete	Floor Joists	B & B	T & G											
	Conc. Blk.		Brick	Stone											
	Brick														
	Wood														
Apartment															
Flat-Court															
Motel															
2 Units															
BATH DETAIL															
FINISH															
FLOOR FINISH															
Walls															
Ceilings															
Shower															
SPECIAL FEATURES															
Dressing Area															
Wet Bar															
Walk-in Closets															
PULLMANS															
NO.															
LGTH.															
FIN.															

COMPUTATION

Appraiser & Date	Area	Unit Cost	Cost	Unit Cost	Cost	Unit Cost	Cost	Unit Cost	Cost	Unit Cost	Cost	Unit Cost	Cost	Unit Cost	Cost
APRIS	16084	9.00	14472												
AC	16084	40	643												
TOTAL			15115												
NORMAL % GOOD															
R.C.L.N.D.			15115												

## MISCELLANEOUS STRUCTURES

[illegible]

Units 28 = 1 Ba.

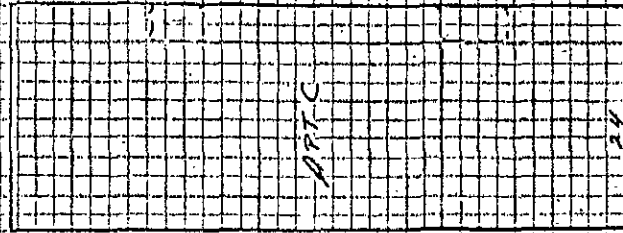
67. OPTC

五



[illegible][illegible] $24 \times 67 = 1608$ 

REMARKS:



2 units - 2 Br - 1 Ba

OPTC

24

DESCRIPTION OF BUILDING

PARCEL

CLASS & SHAPE	CONSTRUCTION	STRUCTURAL	EXTERIOR	ROOF		HEATING	RATING (E, G, A, F, P)		ROOMS	FLOORS		FLOOR FINISH		INTERIOR FINISH	
				Flat	Pitch		Wiring	Elect. Fix.		B 1	2	Material	Grade	Walls	Ceilings
25.5	Light	Frame	Shingle	X	4/12	Forced	X	Wiring	All	X		DRY	A	DRY	Acoust.
	Sub-Standard	Box	Siding	X	4/12	Forced	X	Wiring	All	X		DRY	A	DRY	Acoust.
	Standard	Conc. Blk.	Ply. & Battis		4/12	Forced	X	Wiring	All	X		DRY	A	DRY	Acoust.
	Above-Standard	6" 8"	Routed Ply.		4/12	Forced	X	Wiring	All	X		DRY	A	DRY	Acoust.
Stories	Special	Adobe	Shingle			Thermo.	X	Wiring	Ent. Hall	X		DRY	A	DRY	Acoust.
	FOUNDATION	Brick	Shingle			Thermo.	X	Wiring	Living	X		DRY	A	DRY	Acoust.
	Single	Slump Blk.	Shingle			Thermo.	X	Wiring	Dining	X		DRY	A	DRY	Acoust.
	Double	Conc. Blk.	B & B			Thermo.	X	Wiring	Family	X		DRY	A	DRY	Acoust.
USE DESIGN	Conc. Blk.	Floor Joists	T & G			Thermo.	X	Wiring	Bed	X		DRY	A	DRY	Acoust.
	Brick		Brick			Thermo.	X	Wiring	Bed	X		DRY	A	DRY	Acoust.
	Wood		Shingle			Thermo.	X	Wiring	Bed	X		DRY	A	DRY	Acoust.
	Piers	Concrete Floor	Shingle			Thermo.	X	Wiring	Bed	X		DRY	A	DRY	Acoust.
4 Units	Light	Insulated Ceilings	Shingle			Thermo.	X	Wiring	Kitchen	X		DRY	A	DRY	Acoust.
	Heavy	Insulated Walls	Shingle			Thermo.	X	Wiring	Brain Bd	X		DRY	A	DRY	Acoust.
			Shingle			Thermo.	X	Wiring		X		DRY	A	DRY	Acoust.
			Shingle			Thermo.	X	Wiring		X		DRY	A	DRY	Acoust.
BATH DETAIL															
FINISH (E, G, A, F, P)															
RATING (E, G, A, F, P)															
FIXTURES															
SPECIAL FEATURES															
PULLMANS															
SHOWER															

COMPUTATION

Appraiser & Date	Unit	Area	Unit Cost		Unit Cost	Cost	Unit Cost	Cost	Unit Cost	Cost	Unit Cost	Cost	Unit Cost	Cost	Unit Cost	Cost
			Unit	Cost												
APTS.	3216	9.00	28944													
AG.	3216	40	1286													
TOTAL																
30230																
NORMAL % GOOD																
100																
R.C.L.N.D.																
30230																
46947																
469																



STRUCTURES	SIZE	Unit Cost	COST
COMPUTATIONS			
D			
24x67 = 1608			
24x67 = 1608			
<u>32164</u>			
REMARKS:			

D  $24 \times 67 = 1608$   
 $24 \times 67 = 1608$   
3216

REMARKS:





STRUCTURES	SIZE	Unit Cost	COST
COMPUTATIONS			
D			
$28 \times 3 = 84$			
$48 \times 149 = 7152$			
$28 \times 3 = 84$			
$7320 \div$			
REMARKS:			

28

DESCRIPTION OF BUILDING										PARCEL												
CLASS & SHAPE	CONSTRUCTION	STRUCTURAL	EXTERIOR		ROOF		HEATING	RATING (E, G, A, F, P)	ROOMS	FLOORS		FLOOR FINISH		INTERIOR FINISH								
			Shucco	Shingle	Flat	Pitch				Forced	Wiring	Elect. Fix.	Plumbing	KITCH. DETAILS	Living	Dining	Family	Bed	Bed	Material	Grade	Walls
D.S.5	X	Frame	X	Shucco	X	Flat	Pitch	X	Forced	Wiring	Elect. Fix.	Plumbing	KITCH. DETAILS	Living	Dining	Family	Bed	Bed	Material	Grade	Walls	Ceilings
10 Units	Light	Sub-Standard	Box	Siding	Ply. & Batt.	Shed	Hip	Elect. Rod.	Thermo.	Nat. Fin. Cabs	Painted Cabs	Oven & Plate	Dishwasher	Break. Bar	Pantry	Lumin. Ceril.	Blt-in BBQ	Heat Pump	Material: Vinyl	Grade: A	Walls: Dry	Ceilings: Acous.
TYPE	FOUNDATION	Concrete	Block	Shingle	Shake	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle
USE	DESIGN	Concrete	Block	Shingle	Shake	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle
Single	Double	Concrete	Block	Shingle	Shake	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle
Duplex	Apartment	Concrete	Block	Shingle	Shake	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle
Flat-Court	Motel	Concrete	Block	Shingle	Shake	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle	Shingle
10 Units	Light	Heavy	Insulated	Walls	Insulated	Walls	Insulated	Walls	Insulated	Walls	Insulated	Walls	Insulated	Walls	Insulated	Walls	Insulated	Walls	Insulated	Walls	Insulated	Walls
BATH DETAIL																						
FIN. NO. FINISH WALLS WET LATH TYPE GRADE SHOWER																						
PULLMANS NO. LGTH. SPECIAL FEATURES																						
Dressing Area Wet Bar Walk-in Closets																						

COMPUTATION									
Appraiser & Date	Area	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost
APR 5	7320	9.30	68076						
AC	7320	.40	2928						
TOTAL			71004						
NORMAL % GOOD			100						
R.C.L.N.D.			71004						

10

28

3

10

4-10A, 10A UNITS

6-20A, 10A UNITS

100

DESCRIPTION OF BUILDING										PARCEL	
CLASS & SHAPE	CONSTRUCTION	STRUCTURAL	EXTERIOR	ROOF	HEATING	RATING (E, G, A, F, P)	ROOMS	FLOORS	FLOOR FINISH	INTERIOR FINISH	
D.S. 5	Light	X Frame	X Stucco	Flat 1/4	X Pitch	Wiring	All	1 2	Material	Walls	
	Sub-Standard	Box		X Gable 1/4	M	Elect. Fix.			Carpet	Ceilings	
	X Standard	Conc. Blk.	Siding "x"	Hip 1/4	Floor	Plumbing					
	Above-Standard	6" 8"	Ply. & Battis	Shed 1/4	Elect. Rad.	KITCH. DETAILS	Ent. Hall				
1 Stories	Special	Adobe	Routed Ply.	Encl. Eaves	X Thermo.	X Nat. Fin. Cabs	Living	4	--		
TYPE		Brick	Shingle	Dormers		Painted Cabs	Dining				
USE DESIGN	FOUNDATION	Slump Blk.	Shake	Roof "x"		X Oven & Plate	Family				
Single	X Concrete	Floor Joist:	B & B	T & G	Fireplace	Dishwasher	Bed	8			
Double	Conc. Blk.			Sm. Rk		Break. Bar	Bed				
Duplex	Brick		Brick	Shingle	COOLING	Pantry					
X Apartment	X Wood			X Shake	Refrig. Ton	Lumin. Ceil.					
Flat-Court	Piers	X Concrete Floor	WINDOWS	Tile	Wall Unit	Bit-in BBQ					
Motel			D.H.	Casem't			Kitchen	4	Material		
			M.S.	Lvr.	Heat Pump		Brain Bd		Lgth: 12	Fl. Splash:	
4 Units	Light	Heavy	X Insulated Ceil'gs	X Insulated Walls	Compo. Shingle						
BATH DETAIL											
FIN. No. FLOORS FINISH WALLS W.C. LATH Type Grade SHOWER											
PULLMANS NO. LGTH. FIN.											
SPECIAL FEATURES											
Dressing Area Central Vac. Wet Bar Excess Glass Walk-in Closets											
COMPUTATION											
Appraiser & Date	Area	Unit Cost	Cost	Unit Cost	Cost	Unit Cost	Cost	Unit Cost	Cost	Unit Cost	Cost
APPS	3216	9.00	28944								
AC	3216	.40	1286								
TOTAL			30230								
NORMAL % GOOD			100								
R.C.L.N.D.			30230								

D

$$24 \times 67 = 1608$$
$$24 \times 67 = 1608$$
$$4 \overline{) 3216}$$
$$804$$


69070

[illegible]



23  
 ENG.  
 STORAGE  
 AREA  
 UNIMPROVED

20 ① OFFICE + 1/2 BATH

20

51

74

②③ Laundry

23

Permits:

① E 21611 10500 2-22-68  
 ②③ E 21620 2-22-68  
 ④ E 21629 2-22-68

# ATTACHMENT B.

Photographic Survey

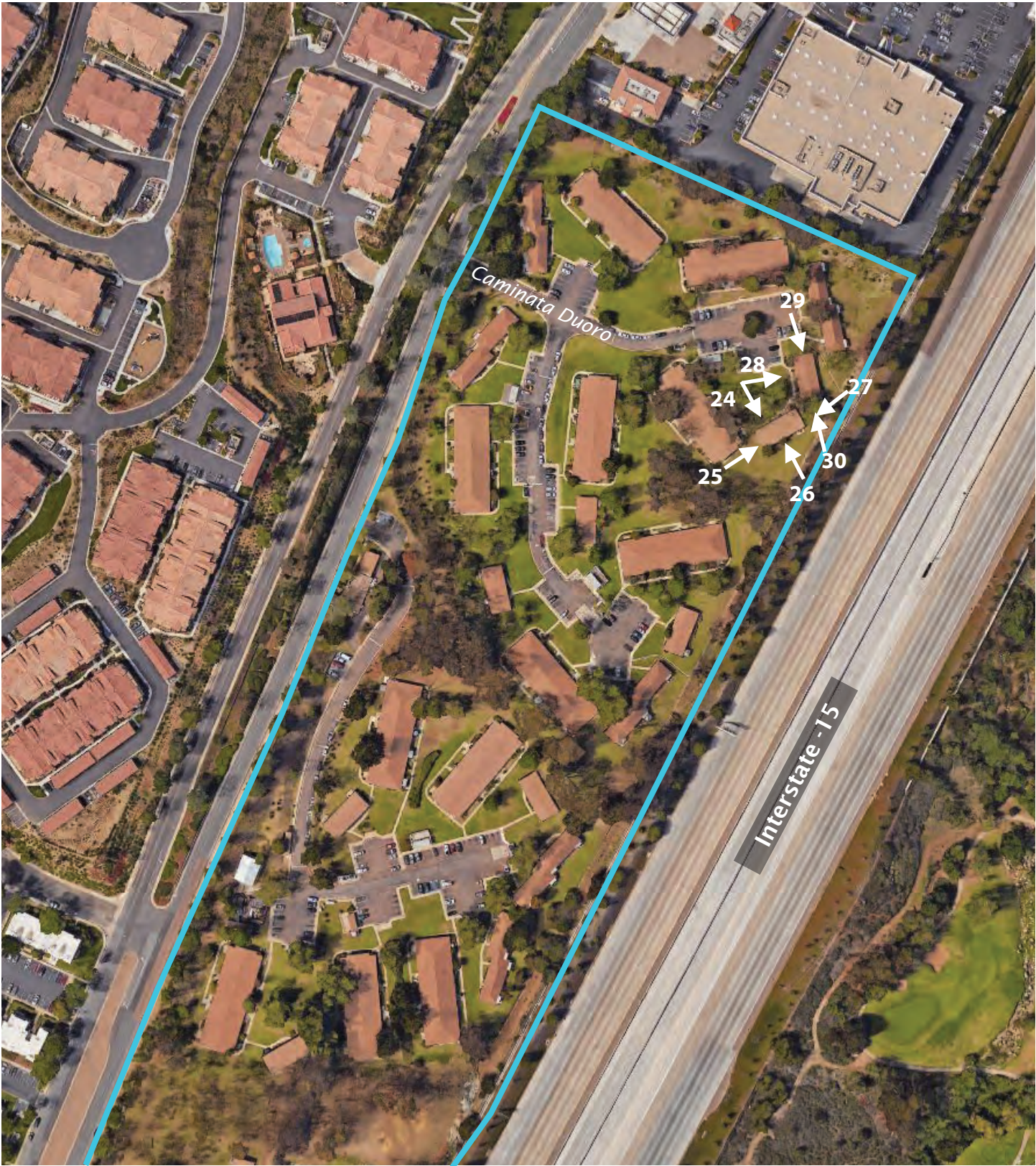


Pacific Village- 10955 Carmel Mountain Road  
Photographic Survey Key Map South





Pacific Village- 10955 Carmel Mountain Road  
Photographic Survey Key Map North







Picture 1: Front Elevation



Picture 2: Right Elevation

Pictures 1-4  
Building Type 2: Medium





Picture 3a: Rear Elevation, Looking Right



Picture 3b: Rear Elevation, Looking Left

Pictures 1-4  
Building Type 2: Medium





Picture 4: Left Elevation

Pictures 1-4  
Building Type 2: Medium





Picture 5: Front Elevation



Picture 6: Left Elevation

Pictures 5-8  
Building Type 3a: Small





Picture 7: Rear Elevation



Picture 8: Right Elevation

Pictures 5-8  
Building Type 3a: Small





Picture 9a: Front Elevation



Picture 9b: Front Elevation

Pictures 9-12  
Building Type 1: Large





Picture 10: Right Elevation



Picture 11a: Rear Elevation, Right

Pictures 9-12  
Building Type 1: Large





Picture 11b: Rear Elevation, Center



Picture 11c: Rear Elevation, Left

Pictures 9-12  
Building Type 1: Large





Picture 12: Left Elevation

Pictures 9-12  
Building Type 1: Large





Picture 13: Left Side Elevation



Picture 14: Front Elevation

Pictures 13-15  
Building Type 3b: Small





Picture 15: Right Side Elevation

Pictures 13-15  
Building Type 3b: Small





Picture 16: Front Elevation



Picture 17: Left Side Elevation

Pictures 16-19  
Building Type 1: Large





Picture 18a: Rear Elevation, Looking Right



Picture 18b: Rear Elevation, Looking Left

Pictures 16-19  
Building Type 1: Large





Picture 19: Right Side Elevation

Pictures 16-19  
Building Type 1: Large





Picture 20: Front Elevation



Picture 21: Right Side Elevation

Pictures 20-23  
Building Type 2: Medium





Picture 22a: Rear Elevation, Looking Left



Picture 22b: Rear Elevation, Looking Right

Pictures 20-23  
Building Type 2: Medium





Picture 23: Left Side Elevation

Pictures 20-23  
Building Type 2: Medium





Picture 24: Front Elevation



Picture 25: Right Side Elevation

Pictures 24-27  
Building Type 3b: Small





Picture 26: Rear Elevation



Picture 27: Left Side Elevation

Pictures 24-27  
Building Type 3b: Small





Picture 28: Front Elevation



Picture 29: Left Side Elevation

Pictures 28-30  
Building Type 3a: Small





Picture 30: Right Side Elevation

Pictures 28-30  
Building Type 3a: Small

# ATTACHMENT C.

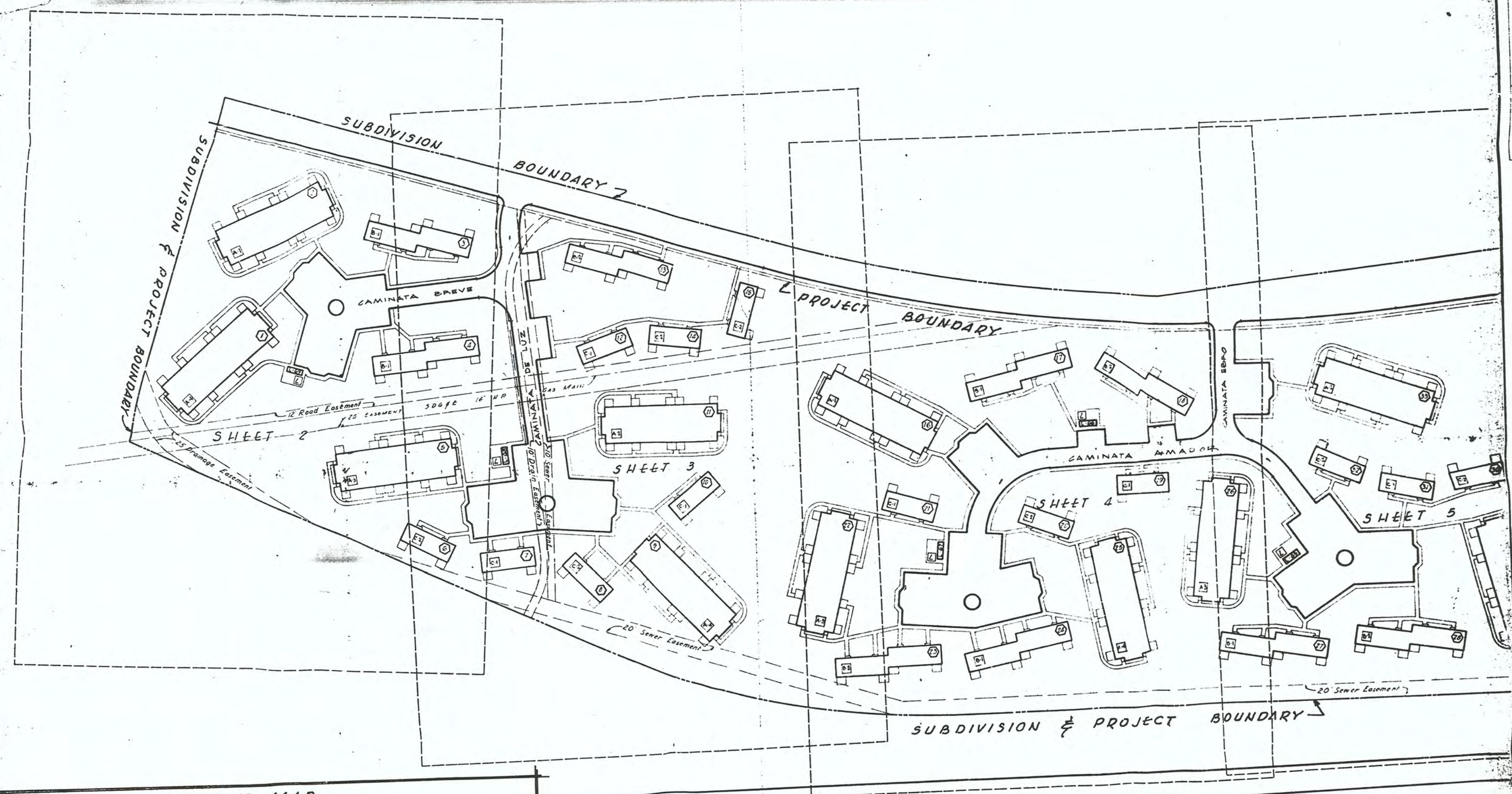
Site Plan



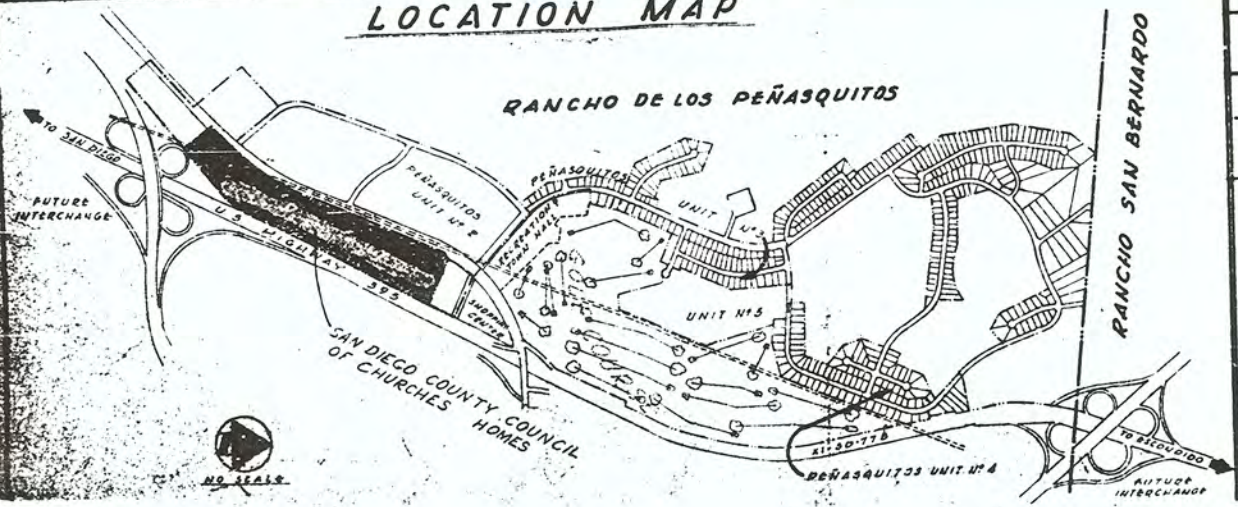
ARCHITECTS - DALE NAEGLIE & ASSOCIATES  
 10000 San Diego Avenue, Suite 100, San Diego, California 92121  
 Telephone (619) 591-1100  
 FAX (619) 591-1101



**PENASQUITOS VILLAGE**



**LOCATION MAP**



U.S. HIGHWAY 395

XI-SD-77B

July 2, 1988  
 This plan was prepared for the  
 use of the project and is not  
 to be used for any other purpose  
 without the written consent of  
 the architect.

DATE  
 7-12-88  
 G-2  
 JUL 15 1988  
 3  
 SHEET







# ATTACHMENT D.

## Additional Documents for Discretionary Projects

1. Written Description of Property
2. Written Description of Alterations
3. Notice of Completion
4. Chain of Title
5. List of Occupants
6. Historical Photographs
7. Sanborn Maps

# ATTACHMENT D.1

## Written Description of Property

- The existing buildings are varied in their architectural character however many of these buildings appear to be non-descript with a minimal Traditional style. Several buildings on site are reminiscent of ranch style homes with limited use of siding, stone veneer, low pitched roofs and deep overhangs. A unifying feature to all existing buildings is a 1-story mass with a wide and shallow form giving the overall composition of these buildings a very simple aesthetic. Roof forms vary from gable to hip with asphalt comp roofing while other finishes include a predominant use stucco exterior walls and aluminum windows.

# ATTACHMENT D.2

## Written Description of Alterations

- **Building Permit No. L81787**

Owner: Penasquitos, Inc., 10955 Carmel Mountain Road, San Diego

Designer: not listed

Builder: San Diego Fence Co., Inc., 7920 Engineer Road, San Diego, CA 92111

Proposed Work: 329' of 5' high chain link fence

Approved: 12/28/1977

- **Building Permit No. G71957**

Owner: Tavin J. Kahn Organization, 10955 Carmel Mountain Road, San Diego, CA 92129

Designer: not listed

Builder: Homeland Construction, Inc., 3668 So. Bonita Street, Spring Valley, CA

Proposed Work: Repair of Fire Damage (drywall and 3 doors rehung)

Approved: 12/13/1971

- **Building Permit No. E85426**

Owner: Penasquitos Village, 3010 Cowley Way, San Diego

Designer: Penasquitos Village, 3010 Cowley Way, San Diego

Builder: Penasquitos Village, 3010 Cowley Way, San Diego

Location: Lot 1 of Penasquitos Village

Proposed Work: Remodel work shop for office space

Approved: 1/28/1970

- **Building Permit No. E21628**

Owner: Penasquitos Village, 3010 Cowley Way, San Diego

Designer: Dale Neagle & Associates, 2210 Avenida de la Playa, La Jolla

Builder: Penasquitos, Inc., 3010 Cowley Way, San Diego

Proposed Work: Office

Approved: 8/22/1968

LOCATION RECD AT COUNTEE BY  
D. Schwartz

EXPIRATION DATE

SATION DATE  
CATE  
ORKMAN'S C  
INSURANCE CE

IN-258 (REV. 8/77)

# Building Permit Application

APPLICANT FILL  
INSIDE HEAVY LINES

OWNER  
NAME (OR NAME OF BUSINESS)  
Penasquitos, Inc.  
MAILING ADDRESS (NUMBER) (STREET)  
10955 Carmel Mountain Rd.  
CITY ZIP TELEPHONE NUMBER  
San Diego 92111 271-0221

DESIGNER  
NAME  
ADDRESS (NUMBER) (STREET)  
CITY ZIP TELEPHONE NUMBER

BUILDER  
NAME  
San Diego Fence Co., Inc.  
ADDRESS (NUMBER) (STREET)  
7920 Engineer Rd.  
CITY ZIP TELEPHONE NUMBER  
San Diego 92111 279-8442  
STATE LICENSE NUMBER CLASS. NO. CITY LICENSE NUMBER  
114091 B-1 00443

JOB LOCATION  
LOT BLOCK SUBDIVISION UNIT  
6 Penasquitos #6  
JOB ADDRESS  
10955 Carmel Mountain Rd.  
CONDITION OF SOIL AT JOB SITE  
☐ ORIGINAL ☐ COMPACTED FILL ☐ LOOSE FILL  
NO. OF EXISTING BUILDINGS ON LOT AND USE

PROPOSED WORK  
DESCRIBE WORK TO BE DONE  
329' of 5' high chain link fence  
EXISTING USE OF BUILDING OR PROPERTY golf course  
PROPOSED USE OF BUILDING OR PROPERTY golf course

I hereby acknowledge that I have read this application; that the information given is correct; and that I am the owner, or the duly authorized agent of the owner. I agree to comply with city and state laws regulating construction. In the event I do not comply with the Workman's Compensation law, this permit shall be deemed revoked.  
SIGNATURE (OWNER OR AGENT) DATE SIGNED  
M. Brown 12/15/77  
AGENT FOR  
San Diego Fence Co., Inc.  
ADDRESS  
7920 Engineer Rd., S.D. 92111

METER SIZE SERVICE SIZE CREDIT CHECK'D BY  
REMARKS  
NO. ADDITIONAL CONNECTIONS REQ'D TYPE CONN CHECKED BY  
REMARKS

JOB ADDRESS 10955 CARMEL MOUNTAIN RD  
CENSUS TRACT NUMBER 170.16  
USE ZONE R-2 COORD. INDEX 295-1742 PLAN FILE NO. E60637  
REAR YD (INT) (STR) NAME OF STREET  
ALLOWABLE COVERAGE FLOOR AREA RATIO ALLOWED MAX. ALLOWABLE HEIGHT (FT.) VARIANCE NO.  
LOT SPLIT DATE AGREEMENT NO. NO. OF BAR SINKS CURB TO P.L.  
DATE PLANS SUBMITTED: WORK TO BE DONE  
PLAN CHK. RECPT. NO. SIGN MOVE  
REPAIR DEMOLISH  
PLAN CHECK NEW RESIDENTIAL  
RECPT. AMT. \$ ADD

FUND & ACCT.	NO. UNITS	PER UNIT	TOTAL
100 PLAN CHECK FEE			5.50
73421 SUPPLEMENTAL PLAN CHK. FEE			
100 BUILDING PERMIT FEE			11.00
73422			
320 STATE FEE			50.00
9660			
506 SEWER FEE			
79750			
500 WATER FEE			
79080			
73423 PARK FEE			

SPECIAL INSPECTION REQUIRED FOR  
☐ CONCRETE  
☐ MASONRY  
☐ WELDING, H.S. BOLTS  
☐ PILE DRIVING  
☐ SOILS  
☐ OTHER (IDENTIFY)  
TOTAL FEES DUE 17.00  
FIRE ZONE 3 TYPE OF CONST. IN OCCUR. GRP. 3  
BLDG. AREA NO. STORIES TOT. FLR. AREA  
SPRINKLERS REQ'D FOR: HGT. IN FT.

PLANS CHECKED DATE  
per BID-7 12/15/77  
PLANS APPROVED  
D. Schwartz 12/15/77  
PLOT PLAN CHK'D & APPRD  
per ZONING 12/15/77  
APPLICATION APPROVAL  
THIS PERMIT DOES NOT BECOME VALID UNTIL SIGNED BY THE DIRECTOR OF BUILDING INSPECTION, OR HIS DEPUTY, AND FEES ARE PAID, AND RECEIPT IS ACKNOWLEDGED IN SPACE PROVIDED.  
SIGNATURE OF BUILD. INSP. DEPT. DEPUTY  
D. Schwartz  
DATE 12/28/77  
FILE

ATTENTION:  
THIS PERMIT  
AUTHORIZES  
ONLY THE  
WORK NOTED  
17.00  
1278003  
3 CODE  
17.00+  
17.00+T



CITY OF  
SAN DIEGO

INSPECTION  
ZONING APPROVAL  
HEALTH DEPT. APPROVAL



## Building Permit Application

APPLICANT FILL  
INSIDE HEAVY LINES

JOB ADDRESS

10955 CARMEL MOUNTAIN RD.

OWNER	NAME (OR NAME OF BUSINESS)		MAILING ADDRESS (NUMBER)		(STREET)		CITY	STATE	ZIP	TELEPHONE NUMBER
	JOHN J. RAIN ORGANIZATION		10955 Carmel Mountain Rd.				San Diego, Ca.	92129		279-3950
DESIGNER	NAME		ADDRESS (NUMBER)		(STREET)		CITY	STATE	ZIP	TELEPHONE NUMBER
	HOMELAND CONSTRUCTION, INC.		3668 So. Bonita Street				Spring Valley, Ca.			469-6155
BUILDER	NAME		ADDRESS (NUMBER)		(STREET)		CITY	STATE	ZIP	TELEPHONE NUMBER
	HOMELAND CONSTRUCTION, INC.		3668 So. Bonita Street				Spring Valley, Ca.			469-6155
JOB LOCATION	LOT	BLOCK	SUBDIVISION		Map	UNIT				
	Par. 1		Penasquitos Gardens							
PROPOSED WORK	JOB ADDRESS									
	10820 Carmel Mountain Rd.									
CONDITION OF SOIL AT JOB SITE										
<input checked="" type="checkbox"/> ORIGINAL <input type="checkbox"/> COMPACTED FILL <input type="checkbox"/> LOOSE FILL										
NO. OF EXISTING BUILDINGS ON LOT AND USE										
1 dwelling										
WORK TO BE DONE										
<input type="checkbox"/> NEW ADD <input checked="" type="checkbox"/> ALTER REPAIR <input type="checkbox"/> MOVE <input type="checkbox"/> DEMOLISH										
DESCRIBE										
Repair of fire damage (REPAIR)										
THREE DOORS REMOVING										
EXISTING USE OF BUILDING OR PROPERTY										
Dwelling										
PROPOSED USE OF BUILDING OR PROPERTY										
Dwelling										
<input type="checkbox"/> NON RESIDENTIAL <input checked="" type="checkbox"/> RESIDENTIAL         NUMBER OF DWELLING UNITS										
I hereby acknowledge that I have read this application; that the information given is correct; and that I am the owner, or the duly authorized agent of the owner. I agree to comply with city and state laws regulating construction; and in doing the work authorized thereby, no person will be employed in violation of the Labor Code of the State of California relating to Workmen's Compensation Insurance.										
SIGNATURE OF OWNER OR AGENT										
Eddie J. Wade										
DATE SIGNED										
12/13/71										
AGENT FOR										
HOMELAND CONSTRUCTION, INC.										
ADDRESS										
P. O. Box 325, Spring Valley 92077										
COUNTY SANITATION DISTRICT										
RECEIPT NO.										
PRIVATE DISPOSAL APPROVAL										
HEALTH DEPT. APPROVAL										
SPRINKLERS REQ'D FOR										
COORD. INDEX 275-1740 PLAN FILE NO. PERMIT NO. 671951										
USE ZONE 12-1-5 SETBACK FRONT YARD 15 REAR YD. 20 SIDE YD. (INT.) 4 SIDE YD. (STR.) LOT AREA ALLOW. COVERAGE 40 % TOTAL AREA COVERED N/C SQ. FT. LOT SPLIT DATE										
CURB TO P.L. F. S. METER SIZE STREET IMPROV'D YES NO ENC'R. PERMIT YES NO CHECKED BY REMARKS										
NO. ADDITIONAL CONNECTIONS REQ'D TYPE CONN. CHECKED BY REMARKS										
VALUATION OF WORK NO. UNITS PER UNIT TOTAL 200										
FUND & ACCT. PLAN CHECK FEE SUPPLEMENTAL PLAN CHK. FEE BUILDING PERMIT FEE SUB-TOTAL SEWER FEE WATER FEE										
SPECIAL INSPECTOR REQ'D. FOR <input type="checkbox"/> CONCRETE <input type="checkbox"/> MASONRY <input type="checkbox"/> WELDING, H.S. BOLTS <input type="checkbox"/> PILE DRIVING <input type="checkbox"/> OTHER										
TOTAL FEES DUE FIRE ZONE 3 TYPE OF CONST. VN OCCUP. GRP. 3 BLDG. AREA N/C NO. STORIES TOT. FIB. AREA N/C PLAN CHK. RECPT. NO. & AMT. DATE										
PLANS CHECKED DATE PLANS APPROVED DATE PLOT PLAN CHK'D & APPR'D DATE										
APPLICATION APPROVAL THIS PERMIT DOES NOT BECOME VALID UNTIL SIGNED BY THE DIRECTOR OF BUILDING INSPECTION, OR HIS DEPUTY; AND FEES ARE PAID, AND RECEIPT IS ACKNOWLEDGED IN SPACE PROVIDED. SIGNATURE OF DIR. OF BNSP. DIVISION DATE 12-13-71 INSPECTOR										



CITY OF SAN DIEGO

PARCEL NO.

IN 258 (REV. 6-65)

Building Permit Application				APPLICANT FILL INSIDE HEAVY LINES		JOB ADDRESS	
OWNER	NAME (OR NAME OF BUSINESS)			COORD. INDEX		PLAN FILE NO.	
	Penasquitos Inc.			2 97-1740		2 27810	
DESIGNER	WORKING ADDRESS (NUMBER) (STREET)			USE ZONE		SETBACK	
	3010 Cowley Way			R-1-5		FRONT YARD 15	
BUILDER	CITY			CENSUS TRACT		REAR YD.	
	San Diego			170-04		20	
JOB LOCATION	TELEPHONE NUMBER			B.C. CODE		SIDE YD. (INT.)	
	276-5130			22		4	
PROPOSED WORK	NAME			VARIANCE NO.		SIDE YD. (STR.)	
	Penasquitos Inc.						
PROPOSED WORK	ADDRESS (NUMBER) (STREET)			CURB TO P.L.		STREET IMPROV'D	
	3010 Cowley Way			F. S.		YES NO	
PROPOSED WORK	CITY			MEIET SIZE		SERVICE SIZE	
	San Diego					CLEARANCE	
PROPOSED WORK	STATE LICENSE NUMBER			REMARKS		CHECKED BY	
	253198						
PROPOSED WORK	CLASS. NO.			NO. ADDITIONAL CONNECTIONS REQ'D.		TYPE CONN.	
	B-1						
PROPOSED WORK	CITY LICENSE NUMBER			REMARKS		CHECKED BY	
	24905						
PROPOSED WORK	LOT			VALUATION OF WORK		NO. UNITS	
	1						
PROPOSED WORK	BLOCK			PLAN CHECK FEE		PER UNIT	
	Penasquitos Village			450-16		1500	
PROPOSED WORK	SUBDIVISION			SUPPLEMENTAL PLAN CHK. FEE		TOTAL	
				-150		-150	
PROPOSED WORK	UNIT			BUILDING PERMIT FEE		9.00	
				SUB-TOTAL		7.50	
PROPOSED WORK	JOB ADDRESS			100		7342	
	10955 Carmel Mt. Road			506		SEWER FEE	
PROPOSED WORK	CONDITION OF SOIL AT JOB SITE			79750		500	
	ORIGINAL <input type="checkbox"/> COMPACTED FILL <input checked="" type="checkbox"/> LOOSE FILL <input type="checkbox"/>			79080		WATER FEE	
PROPOSED WORK	NO. OF EXISTING BUILDINGS ON LOT AND USE			TOTAL FEES DUE		7.50	
	60 Apt Multi-Fam.						
PROPOSED WORK	WORK TO BE DONE			SPECIAL INSPECTOR REQ'D. FOR		FIRE ZONE	
	NEW <input type="checkbox"/> ALTER <input checked="" type="checkbox"/> REPAIR <input type="checkbox"/> MOVE <input type="checkbox"/> DEMOLISH <input type="checkbox"/>			CONCRETE <input type="checkbox"/> MASONRY <input type="checkbox"/> WELDING, H.S. BOLTS <input type="checkbox"/> PILE DRIVING <input type="checkbox"/> OTHER <input type="checkbox"/>		3	
PROPOSED WORK	DESCRIBE			TOTAL FEES DUE		TYPE OF CONST.	
	Remodel Work shop For					V-N	
PROPOSED WORK	EXISTING USE OF BUILDING OR PROPERTY			BLDG. AREA		NO. STORIES	
	Office			N/A		1	
PROPOSED WORK	PROPOSED USE OF BUILDING OR PROPERTY			PLAT. CHK. RECPT. NO. & AMT.		DATE	
	Office			37843 600		12/24/70	
PROPOSED WORK	X NON RESIDENTIAL			PLANS CHECKED		DATE	
	RESIDENTIAL			APPROVED		DATE	
PROPOSED WORK	NUMBER OF DWELLING UNITS			PLOT PLAN		DATE	
	0			N/A		1/70	
PROPOSED WORK	I hereby acknowledge that I have read this application, that the information given is correct, and that I am the owner, or the duly authorized agent of the owner. I agree to comply with city and state laws regulating construction, and in doing the work authorized thereby, no person will be employed in violation of the Labor Code of the State of California relating to Workmen's Compensation Insurance.			ATTENTION		APPLICATION APPROVAL	
	SIGNATURE (OWNER OR AGENT)			THIS PERMIT AUTHORIZES ONLY THE WORK NOTED		THIS PERMIT DOES NOT BECOME VALID UNTIL SIGNED BY THE DIRECTOR OF BUILDING INSPECTION, OR HIS DEPUTY, AND FEES ARE PAID, AND RECEIPT IS ACKNOWLEDGED IN SPACE PROVIDED.	
PROPOSED WORK	DATE SIGNED			INSPECTION DEPARTMENT		SIGNATURE OF DEPT. OF BLDG. DEPT.	
	1-26-70					W. Amiller	
PROPOSED WORK	AGENT FOR			CITY OF SAN DIEGO		DATE	
	Penasquitos Inc.					1-28-70	
PROPOSED WORK	ADDRESS					INSPECTOR	
	3010 Cowley Way San Diego						
PROPOSED WORK	COUNTY SANITATION DISTRICT						
	PRIVATE DISPOSAL APPROVAL						
PROPOSED WORK	RECEIPT NO.						
PROPOSED WORK	HEALTH DEPT. APPROVAL						
	SPRINKLERS REQ'D. FOR						

PARCEL NO.

R 258 REV. 1-27-61

Building Permit Application				APPLICANT FILL INSIDE HEAVY LINES		JOB ADDRESS <i>10955 Carmel Mountain Rd</i>			
OWNER	NAME (OR NAME OF BUSINESS) <b>Penasquitos Village</b>					CITY <b>San Diego</b>		TELEPHONE NUMBER <b>276-5130</b>	
	MAILING ADDRESS (NUMBER) (STREET) <b>3010 Cowley Way</b>					CITY <b>San Diego</b>		TELEPHONE NUMBER <b>276-5130</b>	
	NAME <b>Dale Nagle &amp; Associates</b>					ADDRESS (NUMBER) (STREET) <b>2210 Avenida de la Playa</b>		CITY <b>La Jolla</b>	
DESIGNER	NAME <b>Dale Nagle &amp; Associates</b>					ADDRESS (NUMBER) (STREET) <b>2210 Avenida de la Playa</b>		CITY <b>La Jolla</b>	
	NAME <b>Penasquitos, Inc.</b>					ADDRESS (NUMBER) (STREET) <b>3010 Cowley Way</b>		CITY <b>San Diego</b>	
	STATE LICENSE NUMBER <b>142682</b>					CLASS. NO.		CITY LICENSE NUMBER	
BUILDER	LOT <b>1</b>					BLOCK		SUBDIVISION <b>Map 6126</b>	
	JOB ADDRESS <b>Carmel Mountain Road</b>					CONDITION OF SOIL AT JOB SITE <input type="checkbox"/> ORIGINAL <input checked="" type="checkbox"/> COMPACTED FILL <input type="checkbox"/> LOOSE FILL		NO. OF EXISTING BUILDINGS ON LOT AND USE	
	WORK TO BE DONE <input checked="" type="checkbox"/> NEW <input type="checkbox"/> ALTER <input type="checkbox"/> MOVE					ADD <input type="checkbox"/> REPAIR <input type="checkbox"/> DEMOLISH		DESCRIBE <b>Office</b>	
PROPOSED WORK	EXISTING USE OF BUILDING OR PROPERTY					PROPOSED USE OF BUILDING OR PROPERTY		NON RESIDENTIAL <input checked="" type="checkbox"/> RESIDENTIAL <input type="checkbox"/> NUMBER OF DWELLING UNITS	
	I hereby acknowledge that I have read this application, that the information given is correct, and that I am the owner, or the duly authorized agent of the owner. I agree to comply with city and state laws regulating construction, and in doing the work authorized thereby, no person will be employed in violation of the Labor Code of the State of California relating to Workmen's Compensation Insurance.					SIGNATURE (OWNER OR AGENT) <i>Henry Clement</i>		DATE SIGNED <b>5-16-68</b>	
	AGENT FOR <b>Penasquitos Village</b>					ADDRESS <b>3010 Cowley Way, San Diego</b>		COUNTY SANITATION DISTRICT RECEIPT NO.	
HEALTH DEPT. APPROVAL:					PRIVATE DISPOSAL APPROVAL				
SPRINKLERS REQ'D FOR:					CITY OF SAN DIEGO				
JOB ADDRESS <i>10955 Carmel Mountain Rd</i>					PLAN FILE NO. <b>130610</b>		PERMIT NO. <b>E 21618</b>		
USE ZONE <b>R-1-5</b>					SETBACK FRONT YARD <b>15</b>		LOT AREA		
CENSUS TRACT <b>170</b>					REAR YARD <b>50'</b>		ALLOW. COVERAGE <b>40 %</b>		
B.C. CODE <b>15</b>					SIDE YD. (INT.) <b>4</b>		TOTAL AREA COVERED <b>1270</b> SQ. FT.		
VARIANCE NO.					CURB TO P.L.		STREET IMPROV'D		
ENC. PERMIT					CHECKED BY		ENC. PERMIT		
METER SIDE					SERVICE		CLEARANCE		
REMARKS <i>OF Vaneto</i>					NO. ADDITIONAL CONNECTIONS REQ'D.		CHECKED BY		
VALUATION OF WORK					NO. UNITS		PER UNIT		
TOTAL					TOTAL		TOTAL		
PLAN CHECK FEE					FUND & ACC'T.		TOTAL		
SUPPLEMENTAL PLAN CHK FEE					BUILDING PERMIT FEE		TOTAL		
SUB. TOTAL					SEWER PERMIT FEE		TOTAL		
SEWER FEE					WATER FEE		TOTAL		
SPECIAL INSPECTOR REQ'D. FOR					TOTAL FEES DUE		TOTAL		
CONCRETE					FIRE ZONE		TYPE OF CONSTRUCTION		
MASONRY					BLOG. AREA		NO. STORIES		
WELDING, H.S. BOLTS					PLAN CHK. REC'D. NO. & AMT.		DATE		
PILE DRIVING					PLANS CHECKED		DATE		
OTHER					PLANS APPROVED		DATE		
ATTENTION					NOT PLAN CHK'D & APP'D		DATE		
THIS PERMIT AUTHORIZES ONLY THE WORK NOTED					APPLICATION APPROVAL		THIS PERMIT DOES NOT BECOME VALID UNTIL SIGNED BY THE DIRECTOR OF BUILDING INSPECTION, OR HIS DEPUTY, AND FEES ARE PAID, AND RECEIPT IS ACKNOWLEDGED IN SPACE PROVIDED.		
INSPECTION DEPARTMENT					SIGNATURE OF DEPT. OF INSP. DEPUTY		DATE		
CITY OF SAN DIEGO					CALL		INSPECTOR		

# ATTACHMENT D.3

Notice of Completion

RECORDING REQUESTED BY

AND WHEN RECORDED MAIL TO

Name  
Street  
Address  
City & State

Penasquitos Village  
3010 Cowley Way  
San Diego, Calif. 92117

186166

CLAIMANT

SPACE ABOVE THIS LINE FOR RECORDER'S USE

CORPORATION FORM

## Notice of Completion

TO 408-1 C

Before execution, refer to title company requirements stated on reverse side.

### Notice is hereby given that:

1. The undersigned is owner of the interest or estate stated below in the property hereinafter described.
2. The full name of the undersigned is Penasquitos Village
3. The full address of the undersigned is 3010 Cowley Way, San Diego, Calif. 92117
4. The nature of the title of the undersigned is: In fee.  
(If other than fee, strike "In fee" and insert, for example, "purchaser under contract of purchase," or "lessee".)
5. The full names and full addresses of all persons, if any, who hold title with the undersigned as joint tenants or as tenants in common are:

NAMES

ADDRESSES

6. The names of the predecessors in interest of the undersigned, if the property was transferred subsequent to the commencement of the work of improvement herein referred to:

NAMES

ADDRESSES

(If no transfer made, insert "none".)

7. A work of improvement on the property hereinafter described was completed on October 1, 1969
8. The name of the contractor, if any, for such work of improvement was Penasquitos, Inc.

(If no contractor for work of improvement as a whole, insert "none".)

9. The property on which said work of improvement was completed is in the City of San Diego, County of San Diego, State of California, and is described as follows:

Lot No. 1 of Penasquitos Village according to Map #6126 filed in the  
Office of the County Recorder on June 12, 1968

10. The street address of said property is See attached list

(If no street address has been officially assigned, insert "none".)

Dated: October 9, 1969

Signature of  
owner named  
in paragraph 2 PENASQUITOS VILLAGE

(Corporate Seal)

STATE OF CALIFORNIA,

COUNTY OF San Diego

SS.

Larry Clement being duly sworn, says:  
that he is the Vice President of Penasquitos Village

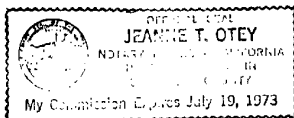
the corporation that executed the foregoing notice as owner of the aforesaid interest or estate in the property therein described; that he makes this verification on behalf of said corporation; that he has read said notice and knows the contents thereof, and that the facts therein stated are true.

SUBSCRIBED AND SWORN TO before me

Signature of  
corporate officer  
above named Larry Clement  
Larry Clement, Vice President

on October 9, 1969

Signature Jeanne T. Otey  
JEANNE T. OTEY  
Name (Typed or Printed)  
Notary Public in and for said State



Title Order No. \_\_\_\_\_

Escrow or Loan No. \_\_\_\_\_

FOR REVERSE SIDE FOR  
TITLE COMPANY REQUIREMENTS AS TO NOTICE OF COMPLETION

(This area for official notarial seal)

No 186166

PENASQUITOS VILLAGE ADDRESS REVISIONS

1224

<u>Building Number</u>	<u>Old Address</u>	<u>New Address</u>
1	13955 Caminata Breve	13955 Caminata Breve 13957 13959 13961 13963 13965 13967 13969 13971 13973
2	13944 Caminata Breve	13944 Caminata Breve 13946 13948 13950 13952 13954 13956 13958 13960 13962
3	13966 Caminata Breve	13964 Caminata Breve 13966 13968 13970
4	13977 Caminata Breve	13975 Caminata Breve 13977 13979 13981
5	10765 Caminata De Luz	10765 Caminata De Luz 10767 10769 10771 10773 10775 10777 10779 10781 10783
6	10785 Caminata De Luz	10785 Caminata De Luz 10787
7	10795 Caminata De Luz	10789 Caminata De Luz 10791
8	10796 Caminata De Luz	10800 Caminata De Luz 10802
9	10786 Caminata De Luz	10780 Caminata De Luz 10782 10784 10786 10788 10790 10792 10794 10796 10798

No. 186166

Building Number	Old Address	New Address
10	10778 Caminata De Luz	10778 Caminata De Luz 10779
11	10768 Caminata De Luz	10756 Caminata De Luz 10758 10760 10763 10764 10766 10768 10770 10772 10774
12	10760 Caminata De Luz	10752 Caminata De Luz 10754
13	10736 Caminata De Luz	10736 Caminata De Luz 10738 10740 10742
14	10752 Caminata De Luz	10748 Caminata De Luz 10750
	10744 Caminata De Luz	10744 Caminata De Luz 10746
16	14058 Caminata Amador	14052 Caminata Amador 14054 14056 14058 14060 14062 14064 14066 14068 14070
17	14078 Caminata Amador	14072 Caminata Amador 14074 14076 14078
18	14098 Caminata Amador	14080 Caminata Amador 14082 14084 14086
19	14095 Caminata Amador	14105 Caminata Amador 14107
20	14085 Caminata Amador	14101 Caminata Amador 14103
21	14048 Caminata Amador	14048 Caminata Amador 14050

Nº 186166



Building Number	Old Address	New Address
22	14045 Caminata Amador	14045 Caminata Amador 14047 14049 14051 14053 14055 14057 14059 14061 14063
23	14055 Caminata Amador	14065 Caminata Amador 14067 14069 14071
24	14065 Caminata Amador	14073 Caminata Amador 14075 14077 14079
25	14075 Caminata Amador	14081 Caminata Amador 14083 14085 14087 14089 14091 14093 14095 14097 14099
26	14115 Caminata Amador	14109 Caminata Amador 14111 14113 14115 14117 14119 14121 14123 14125 14127
27	14125 Caminata Amador	14129 Caminata Amador 14131 14133 14135
28	14145 Caminata Amador	14137 Caminata Amador 14139 14141 14143
29	14140 Caminata Amador	14122 Caminata Amador 14124 14126 14128 14130 14132 14134 14136 14138 14140
30	14130 Caminata Amador	14118 Caminata Amador 14120

1236

Nº 186166

<u>Building Number</u>	<u>Old Address</u>	<u>New Address</u>
31	14120 Caminata Amador	14114 Caminata Amador 14116
32	14110 Caminata Amador	14110 Caminata Amador 14112
33	10866 Caminata Amador	10866 Caminata Amador 10868 10870 10872 10874 10876 10878 10880 10882 10884
34	14251 Caminata Soleado	14363 Caminata Soleado 14365 14367 14369 14371 14373 14375 14377 14379 14381
35	14241 Caminata Soleado	14359 Caminata Soleado 14361
36	14231 Caminata Soleado	14239 Caminata Soleado 14241 14243 14245 14247 14249 14251 14253 14255 14257
37	14221 Caminata Soleado	14219 Caminata Soleado 14221 14223 14225 14227 14229 14231 14233 14235 14237
38	14211 Caminata Soleado	14211 Caminata Soleado 14213 14215 14217

1237

Nº 186166

Building Number	Old Number	New Number
39	14220 Caminata Soleado	14220 Caminato Soleado 14222 14224 14226
40	14230 Caminata Soleado	14228 Caminata Soleado 14230
41	14240 Caminata Soleado	14232 Caminato Soleado 14234 14236 14238 14240 14242 14244 14246 14248 14250
42	14260 Caminata Soleado	14272 Caminato Soleado 14274
43	14250 Caminata Soleado	14252 Caminata Soleado 14254 14256 14258 14260 14262 14264 14266 14268 14270
44	14350 Caminata Taugus	14374 Caminata Taugus 14376 14378 14380
45	14344 Caminata Taugus	14354 Caminata Taugus 14356 14358 14360 14362 14364 14366 14368 14370 14372
46	14340 Caminata Taugus	14350 Caminata Taugus 14352
47	14330 Caminata Taugus	14330 Caminata Taugus 14332 14334 14336 14338 14340 14342 14344 14346 14348

Nº 186166

<u>Building Number</u>	<u>Old Address</u>	<u>New Address</u>
48	14329 Caminata Taugus	14329 Caminata Taugus 14331 14333 14335
49	14339 Caminata Taugus	14337 Caminata Taugus 14339
50	14349 Caminata Taugus	14341 Caminata Taugus 14343 14345 14347 14349 14351 14353 14355 14357 14359
51	14359 Caminata Taugus	14361 Caminata Taugus 14363
52	14365 Caminata Taugus	14365 Caminata Taugus 14367 14369 14371 14373 14375 14377 14379 14381 14383
53	11069 Caminata Douro	11069 Caminata Douro 11071 11073 11075 11077 11079 11081 11083 11085 11087
54	11079 Caminata Douro	11089 Caminata Douro 11091
55	11089 Caminata Douro	11093 Caminato Douro 11095
56	11099 Caminata Douro	11097 Caminata Douro 11099 11101 11103

1239

Nº 186166

Building NumberOld AddressNew Address

57

11090 Caminata Douro

11098 Caminata Douro

11100

11102

11104

11106

11108

11110

11112

11114

11116

58

11080 Caminata Douro

11078 Caminata Douro

11080

11082

11084

11086

11088

11090

11092

11094

11096

59

11070 Caminata Douro

11070 Caminata Douro

11072

11074

11076

Nº 186166  
8

# ATTACHMENT D.4

## Chain of Title

<b>Seller</b>	<b>Buyer</b>	<b>Date Sold</b>
Transamerica Financial Corporation	Penasquitos, Inc., an Illinois corporation	April 19, 1968
Penasquitos, Inc.	Penasquitos Village	September 9, 1968
Penasquitos Village	California Properties Village, a Florida General Partnership	June 30, 1975
California Properties Village	California Properties	May 5, 2015
California Properties	Village Penasquitos, LP (98%)	May 5, 2015
California Properties	Village Penasquitos, LLC (2%)	May 5, 2015
Village Penasquitos, LLC (2%)	Village Penasquitos, LP (2%)	May 5, 2015

A  
DOC# 2015-0230542

May 08, 2015 08:00 AM

OFFICIAL RECORDS

Ernest J. Dronenburg, Jr.,

SAN DIEGO COUNTY RECORDER

FEES: \$24.00

PCOR: YES

RECORDING REQUESTED BY:  
Chicago Title CompanyAND WHEN RECORDED MAIL TO:  
John J. Del Propost, Esq.  
Larson & Solecki LLP  
2366 Front Street  
San Diego, CA 92101MAIL TAX STATEMENTS TO:  
Stanley D. Cohen  
Village Penasquitos, LP  
11075 Carmel Mountain Road, Suite 200  
San Diego, CA 92129

APN: 313-030-15

(Space Above for Recorder's Use)

**GRANT DEED**

The undersigned Grantor declares:

DOCUMENTARY TRANSFER TAX \$ 0

The grantors and the grantees in this conveyance are comprised of the same parties who continue to hold the same proportionate interests in the property, R&T 11925(d).

FOR VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, **Village Penasquitos, LLC**, a California limited liability company ("Grantor"), hereby GRANTS to **Village Penasquitos, LP**, a California limited partnership, a two percent (2%) undivided interest in that certain real property in the County of San Diego, State of California, commonly known as 10955 Carmel Mountain Road, San Diego, California, having Assessor's Parcel Number 313-030-15, and being more particularly described in Schedule 1 attached hereto and incorporated herein by reference.

[SIGNATURE PAGE FOLLOWS]

Page 1 of 2

The instrument filed for record by Chicago Title Company as an accommodation only. It has not been examined as to its execution or as to its effect upon the title.

12205396.430

F:\Client\20001\Village\Title\Grant Deed Village Pen LLC To Village Pen LP.Doc



IN WITNESS WHEREOF, Grantor has executed this Grant Deed as of the date set forth below.

Dated: May 5, 2015

**Village Penasquitos, LLC,**  
a California limited liability company

By: California Properties,  
a Florida general partnership

Its: Sole Member

By:   
Stanley D. Cohen

Its: Managing Partner

[ACKNOWLEDGEMENT ATTACHED]

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA                     )  
   )  
COUNTY OF SAN DIEGO                 )

On May 5, 2015, before me, Michele D. Eacobellis,  
Notary Public, personally appeared STANLEY D. COHEN, who proved to me on the  
basis of satisfactory evidence to be the person whose name is subscribed to the within  
instrument and acknowledged to me that he executed the same in his authorized  
capacity(~~ies~~), and that by his signature on the instrument the person(~~s~~), or the entity upon  
behalf of which the person(~~s~~) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that  
the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Michele D. Eacobellis



[SEAL]

SCHEDULE 1

LEGAL DESCRIPTION

LOT 1 PENASQUITOS VILLAGE, IN THE CITY OF SAN DIEGO, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 6126, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, JUNE 12, 1968.

APN: 313-030-15

3  
AP-78  
DOC# 2015-0230541

May 08, 2015 08:00 AM

OFFICIAL RECORDS

Ernest J. Dronenburg, Jr.,

SAN DIEGO COUNTY RECORDER

FEES: \$24.00

PCOR: YES

RECORDING REQUESTED BY:  
Chicago Title CompanyAND WHEN RECORDED MAIL TO:  
John J. Del Propost, Esq.  
Larson & Solecki LLP  
2366 Front Street  
San Diego, CA 92101MAIL TAX STATEMENTS TO:  
Stanley D. Cohen  
Village Penasquitos, LLC  
11075 Carmel Mountain Road, Suite 200  
San Diego, CA 92129

APN: 313-030-15

(Space Above for Recorder's Use)

**GRANT DEED****DOCUMENTARY TRANSFER TAX \$** 

The undersigned Grantor declares:

The grantors and the grantees in this conveyance are comprised of the same parties who continue to hold the same proportionate interest in the property, R&T 11925(d).

FOR VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, **California Properties**, a Florida general partnership ("Grantor"), hereby GRANTS to **Village Penasquitos, LLC**, a California limited liability company, a two percent (2%) undivided interest in that certain real property in the County of San Diego, State of California, commonly known as 10955 Carmel Mountain Road, San Diego, California, having Assessor's Parcel Number 313-030-15, and being more particularly described in Schedule 1 attached hereto and incorporated herein by reference.

[SIGNATURE PAGE FOLLOWS]

Page 1 of 2

F:\Client\20001\Village\Title\Grant Deed CP To Village Pen LLC.Doc

The instrument filed for record by Chicago Title Company as an accommodation only. It has not been examined as to its execution or as to its effect upon the title.

1220 5396-450

IN WITNESS WHEREOF, Grantor has executed this Grant Deed as of the date set forth below.

Dated: May 5, 2015

**California Properties,**  
a Florida general partnership

By: \_\_\_\_\_

Stanley D. Cohen

Its: Managing Partner

[ACKNOWLEDGEMENT ATTACHED]

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA                    )  
  )  
COUNTY OF SAN DIEGO                )

On May 5, 2015, before me, Michele D. Eacobellis  
Notary Public, personally appeared STANLEY D. COHEN, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity(ies), and that by his signature on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Michele D Eacobellis



[SEAL]

SCHEDULE 1

LEGAL DESCRIPTION

LOT 1 PENASQUITOS VILLAGE, IN THE CITY OF SAN DIEGO, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 6126, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, JUNE 12, 1968.

APN: 313-030-15



2  
AP-7Q  
DOC# 2015-0230540RECORDING REQUESTED BY:  
Chicago Title CompanyMay 08, 2015 08:00 AM  
OFFICIAL RECORDS  
Ernest J. Dronenburg, Jr.,  
SAN DIEGO COUNTY RECORDER  
FEES: \$24.00  
PCOR: YES

AND WHEN RECORDED MAIL TO:

John J. Del Propost, Esq.

Larson &amp; Solecki LLP

2366 Front Street

San Diego, CA 92101

MAIL TAX STATEMENTS TO:

Stanley D. Cohen

Village Penasquitos, LP

11075 Carmel Mountain Road, Suite 200

San Diego, CA 92129

APN: 313-030-15

(Space Above for Recorder's Use)

**GRANT DEED****DOCUMENTARY TRANSFER TAX \$** 0

The undersigned Grantor declares:

The grantors and the grantees in this conveyance are comprised of the same parties who continue to hold the same proportionate interest in the property, R&T 11925(d).

FOR VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, **California Properties**, a Florida general partnership ("Grantor"), hereby GRANTS to **Village Penasquitos, LP**, a California limited partnership, a ninety-eight percent (98%) undivided interest in that certain real property in the County of San Diego, State of California, commonly known as 10955 Carmel Mountain Road, San Diego, California, having Assessor's Parcel Number 313-030-15, and being more particularly described in Schedule 1 attached hereto and incorporated herein by reference.

[SIGNATURE PAGE FOLLOWS]

Page 1 of 2

F:\Client\20001\Village\Title\Grant Deed CP To Village Pen LP.Doc


The instrument filed for record by Chicago Title Company as an accommodation only. It has not been examined as to its execution or as to its effect upon the title.

12205396.450

IN WITNESS WHEREOF, Grantor has executed this Grant Deed as of the date set forth below.

Dated: May 5, 2015

**California Properties,**  
a Florida general partnership

By:   
Stanley D. Cohen

Its: Managing Partner

[ACKNOWLEDGEMENT ATTACHED]

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA                     )  
   )  
COUNTY OF SAN DIEGO                     )

On May 5, 2015, before me, Michele D. Eacobellis,  
Notary Public, personally appeared STANLEY D. COHEN, who proved to me on the  
basis of satisfactory evidence to be the person whose name is subscribed to the within  
instrument and acknowledged to me that he executed the same in his authorized  
capacity(~~ies~~), and that by his signature on the instrument the person(~~s~~), or the entity upon  
behalf of which the person(~~s~~) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that  
the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Michele D. Eacobellis



[SEAL]

SCHEDULE 1

LEGAL DESCRIPTION

LOT 1 PENASQUITOS VILLAGE, IN THE CITY OF SAN DIEGO, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 6126, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, JUNE 12, 1968.

APN: 313-030-15

DOC# 2015-0230539



May 08, 2015 08:00 AM

OFFICIAL RECORDS

Ernest J. Dronenburg, Jr.,

SAN DIEGO COUNTY RECORDER

FEES: \$24.00

PCOR: YES

RECORDING REQUESTED BY:  
Chicago Title Company

AND WHEN RECORDED MAIL TO:

John J. Del Propost, Esq.  
Larson & Solecki LLP  
2366 Front Street  
San Diego, CA 92101MAIL TAX STATEMENTS TO:  
Stanley D. Cohen  
California Properties  
11075 Carmel Mountain Road, Suite 200  
San Diego, CA 92129

APN: 313-030-15

(Space Above for Recorder's Use)

**QUITCLAIM DEED**

The undersigned hereby declares:

**DOCUMENTARY TRANSFER TAX \$**

The grantors and the grantees in this conveyance are comprised of the same parties who continue to hold the same proportionate interest in the property, R&amp;T 11925(d)

FOR VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, **California Properties Village**, a Florida general partnership, hereby REMISES, RELEASES AND FOREVER QUITCLAIMS to **California Properties**, a Florida general partnership, all of its right, title and interest in and to that certain real property in the County of San Diego, State of California, commonly known as 10955 Carmel Mountain Road, San Diego, California, having Assessor's Parcel Number 313-030-15, and being more particularly described in Schedule 1 attached hereto and incorporated herein by reference.

[SIGNATURE PAGE FOLLOWS]

Page 1 of 2

F:\Client\20001\Village\Title\Quitclaim Deed CP Village To CP.Doc

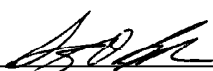
The instrument filed for record by Chicago Title Company as an accommodation only. It has not been examined as to its execution or as to its effect upon the title.

12205396-4650


IN WITNESS WHEREOF, the undersigned has executed this Quitclaim Deed as of the date set forth below.

Dated: May 5, 2015

**California Properties Village,**  
a Florida general partnership

By:   
Stanley D. Cohen  
Its: Managing Partner

**California Properties,**  
a Florida general partnership

By:   
Stanley D. Cohen  
Its: Managing Partner

[ACKNOWLEDGEMENT ATTACHED]

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA                    )  
  )  
COUNTY OF SAN DIEGO                )

On May 5, 2015, before me, Michele D. Eacobellis,  
Notary Public, personally appeared STANLEY D. COHEN, who proved to me on the  
basis of satisfactory evidence to be the person whose name is subscribed to the within  
instrument and acknowledged to me that he executed the same in his authorized  
capacity(~~ies~~), and that by his signature on the instrument the person(~~s~~), or the entity upon  
behalf of which the person(~~s~~) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that  
the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Michele D. Eacobellis



[SEAL]



SCHEDULE 1

LEGAL DESCRIPTION

LOT 1 PENASQUITOS VILLAGE, IN THE CITY OF SAN DIEGO, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 6126, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, JUNE 12, 1968.

APN: 313-030-15

75-167420

123

RECORDING REQUESTED BY  
**DONNELLEY & HULDEN**  
 A PROFESSIONAL CORPORATION  
 2655 Fourth Avenue  
 San Diego, California, 92103  
 AND WHEN RECORDED MAIL TO

NAME  
 Street Address  
 City & State

LAW OFFICES  
**DONNELLEY & HULDEN**  
 A PROFESSIONAL CORPORATION  
 2655 Fourth Avenue  
 San Diego, California, 92103

MAIL TAX STATEMENTS TO  
 Name **California Properties Village**  
 Street Address **10955 Carmel Mountain Road**  
 City & State **San Diego, California 92129**

FILE/PAGE NO. \_\_\_\_\_  
 BOOK 1975  
 RECORDED REQUEST OF

ATTORNEY  
 JUN 30 3 42 PM '75  
 OFFICIAL RECORDS  
 SAN DIEGO COUNTY, CALIF.  
 HARLEY F. BLOOM  
 RECORDER

SPACE ABOVE THIS LINE FOR RECORDER'S USE

Documentary transfer tax \$ \_\_\_\_\_  
☐ Computed on full value of property conveyed, or  
☐ Computed on full value less liens & encumbrances  
 remaining thereon at time of sale

Signature of declarant or agent determining tax firm name \_\_\_\_\_  
☐ Unincorporated area City of \_\_\_\_\_

**Corporation Grant Deed**

Parcel No. 313 030 15

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,  
**PENASQUITOS VILLAGE**  
 a corporation organized under the laws of the state of California  
 hereby GRANTS to **CALIFORNIA PROPERTIES VILLAGE, a Florida**  
**General Partnership**

the following described real property in the City of San Diego  
 County of San Diego, State of California:

Lot 1 of PENASQUITOS VILLAGE in the  
 City of San Diego, County of San Diego,  
 State of California, according to Map  
 thereof No. 6126, filed in the office of the  
 County Recorder of San Diego County,  
 June 12, 1968.

In Witness Whereof, said corporation has caused its corporate name and seal to be affixed hereto and this  
 instrument to be executed by its Vice President and \_\_\_\_\_ Secretary  
 thereunto duly authorized.

Dated June 30, 1975

STATE OF CALIFORNIA } ss.  
 COUNTY OF SAN DIEGO

On June 30, 1975 before me, the undersigned,  
 a Notary Public in and for said State, personally appeared  
Brian A. Riley known  
 to me to be the Vice President, and  
Ben Hayward known to me to be  
 Secretary of the Corporation that executed the  
 within instrument, known to me to be the persons who executed the  
 within instrument on behalf of the Corporation therein named, and  
 acknowledged to me that such Corporation executed the within  
 instrument pursuant to its by-laws or a resolution of its board of  
 directors.

WITNESS my hand and official seal.

Signature Martha L. Moore  
Martha L. Moore  
 Name (Typed or Printed)

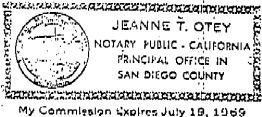
By Brian A. Riley Vice President  
Ben Hayward Secretary

MARTHA L. MOORE  
 NOTARY PUBLIC  
 Principal Office, San Diego Co. Calif.  
 My Commission Expires April 3, 1976

(This area for official notarial seal)

Title Order No. \_\_\_\_\_ Escrow or Loan No. \_\_\_\_\_

C-15 MAIL TAX STATEMENTS AS DIRECTED ABOVE

RECORDING REQUESTED BY <b>Title Insurance &amp; Trust Company</b>		916 155575 SEP 10 10 57 AM '68 SERIES 2 2000 1968 OFFICIAL RECORD SAN DIEGO COUNTY, CALIF. A. S. GRAY, RECORDER \$2.00
AND WHEN RECORDED MAIL TO		
Name	Penasquitos Village	
Street Address	3010 Cowley Way	
City & State	San Diego, California 92117	
MAIL TAX STATEMENTS TO		
Name	Penasquitos Village	
Street Address	3010 Cowley Way	
City & State	San Diego, California 92117	
SPACE ABOVE THIS LINE FOR RECORDER'S USE		
TRANSFER TAX PAID A. S. GRAY, COUNTY RECORDER AFFIX \$ 596.20 I.R.S. ABOVE		
<b>Corporation Grant Deed</b> THIS FORM FURNISHED BY TITLE INSURANCE AND TRUST COMPANY		
TO 406 CA (5-67)		
FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged. <p style="text-align: center;"><b>PENASQUITOS, INC.</b>          a corporation organized under the laws of the state of Illinois          hereby GRANTS to  <b>PENASQUITOS VILLAGE</b></p> <p>the following described real property in the City of San Diego          County of <b>San Diego</b> State of California:</p> <p style="text-align: center;">Lot 1 of Penasquitos Village, in the City of San Diego, County          of San Diego, State of California, according to Map thereof,          No. 6126, filed in the Office of the County Recorder of San          Diego County, June 12, 1968.</p> <p>The grantor does hereby waive any vendor's lien which the undersigned has or may          have with respect to the real property described above, whether created by law,          or otherwise.</p> <p>In Witness Whereof, said corporation has caused its corporate name and seal to be affixed hereto and this instru-          ment to be executed by its _____ President and _____ Secretary          thereunto duly authorized.          Dated: <u>Sept. 9, 1968</u></p> <p>STATE OF CALIFORNIA } ss.          COUNTY OF <u>San Diego</u>          On <u>Sept. 9, 1968</u> before me, the under-          signed, a Notary Public in and for said State, personally appeared  <u>Irvine J. Kahn</u> known          to me to be the _____ President, and  <u>Norman B. Smith</u> known to me to be          the _____ Secretary of the Corporation that executed the          within instrument, known to me to be the persons who executed the          within instrument on behalf of the Corporation therein named, and          acknowledged to me that such Corporation executed the within instru-          ment pursuant to its by-laws or a resolution of its board of directors.          WITNESS my hand and official seal.</p> <p>Signature <u>Jeanne T. Otey</u>  <b>Jeanne T. Otey</b>          Name (Typed or Printed)</p> <p style="text-align: center;">           JEANNE T. OTEY          NOTARY PUBLIC, CALIFORNIA          PRINCIPAL OFFICE IN          SAN DIEGO COUNTY          My Commission Expires July 18, 1969       </p> <p style="text-align: right;">N: 155575</p>		
Title Order No. _____ Escrow or Loan No. _____		
MAIL TAX STATEMENTS AS DIRECTED ABOVE		

RECORDING REQUESTED BY

AND WHEN RECORDED MAIL TO

Name  
Street  
Address  
City & State  
Penasquitos, Inc.  
3010 Cowley Way  
San Diego, California

FILE/PAGE NO. 141649  
RECORDED REQUEST OF  
TITLE INSURANCE AND TRUST COMPANY

AUG 19 10 48 AM '68

SERIES 0600A 1968  
OFFICIAL RECORDS  
SAN DIEGO COUNTY, CALIF.  
A. S. GRAY, RECORDER  
\$3.60

MAIL TAX STATEMENTS TO

SPACE ABOVE THIS LINE FOR RECORDER'S USE

Name  
Street  
Address  
City & State  
Same as above

Consideration less than  
\$100.00 "NO TAX DUE"  
AFFIX \$ \_\_\_\_\_ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 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TS 44X C  
(Corporation)

STATE OF CALIFORNIA  
COUNTY OF Los Angeles } ss.

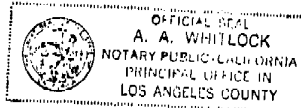
TI  
8'71

On April-19, 1968 before me, the undersigned, a Notary Public in and for said State, personally appeared Ralph D. Wenger  
known to me to be the Vice President, and Robert M. Austin  
known to me to be the Asst. Secretary of the corporation that executed the within Instrument,  
known to me to be the persons who executed the within Instrument on behalf of the corporation therein named, and  
acknowledged to me that such corporation executed the within instrument pursuant to its by-laws or a resolution of its board of directors.

STAPLE HERE  
↑  
↓

WITNESS my hand and official seal.

Signature A. A. Whitlock  
A. A. WHITLOCK - Notary Public - Calif.  
COMM. EXP. SEPT. 5, 1970 - LOS ANGELES CO.  
1100 S. Olive St., Rm. 1170, Los Angeles, CA 90015



(This area for official notarial seal)

NO 141649  
4

## EXHIBIT "A"

All those portions of Rancho Los Penasquitos, in the City of San Diego, County of San Diego, State of California, according to Map accompanying the Patent to said Rancho recorded in the Office of the County Recorder of said County, in Book 2, page 385 of Patents, described in two parcels as follows:

## PARCEL 1:

An easement and right of way to locate, relocate, construct, reconstruct, maintain, operate and repair a water main or water mains, together with any or all fittings, structures, and appurtenances thereto, through, over, under, along and across a 15.00 foot strip of land lying contiguous Easterly and Southeast-erly, measured radially and at right angles, from the following described line:

Commencing at the most Westerly corner of Lot 2, Penasquitos Unit No. 1, according to Map thereof No. 5567, as filed in the Office of said County Recorder on April 29, 1965; thence South 52°08'00" West a distance of 123.09 feet to a point in the arc of a 1500.00 foot radius curve, concave Southeasterly, a radial to said point bears North 60°02'42" West, said point being also the True Point of Beginning; thence Southwesterly along the arc of said curve, through a central angle of 08°49'38" an arc length of 231.10 feet; thence South 21°07'40" West a distance of 100.00 feet to a point in the arc of a 10,000.00 foot radius curve, concave Northwesterly, a radial of said point bears South 68°52'20" East; thence Southwesterly along the arc of said curve, through a central angle of 03°12'37" an arc length of 560.30 feet to a point hereby designated 'Point A' for the purpose of this description, a radial to last said point bears South 65°39'43" East; thence continuing Southwesterly along the arc of last said curve, through a central angle of 01°08'11" a distance of 198.34 feet to the beginning of a reverse curve, concave Southeasterly, having a radius of 2000.00 feet, a radial to said point bears North 64°31'34" West; thence Southwesterly along the arc of last said curve, through a central angle of 02°34'10" an arc length of 89.69 feet; thence South 22°54'18" West a distance of 140.95 feet to a terminus.

The Easterly line of the above strip of land shall be prolonged so as to terminate Northerly in a line bearing North 52°08'00" East through the True Point of Beginning.

No. 141649  
4

## PARCEL 2:

An easement and right of way for the construction, operation and maintenance of a storm drain or drains and appurtenances thereto, through, over, under, along and across a strip of land 10.00 feet in width lying 5.00 feet on each side of the following described centerline:

Commencing at 'Point A' as set out and designated in Parcel 1 above; thence North  $65^{\circ}39'43''$  West a distance of 18.00 feet to the True Point of Beginning; thence South  $65^{\circ}39'43''$  East a distance of 118.00 feet to a terminus.

Basis of Bearing: The Southwesterly boundary of Penasquitos Unit No. 1, according to Map thereof No. 5567, i.e. South  $64^{\circ}20'00''$  East.

No. 141649  
4



# ATTACHMENT D.5

## List of Occupants

- A list of occupants is unavailable for this site because the addresses are not listed in the directories any year from 1968-1984. The last year the directories were published was in 1984.
- The research assistant at the San Diego History Center said that as San Diego grew, many times properties that were not in the center of the city at that time, were not recorded in the directories.

# ATTACHMENT D.6

## Historical Photographs

1. Scan of photograph from a book found at the San Diego History Center.

Photographer unknown. (1972, August). *Untitled* [photograph]. San Diego, CA: Real Estate Atlas of San Diego County 8th Edition Volume 2 page 201.

2. Photograph from the San Diego History Center.

Photographer unknown. (1979, July). *P8157 Rancho Los Penasquitos-View of Housing Development and Golf Course* [photograph]. San Diego, CA: San Diego History Center.







Scale 1" = 800'

August 1972

LEGEND:

1. INT 395

2. CARMEL MTN RD

3. PENASQUITOS DR

4. ANDORRA WAY

5. CUCA ST.





P8157 Rancho Los Penasquitos Village-Vie of Housing Development and Golf Course, July 1979



# ATTACHMENT D.7

## Sanborn Maps

- Sanborn Maps for this site are unavailable because it was not mapped in any published year.

# **NOISE STUDY**

## **Pacific Village Residential Development City of San Diego**

**City Project No. 470158**

### **Prepared for:**

**Lennar - California Coastal Division  
25 Enterprise, Suite 300  
Aliso Viejo, CA 92656**

### **Prepared by:**

***Ldn Consulting, Inc.***

**42428 Chisolm Trail  
Murrieta, CA 92562  
760-473-1253**

**January 10, 2017**



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## **GLOSSARY OF TERMS**

**Sound Pressure Level (SPL):** a ratio of one sound pressure to a reference pressure ( $L_{ref}$ ) of 20  $\mu$ Pa. Because of the dynamic range of the human ear, the ratio is calculated logarithmically by  $20 \log (L/L_{ref})$ .

**A-weighted Sound Pressure Level (dBA):** Some frequencies of noise are more noticeable than others. To compensate for this fact, different sound frequencies are weighted more.

**Minimum Sound Level ( $L_{min}$ ):** Minimum SPL or the lowest SPL measured over the time interval using the A-weighted network and slow time weighting.

**Maximum Sound Level ( $L_{max}$ ):** Maximum SPL or the highest SPL measured over the time interval the A-weighted network and slow time weighting.

**Equivalent sound level ( $L_{eq}$ ):** the true equivalent sound level measured over the run time.  $L_{eq}$  is the A-weighted steady sound level that contains the same total acoustical energy as the actual fluctuating sound level.

**Day Night Sound Level (LDN):** Representing the Day/Night sound level, this measurement is a 24 –hour average sound level where 10 dB is added to all the readings that occur between 10 pm and 7 am. This is primarily used in community noise regulations where there is a 10 dB “Penalty” for night time noise. Typically LDN’s are measured using A weighting.

**Community Noise Exposure Level (CNEL):** The accumulated exposure to sound measured in a 24-hour sampling interval and artificially boosted during certain hours. For CNEL, samples taken between 7 pm and 10 pm are boosted by 5 dB; samples taken between 10 pm and 7 am are boosted by 10 dB.

**Octave Band:** An octave band is defined as a frequency band whose upper band-edge frequency is twice the lower band frequency.

**Third-Octave Band:** A third-octave band is defined as a frequency band whose upper band-edge frequency is 1.26 times the lower band frequency.

**Response Time (F,S,I):** The response time is a standardized exponential time weighting of the input signal according to fast (F), slow (S) or impulse (I) time response relationships. Time response can be described with a time constant. The time constants for fast, slow and impulse responses are 1.0 seconds, 0.125 seconds and 0.35 milliseconds, respectively.

## **EXECUTIVE SUMMARY**

This noise study has been completed to determine the noise impacts associated with the development of the proposed residential project. The project known as "Pacific Village" consists of replacing an existing 332-unit apartment complex which was constructed in 1970. The Project proposes the redevelopment of this 41-acre rental complex currently known as Penasquitos Village with 601 DU. Three (3) distinct housing types are proposed. The "for sale" component proposes 99 single-family cluster homes, 105 multi-family tri-plex units, and 120 town homes and 277 apartments for a total of 601 units. The project site is located east of Carmel Mountain Road, and west of Interstate 15 in the City of San Diego CA.

### **Construction Noise Levels**

The construction equipment will be spread out over the project site from average distances of more than 300-feet from the nearest property lines with the exception of the minor grading needed for the proposed southern portions of the site where grading will occur at an average distance as close as 110-180 feet from the existing uses to the south. Based upon the calculations of the noise levels when construction equipment is located near the property line, the average noise levels would be 74.8 dBA and does not exceed the 75-dBA standard. As a result, no impacts will occur and no mitigation measures are required.

### **Onsite Transportation Related Noise Levels**

The proposed project is consistent with the existing and surrounding residential uses. Based upon the findings, with the existing 8-foot Caltrans's berm and proposed 6-foot and 12-foot walls on the southern and eastern portion of the site, no exterior noise mitigation will be necessary for compliance with the City of San Diego's Noise compatibility threshold at the proposed ground level outdoor use areas. The common outdoor use areas at the Project site are located in the center of the site and shielded by the proposed buildings.

Additionally, if 2<sup>nd</sup> and 3<sup>rd</sup> floor balconies are proposed in the eastern portion of the site, facing east towards Interstate 15, 5-foot barriers are needed to block the line of sight to the roadway. Breaking the line of sight from a noise source to a receptor will achieve a 5 decibel reduction or better based on elevation offsets and reduce the noise levels at the balconies.

The City of San Diego as part of its noise guidelines also states, consistent with Title 24 of the California Code of Regulations (CCR), a project is required to perform an interior assessment on the portions of a project site where building façade noise levels are above the normally compatible noise level.

Standard building construction will provide a noise reduction of approximately 10-15 dBA with a

windows open condition (Source: Federal Highway Administration Highway Traffic Noise Analysis and Abatement Policy and Guidance). An interior noise level reduction of 26-35 dBA CNEL is needed for the proposed residential units located adjacent to Interstate 15 and a noise level reduction of 15-25 dBA CNEL is needed for the residential units on the eastern portion of the site. Based on the preliminary architectural plans, to meet the 45 dBA CNEL interior noise standard, a minimum STC 36-40 rated dual pane windows and mechanical ventilation could be needed to achieve the necessary interior noise reductions to meet the City's standard for the residential units adjacent to Interstate 15. A minimum STC 22-28 rated assemblies and mechanical ventilation could be needed to achieve the interior noise reductions for the residential units on the western portion of the site. Once the final architectural plans are prepared, the proposed project site will require an interior noise study be prepared prior to the issuance of building permits to determine the detailed components to reduce interior noise to 45 dBA CNEL.

#### Offsite Project Related Transportation Noise Levels

The project does not create a direct impact of more than 3 dBA CNEL on any roadway segment. Therefore, the project's direct contributions to off-site roadway noise increases will not cause any significant impacts to any existing or future noise sensitive land uses. No mitigation is required.

## **1.0 PROJECT INTRODUCTION**

### **1.1 Purpose of this Study**

The purpose of this Noise study is to determine potential onsite traffic noise impacts (if any) created from adjacent Interstate 15 (I-15) and Carmel Mountain Road. Should impacts be determined, the intent of this study would be to recommend suitable mitigation measures to bring those impacts to a level that would be considered less than significant.

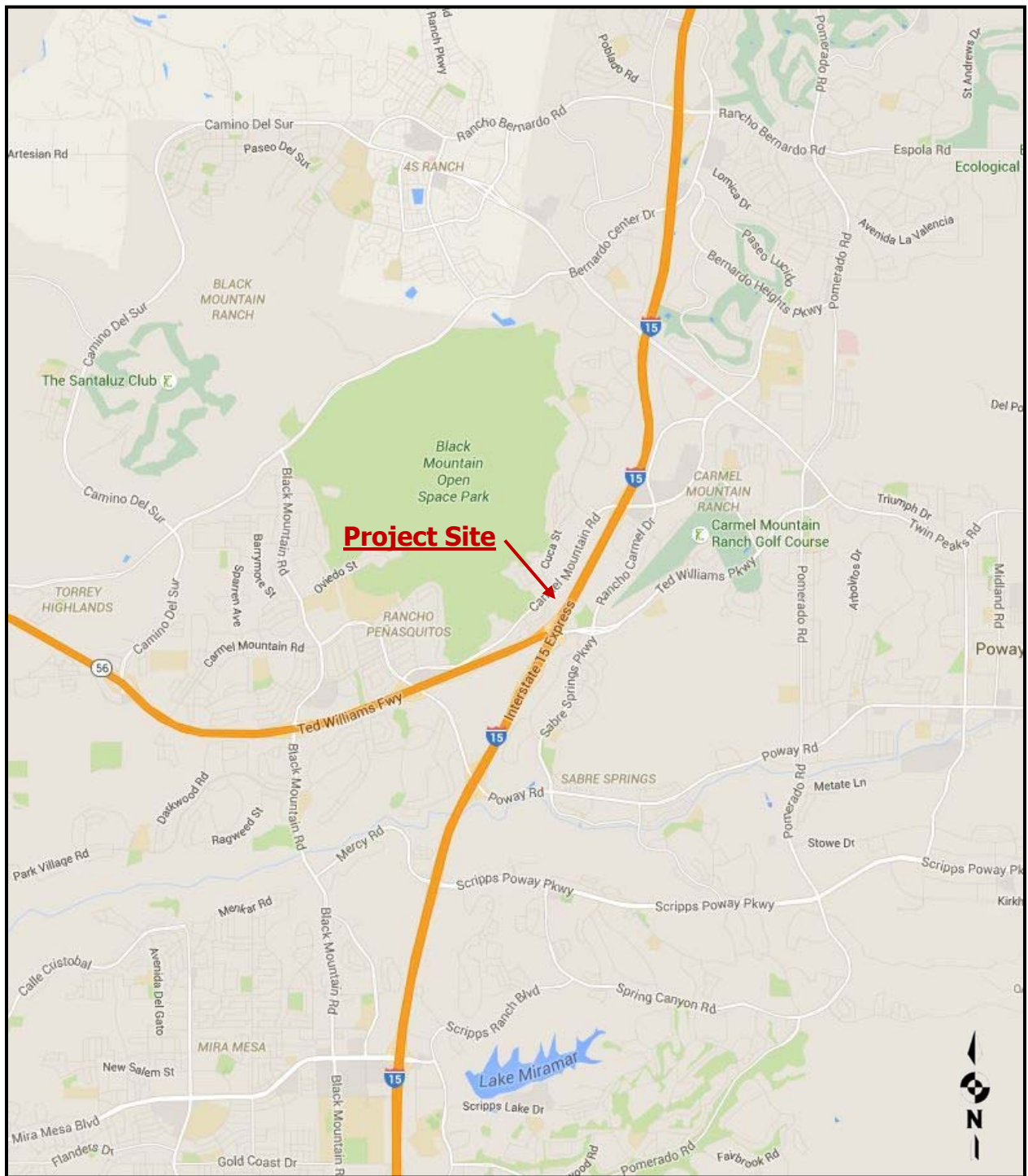
### **1.2 Project Location**

The site is immediately west of Interstate 15 (I-15), east of Carmel Mountain Road, south of the Peñasquitos Drive Shopping Center, and north of the multi-family development, Peñasquitos Villas, within the Community of Rancho Peñasquitos in the City of San Diego. A general project vicinity map is shown in Figure 1-1 on the following page.

### **1.3 Project Description**

The existing use of the property serves a 332-unit apartment complex which was constructed in 1970. The Project proposes the redevelopment of this 41-acre rental complex currently known as Peñasquitos Village with 601 DU. Three (3) distinct housing types are proposed. The “for sale” component proposes 99 single-family cluster homes, 105 multi-family tri-plex units, and 120 town homes and 277 apartments for a total of 601 units. The project overall development plan is shown on Figure 1-2 on Page 3 of this report.

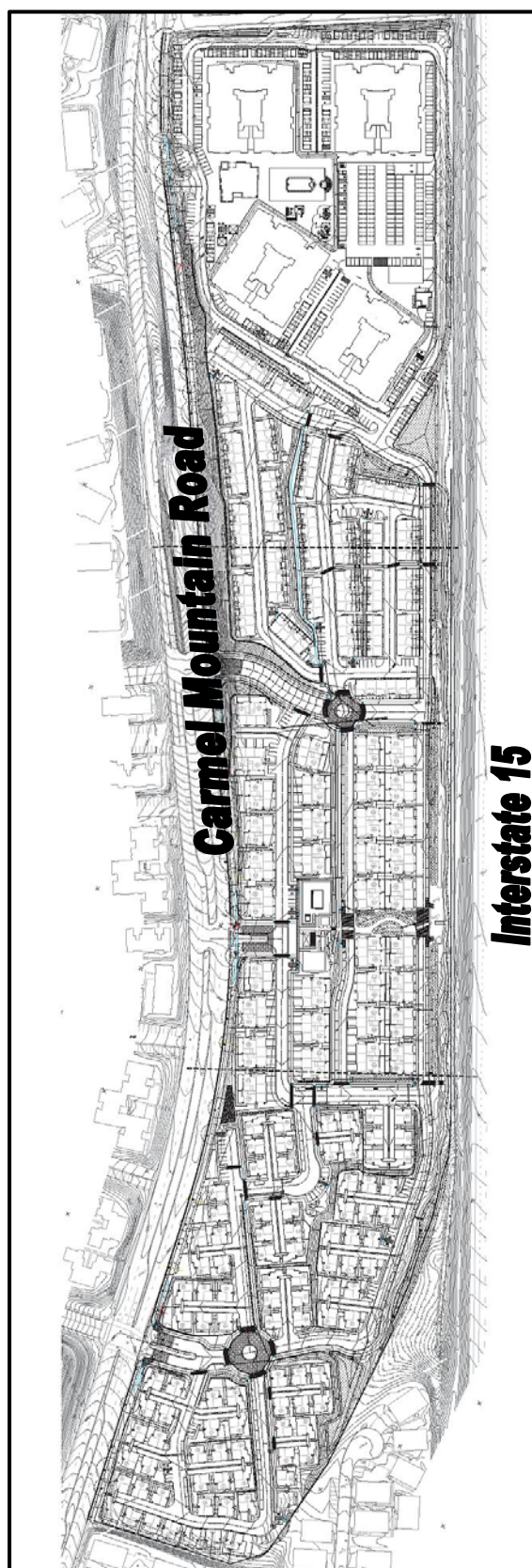
**Figure 1-1: Project Vicinity Map**



Source: Google Maps, 2016



**Figure 1-2: Project Site Plan**



Source: Latitude 33, 2016

## **2.0 ACOUSTICAL FUNDAMENTALS**

Noise is defined as unwanted or annoying sound which interferes with or disrupts normal activities. Exposure to high noise levels has been demonstrated to cause hearing loss. The individual human response to environmental noise is based on the sensitivity of that individual, the type of noise that occurs, and when the noise occurs.

Sound is measured on a logarithmic scale consisting of sound pressure levels known as a decibel (dB). The sounds heard by humans typically do not consist of a single frequency but of a broadband of frequencies having different sound pressure levels. The method for evaluating all the frequencies of the sound is to apply an A-weighting to reflect how the human ear responds to the different sound levels at different frequencies. The A-weighted sound level adequately describes the instantaneous noise whereas the equivalent sound level depicted as  $L_{eq}$  represents a steady sound level containing the same total acoustical energy as the actual fluctuating sound level over a given time interval.

The Community Noise Equivalent Level (CNEL) is the 24-hour A-weighted average for sound, with corrections for evening and nighttime hours. The corrections require an addition of 5 decibels to sound levels in the evening hours between 7 p.m. and 10 p.m. and an addition of 10 decibels to sound levels at nighttime hours between 10 p.m. and 7 a.m. These additions are made to account for the increased sensitivity during the evening and nighttime hours when sound appears louder.

A vehicle's noise level is a combination of the noise produced by a vehicle's engine, exhaust, and tires. The cumulative traffic noise levels along a roadway segment are based on three primary factors: the amount of traffic, the travel speed of the traffic, and the vehicle mix ratio or number of medium and heavy trucks. The intensity of traffic noise is increased by higher traffic volumes, greater speeds, and increased number of trucks.

Because mobile/traffic noise levels are calculated on a logarithmic scale, a doubling of the traffic noise or acoustical energy results in a noise level increase of 3 dBA. Therefore the doubling of the traffic volume, without changing the vehicle speeds or mix ratio, results in a noise increase of 3 dBA. Mobile noise levels radiate in an almost oblique fashion from the source and drop off at a rate of 3 dBA for each doubling of distance under hard site conditions and at a rate of 4.5 dBA for soft site conditions. Hard site conditions consist of concrete, asphalt, and hard pack dirt while soft site conditions exist in areas having slight grade changes, landscaped areas, and vegetation. Alternately, fixed/point sources radiate outward uniformly as it travels away from the source. Their sound levels attenuate or drop off at a rate of 6 dBA for each doubling of distance.

The most effective noise reduction methods consist of controlling the noise at the source and blocking the noise transmission with barriers. Any or all of these methods may be required to reduce noise levels to an acceptable level. To be effective, a noise barrier must have enough mass to prevent significant noise transmission through it and high enough and long enough to shield the receiver from the noise source. A safe minimum surface weight for a noise barrier is 3.5 pounds/square foot (equivalent to 3/4-inch plywood), and the barrier must be carefully constructed so that there are no cracks or openings.

Barriers constructed of wood or as a wooden fence must have minimum design considerations as follows: the boards must be 3/4 inch thick and free of any gaps or knot holes. The design must also incorporate either overlapping the boards at least 1 inch or utilizing a tongue-and-groove design for this to be achieved.

### **3.0 SIGNIFICANCE THRESHOLDS AND STANDARDS**

#### **3.1 Construction Noise**

Division 4 of Article 9.5 of the City of San Diego Municipal Code addresses the limits of disturbing or offensive construction noise. The Municipal Code states that with the exception of an emergency, it should be unlawful 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.

#### **3.2 City CEQA Significance Determination Thresholds**

The City uses the Land Use - Noise Compatibility Guidelines as shown on Table NE-3 in the Noise Element of the General Plan (provided as Table 3-1 below) for evaluating land use noise compatibility when reviewing proposed land use development projects. A "compatible" land use indicates that standard construction methods will attenuate exterior noise to an acceptable indoor noise level and people can carry out outdoor activities with minimal noise interference. Evaluation of land use that falls into the "conditionally compatible" noise environment should have an acoustical study prepared. The acoustical study should include, with consideration of the type of noise source, the sensitivity of the noise receptor, and the degree to which the noise source may interfere with speech, sleep, or other activities characteristic of the land use. For land uses indicated as "conditionally compatible", structures must be capable of attenuating exterior noise to the indoor noise level as shown in Table 3-1. For land uses indicated as "incompatible", new construction should generally not be undertaken.

Additionally, if the project is proposed within the Airport Environs Overlay Zone (AEOZ) as defined in Chapter 13, Article 2, Division 3 of the San Diego Municipal Code, the potential exterior noise impacts from aircraft noise would not constitute a significant environmental impact. However, the City recommends that structures within an AEOZ must also follow the requirements as shown in Table 3-1.

In accordance with CEQA, a project should not have a noticeable adverse impact on the surrounding environment. Noise level changes greater than 3 dBA, or a doubling of the acoustic energy, are often identified as audible and considered potentially significant, while changes less than 1 dBA are not discernible. In the range of 1 to 3 dBA, humans who are very sensitive to noise may perceive a slight change. For the purposes for this analysis, a direct and cumulative roadway noise impact would be considered significant if the project increases noise levels at a noise sensitive land use 3 dBA CNEL and if the noise level increases above an unacceptable noise level per the City's General Plan.

**Table 3-1: Land Use - Noise Compatibility Guidelines**

Land Use Category			Exterior Noise Exposure ( dBA CNEL)			
			60	65	70	75
<i>Parks and Recreational</i>						
Parks, Active and Passive Recreation						
Outdoor Spectator Sports, Golf Courses; Water Recreational Facilities; Indoor Recreational Facilities						
<i>Agricultural</i>						
Crop Raising & Farming; Community Gardens, Aquaculture, Dairies; Horticulture Nurseries & Greenhouses; Animal Raising, Maintain & Keeping; Commercial Stables						
<i>Residential</i>						
Single Dwelling Units; Mobile Homes				45		
Multiple Units; <i>*For uses affected by aircraft noise, refer to Policies NE-D.2. &amp; NE-D.3.</i>				45	45*	
<i>Institutional</i>						
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 and Colleges, and Universities				45	45	
Cemeteries						
<i>Retail Sales</i>						
Building Supplies/Equipment; Food, Beverages & Groceries; Pets & Pet Supplies; Sundries, Pharmaceutical, & Convenience Sales; Wearing Apparel & Accessories					50	50
<i>Commercial Services</i>						
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
<i>Offices</i>						
Business & Professional; Government; Medical, Dental & Health Practitioner; Regional & Corporate Headquarters					50	50
<i>Vehicle and Vehicular Equipment Sales and Services Use</i>						
Commercial or Personal Vehicle Repair & Maintenance; Commercial or Personal Vehicle Sales & Rentals; Vehicle Equipment & Supplies Sales & Rentals; Vehicle Parking						
<i>Wholesale, Distribution, Storage Use Category</i>						
Equipment & Materials Storage Yards; Moving & Storage Facilities; Warehouse; Wholesale Distribution						
<i>Industrial</i>						
Heavy Manufacturing; Light Manufacturing; Marine Industry; Trucking & Transportation Terminals; Mining & Extractive Industries						
Research & Development					50	
	Compatible	Indoor Uses	Standard construction 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	Severe noise interference makes outdoor activities unacceptable.			

Source: City of San Diego Noise Element (2015)

## **4.0 EXISTING NOISE ENVIRONMENT**

### **4.1 Existing Noise Environment Onsite**

Noise measurements were taken using a Larson-Davis Model LxT Type 1 precision sound level meter, programmed, in "slow" mode, to record noise levels in "A" weighted form. The sound level meter and microphone were mounted on a tripod, five feet above the ground and equipped with a windscreen during all measurements. The sound level meter was calibrated before and after the monitoring using a Larson-Davis calibrator, Model CAL 200.

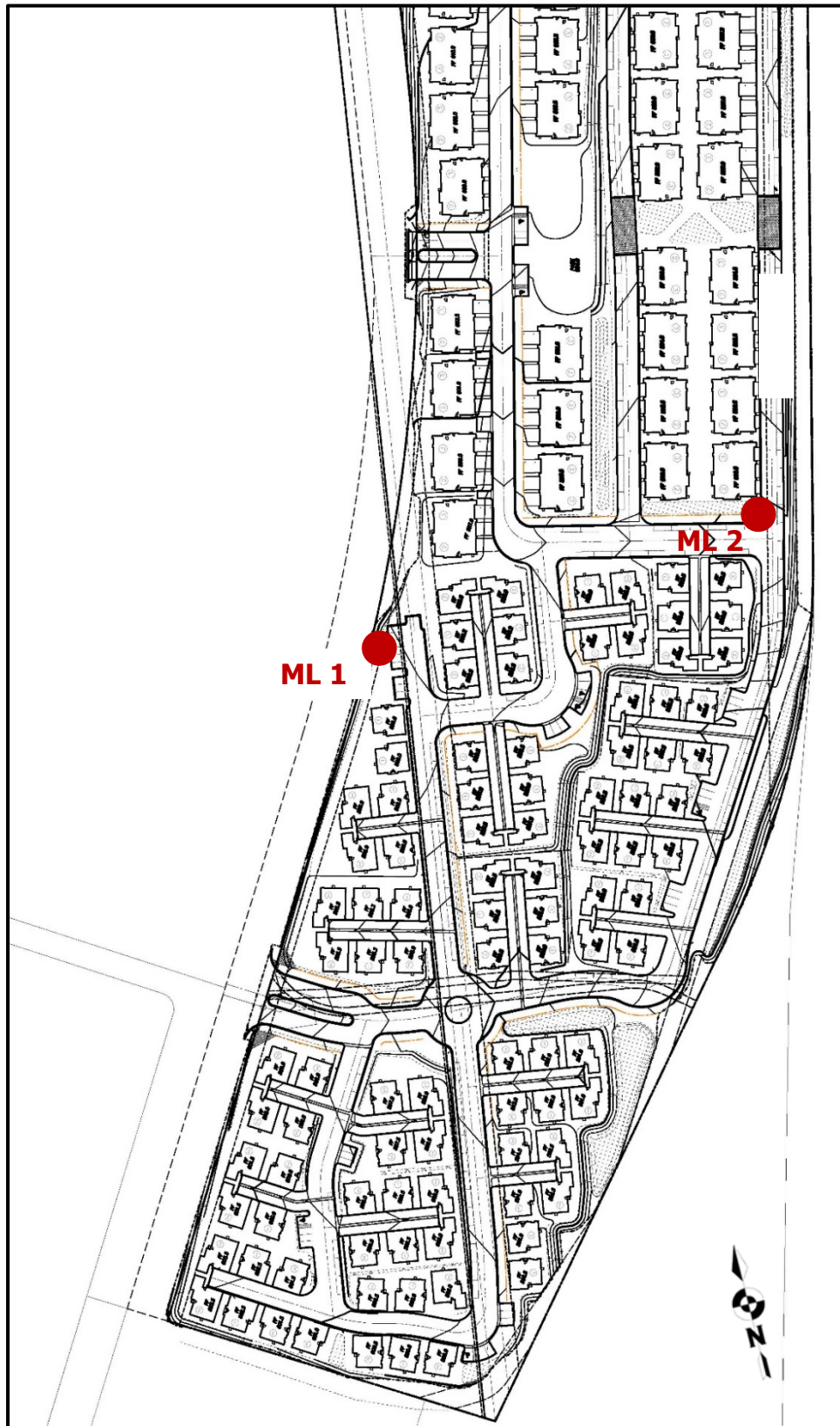
Monitoring location 1 (M1) was located along Carmel Mountain Road in the southern portion of the site. Monitoring location 2 (M2) was located near Interstate 15 in the southern portion of the site. The results of the noise level measurements are presented in Table 4-1. The noise measurements were monitored for a time period of 20 minutes. The existing noise levels in the project area consisted primarily of traffic along Interstate 15. The ambient Leq noise levels measured in the area of the project during the afternoon hours were found to be 62-73 dBA Leq based on the existing Caltrans's berm along Interstate 15. The statistical indicators Lmax, Lmin, L10, L50 and L90, are given for the monitoring location. As can be seen from the L90 data, 90% of the time the noise level is approximately 60-70 dBA from Interstate 15 across the site.

**Table 4-1: Measured Ambient Noise Levels**

<b>Measurement Identification</b>	<b>Location/Source</b>	<b>Time</b>	<b>Noise Levels (dBA)</b>					
			<b>Leq</b>	<b>Lmax</b>	<b>Lmin</b>	<b>L10</b>	<b>L50</b>	<b>L90</b>
M1	Carmel Mountain Road	1:00-1:20 p.m.	61.6	72.2	59.0	62.5	60.4	59.5
M2	Interstate 15	1:25-1:45 p.m.	72.6	80.5	67.3	72.7	70.4	69.5
Source: Ldn Consulting, Inc. March 15, 2016								



**Figure 4-1: Ambient Noise Monitoring Locations**

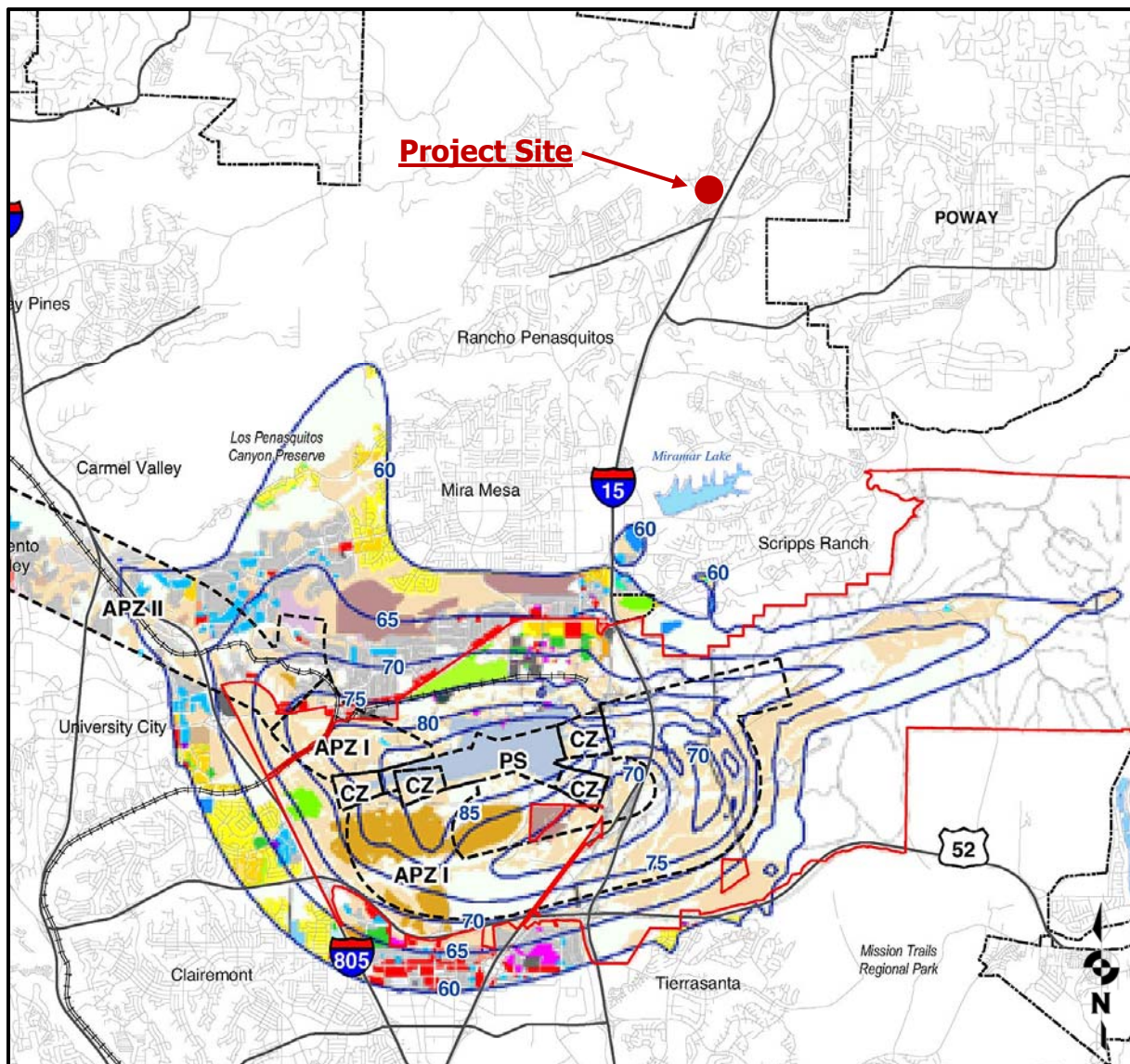




#### 4.2 Existing Site with Respect to Miramar Onsite

The proposed project is not near the Marine Corps Air Station (MCAS) Miramar over flight areas and is outside the 60 dBA CNEL noise contour pocket due to aircraft over flights. Noise from MCAS Miramar would not be expected to exceed 60 dBA CNEL and therefore no mitigation to any structures or sensitive land uses due to aircraft is required. The project site location along with the noise contours from MCAS Miramar is shown in Figure 4-2 below.

**Figure 4-2: MCAS Miramar Noise Contours/Project Location**



## **5.0 CONSTRUCTION NOISE LEVELS**

Construction noise represents a short-term impact on the ambient noise levels. Noise generated by construction equipment includes haul trucks, water trucks, graders, dozers, loaders, and scrapers and can reach relatively high levels. Grading activities typically represent one of the highest potential sources for noise impacts. The most effective method of controlling construction noise is through local control of construction hours and by limiting the hours of construction to normal weekday working hours.

Division 4 of Article 9.5 of the City of San Diego Municipal Code addresses the limits of disturbing or offensive construction noise. The Municipal Code states that with the exception of an emergency, it should be unlawful 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.

The U.S. Environmental Protection Agency (U.S. EPA) has compiled data regarding the noise generating characteristics of specific types of construction equipment. Noise levels generated by heavy construction equipment can range from 60 dBA to in excess of 100 dBA when measured at 50 feet. However, these noise levels diminish rapidly with distance from the construction site at a rate of approximately 6 dBA per doubling of distance. For example, a noise level of 75 dBA measured at 50 feet from the noise source to the receptor would be reduced to 69 dBA at 100 feet from the source to the receptor, and reduced to 63 dBA at 200 feet from the source.

Using a point-source noise prediction model, calculations of the expected construction noise levels were completed. The essential model input data for these performance equations include the source levels of the equipment, source to receiver horizontal and vertical separations, the amount of time the equipment is operating in a given day (also referred to as the duty-cycle), and any transmission loss from topography or barriers.

### **5.1 Potential Noise Impact Identification**

Based on the EPA noise emissions, empirical data and the amount of equipment needed, worst-case noise levels from the construction equipment operations would occur during the base operations (grading/site preparation). The construction schedule identifies that grading activities will occur in a single phase all at the same time, with anticipated equipment including a two dozers, two backhoes, several haul trucks, a roller compactor, and a water truck. Due to physical constraints and normal site preparation operations, most of the equipment will be spread out over the site. Based upon the proposed site plan, the majority of the grading operations will occur more than 300 feet from the nearest property lines, with the exception of the minor grading needed for the proposed southern portions of the site where grading will

occur at an average distance as close as 110-180 feet from the existing uses to the south.

Therefore the worst-case noise condition would occur when the construction equipment is working in close proximity to each other at an average distance of approximately 110 feet from the southern property line. The noise levels utilized in this analysis are shown in Table 5-1. The amount of time the equipment will be utilized over an 8-hour period at this distance from the property line is also given and factored into the average noise level calculations. This is referred to as the duty-cycle.

**Table 5-1: Construction Noise Levels**

<b>Construction Equipment</b>	<b>Quantity</b>	<b>Source Level @ 50-Feet (dBA)*</b>	<b>Duty Cycle (Hours/Day)</b>	<b>Cumulative Noise Level @ Property Line (dBA)</b>
Haul Truck	4	75	4	78.0
Dozer	2	72	6	73.8
Backhoe	2	74	6	75.8
Roller Compactor	1	73	6	71.8
Water Truck	1	70	6	68.8
<b>Cumulative Noise Levels @ 50-Feet (dBA)</b>				<b>81.7</b>
<b>Nearest Average Distance (Feet)</b>				<b>110</b>
<b>Anticipated Property Line Noise Level @ 110-Feet (dBA)</b>				<b>74.8</b>
*Source: U.S. Environmental Protection Agency (U.S. EPA), 1971 and Empirical Data				

As can be seen in Table 5-1, with the equipment working closely together the cumulative noise levels at an average distance of 110 feet would be 74.8 dBA at the nearest property line. Therefore, the average noise level will be below the 75 dBA threshold and no impacts are anticipated.

## 5.2 Construction Noise Conclusions

The construction equipment will be spread out over the project site from average distances of more than 300-feet from the nearest property lines with the exception of the minor grading needed for the proposed southern portions of the site where grading will occur at an average distance as close as 110-180 feet from the existing uses to the south. Based upon the calculations of the noise levels when construction equipment is located near the property line, the average noise levels would be 74.8 dBA and does not exceed the 75-dBA standard; as a result, no impacts will occur and no mitigation measures are required.

## 6.0 TRANSPORTATION NOISE LEVELS

### 6.1 Onsite Transportation Related Noise Levels

The Federal Highway Administration's (FHWA) Traffic Noise Model (TNM), version 2.5, algorithms built into SoundPLAN Essential, version 3.0, a three-dimensional acoustical modeling software package was used to predict existing and future peak hour traffic noise levels at specific receptor locations within the project site (FHWA 2004). Inputs to the model include the three-dimensional coordinates of the roadways; noise receptors; topographic features; existing or planned barriers that would affect noise propagation; and vehicle volumes and speeds, by type of vehicle. For purposes of evaluating future land use compatibility, peak hour traffic volumes were developed based on the maximum hourly traffic volume LOS C traffic conditions. The traffic mix used in the modeling was developed from Caltrans truck traffic data. Table 6-1 presents the roadway parameters used in the analysis including the average daily traffic volumes, vehicle speeds, and the hourly traffic flow distribution (vehicle mix) for the future conditions. The vehicle mix provides the hourly distribution percentages of automobiles, medium trucks, and heavy trucks for input into the Noise Model.

**Table 6-1: Traffic Parameters**

Source	LOS C Traffic (ADT) <sup>1</sup>	Peak Volume	Vehicle Speeds (MPH)	Vehicle Mix %				
				Auto	Motorcycles	Medium Trucks	Buses	Heavy Trucks
Interstate 15	259,000	25,900	65	90.3	1.0	3.7 <sup>2</sup>	1.0	4.0 <sup>2</sup>
Carmel Mountain Road	18,000	1,800	40	93.5 <sup>3</sup>	1.0 <sup>3</sup>	2.5 <sup>3</sup>	1.0 <sup>3</sup>	2.0 <sup>3</sup>

<sup>1</sup> Source: Project Traffic Study, LLG 2016.  
<sup>2</sup> Caltrans Annual Average Daily Truck Traffic on the California State Highway System.  
<sup>3</sup> Typical City vehicle mix data.

The required coordinate information necessary for the traffic noise prediction model input was taken from the preliminary site plans provided by Latitude 33, 2016. To predict the future noise levels, the preliminary site plans were used to identify the pad elevations, the roadway elevations, and the relationship between the noise source(s) and the receptor areas. An existing 8-foot berm constructed by Caltrans is located between the project site and Interstate 15. Additionally, the project is proposing a combination of 6-foot and 12-foot walls on the southern and eastern portion of the site to help reduce traffic noise from I-15. The Caltrans berm and proposed walls were incorporated into the model. The modeled receptors, barrier locations and future outdoor noise contours are shown in Figures 6-1a thru 6-1c.



**Figure 6-1a: Receivers and Future Noise Level Contours**





**Figure 6-1b: Receivers and Future Noise Level Contours**





**Figure 6-1c: Receivers and Future Noise Level Contours**





Based upon the findings, with the existing 8-foot Caltrans's berm and proposed 6-foot and 12-foot walls on the southern and eastern portion of the site, no exterior noise mitigation will be necessary for compliance with the City of San Diego's Noise compatibility threshold at the proposed ground level outdoor use areas as can be seen in Tables 6-2a and 6-2b. The detailed modeling results are also provided in **Attachment A**. Additionally, if 2<sup>nd</sup> and 3<sup>rd</sup> floor balconies are proposed in the eastern portion of the site, facing east towards Interstate 15, 5-foot barriers are needed to block the line of sight to the roadway. Breaking the line of sight from a noise source to a receptor will achieve a 5 decibel reduction or better based on elevation offsets and reduce the noise levels at the balconies. The potential balconies locations that would require the 5-foot barriers, if balconies are proposed, are shown in Figures 6-2a and 6-2b.

**Table 6-2a: Future Exterior Noise Levels**

Receptor Number <sup>1</sup>	Ground Level Noise (dBA CNEL)	Second Floor Façade Noise (dBA CNEL) <sup>2</sup>	Third Floor Façade Noise (dBA CNEL) <sup>2</sup>
1	65.1	66.6	67.5
2	64.8	66.8	67.8
3	62.7	65.1	66.1
4	62.8	65.1	66.3
5	59.8	62.2	63.4
6	62.3	65.6	67.7
7	61.1	64.9	67.0
8	63.1	66.5	68.5
9	61.3	66.1	68.6
10	61.3	65.1	68.8
11	69.3	70.8	--
12	67.4	70.2	--
13	66.5	68.9	--
14	67.0	69.3	--
15	68.2	70.0	--
16	67.5	70.0	--
17	68.3	70.6	--
18	69.2	71.5	--
19	67.0	69.6	--
20	66.0	69.3	--
21	64.9	67.4	--
22	62.3	65.0	--
23	68.2	71.0	--
24	69.1	70.3	--
25	69.7	70.3	--
26	67.9	68.3	--
27	69.9	70.3	--
28	69.0	70.2	--
29	69.2	71.0	--
30	60.1	66.2	--
31	57.3	63.9	--

<sup>1</sup> Interior Noise Study required if noise level is above 60 dBA CNEL per City Guidelines. Open window condition would reduce noise levels 10-15 dBA CNEL below the levels shown and a closed window conditions is required if noise levels are above 60 dBA CNEL.

<sup>2</sup> 2<sup>nd</sup> and 3<sup>rd</sup> Balconies, if proposed facing east towards Interstate 15 as shown in BOLD, would need 5-foot barriers to reduce noise levels.

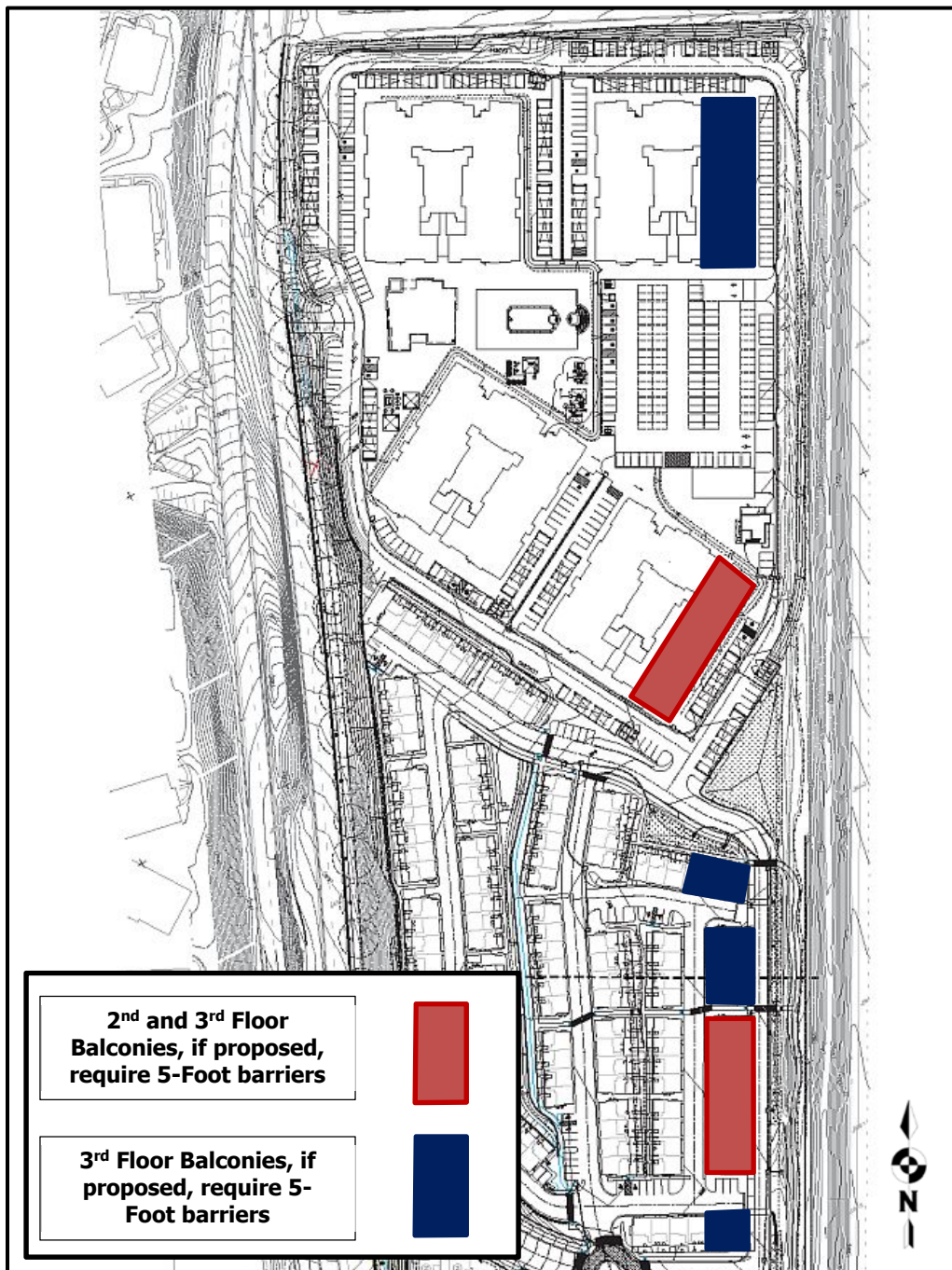
**Table 6-2b: Future Exterior Noise Levels (Continued)**

Receptor Number <sup>1</sup>	Ground Level Noise (dBA CNEL)	Second Floor Façade Noise (dBA CNEL) <sup>2</sup>	Third Floor Facade Noise (dBA CNEL) <sup>2</sup>
32	67.6	70.9	--
33	67.6	70.0	--
34	66.1	70.2	--
35	67.4	71.4	--
36	68.6	70.6	--
37	64.9	68.8	--
38	63.2	69.9	--
39	64.7	<b>75.7</b>	--
40	69.2	<b>75.6</b>	--
41	67.9	74.4	--
42	66.9	73.6	--
43	66.4	72.0	--
44	66.1	70.7	--
45	66.0	71.6	--
46	66.9	72.0	--
47	67.2	72.4	--
48	67.4	73.2	--
49	68.1	74.1	--
50	68.6	74.8	--
51	69.1	74.9	--
52	69.1	73.0	<b>75.8</b>
53	66.6	70.0	73.1
54	66.0	67.6	71.0
55	64.5	<b>75.8</b>	<b>78.6</b>
56	69.6	<b>75.7</b>	<b>78.7</b>
57	69.4	<b>75.8</b>	<b>78.7</b>
58	69.4	<b>75.4</b>	<b>78.4</b>
59	68.9	<b>75.5</b>	<b>78.8</b>
60	69.1	74.9	<b>78.6</b>
61	68.3	74.3	<b>78.2</b>
62	68.0	74.0	<b>78.9</b>
63	68.4	73.3	<b>78.4</b>
64	67.8	73.6	<b>77.0</b>
65	67.7	72.0	<b>75.2</b>
66	67.3	70.7	73.5
67	66.9	65.8	68.5
68	63.9	74.0	<b>76.5</b>
69	70.1	<b>76.3</b>	<b>78.1</b>
70	70.3	<b>77.2</b>	<b>78.8</b>
71	69.4	67.6	70.9
72	63.6	66.5	69.8
73	64.0	68.7	73.1
74	65.1	73.1	<b>78.2</b>
75	67.4	72.6	<b>78.8</b>
76	67.6	71.3	<b>78.1</b>
77	66.6	69.8	72.2

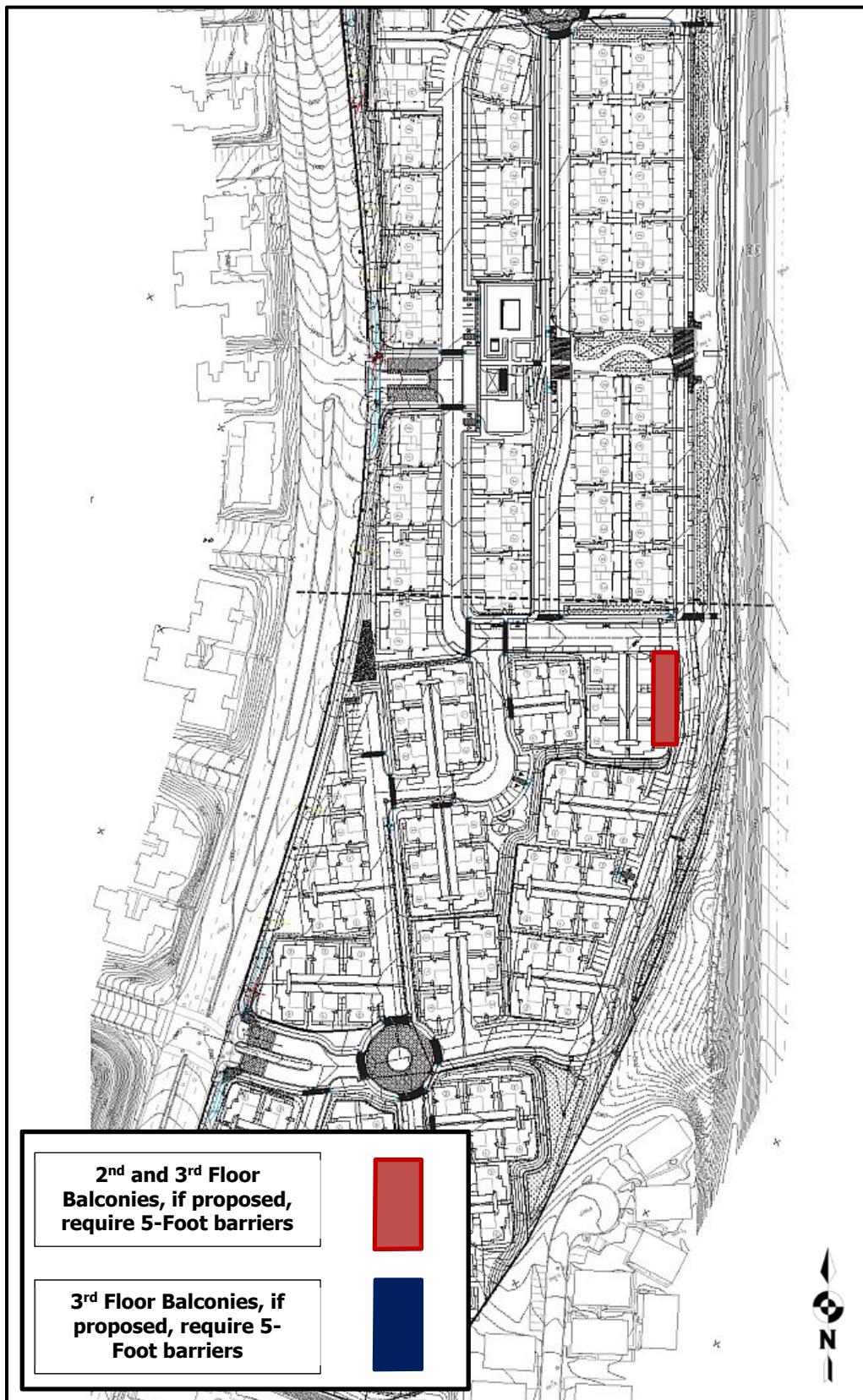
<sup>1</sup> Interior Noise Study required if noise level is above 60 dBA CNEL per City Guidelines. Open window condition would reduce noise levels 10-15 dBA CNEL below the levels shown and a closed window conditions is required if noise levels are above 60 dBA CNEL.

<sup>2</sup> 2<sup>nd</sup> and 3<sup>rd</sup> Balconies, if proposed facing east towards Interstate 15 as shown in BOLD, would need 5-foot barriers to reduce noise levels.

**Figure 6-2a: Balconies Requiring 5-foot Barriers**



**Figure 6-2b: Balconies Requiring 5-foot Barriers**





The City of San Diego as part of its noise guidelines also states, consistent with Title 24 of the California Code of Regulations (CCR), a project is required to perform an interior assessment on the portions of a project site where building façade noise levels are above the normally compatible noise level in order to ensure that acceptable interior noise levels can be achieved. The City of San Diego's Noise Compatibility Guidelines require interior noise levels in residential structures to be reduced to 45 dBA CNEL as shown in Table 3-1 above.

Standard building construction will provide a noise reduction of approximately 10-15 dBA with a windows open condition (Source: Federal Highway Administration Highway Traffic Noise Analysis and Abatement Policy and Guidance). An interior noise level reduction of 26-35 dBA CNEL is needed for the proposed residential units located adjacent to Interstate 15 and a noise level reduction of 15-25 dBA CNEL is needed for the residential units on the eastern portion of the site. Based on the preliminary architectural plans, to meet the 45 dBA CNEL interior noise standard, a minimum STC 36-40 rated dual pane windows and mechanical ventilation could be needed to achieve the necessary interior noise reductions to meet the City's standard for the residential units adjacent to Interstate 15. A minimum STC 22-28 rated assemblies and mechanical ventilation could be needed to achieve the interior noise reductions for the residential units on the western portion of the site. Once the final architectural plans are prepared, the proposed project site will require an interior noise study be prepared prior to the issuance of building permits to determine the detailed components to reduce interior noise to 45 dBA CNEL.

## 6.2 Offsite Project Related Transportation Noise Levels

The off-site project-related roadway segment noise levels projected in this report were calculated using the methods in the Highway Noise Model published by the Federal Highway Administration (FHWA Highway Traffic Noise Prediction Model, FHWA-RD-77-108, December, 1978). The FHWA Model uses the traffic volume, vehicle mix, speed, and roadway geometry to compute the equivalent noise level. A spreadsheet calculation was used which computes equivalent noise levels for each of the time periods used in the calculation of CNEL. Weighting these equivalent noise levels and summing them gives the CNEL for the traffic projections. The noise contours are then established by iterating the equivalent noise level over many distances until the distance to the desired noise contour(s) are found.

Because mobile/traffic noise levels are calculated on a logarithmic scale, a doubling of the traffic noise or acoustical energy results in a noise level increase of 3 dBA. Therefore the doubling of the traffic volume, without changing the vehicle speeds or mix ratio, results in a noise increase of 3 dBA. Mobile noise levels radiate in an almost oblique fashion from the source and drop off at a rate of 3 dBA for each doubling of distance under hard site conditions and at a rate of 4.5 dBA for soft site conditions. Hard site conditions consist of concrete, asphalt, and hard pack dirt, while soft site conditions exist in areas having slight grade changes, landscaped areas, and

vegetation. Hard site conditions, to be conservative, were used to develop the identified noise contours and analyze noise impacts along all roadway segments. The future traffic noise model utilizes a typical, vehicle mix of 96% Autos, 2% Medium Trucks, and 2% Heavy Trucks for all analyzed roadway segments. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks, and heavy trucks for input into the FHWA Model.

Community noise level changes greater than 3 dBA are often identified as audible and considered potential significant, while changes less than 1 dBA will not be discernible to local residents. In the range of 1 to 3 dBA, residents who are very sensitive to noise may perceive a slight change. There is no scientific evidence available to support the use of 3 dBA as the significance threshold; community noise exposures are typically over a long time period rather than the immediate comparison made in a laboratory situation. Therefore, the level at which changes in community noise levels become discernible is likely greater than 1 dBA and 3 dBA appears to be appropriate for most people. For the purposes for this analysis, a direct roadway noise impacts would be considered significant if the project increases noise levels for a noise sensitive land use by 3 dBA CNEL and if the project increases noise levels above an unacceptable noise level per the City's General Plan in the area adjacent to the roadway segment.

#### Traffic Noise Impacts

To determine if off-site noise level increases associated with the development of the project will create noise impacts, the noise levels for the near term conditions were compared with the noise level increase from when the project is full built. Utilizing the project's traffic assessment (Source: LLG, 2016), noise contours were developed for the following traffic scenarios:

Near Term: Traffic projections at the time the proposed project would open without project traffic.

Near Term Plus Project: Projected Near Term conditions plus the added noise from the proposed project related traffic.

Near Term vs. Near Term Plus Project: Comparison between the Near Term conditions without the project and Near Term traffic with the project.

The noise levels and reference distances to the 65 dBA CNEL contours for the roadways in the vicinity of the Project site are given in Table 6-3 for the Near Term Scenario and in Table 6-4 for the Near Term Plus Project Scenario. Table 6-5 presents the comparison of the Near Term Year with and without project related noise levels. The overall roadway segment noise levels will have a less than 0.3 dBA CNEL increase with the development of the project.

As can be seen in Table 6-5, the project does not create a direct noise increase of more than 3 dBA CNEL on any roadway segment. Therefore, the project's direct contributions to off-site

roadway noise increases will not cause any significant impacts to any existing or future noise sensitive land uses.

**Table 6-3: Near Term Noise Levels without Project**

Roadway Segment	ADT <sup>1</sup>	Vehicle Speeds (MPH) <sup>1</sup>	Noise Level @ 50-Foot (dBA CNEL)	65 dBA CNEL Contour Distance (Feet)
<b>Carmel Mountain Road</b>				
1. I-15 SB Ramps to Peñasquitos Dr	28,310	40	72.6	161
2. Peñasquitos Dr to Gerana St	14,060	40	69.6	101
3. Gerana St to Cuca St	13,800	40	69.5	100
4. Cuca St to Paseo Cardiel	13,025	40	69.3	96
5. Paseo Cardiel to Rancho Peñasquitos Blvd	17,180	40	70.5	116
6. Rancho Peñasquitos Blvd to Paseo Montalban	23,580	40	71.8	143
7. Paseo Montalban to Sundevil Way	14,580	40	69.7	104
<sup>1</sup> Source: Project Traffic study prepared by LLG, 2016				

**Table 6-4: Near Term + Project Noise Levels**

Roadway Segment	ADT <sup>1</sup>	Vehicle Speeds (MPH) <sup>1</sup>	Noise Level @ 50-Foot (dBA CNEL)	65 dBA CNEL Contour Distance (Feet)
<b>Carmel Mountain Road</b>				
1. I-15 SB Ramps to Peñasquitos Dr	29,370	40	72.8	165
2. Peñasquitos Dr to Gerana St	15,246	40	69.9	107
3. Gerana St to Cuca St	14,440	40	69.7	103
4. Cuca St to Paseo Cardiel	13,641	40	69.5	99
5. Paseo Cardiel to Rancho Peñasquitos Blvd	17,755	40	70.6	118
6. Rancho Peñasquitos Blvd to Paseo Montalban	23,850	40	71.9	144
7. Paseo Montalban to Sundevil Way	14,763	40	69.8	104
<sup>1</sup> Source: Project Traffic study prepared by LLG, 2016				

**Table 6-5: Near Term vs. Near Term + Project Noise Levels**

Roadway Segment	Existing Noise Level @ 50-Foot (dBA CNEL)	Existing Plus Project Noise Level @ 50-Foot (dBA CNEL)	Project Related Direct Noise Level Increase (dBA CNEL)
<b>Carmel Mountain Road</b>			
1. I-15 SB Ramps to Peñasquitos Dr	72.6	72.8	0.2
2. Peñasquitos Dr to Gerana St	69.6	69.9	0.3
3. Gerana St to Cuca St	69.5	69.7	0.2
4. Cuca St to Paseo Cardiel	69.3	69.5	0.2
5. Paseo Cardiel to Rancho Peñasquitos Blvd	70.5	70.6	0.1
6. Rancho Peñasquitos Blvd to Paseo Montalban	71.8	71.9	0.1
7. Paseo Montalban to Sundevil Way	69.7	69.8	0.1



## 6.3 Transportation Noise Conclusions

### Onsite Transportation Related Noise Levels

The proposed project is consistent with the existing and surrounding residential uses. Based upon the findings, with the existing 8-foot Caltrans's berm and proposed 6-foot and 12-foot walls on the southern and eastern portion of the site, no exterior noise mitigation will be necessary for compliance with the City of San Diego's Noise compatibility threshold at the proposed ground level outdoor use areas. The common outdoor use areas at the Project site are located in the center of the site and shielded by the proposed buildings. Additionally, if 2<sup>nd</sup> and 3<sup>rd</sup> floor balconies are proposed in the eastern portion of the site, facing east towards Interstate 15, 5-foot barriers are needed to block the line of sight to the roadway. Breaking the line of sight from a noise source to a receptor will achieve a 5 decibel reduction or better based on elevation offsets and reduce the noise levels at the balconies to below acceptable levels.

The City of San Diego as part of its noise guidelines also states, consistent with Title 24 of the California Code of Regulations (CCR), a project is required to perform an interior assessment on the portions of a project site where building façade noise levels are above the normally compatible noise level.

Standard building construction will provide a noise reduction of approximately 10-15 dBA with a windows open condition (Source: Federal Highway Administration Highway Traffic Noise Analysis and Abatement Policy and Guidance). An interior noise level reduction of 26-35 dBA CNEL is needed for the proposed residential units located adjacent to Interstate 15 and a noise level reduction of 15-25 dBA CNEL is needed for the residential units on the eastern portion of the site. Based on the preliminary architectural plans, to meet the 45 dBA CNEL interior noise standard, a minimum STC 36-40 rated dual pane windows and mechanical ventilation could be needed to achieve the necessary interior noise reductions to meet the City's standard for the residential units adjacent to Interstate 15. A minimum STC 22-28 rated assemblies and mechanical ventilation could be needed to achieve the interior noise reductions for the residential units on the western portion of the site. Once the final architectural plans are prepared, the proposed project site will require an interior noise study be prepared prior to the issuance of building permits to determine the detailed components to reduce interior noise to 45 dBA CNEL.

### Offsite Project Related Transportation Noise Levels

The project does not create a direct impact of more than 3 dBA CNEL on any roadway segment. Therefore, the project's direct contributions to off-site roadway noise increases will not cause any significant impacts to any existing or future noise sensitive land uses. No mitigation is required.

**ATTACHMENT A**

NOISE MODELING RESULTS

No.	Floor	Limit L(Aeq1h) dB(A)	Level w/o NP L(Aeq1h) dB(A)	Level w. NP L(Aeq1h) dB(A)	Difference L(Aeq1h) dB(A)	Conflict L(Aeq1h) dB(A)
	1 1.FI	75	65.1	65.1	0	No
	2 1.FI	75	64.8	64.8	0	No
	3 1.FI	75	62.5	62.7	0.2	No
	4 1.FI	75	62.8	62.8	0	No
	5 1.FI	75	60.4	59.8	-0.6	No
	6 1.FI	75	62.3	62.3	0	No
	7 1.FI	75	61.1	61.1	0	No
	8 1.FI	75	63.1	63.1	0	No
	9 1.FI	75	61.3	61.3	0	No
	10 1.FI	75	61.3	61.3	0	No
	11 1.FI	75	69.3	69.3	0	No
	12 1.FI	75	67.4	67.4	0	No
	13 1.FI	75	66.5	66.5	0	No
	14 1.FI	75	67	67	0	No
	15 1.FI	75	68.2	68.2	0	No
	16 1.FI	75	67.5	67.5	0	No
	17 1.FI	75	68.3	68.3	0	No
	18 1.FI	75	69.2	69.2	0	No
	19 1.FI	75	67	67	0	No
	20 1.FI	75	66	66	0	No
	21 1.FI	75	64.9	64.9	0	No
	22 1.FI	75	62.3	62.3	0	No
	23 1.FI	75	68.2	68.2	0	No
	24 1.FI	75	69.1	69.1	0	No
	25 1.FI	75	69.7	69.7	0	No
	26 1.FI	75	67.9	67.9	0	No
	27 1.FI	75	69.9	69.9	0	No
	28 1.FI	75	69	69	0	No
	29 1.FI	75	69.2	69.2	0	No
	30 1.FI	75	60.1	60.1	0	No
	31 1.FI	75	57.3	57.3	0.1	No
	32 1.FI	75	67.5	67.6	0	No
	33 1.FI	75	66.1	66.1	0	No
	34 1.FI	75	67.4	67.4	-0.1	No
	35 1.FI	75	68.5	68.6	0.1	No
	36 1.FI	75	66.5	64.9	-1.6	No
	37 1.FI	75	66.6	63.2	-3.4	No
	38 1.FI	75	67.1	64.7	-2.4	No
	39 1.FI	75	71.5	69.2	-2.3	No
	40 1.FI	75	71.9	67.9	-4.1	No
	41 1.FI	75	70.2	66.9	-3.3	No
	42 1.FI	75	69.5	66.4	-3.1	No
	43 1.FI	75	69	66.1	-3	No
	44 1.FI	75	68.9	66	-2.9	No
	45 1.FI	75	71	66.9	-4.1	No
	46 1.FI	75	71.3	67.2	-4.1	No
	47 1.FI	75	69.8	67.4	-2.4	No
	48 1.FI	75	72.5	68.1	-4.3	No
	49 1.FI	75	72.7	68.6	-4.1	No
	50 1.FI	75	73	69.1	-3.9	No
	51 1.FI	75	72.7	69.1	-3.7	No
	52 1.FI	75	70.1	66.6	-3.5	No
	53 1.FI	75	68.2	66	-2.1	No
	54 1.FI	75	66.2	64.5	-1.7	No
	55 1.FI	75	72.4	69.6	-2.8	No
	56 1.FI	75	72.2	69.4	-2.8	No
	57 1.FI	75	72.1	69.4	-2.7	No
	58 1.FI	75	71.9	68.9	-3	No
	59 1.FI	75	72	69.1	-2.8	No
	60 1.FI	75	71.7	68.3	-3.3	No
	61 1.FI	75	71.4	68	-3.4	No
	62 1.FI	75	71.7	68.4	-3.3	No
	63 1.FI	75	71.1	67.8	-3.4	No

64 1.FI	75	70.5	67.7	-2.8 No
65 1.FI	75	69.6	67.3	-2.3 No
66 1.FI	75	68.8	66.9	-1.9 No
67 1.FI	75	65	63.9	-1.1 No
68 1.FI	75	72.5	70.1	-2.4 No
69 1.FI	75	73.4	70.3	-3.1 No
70 1.FI	75	72.8	69.4	-3.4 No
71 1.FI	75	66.6	63.6	-3 No
72 1.FI	75	65.4	64	-1.4 No
73 1.FI	75	67.4	65.1	-2.4 No
74 1.FI	75	70.2	67.4	-2.8 No
75 1.FI	75	70.7	67.6	-3.1 No
76 1.FI	75	70.1	66.6	-3.5 No
77 1.FI	75	67.2	64.3	-2.9 No
1 2.FI	75	66.6	66.6	0 No
2 2.FI	75	66.8	66.8	0 No
3 2.FI	75	65.1	65.1	0 No
4 2.FI	75	65.1	65.1	0 No
5 2.FI	75	62.8	62.2	-0.5 No
6 2.FI	75	65.6	65.6	0 No
7 2.FI	75	64.9	64.9	0 No
8 2.FI	75	66.5	66.5	0 No
9 2.FI	75	66.1	66.1	0 No
10 2.FI	75	65.1	65.1	0 No
11 2.FI	75	70.8	70.8	0 No
12 2.FI	75	70.2	70.2	0 No
13 2.FI	75	68.9	68.9	0 No
14 2.FI	75	69.3	69.3	0 No
15 2.FI	75	70	70	0 No
16 2.FI	75	70	70	0 No
17 2.FI	75	70.6	70.6	0 No
18 2.FI	75	71.5	71.5	0 No
19 2.FI	75	69.6	69.6	0 No
20 2.FI	75	69.3	69.3	0 No
21 2.FI	75	67.4	67.4	0 No
22 2.FI	75	65	65	0 No
23 2.FI	75	71	71	0 No
24 2.FI	75	70.3	70.3	0 No
25 2.FI	75	70.3	70.3	0 No
26 2.FI	75	68.3	68.3	0 No
27 2.FI	75	70.3	70.3	0 No
28 2.FI	75	70.2	70.2	0 No
29 2.FI	75	71	71	0 No
30 2.FI	75	65.8	66.2	0.3 No
31 2.FI	75	64	63.9	-0.2 No
32 2.FI	75	70.8	70.9	0.1 No
33 2.FI	75	69.9	70	0.1 No
34 2.FI	75	70	70.2	0.2 No
35 2.FI	75	71.3	71.4	0.1 No
36 2.FI	75	71.2	70.6	-0.6 No
37 2.FI	75	70.5	68.8	-1.7 No
38 2.FI	75	71.4	69.9	-1.5 No
39 2.FI	75	75.9	75.7	-0.2 Yes
40 2.FI	75	76	75.6	-0.4 Yes
41 2.FI	75	75.3	74.4	-0.8 No
42 2.FI	75	74.6	73.6	-1 No
43 2.FI	75	74.8	72	-2.9 No
44 2.FI	75	74.7	70.7	-4.1 No
45 2.FI	75	75.1	71.6	-3.5 No
46 2.FI	75	75.9	72	-3.9 No
47 2.FI	75	76.2	72.4	-3.8 No
48 2.FI	75	76.7	73.2	-3.5 No
49 2.FI	75	76.9	74.1	-2.8 No
50 2.FI	75	77.3	74.8	-2.5 No
51 2.FI	75	76.9	74.9	-1.9 No
52 2.FI	75	74.3	73	-1.3 No

53 2.FI	75	71.8	70	-1.8 No
54 2.FI	75	69.7	67.6	-2.2 No
55 2.FI	75	77.1	75.8	-1.4 Yes
56 2.FI	75	77	75.7	-1.3 Yes
57 2.FI	75	76.9	75.8	-1.1 Yes
58 2.FI	75	76.6	75.4	-1.2 Yes
59 2.FI	75	76.8	75.5	-1.3 Yes
60 2.FI	75	76.5	74.9	-1.6 No
61 2.FI	75	76.2	74.3	-1.8 No
62 2.FI	75	76.5	74	-2.5 No
63 2.FI	75	76	73.3	-2.7 No
64 2.FI	75	75.5	73.6	-1.9 No
65 2.FI	75	74	72	-2 No
66 2.FI	75	72.9	70.7	-2.1 No
67 2.FI	75	68	65.8	-2.2 No
68 2.FI	75	75.4	74	-1.4 No
69 2.FI	75	76.8	76.3	-0.5 Yes
70 2.FI	75	77.6	77.2	-0.4 Yes
71 2.FI	75	69.5	67.6	-1.9 No
72 2.FI	75	69.4	66.5	-2.9 No
73 2.FI	75	71.6	68.7	-2.9 No
74 2.FI	75	76.5	73.1	-3.5 No
75 2.FI	75	77.1	72.6	-4.5 No
76 2.FI	75	77.1	71.3	-5.7 No
77 2.FI	75	72	69.8	-2.2 No
1 3.FI	75	67.5	67.5	0 No
2 3.FI	75	67.8	67.8	0 No
3 3.FI	75	66.1	66.1	0 No
4 3.FI	75	66.3	66.3	0 No
5 3.FI	75	64.4	63.4	-0.9 No
6 3.FI	75	67.7	67.7	0 No
7 3.FI	75	67	67	0 No
8 3.FI	75	68.5	68.5	0 No
9 3.FI	75	68.6	68.6	0 No
10 3.FI	75	68.8	68.8	0 No
52 3.FI	75	75.9	75.8	-0.1 Yes
53 3.FI	75	73.5	73.1	-0.4 No
54 3.FI	75	71.3	71	-0.2 No
55 3.FI	75	78.7	78.6	-0.1 Yes
56 3.FI	75	78.8	78.7	-0.1 Yes
57 3.FI	75	78.8	78.7	-0.1 Yes
58 3.FI	75	78.4	78.4	-0.1 Yes
59 3.FI	75	78.9	78.8	-0.1 Yes
60 3.FI	75	78.7	78.6	-0.1 Yes
61 3.FI	75	78.3	78.2	-0.1 Yes
62 3.FI	75	78.9	78.9	-0.1 Yes
63 3.FI	75	78.6	78.4	-0.2 Yes
64 3.FI	75	77.2	77	-0.3 Yes
65 3.FI	75	75.5	75.2	-0.4 Yes
66 3.FI	75	73.9	73.5	-0.4 No
67 3.FI	75	69	68.5	-0.4 No
68 3.FI	75	76.6	76.5	-0.1 Yes
69 3.FI	75	78.1	78.1	0 Yes
70 3.FI	75	78.8	78.8	0 Yes
71 3.FI	75	71	70.9	-0.1 No
72 3.FI	75	71.2	69.8	-1.4 No
73 3.FI	75	73.7	73.1	-0.6 No
74 3.FI	75	78.4	78.2	-0.2 Yes
75 3.FI	75	79	78.8	-0.2 Yes
76 3.FI	75	78.6	78.1	-0.5 Yes
77 3.FI	75	74.2	72.2	-2 No

**PRELIMINARY SANITARY SEWER STUDY  
PACIFIC VILLAGE**

**(V.T.M. 1669785)**

**(PTS No. 470158)**

**SAN DIEGO, CALIFORNIA**

**PREPARED ON:**

September 22, 2016

**PREPARED FOR:**

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## **EXHIBITS**

Exhibit “A” – Existing Sewer Facilities
Exhibit “B” – Proposed Sewer Facilities
Exhibit “C” – VTM Sheets (showing the street sections and utility design)

## **APPENDICES**

Appendix “A” – <i>City of San Diego Memorandum – Capacity Assessment for Penasquitos North Trunk Sewer</i> dated May 31, 2012
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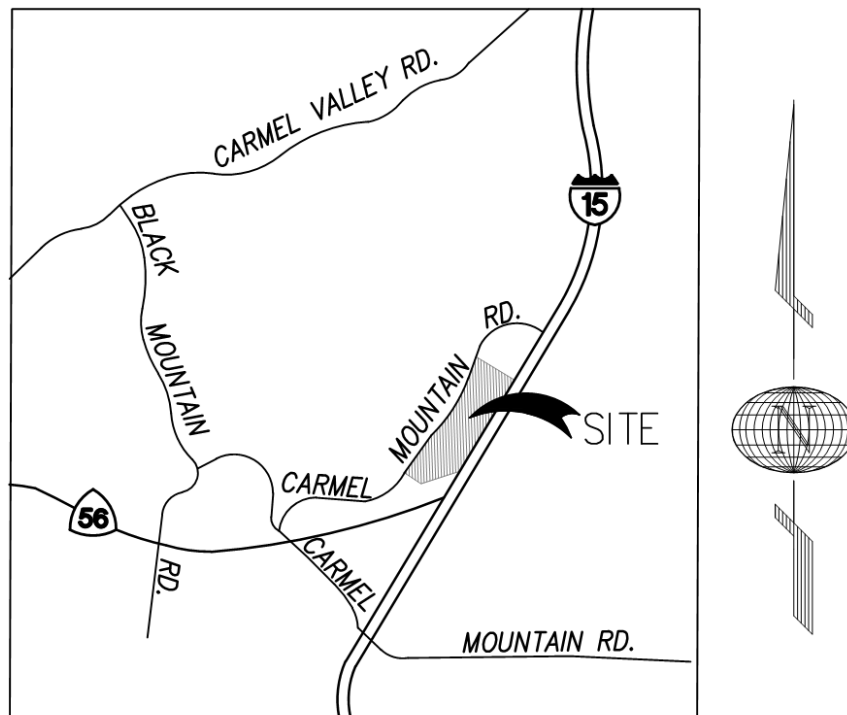
## **INTRODUCTION**

This Sanitary Sewer Study provides a sewer system analysis of Pacific Village. The project is located in the Rancho Penasquitos area of the City of San Diego. It is bounded on the north by a commercial center, residential south, interstate 15 to the east, and Carmel Valley Road to the west. Figure 1 provides a location map of the study area.

The project is within the City of San Diego jurisdiction. The design of the facilities is in accordance with the City of San Diego Standards. The size of the proposed sanitary sewer mains is based on the City of San Diego's Sewer Design Guide dated February, 2013. The proposed sewer system will serve the residential units within the project limits with a zoning designation of RM-1-1.

## **PROJECT DESCRIPTION**

Latitude 33 is developing a tentative map for the Pacific Village project located in Ranchos Penasquitos just west of Interstate 15 along Carmel Mountain Road, see vicinity map below. As part of this development there is a mix of 2-story single family detached cluster homes, triplexes, 3-story row townhomes and apartments. This report has been prepared to document the analysis of the existing and proposed sewer condition associated with Pacific Village.



**VICINITY MAP**

**(Figure 1 - Project Location Map)**



**latitude 33**  
PLANNING & ENGINEERING  
9066 Hilbert Street, 2<sup>nd</sup> Floor, San Diego, CA 92131  
Tel 619.751.0633

## FIGURE 1 - PROJECT LOCATION MAP

SCALE: 1:800

DATE: 2016-05-03

PREPARED BY: ANB

## **EXISTING SANITARY SEWER SYSTEM**

A capacity assessment for Penasquitos North Trunk Sewer was prepared for the municipal gravity sanitary sewer main located along the Eastern boundary of the project site. The assessment for this existing 15-inch sewer, Capacity Assessment for Penasquitos North Trunk Sewer (Trunk Sewer #89) dated *May 31, 2012*, is attached as Appendix A.

## **PROPOSED SANITARY SEWER IMPROVEMENTS**

The proposed public sanitary sewer mains for Lots 1, 2, and 3 will be installed within the proposed private street. The proposed mains will connect to the existing trunk sewer identified above. The location of the proposed sewer mains is shown on Exhibit “A” and Exhibit “B”. The average daily flows and peak flows for the proposed sewer system are shown in Table 1.

The sewer calculations in Table 1 also include the downstream sewer system, per the *Sewer System Analysis for The Village at Pacific Highlands Ranch*, in order to verify that the contribution of the Corallina project does not adversely affect the downstream system.

## **HORIZONTAL ALIGNMENT**

The horizontal design of the proposed sewer facilities is in accordance with the Sewer Design Guide dated February, 2013. The minimum horizontal radius for the proposed 10-inch sewer main is 200 ft. All sewer pipe is proposed to be PVC SDR 35 sewer pipe with precast concrete manholes meeting City standards.

## **ANALYSIS AND RESULTS**

Determination of the preliminary size of the proposed sanitary sewer mains was based on:

1. City of San Diego Sewer Design Guide dated February, 2013.
2. Handbook of Hydraulics, 6th Edition, Brater and King.

### **Design Criteria**

- 1) Sewer Peaking Factor =  $6.2945 (\text{pop})^{-0.1342}$  (from Figure 2)
- 2) Net Acre = 0.80 x Gross Acre
- 3) Average Flow = Pop/Dwelling Unit x Number of Units x Unit Flow
- 4) Equivalent Dwelling Unit = EDU
- 5) Unit Flow = 80 Gal/Capita/Day
- 6) Pop/Dwelling Unit = 3.2 for Residential Projects
- 7) Design Flow = Average Flow x Peaking Factor

## **Sample Calculations**

### (1) Demand / Flow Calculations

Future Service to proposed single-family units

CO#1 to MH#1

Number of Units = 7

80 Gal /Day

3.2 Pop/DU (Zone RM-1-1 Per table 1-1 City of San Diego Sewer Design Guide)

Population Served =  $(7)(3.2) = 22.4$

Peaking Factor = 4.0

Design Flow =  $(74.1)(80) = 1,792$  Gal/Day

Peak Flow =  $(5,928)(3.20)(1.5473 \times 10^{-6}) = 0.0111$  CFS

### (2) Hydraulic Calculations

Peak Flow = 0.0111 CFS

Pipe Size = 10 inches

Slope 1.6%

From King's Handbook:

$Q = (K')(d^{8/3})(s^{1/2})/n$

$K' = (0.0293)(.013)/[(0.833^{8/3})(.0104^{1/2})] = 0.00185$

$D/d$  (from Figure 2) = 0.05

$Ca$  (from Figure 2) = 0.0147

$A = Ca(d^2) = (0.0294)(0.833^2) = 0.0102$  s.f.

$V = Q/A = 0.0293/0.0204 = 1.1$  fps

FIGURE 2

Table 7-4. For Determining the Area  $a$  of the Cross Section of a Circular Conduit Flowing Part Full

Let  $\frac{\text{depth of water}}{\text{diameter of channel}} = \frac{D}{d}$  and  $C_a$  = the tabulated value. Then  $a = C_a d^2$ .

$\frac{D}{d}$	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
.0	.0000	.0013	.0037	.0069	.0105	.0147	.0192	.0242	.0294	.0350
.1	.0409	.0470	.0534	.0600	.0668	.0739	.0811	.0885	.0961	.1039
.2	.1118	.1199	.1281	.1365	.1449	.1535	.1623	.1711	.1800	.1890
.3	.1982	.2074	.2167	.2260	.2355	.2450	.2546	.2642	.2739	.2836
.4	.2934	.3032	.3130	.3229	.3328	.3428	.3527	.3627	.3727	.3827
.5	.393	.403	.413	.423	.433	.443	.453	.462	.472	.482
.6	.492	.502	.512	.521	.531	.540	.550	.559	.569	.578
.7	.587	.596	.605	.614	.623	.632	.640	.649	.657	.666
.8	.674	.681	.689	.697	.704	.712	.719	.725	.732	.738
.9	.745	.750	.756	.761	.766	.771	.775	.779	.782	.784

Table 7-14. Values of  $K'$  for Circular Channels in the Formula

$$Q = \frac{K'}{n} d^{5/2} S^{1/2}$$

$D$  = depth of water     $d$  = diameter of channel

$\frac{D}{d}$	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
.0		.00007	.00031	.00074	.00138	.00222	.00328	.00455	.00604	.00775
.1	.00967	.0118	.0142	.0167	.0195	.0225	.0257	.0291	.0327	.0366
.2	.0406	.0448	.0492	.0537	.0585	.0634	.0686	.0738	.0793	.0849
.3	.0907	.0966	.1027	.1089	.1153	.1218	.1284	.1352	.1420	.1490
.4	.1561	.1633	.1705	.1779	.1854	.1929	.2005	.2082	.2160	.2238
.5	.232	.239	.247	.255	.263	.271	.279	.287	.295	.303
.6	.311	.319	.327	.335	.343	.350	.358	.366	.373	.380
.7	.388	.395	.402	.409	.416	.422	.429	.435	.441	.447
.8	.453	.458	.463	.468	.473	.477	.481	.485	.488	.491
.9	.494	.496	.497	.498	.498	.498	.496	.494	.489	.483
1.0	.463									



**(TABLE 1 – Sewer Calculations)**

**PACIFIC VILLAGE - TABLE 1**  
**FLOW CALCULATIONS JN: 1323.10**

LINE NO.	MH TO MH	(1)POPULATION PER D.U.	D.U.'S	POPULATION SERVED		(1)GAL/DAY	DESIGN FLOW GAL/DAY	(2)PEAKING FACTOR	PEAK FLOW (CFS)	PIPE SIZE (d), in	n-VALUE	Slope (%)	d(n), ft	dn/d	Velocity, fps
			IN-LINE	IN-LINE	TOTAL										
Sewer System															
L1.1	CO1.1 TO MH1.1	3.2	69.0	220.8	220.8	80	17,664	3.05	0.0834	8	0.013	1.20	0.12	0.1800	2.0
L1.0	MH1.1 TO MH 1.0	3.2	69.0	220.8	441.6	80	35,328	2.78	0.1519	10	0.013	1.00	0.15	0.1800	2.3
L2.6	MH2.5 TO CO2.2	3.2	3.0	9.6	9.6	80	768	4.00	0.0048	8	0.013	1.60	0.03	0.0500	0.7
L2.5	CO2.2 TO MH2.4	3.2	0.0	0.0	9.6	80	768	4.00	0.0048	8	0.013	1.00	0.03	0.0500	0.7
L2.4	MH2.4 TO MH2.3	3.2	69.0	220.8	230.4	80	18,432	3.03	0.0865	8	0.013	2.10	0.11	0.1600	2.4
L2.3	MH2.3 TO MH2.2	3.2	69.0	220.8	451.2	80	36,096	2.77	0.1548	10	0.013	2.30	0.13	0.1500	3.0
L2.2	MH2.2 TO MH2.1	3.2	0.0	0.0	451.2	80	36,096	2.77	0.1548	10	0.013	2.10	0.13	0.1600	2.7
L2.1	MH2.1 TO MH2.0	3.2	69.0	0.0	451.2	80	36,096	2.77	0.1548	10	0.013	1.00	0.16	0.1900	2.1
L2.7	CO2.1 TO MH2.0	3.2	10.0	32.0	32.0	80	2,560	3.95	0.0157	10	0.013	4.70	0.04	0.0500	1.5
L2.0	MH2.0 TO EX03	3.2	0.0	0.0	483.2	80	38,656	2.75	0.1643	8	0.013	50.00	0.07	0.1000	9.0
L3.10	MH3.10 TO MH3.8	3.2	6.0	19.2	19.2	80	1,536	4.00	0.0095	8	0.013	3.00	0.03	0.0500	1.5
L3.9	MH3.8 TO MH3.7	3.2	0.0	0.0	19.2	80	1,536	4.00	0.0095	8	0.013	5.10	0.03	0.0500	1.5
L3.8	MH3.7 TO MH3.6	3.2	10.0	32.0	51.2	80	4,096	3.71	0.0235	10	0.013	2.90	0.05	0.0600	1.8
L3.11	MH3.11 TO MH3.6	3.2	22.0	70.4	70.4	80	5,632	3.56	0.0310	10	0.013	1.80	0.07	0.0800	1.5
L3.7	MH3.6 TO MH3.1	3.2	6.0	19.2	140.8	80	11,264	3.24	0.0565	10	0.013	1.00	0.10	0.1200	1.5
L3.6	MH3.9 TO MH3.5	3.2	26.0	83.2	83.2	80	6,656	3.48	0.0358	10	0.013	1.00	0.08	0.0900	1.5
L3.5	MH3.5 TO MH3.4	3.2	12.0	38.4	121.6	80	9,728	3.30	0.0497	10	0.013	1.00	0.09	0.1100	1.5
L3.4	MH3.4 TO MH3.3	3.2	4.0	12.8	134.4	80	10,752	3.26	0.0542	10	0.013	1.00	0.09	0.1100	1.7
L3.3	MH3.3 TO MH3.2	3.2	0.0	0.0	134.4	80	10,752	3.26	0.0542	10	0.013	2.70	0.08	0.0900	2.2
L3.2	MH3.2 TO MH3.1	3.2	24.0	76.8	211.2	80	16,896	3.07	0.0802	10	0.013	1.00	0.12	0.1400	1.7
L3.1	MH3.1 TO MH3.0	3.2	0.0	0.0	352.0	80	28,160	2.87	0.1249	10	0.013	1.60	0.13	0.1500	2.4
L3.0	MH3.0 TO EX04	3.2	0.0	0.0	352.0	80	28,160	2.87	0.1249	10	0.013	1.00	0.14	0.1700	2.0
L4.7	CO4.1 TO MH4.6	3.2	6.0	19.2	19.2	80	1,536	4.00	0.0095	8	0.013	3.60	0.03	0.0500	1.5
L4.6	MH4.6 TO MH4.5	3.2	27.0	86.4	105.6	80	8,448	3.37	0.0440	8	0.013	1.90	0.08	0.1200	1.9
L4.5	MH4.5 TO MH4.4	3.2	21.0	67.2	172.8	80	13,824	3.15	0.0674	10	0.013	2.40	0.08	0.1000	2.4
L4.4	MH4.4 TO MH4.3	3.2	0.0	0.0	172.8	80	13,824	3.15	0.0674	10	0.013	1.80	0.09	0.1100	2.1
L4.12	CO4.3 TO MH4.9	3.2	6.0	19.2	19.2	80	1,536	4.00	0.0095	8	0.013	1.00	0.05	0.0700	0.9
L4.11	CO4.2 TO MH4.9	3.2	6.0	19.2	19.2	80	1,536	4.00	0.0095	8	0.013	1.00	0.05	0.0700	0.9
L4.10	MH4.9 TO MH4.8	3.2	0.0	0.0	38.4	80	3,072	3.86	0.0183	10	0.013	1.00	0.06	0.0700	1.1
L4.9	MH4.8 TO MH4.7	3.2	0.0	0.0	38.4	80	3,072	3.86	0.0183	10	0.013	1.00	0.06	0.0700	1.1
L4.13	CO4.4 TO MH4.7	3.2	4.0	12.8	12.8	80	1,024	4.00	0.0063	10	0.013	1.00	0.03	0.0400	0.9
L4.8	MH4.7 TO MH4.3	3.2	0.0	0.0	51.2	80	4,096	3.71	0.0235	10	0.013	1.00	0.07	0.0800	1.2
L4.3	MH4.3 TO MH4.2	3.2	0.0	0.0	224.0	80	17,920	3.04	0.0844	10	0.013	2.70	0.09	0.1100	2.6
L4.15	MH4.12 TO MH4.11	3.2	12.0	38.4	38.4	80	3,072	3.86	0.0183	10	0.013	1.00	0.06	0.0700	1.1
L4.14	MH4.11 TO MH4.10	3.2	6.0	19.2	19.2	80	1,536	4.00	0.0095	10	0.013	1.00	0.04	0.0500	0.9
L4.13	MH4.10 TO MH4.2	3.2	9.0	28.8	48.0	80	3,840	3.74	0.0222	10	0.013	1.60	0.06	0.0700	1.3
L4.2	MH4.2 TO MH4.1	3.2	0.0	0.0	272.0	80	21,760	2.97	0.0999	10	0.013	3.00	0.10	0.1200	2.7
L4.16	CO4.5 TO MH4.1	3.2	6.0	19.2	310.4	80	24,832	2.91	0.1120	8	0.013	1.80	0.12	0.1800	2.6
L4.1	MH4.1 TO MH4.0	3.2	0.0	0.0	310.4	80	24,832	2.91	0.1120	10	0.013	8.90	0.08	0.1000	3.9
L4.18	MH4.14 TO MH4.13	3.2	15.0	48.0	48.0	80	3,840	3.74	0.0222	10	0.013	1.00	0.07	0.0800	1.1
L4.17	MH4.13 TO MH4.0	3.2	12.0	38.4	86.4	80	6,912	3.46	0.0370	10	0.013	2.80	0.07	0.0800	1.8
L4.0	MH4.0 TO EX07	3.2	0.0	0.0	396.8	80	31,744	2.82	0.1385	10	0.013	5.00	0.10	0.1200	3.7
L5.2	CO5.1 TO MH 5.1	3.2	6.0	19.2	19.2	80	1,536	4.00	0.0095	8	0.013	1.00	0.05	0.0700	0.9
L5.1	MH5.1 TO MH5.0	3.2	0.0	0.0	19.2	80	1,536	4.00	0.0095	10	0.013	1.00	0.04	0.0500	0.9
L5.4	CO5.2 TO MH5.0	3.2	0.0	0.0	19.2	80	1,536	4.00	0.0095	10	0.013	1.00	0.04	0.0500	0.9
L5.0	MH5.0 TO EX09	3.2	0.0	0.0	38.4	80	3,072	3.86	0.0183	10	0.013	1.00	0.06	0.0700	1.1
L6.1	CO6.1 TO MH6.0	3.2	4.0	12.8	12.8	80	1,024	4.00	0.0063	8	0.013	2.70	0.03	0.0500	1.0
L6.0	MH6.0 TO EX10	3.2	0.0	0.0	12.8	80	1,024	4.00	0.0063	10	0.013	10.80	0.03	0.0300	1.3
L7.13	CO7.7 TO MH7.8	3.2	4.0	12.8	12.8	80	1,024	4.00	0.0063	8	0.013	1.00	0.04	0.0600	0.7
L7.12	CO7.5 TO MH7.8	3.2	4.0	12.8	12.8	80	1,024	4.00	0.0063	8	0.013	1.00	0.04	0.0600	0.7
L7.7	MH7.8 TO MH7.7	0.0	0.0	0.0	25.6	80	2,048	4.00	0.0127	10	0.013	1.00	0.05	0.0600	1.0

TABLE NO. 1

**PACIFIC VILLAGE - TABLE 1**  
**FLOW CALCULATIONS JN: 1323.10**

LINE NO.	MH TO MH	<sup>(1)</sup> POPULATION PER D.U.	D.U.'S		POPULATION SERVED	<sup>(1)</sup> GAL/DAY	DESIGN FLOW GAL/DAY	<sup>(2)</sup> PEAKING FACTOR	PEAK FLOW (CFS)	PIPE SIZE (d), in	n-VALUE	Slope (%)	d(n), ft	dn/d	Velocity, fps
			IN-LINE	IN-LINE	TOTAL										
L7.11	CO7.4 TO MH7.7	3.2	4.0	12.8	12.8	80	1,024	4.00	0.0063	8	0.013	1.00	0.04	0.0600	0.7
L7.6	MH7.7 TO MH7.6	3.2	0.0	0.0	38.4	80	3,072	3.86	0.0183	10	0.013	1.00	0.06	0.0700	1.1
L7.13	CO7.6 TO MH7.6	3.2	6.0	19.2	19.2	80	1,536	4.00	0.0095	8	0.013	1.00	0.05	0.0700	0.9
L7.5	MH7.6 TO MH7.5	3.2	0.0	0.0	57.6	80	4,608	3.65	0.0260	10	0.013	1.00	0.07	0.0800	1.3
L7.10	CO7.3 TO MH7.5	3.2	7.0	22.4	22.4	80	1,792	4.00	0.0111	8	0.013	1.00	0.05	0.0700	1.0
L7.4	MH7.5 TO MH7.4	3.2	6.0	19.2	99.2	80	7,936	3.40	0.0417	10	0.013	1.00	0.08	0.1000	1.5
L7.3	MH7.4 TO MH7.3	3.2	0.0	0.0	99.2	80	7,936	3.40	0.0417	10	0.013	1.00	0.08	0.1000	1.5
L7.2	MH7.3 TO MH7.2	3.2	2.0	6.4	105.6	80	8,448	3.37	0.0440	10	0.013	1.00	0.08	0.1000	1.6
L7.9	CO7.2 TO MH7.2	3.2	4.0	12.8	12.8	80	1,024	4.00	0.0063	8	0.013	1.00	0.04	0.0600	0.7
L7.1	MH7.2 TO MH7.1	3.2	0.0	0.0	118.4	80	9,472	3.32	0.0486	10	0.013	1.00	0.09	0.1100	1.5
L7.8	CO7.1 TO MH7.1	3.2	6.0	19.2	19.2	80	1,536	4.00	0.0095	8	0.013	1.00	0.05	0.0700	0.9
L7.0	MH7.1 TO MH7.0	3.2	0.0	0.0	137.6	80	11,008	3.25	0.0554	10	0.013	1.00	0.09	0.1100	1.7
L7.16	CO7.8 TO MH7.10	3.2	2.0	6.4	6.4	80	512	4.00	0.0032	10	0.013	2.60	0.03	0.0300	0.7
L7.17	CO7.9 TO MH7.10	3.2	4.0	12.8	12.8	80	1,024	4.00	0.0063	8	0.013	5.50	0.03	0.0400	1.4
L7.15	MH7.10 TO MH7.9	3.2	3.0	9.6	28.8	80	2,304	4.00	0.0143	10	0.013	1.00	0.05	0.0600	1.1
L7.18	CO7.10 TO MH7.9	3.2	6.0	19.2	19.2	80	1,536	4.00	0.0095	8	0.013	4.00	0.03	0.0500	1.5
L7.14	MH7.9 TO MH7.0	3.2	0.0	0.0	48.0	80	3,840	3.74	0.0222	10	0.013	1.00	0.07	0.0800	1.1
L8.0	MH7.0 TO EX08	3.2	0.0	0.0	185.6	80	14,848	3.12	0.0717	15	0.013	20.00	0.05	0.0400	4.4
L8.1	CO8.1 TO EX08	3.2	6.0	19.2	19.2	80	1,536	4.00	0.0095	10	0.013	11.70	0.03	0.0300	2.0
L8.2	EX08 TO EX10	3.2	0.0	0.0	204.8	80	16,384	3.08	0.0781	15	0.013	1.50	0.10	0.0800	1.7

Note:

(1) Per City of San Diego Sewer Design Guide

(2) Peaking Factor based per City of San Diego Sewer Design Guide Figure 1-1 and peaking factor equation :  $6.2945 \times (\text{pop})^{0.1342}$ , with max peaking factor of 4 used.

(3) Depth of flow in pipe, per depth calculations using Mannings Pipe Calculator provided in report.

TABLE NO. 1

**(TABLE 2 – Trunk Sewer Flow Analysis)**

## **PACIFIC VILLAGE - TABLE 2**

### **TRUNK SEWER FLOW ANALYSIS JN: 1323.10**

<b>CONTRIBUTING LINE</b>	<b>PROPOSED PEAK FLOW (CFS)</b>	<b>EXISTING PEAK FLOW (CFS)</b>	<b>TOTAL FLOW (CFS)</b>	<b>PIPE CAPACITY (CFS)</b>
L1.0	0.151900	1.717	1.869	9.160
L2.0	0.164300	1.717	1.881	7.364
L3.0	0.128800	1.717	1.846	4.811
L4.0	0.132700	1.717	1.850	3.240
L5.0	0.018300	1.850	1.868	3.233
L6.0 & L8.2	0.084400	1.868	1.952	3.574

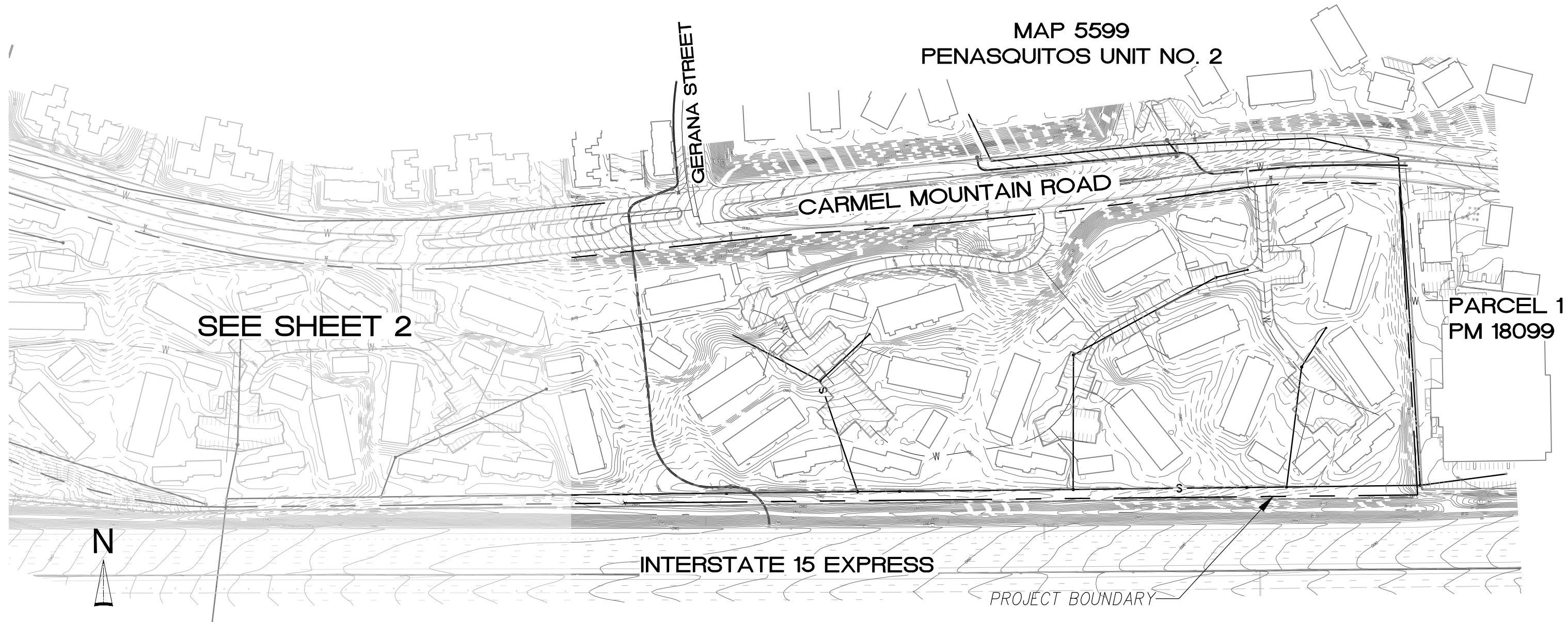
## **SEWER EASEMENT AND ACCESS**

The proposed public sewer main is located within the limits of the project boundary. The onsite system will be private and will connect to the existing trunk sewer system located along the Western boundary of the project that is adjacent to Interstate 15 Express. Any required sewer easements will be in conformance with the City of San Diego's Sewer Design Guide dated February, 2013.

## **CONCLUSION**

We have concluded from this study that the proposed sanitary sewer mains within the Pacific Village project meet City of San Diego design standards. All reaches, as noted in Table Number 1, are designed to comply with the minimum allowable velocity of 2fps. Those reaches whose velocities are below the minimum are designed to at least 1 percent slope, as noted in Table Number 1.

The proposed sewer flow from the Pacific Village development to the Pensacitos North Trunk Sewer, as noted in Table Number 2, show contributions of >1.0% when compared to the pipe capacity at each connection point and therefore to not adversely affect the existing facilities.



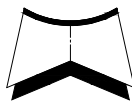
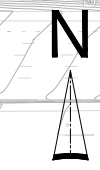
SEE SHEET 2

MAP 5599  
PENASQUITOS UNIT NO. 2

PARCEL 1  
PM 18099

INTERSTATE 15 EXPRESS

PROJECT BOUNDARY



SCALE: 1"=200'

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Tel 858.751.0633

**EXHIBIT 'A' - EXISTING  
SEWER FACILITIES**

PAGE 1 OF 2

DATE: 2016-05-23



MAP 6654  
PENASQUITOS VILLAS  
UNIT NO. 1

MAP 6390  
PENASQUITOS GARDEN  
UNIT NO. 1

SEE SHEET 1

MAP 6793  
PENASQUITOS VILLAS  
UNIT NO. 2

PROJECT BOUNDARY

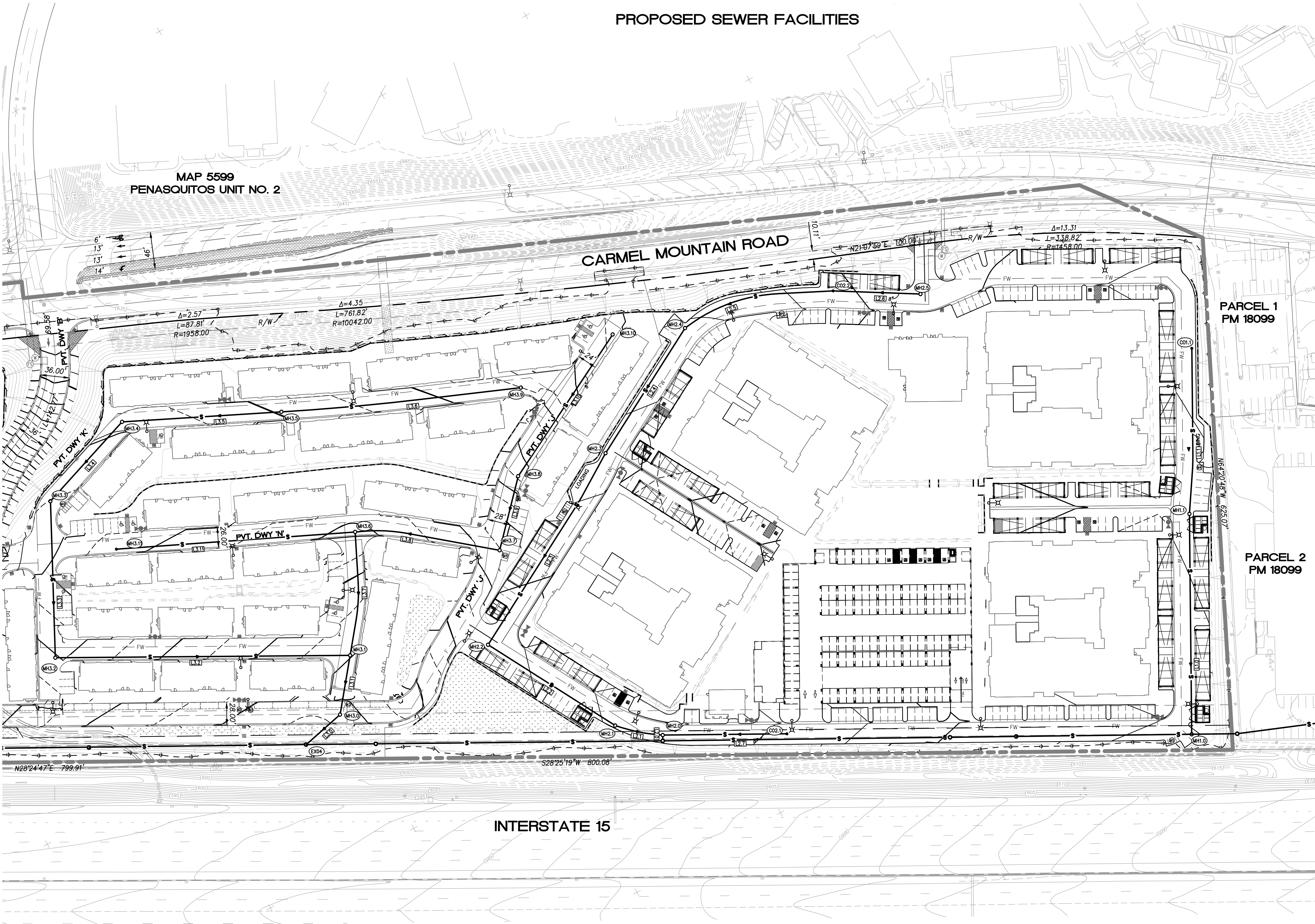
INTERSTATE 15 EXPRESS



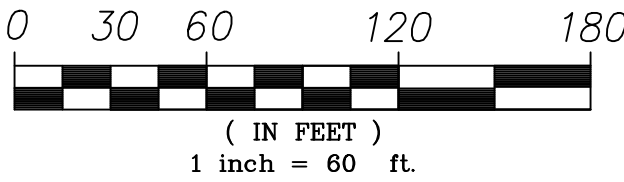
SCALE: 1"=200'



PROPOSED SEWER FACILITIES



MH ID	RIM ELEV	INVERT ELEV
MH1.0	602.7	595.7
MH1.1	604.6	598.3
CO1.1	607.0	600.3
MH2.0	594.3	585.4
MH2.1	595.5	586.0
MH2.2	597.8	589.8
MH2.3	603.1	596.1
MH2.4	605.8	599.8
MH2.5	611.8	604.9
CO2.1	596.5	586.9
CO2.2	609.2	603.2
CO2.3	609.9	603.9
CO2.4	611.8	604.9
EX04	590.0	583.2
MH3.0	591.4	583.8
MH3.1	592.1	585.1
MH3.2	597.9	588.7
MH3.3	600.9	593.9
MH3.4	602.2	595.2
MH3.5	604.1	597.1
MH3.6	596.0	586.5
MH3.7	598.5	591.5
MH3.8	603.1	596.1
MH3.9	607.0	600.0
MH3.10	609.2	602.2
CO3.1	607.0	600.0
CO3.2	609.2	602.2
CO3.3	598.7	591.7

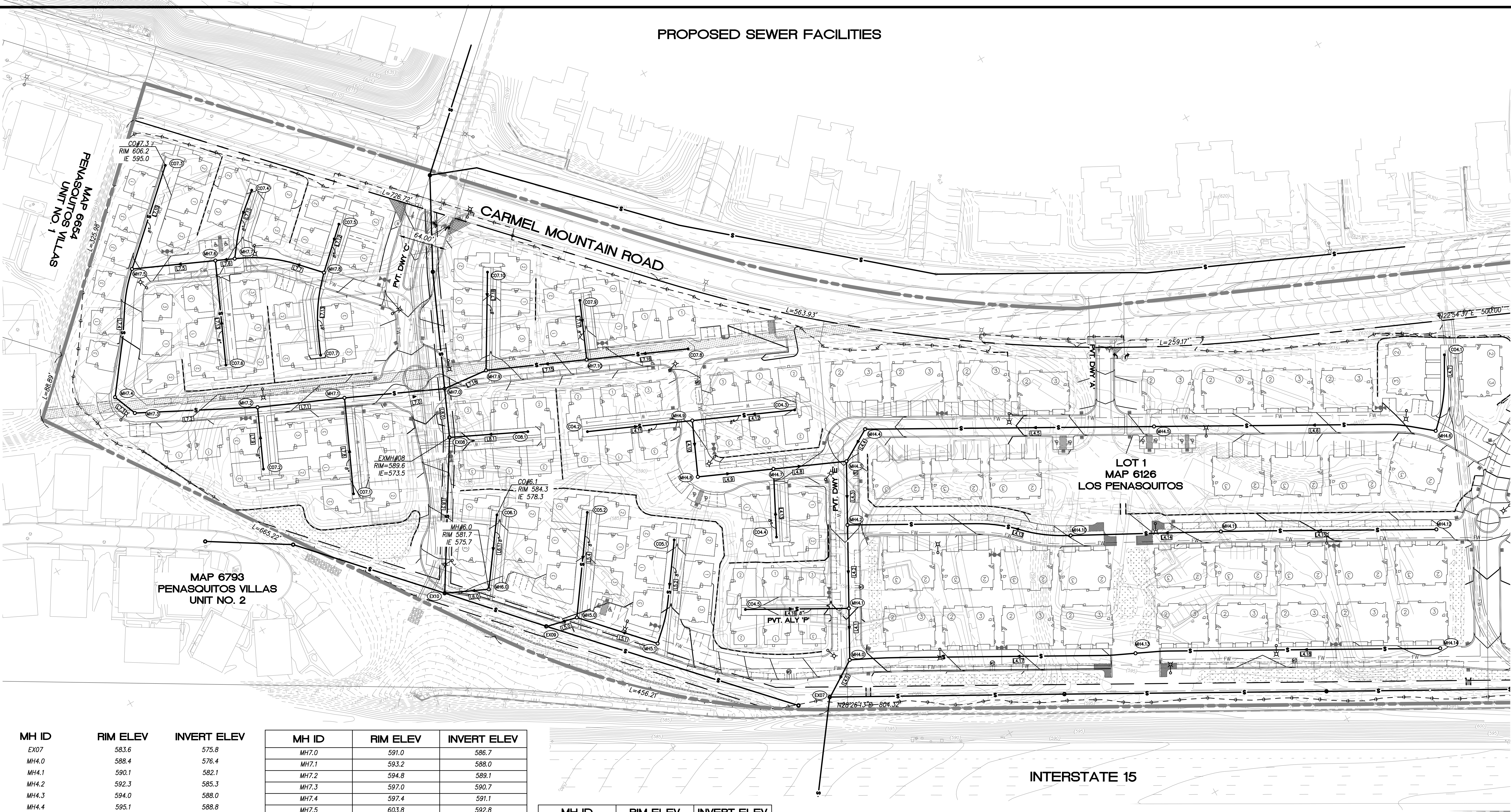


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EXHIBIT 'B'  
PROPOSED SEWER FACILITIES  
SCALE: 1:60  
DATE: 2015-08-30  
PREPARED BY: ANB



PROPOSED SEWER FACILITIES



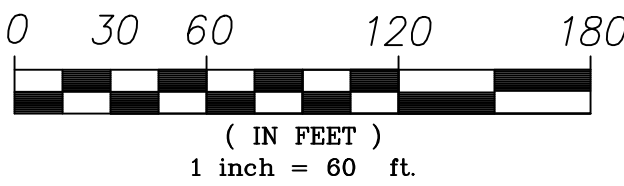
MH ID	RIM ELEV	INVERT ELEV
EX07	583.6	575.8
MH4.0	588.4	576.4
MH4.1	590.1	582.1
MH4.2	592.3	585.3
MH4.3	594.0	588.0
MH4.4	595.1	588.8
MH4.5	604.5	597.8
MH4.6	611.0	605.0
MH4.7	594.5	589.0
MH4.8	595.0	589.9
MH4.9	596.0	590.6
MH4.10	596.0	590.0
MH4.11	598.7	592.0
MH4.12	601.8	594.8
MH4.13	596.5	586.9
MH4.14	597.9	590.9
CO4.1	613.1	607.1
CO4.2	597.2	592.0
CO4.3	598.0	591.9
CO4.4	595.1	589.9
CO4.5	595.1	589.9
CO4.6	591.3	583.4
CO4.7	591.3	585.3
CO4.8	598.0	594.3

MH ID	RIM ELEV	INVERT ELEV
MH7.0	591.0	586.7
MH7.1	593.2	588.0
MH7.2	594.8	589.1
MH7.3	597.0	590.7
MH7.4	597.4	591.1
MH7.5	603.8	592.8
MH7.6	602.5	595.5
MH7.7	601.8	595.7
MH7.8	599.2	596.9
MH7.9	593.3	587.3
MH7.10	597.0	588.6
CO7.1	593.1	588.0
CO7.2	594.7	589.9
CO7.3	606.2	595.0
CO7.4	604.1	596.6
CO7.5	601.2	597.6
CO7.6	603.1	596.8
CO7.7	599.7	598.0
CO7.8	599.0	592.0
CO7.9	598.8	592.8
CO7.10	596.8	591.8

MH ID	RIM ELEV	INVERT ELEV
EX09	582.4	575.2
MH5.0	579.9	575.6
MH5.1	578.5	576.7
CO5.1	582.2	578.1
CO5.2	583.5	577.0

MH ID	RIM ELEV	INVERT ELEV
EX10	580.8	569.9
MH6.0	581.7	575.7
CO6.1	584.3	578.3

MH ID	RIM ELEV	INVERT ELEV
EX08	589.6	573.5
CO8.1	591.7	585.7



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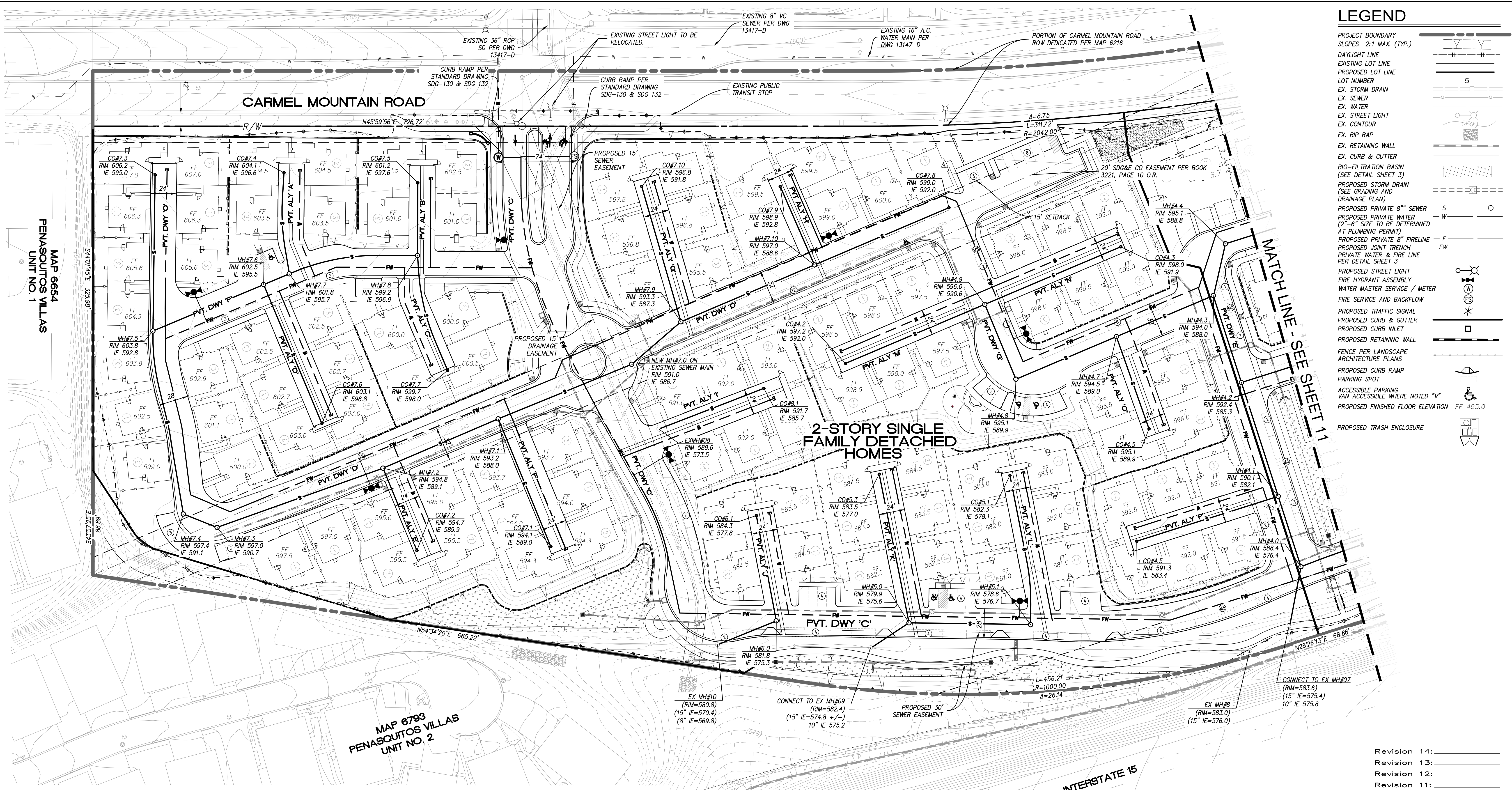
EXHIBIT 'B'  
PROPOSED SEWER FACILITIES  
SCALE: 1"=60'  
DATE: 2016-08-30  
PREPARED BY: ANB



# Exhibit 'C'

Vesting Tentative Map Sheets





### LEGEND

PROJECT BOUNDARY  
SLOPES 2:1 MAX. (TYP.)

DAYLIGHT LINE

EXISTING LOT LINE

PROPOSED LOT LINE

LOT NUMBER

EX. STORM DRAIN

EX. SEWER

EX. WATER

EX. STREET LIGHT

EX. CONTOUR

EX. RIP RAP

EX. RETAINING WALL

EX. CURB & GUTTER

BIO-FILTRATION BASIN  
(SEE DETAIL SHEET 3)

PROPOSED STORM DRAIN  
(SEE GRADING AND DRAINAGE PLAN)

PROPOSED PRIVATE 8" SEWER

PROPOSED PRIVATE WATER  
(2" - 6" SIZE TO BE DETERMINED AT PLUMBING PERMIT)

PROPOSED PRIVATE 8" FIRELINE

PROPOSED JOINT TRENCH  
PRIVATE WATER & FIRE LINE  
PER DETAIL SHEET 3

PROPOSED STREET LIGHT

FIRE HYDRANT ASSEMBLY

WATER MASTER SERVICE / METER

FIRE SERVICE AND BACKFLOW

PROPOSED TRAFFIC SIGNAL

PROPOSED CURB & CUTTER

PROPOSED CURB INLET

PROPOSED RETAINING WALL

FENCE PER LANDSCAPE ARCHITECTURE PLANS

PROPOSED CURB RAMP

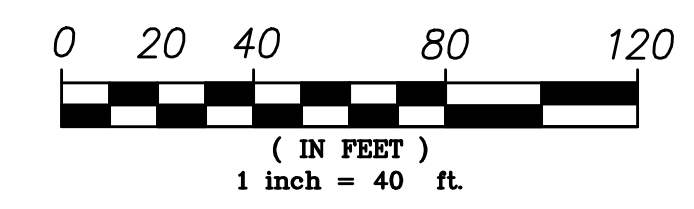
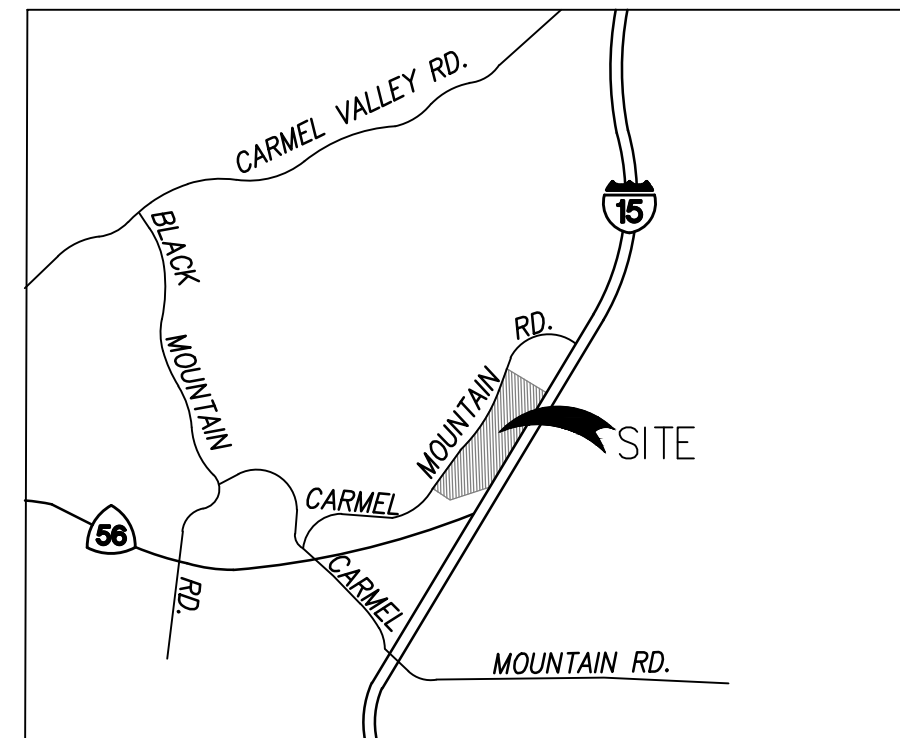
PARKING SPOT

ACCESSIBLE PARKING  
VAN ACCESSIBLE WHERE NOTED "V"

PROPOSED FINISHED FLOOR ELEVATION FF 495.0

PROPOSED TRASH ENCLOSURE

- ### UTILITY NOTES
- ALL ONSITE WATER, SEWER AND STORM DRAIN FACILITIES WILL BE PRIVATE UNLESS NOTED OTHERWISE. PUBLIC EASEMENTS SHALL BE PROVIDED FOR ALL PUBLIC UTILITIES, INCLUDING WATER METERS ON PRIVATE PROPERTY. BACKFLOW DEVICES SHALL BE OUTSIDE OF PUBLIC EASEMENTS & R/W. PRIVATE WATER AND SEWER FACILITIES SHALL BE DESIGNED TO MEET THE REQUIREMENTS OF THE CALIFORNIA UNIFORM PLUMBING CODE AND SHALL BE REVIEWED AS PART OF THE BUILDING PERMIT PLAN CHECK
  - IF A 3" OR LARGER METER IS REQUIRED FOR THIS PROJECT, THE OWNER/PERMITEE SHALL CONSTRUCT THE NEW METER AND PRIVATE BACKFLOW DEVICE ON SITE, ABOVE GROUND, IN A MANNER SATISFACTORY TO THE PUBLIC UTILITIES DIRECTOR AND THE CITY ENGINEER.
  - NO TREES OR SHRUBS EXCEEDING 3' IN HEIGHT AT MATURITY SHALL BE INSTALLED OR RETAINED WITHIN 10' OF ANY SEWER FACILITIES AND 5' OF ANY WATER FACILITIES.
  - PROVIDE STREET LIGHTS ALONG ALL PRIVATE DRIVES PER THE SAN DIEGO STREET DESIGN MANUAL.
  - ALL FIRE SERVICE LINES WITHIN THE DEVELOPMENT SHALL BE NO LESS THAN 8" IN DIAMETER.



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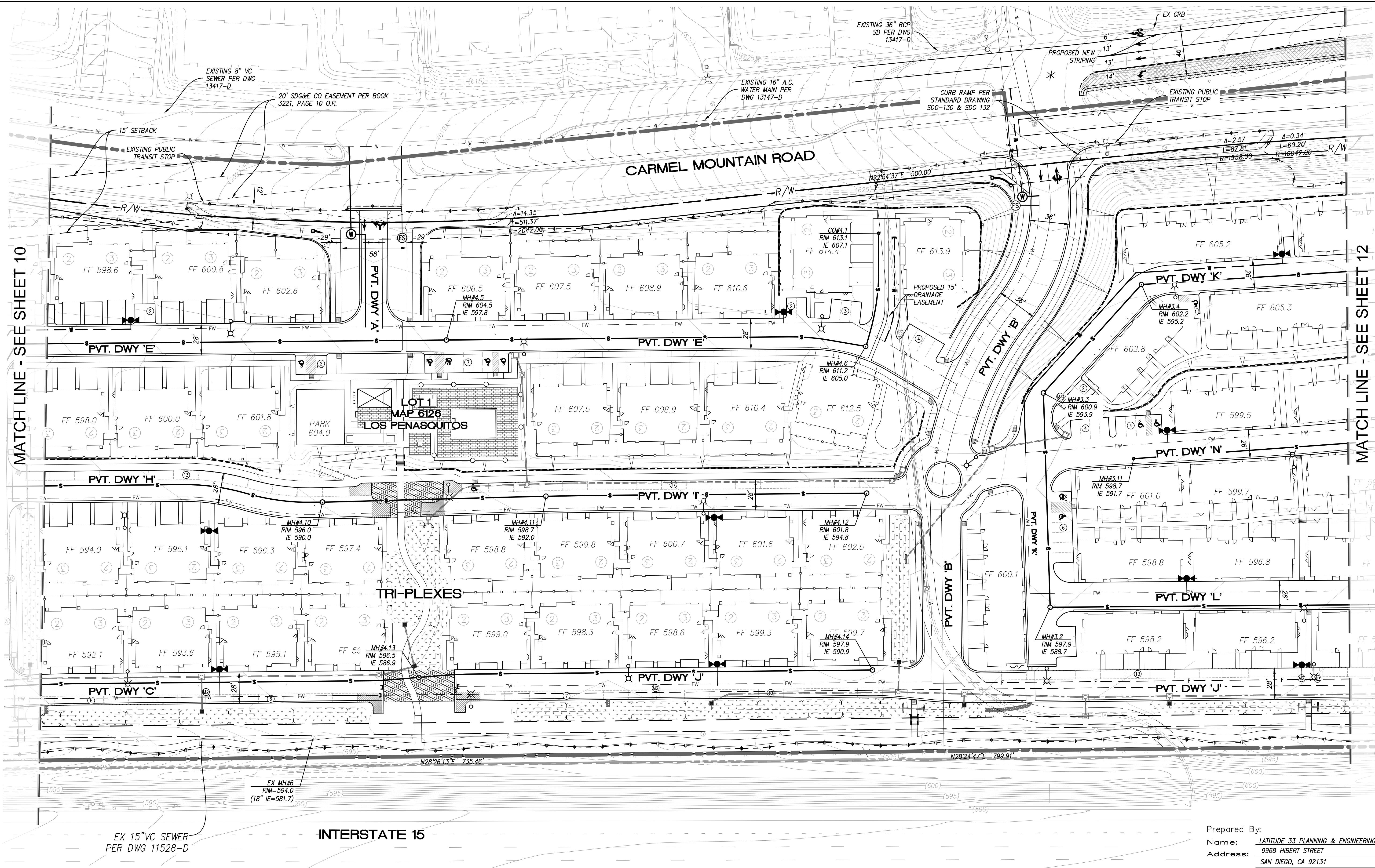
Project Address:  
10955 CARMEL MOUNTAIN ROAD, SAN DIEGO,  
CALIFORNIA 92129

Project Name:  
**PACIFIC VILLAGE**  
**VESTING TENTATIVE MAP**  
**PLANNED DEVELOPMENT PERMIT**  
**NEIGHBORHOOD USE PERMIT**

Sheet Title:  
**SITE PLAN**

Revision 14:	_____
Revision 13:	_____
Revision 12:	_____
Revision 11:	_____
Revision 10:	_____
Revision 9:	_____
Revision 8:	_____
Revision 7:	_____
Revision 6:	_____
Revision 5:	_____
Revision 4:	_____
Revision 3:	_____
Revision 2:	_____
Revision 1:	_____
Original Date:	<u>2-3-2016</u>
Sheet	<u>10</u> of <u>90</u>
PTS #	<u>470158</u>
I.O. #	<u>24006477</u>
1332-6299 CCS83 COORDINATES	292-1739 LAMBERT COORDINATES





LEGEND

PROJECT BOUNDARY  
SLOPES 2:1 MAX. (TYP.)

DAYLIGHT LINE

EXISTING LOT LINE

PROPOSED LOT LINE

LOT NUMBER

EX. STORM DRAIN

EX. SEWER

EX. WATER

EX. STREET LIGHT

EX. CONTOUR

EX. RIP RAP

EX. RETAINING WALL

EX. CURB & GUTTER

BIO-FILTRATION BASIN  
(SEE DETAIL SHEET 3)

PROPOSED STORM DRAIN  
(SEE GRADING AND DRAINAGE PLAN)

PROPOSED PRIVATE 8" SEWER  
(2'-6" SIZE TO BE DETERMINED AT PLUMBING PERMIT)

PROPOSED PRIVATE 8" FIRELINE

PROPOSED JOINT TRENCH  
PRIVATE WATER & FIRE LINE  
PER DETAIL SHEET 3

PROPOSED STREET LIGHT

FIRE HYDRANT ASSEMBLY

WATER MASTER SERVICE / METER

FIRE SERVICE AND BACKFLOW

PROPOSED TRAFFIC SIGNAL

PROPOSED CURB & CUTTER

PROPOSED CURB INLET

PROPOSED RETAINING WALL

FENCE PER LANDSCAPE ARCHITECTURE PLANS

PROPOSED CURB RAMP

PARKING SPOT

ACCESSIBLE PARKING  
VAN ACCESSIBLE WHERE NOTED "V"

PROPOSED FINISHED FLOOR ELEVATION FF 495.0

PROPOSED TRASH ENCLOSURE

- UTILITY NOTES
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5. ALL FIRE SERVICE LINES WITHIN THE DEVELOPMENT SHALL BE NO LESS THAN 8" IN DIAMETER.

33

latitute33

PLANNING & ENGINEERING

9968 Hibert Street 2nd Floor, San Diego, CA 92131

Tel 658.751.0633

REGISTERED PROFESSIONAL ENGINEER

NO. 66332

EXP. 06-2016

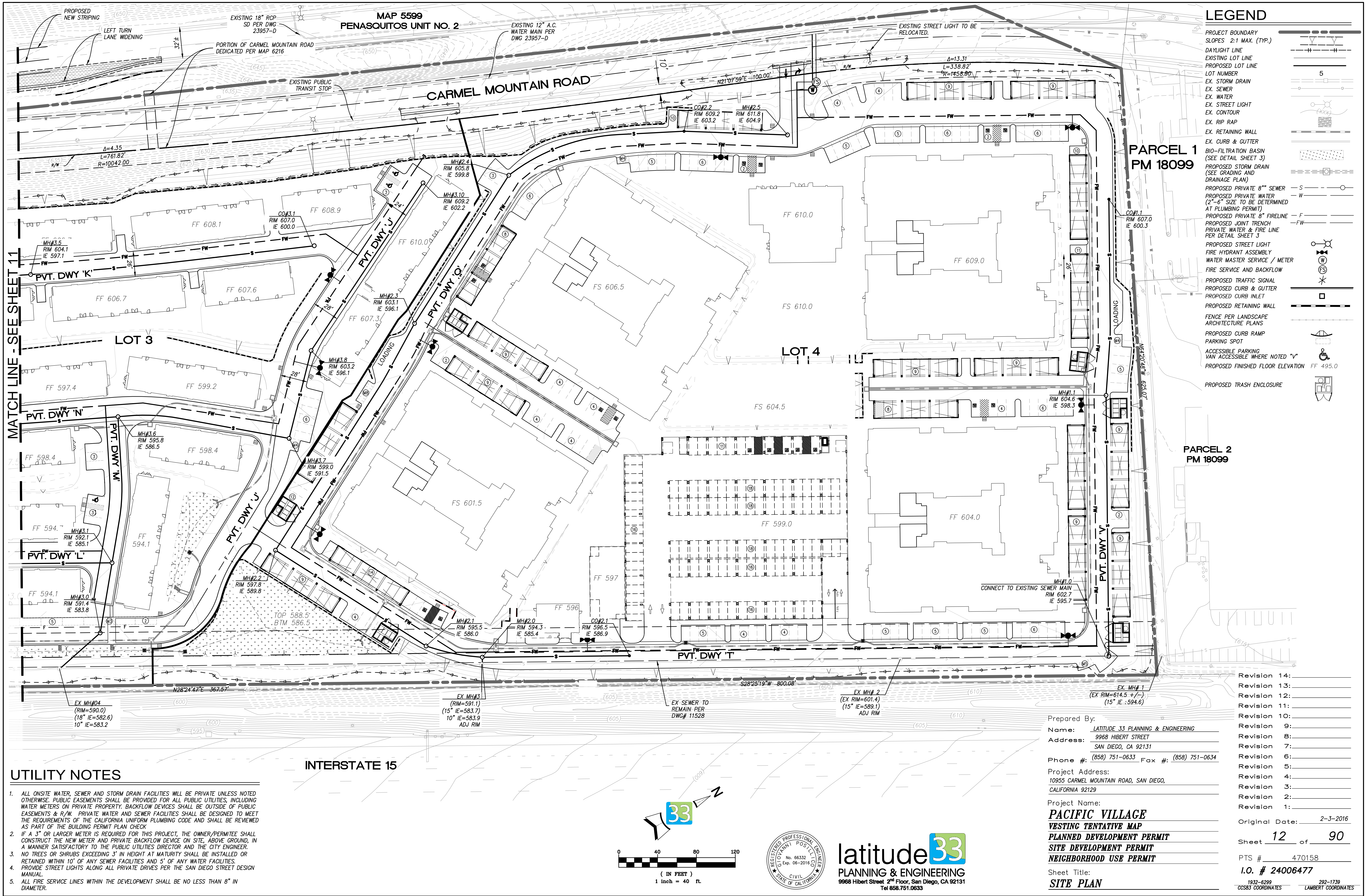
CIVIL

STATE OF CALIFORNIA

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10955 CARMEL MOUNTAIN ROAD, SAN DIEGO,  
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PACIFIC VILLAGE  
VESTING TENTATIVE MAP  
PLANNED DEVELOPMENT PERMIT  
NEIGHBORHOOD USE PERMIT  
Sheet Title:  
SITE PLAN

Revision 14:	
Revision 13:	
Revision 12:	
Revision 11:	
Revision 10:	
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Revision 8:	
Revision 7:	
Revision 6:	
Revision 5:	
Revision 4:	
Revision 3:	
Revision 2:	
Revision 1:	
Original Date:	2-3-2016
Sheet	11 of 90
PTS #	470158
I.O. #	24006477
1332-6299 CCS83 COORDINATES	292-1739 LAMBERT COORDINATES







# Appendix 'A'

## Penasquitos North Existing Trunk Sewer Assessment

**CITY OF SAN DIEGO  
M E M O R A N D U M**

DATE: May 31, 2012

TO: Tung Phung, Public Utilities Dept., Engineering and Program Management Div.

FROM: Huy Nguyen, Public Utilities Dept., Engineering and Program Management Div.

SUBJECT: Capacity Assessment for Penasquitos North Trunk Sewer (Trunk Sewer #89)

---

**OBJECTIVE**

Transmitted hereby is the capacity assessment for Penasquitos North Trunk Sewer (PNTS). The purpose for this assessment is to update the original planning study with the latest information in population projections and a decreasing trend in unit generation rate due to water conservation.

The original PNTS planning study report was distributed on February 6, 2003. The modeling results were based on the SANDAG population projection Series 10 with a higher Unit Generation Rate (UGR) at that time.

In comparison with Series 10, SANDAG population projection Series 12 projected approximately 10% lower in population forecast for the build-out scenario within the trunk sewer tributary areas. The recent UGR also declined by 18% compared to the year 2003.

**STUDY SCOPE**

This study reevaluates capacity of the trunk sewer. It also incorporates the findings of CCTV condition assessment.

**FINDINGS**

According to the hydraulic modeling results, under the build-out wet weather flow As-Built conditions, PNTS has adequate capacity through the year 2050. The maximum d/D for PNTS in 2050 Wet Weather Flow scenario is all under 75%. Most of the segments have an average maximum d/D of 35% (see attachment).

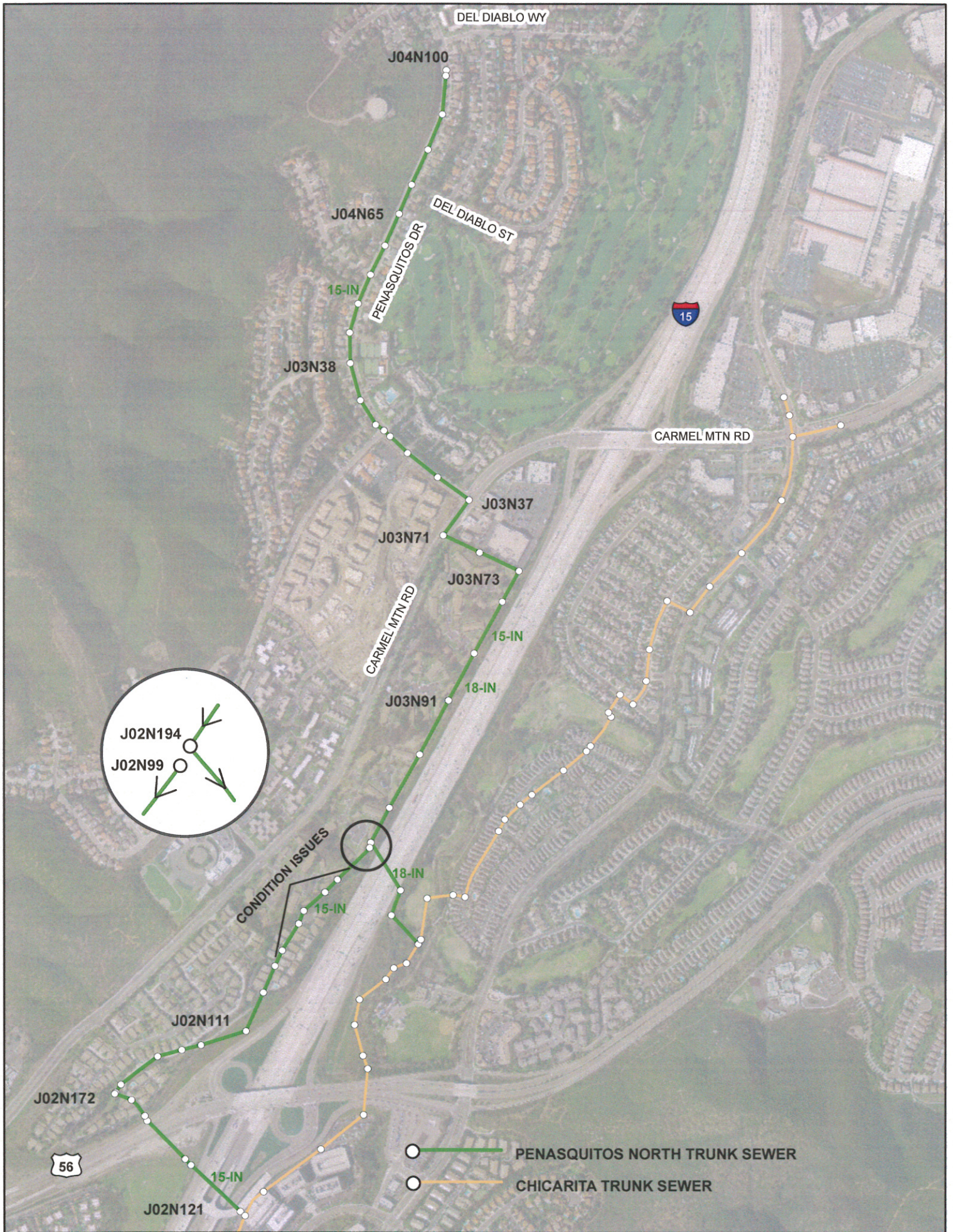
It is concluded that no action is required for capacity-related issues except four (4) segments were called for point repair, rehabilitation, and replace (see Condition Assessment Table).



Huy T. Nguyen

Attachments: Hydraulic Tables, CCTV Condition Assessment Results





PENASQUITOS NORTH TRUNK SEWER (TS89)



CITY OF SAN DIEGO  
HYDRAULIC MODEL RESULTS TABLE  
TRUNK SEWER 89 - PENASQUITOS NORTH  
2010 DWF AS-BUILT + CCTV CONDITION ASSESSMENT

FACILITY SEQUENCE NUMBER	PIPE ID	DOWNSTREAM MH ID	UPSTREAM MH INV. EL. (FT)	DOWNSTREAM MH INV. EL. (FT)	DOWNSTREAM MH RIM EL. (FT)	PIPE SLOPE (FT/FT)	PIPE DIAMETER (IN)	PIPE LENGTH (FT)	MAX. VELOCITY (FT/SEC)	MAX. DEPTH (IN)	MAX. d/D (%)	MAX. HGL EL. (FT)	MAX. HGL EL. (FT)	MAX. HGL DEPTH BELOW RIM (FT)	MAX. FLOW (MGD)	FULL CAPACITY (MGD)	Q/CAP (%)	CONDITION ASSESSMENT
41703	J04N100.1	J04N101	743.81	743.31	753.30	0.011	15	44	3.52	3.87	25.8	743.63	743.83	9.67	0.57	4.43	12.9	Maintenance
41704	J04N101.1	J04N102	743.31	737.80	744.80	0.018	15	300	4.30	3.85	25.7	738.12	738.41	6.68	0.69	5.66	12.2	Maintenance
41673	J04N102.1	J04N70	737.80	732.21	738.20	0.019	15	300	4.76	3.58	23.9	732.51	732.86	5.69	0.69	5.70	12.1	Maintenance
41672	J04N70.1	J04N69	732.21	724.71	730.70	0.025	15	300	4.74	3.59	23.9	725.01	725.36	5.69	0.69	6.60	10.5	Maintenance
41671	J04N69.1	J04N65	724.71	718.40	724.40	0.025	15	255	4.76	3.58	23.9	718.70	719.05	5.70	0.69	6.57	10.5	Maintenance
41667	J04N65.1	J04N64	718.40	711.90	717.90	0.025	15	260	4.77	3.57	23.8	712.20	712.55	5.70	0.69	6.60	10.5	Maintenance
41500	J04N64.1	J03N41	711.90	705.35	712.40	0.025	15	260	4.97	3.46	23.1	705.64	706.02	6.76	0.69	6.63	10.4	Maintenance
41497	J03N41.1	J03N40	705.35	698.00	705.00	0.031	15	240	5.68	3.22	21.5	698.27	698.77	6.73	0.71	7.31	9.7	Maintenance
41496	J03N40.1	J03N39	698.00	687.45	694.50	0.045	15	235	6.06	3.08	20.5	687.71	688.28	6.79	0.71	8.85	8.0	Maintenance
41495	J03N39.1	J03N38	687.45	673.16	683.20	0.060	15	239	5.75	3.19	21.3	673.43	673.94	9.77	0.71	10.21	7.0	Maintenance
41493	J03N38.1	J03N30	673.16	657.50	668.50	0.052	15	304	4.92	3.67	24.5	657.81	658.18	10.69	0.74	9.48	7.8	Maintenance
41491	J03N30.1	J03N47	657.50	650.85	656.90	0.030	15	220	5.32	3.66	24.4	651.16	651.60	5.74	0.80	7.26	11.0	Maintenance
41490	J03N47.1	J03N27	650.85	645.50	651.50	0.066	15	81	4.86	3.91	26.1	645.82	646.19	5.67	0.80	10.73	7.4	Maintenance
41489	J03N27.1	J03N29	645.50	643.87	648.90	0.024	15	67	4.97	3.90	26.0	644.20	644.58	4.70	0.82	6.51	12.5	Maintenance
41484	J03N29.1	J03N32	643.74	633.69	640.60	0.044	15	228	6.06	3.39	22.6	633.97	634.54	6.63	0.82	8.76	9.3	Maintenance
5101105	J03N32.1	J03N34	633.42	615.83	627.30	0.060	15	294	7.21	3.01	20.0	616.08	616.89	11.22	0.82	10.21	8.0	Maintenance
41487	J03N34.1	J03N37	615.72	611.36	620.30	0.015	15	297	4.31	4.32	28.8	611.72	612.01	8.58	0.82	5.06	16.1	Maintenance
41488	J03N37.1	J03N71	611.36	603.53	620.30	0.024	15	327	3.68	4.84	32.3	603.93	604.14	16.36	0.81	6.46	12.6	Maintenance
41530	J03N71.1	J03N72	603.53	599.70	615.70	0.012	15	315	4.55	4.58	30.5	600.08	600.41	15.62	0.93	4.60	20.3	Maintenance
41531	J03N72.1	J03N73	599.70	594.65	611.70	0.015	15	340	4.47	4.64	30.9	595.04	595.35	16.66	0.93	5.09	18.3	Maintenance
41536	J03N73.1	J03N78	594.65	589.25	599.30	0.020	15	269	4.55	5.20	34.6	589.68	590.00	9.62	1.11	5.92	18.8	Maintenance
41548	J03N78.1	J03N86	589.25	583.66	589.70	0.013	15	430	2.78	7.54	40.2	583.38	584.29	5.41	1.11	3.11	35.8	Maintenance
41547	J03N86.1	J03N91	583.66	582.75	588.80	0.002	18	435	2.42	7.60	42.1	582.41	582.50	9.39	1.11	3.05	36.4	Maintenance
41542	J03N91.1	J03N93	582.75	581.78	591.80	0.002	18	481	2.43	7.58	42.1	582.41	583.47	5.42	1.11	3.11	35.8	Maintenance
41237	J03N93.1	J02N193	581.78	580.80	592.80	0.002	18	481	3.37	5.95	33.0	581.30	581.47	11.50	1.11	3.06	36.2	Maintenance
41317	J02N193.1	J02N194	580.80	576.04	583.00	0.015	18	312	4.53	4.80	26.7	576.44	576.76	6.56	1.11	8.39	13.2	Maintenance
5473694	J02N194.1	J02N462	576.04	560.09	566.00	0.038	18	423	6.54	3.96	22.0	560.42	561.08	5.58	1.15	13.18	8.7	Not Inspected
5473696	J02N462.1	J02N463	560.09	541.23	550.70	0.092	18	206	4.37	5.20	28.9	541.66	541.96	9.04	1.20	20.54	5.8	Not Inspected
5473402	J02N463.1	J02N464	541.23	538.42	546.60	0.010	18	289	2.97	6.89	38.3	538.99	539.13	7.61	1.19	6.69	17.8	Point Repair & Rehab
41242	J02N99.1	J02N98	576.01	575.13	580.10	0.003	15	350	0.00	0.79	5.3	575.20	575.20	4.90	0.00	2.09	0.0	Point Repair & Rehab
41243	J02N98.1	J02N71	575.13	574.70	579.70	0.003	15	141	-0.01	3.72	24.8	575.01	575.01	4.69	0.00	2.31	-0.1	Replace
41210	J02N71.1	J02N67	574.70	574.25	579.70	0.002	15	212	1.71	3.59	23.9	574.55	574.59	5.15	0.25	1.92	12.9	no data
41178	J02N67.1	J02N65	574.25	573.97	589.00	0.002	15	116	1.74	3.54	23.6	574.27	574.31	14.73	0.25	2.05	12.1	no data
41184	J02N65.1	J02N63	573.97	573.38	585.40	0.003	15	234	1.77	3.48	23.2	573.67	573.72	11.73	0.25	2.10	11.8	Point Repair
41185	J02N63.1	J02N53	573.38	573.03	595.00	0.003	15	130	1.61	3.73	24.9	573.34	573.38	21.66	0.25	2.17	11.4	Maintenance
41314	J02N53.1	J02N56	573.03	572.50	581.50	0.002	15	220	1.75	3.69	24.6	572.81	572.86	8.69	0.27	2.05	13.0	Maintenance
41204	J02N56.1	J02N11	572.50	571.63	586.60	0.002	15	350	1.76	3.68	24.5	571.94	571.98	14.66	0.26	2.08	12.7	Maintenance
41250	J02N11.1	J02N12	571.63	570.75	576.80	0.003	15	350	1.77	3.65	24.3	571.06	571.10	5.75	0.26	2.09	12.6	Maintenance
41251	J02N12.1	J02N13	570.75	570.35	597.59	0.003	15	155	1.63	3.87	25.8	570.67	570.71	26.92	0.26	2.12	12.4	Point Repair
41252	J02N13.1	J02N14	570.35	569.88	575.00	0.002	15	195	1.72	3.92	26.1	570.21	570.25	4.79	0.28	2.05	13.9	Maintenance
41253	J02N14.1	J02N17	569.88	569.00	581.00	0.003	15	350	2.38	3.22	21.5	569.27	569.36	11.73	0.30	2.09	14.2	Maintenance
41304	J02N17.1	J02N17	569.00	564.60	574.60	0.050	15	88	3.15	2.65	17.7	564.82	564.97	9.78	0.30	9.32	3.2	Maintenance
41311	J02N17.1	J02N17	564.60	564.22	573.00	0.032	18	12	3.02	2.70	15.0	564.44	564.59	8.55	0.33	12.18	2.7	Maintenance
41308	J02N17.1	J02N180	564.22	560.12	572.10	0.025	15	164	3.34	2.70	18.0	560.35	560.52	11.75	0.32	6.60	4.9	Maintenance
41323	J02N180.1	J02N200	560.12	557.02	571.00	0.025	15	124	4.02	2.70	18.0	557.25	557.50	13.75	0.32	6.60	4.9	Maintenance

CITY OF SAN DIEGO  
HYDRAULIC MODEL RESULTS TABLE  
TRUNK SEWER 89 - PENASQUITOS NORTH  
2010 DWF AS-BUILT + CCTV CONDITION ASSESSMENT

FACILITY SEQUENCE NUMBER	PIPE ID	DOWNSTREAM MH ID	UPSTREAM MH INV. EL. (FT)	DOWNSTREAM MH INV. EL. (FT)	DOWNSTREAM MH RIM EL. (FT)	PIPE SLOPE (FT/FT)	PIPE DIAMETER (IN)	PIPE LENGTH (FT)	MAX. VELOCITY (FT/SEC)	MAX. DEPTH (IN)	MAX. d/D (%)	MAX. HGL EL. (FT)	MAX. EGL EL. (FT)	HGL DEPTH BELOW RIM (FT)	MAX. FLOW (MGD)	FULL CAPACITY (MGD)	MAX. Q/CAP (%)	CONDITION ASSESSMENT
41257	J02N200.1	J02N118	557.02	553.06	570.50	0.125	15	32	3.53	2.60	17.4	553.28	553.47	17.22	0.32	14.76	2.2	Maintenance
41325	J02N118.1	J02N201	553.06	530.78	548.80	0.050	15	450	4.32	2.67	17.8	531.00	531.29	17.80	0.41	9.29	4.5	Maintenance
41322	J02N201.1	J02N199	530.78	526.41	542.40	0.062	15	70	3.28	3.69	24.6	526.72	526.89	15.68	0.50	10.43	4.8	Maintenance
41259	J02N199.1	J02N121	526.41	519.32	530.30	0.015	15	477	3.75	3.69	24.6	519.63	519.85	10.67	0.57	5.09	11.1	Maintenance
41261	J02N121.1	J02N122	519.24	507.91	516.16	0.249	15	45	7.77	2.22	14.8	508.09	509.03	8.07	0.57	20.86	2.7	Maintenance

TOTAL LENGTH (MILES): 2.37  
 LENGTH WEIGHTED Q/CAP: 0.00  
 LENGTH WEIGHTED d/D: 0.00  
 LENGTH WEIGHTED HGL BELOW RIM (FT): 0.00

LENGTH OF PIPE - Q/CAP < 50% (MILES): 2.37  
 LENGTH OF PIPE - Q/CAP 50 - 75% (MILES): 0.00  
 LENGTH OF PIPE - Q/CAP 75 - 100% (MILES): 0.00  
 LENGTH OF PIPE - Q/CAP > 100% (MILES): 0.00



CITY OF SAN DIEGO  
HYDRAULIC MODEL RESULTS TABLE  
TRUNK SEWER 89 - PENASQUITOS NORTH  
2050 DWF AS-BUILT

FACILITY SEQUENCE NUMBER	PIPE ID	DOWNSTREAM MH ID	UPSTREAM MH INV. EL. (FT)	DOWNSTREAM MH INV. EL. (FT)	DOWNSTREAM MH RIM EL. (FT)	PIPE SLOPE (FT/FT)	PIPE DIAMETER (IN)	PIPE LENGTH (FT)	MAX. VELOCITY (FT/SEC)	MAX. DEPTH (IN)	MAX. Q/D (%)	MAX. HGL EL. (FT)	MAX. EGL EL. (FT)	HGL DEPTH BELOW RIM (FT)	MAX. FLOW (MGD)	FULL CAPACITY (MGD)	MAX. Q/CAP (%)
41703	J04N100.1	J04N101	743.81	743.31	753.30	0.011	15	44	3.58	3.96	26.4	743.64	743.84	9.66	0.60	4.43	13.5
41704	J04N101.1	J04N102	743.31	737.80	744.80	0.018	15	300	4.36	3.93	26.2	738.13	738.42	6.67	0.72	5.66	12.8
41673	J04N102.1	J04N70	737.80	732.21	738.20	0.019	15	300	4.83	3.66	24.4	732.52	732.88	5.68	0.72	5.70	12.7
41672	J04N70.1	J04N69	732.21	724.71	730.70	0.025	15	300	4.81	3.67	24.5	725.02	725.38	5.68	0.72	6.60	11.0
41671	J04N69.1	J04N65	724.71	718.40	724.40	0.025	15	255	4.83	3.66	24.4	718.70	719.07	5.70	0.72	6.57	11.0
41667	J04N65.1	J04N64	718.40	711.90	717.90	0.025	15	260	4.84	3.65	24.3	712.20	712.57	5.70	0.72	6.60	10.9
41500	J04N64.1	J03N41	711.90	705.35	712.40	0.025	15	260	5.05	3.54	23.6	705.65	706.04	6.76	0.72	6.63	10.9
41497	J03N41.1	J03N40	705.35	698.00	705.00	0.031	15	240	5.82	3.27	21.8	698.27	698.80	6.73	0.74	7.31	10.2
41496	J03N40.1	J03N39	698.00	687.45	694.50	0.045	15	235	6.21	3.12	20.8	687.71	688.31	6.79	0.74	8.85	8.4
41495	J03N39.1	J03N38	687.45	673.16	683.20	0.060	15	239	5.89	3.24	21.6	673.43	673.97	9.77	0.74	10.21	7.3
41493	J03N38.1	J03N30	673.16	657.50	668.50	0.052	15	304	4.97	3.76	25.1	657.81	658.20	10.69	0.77	9.48	8.2
41491	J03N30.1	J03N47	657.50	650.85	656.90	0.030	15	220	5.40	3.76	25.0	651.16	651.62	5.74	0.84	7.26	11.6
41490	J03N47.1	J03N27	650.85	645.50	651.50	0.066	15	81	4.92	4.02	26.8	645.83	646.21	5.67	0.84	10.73	7.8
41489	J03N27.1	J03N29	645.50	643.87	648.90	0.024	15	67	5.08	4.01	26.7	644.21	644.61	4.70	0.87	6.51	13.3
41484	J03N29.1	J03N32	643.74	633.69	640.60	0.044	15	228	6.20	3.48	23.2	633.98	634.58	6.62	0.87	8.76	9.9
5101105	J03N32.1	J03N34	633.42	615.83	627.30	0.060	15	294	7.28	3.11	20.7	616.09	616.91	11.21	0.87	10.21	8.5
41487	J03N34.1	J03N37	615.72	611.36	620.30	0.015	15	297	4.43	4.42	29.5	611.73	612.03	8.57	0.87	5.06	17.1
41488	J03N37.1	J03N71	611.36	603.53	620.30	0.024	15	327	3.62	5.12	34.1	603.96	604.16	16.34	0.86	6.46	13.4
41530	J03N71.1	J03N72	603.53	599.70	615.70	0.012	15	315	4.63	5.12	34.1	600.13	600.46	15.57	1.04	4.60	22.6
41531	J03N72.1	J03N73	599.70	594.65	611.70	0.015	15	340	4.50	4.99	33.3	595.06	595.38	16.63	1.04	5.09	20.4
41536	J03N73.1	J03N78	594.65	589.25	599.30	0.020	15	269	4.84	5.47	36.5	589.70	590.07	9.60	1.27	5.92	21.4
41548	J03N78.1	J03N86	589.25	583.66	589.70	0.013	15	430	2.94	8.01	53.4	584.33	584.46	5.37	1.27	4.76	26.6
41547	J03N86.1	J03N91	583.66	582.75	588.80	0.002	18	435	2.55	8.08	44.9	583.42	583.52	5.38	1.27	3.11	40.7
41542	J03N91.1	J03N93	582.75	581.78	591.80	0.002	18	481	2.56	8.04	44.7	582.45	582.55	9.35	1.26	3.05	41.4
41237	J03N93.1	J02N193	581.78	580.80	592.80	0.002	18	481	3.50	6.35	35.3	581.33	581.52	11.47	1.26	3.06	41.1
41317	J02N193.1	J02N194	580.80	576.04	583.00	0.015	18	312	4.79	5.06	28.1	576.46	576.82	6.54	1.26	8.39	15.0
5473694	J02N194.1	J02N462	576.04	560.09	566.00	0.038	18	423	6.57	4.17	23.2	560.44	561.11	5.56	1.30	13.18	9.8
5473696	J02N462.1	J02N463	560.09	541.23	550.70	0.092	18	206	4.54	5.52	30.7	541.69	542.01	9.01	1.35	20.54	6.6
5473402	J02N463.1	J02N464	541.23	538.42	546.60	0.010	18	289	3.07	7.38	41.0	539.03	539.18	7.57	1.35	6.69	20.2
41242	J02N99.1	J02N98	576.01	575.13	580.10	0.003	15	350	0.00	0.79	5.3	575.20	575.20	4.90	0.00	2.09	0.0
41243	J02N98.1	J02N71	575.13	574.70	579.70	0.003	15	141	-0.01	4.27	28.5	575.06	575.06	4.64	0.00	2.31	-0.1
41210	J02N71.1	J02N67	574.70	574.25	579.70	0.002	15	212	1.84	4.15	27.7	574.59	574.65	5.11	0.33	1.92	17.1
41178	J02N67.1	J02N65	574.25	573.97	589.00	0.002	15	116	1.87	4.11	27.4	574.31	574.37	14.69	0.33	2.05	16.1
41184	J02N65.1	J02N63	573.97	573.38	585.40	0.003	15	234	1.90	4.05	27.0	573.72	573.77	11.68	0.33	2.10	15.7
41185	J02N63.1	J02N53	573.38	573.03	595.00	0.003	15	130	1.75	4.29	28.6	573.39	573.44	21.61	0.33	2.17	15.1
41314	J02N53.1	J02N56	573.03	572.50	581.50	0.002	15	220	1.91	4.26	28.4	572.85	572.91	8.64	0.35	2.05	17.3
41204	J02N56.1	J02N111	572.50	571.63	586.60	0.002	15	350	1.92	4.25	28.3	571.98	572.04	14.62	0.35	2.08	17.0
41250	J02N111.1	J02N112	571.63	570.75	576.80	0.003	15	350	1.93	4.22	28.2	571.10	571.16	5.70	0.35	2.09	16.9
41251	J02N112.1	J02N113	570.75	570.35	597.59	0.003	15	155	1.81	4.42	29.5	570.72	570.77	26.87	0.35	2.12	16.6

CITY OF SAN DIEGO  
HYDRAULIC MODEL RESULTS TABLE  
TRUNK SEWER 89 - PENASQUITOS NORTH  
2050 DWF AS-BUILT

FACILITY SEQUENCE NUMBER	PIPE ID	DOWNSTREAM MH ID	UPSTREAM MH INV. EL. (FT)	DOWNSTREAM MH INV. EL. (FT)	DOWNSTREAM MH RIM EL. (FT)	PIPE SLOPE (FT/FT)	PIPE DIAMETER (IN)	PIPE LENGTH (FT)	MAX. VELOCITY (FT/SEC)	MAX. DEPTH (IN)	MAX. d/D (%)	MAX. HGL EL. (FT)	MAX. EGL EL. (FT)	HGL DEPTH BELOW RIM (FT)	MAX. FLOW (MGD)	FULL CAPACITY (MGD)	MAX. Q/CAP (%)
41252	J02N113.1	J02N114	570.35	569.88	575.00	0.002	15	195	1.94	4.46	29.7	570.25	570.31	4.75	0.38	2.05	18.7
41253	J02N114.1	J02N171	569.88	569.00	581.00	0.003	15	350	2.59	3.72	24.8	569.31	569.41	11.69	0.40	2.09	18.9
41304	J02N171.1	J02N172	569.00	564.60	574.60	0.050	15	88	3.70	2.89	19.3	564.84	565.05	9.76	0.40	9.32	4.3
41311	J02N172.1	J02N179	564.60	564.22	573.00	0.032	18	12	3.46	3.02	16.8	564.47	564.66	8.53	0.44	12.18	3.6
41308	J02N179.1	J02N180	564.22	560.12	572.10	0.025	15	164	3.83	3.02	20.1	560.37	560.60	11.73	0.44	6.60	6.6
41323	J02N180.1	J02N200	560.12	557.02	571.00	0.025	15	124	4.11	3.02	20.1	557.27	557.53	13.73	0.44	6.60	6.6
41257	J02N200.1	J02N118	557.02	553.06	570.50	0.125	15	32	4.05	2.91	19.4	553.30	553.56	17.20	0.44	14.76	3.0
41325	J02N118.1	J02N201	553.06	530.78	548.80	0.050	15	450	4.99	2.95	19.7	531.03	531.41	17.77	0.55	9.29	5.9
41322	J02N201.1	J02N199	530.78	526.41	542.40	0.062	15	70	3.61	4.15	27.7	526.76	526.96	15.64	0.65	10.43	6.2
41259	J02N199.1	J02N121	526.41	519.32	530.30	0.015	15	477	4.11	4.15	27.7	519.67	519.93	10.63	0.74	5.09	14.4
41261	J02N121.1	J02N122	519.24	507.91	516.16	0.249	15	45	9.02	2.39	15.9	508.11	509.37	8.05	0.74	20.86	3.5

TOTAL LENGTH (MILES):

LENGTH WEIGHTED Q/CAP:

LENGTH WEIGHTED d/D:

LENGTH WEIGHTED HGL BELOW RIM (FT):

LENGTH OF PIPE - d/D < 50% (MILES):

LENGTH OF PIPE - d/D 50 - 75% (MILES):

LENGTH OF PIPE - d/D 75 - 100% (MILES):

LENGTH OF PIPE - d/D > 100% (MILES):

LENGTH OF PIPE - Q/CAP < 50% (MILES):

LENGTH OF PIPE - Q/CAP 50 - 75% (MILES):

LENGTH OF PIPE - Q/CAP 75 - 100% (MILES):

LENGTH OF PIPE - Q/CAP > 100% (MILES):

2.37

16.3

28.7

9.51

2.29

0.08

0.00

0.00

2.37

0.00

0.00

0.00



CITY OF SAN DIEGO  
HYDRAULIC MODEL RESULTS TABLE  
TRUNK SEWER 89 - PENASQUITOS NORTH  
2050 WWF AS-BUILT

FACILITY SEQUENCE NUMBER	PIPE ID	DOWNSTREAM MH ID	UPSTREAM MH INV. EL. (FT)	DOWNSTREAM MH INV. EL. (FT)	DOWNSTREAM MH RIM EL. (FT)	PIPE SLOPE (FT/FT)	PIPE DIAMETER (IN)	PIPE LENGTH (FT)	MAX. VELOCITY (FT/SEC)	MAX. DEPTH (IN)	MAX. D/D (%)	MAX. HGL EL. (FT)	MAX. EGL EL. (FT)	HGL DEPTH BELOW RIM (FT)	MAX. FLOW (MGD)	FULL CAPACITY (MGD)	MAX. Q/CAP (%)
41703	J04N100.1	J04N101	743.81	743.31	753.30	0.011	15	44	4.36	5.04	33.6	743.73	744.03	9.57	1.02	4.43	23.0
41704	J04N101.1	J04N102	743.31	737.80	744.80	0.018	15	300	5.31	5.01	33.4	738.22	738.65	6.58	1.23	5.66	21.7
41673	J04N102.1	J04N70	737.80	732.21	738.20	0.019	15	300	5.31	5.00	33.3	732.63	733.07	5.57	1.23	5.70	21.6
41672	J04N70.1	J04N69	732.21	724.71	730.70	0.025	15	300	5.91	4.63	30.9	725.10	725.64	5.60	1.23	6.60	18.6
41671	J04N69.1	J04N65	724.71	718.40	724.40	0.025	15	255	5.93	4.62	30.8	718.78	719.33	5.62	1.23	6.57	18.7
41667	J04N65.1	J04N64	718.40	711.90	717.90	0.025	15	260	5.95	4.61	30.7	712.28	712.83	5.62	1.23	6.60	18.6
41500	J04N64.1	J03N41	711.90	705.35	712.40	0.025	15	260	6.21	4.46	29.7	705.72	706.32	6.68	1.23	6.63	18.5
41497	J03N41.1	J03N40	705.35	698.00	705.00	0.031	15	240	6.43	4.45	29.7	698.37	699.01	6.63	1.27	7.31	17.3
41496	J03N40.1	J03N39	698.00	687.45	694.50	0.045	15	235	7.73	3.90	26.0	687.78	688.70	6.73	1.27	8.85	14.3
41495	J03N39.1	J03N38	687.45	673.16	683.20	0.060	15	239	7.19	4.10	27.3	673.50	674.30	9.70	1.26	10.21	12.4
41493	J03N38.1	J03N30	673.16	657.50	668.50	0.052	15	304	6.08	4.76	31.8	657.90	658.47	10.60	1.32	9.48	13.9
41491	J03N30.1	J03N47	657.50	650.85	656.90	0.030	15	220	6.62	4.75	31.7	651.25	651.93	5.65	1.43	7.26	19.7
41490	J03N47.1	J03N27	650.85	645.50	651.50	0.066	15	81	5.96	5.13	34.2	645.93	646.48	5.57	1.43	10.73	13.3
41489	J03N27.1	J03N29	645.50	643.87	648.90	0.024	15	67	6.16	5.12	34.1	644.30	644.89	4.60	1.47	6.51	22.6
41484	J03N29.1	J03N32	643.74	633.69	640.60	0.044	15	228	7.61	4.39	29.3	634.06	634.96	6.54	1.47	8.76	16.8
5101105	J03N32.1	J03N34	633.42	615.83	627.30	0.060	15	294	7.56	4.42	29.5	616.20	617.09	11.10	1.47	10.21	14.4
41487	J03N34.1	J03N37	615.72	611.36	620.30	0.015	15	297	5.28	5.74	38.2	611.84	612.27	8.46	1.47	5.06	29.1
41488	J03N37.1	J03N71	611.36	603.53	620.30	0.024	15	327	4.37	6.61	44.1	604.08	604.38	16.22	1.47	6.46	22.8
41530	J03N71.1	J03N72	603.53	599.70	615.70	0.012	15	315	5.26	6.60	44.0	600.25	600.68	15.45	1.77	4.60	38.4
41531	J03N72.1	J03N73	599.70	594.65	599.30	0.015	15	340	5.41	6.46	43.1	595.19	595.64	16.51	1.77	5.09	34.8
41536	J03N73.1	J03N78	594.65	589.25	599.30	0.020	15	269	5.60	7.33	48.9	589.86	590.35	9.44	2.16	5.92	36.5
41548	J03N78.1	J03N86	589.25	583.66	589.70	0.013	15	430	3.41	11.22	74.8	584.60	584.78	5.10	2.16	4.76	45.3
41547	J03N86.1	J03N91	583.66	582.75	588.80	0.002	18	435	2.86	11.34	63.0	583.69	583.82	5.10	2.15	3.11	69.3
41542	J03N91.1	J03N93	582.75	581.78	591.80	0.002	18	481	2.89	11.17	62.1	582.71	582.84	9.09	2.14	3.05	70.2
41237	J03N93.1	J02N193	581.78	580.80	592.80	0.002	18	481	4.13	8.35	46.4	581.50	581.76	11.30	2.14	3.06	69.8
41317	J02N193.1	J02N194	580.80	576.04	583.00	0.015	18	312	5.81	6.45	35.8	576.58	577.10	6.42	2.14	8.39	25.5
5473694	J02N194.1	J02N462	576.04	560.09	566.00	0.038	18	423	7.94	5.26	29.2	560.53	561.51	5.47	2.21	13.18	16.7
5473696	J02N462.1	J02N463	560.09	541.23	550.70	0.092	18	206	5.20	7.39	41.0	541.85	542.27	8.85	2.30	20.54	11.2
5473402	J02N463.1	J02N464	541.23	538.42	546.60	0.010	18	289	3.49	10.08	56.0	539.26	539.45	7.34	2.30	6.69	34.3
41242	J02N99.1	J02N98	576.01	575.13	580.10	0.003	15	350	0.00	0.89	6.0	575.21	575.21	4.89	0.00	2.09	0.0
41243	J02N98.1	J02N71	575.13	574.70	579.70	0.003	15	141	-0.01	5.55	37.0	575.16	575.16	4.54	0.00	2.31	-0.1
41210	J02N71.1	J02N67	574.70	574.25	579.70	0.002	15	212	2.18	5.39	35.9	574.70	574.77	5.00	0.56	1.92	29.0
41178	J02N67.1	J02N65	574.25	573.97	589.00	0.002	15	116	2.20	5.34	35.6	574.42	574.49	14.58	0.56	2.05	27.2
41184	J02N65.1	J02N63	573.97	573.38	585.40	0.003	15	234	2.24	5.28	35.2	573.82	573.90	11.58	0.56	2.10	26.7
41185	J02N63.1	J02N53	573.38	573.03	595.00	0.003	15	130	2.07	5.60	37.3	573.50	573.56	21.50	0.56	2.17	25.8
41314	J02N53.1	J02N56	573.03	572.50	581.50	0.002	15	220	2.27	5.54	36.9	572.96	573.04	8.54	0.60	2.05	29.4
41204	J02N56.1	J02N111	572.50	571.63	586.60	0.002	15	350	2.27	5.52	36.8	572.09	572.17	14.51	0.60	2.08	28.9
41250	J02N111.1	J02N112	571.63	570.75	576.80	0.003	15	350	2.28	5.50	36.7	571.21	571.29	5.59	0.60	2.09	28.7
41251	J02N112.1	J02N113	570.75	570.35	597.59	0.003	15	155	2.09	5.87	39.1	570.84	570.91	26.75	0.60	2.12	28.3

CITY OF SAN DIEGO  
HYDRAULIC MODEL RESULTS TABLE  
TRUNK SEWER 89 - PENASQUITOS NORTH  
2050 WWF AS-BUILT

FACILITY SEQUENCE NUMBER	PIPE ID	DOWNSTREAM MH ID	UPSTREAM MH INV. EL. (FT)	DOWNSTREAM MH INV. EL. (FT)	DOWNSTREAM MH RIM EL. (FT)	PIPE SLOPE (FT/FT)	PIPE DIAMETER (IN)	PIPE LENGTH (FT)	MAX. VELOCITY (FT/SEC)	MAX. DEPTH (IN)	MAX. d/D (%)	MAX. HGL EL. (FT)	MAX. EGL EL. (FT)	HGL DEPTH BELOW RIM (FT)	MAX. FLOW (MGD)	FULL CAPACITY (MGD)	MAX. Q/CAP (%)
41252	J02N113.1	J02N114	570.35	569.88	575.00	0.002	15	195	2.23	5.92	39.5	570.37	570.45	4.63	0.65	2.05	31.7
41253	J02N114.1	J02N171	569.88	569.00	581.00	0.003	15	350	3.03	4.86	32.4	569.40	569.55	11.60	0.67	2.09	32.2
41304	J02N171.1	J02N172	569.00	564.60	574.60	0.050	15	88	4.74	3.53	23.5	564.89	565.24	9.71	0.67	9.32	7.2
41311	J02N172.1	J02N179	564.60	564.22	573.00	0.032	18	12	4.38	3.71	20.6	564.53	564.83	8.47	0.74	12.18	6.1
41308	J02N179.1	J02N180	564.22	560.12	572.10	0.025	15	164	4.87	3.71	24.7	560.43	560.80	11.67	0.74	6.60	11.3
41323	J02N180.1	J02N200	560.12	557.02	571.00	0.025	15	124	4.87	3.71	24.7	557.33	557.70	13.67	0.74	6.60	11.3
41257	J02N200.1	J02N118	557.02	553.06	570.50	0.125	15	32	5.24	3.52	23.5	553.35	553.78	17.14	0.74	14.76	5.0
41325	J02N118.1	J02N201	553.06	530.78	548.80	0.050	15	450	6.40	3.60	24.0	531.08	531.72	17.72	0.94	9.29	10.1
41322	J02N201.1	J02N199	530.78	526.41	542.40	0.062	15	70	4.38	5.31	35.4	526.85	527.15	15.55	1.10	10.43	10.5
41259	J02N199.1	J02N121	526.41	519.32	530.30	0.015	15	477	4.99	5.30	35.4	519.76	520.15	10.54	1.25	5.09	24.6
41261	J02N121.1	J02N122	519.24	507.91	516.16	0.249	15	45	11.56	2.91	19.4	508.15	510.23	8.01	1.25	20.86	6.0

TOTAL LENGTH (MILES):

LENGTH WEIGHTED Q/CAP:

LENGTH WEIGHTED d/D:

LENGTH WEIGHTED HGL BELOW RIM (FT):

LENGTH OF PIPE - d/D < 50% (MILES):

LENGTH OF PIPE - d/D 50 - 75% (MILES):

LENGTH OF PIPE - d/D 75 - 100% (MILES):

LENGTH OF PIPE - d/D > 100% (MILES):

LENGTH OF PIPE - Q/CAP < 50% (MILES):

LENGTH OF PIPE - Q/CAP 50 - 75% (MILES):

LENGTH OF PIPE - Q/CAP 75 - 100% (MILES):

LENGTH OF PIPE - Q/CAP > 100% (MILES):



# PIPE CONDITION ASSESSMENT

Facility Name	FSN	Length	Inspection Length	Material	Diameter	Install Date	Date of Video	New Dispatch	New Dispatch Comments
PENASQUITOS NORTH TS # 89	41185	134	12	VCP	15	01-Jan-64	05/03/02	Point Repair	CM (M) @ 7' SA @ 12' due to DE. No other data available. DE (S-M) & DEG (S) through the ins pected length of pipeline bas ed on still report not on video. CCTV done by Unknown provider las t 5/3/02.
PENASQUITOS NORTH TS # 89	41204	328	346	VCP	15	01-Jan-64	05/03/02	Maintenance	DE (S-M) & DEG (S) throughout pipeline. CCTV done by Unknown provider last 5/3/02. Signs of d/D=50% exist in the pipeline.
PENASQUITOS NORTH TS # 89	41210	219	13	VCP	15	01-Jan-64	05/03/02	Replace	MC @ 13' from VCP to CI. SA @ 13' due to C (L). No other data available. CCTV done by Unknown provider las t 5/3/02.
PENASQUITOS NORTH TS # 89	41237	477	478	VCP	18	01-Jan-64	04/03/02	Maintenance	DE (S) & DEG (S) throughout pipeline. Pipeline in good condition. CCTV done by Unknown provider las t 3/4/02.
PENASQUITOS NORTH TS # 89	41242	350	297	VCP	15	01-Jan-64	05/16/05	Point Repair & Rehab	MC @ 28' from VCP to CI. SA @ 28' due to C (L). RP: MC @ 2 69' from VCP to CI. Replace the CI pipe which is about 50' and rehab the whole pipeline. DE (S), Cracks (S), C (M-L) and DEG (S) throughout pipeline. CCTV done by Empire Pipe Cleaning las t 5/16/05.
PENASQUITOS NORTH TS # 89	41243	141	139	VCP	15	01-Jan-64	05/16/05	Point Repair & Rehab	CC (S) with R (S) @ 3' on both sides of the pipe. MC @ 1 36' from VCP to CI. Replace the CI pipe which is about 5' and rehab the whole pipeline. DE (S), Cracks (S), C (M-L) & DEG (S) throughout pipeline. CCTV done by Empire Pipe Cleaning las t 5/16/05.
PENASQUITOS NORTH TS # 89	41245	10	19	VCP	18	01-Jan-87	05/03/02	Maintenance	The entire pipeline in good condition per still report dated 5/3/02.
PENASQUITOS NORTH TS # 89	41250	367	351	VCP	15	01-Jan-64	05/03/02	Maintenance	DE (S) & DEG (S) throughout pipeline. Pipeline in good condition. CCTV done by Unknown provider las t 5/3/02.
PENASQUITOS NORTH TS # 89	41251	155	162	VCP	15	01-Jan-64	05/03/02	Point Repair	BP (M) @ 157'. DE (S) & DEG (S) throughout pipeline. Pipeline in good condition. CCTV done by Unknown provider las t 5/3/02.
PENASQUITOS NORTH TS # 89	41252	197	188	VCP	15	01-Jan-65	05/03/02	Maintenance	CC (S) @ 121' & 168'. DEG (S) throughout pipeline. Pipeline in good condition. Pipeline practically in good condition. CCTV done by Unknown provider las t 5/3/02.
PENASQUITOS NORTH TS # 89	41253	358	350	VCP	15	01-Jan-64	06/03/02	Maintenance	Pipeline has signs of d/D>50% capacity. CC (S) @ 3 0'. DE (S-M) & DEG (S) throughout pipeline. Pipeline practically in good condition. CCTV done by City of San Diego las t 3/13/12.
PENASQUITOS NORTH TS # 89	41257	44	480	VCP	15	01-Jan-83	06/03/02	Maintenance	DE (S) & DEG (S) throughout pipeline. Pipeline in good condition. DSMH118 is missing. CCTV done by City of San Diego las t 3/21/12.
PENASQUITOS NORTH TS # 89	41259	527	475	VCP	15	01-Jan-71	06/03/02	Maintenance	DEG (S) throughout pipeline. Pipeline in good condition. CCTV done by Unknown provider las t 3/6/02.



PIPE CONDITION ASSESSMENT

Facility Name	FSN	Length	Inspection Length	Material	Diameter	Install Date	Date of Video	New Dispatch	New Dispatch Comments
PENASQUITOS NORTH TS # 89	41261	51	51	VCP	15	01-Jan-81	06/03/02	Maintenance	DEG (S) throughout pipeline. Pipeline in good condition. CCTV done by Unknown provider las t 3/6/02.
PENASQUITOS NORTH TS # 89	41304	74	85	VCP	15	01-Jan-64	06/03/02	Maintenance	DEG (S) throughout pipeline. Pipeline in good condition. CCTV done by Unknown provider las t 3/6/02.
PENASQUITOS NORTH TS # 89	41308	141	159	VCP	15	01-Jan-71	06/03/02	Maintenance	DEG (S) throughout pipeline. Pipeline in good condition. CCTV done by Unknown provider las t 3/6/02.
PENASQUITOS NORTH TS # 89	41311	8	7	VCP	15	01-Jan-70	06/03/02	Maintenance	CL (S) @ 4' DEG (S) throughout pipeline. Pipeline in good condition. Pipeline practically in good condition. CCTV done by Unknown provider las t 3/6/02.
PENASQUITOS NORTH TS # 89	41314	227	208	VCP	15	01-Jan-64	05/03/02	Maintenance	BJ (S) @ 142' DEG (S) throughout pipeline. Pipeline in good condition. Pipeline practically in good condition. CCTV done by Unknown provider las t 5/3/02.
PENASQUITOS NORTH TS # 89	41317	312	308	PVC	18	01-Jan-87	03/04/02	Maintenance	DEG (S) throughout pipeline. Pipeline in good condition. CCTV done by Unknown provider las t 3/4/02.
PENASQUITOS NORTH TS # 89	41322	66	65	PVC	15	01-Jan-71	06/03/02	Maintenance	DEG (S) throughout pipeline. Pipeline in good condition. CCTV done by City of San Diego las t 3/21/12
PENASQUITOS NORTH TS # 89	41323	162	134	PVC	15	01-Jan-83	06/03/02	Maintenance	DEG (S) throughout pipeline. Pipeline in good condition. CCTV done by Unknown provider las t 6/3/02.
PENASQUITOS NORTH TS # 89	41484	187	210	PVC	15	01-Jan-87	01/03/02	Maintenance	DEG (S) throughout pipeline. Pipeline in good condition. CCTV done by Unknown provider las t 1/3/02.
PENASQUITOS NORTH TS # 89	41485	76	72	PVC	15	01-Jan-87	01/03/02	Maintenance	DEG (S) throughout pipeline. Pipeline in good condition. CCTV done by Unknown provider las t 1/3/02.
PENASQUITOS NORTH TS # 89	41487	306	297	PVC	15	01-Jan-63	09/25/08	Maintenance	DEG (S) throughout pipeline. Pipeline in good condition. CCTV done by Unknown provider las t 9/25/08.
PENASQUITOS NORTH TS # 89	41488	350	325	PVC	15	01-Jan-63	04/03/02	Maintenance	DEG (S) throughout pipeline. Pipeline in good condition. Signs of d/D with 40%-50% capacity in the pipeline. CCTV done by Unknown provider las t 3/4/02.
PENASQUITOS NORTH TS # 89	41489	74	65	PVC	15	01-Jan-63	01/03/02	Maintenance	DEG (S) throughout pipeline. Pipeline in good condition. CCTV done by Unknown provider las t 3/1/02.
PENASQUITOS NORTH TS # 89	41490	72	76	PVC	15	01-Jan-87	08/08/07	Maintenance	DEG (S) throughout pipeline. Pipeline in good condition. CCTV done by City of San Diego las t 8/8/07.
PENASQUITOS NORTH TS # 89	41491	223	216	PVC	15	01-Jan-87	08/08/07	Maintenance	DEG (S) throughout pipeline. Pipeline in good condition. CCTV done by City of San Diego las t 8/8/07.
PENASQUITOS NORTH TS # 89	41493	301	304	PVC	15	01-Jan-63	03/23/09	Maintenance	DEG (S) throughout pipeline. Pipeline in good condition. CCTV done by City of San Diego las t 3/23/09.
PENASQUITOS NORTH TS # 89	41495	240	237	PVC	15	01-Jan-87	03/23/09	Maintenance	DEG (S) throughout pipeline. Pipeline in good condition. CCTV done by City of San Diego las t 3/23/09.



PIPE CONDITION ASSESSMENT

Facility Name	FSN	Length	Inspection Length	Material	Diameter	Install Date	Date of Video	New Dispatch	New Dispatch Comments
PENASQUITOS NORTH TS # 89	41496	235	233	PVC	15	01-Jan-87	03/23/09	Maintenance	DEG (S) throughout pipeline. Pipeline in good condition. CCTV done by City of San Diego las t 3/23/09.
PENASQUITOS NORTH TS # 89	41497	244	237	PVC	15	01-Jan-63	01/03/02	Maintenance	DEG (S) throughout pipeline. Pipeline in good condition. CCTV done by Unknown provider las t 1/3/02.
PENASQUITOS NORTH TS # 89	41500	254	257	PVC	15	01-Jan-63	01/03/02	Maintenance	DEG (S) throughout pipeline. Pipeline in good condition. CCTV done by Unknown provider las t 1/3/02.
PENASQUITOS NORTH TS # 89	41530	314	317	PVC	15	01-Jan-63	04/03/02	Maintenance	The pipeline is in good condition per s till report done by Unknown provider last 4/3/02.
PENASQUITOS NORTH TS # 89	41531	342	316	PVC	15	01-Jan-63	04/03/02	Maintenance	DEG (S) throughout pipeline. Pipeline in good condition. CCTV done by Unknown provider las t 4/3/02.
PENASQUITOS NORTH TS # 89	41536	273	260	PVC	15	01-Jan-64	04/03/02	Maintenance	Signs of d/D with 3 0%-40% capacity in the pipeline. SA @ 2 60' due to DE (M). CCTV done by unknown provider las t 4/3/02. Pipeline in good condition through the ins pected length.
PENASQUITOS NORTH TS # 89	41542	478	144	PVC	18	01-Jan-87	04/03/02	Maintenance	Signs of d/D > 5 0% capacity in the pipeline. SA @ 1 44' due to DE (M). CCTV done by unknown provider las t 4/3/02. Pipeline in good condition through the ins pected length.
PENASQUITOS NORTH TS # 89	41547	416	433	PVC	18	01-Jan-65	04/03/02	Maintenance	Signs of d/D > 5 0% capacity in the pipeline. DEG (S) throughout pipeline. CCTV done by unknown provider las t 4/3/02. USMH has large roots at the base.
PENASQUITOS NORTH TS # 89	41548	460	428	PVC	15	01-Jan-87	04/03/02	Maintenance	Signs of d/D > 5 0% capacity in the pipeline. DEG (S) throughout pipeline. CCTV done by unknown provider las t 4/3/02.
PENASQUITOS NORTH TS # 89	41667	270	258	PVC	15	01-Jan-87	01/03/02	Maintenance	Signs of d/D with 3 0% capacity in the pipeline. Pipeline in good condition. DEG (S) throughout pipeline. CCTV done by PBS & J las t 1/3/02.
PENASQUITOS NORTH TS # 89	41671	248	255	PVC	15	01-Jan-63	01/03/02	Maintenance	Signs of d/D with 3 0% capacity in the pipeline. Pipeline in good condition. DEG (S) throughout pipeline. CCTV done by PBS & J las t 1/3/02.
PENASQUITOS NORTH TS # 89	41672	302	297	PVC	15	01-Jan-63	01/03/02	Maintenance	DEG (S) throughout pipeline. Pipeline in good condition. CCTV done by PBS & J las t 1/3/02.
PENASQUITOS NORTH TS # 89	41673	298	296	PVC	15	01-Jan-63	01/03/02	Maintenance	Signs of d/D with 3 0% capacity in the pipeline. Pipeline in good condition. DEG (S) throughout pipeline. CCTV done by PBS & J las t 1/3/02.
PENASQUITOS NORTH TS # 89	41701	160	162	PVC	12	01-Jan-63	02/10/03	Maintenance	DEG (S) throughout pipeline. Pipeline in good condition. CCTV done by PBS & J las t 2/10/03.
PENASQUITOS NORTH TS # 89	41703	45	48	PVC	15	01-Jan-63	01/03/02	Maintenance	Signs of d/D with 3 0% capacity in the pipeline. Pipeline in good condition. DEG (S) throughout pipeline. CCTV done by PBS & J las t 1/3/02.



PIPE CONDITION ASSESSMENT

Facility Name	FSN	Length	Inspection Length	Material	Diameter	Install Date	Date of Video	New Dispatch	New Dispatch Comments
PENASQUITOS NORTH TS # 89	41704	301	296	PVC	15	01-Jan-63	01/03/02	Maintenance	Signs of d/D with 30% capacity in the pipeline. Pipeline in good condition. DEG (S) throughout pipeline. CCTV done by PBS & J las t 1/3/02.
PENASQUITOS NORTH TS # 89	5101105	227	215	PVC	15	01-Jan-87	01/03/02	Maintenance	R (S) @ 204'-216' are coming from the DSMH not from the pipe. DEG (S) throughout pipeline. CCTV done by PBS&J las t 1/3/02.
PENASQUITOS NORTH TS # 89	41178	116		VCP	15	01-Jan-64	04/08/09	Maintenance	DES (S-M) throughout pipeline. CCTV done by DSI las t 4/8/2009.
PENASQUITOS NORTH TS # 89	41184	234		VCP	15	01-Jan-64	10/22/08	Maintenance	DEG (S) throughout pipeline. Pipeline in good condition. CCTV done by DSI las t 10/22/2008.
PENASQUITOS NORTH TS # 89	41325		0	VCP	15	01-Jan-71	N/A	Not Inspected	No CCTV data available.
PENASQUITOS NORTH TS # 89	5473402		0	VCP	18	30-Dec-87	N/A	Not Inspected	No CCTV data available.
PENASQUITOS NORTH TS # 89	5473694		0	VCP	18	30-Dec-87	N/A	Not Inspected	No CCTV data available.
PENASQUITOS NORTH TS # 89	5473696		0	VCP	18	30-Dec-87	N/A	Not Inspected	No CCTV data available.

For CCTV Defect Codes , see next page.

Any questions regarding to CCTV, please contact EPM's CCTV Section

## CCTV Defect Codes

Code	Severity	Observation
R	S	Roots, Small
	M	Roots, Medium
	L	Roots, Large
I	S	Infiltration, slight
	M	Infiltration, Medium
	L	Infiltration, Large
E	S	Slight Mineral Deposits
	M	Medium Mineral Deposits
	L	Heavy Mineral Deposits
CC	S	Circular Crack, Small
	M	Circular Crack, Medium
	L	Circular Crack, Large
CL	S	Crack -Longitudinal, Small
	M	Crack -Longitudinal, Medium
	L	Crack -Longitudinal, Large
CM	S	Cracks -Multiple, Small
	M	Cracks -Multiple, Medium
	L	Cracks -Multiple, Large
B	S	Broken Pipe, Small
	M	Broken Pipe, Medium
	L	Broken Pipe, Large
X	N	Collapsed Pipe
H	S	Hole in Pipe, Small
	M	Hole in Pipe, Medium
	L	Hole in Pipe, Large
DS	N	Begin Pipe Sag
DF	N	End Pipe Sag
SS	S	Erosion of CP, Slight
	M	Erosion of CP, Moderate
	L	Erosion of CP, Large
DEG	S	Debris -Grease, slight
	M	Debris -Grease, Moderate
	L	Debris -Grease, Large
DE	S	Debris, Slight
	M	Debris, Moderate
	L	Debris, Large
DES	S	Debris -Silt, Slight
	M	Debris -Silt, Moderate
	L	Debris -Silt, Large

Code	Severity	Observation
D	S	Deformation, Slight
	M	Deformation, Moderate
	L	Deformation, Large
LC	S	Lining Defect, Small
	M	Lining Defect, Moderate
	L	Lining Defect, Large
SR	N	Spot Repair
CO	S	Corrosion of CI, Slight
	M	Corrosion of CI, Moderate
	L	Corrosion of CI, Large
RJ	S	Roots at Joint, Small
	M	Roots at Joint, Medium
	L	Roots at Joint, Large
JD	M	Joint Displaced, Medium
	L	Joint Displaced, Large
IJ	S	Infiltration at Joint, Small
	M	Infiltration at Joint, Medium
	L	Infiltration at Joint, Large
COJ	S	Corrosion at Joint, Slight
	M	Corrosion at Joint, Moderate
	L	Corrosion at Joint, Large
CCJ	S	Circular Crack at Joint, Small
	M	Circular Crack at Joint, Medium
	L	Circular Crack at Joint, Large
CLJ	S	Crack -Longitudinal at Joint, Small
	M	Crack -Longitudinal at Joint, Medium
	L	Crack -Longitudinal at Joint, Large
CMJ	S	Multiple Cracks at Joint, Small
	M	Multiple Cracks at Joint, Medium
	L	Multiple Cracks at Joint, Large
GEJ	N	Gasket Exposed at Joint
SJ	S	Separated Joint, Slight
	M	Separated Joint, Moderate
	L	Separated Joint, Large
BJ	S	Broken Joint, Small
	M	Broken Joint, Medium
	L	Broken Joint, Large