

Initial Study & Mitigated Negative Declaration

The Courtyard at Signal Hill

1933-1939 Temple Avenue, Signal Hill, CA

Lead CEQA Agency: City of Signal Hill

Applicant: Signal Ventures LLC

November 7~~September 27~~, 2024

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Acronyms and Abbreviations

AB	Assembly Bill
ADT	Average daily traffic
AEP	Association of Environmental Professionals
af	Artificial fill
AF	Acre-feet
AFY	Acre-feet per year
APA	Allowable pumping allocation
APN	Assessor Parcel Number
BERD	Built Environment Resources Directory
bgs	Below ground surface
BMP	Best management practice
CAAQS	California ambient air quality standards
CARB	California Air Resources Board
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CalGEM	California Geologic Energy Management Division
CAL FIRE	California Department of Fire and Forestry
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CBMWD	Central Basin Municipal Water District
CB-19	Central Basin-19
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDOC	California Department of Conservation
CDWR	California Department of Water Resources
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CGS	California Geological Survey
CH_4	methane
City	City of Signal Hill
CHRIS	California Historic Resources Information System
CNDDB	California natural diversity database
CNEL	Community noise equivalent level
CNPS	California Native Plant Survey
CO	Carbon monoxide
CO_2	Carbon dioxide
COPC	Chemical of potential concern
CRA	Colorado River Aqueduct
CSTDM	California Statewide Travel Demand Model
CSWCB	California State Water Control Board
CVOC	chlorinated volatile organic compounds
dBA	A-weighted decibels
dB	decibels

DOT	Department of transportation
DPM	Diesel particulate matter
DTSC	Department of Toxic Substances Control
DWR	California Department of Water Resources
EIR	Environmental impact report
EOC	Emergency Operations Center
ESA	Endangered Species Act
FIRM	Federal Insurance Rate Map
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FMP	Facilities Master Plan
FTA	Federal Transportation Administration
GHG	Greenhouse gas
GLAC	Greater Los Angeles County
Gpm	Gallon per minute
Gpy	Gallons per year
GWP	Global warming potential
GWh	Gigawatt hours
HERO	Human and Ecological Risk Office
HFC	hydrofluorocarbons
HOA	homeowner's association
HOV	High Occupancy Vehicle
HRA	Health risk assessment
HSC	Health and Safety Code
H_2S	hydrogen sulfide
HVAC	heating, ventilation, and air conditioning
IS	Initial Study
IRWM	Integrated Regional Water Management
JWPCP	Joint Water Pollution Control Plant
kBTU	Thousand British thermal units
Kwh	Kilowatt hours
LACoFD	Los Angeles County Fire Department
LAPD	Los Angeles Police Department
Lbs	Pounds
LBUSD	Long Beach Unified School District
LBWRP	Long Beach Water Reclamation Plant
L_{dn}	Day Night Sound Level
Leq	Average sound level
LID	Low impact development
Lmax	Maximum sound level
LOS	Level of service
LST	Localized significance thresholds
m^3	Cubic meter
MCL	Maximum contaminant level
Mg	milligrams
MMRP	Mitigation monitoring and reporting program
MND	Mitigated negative declaration
MRF	materials recovery facility
MRZ	Mineral Resource Zone
Msl	Mean sea level
MS4	Municipal separate stormwater system
$MTCO_2e$	Metric tons carbon dioxide equivalent
MWD	Metropolitan Water District of Southern California
MWELO	Model Water Efficient Landscape Ordinance
MWh	Megawatt hours
NAAQS	National ambient air quality standards

ND	Negative Declaration
NHPA	National Historic Preservation Act
NO_2	Nitrogen dioxide
NO_x	Nitrogen oxides
N_2O	Nitrous oxide
NRHP	National Register of Historic Places
O_3	ozone
OEHHA	Office of Environmental Health Hazards Administration
OHP	Office of Historic Preservation
OPR	Office of Planning and Research
Pb	lead
PCE	tetrachloroethylene
PCH	Pacific Coast Highway
PFC	perfluorocarbons
PID	Photoionization detector
PM	Particulate matter
$PM_{2.5}$	Particulate matter less than 2.5 microns
PM_{10}	Particulate matter less than 10 microns
Ppm	Parts per million
ppmv	parts per million by volume
PRC	Public Resources Code
Qol	Old Lacustrine, Playa, and Estuarine (Paralic) Deposits (late to middle Pleistocene)
Qop	Old paralic deposits (late to middle Pleistocene)
Qya	Young alluvial floodplain deposits (Holocene and Late Pleistocene)
Qyfa	Young alluvial fan and valley deposits (Holocene and Late Pleistocene)
Qyl	Young Lacustrine, Playa, and Estuarine (Paralic) Deposits (Holocene to Late Pleistocene)
RSL	Regional Screening Level
RTP	Regional Transportation Plan
SAB	State Allocation Board
SB	Senate bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SDLAC	Sanitation Districts of Los Angeles County
SF_6	sulfur hexafluoride
SHPD	Signal Hill Police Department
SIP	State Implementation Plan
SMP	Soil Management Plan
SO_2	Sulfur dioxide
SO_x	Sulfur oxides
SP-21	The Courtyard Specific Plan
sqft	square feet
SR	State route
SRA	source receptor areas
SVOC	Semi-volatile organic compound
SWP	State Water Project
SWRCB	State Water Resources Control Board
TAC	Toxic air contaminants
TAZ	Traffic Analysis Zone
TPH	total petroleum hydrocarbons
TDS	Total dissolved solids
TTM	Tentative Tract Map

USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VMT	Vehicle miles traveled
VOC	Volatile organic compounds
WAR	Well Abandonment Report
WELO	Water Efficient Landscape Ordinance
WRD	Water replenishment district
µg	micrograms

Section A Environmental Checklist Form

1. Project Title:	The Courtyard At Signal Hill
2. Lead Agency Name and Address:	The City of Signal Hill 2175 Cherry Avenue Signal Hill, CA 90755
3. Contact Person and Phone Number:	Ms. Colleen Doan Community Development Director Signal Hill Community Development (562) 989-7344
4. Project Location:	1933-1939 Temple Avenue Signal Hill, CA 90755
5. Applicant's Name and Address:	Signal Ventures LLC 11 Keats Court Coto de Caza, CA 92679
6. General Plan Designation:	High Density Residential (RH)
7. Zoning:	RH; The Courtyard Specific Plan (SP-21) proposed.
8. Description of Project:	Signal Ventures LLC proposes to demolish, remove, and dispose of all existing buildings, concrete, asphalt, and vegetation. Once clear, the Project Site would be developed into eight new detached single-family homes and ancillary facilities. This residential development would require a zoning ordinance amendment from the current designation of Residential High Density (RH; i.e., 21 dwelling units based on lot size greater than 20,000 square feet) to The Courtyard Specific Plan (SP-21).
9. Surrounding Land Uses and Setting:	High density residential; low density residential; single family residential. To the north of the site are Temple View Condominiums (1957 Temple Avenue) and a single-family dwelling (2750 E. 20th

Street). To the west and south of the site are the Hillbrook Condominiums (1903 Temple Avenue). To the east of the site are single-family dwellings within the California Crown Specific Plan.

10. Other public agencies who approval is required:

Los Angeles County Fire Department, and all other applicable agencies and departments.

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1?

No.

Introduction

1.1 Project Overview

Signal Ventures, LLC (the Applicant) proposes to construct an eight (8) unit single family home residential development on two parcels (APNs 7216-021-002 and 7216-020-011) at 1933-1939 Temple Avenue, Signal Hill, California 90755 (the Project; Figure 1.1-1 and Figure 1.1-2). The Applicant proposes to demolish all existing structures on the Project Site, including a garage building and two (2) detached metal buildings garage, and concrete pad/parking lot (approximately 11,500 square feet [sqft] in total). To conform with the City of Signal Hill (City) General Plan, the Project would require a zoning ordinance amendment from the existing designation of High Density Residential (RH) to The Courtyard Specific Plan (SP-21).

1.2 Background and Public Involvement

1.2.1 Previous Site Plan

The current version of the Project is an amended design/site plan that was originally submitted to the City in 2020. During the public commenting period for the initial proposal, multiple residents, primarily from 1957 Temple Avenue to the north, provided feedback that the height of the development obstructed views from their units. This prompted the Project to be redesigned, reducing the roof-top heights to 22.9-feet, or 139.75 feet elevation which is approximately 1.5 feet to 5 feet below the maximum height line. This was done to minimize visual impacts from the neighboring northern property.

1.2.2 Public Involvement

A public meeting was convened on March 21, 2024. The meeting was attended by two local stakeholders/neighbors. Their primary issues and concerns with the Project involved aesthetic impacts. In response, the Applicant voluntarily modified the Project design, in particular Dwelling Unit No. 1, to allow for an expanded view from their existing domiciles. The site plan was adjusted to set back the second story of Unit No. 1 from the northern and eastern property boundaries and the roof ridge was moved further away from the north property line and lowered by approximately three inches.



Figure 1.2-1: Project Location Map

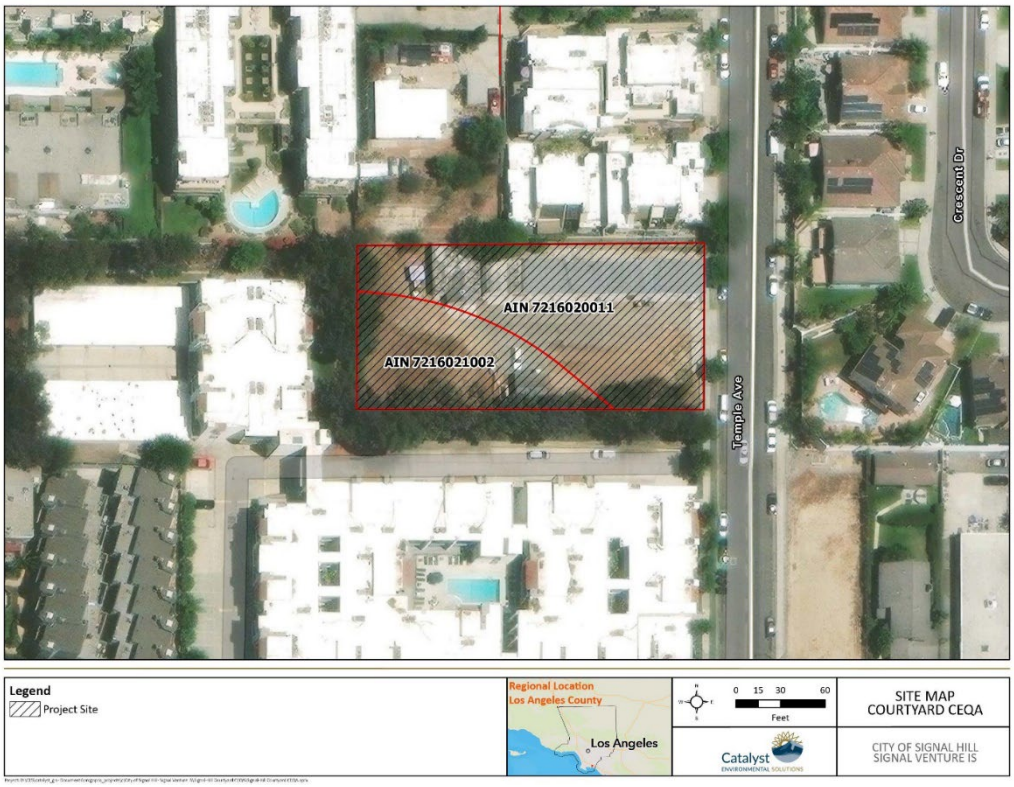


Figure 1.2-2: Site Map

1.3 Project Objective(s)

California Environmental Quality Act (CEQA) Guidelines Section 15124(b) requires a project description to include a statement of objectives for the proposed action/activity, including the underlying purpose of the proposal/application. Compatibility with Project objectives is one criterion for determining if a project/alternative meets the established goals and provides a standard against which to measure project alternatives (additional alternatives or an alternative analysis is not required for a CEQA Initial Study (IS), Negative Declaration (ND), or Mitigated ND (MND), only Environmental Impact Reports - EIRs).

The Project objectives are as follows:

Objective 1: Support the Program Category 1 Goals of the City of Signal Hill Housing element 2021-2029 which is to provide homes that would help City of Signal Hill meet the Regional Housing Needs Assessment goal for 2021-2029 housing in the City of Signal Hill and accommodate the housing needs of all income groups as quantified by Regional Housing Needs Assessment.

Objective 2: Provide housing consistent with Goal 1 and Goal 3 of the General Plan Land Use Element which are to:

> 1. Manage growth to achieve a well-balanced land use pattern that accommodates existing and future needs for housing, commercial and industrial land, open space, and community facilities and services, while maintaining a healthy, diversified economy adequate to provide future City revenue; and
>
> 3. Assure a safe, healthy, and aesthetically pleasing community for residents and businesses.

Objective 3: To provide housing consistent with Goal 3.5(c) of the 2023-2028 Signal Hill Strategic Plan which is to:

> 3.5. Increase the local housing supply to support current and potential residents; and
>
> 3.5(c). Continue efforts to support housing development projects through rezoning.

1.4 Lead Agency

CEQA Guidelines Section 15367 states that a Lead Agency is “the public agency which has the principal responsibility for carrying out or approving a project.” The City of Signal Hill is the primary permitting agency and governmental body responsible for approval and ongoing oversight of the proposed Project and therefore serves as the lead agency responsible for compliance with CEQA.

The Lead Agency is the public agency that has the greatest responsibility for carrying out or approving a project which may have a significant impact upon the environment (Public Resources Code Section 21067). As set forth in Section 15021 of the CEQA Guidelines, the

County, as Lead Agency, has the duty to avoid or minimize environmental damage where feasible.

1.5 Required Permits/Approvals and Responsible Agencies

Implementation of the Project would require permits or other forms of approval from public agencies or other entities prior to construction of the Project. Below is a summary of public agency approvals and recommendations that are expected to be required for the Project.

1.5.1 City of Signal Hill – IS/MND Certification and Adoption

The City of Signal Hill is required to certify this IS/MND and consider the recommended mitigation measures for adoption as Conditions of Approval in the land use decision (i.e., SP-21).

1.5.2 City of Signal Hill – Specific Plan Area Designation (SP-21)

The Project is not compliant with the RH front yard setback requirements for a lot exceeding 20,000 sqft. The proposed lot (no. 7) is less than the minimum 2,100 sqft. lot size and the Project also exceeds the 25% hardscape requirement. Lastly, the proposed perimeter fence exceeds the 42" height standard in the front yard setback. These exceedances and variations would require a zoning ordinance amendment from RH to SP-21. The specific plan would modify these requirements on the Project Site while maintaining general consistency with the surrounding neighborhood residential uses. The tentative tract map requires approval from the City of Signal Hill Planning Commission, and the final tract map requires approval from Los Angeles County. Final approval would be issued by the City of Signal Hill City Council.

1.5.3 City of Signal Hill - Methane Leak Testing

Pursuant to section 16.24.040 of the City of Signal Hill Oil and Gas Code, approved leak test reports are valid for 24 months from city acceptance. The most recent methane leak testing was conducted on site in 2021 and will require a re-test prior to the start of grading activities.

1.5.4 South Coast Air Quality Management District (SCAQMD) Permits

Rule 1166

Rule 1166 applies to facilities that have the potential for volatile organic compound (VOC) leakage from storage and transfer operations, accidental spillage, or other deposition. This rule sets requirements to control the emission of VOCs from excavating, grading, handling, and treating VOC contaminated soil. Rule 1166 requires that an approved mitigation plan be obtained from SCAQMD prior to commencing these activities.

Rule 1466

The purpose of Rule 1466 is to minimize off-site fugitive dust emissions from earth-moving activities at sites containing specific toxic air contaminants by establishing dust control measures. Rule 1466 applies to any owner or operator conducting earth-moving activities of soil with applicable toxic air contaminant(s) as defined in paragraph (c)(16) of the rule that have been identified as contaminant(s) of concern at a site. The rule focuses on the toxic air contaminants listed in Table I of the rule. The provisions in Rule 1466 include ambient PM10 monitoring, dust control measures, notification, signage, and recordkeeping requirements.

Rule 402 (Nuisance)

Rule 402 states that a person should not emit air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

Rule 403 (Fugitive Dust)

Rule 403 controls fugitive dust through various requirements including, but not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site, and maintaining effective cover over exposed areas.

1.5.5 Los Angeles County Sanitation District (LACSD) Permit

Alamitos Pumping Plant Trunk Sewer

Wastewater flow originating from the proposed project will discharge directly to the District's Alamitos Pumping Plant Trunk Sewer, located in Temple Avenue north of East 19th Street. The District(s) 8–inch diameter trunk sewer has a capacity of 1.1 million gallons per day (mgd) and conveyed a peak flow of 0.3 mgd when last measured in 2021. A 6-inch diameter or smaller direct connection to a District's trunk sewer requires a Trunk Sewer Connection Permit issued by the District(s). An 8-inch diameter or larger direct connection to a District's trunk sewer requires submittal of Sewer Plans for review and approval by the District(s).

1.5.6 California Department of Transportation

Oversize/overweight vehicles

The California Department of Transportation (Caltrans) has discretionary authority with respect to highways under its jurisdiction and may, upon application and if good cause appears, issue a special permit to operate or move a vehicle or combination of vehicles or special mobile equipment of a size or weight of vehicle or load exceeding the maximum limitations specified in the California Vehicle Code. The Caltrans Office of Commercial Vehicle Operations is

responsible for the issuance of these special transportation permits for oversize/overweight vehicles on the State Highway System.

Project Description

2.1 Project Summary

The Project Site is located at 1933-1939 Temple Avenue (APNs 7216-021-002 and 7216-020-011) in the City of Signal Hill in southern Los Angeles County (Figure 1.2-1 through Figure 2.1-1). The Project Site is currently developed with a garage/storage structure, two non-residential building structures, and associated accessory structures (i.e., concrete pad, asphalt driveway, and sparce vegetation including a few non-native trees). The Applicant proposes to demolish, remove, and dispose of all existing buildings, concrete, asphalt, and vegetation. Once clear, the Project Site would be developed into eight new detached single-family town homes and ancillary facilities. This residential development would require a zoning ordinance amendment from the current designation of High Density Residential (RH; i.e., 20-35 dwelling units per acre) to The Courtyard Specific Plan (SP-21). As provided in Table 2.1-1 below, the Project would occupy nearly the entire Project Site and have a disturbance footprint of 0.6 acres.

Table 2.1-1 Project Disturbance Footprint

Project Facility	Disturbance Size
Residential Buildings	10,872 sqft (0.24 acres)
Hardscaping	5,332 sqft (0.03 acres)
Driveway	6,840 sqft (0.16 acres)
Landscaping	3,017 sqft (0.18 acres)
TOTAL	**26,061 sqft (0.6 acres)**

2.1.1 Project Location

The Project Site is located at 1933-1939 Temple Avenue, entirely within the boundaries of the City of Signal Hill in southern Los Angeles County. The Project Site is located in a densely developed urban area, surrounded by residential use, as shown in Figure 2.1-2. The Project Site is bounded by Temple Avenue to the east and RH-zoned high-density residencies to the south, west, and north.

The Project Site is located within APNs 7216-021-002 and 7216-020-011. Parcel 7216-021-002 is also referenced as The Alamitos Tract or Farm Lot 22 and Parcel 7216-020-011 is also referenced as The Price & Peterson Tract. The General Plan designation for this site is currently zoned for high-density residential (RH).

2.1.2 Existing Site Description

The Project Site is a rectangular 0.6-acre plot currently occupied by a garage building and two detached metal buildings, all with slab-on-grade foundations. A paved driveway extends approximately 175 feet from Temple Avenue on the east to the front of the western-most building. The remaining portions of the Project Site are bare dirt, grass, and three eucalyptus trees (a non-native invasive species) present along the perimeter of the Project Site (Figure 2.1-2).



Figure 2.1-1: Zoning Map

2.1.3 Project Plans

The Project Site's floor plans, architectural styles, landscaping, storm water, lighting, vehicle access, parking, and on-site circulation plans, sustainability features, and utilities are described and shown below.



Figure 2.1-2: Picture of Project Site

2.1.3.1 Building Pads, Walls, and Fencing

The Project's proposed building pads and their relative elevations are shown in the Tentative Tract Map (TTM) (**Appendix B**). A retaining wall is proposed along the north end of the Project Site along the existing wall boundary at nine feet in height above grade. Fencing to the west and south include new six-foot-tall vinyl fencing. A six-foot-tall vinyl fence is also proposed to divide the back yards of each unit. Temple Avenue frontage would be completed with black metal fencing and segments of stucco wall decorated with some tiling and "The Courtyard at Signal Hill" signage. Applicable BMPs have been outlined in Section 2.1.3.10 and in Table 2.1-2.

2.1.3.2 Active Methane Mitigation System

Due to the presence of the two abandoned oil wells located within 100 feet of the proposed developments, the investigative findings, and the City's methane mitigation requirements (City of Signal Hill, Community Development Department, Methane Mitigation System (December 12, 2023)), a Modified Active Methane Mitigation System including the following features would be installed as part of the Project as proposed by the City's Environmental Consultant:

- An impermeable membrane such as Liquid Boot would be required to be installed subslab and shall be placed in between geotextile and geo cloth per manufacturer's specifications to protect it from the gravel blanket below and sand above.
- A minimum 2-inch gravel blanket is required underneath the impermeable membrane.

- Horizonal slotted vent pipe(s) shall be placed in the gravel blanket.
- The horizontal vent pipe(s) shall be tied into vertical cast iron vent pipe risers (typically placed in between the interior and exterior walls of the structure), no greater than 100 feet apart.
- The number of vertical vent pipe risers shall be doubled from the requirements of the passive system; vertical vent risers shall extend a minimum of three feet above slope of roof line and shall terminate not less than 10 feet from any opening into the structure in every direction.
- Conduit and cable seal(s) and trench dam(s) shall be installed.
- Signage on vertical vent pipe risers identifying the vent risers as a methane mitigation system shall be required.
- Hard scape and land scape areas shall provide methane mitigation as follows:
- Paved areas greater than 5,000 sqft within 15 feet of the exterior of the proposed development require venting. The surface level vents shall be spaced no greater than 100 feet apart and shall consist (subgrade) of a minimum of 12 inches (width) of exposed ¾-inch rock on top of exposed soil; the exposed rock shall have a minimum height of one foot; the rock shall be contained vertically subgrade and shall be protected at the surface.
- Methane vent boxes in hardscape shall be 18 inch by 18 inch concrete traffic rated bottomless catch basins filled with ¾ inch gravel, the rock shall rest on soil, the vent box shall have a concrete collar +/- 6 inch width by inch depth all the way around extending above the surface and sloped to prevent water infiltration with a 14 inch by 14 inch by 1” thick traffic rated grate on top.
- Surface level vents shall not be placed at areas of low site elevation. Along two sites of the landscaped areas contiguous to the exterior of the proposed development may eliminate the need to vent continuous paving.
- Vertical vent risers to allow methane to vent from well-heads shall extend a minimum of 10 feet above grade.
- Signage indicating surface level vents in hardscape and landscaped areas are for purposes of methane mitigation shall be posted.

2.1.3.3 Residential Units

A general architectural theme for the Project is modern, simplified Spanish style, as provided in the renderings below (Figure 2.1-2 and 2.1-3). The Project would consist of three first-floor, three second-floor plan variations, and 2-3 exterior elevation design variations for front, street, back, and left elevations. There are four variations of entry porch, four variations of entry door,

three variations of garage door, and four roof-top variations all with configurations of photo voltaic solar structures. This would create architectural variation and articulation that seeks compatibility with the surrounding aesthetics and land uses. Exterior building materials would include decorative Bermuda style awnings, forged steel baluster railings, metal window flower shelves, concrete roofing tiles, and varying accent tiling.

The Project's floor plans would provide four bedrooms and four bathrooms with 2,122 to 2,144 sqft of living space in each of the eight residential units. Each unit would also have a two-car garage totaling 455 sqft. All units would be two stories. Unit 1 would not exceed a height of 22'-9" and Units 2 through 8 would not exceed a maximum height of 23 feet above the proposed pad elevation. Applicable BMPs have been outlined in Section 2.1.3.10 and in Table 2.1-2.

Figure 2.1-2: Rendering of the Overall Courtyard at Signal Hill Development



Figure 2.1-3 Rendering of an Example Residence



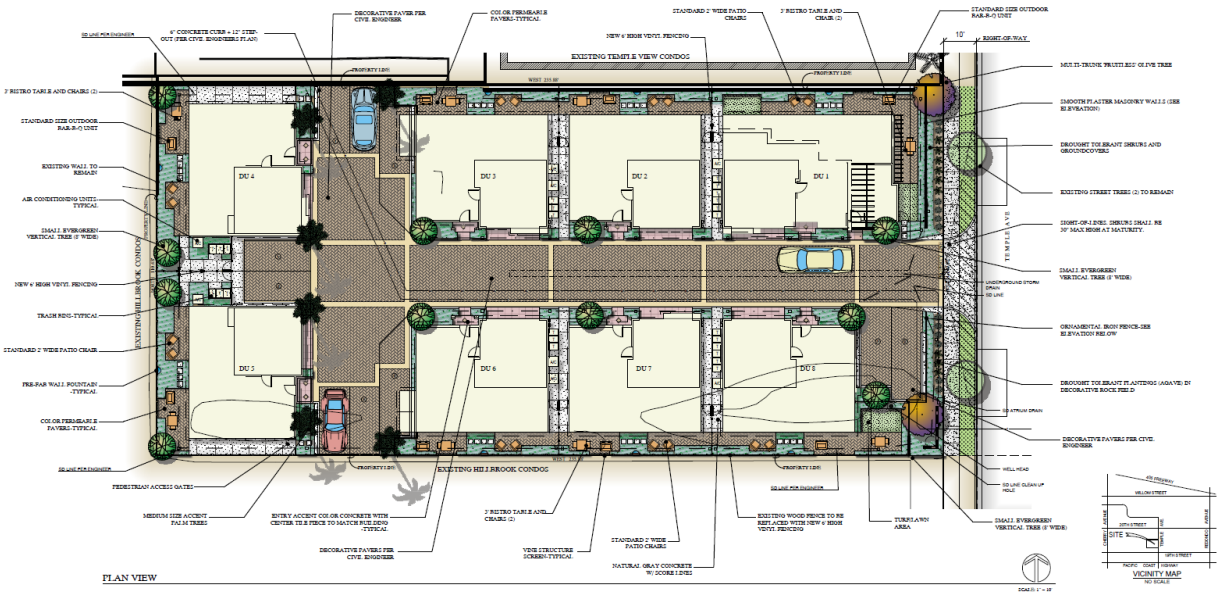
2.1.3.4 Stormwater

The Project Site currently accepts storm water runoff from the adjacent property to the north (7216-020-012) which drains into the municipal storm drain system. The Project would include a stormwater drainage and erosion control system capable of handling both site's stormwater runoff. The Project would install a collection system of inlet drains, catch basins, a trench drain, and permeable pavement that feeds into an CUDO® Stormwater Infiltration System. The stormwater drain system will be installed to the manufacturer's specification and will comply with County of Los Angeles Department of Public Works' LID Standards Manual (2014). Applicable BMPs have been outlined in Section 2.1.3.10 and in Table 2.1-2.

2.1.3.5 Landscaping

A preliminary rendering of the landscaping plan is provided in Figure 2.1-4 below. The Project would provide drought tolerant landscaping (i.e., blue glow agave, creeping mahonia, golden rain tree,) and water-conscious automatic irrigation that would comply with the City of Signal Hill Water Conservation in Landscaping Code (13.10.010). The annual estimated total landscaping water use for the proposed Project is 27,615 gallons per year (gpy) which is below the calculated maximum allowed water allowance of 46,109 gpy and in compliance with the criteria of California Model Water Efficient Landscape Ordinance. The homeowner's association (HOA) would be responsible for maintaining all landscaping in front yard areas; individual homeowners would be responsible for maintaining landscaping within the private fenced yards. Applicable BMPs have been outlined in Section 2.1.3.10 and in Table 2.1-2.

Figure 2.1-4 Proposed Landscaping Plan



2.1.3.6 Lighting

Proposed lighting would be limited to exterior lighting associated with each unit. All exterior lighting would be designed to minimize glare and light spillage onto adjacent properties (i.e., downcasted and hooded sources). These sources would be consistent with the CalGreen Building Standards (Code 5.106.8, Light Pollution Reduction) and the City's Municipal Code (Chapter 15.10). Applicable BMPs have been outlined in Section 2.1.3.10 and in Table 2.1-2.

2.1.3.7 Vehicular Access, Parking, and Site Circulation

Vehicle access to the Project Site on Temple Avenue would be provided by a primary 20-foot-wide driveway in the center of the lot that meets a perpendicular 20-foot-wide driveway that bisects the residences and spans the northern and southern extent of the lot. Each home also offers two parking spaces located in an enclosed garage. Additionally, there is one surface parking space for each home located in common areas adjacent to the dwellings. Two guest parking spaces are located at the west end of the Project Site, positioned on each end of the hammerhead. (**Appendix B**).

Site circulation will follow a hammer head turnaround configuration and has been designed to meet 20-foot width requirements for single family residences. The Los Angeles County Fire Department Fire Prevention Division - Land Development Unit approved the proposed site circulation plans (July 2023). Applicable BMPs have been outlined in Section 2.1.3.10 and in Table 2.1-2.

2.1.3.8 Low Impact Development and Sustainability Design Features

In accordance with CalGreen standards, the various green features are proposed as part of the Project such as:

- Water efficient plumbing fixtures,
- Energy efficient appliances,
- High R value insulation,
- Paint coatings with low volatile organic compounds levels,
- High efficiency light fixtures,
- EV charger ready infrastructure,
- Photovoltaic system.

The stormwater runoff will be controlled by CUDO Storage system, as identified in the Low Impact Development Report (LID; **Appendix E**), and located under permeable driveway pavers. Additionally, the landscape plan specifies drought tolerant plants and trees in compliance with ordinance and Signal Hill Street Trees plan and California Department of Water Resources Model Water Efficient Landscape Ordinance (CDWR MWELO).

Each home would have a roof mounted photovoltaic system in compliance with current codes. The proposed photovoltaic panels would be on the Project's hip roofs and sized to accommodate the solar system. Applicable BMPs have been outlined in Section 2.1.3.10 and in Table 2.1-2.

2.1.3.9 Utilities

Overhead electrical distribution lines are present along the Project Site's southern boundary. All existing overhead utilities exclusively serving the site shall be removed and new utilities will be provided via underground conduits and pipes. Site sewer, water, electric, gas, and cable are serviced by public utilities and available in the public right-of-way.

Utility providers for the Project are as follows:

- Water – City of Signal Hill
- Sewer – Los Angeles County Sanitation Districts (District #29)
- Gas – Energy Resources Department (City of Long Beach)
- Electrical – Southern California Edison
- Residential Trash – EDCO Disposal
- Fire – Los Angeles County Fire Department
- Police – City/Community of Signal Hill

A Grant of Easement was recorded as No. 20240498772 between the Courtyard parcels 7216-020-011 & 7216-021-002 and the adjacent Smart Home parcel 7216-020-012 for the purpose of installing, maintaining, repairing, renewing and replacing an underground sanitary sewer line, a

sump pump, and a storm water drain line. Applicable BMPs have been outlined in Section 2.1.3.10 and in Table 2.1-2.

2.1.3.10 Best Management Practices (BMPs)

Best Management Practices (BMPs) and applicant-proposed measures serve to minimize and limit the extent and magnitude of potential environmental impacts. These measures are identified per resource in Table 2.1-2. The following BMPs would be implemented for construction activities:

- Eroded sediments and other pollutants must be retained on site and would not be transported from the site via sheet flow, swales area drains, natural drainage courses, or wind.
- Stockpiles or earth and other construction related materials would be protected from being transported from the site by the force of wind and water.
- Fuels, oils, solvents and other toxic materials would be stored in accordance with their listing and are not to contaminate the soil and surface waters. All approved storage containers would be protected from the weather.
- Spills would be cleaned up immediately and disposed of in a proper manner. Spills would not be washed into the drainage system.
- Non-storm water runoff from equipment and vehicle washing and any other activity would be contained at the Project Site.
- Excess or waste concrete would not be washed into the public way or any other drainage system. Provisions would be made to retain concrete wastes on site until they can be disposed of as solid waste.
- Trash and construction related solid wastes would be deposited into a covered receptacle to prevent contamination of rainwater and dispersal by wind.
- Sediments and other materials would not be tracked from the site by vehicle traffic. The construction entrance roadways would be stabilized so as to inhibit sediments from being deposited into the public way. Accidental depositions would be swept up immediately and would not be washed down by rain or other means.
- Any slope with disturbed soils or denuded of vegetation would be stabilized so as to inhibit erosion by wind or water.
- Additional BMPs will be implemented as deemed necessary by City inspectors.

Table 2.1-2: Best Management Practices and Applicant-Proposed Measures

Plan	BMP ID	Measure
Stormwater		
Precise Grading Plan	**WM-1 - Material Delivery and Storage**	Provide a material storage area with secondary containment and/or weather protection. Note the maintenance practices and schedule proposed for this area.
Precise Grading Plan	**WM-2 – Material Use**	Hazardous materials, fertilizers, pesticides, plasters, solvents, paints, and other compounds must be properly handled in order to reduce the risk of pollution or contamination. Training and information on procedures for the proper use of all materials must be available to the employees that apply such materials.
Precise Grading Plan	**WM-4 - Spill Prevention and Control**	Identify spill prevention and control measures that will be taken for all proposed materials. Identify the methods by which accidental spills will be cleaned and properly disposed of.
Precise Grading Plan	**WM-5 - Solid Waste Management**	Provide designated waste collection areas and containers. Arrange for regular disposal. Provide covered storage with secondary containment. Containers are required to protect waste from rain to prevent water. Pollution and prevent wind dispersal.
Precise Grading Plan	**WM-6 - Hazardous Waste Management.**	Hazardous materials must be disposed of in accordance with state and federal regulations. Identify the proposed methods of disposal and any special handling contracts that may be applicable.
Precise Grading Plan	**WM-7 - Contaminated Soil Management**	Prevent or reduce the discharge of pollutants to stormwater from contaminated soil and highly acidic or Alkaline soils by conducting pre-construction surveys, inspecting excavations regularly, and remediating contaminated soil promptly.
Precise Grading Plan	**WM-8 - Concrete Waste Management**	Store dry and wet materials under cover. Avoid on-site washout except in designated areas away from drains, ditches, streets, and streams. Concrete waste deposited on site shall set-up, be broken apart, and disposed of properly. Containment and proper disposal is required for all concrete waste.
Precise Grading Plan	**WM-9 - Sanitary / Septic Waste Management**	Untreated raw wastewater is not to be discharged or buried. Sanitary sewer facilities on site are required to be in compliance with local health agency requirements. Sanitary or septic wastes must be treated or disposed of in accordance with state and local requirements.
Precise Grading Plan	**TC-1 - Stabilized Construction Entrance**	A stabilized entrance is required for all construction sites to ensure that dirt and debris are not tracked onto the road or adjacent property. Maintenance of such a system is required for the duration of the Project. Such stabilization may be of rock or paved.

Plan	BMP ID	Measure
Precise Grading Plan	**SE-1 - Silt fence, SE-3 - Sediment Trap, SE-8 - Sandbags**	Eroded sediments must be retained on site and not permitted to enter the drainage system. May be at the sole discretion of the city inspector if other erosion control BMPs are deemed sufficient.
LID Precise Grading Plan	**WM-1 - Material Delivery and Storage**	Materials shall be stored on-site in original marked containers and covered from rain and wind. Material inventory shall consist of supply required for a few days.
LID Precise Grading Plan	**WM-2 - Material Use**	Materials for construction shall be used in accordance with product direction
LID Precise Grading Plan	**WM-3 - Stockpile Management.**	Materials stockpiles shall be surrounded by a temporary sediment barrier and covered to maintain dust control.
LID Precise Grading Plan	**WM-4 - Spill Prevention and Control**	Ample clean-up supplies for stored materials shall be kept on-site. Employees shall be educated on the classification of spills and appropriate responses.
LID Precise Grading Plan	**WM-5 - Solid Waste Management**	Solid waste from construction activities shall be stored in appropriate containers. Full containers shall be disposed of properly.
LID Precise Grading Plan	**WM-6 - Solid Waste Management**	Solid waste from construction activities shall be stored in appropriate containers. Full containers shall be disposed of properly.
LID Precise Grading Plan	**WM-8 - Concrete Waste Management**	An on-site concrete washout area shall be constructed, used, and disposed of in a manner which meets the requirement of the city.
LID Precise Grading Plan	**WM-9 - Sanitary / Septic Waste Management**	On-site facility shall be provided and maintained by the contractor for the duration of the Project
Low Impact Development Study BMPs	**Structural BMPs**	Kristar Trench Dain Filter Insert, by Kristar Enterprises, Inc. which will be installed in trench drain, are being proposed as structural BMPs for the removal of silt and debris in storm water runoff. The filter inserts have been selected to accommodate, up to and including, the 85th percentile storm event.

Plan	BMP ID	Measure
Low Impact Development Study BMPs	**Structural BMPs**	The Project will propose to install a CUDO system to treat stormwater.
Erosion Control BMPs		
LID Precise Grading Plan	**EC-1**	Schedule prepared by contractor shall be on-site during construction.
Temporary Sediment Control		
LID Precise Grading Plan	**SE-5 - Fiber Rolls**	Install where shown on plan.
LID Precise Grading Plan	**SE-7 - Street Sweeping and Vacuuming**	Street shall be swept, sediment collected, and disposed of off-site on a daily basis.
LID Precise Grading Plan	**SE-10 - Storm Water Inlet Protection**	Once inlet risers are constructed, surround risers with gravel bags or cap the riser to reduce sediment introduction to the area drain system.
Wind Erosion Control		
LID Precise Grading Plan	**WE-1 - Wind Erosion Control**	Water or cover material shall be used to alleviate dust nuisance on the rough graded pads and any stockpile areas
Tracking Control		
LID Precise Grading Plan	**TC-1 - Stabilized Construction Exit**	Rumble rack shall be placed on the driveway to ensure that all vehicles leaving the site pass over the devices before entering the public street.
Non-Stormwater Management		
LID Precise Grading Plan	**NS-1 - Water Conservation Practices**	Maintain water equipment to prevent non-stormwater discharges.
LID Precise Grading Plan	**NS-3 - Paving And Grading Operations**	Apply parameter controls and vacuuming to prevent non-stormwater discharge.
LID Precise Grading Plan	**NS-6 - Illicit Connection / Illegal Discharge**	Contractor shall report illicit connections or illegally dumped materials on site to the resident engineer immediately and contractor shall take no further action until the resident engineer provide a response.
LID Precise Grading Plan	**NS-7 - Potable Water / Irrigation**	Excise care during construction to prevent non-stormwater discharges.
LID Precise Grading Plan	**NS-8 - Vehicle And Equipment Cleaning**	All vehicles and equipment will be cleaned off-site.

Plan	BMP ID	Measure
LID Precise Grading Plan	**NS-9 - Vehicle And Equipment Fuelling**	All vehicles and equipment will be fuelled off-site.
LID Precise Grading Plan	**NS-10 - Vehicle And Equipment Maintenance**	All vehicles and equipment will be maintained off-site.
LID Precise Grading Plan	**NS-12 - Concrete Curing**	Applies to all concrete construction.
LID Precise Grading Plan	**NS-13 - Concrete Finishing**	Applies to all concrete construction.
Operations and Maintenance		
Low Impact Development Study	**Open paved areas and planter areas**	a. Regular sweeping of all open and planter areas, at a minimum, on a weekly basis in order to prevent dispersal of pollutants that may collect those surfaces. b. Trash and recycling containers shall be used such that, If they are to be located outside or apart from the principal structure, are fully enclosed and watertight in order to prevent contact of storm water with waste matter, which can be a potential source of bacteria and other pollutants in runoff. These containers shall be emptied, and wastes disposed of properly on a regular basis.
Low Impact Development Study	**Education and Training**	a. The owner shall be made aware of the structural BMPs installed in the Project. Information materials, such as brochures, shall also be provided for their complete information. The Owner shall also be briefed about chemical management and proper methods of handling and disposal of wastes and should understand the on-site BMPs and their maintenance requirements.
LID O&M Plan	**Education for Property Owners, Tenants and Occupants**	Practical information material will be provided to the owner on general good housekeeping practices for each type of site occupancy that contributes to protection of storm water quality
Low Impact Development Study	**Landscaping**	a. Minimize the use of pesticides and fertilizers to the maximum extent practical. b. Regular pruning of trees and shrubs in the planter areas to avoid formation of dried leaves and twigs, which are normally blown by the wind during windy days. These dried leaves are likely to clog the surface inlets of the drainage system when rain comes, which would result to flooding of the surrounding area due to reduced flow capacities of the inlets.
LID O&M Plan	**Common Area Landscape Management**	Management of landscaped areas shall be performed consistent with the following: “Management Guidelines for Use of Fertilizers and Pesticides”
Low Impact Development Study	**Monitoring and Maintenance**	a. All BMPs shall be operated, monitored, and maintained for the life of the Project and at a minimum, all structural BMPs shall be inspected, cleaned-out, and where necessary, repaired, at the following minimum frequencies: 1) prior to October 15th each year; 2) during each

Plan	BMP ID	Measure
		month between October 15th and April 15th of each year and, 3) at least twice during the dry season (between April 16 and October 14 of each year). b. Debris and other water pollutants removed from structural BMPs during cleanout shall be contained and disposed of in a proper manner. c. The drainage system and associated structures and BMPs shall be maintained according to manufacturer's specification to ensure maximum pollutant removal efficiencies.
LID O&M Plan	**Activity Restriction**	b. No car washing will be permitted on the premises. c. No changing of oil or other auto repairs will be permitted on the premises. d. Do not sweep grass clippings, dead leaves into catch basins, or other landscaping related debris into catch basins. e. Do not perform paint cleanup activities in paved areas or allow rinse water from these activities to enter the storm drain system. Clean brushes containing water-based paint in a sink that is connected to the sanitary sewer system. f. Do not use detergents or other chemical additives when washing concrete sidewalks or building exteriors, use potable water only and collect wash water runoff using a vacuum truck, for proper offsite disposal. g. Keep premises, as well as trash container areas, free of litter.
LID O&M Plan	**Common Area Landscape Management**	Management of landscaped areas shall be performed consistent with the following: "Management Guidelines for Use of Fertilizers and Pesticides"
LID O&M Plan	**BMP Maintenance**	The responsible party (owner, agency name, phone number, and address) for implementation of each non-structural BMP and scheduled cleaning of all structural BMP controls shall be identified in this LID.
LID O&M Plan	**Common Area Catch Basin Inspection**	Owner to have privately owned catch basins cleaned and maintained, as frequently as necessary, to prevent sediment, garden waste, and trash, or other pollutants from entering the public streets and storm drain systems.
LID O&M Plan	**Street Sweeping Private Streets and Parking Lots**	Drive aisles and parking lots shall be swept on a regular basis using a vacuum sweeper to reduce the discharge of pollutants into the storm drain system from paved surfaces.
LID O&M Plan	**Design and Construct Outdoor Material Storage Areas to Reduce Pollutant Introduction**	Procedures and practices for the proper handling and storage of materials in a manner that minimizes or eliminates the discharge of these materials to the ground, storm drain system or to watercourses.

Plan	BMP ID	Measure
LID O&M Plan	**Vehicle Wash Areas**	Vehicle cleaning procedures and practices are used to minimize or eliminate the discharge of pollutants from vehicle and equipment cleaning operations to the ground, storm drain system or to watercourses.
LID O&M Plan	**Equipment Wash Areas**	Equipment cleaning procedures and practices are used to minimize or eliminate the discharge of pollutants from vehicle and equipment cleaning operations to the ground, storm drain system or to watercourses.
LID O&M Plan	**Fuelling Areas**	Vehicle and equipment fuelling procedures and practices are designed to minimize or eliminate the discharge of fuel spills and leaks onto the ground (impervious or pervious site surfaces) or into storm drain systems or to watercourses.

2.2 Project Construction

The proposed Project would require the following phases: demolition, site preparation, and construction, paving, and maintenance/operation. Construction activities will be conducted over approximately 14 to 16 months. Once construction is completed, routine operation and maintenance would occur.

Demolition is scheduled to take approximately five days and require approximately two to four workers. Demolition activities include removal of all existing structures on the site including one garage/storage structure, two non-residential metal building structures, and ancillary paved pad/parking lot, approximately five trees, and other on-site vegetation. A 16-yard dump truck would haul away the waste and debris to various waste disposal and/or construction and demolition debris recycling facilities such as EDCO Disposal (construction and demolition debris, mixed debris, and green waste), American Industrial Services (mixed debris) Hanson Aggregates (asphalt, concrete, and/or gravel) in Long Beach, and/or Greencycle (green waste) in Santa Fe Springs. Truck trips associated with hauling construction debris and cut material will be scheduled for off-peak hours to the extent feasible. Transportation of debris materials on highways will be covered with Tarpaulin or similar material to reduce debris spillage.

Site preparation and grading is scheduled to occur over approximately 10 days and would require four to six workers. Site preparation and grading consists of rough grading, over-excavation for foundations of proposed buildings, walkways and driveways, compaction, and precise grading for construction of the residential buildings. Cut material will be stockpiled on site to be used for necessary fill activities, eliminating the need to import soil. All stockpiled soil to be used for "fill" activities shall be tested to assess potential contaminants of concern that meet screening levels as outlined in DTSC's Preliminary Endangerment Assessment (PEA) Guidance Manual before use. Anticipated soil disturbance to balance the site is as follows:

- Cut - 1,802 cubic yards
- Fill - 118 cubic yards
- Export - 1,633 cubic yards

As discussed in Section 1.2 above, two abandoned oil wells are present on the Project Site. Both wells are located near open parking spaces providing more than 10 feet of access from the nearest surrounding property lines, allowing for unobstructed access to the wellheads if need be.

The oil wells would not be disturbed during demolition, site preparation, or construction activities. Oil Well #79's well cap elevation is 108.53 feet above mean sea level (msl) which is 7.97-feet below planned grade elevation of 116.50 feet msl. Oil Well #3's well cap elevation is 106.46 feet msl which is 10 feet below planned grade elevation. The location of abandoned oil wells and previous remediation activities are shown in Figure 3.10-1.

The combined building footprint for all eight proposed structures is 10,872 sqft of building area, 5,532 sqft of hardscape area, 6,840 sqft of driveway (concrete pavers) and 3,017 sqft of landscape area. Construction of the residential units, ancillary facilities, and landscaping is scheduled to take approximately 14-16 months and would be completed with a workforce of up to 5-10 workers. Construction activities will begin with installation of utilities, drainage systems, passive methane mitigation system, foundations, framing, roofing and interior and exterior finishes for the eight residential units. Plans for the Project including building setbacks and proposed landscaping are provided in **Appendix B**.

2.2.1.1 Construction Equipment

Specific details about construction scheduling and equipment were not known at the time this analysis was conducted. As such, the California Emissions Estimator Model (CalEEMod), version 2022.1 was used to estimate duration of construction phases and required construction equipment. Default equipment and usage hours are estimated in CalEEMod based on the Project type (i.e., single family residential) and overall size (i.e., 0.6 acres). Table 2.2-1 provides a summary of equipment types and usage for each construction phase and activity.

Table 2.2-1: Construction Equipment List by Project Activity

Construction Phase	Equipment	Quantity	Hours/Day	Engine Horsepower
Demolition (5 Days)	Tractors/Loaders/Backhoes	2	6	84
	Dozer	1	1	367
	Concrete/Industrial Saws	1	8	33
Site Preparation (5 Days)	Grader	1	8	148
	Tractors/Loaders/Backhoes	1	8	84
Grading (5 Days)	Grader	1	6	148
	Dozer	1	6	367
	Tractors/Loaders/Backhoes	1	7	84
Project Construction (270 Days)	Crane	1	4	367
	Forklifts	2	6	82
	Tractors/Loaders/Backhoes	2	8	84
Paving/Surfacing (5 Days)	Tractors/Loaders/Backhoes	1	7	84
	Cement and Mortar Mixers	4	6	10
	Pavers	1	7	81
	Rollers	1	7	36
Landscaping (5 Days)	Skid Steer Loader	1	8	71
Architectural Coating (5 Days)	Air Compressors	1	6	37

2.2.1.2 Construction Vehicle Trips

Onroad construction vehicle trips include construction worker trips to and from the job site, off-site hauling trips, and material delivery trips. The number of one-way trips of each type of

onroad activity was calculated using CalEEMod default values based on project dimensions and quantities of various construction materials. Trip lengths are based on CalEEMod defaults developed for the Project area. Table 2.2-2 summarizes onroad activity associated with construction of the proposed Project.

Table 2.2-2: Vehicle Trips Associated with Project Construction

Construction Phase	Trip Type	Number of One-Way Trips per Day[1]	One-Way Trip Length (miles)[2]
Demolition (5 Days)	Workers	10	18.5
	Vendor	0	10.2
	Haul	15	20.0
Site Preparation (5 Days)	Workers	5	18.5
	Vendor	0	10.2
	Haul	0	20.0
Grading (5 Days)	Workers	8	18.5
	Vendor	0	10.2
	Haul	41	20.0
Project Construction (270 Days)	Workers	3	18.5
	Vendor	1	10.2
	Haul	0	20.0
Paving/Surfacing (5 Days)	Workers	18	18.5
	Vendor	0	10.2
	Haul	0	20.0
Landscaping (5 Days)	Workers	3	18.5
	Vendor	0	10.2
	Haul	0	20.0
Architectural Coating (5 Days)	Workers	1	18.5
	Vendor	0	10.2
	Haul	0	20.0

Notes:

[1] Worker trip generation rates are calculated based on number of equipment. Vendor trips during construction are based on CalEEMod default values based on statewide construction surveys. Haul trip rates are based on demolition and/or material import/export quantities with an assumed truck capacity of 16 cubic yards.

[2] Trip lengths consist of default CalEEMod values developed for the Project Site.

2.3 Operations and Maintenance

Upon completion of the Project, general operations and maintenance would occur. These include vehicle circulation, unit use (utility), and HOA landscaping and stormwater system maintenance.

2.3.1.1 Vehicle trips associated with the Project.

Vehicle trips associated with the proposed development are generated by resident, worker, and delivery vehicles visiting the site and are based on CalEEMod defaults for residential development projects. Specifically, trip rates and trip link type are primarily from *Trip Generation Manual, 10th Edition* (ITE 2017). Vehicle trip purpose and length are based on the

2015 California Statewide Travel Demand Model for the specific Traffic Analysis Zone and/or regional travel demand models from the Southern California Association of Governments (SCAG). Table 2.3-1 summarizes the vehicle trip rates and vehicle miles traveled (VMT) associated with the residential development.

Table 2.3-1: Vehicle Trips and VMT Associated with Residential Development

Trip Type	Trip Rate	VMT[1]
Weekday	75.52 trips/day	579.57 miles/day
Saturday	76.32 trips/day	585.71 miles/day
Sunday	68.4 trips/day	524.93 miles/day
Annual Trips	**27,235 trips/year**	**209,013 miles/year**

Notes:

[1] VMT=Vehicle Trips*Vehicle Trip Lengths. VMT is inclusive of al vehicle types (i.e., passenger and commercial vehicles) and trip purposes for either an "average day" or "peak day."

2.3.1.2 Energy Use

Estimates of electricity and natural gas consumption are based on CalEEMod defaults for single family residential developments. Specifically, CalEEMod generates default electricity and natural gas consumption based on the Electricity Demand Forecast Zone and the land use subtype and building size and the energy intensity values for residential buildings as reported in the California Energy Commission's (CEC's) 2019 Residential Appliance Saturation Survey (CEC 2021).

Within Title 24 of the California Code of Regulations (Building Standards Code) is Part 6, the Building Energy Efficiency Standards (Energy Code). CEC implements Title 24, Part 6 to increase the energy efficiency of newly constructed and altered residential and nonresidential buildings. The CEC adopted the Energy Code in 1978 and has since updated it numerous times over the years, increasing the energy efficiency of new buildings with each subsequent update. CEC adopted the 2022 Energy Code in August 2021, and it in effect January 1, 2023. Accordingly, estimated electricity consumption for the proposed development is 55,161 kilowatt hours per year (kWh/year) and total natural gas consumption is estimated at 306,683 thousand British thermal units (kBTU/year).

2.3.1.3 Water Use

Estimated indoor residential water consumption is based on per capita daily water use rate of 34.5 gallons per day as cited by the Residential End Uses of Water published by the Water Research Foundation (2016). Accordingly, total indoor water use for the eight residential units is 298,190 gallons per year (based on assumed occupancy of four residents per dwelling).

Approximately 3,017 sqft of landscape area is incorporated into the proposed Project design. Landscape irrigation will consist of a combination of overhead spray and drip. Actual estimated water use for the site has been developed using an evapotranspiration rate of 39.7 inches per

year as recommended by the City of Signal Hill Water Conservation and Landscaping Code (13.10.010). Specifically, estimated total outdoor water use for the 3,017 sqft of landscape area is approximately 27,615 gallons per year. This is less than the estimated Maximum Applied Water Allowance established under the California Department of Water Resources' (DWR) 2015 Model Water Efficient Landscape Ordinance (CCR Title 23, Division 2, Chapter 2.7). As calculated in CalEEMod, the Maximum Applied Water Allowance for the landscaped area associated with the proposed development is 46,109 gallons per year.

2.3.1.4 Waste

The City of Signal Hill exclusively contracts with EDCO Disposal for solid waste and recycling collection services. The City requires that all residents, businesses, and developers within the City limits use EDCO for the collection of regular trash, recyclables, and debris. Using annual waste disposal rates from the California Department of Resources Recycling and Recovery (CalRecycle) data for residential land use in Los Angeles County of 0.26 tons per resident, total solid waste generation rates for the development are estimated at 6.37 tons per year (assuming four residents per dwelling).

Section B Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by the Project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Greenhouse Gas Emissions	X	**Hazards & Hazardous Materials**
X	**Biological Resources**	☐	Land Use/Planning	☐	Mineral Resources
☐	Hydrology/Water Quality	☐	Population/Housing	☐	Public Services
☐	Noise	☐	Transportation/Traffic	X	**Tribal Cultural Resources**
☐	Recreation	☐	Wildfire	X	**Geology and Soils**
☐	Utilities/Service Systems	☐	Air Quality	☐	Mandatory Findings of Significance
☐	Agriculture & Forestry Resources	☐	Energy		

X **Cultural Resources**

For the evaluation of potential impacts, the technical questions in this Initial Study come from Appendix G of the CEQA Guidelines (PRC 21000-21189; CCR Title 14, Div.6, Chapter 3, Sections 15000-15387). An analytical response to each question is provided. The analyses consider the long-term, direct, indirect, and cumulative impacts of the Project. To each question, there are four possible responses, each with varying degrees of *Significance*:

- **No Impact**. The Project would not have any measurable environmental impact on the environment.
- **Less than Significant Impact**. The Project may have the potential for affecting the environment, although these impacts will be below levels or thresholds that the City of Signal Hill or other responsible agencies consider to be significant.
- **Less than Significant Impact with Mitigation Incorporated**. The Project may have the potential to generate impacts that will have a significant impact on the environment. However, the level of impact would be reduced to levels that are less than significant with the implementation of mitigation measures.
- **Potentially Significant Impact**. The Project may result in environmental impacts that are significant and cannot be reduced to levels that are less than significant even with the implementation of mitigation measures.

Section C Determination

On the basis of this Initial Study:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

X I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

_____ _____

Signature **Date**

Section D Evaluation of Environmental Impacts

This Initial Study (IS) assesses the potential impacts of the proposed Project on all resource areas, pursuant to Appendix G of the CEQA Guidelines (PRC 21000-21189; CCR Title 14, Div.6, Chapter 3, Sections 15000-15387). As provided in the CEQA Checklist (Table ES-1) and analysis below:

- No impacts would occur to Agriculture and Forestry Resources, or Wildfire.
- Less than significant impacts would occur to Aesthetics; Air Quality; Energy; Greenhouse Gas Emissions; Hydrology and Water Quality; Land Use and Planning; Noise; Population and Housing; Public Services; Recreation; Transportation; Utilities and Services Systems; and the Mandatory Findings of Significance (i.e., significant environmental degradation; cumulative impacts; substantial adverse effects to human beings).
- Less than significant impacts with mitigation incorporated would occur to Biological Resrouces; Cultural Resrouces; Hazards and Hazardous Materials; Geology and Soils; and Tribal Cultural Resrouces.
- No Potentially Significant Impacts were identified that would merit the preparation of an Environmental Impact Report (EIR).

Table ES-2 below provides a description of the mitigation recommended to lower a potentially significant impact to less than significant.

Table ES-1. Summary of Environmental Impacts Per the CEQA Checklist

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Aesthetics. Would the Project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐
II. Agriculture. Would the Project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in	☐	☐	☐	☒

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district 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 applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐
IV. BIOLOGICAL RESOURCES. Would the Project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife	☐	☐	☐	☒

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
corridors, or impede the use of native wildlife nursery sites?				
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒
V. CULTURAL RESOURCES. Would the Project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐
VI. ENERGY. Would the Project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☐	☒
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒
VII. GEOLOGY AND SOILS. Would the Project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☒	☐
(i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
(ii) Strong seismic ground shaking?	☐	☐	☒	☐

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
(iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☒	☐
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
VIII. GREENHOUSE GAS EMISSIONS. Would the Project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐
IX. HAZARDS AND HAZARDOUS MATERIALS. Would the Project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?	☐	☐	☒	☐
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒
X. HYDROLOGY AND WATER QUALITY. Would the Project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?	☐	☐	☐	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:	☐	☐	☒	☐
i. result in a substantial erosion or siltation on- or off-site;	☐	☐	☐	☐
ii. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
iii. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐
iv. Impede or redirect flood flows?	☐	☐	☐	☒
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒
XI. Land Use and Planning. Would the Project:				
a) Physically divide an established community?	☐	☐	☐	☒

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐
XII. Mineral Resources. Would the Project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☒	☐
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☒	☐
XIII. Noise. Would the Project:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?	☐	☐	☒	☐
XV. POPULATION AND HOUSING. Would the Project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
XVI. PUBLIC SERVICES. Would the Project:				
a) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	☐	☐	☒	☐

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
i. Fire protection?	☐	☐	☒	☐
ii. Police protection?	☐	☐	☒	☐
iii. Schools?	☐	☐	☒	☐
iv. Parks?	☐	☐	☒	☐
v. Other public facilities?	☐	☐	☒	☐
XVII. RECREACTION. Would the Project:				
a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒
XVIII. TRANSPORTATION. Would the Project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐
XIX. TRIBAL CULTURAL RESOURCES.				
a) Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: i. Listed or eligible for listing in the California Register of Historical Resources, or in a local	☐	☒	☐	☐

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
register of historical resources as defined in Public Resources Code section 5020.1(k), or				
i. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐
XIX. UTILITIES AND SERVICE SYSTEMS. Would the Project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the waste water treatment provider, which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐
XX. Wildfire: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒
e) Harm the biological integrity of drainage systems and water bodies?	☐	☐	☐	☒
f) Will there be potential impact of project construction on storm water runoff?	☐	☐	☐	☒
g) Will there be potential impact of project post-construction activity on storm water runoff?	☐	☐	☐	☒
XXII. MANDATORY FINDINGS OF SIGNIFICANCE. Would the Project:				
a) a. Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
b) b. Does the Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
c) c. Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Table ES-2. Summary of Mitigation Measures

Would the Project?	Project Impact	Summary of Mitigation Measures (if necessary)
BIO(a). Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Less Than Significant With Mitigation	**MM-BIO-1: Pre-construction Clearance Survey.** Prior to performing project activities, including demolition and ground disturbing activities, a biological reconnaissance survey will be performed to verify the presence/absence of sensitive species. If a sensitive species is identified, no further work shall progress until consultation with the CDFW and/or USFWS has occurred.
CR(a). Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	Less Than Significant With Mitigation	**MM-CUL-1: Cultural and Historical Resources Due Diligence.** A CHRIS records search and formal search of potentially eligibly historical resources would be performed. Any newly identified resources would be avoided.
CR(b). Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	Less Than Significant With Mitigation	**MM-CUL-2: Inadvertent Discovery**. In the event that any archaeological features are discovered during construction, all work shall stop, and a qualified archaeologist shall be notified. The archaeologist shall record the site and consult the City on potential eligibility. The archaeologist shall prepare a report according to current professional standards and include recommendations for avoiding, mitigating, or relocating the resource.
CR(c). Disturb any human remains, including those interred outside of dedicated cemeteries?	Less Than Significant With Mitigation	**MM-CUL-1: Cultural and Historical Resources Due Diligence** and **MM-CUL-2: Inadvertent Discovery.**
GEO(f). Directly or indirectly destroy a unique paleontological resource to site or unique geological feature?	Less Than Significant With Mitigation	**MM-GEO-1: Worker Environmental Awareness Training.** All contractors and earth moving personnel shall be given Worker Environmental Awareness training by a qualified paleontological resource specialist prior to any ground-disturbing activities to discuss the activity's potential for impacting paleontological resources.
HAZ(a). Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less Than Significant With Mitigation	**MM-HAZ-1:** Soil Management Plan and Remedial Action Plan. ~~Clean-up Action Plan and Soil Management Plan.~~ In the event that previously unidentified, obvious, or suspected hazardous materials, contamination, debris, or other features or materials that could present a threat to human, health or the environment are discovered during construction, construction activities shall cease immediately until the affected area is evaluated by a qualified professional.
TCR(a). Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Less Than Significant With Mitigation	**MM-TCR-1: Tribal Monitor.** A tribal member would be present during ground disturbing activities to monitor the potential for encountering human remains, archaeological resources, or a tribal cultural resource.

Would the Project?	Project Impact	Summary of Mitigation Measures (if necessary)
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or, ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		

3.1 Impact Assessment Methodology

This section evaluates the potential environmental impacts of the proposed Project. Each environmental resource section provides background information and describes the environmental setting (baseline conditions) to help the reader understand the conditions that would cause an impact to occur. The regulatory framework for each environmental resource category is provided in **Appendix B**. Identification of the pertinent federal, state, and local (City, County, Regional) regulations, laws, policies, and plans serves to establish significance thresholds and permitting triggers.

Environmental impacts of the Project are then evaluated in conformance with CEQA (PRC Section 21000 et seq.) and the State CEQA Guidelines (Title 14, California Code of Regulations, Section 15000 et seq.), including Appendix G to the Guidelines (CEQA Checklist). Where necessary, each resource analysis recommends mitigation measures to reduce potentially significant impacts to a level of less than significant.

3.1.1 Environmental Baseline

The analysis of each environmental resource category begins with an examination of the existing physical setting (baseline conditions as determined pursuant to Section 15125(a) of the State CEQA Guidelines) that may be affected by the Project. The environmental baseline conditions are defined as the existing physical conditions in the affected area as they existed at the time this IS was published, including the consideration of historical trends in those conditions.

3.1.2 Significance Criteria

Significance criteria are identified for each environmental resource category. The significance criteria serve as benchmarks for determining if components of the Project or an alternative would result in a significant adverse environmental impact when evaluated against the environmental baseline conditions. Where quantitative thresholds are set by a regulatory agency, these are defined (e.g., air quality, noise, hazards). Where there are not quantitative thresholds, potential effects are evaluated guided by the CEQA Checklist questions. According to State CEQA Guidelines Section 15382, a significant effect on the environment means "…a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the Project…".

3.1.3 Impact Analysis

This IS considers four categories of environmental impacts, as follows:

- **No Impact**. The Project would not have any measurable environmental impact on the environment.

- **Less than Significant Impact**. The Project may have the potential for affecting the environment, although these impacts will be below levels or thresholds that the City of Signal Hill or other responsible agencies consider to be significant.
- **Less than Significant Impact with Mitigation Incorporated**. The Project may have the potential to generate impacts that will have a significant impact on the environment. However, the level of impact would be reduced to levels that are less than significant with the implementation of mitigation measures.
- **Potentially Significant Impact**. The Project may result in environmental impacts that are significant and cannot be reduced to levels that are less than significant even with the implementation of mitigation measures.

3.1.4 Formulation of Mitigation Measures and Mitigation Monitoring Program

For those impacts that are not altogether avoided or minimized to less than significant levels through enforcement of existing regulatory requirements, feasible and enforceable mitigation measures are formulated to eliminate or reduce the level of the impacts and focus on the protection of environmental resources. The effectiveness of a mitigation measure is subsequently determined by evaluating the impact remaining after its application. Those impacts meeting or exceeding the impact significance criteria after mitigation are considered residual impacts that remain significant. Implementation of more than one mitigation measure may be needed to reduce an impact below a level of significance.

The mitigation measures recommended in this IS are identified in the impact assessment sections and will be presented in a Mitigation Monitoring and Reporting Program (MMRP) in the MND and will be considered by the City of Signal Hill as conditions of approval in the land use approach (i.e., SP-21). The Draft MMRP is included as **Appendix A**. Compliance with the regulatory framework is also considered in assessing the potential significance of an environmental impact, but the specific requirements are not identified as mitigation measures because they have a separate monitoring, reporting, and enforcement framework through the agency with jurisdiction.

3.2 Aesthetics

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Aesthetics. Would the Project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Aesthetics. Would the Project:				
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

3.2.1 Environmental Setting

The Project Site consists of 0.6 acres and is currently occupied by a garage building and two (2) detached metal buildings, all with slab-on-grade foundations. The Project Site also contains three eucalyptus trees (a non-native invasive species) and low-lying vegetation (i.e., grass, weeds) scattered throughout the site. A paved driveway extends approximately 175 ft. from Temple Ave. on the east to the front of the western-most on-site building. Minimal lighting is present on the site, including outdoor lighting installed on storage building entrances.

Surrounding uses are dominated by residential developments. The area is densely developed and includes nearby sources of nighttime lighting, including some limited street lights on the streets adjacent to the Project Site, as well as outdoor lighting installed on nearby residential properties around the Project Site.

3.2.1.1 Roadways

No designated scenic highways are located within the boundaries of the City of Signal Hill. No candidate or officially designated state scenic highways are located within the City. The closest eligible state scenic highway is located southeast of the City and includes a portion of State Route 1 (SR-1) which ends at the Traffic Circle neighborhood in Long Beach (Caltrans 2018). The Project Site is 0.95 miles and is not visible from the end of the Traffic Circle neighborhood.

3.2.1.2 Local Viewpoints and Scenic Vistas

Signal Hill is considered the most valuable scenic resource in the City, and views from the hilltop are a valued public resource, including the scenic vistas from Hilltop Park, Sunset View, and Discovery Well parks (City 2001). The Project is located between 0.32 and 0.62 miles from the scenic vistas with a maximum elevation change of 232 feet from Hilltop Park.

3.2.2 Impact Assessment

AES(a). Have a substantial adverse effect on a scenic vista?

No Impact. There Project would not directly alter or impact any scenic vistas in the Project area. The proposed residences would blend into the surrounding area and not stand out in the viewshed from any scenic vista. Therefore, no impacts to scenic vistas would occur as result of the Project.

AES(b). Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Less Than Significant. The Project would remove three eucalyptus trees (a non-native invasive species) to develop the residences, but the Project plans include new landscaping which would create new green features on the site. Further, there are no state scenic highways within the Project area. Therefore, potential impacts to scenic resources would be less than significant.

AES(c). In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?

Less Than Significant. The Project would be developed in a heavily urbanized and developed area, dominated by mostly residential developments. The Project is seeking a zoning amendment to SP-21, which would allow for the lower density residential development. However, this action would not conflict with any applicable City guidance/zoning on aesthetics and design. The Project would blend into the surrounding area, which is predominately high-density residential development; therefore, the Project would generate less than significant impacts to applicable zoning and regulations that guide scenic quality.

AES(d). Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less Than Significant. As discussed in Section 2.1.3.6, the Project would develop new sources of exterior light but these lights would be down-casted, shielded, and in line with the City's code on lighting (**Appendix B** – Lighting Plan). These new sources of light would blend in with the highly urbanized and developed nature of the Project area. Therefore, the Project would not introduce a new source of substantial light or glare.

3.3 Agriculture

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
II. Agriculture. Would the Project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

3.3.1 Environmental Setting

The Project is not zoned for or designated as agricultural or forest land. The Project Site is located entirely within land zoned as high density residential (RH) and the areas surrounding the Project Site are developed with commercial, industrial, and residential uses. The California Department of Conservation (CDOC) maintains an important farmland finder which maps the Project Site in the City of Signal Hill as Urban and Built-Up Land. There are no farmland or agriculture zones within the City of Signal Hill; the closest mapped prime farmland is located over 5 miles from the Project area in Orange County (CDOC 2018). There are no Williamson Act lands in the vicinity of the Project area (CDOC 2017).

3.3.2 Impact Assessment

AG (a). Would the Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland

Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?

No impact. The Project Site is currently developed on land designated as Urban and Built-up Land (CDOC 2018). There are no farmland or agriculture zones within the City of Signal Hill; the closest mapped prime farmland is located over 5 miles from the Project area in Orange County (CDOC 2018). Therefore, the Project would have no impact and no mitigation measures are proposed.

AG (b). Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The Project Site is currently developed on land designated as Urban and Built-up Land (CDOC 2018). There are no agriculture zones or Williamson Act contract lands within the City of Signal Hill. Additionally, the entirety of Los Angeles County does not contain Williamson Act contract land. Therefore, the Project would have no impact and no mitigation measures are proposed.

AG (c). Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. There are no forest lands, timberlands, or areas zoned for timberland production within the city of Signal Hill. The Project Site is located within a residential zoning designation and is surrounded by developed urban areas. Therefore, the Project Would have no impact and no mitigation measures are proposed.

AG (d). Result in the loss of forest land or conversion of forest land to non-forest use?

No impact. As described under Impact AG (c) the Project would be developed on a previously disturbed plot located within an entirely urbanized area. There is no forest land within the vicinity of the Project Site. Therefore, the Project would have no impact and no mitigation measures are proposed.

AG (e). Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No impact. As described under Impact AG (a) and Impact AG (c) the Project would be developed on a previously disturbed plot located within an entirely urbanized area. There is no Farmland or forestland land within the vicinity of the Project Site. Therefore, the Project would have no impact and no mitigation measures are proposed.

3.4 Air Quality

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district 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 applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

3.4.1 Environmental Setting

The proposed Project is within the South Coast Air Basin (SCAB) under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and/or dispersion of air pollutants throughout the SCAB. Air pollutant emissions within the SCAB are generated by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point sources and area sources. Point sources occur at an identified location and are usually associated with manufacturing and industry. Examples of point sources are boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and produce many small emissions. Examples of area sources include residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and consumer products, such as barbeque lighter fluid and hair spray. Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, race cars, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment, such as when fine dust particles are pulled off the ground surface and suspended in the air during high winds.

Both the federal and State governments have established ambient air quality standards for outdoor concentrations of various pollutants to protect public health and welfare. These pollutants are referred to as “criteria air pollutants” because of the specific standards, or criteria, which have been adopted for them. The federal and State standards have been set at levels considered safe to protect public health, including the health of “sensitive” populations, such as asthmatics, children, and the elderly with a margin of safety; and to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

3.4.1.1 Meteorological Conditions

The climate in the SCAB is generally characterized by sparse winter rainfall and hot summers tempered by cool ocean breezes. A temperature inversion, a warm layer of air that traps the cool marine air layer underneath it and prevents vertical mixing, is the prime factor that allows contaminants to accumulate in the SCAB. The mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, and Santa Ana winds. The climate of the area is not unique, but the high concentration of mobile and stationary sources in the western portion of the SCAB, in addition to the mountains, which surround the perimeter of the SCAB, contribute to air quality challenges in the region.

Meteorological data for various monitoring stations is maintained by the Western Regional Climate Center. Meteorological data for the Project Site is expected to be similar to the data recorded at Long Beach Daugherty Field which is located one to two miles north/northeast of the Project Site(s). Over the 67-year period from 1949 through 2016 (the most recent data available), the average annual precipitation was 12.01 inches.

Wind flow patterns play an important role in the transport of air pollutants in the SCAB. The winds flow from offshore and blow eastward during the daytime hours. In summer, the sea breeze starts in mid-morning, peaks at 10-15 miles per hour, and subsides after sundown. There is a calm period until about midnight. At that time, the land breeze begins from the northwest, typically becoming calm again about sunrise. In winter, the same general wind flow patterns exist, except that summer wind speeds average slightly higher than winter wind speeds. This pattern of low wind speeds is a major factor that allows the pollutants to accumulate in the SCAB. The normal wind patterns in the SCAB are interrupted by the unstable air accompanying the passing storms during the winter, and infrequent strong northeasterly Santa Ana wind flows from the mountains and deserts north of the SCAB. Wind speed data collected by the National Oceanic and Atmospheric Administration at the Long Beach Airport station (approximately 1 mile from City of Signal Hill) indicates that the windiest month of the year in Long Beach is June, with an average hourly wind speed of 6.3 miles per hour in 2021. The calmest month of the year in Signal Hill is November, with an average hourly wind speed of 3.7 miles per hour.

3.4.1.2 Criteria Air Pollutants

A criteria air pollutant is any air pollutant for which ambient air quality standards (criteria) have been set by the U.S. Environmental Protection Agency (USEPA) (National Ambient Air Quality Standards [NAAQS]) or California Air Resources Board (CARB) (California Ambient Air Quality Standards [CAAQS]). The presence of these pollutants in ambient air is generally due to numerous diverse and widespread sources of emissions, and air quality standards have been established for these pollutants to protect public health. Criteria pollutants include ozone (O_3), fine particulate matter ($PM_{2.5}$), respirable particulate matter (PM_{10}), carbon monoxide (CO), nitrogen dioxide (NO_2), lead (Pb), sulfur dioxide (SO_2), visibility-reducing particles, sulfates, and hydrogen sulfide (H_2S). Table 3.4-1 presents the federal and state air quality standards for criteria pollutants. The sections below provide additional details about each of these criteria pollutants.

Table 3.4-1: Ambient Air Quality Standards

Pollutant	Averaging Time	CAAQS (ppm)	CAAQS (µg/m³)	NAAQS (ppm)	NAAQS (µg/m³)
Ozone (O_3)	1-hour	0.09	180	--	--
	8-hour	0.07	137	0.070	137
Nitrogen Dioxide (NO_2)	1-hour	0.18	339	0.100	188
	Annual	0.03	57	0.053	100
Sulfur Dioxide (SO_2)	1-hour	0.25	655	0.075	196
	3-hour	--	--	0.5	1,300
	24-hour	0.04	105	0.14 (for certain areas)	0.030 (for certain areas)
	Annual arithmetic mean	--	--	0.03	--
Carbon Monoxide (CO)	1-hour	20	23 (mg/m³)	35	40 (mg/m³)
	8-hour	9	10 (mg/m³)	9	10 (mg/m³)
Particulates (as PM_{10})	24-hour	--	50	--	150
	Annual arithmetic mean	--	20	--	--
Particulates (as $PM_{2.5}$)	24-hour	--	--	--	35
	Annual	--	12	--	12
Lead (Pb)	30-day	--	1.5	--	--
	Calendar average	--	--	--	1.5 (for certain areas)
	3-month (rolling average)[1]	--	--	--	0.15
Sulfates (as SO_4)	24-hour	--	25	--	--
Hydrogen Sulfide (H_2S)	1-hour	0.03	42	--	--
Vinyl Chloride	24-hour	0.01	26	--	--

Source: CARB 2017a

Notes: A rolling average is a calculation to analyze data points by creating series of averages of different subsets of the full data set. ppm = part(s) per million; µg/m³ = microgram(s) per cubic meter

Under the provisions of the U.S. Clean Air Act, the Los Angeles County portion of the SCAQMD has been classified as nonattainment (extreme, moderate, serious), nonattainment, attainment, maintenance, partial nonattainment, unclassified or no federal standard under the established National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) for various criteria pollutants. Table 3.4-2 provides the SCAQMD's designation and classification based on the various criteria pollutants under both NAAQS and CAAQS.

Table 3.4-2: SCAB CAAQS and NAAQS Attainment Status

NAAQS	CAAQS Attainment Status	NAAQS Attainment Status
Ozone (O_3)	Nonattainment	Extreme Nonattainment
Nitrogen Dioxide (NO_2)	Attainment	Unclassified/Attainment
Sulfur Dioxide (SO_2)	Attainment	Unclassified/Attainment
Carbon Monoxide (CO)	Attainment	Unclassified/Attainment
Particulates (as PM_{10})	Nonattainment	Attainment
Particulates (as $PM_{2.5}$)	Nonattainment	Serious Nonattainment
Lead (Pb)	Attainment	Nonattainment (Los Angeles County Portion)

Source: CARB 2023a

The SCAQMD divides the SCAB into 37 source receptor areas (SRAs) in which 42 monitoring stations currently operate to monitor concentrations of air pollutants in the region (SCAQMD 1999). The Project is located within SRA 4.

The following is a description of criteria air pollutants, typical sources and health effects and the recently documented pollutant levels in the Project vicinity.

3.4.1.2.1 Ozone (O_3)

The most severe air quality problem in Los Angeles County is high concentrations of O_3. High levels of O_3 cause eye irritation and can impair respiratory functions. High levels of O_3 can also affect plants and materials. Grapes, lettuce, spinach and many types of garden flowers and shrubs are particularly vulnerable to O_3 damage. O_3 is not emitted directly into the atmosphere but is a secondary pollutant produced through photochemical reactions involving hydrocarbons and nitrogen oxides (NO_X). Significant O_3 generation requires about one to three hours in a stable atmosphere with strong sunlight. For this reason, the months of April through October comprise the "ozone season." O_3 is a regional pollutant because O_3 precursors are transported and diffused by wind concurrently with the reaction process.

3.4.1.2.2 Suspended Particulate Matter (PM_{10} and $PM_{2.5}$)

Both State and Federal particulate standards now apply to particulates under 10 microns (PM_{10}) rather than to total suspended particulate, which includes particulates up to 30 microns in diameter. Continuing studies have shown that the smaller-diameter fraction of total suspended particulate represents the greatest health hazard posed by the pollutant; therefore, USEPA has recently established NAAQS for $PM_{2.5}$. The Project area is classified as nonattainment for both PM_{10} and $PM_{2.5}$ for CAAQS.

Particulate matter consists of particles in the atmosphere resulting from many kinds of dust and fume-producing industrial and agricultural operations, from combustion, and from atmospheric photochemical reactions. Natural activities also increase the level of particulates in the atmosphere; wind-raised dust and ocean spray are two sources of naturally occurring particulates. The largest sources of PM_{10} and $PM_{2.5}$ in Los Angeles County are vehicle movement over paved and unpaved roads, demolition and construction activities, and unplanned fires. PM_{10} and $PM_{2.5}$ are considered regional pollutants with elevated levels typically occurring over a wide geographic area. Concentrations tend to be highest in the winter, during periods of high atmospheric stability and low wind speed. In the respiratory tract, very small particles of certain substances may produce injury by themselves or may contain absorbed gases that are injurious. Particulates of aerosol size suspended in the air can both scatter and absorb sunlight, producing haze and reducing visibility. They can also cause a wide range of damage to materials.

3.4.1.2.3 Carbon Monoxide (CO)

Ambient CO concentrations normally correspond closely to the spatial and temporal distributions of vehicular traffic. Relatively high concentrations of CO would be expected along heavily traveled roads and near busy intersections. Wind speed and atmospheric mixing also influence CO concentrations; however, under inversion conditions, CO concentrations may be more uniformly distributed over a broad area.

Internal combustion engines, principally in vehicles, produce CO due to incomplete fuel combustion. Various industrial processes also produce CO emissions through incomplete combustion. Gasoline-powered motor vehicles are typically the major source of this contaminant. CO does not irritate the respiratory tract but passes through the lungs directly into the blood stream, and by interfering with the transfer of fresh oxygen to the blood, deprives sensitive tissues of oxygen, thereby aggravate cardiovascular disease, causing fatigue, headaches, and dizziness. CO is not known to have adverse effects on vegetation, visibility, or materials. Nitrogen Dioxide (NO_2) and Hydrocarbons

Los Angeles County has been designated as an attainment area for the NAAQS for NO_2. NO_2 is the "whiskey brown" colored gas readily visible during periods of heavy air pollution. Mobile sources and oil and gas production account for nearly all of the County's NO_X emissions, most of

which is emitted as NO_2. Combustion in motor vehicle engines, power plants, refineries and other industrial operations are the primary sources in the region. Railroads and aircraft are other potentially significant sources of combustion air contaminants. Oxides of nitrogen are direct participants in photochemical smog reactions. The emitted compound, nitric oxide, combines with oxygen in the atmosphere in the presence of hydrocarbons and sunlight to form NO_2 and O_3. NO_2, the most significant of these pollutants, can color the atmosphere at concentrations as low as 0.5 ppm on days of 10-mile visibility. NO_X is an important air pollutant in the region because it is a primary receptor of ultraviolet light, which initiates the reactions producing photochemical smog. It also reacts in the air to form nitrate particulates.

Motor vehicles are the major source of reactive hydrocarbons in the SCAB. Other sources include evaporation of organic solvents and petroleum production and refining operations. Certain hydrocarbons can damage plants by inhibiting growth and by causing flowers and leaves to fall. Levels of hydrocarbons currently measured in urban areas are not known to cause adverse effects in humans. However, certain members of this contaminant group are important components in the reactions, which produce photochemical oxidants.

3.4.1.2.4 Sulfur Dioxide (SO_2)

Los Angeles County has been designated as an attainment area for the NAAQS for SO_2. SO_2 is the primary combustion product of sulfur, or sulfur containing fuels. Fuel combustion is the major source of this pollutant, while chemical plants, sulfur recovery plants, and metal processing facilities are minor contributors. Gaseous fuels (natural gas, propane, etc.) typically have lower percentages of sulfur containing compounds than liquid fuels such as diesel or crude oil. SO_2 levels are generally higher in the winter months. Decreasing levels of SO_2 in the atmosphere reflect the use of natural gas in power plants and boilers.

At high concentrations, SO_2 irritates the upper respiratory tract. At lower concentrations, when respirated in combination with particulates, SO_2 can result in greater harm by injuring lung tissues. Sulfur oxides (SO_X), in combination with moisture and oxygen, results in the formation of sulfuric acid, which can yellow the leaves of plants, dissolve marble, and oxidize iron and steel. SO_X can also react to produce sulfates that reduce visibility and sunlight.

3.4.1.2.5 Lead (Pb) and Suspended Sulfate

Ambient Pb levels have dropped dramatically due to the increase in the percentage of motor vehicles that run exclusively on unleaded fuel. Ambient Pb levels in Los Angeles County are well below the ambient standard and are expected to continue to decline.

3.4.1.3 Regional Air Quality

Air quality in the SCAB is monitored by the SCAQMD, which operates a network of 38 permanent air monitoring stations and four single-pollutant source impact lead air monitoring sites throughout the SCAQMD jurisdiction (SCAQMD 2022). For the purposes of background

data and this air quality analysis, this analysis relied on data collected in the last three years for the California Air Resources Board (CARB) monitoring stations that are located in the closest proximity to the Project Site. Table 3.4-3 provides the background concentrations for O_3, PM_{10}, $PM_{2.5}$, CO, NO_2, SO_2, and Pb. Information is provided for monitoring stations #072, 077, 033, and 039.

Table 3.4-3: Existing Ambient Air Quality Monitoring Station in Project Area

Pollutant and Monitoring Station Location	Maximum Concentration			Days Exceeding Standard		
	2020	2021	2022	2020	2021	2022
O_3 – 1-hour CAAQS (0.09 ppm)						
Long Beach – Signal Hill	0.105	0.086	0.108	4	0	1
Long Beach – 2425 Webster Street	*	*		*	*	*
Compton – 700 North Bullis Road	0.152	0.085	0.111	3	0	1
O_3 – 8-hour CAAQS (0.07 ppm)						
Long Beach – Signal Hill	0.083	0.065	0.77	4	0	1
Long Beach – 2425 Webster Street	*	*	*	*	*	*
Compton – 700 North Bullis Road	0.115	0.077	0.085	4	1	1
O_3 – 8-hour NAAQS (0.070 ppm)						
Long Beach – Signal Hill	0.083	0.064	0.77	4	0	1
Long Beach – 2425 Webster Street	*	*	*	*	*	*
Compton – 700 North Bullis Road	0.115	0.076	0.085	4	1	1
PM_{10} – 24-hour CAAQS (50 µg/m³)						
South Long Beach	68.7	49.7	50.3	3	0	0
Long Beach – 2425 Webster Street	61.4	*	*	3	*	*
PM_{10} – 24-hour NAAQS (150 µg/m3)						
Long Beach – Signal Hill	*	*	57.9	*	*	0
South Long Beach	68.3	48.7	48.9	0	0	0
Long Beach – 2425 Webster Street	61.6	*	128.6	0	*	0
$PM_{2.5}$ - 24-hour NAAQS (35 µg/m³)						
Long Beach – Signal Hill	*	*	26.7	*	*	0
South Long Beach	63.7	42.9	26.6	10	4	0
North Long Beach	66.0	41.2	20.0	4	1	0
Long Beach – Route 710 Near Road	65.7	84.6	39.0	12	7	1
CO - 8-Hour CAAQS & NAAQS (9.0 ppm)						
No data collected	--	--	--	--	--	--
NO_2 - 1-Hour CAAQS (0.18 ppm)						
Long Beach – Signal Hill	0.075	0.059	0.058	0	0	0
Compton – 700 North Bullis Road	0.072	0.068	0.065	0	0	0
Long Beach – Route 710 Near Road	0.100	0.091	0.095	0	0	0
NO_2 - 1-Hour NAAQS (0.10 ppm)						
Long Beach – Signal Hill	0.075	0.059	0.058	0	0	0
Compton – 700 North Bullis Road	0.072	0.068	0.064	0	0	0
Long Beach – Route 710 Near Road	0.100	0.092	0.095	0	0	0
SO_2 – 24-hour Concentration - CAAQS (0.04 ppm) & NAAQS (0.14 ppm)						
No data collected	--	--	--	--	--	--
Pb - Maximum 30-Day Concentration CAAQS (1500 ng/m³)						
Los Angeles – North Main Street	8.6	*	*	*	*	*

Source: CARB 2023b

Notes: ppm= parts per million, µg/m^3 – micrograms per cubic meter

* There was insufficient (or no) data available to determine the value.

3.4.1.4 Sensitive Receptors

Some population groups, such as children, the elderly, and acutely and chronically ill persons are considered more sensitive to air pollution than others. Sensitive receptor locations typically include residential areas, hospitals, elder-care facilities, rehabilitation centers, daycare centers, and parks. The Project Site is in an urban area surrounded by residential developments.

Sensitive receptors in proximity to Project components include multiple single family and multi-family residences surrounding the Project Site. Table 3.4-4 summarizes the sensitive receptors in the Project area and distance to the nearest Project components.

Table 3.4-4: Nearest Residents, Schools, and Hospitals

Direction from Project Site	Sensitive Receptor	Distance to Nearest Project Component
Northern Boundary	Multifamily Development (1957 Temple Ave.)	10 feet
Northern Boundary	Pending Multi-Family Development (2750 E. 20th St.)	10 feet
Western Boundary	Multifamily Development (1903 Temple Ave.)	30 feet
Southern Boundary	Multifamily Development (1903 Temple Ave.)	40
East	Single Family Residences (1925-1941 Crescent Dr.)	85

3.4.2 Impact Assessment

3.4.2.1 Significance Criteria

Appendix G of the CEQA Guidelines are used to determine whether the Project would result in significant impacts related to air quality. The criteria listed below consider if the Project would:

a. Conflict with or obstruct implementation of the applicable air quality plan.

b. Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment under an applicable Federal or State ambient air quality standard.

c. Expose sensitive receptors to substantial pollutant concentrations.

d. Result in other emissions (such as those leading to odors or adversely affecting a substantial number of people.

3.4.2.1.1 SCAQMD Significance Thresholds

The City of Signal Hill, as the CEQA Lead Agency, also applies the SCAQMD's Significance Thresholds (SCAQMD 2019) to assess the impact of project-related air pollution emissions.

Table 3.4-1 presented in Section 3.4.1.2 above details these significance thresholds. There are separate thresholds for construction-related and operational emissions. A project with daily emission rates below these thresholds is considered to have a less than significant impact on regional air quality and to not make a considerable contribution to a cumulative impact.

In addition, as detailed in Section 3.4.2.3, the SCAQMD provides Localized Significance Thresholds (LSTs) for projects that are five acres or less. To provide a conservative assessment, each individual Project Site is considered a 1-acre construction site for the purpose of comparing to the relevant LSTs. The Project is located in SRA 4. Accordingly, the emissions thresholds for SRA 4 for receptors located 25 meters from individual Project Sites as summarized in Table 3.4-4 presented in Section 3.4.1.4 above, are used to determine whether air quality impacts from construction of the proposed Project within the SCAQMD may be significant.

3.4.2.2 Air Quality Analysis Methods

3.4.2.2.1 Short-Term Construction Emissions

Construction of the Project was assumed to commence in the third quarter of 2024 and was estimated to take up to 16 months to complete. The Project would result in both short-term and long-term emissions of air pollutants associated with construction and operations. Construction emissions would include exhaust from the operation of conventional construction equipment, on-road emissions from employee vehicle trips and haul truck trips, fugitive dust as a result of grading and vehicle travel on paved and unpaved surfaces.

Construction emissions were estimated using the latest version of California Emissions Estimator Model (CalEEMod), version 2022.1. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operation of a variety of land use projects. The model utilizes widely accepted federal and state models for emission estimates and default data from sources such as USEPA AP-42 emission factors, CARB vehicle emission models, and studies from California agencies such as the California Energy Commission (CEC). CalEEMod inputs for construction activities consist of the data provided for offroad equipment operations detailed in Table 2.2-1 and vehicle miles traveled detailed in Table 2.2-2 in Section 2.2.1.2 above. Default CalEEMod inputs were used for modeling where Project-specific details were not readily ascertainable (e.g., fleet mix and trip length).

3.4.2.2.1 Long-Term Operation Emissions

Upon completion of the Project, general operations and maintenance would occur. These include vehicle circulation, unit use (utility), and Home Owners' Association (HOA) landscaping and stormwater system maintenance. Within CalEEMod, operational emissions are categorized

into three different types of emissions: area, energy, and mobile. Area emissions refers to those type of emissions that consist of VOCs, such as architectural coatings; landscape equipment and fuel; cleaning supplies; and wood-burning stoves. Energy emissions quantify the proposed Project's indirect emissions related to the consumption and generation of energy, while mobile emissions estimate the proposed Project's emissions from on-road mobile sources. The analysis of long-term operational impacts also used the CalEEMod computer model and associated defaults for residential development area, energy, and mobile source emissions relative to the development size. For mobile source emissions, CalEEMod default trip generation rates for the development are presented in Section 2.2.1.2 above in Table 2.2-2.

3.4.2.2.2 CO "Hotspot" Analysis

Ambient CO concentrations normally correspond closely to the spatial and temporal distributions of vehicular traffic. Relatively high concentrations of CO would be expected along heavily traveled roads and near busy intersections. CO concentrations are also influenced by wind speed and atmospheric mixing. CO concentrations may be more uniformly distributed when inversion conditions are prevalent in the valley. Under certain meteorological conditions, CO concentrations along a congested roadway or intersection may reach unhealthful levels for sensitive receptors (e.g., children, the elderly, hospital patients, etc.). This localized impact can result in elevated levels of CO, or "hotspots" even though concentrations at the closest air quality monitoring station may be below NAAQS and CAAQS.

The localized Project impacts depend on whether ambient CO levels in the Project vicinity would be above or below NAAQS. If ambient levels are below the standards, a project is considered to have significant impacts if a project's emissions exceed one or more of these standards. If ambient levels already exceed a state standard, a project's emissions are considered significant if they would increase one-hour CO concentrations by 10 ppm or more or eight-hour CO concentrations by 0.45 ppm or more. Typical criteria by which CO "Hot Spot" modeling should be considered include:

1. A traffic study for the Project indicates that the Level of Service (LOS) on one or more streets or at one or more intersections in the Project vicinity would be reduced to LOS E or F; or
2. A traffic study indicates that the Project would substantially worsen an already existing LOS F on one or more streets or at one or more intersections in the Project vicinity.

The Project is located in an existing built out urban environment. Further, the Project includes a relatively small residential development on RH-zoned land, consistent with surrounding land uses and baseline conditions. While additional vehicles would have to travel to and from the Project Site to facilitate construction of the proposed site improvements, these additional vehicle trips would be minimal (see Table 2.2-2 above) and temporary/short-term in nature (i.e., construction is expected to last no more than 16 months). Once construction is complete, vehicle trips associated with the residential land use would be minimal. For these reasons, the

Project is not anticipated to permanently change or increase operational traffic within the immediate vicinity of the Project Site, or within the City of Signal Hill more broadly. Therefore, CO "Hotspot" Modeling was not conducted for this Project and no concentrated excessive CO emissions are expected to be generated once temporary construction activities at the Project Site are completed.

3.4.2.3 Impact Discussion

AIR (a). Would the Project conflict with or obstruct implementation of the applicable air quality plan?

Construction

Less Than Significant. Under this criterion, the SCAQMD recommends demonstration that a project would not directly obstruct implementation of an applicable air quality plan and that a project be consistent with the assumptions (typically land-use related, such as resultant employment or residential units) upon which the air quality plan is based. Construction of the proposed Project would result in an increase in short-term employment compared to existing conditions. While the proposed Project would require up to approximately 10 workers per day at any given time over the construction process, these jobs are temporary in nature and would be expected to be filled from the local labor market. Thus, it is not anticipated that a substantial number of construction workers would move to the region to work on the proposed project. Furthermore, the construction activities would not result in permanent employment opportunities for the region. Therefore, construction jobs associated with construction of the proposed Project would not conflict with the long-term population projections upon which the SCAQMP are based.

Construction activities associated with the proposed Project would temporarily generate emissions of criteria pollutants, which are primarily associated with mobile equipment exhaust. Construction activities would also generate fugitive dust emissions from vehicles, grading, and demolition activities. As set forth in *Impact Criteria (b)* below, the total construction emissions associated with the proposed Project would not exceed the SCAQMD thresholds for criteria pollutants. The proposed Project would also comply with CARB requirements to minimize short-term emissions from on-road and off-road diesel equipment as set forth in Title 13, CCR, Sections 2485 and 2449. Pursuant to SCAQMD Rule 403, the Project would be required to comply with regulations for controlling fugitive dust. Compliance with these requirements is consistent with and meets or exceeds the SCAQMP requirements for control strategies intended to reduce emissions from construction equipment and activities. Because the Project would not conflict with the control strategies intended to reduce emissions from construction equipment, construction activities associated with the proposed Project would not conflict with or obstruct implementation of the SCAQMP and impacts would be less than significant.

Operation

Less Than Significant. As demonstrated for *Impact Criteria (b)* below, the proposed Project's long-term (operational) emissions will be below levels that the SCAQMD considers to be a significant impact. As such, the Project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay timely attainment of air quality standards.

Conformance with the SCAQMP for development projects is determined by demonstrating compliance with local land use plans and/or population projections, meeting the land use designation set forth in the local General Plan, and comparing assumed emissions in the AQMP to proposed emissions. The Project proposes low-density residential which would result in lower population density than the High-Density Residential land use designated in the City of Signal Hill Land Use Element; therefore, the Project would not conflict with the population growth projections associated with the City's General Plan. In addition, the Project will not significantly affect any regional population, housing, and employment projections prepared for the region. Projects that are consistent with the Projections of employment and population forecasts identified in the Regional Transportation Plan/Sustainable Communities Strategies (RTP/SCS) prepared by SCAG are considered consistent with the SCAQMD's AQMP growth projections, since the RTP/SCS forms the basis of the land use and transportation control portions of the SCAQMP. According to the SCAQMP, the SCAB had a population of 16.7 million in 2018 and is projected to have a population of 17.2 million by the year 2027 (these numbers are derived from the 2020-2045 RTP/SCS prepared by SCAG). According to the Growth Forecast Technical Report prepared by SCAG for the 2020-2045 RTP/SCS, the City of Signal Hill is projected to add a total of 900 residents from 2018 through the year 2045. The proposed Project's potential growth is anticipated to be 32 persons, which is based on the ratio of four persons per household. The number of residents that will be added is well within SCAG's growth forecast of 900 residents for the City of Signal Hill. Thus, the proposed Project will not conflict with the regional population forecast and distribution in the SCAQMP. In addition, the Project is in conformance with SCAG's regional sustainable development policies that promote infill development. Because the proposed Project complies with local land use plans and population projections and would not exceed SCAQMD's regional mass daily emissions thresholds, the proposed Project would not conflict with or obstruct implementation of the applicable air quality plan. Impacts would be less than significant.

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

Construction

Less Than Significant. As shown above in Table 3.4-2, the criteria pollutants for which the Project area is in state nonattainment under applicable air quality standards are O_3, PM_{10}, and $PM_{2.5}$. The SCAQMD's application of thresholds of significance for criteria air pollutants is relevant to the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality. Construction would result in a temporary increase in criteria pollutant emissions from engine exhaust during on-road vehicle and truck trips and off-road construction equipment operations, and fugitive dust during earthmoving and demolition activities and helicopter takeoff and landings. Primary criteria pollutants emitted during construction projects are NO_X, VOC, PM_{10}, and $PM_{2.5}$. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of construction activity, and prevailing weather conditions. Table 3.4-5 summarizes the estimated unmitigated maximum daily emissions from construction activities.

Table 3.4-5: Unmitigated Maximum Daily Project Construction-Generated Emissions

Pollutant	Project Construction-Related Emissions (lbs/day)	SCAQMD Threshold (lbs/day)	SCAWMD LST Threshold (lb/day)	Exceed Thresholds?
ROG	26.15	75	--	No
NO_X	15.18	100	57	No
CO	12.59	550	585	No
SO_2	0.03	150	--	No
PM_{10}	3.51	150	4	No
$PM_{2.5}$	1.76	55	3	No

Source: CalEEMod Results in Appendix D.

Note that emissions are representative of the maximum daily output (i.e., maximum of summer or winter results).

As summarized in Table 3.4-5, unmitigated construction related ROG, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$ would be below the SCAQMD significance thresholds. Although the Project construction emissions would not exceed the SCAQMD thresholds, it must comply with the anti-idling requirements set forth in Title 13, CCR, Sections 2485 and 2449 and SCAQMD Rule 403 regulations for controlling fugitive dust which would further reduce impacts associated with fugitive dust emissions. The SCAQMD *White Paper on Potential Control Strategies to Address Cumulative Impacts* (2003) addresses cumulative impacts of air pollution and notes that projects that do not exceed the Project-specific thresholds are generally not considered to be cumulatively significant. Specifically, the SCAQMD cumulative significance thresholds are the same as project-specific significance thresholds. Therefore, potential adverse impacts associated with the proposed Project would not be "cumulatively considerable" as defined by CEQA Guidelines Section 15064(h)(1) for air quality impacts. The court upheld the SCAQMD's approach to utilizing the established significance thresholds to determine whether the impacts of a project would be cumulatively considerable in *Rialto Citizens for Responsible Growth v. City of Rialto* (2012) Cal. App. 4th 899. Thus, it may be concluded that construction of downstream facilities would not significantly contribute to an existing violation of air quality standards for regional pollutants (e.g., ozone) and will not contribute to a significant and unavoidable cumulative air quality impact. In terms of local air quality, the Project construction activities would not produce significant emissions exceeding the SCAQMD's LSTs for NO_X, CO, PM_{10}, or $PM_{2.5}$. Therefore, the Project's potential to result in a cumulatively considerable net increase of any criteria pollutant during construction is considered less than significant.

Operations

Less Than Significant. Operational or long-term emissions occur over the life of the Project. Both mobile and area sources generate operational emissions of criteria pollutants. Area source emissions arise from consumer product usage, heaters that consume natural gas, gasoline-powered landscape equipment, and architectural coatings (painting). Mobile source emissions from motor vehicles are the largest single long-term source of air pollutants from the operation of the Project. Small amounts of emissions would also occur from area sources such as the consumption of natural gas for heating, from landscaping emissions, and consumer product usage. As detailed in Section 3.4.2.2, the operational emissions were estimated using the latest version of CalEEMod and are summarized in Table 3.4-6.

Table 3.4-6: Unmitigated Maximum Daily Project Operational Emissions

Sector	ROG (lb/day)	NO_X (lb/day)	CO (lb/day)	SO_2 (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
Mobile	0.24	0.17	1.95	0.0045	0.42	0.12
Area	2.61	0.17	4.52	0.0104	0.57	0.56
Energy	0.005	0.8	0.03	0.0005	0.006	0.006
Water	--	--	--	--	--	--
Waste	--	--	--	--	--	--
Refrigerants	--	--	--	--	--	--
Total	**2.64**	**0.42**	**6.51**	**0.0154**	**0.99**	**0.68**
SCAQMD Mass Daily Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Exceed Threshold?	*No*	*No*	*No*	*No*	*No*	*No*
SCAQMD LST	**--**	**57**	**585**	**--**	**1**	**1**
Exceed LST?	*No*	*No*	*No*	*No*	*No*	*No*

Source: CalEEMod Results in Appendix D.

Note that emissions are representative of the maximum daily output (i.e., maximum of summer or winter results).

As summarized in Table 3.4-6, the Project's daily projected long-term emissions would not exceed the SCAQMD mass daily or LST thresholds. As noted for construction impacts above, projects that do not exceed the SCAQMD project-specific thresholds are generally not considered to be cumulatively significant Therefore, following construction, the Project's potential to result in a cumulatively considerable net increase of any criteria pollutant is considered ***less than significant***.

AIR (c). Would the Project expose sensitive receptors to substantial pollutant concentrations?

Construction

Less Than Significant. Land uses that are generally considered more sensitive to air pollution than others are as follows: hospitals, schools, residences, playgrounds, child-care centers, athletic facilities, and retirement/convalescent homes. As summarized in Table 3.4-4 in Section 3.4.1.4 above, residential receptors surround the Project Site. Construction of the Project would result in temporary, short-term project-generated emissions of diesel particulate matter (DPM), ROG, NO_X, CO, and PM_{10} from the exhaust of offroad, heavy-duty diesel equipment and construction-related truck traffic.

As discussed above, SCAQMD has developed LST look-up tables for Project Sites that are one, two, and five acres in size to simplify evaluation of localized emissions at small sites. LSTs are provided for each source receptor area and various distances from the source of emissions and represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or State ambient air quality standards (which are established to protect the health of the most sensitive groups) in the affected area. As discussed for *Impact Criteria (b)* above, emissions generated during construction were calculated with the SCAQMD's CalEEMod model. The predicted emissions associated with construction are presented in Table 3.4-5 above. As shown in Table 3.4-5, construction activities would not exceed the SCAQMD's LST for the specified pollutants for receptors that are within 25 meters of the Project's construction activities. Therefore, based on SCAQMD guidance, localized emissions of criteria pollutants would not have the potential to expose sensitive receptors to substantial concentrations that would present a public health concern. The primary TAC that would be generated by construction activities is DPM which would be released from

the exhaust stacks of construction equipment. The construction emissions modeling conservatively assumed that all equipment present on the Project Site would be operating simultaneously throughout most of the day, while in all likelihood this would rarely be the case. Therefore, given that the conservative estimate of maximum daily emissions of DMP is below the LSTs, the magnitude of daily DPM emissions, would not be sufficient to result in substantial pollutant concentrations at nearby off-site locations. Furthermore, according to SCAQMD methodology, health risks from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of TACs over a 30-year period will contract cancer based on the use of standard risk-assessment methodology. The entire duration of construction activities associated with implementation of the Project is anticipated to be approximately 16 months, and the magnitude of daily DPM emissions will vary over this time period. With compliance with CARB Heavy-Duty On-Road and Off-Road Vehicle Regulations, construction activities would limit idling to no more than five minutes, which would further reduce nearby sensitive receptors' exposure to temporary and variable DPM emissions. No residual emissions and corresponding individual cancer risk are anticipated after construction. Because there is such a short-term exposure period, construction TAC emissions would result in a less than significant impact. Therefore, construction of the Project would not expose sensitive receptors to substantial DPM concentrations, and impacts would be less than significant.

Operation

Less Than Significant. The Project Site would be redeveloped with eight single-family dwellings and associated parking, land uses that are not associated with TAC emissions. It is expected that quantities of hazardous TACs generated on-site (e.g., cleaning solvents, paints, landscape pesticides) for the residential land use would be below thresholds warranting further study under California Accidental Release Program. As summarized in Table 3.4-6, the Project would generate long-term emissions on-site from area and energy sources that would generate negligible pollutant concentrations of CO, NO_2, $PM_{2.5}$, or PM_{10} at nearby sensitive receptors. While long-term operations of the Project would generate traffic that produces off-site emissions, these would not result in exceedances of CO air quality standards at roadways in the area due to three key factors. First, CO hotspots are extremely rare and only occur in the presence of unusual atmospheric conditions and extremely cold conditions, neither of which applies to this Project area. Second, auto-related emissions of CO continue to decline because of advances in fuel combustion technology in the vehicle fleet. Finally, the Project would not contribute to the levels of congestion that would be needed to produce emissions concentrations needed to trigger a CO hotspot, as it would generate a maximum of 76.32 vehicle trips per day to the local roadway network. This negligible contribution to local traffic would not substantially worsen conditions on local roads.

As detailed in Section 2.1, the Project Site was historically used for oil and gas production with two previously abandoned oil wells located onsite. Accordingly, for the evaluation of health risks associated with the development at the Project Site, the analysis below relies upon the results of the Health Risk Assessment (HRA) conducted for the Project Site to estimate the potential risk and hazard due to exposure to volatiles in soil vapor in shallow soil (10-feet below ground surface [bgs] or less) and deeper soil (greater than 10-feet bgs). Chemicals of potential concern (COPCs) in soil vapor identified at the Project Site include tetrachloroethylene (PCE), toluene, and total xylenes. These COPCs were analyzed in the HRA with respect to potential pathways of exposure for future onsite residents, commercial building. The results of the HRA indicated that the maximum cancer risk associated with soil vapors

would be 2.1 cancers per one million for future residents and 0.48 cancers per one million for commercial occupants. The cancer risk for future residential receptors would not exceed the SCAQMD's threshold of 10 cancers per one million. Methane was also detected in soil vapor samples collected onsite. Pursuant to the City of Signal Hill's Oil and Gas Code, Section 16.24.080, a methane mitigation system will be installed subslab of all proposed buildings which will effectively mitigate risks and hazards due to vapor intrusion to negligible conditions, ensuring the Project Site is safe for any future intended use, including residential habitation. The Project would not result in any additional substantial emissions of TACs during the operational phase, since the Project would not include typical sources of acutely and chronically hazardous TACs, such as industrial manufacturing processes and automotive repair facilities.

In addition, the SCAQMD recommends that health risk assessments be conducted for substantial sources of diesel particulate emissions (e.g., truck stops and warehouse distribution facilities) and has provided guidance for analyzing mobile source diesel emissions. The Project would not generate a substantial number of truck trips. Based on the limited activity of TAC sources, the Project would not warrant the need for a health risk assessment associated with stationary or mobile-sources. In addition, the results of the HRA performed for soil vapor detected at the Project Site indicates that TACs onsite are below the SCAQMD threshold. Soil vapor and methane that may be present onsite will be sufficiently reduced to less than significant levels through compliance with applicable regulations and installation of a methane mitigation system subslab of all proposed buildings onsite. Therefore, the Project's operational air quality impacts on local sensitive receptors would be less than significant.

AIR (d). Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Construction/Operation

Less Than Significant. Odors and dust are air pollutants that can have negative health impacts. While almost any source may emit objectionable odors, some land uses will be more likely to produce odors or dust because of their operation. According to the SCAQMD CEQA Air Quality Handbook, the types of facilities or operations that are prone to generate odors, dust, and other air pollutants include: agriculture (farming and livestock); chemical plants; composting activities; dairies; fiberglass molding; landfills; refineries; rail yards; wastewater treatment plants; and materials recovery facilities (MRFs). Odors may also be generated during a project's construction phase as a result of short-term diesel exhaust emissions from on-site heavy-duty equipment and from material deliveries, the installation of asphalt pavement, and the application of architectural coatings. Fugitive dust is also typically generated during a project's construction phase by increased wind or disturbance from construction vehicles and equipment. The CARB requires fleets of off-road diesel equipment to limit idling to five minutes, unless idling is necessary to perform a task. In addition, measures established by the SCAQMD to reduce the generation of fugitive dust are identified in SCAQMD Rule 403. These measures are standard conditions that are mandatory for projects constructed within the SCAB. Finally, regulations restricting the VOC content of various coatings are included in SCAQMD Rule 1113. For example, according to SCAQMD Rule 1113, exterior building coatings and roof coatings are restricted to a VOC content of 50 grams of VOCs per liter. The Project Applicant will be required to adhere to all three of the aforementioned regulations during the Project's construction. As a result, the Project's construction phase will result in less than significant impacts with respect to the generation of odors and fugitive dust.

Once occupied, the proposed Project will not result in the generation of objectionable odors since the proposed Project is residential in nature and will not be involved in any of the previously mentioned odor generating activities. As a result, the potential construction and operational impacts will be less than significant.

3.5 Biological Resources

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES. Would the Project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

3.5.1 Environmental Setting

The Environmental Resources Element of the City of Signal Hill General Plan describes the biological resources present throughout the City. Historically, the dominant plant community in the City was coastal sage scrub. However, following development of the area, this native community has been replaced by ruderal species due to brush clearing activities. Remnants of sage scrub communities may be found in some of the brushy, open areas adjacent to existing oil wells within the city limits (City 1986). Available habitat in Signal Hill is degraded and as such, most animals are expected to be common, widespread, and highly adaptable species. No plant or wildlife species designated as rare, threatened, or endangered by the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Wildlife (CDFW), or California Native Plant Society (CNPS) have been located or are expected to occur at the Project Site or within the City of Signal Hill (City 1986).

3.5.1.1 Vegetation Communities and Land Cover Types

The Project Site is a previously disturbed and developed site with limited vegetation present (i.e., grass, bare dirt). Eucalyptus trees (*Eucalyptus* spp.; a non-native invasive species) border the outside of the site along the western and southern boundaries of the site; the canopies of the trees minimally overhang the site boundary along the southern border that are trimmed for the utility lines and do not extend further onto the site (site visit conducted from public view on March 3, 2024, Figure 2.1-2). The land cover types at the Project Site consist of disturbed land, with sparce grass and asphalt surrounding the existing structures. Three young eucalyptus trees (a non-native invasive species) were observed at the southeast portion of the site and are the only present of vegetation within the central portion of the site. There is one small tree is located in the median (between the sidewalk and the street), outside of the site boundary to the east.

In 2022, a biological reconnaissance survey for another project was conducted near the Project Site (<.25 miles) to characterize existing vegetation communities and potential wildlife habitats in the area (ECORP 2022a). As described in ECORP (2022a), the disturbed/developed land cover areas in the Project vicinity support ornamental trees and patches of scattered non-native vegetation such as flax-leaved horseweed (*Erigeron bonariensis*), pigweed (*Amaranthus albus*), Bermuda grass (*Cynodon dactylon*), puncture vine (*Tribulus terrestris*), and other non-native grasses (*Bromus* sp.).

3.5.1.2 Common Wildlife

The Project Site is fully developed, and the wildlife habitat present is suitable only to urban tolerant wildlife species. No water features or resources are present, and no fish or amphibian species are anticipated to occur on the Project Site. The same biological survey that cataloged nearby vegetation detected the following wildlife species: common raven (*Corvus corax*), house sparrow (*Passer domesticus*), mourning dove (*Zenaida macroura*), northern mockingbird

(*Mimus polyglottos*), black phoebe (*Sayornis nigricans*), barn swallow (*Hirundo rustica*), Allen's hummingbird (*Selasphorus sasin*), western fence lizard (*Sceloporus occidentalis*), and side-blotched lizard (*Uta stansburiana elegans*). No raptor species were noted, but red-tailed hawk (*Buteo jamaicensis*) is a species that is typically seen in similar habitat within ornamental and eucalyptus trees (a non-native invasive species). Any of the common mammal species found in the suburban areas of southern California may use or traverse the Project Site on occasion, including raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), coyote (*Canis latrans*), and small rodents (ECORP 2022a).

3.5.1.3 Wildlife Movement

Within large, open space areas where few or no man-made or naturally occurring physical constraints to wildlife movement are present, wildlife corridors may not yet exist. However, once open space areas become constrained and/or fragmented as a result of urban development or the construction of physical obstacles (e.g., roads and highways), the remaining landscape features or travel routes that connect the larger open space areas become corridors as long as they provide adequate space, cover, food, and water and do not contain obstacles or distractions (e.g., man-made noise, lighting) that would generally hinder wildlife movement. Alternatively, redevelopment and in-fill Projects within fully developed landscapes, such as those in urban and suburban environments, may not be located adjacent to any open space areas and local wildlife movement is limited only to urban-tolerant wildlife species (e.g., raccoon, opossum, and coyote) and urban-adapted bird species. The Project Site is located within a totally developed urban area surrounded by residential development and does not provide a linkage to undeveloped areas. Only urban-tolerant wildlife would be expected to use the site for wildlife movement.

3.5.1.4 Special Status Species

Special status species are plants and animals that meet the definition of rare, threatened, or endangered pursuant to §15380 of the CEQA Guidelines. Special status species discussed in this document include the following:

- Species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (ESA).
- Species listed or proposed for listing as threatened or endangered under the California Endangered Species Act (CESA).
- Species that are recognized as candidates for future listings by agencies such as USFWS, National Oceanic and Atmospheric Administration's National Marine Fisheries Service, and CDFW.
- Species defined by CDFW as Species of Special Concern.
- Species classified as Fully Protected by CDFW.

- Bat species listed by the Western Bat Working Group as priority species.
- Plant species, subspecies, and varieties defined as rare or threatened by the California Native Plant Protection Act (California Fish and Game Code § 1900 et seq.).
- Plant species listed by the CNPS as List 1 and 2 and some List 3 plants under CEQA (CEQA Guidelines §15380).

A literature review using the CDFW's California Natural Diversity Database (CNDDB) and the CNPS online inventory was conducted to identify a list of potential special status species that could occur in the Project area. The CNDDB is an inventory of the status and locations of rare plants and animals in California managed by CDFW. A list of special status species with potential to occur on or adjacent to the Project Site was generated from the results of the literature review and the Project Site was evaluated for suitable habitat that could support listed plant or wildlife species.

Most of the special status wildlife and plant species identified by CNDDB and CNPS that occur in the vicinity of the Project Site have very specific habitat needs that are not present in the Project area. Based on the background literature review, three special status wildlife species were identified as having a moderate or low to moderate potential to occur within the Project area: overwintering monarch butterfly (*Danaus plexippus*), Crotch's bumble bee (*Bombus crotchii*), bank swallow (*Riparia riparia*).

Monarch Butterfly Overwintering Population

This species is a federal candidate for listing as endangered under ESA. Overwintering monarch butterflies require dense stands of non-native trees, particularly eucalyptus planted in the mild coastal zone. Overwintering sites must provide shelter from wind, a varied light environment ranging from full sun to deep shade, and a freshwater source (Xerces 2016). Overwintering populations of monarch butterflies have been documented within the City of Long Beach (BIOS 2024). However, the three eucalyptus trees onsite do not provide suitable habitat for overwintering population. Therefore, the probability of occurrence is low.

Crotch's Bumble Bee

Bombus crotchii is a candidate endangered species under CESA. Crotch's bumble bee inhabits open grassland and scrub habitats. Nesting occurs underground. Males perch and chase moving objects in search of mates. This species is classified as a short-tongued species, whose food plants include Asclepias, Chaenactis, Lupinus, Medicago, Phacelia, and Salvia (IUCN 2015). Nests are often located underground in abandoned rodent nests, or above ground in tufts of grass, old bird nests, rock piles, or cavities in dead trees. Initially, the queen does all of the foraging and care for the colony until the first workers emerge and assist with these duties. Bumble bees collect both nectar and pollen of the plants that they pollinate. In general, bumble bees forage from a diversity of plants, although individual species can vary greatly in their plant references, largely due to differences in tongue length. Considering that vegetation at the Project Site is

limited to bare dirt and grass, the probably of Crotch's bumble bee being present is moderate (IUCN 2015).

Bank Swallow

Riparia riparia is a threated species under CESA. The bank swallow, also known as the sand martin, is a neotropical migrant found primarily in riparian and other lowland habitats in California west of the deserts during the spring-fall period. A spring and fall migrant in the interior, less common on coast; an uncommon and very local summer resident. Casual in southern California in winter; a few winter records along central coast to San Mateo Co. (CDFW 1999). In summer, restricted to riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with fine-textured or sandy soils, into which it digs nesting holes. The bank swallow forages by hawking insects during long, gliding flights, and feeds predominantly over open riparian areas, but also over brushland, grassland, wetlands, water, and cropland. The probability of the bank swallow being present on the Project Site is low given the lack of foraging riparian resources and banks/bluffs/cliffs to nestle into.

3.5.1.5 Critical Habitat

Critical habitat is a term that is defined and used in the federal ESA. Critical habitat includes specific geographic areas that contain features essential to the conservation of an endangered or threatened species and that may require special management or protection. Critical habitat may also include areas that are not currently occupied by an endangered or threatened species, but that will be needed for its recovery. The USFWS Service provides spatial data for active proposed and final critical habitat for FWS only and Joint FWS/NMFS threatened and endangered species. A desktop review showed no designated critical habitat on or near the Project Site.

3.5.1.6 Wetlands

The USFWS National Wetland Inventory Wetlands Mapper identifies existing wetlands and riparian areas. A desktop review using this mapper showed no wetlands present at or in the vicinity of the Project Site (USFWS 2024).

3.5.1.7 Wildlife Corridors

A wildlife corridor allows movement between historically connected habitats/natural areas and facilitates movement between these habitat areas without other disturbances, like traffic or development. They allow exchange of individuals between populations and connect various habitats required for species to complete their life history, like feeding and breeding grounds.

The Project Site does not function as a wildlife movement corridor because the site is disturbed/developed, supports minimal vegetation cover, and is surrounded by roads and urban development. The Project Site does not support native habitat that would support

wildlife movement, and the fencing/walls on the site and the surrounding structures are not conducive to wildlife movement. The Project Site area is not located along any major drainages or washes that would be considered movement corridors for wildlife. Wildlife may use the limited vegetation, but the site is not part of a regional wildlife movement corridor or a corridor between natural habitat areas (ECORP 2022a).

3.5.2 Impact Assessment

BIO (a). Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

Less Than Significant with Mitigation. The Project Site is previously developed, and while limited vegetation is present on the outside of the western and southern site perimeter, the highly disturbed nature of the site is not suitable habitat to support candidate, sensitive, or special status species. As previously stated in Section 3.5.1, no plant or wildlife species designated as rare, threatened, or endangered by the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Wildlife (CDFW), or California Native Plant Society (CNPS) have been documented or are expected to occur on the Project Site, or within the City of Signal Hill (City 1986). However, site conditions have not been verified and therefore, the potential for occupancy of a sensitive species (i.e., monarch butterfly, bank swallow, Crotch's bumble bee) exists. Ground disturbing activities would threaten potentially present sensitive species and result in potentially significant impacts to sensitive species.

MM-BIO-1: **Pre-construction Clearance Survey**. Prior to performing project activities, including demolition and ground disturbing activities, a biological reconnaissance survey will be performed to verify the presence/absence of sensitive species. If a sensitive species is identified, no further work shall progress until consultation with the CDFW and/or USFWS has occurred.

Potential impacts to sensitive species would be abated to less than significant impacts with the implementation of **MM-BIO-1**.

BIO (b). ***Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?***

No Impact. As stated in BIO(a), the Project Site is fully developed; there is no riparian habitat or other sensitive vegetation community on site. The land surrounding the site is also developed with streets and residential uses that have disturbed the habitat. No sensitive communities that are identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service within the boundaries of the Project Site. Therefore, no impact would occur.

BIO (c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. The Project Site has been previously developed with some pavement and does not contain wetlands of any description. Section 3.11.1.5 provides the details for the stormwater runoff capture and infiltration mechanisms of the Project; site runoff will be captured and treated, and therefore no offsite effects could occur during Project Operations. Because there are no wetlands on the Project Site, there would be no impacts on wetlands.

BIO (d). Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

No Impact. As stated in Section 3.5.1.7, the Project Site does not currently function as a wildlife movement corridor. The Project Sites are disturbed/developed and do not support native habitat that would support wildlife movement. In addition, the existing fencing on the site, the surrounding roads, and overall urban development are not conducive to wildlife movement. Wildlife may use the limited vegetation on the Project Site during local movement, but the site is not part of a regional wildlife movement corridor or a corridor between natural habitat areas, and therefore, there would be no impact.

BIO (e). Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less Than Significant. The Project proposes to remove the three eucalyptus trees preset on the site, but this action does not conflict with the City of Signal Hill's Street Tree Master Plan or Street Tree Ordinance. No other land policies protecting biological resources are relevant to the Project Site, and therefore, there would be less than significant.

BIO (f). Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. No habitat conservation plans or natural community conservation plans are adopted which cover the Project Site. The site is previously disturbed and has historically been used for oil production, having been abandoned multiple times since the 1930s. Therefore, no impacts could occur.

3.6 Cultural Resources

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES. Would the Project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

3.6.1 Environmental Setting

Cultural resources include the locations of human activity, occupation, or usage that contain materials, structures, or landscapes that were used, built, or modified by people. Cultural resources consist of a variety of prehistoric and historic archaeological resources including sites, objects, buildings, structures, districts, and properties of religious and cultural significance including traditional cultural properties. Historic properties, as defined in 36 CFR 800, the implementing regulations of the National Historic Preservation Act (NHPA), are cultural resources that meet the criteria to be included in or eligible for inclusion in the National Register of Historic Places (NRHP).

The Environmental Resources Element of the Signal Hill General Plan describes historical resources located in Signal Hill, which include oil development and historical structures. Oil was discovered in 1921 and provided the City with the financial resources to develop. The discovery led to speculative oil development of the area and resulted in one of the largest historical oil fields in the state. The first well, Alamitos #1 Discovery Well (Historic Landmark # 580), located at the northeast corner of Hill Street and Temple Avenue, is designated as a state historical monument (City 1986). Alamitos #1 Discovery Well is located approximately 0.34 miles north of Project Site.

The County Register is maintained by the Historical Landmarks and Records Commission pursuant to the County's Historic Preservation Ordinance No. 2015-0033. No designated Los Angeles County historical landmarks are located within the Project Site (County Register 2023).

The Built Environment Resources Directory (BERD) files provide information regarding non-archaeological resources in the Office of Historic Preservation's (OHP) inventory. The OHP

inventory contains information only for cultural resources that have been processed for eligibility to National Register of Historic Places and the California Historical Landmarks programs through federal and state environmental compliance laws, and resources nominated under federal and state registration programs. OPH records are not comprehensive for the state in relation to CEQA review. Based on the current BERD file for Los Angeles County, the Project Site does not contain a listed historic resource.

The Project Site has undergone prior development and experienced extensive ground disturbing activities. The probability of an unidentified cultural resource present in the subsurface is low.

3.6.2 Impact Assessment

CUL (a). Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?

Less than Significant with Mitigation. The Project Site does not contain any State Historic Resources, any Los Angeles County registered historic landmarks, or any BERD listed National Historic Resources. Nor are any historic resources/sites registered around the Project Site. However, in the absence of a formal records search, unidentified historic resources/sites may exists in the Project area; therefore, potential impacts to unrecorded historical resources/sites may occur from ground disturbing activities.

Mitigation Measure CUL-1: Cultural and Historical Resources Due Diligence. A California Historic Resources Information System (CHRIS) records search and formal search of potentially eligibly historical resources would be performed. Any newly identified resources would be avoided.

Implementation of **MM-CUL-1** would reduce potentially significant impacts resulting from inadvertent damage or destruction of unknown historical resources during the construction; therefore, potential impacts would be less than significant with mitigation.

CUL (b). Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Less than Significant with Mitigation. In the absence of a site-specific archaeological investigation/survey, there may be additional cultural resources present on the site that have not been identified in initial record searches. Project activities would require excavation during construction, which could result in a potentially significant impact if unanticipated discoveries of archaeological resources occur during ground-disturbing activities.

The Project construction phase would require excavation, which could result in a potentially significant impact if any archaeological features are present.

Mitigation Measure CUL-2: Inadvertent Discovery. In the event that any archaeological features are discovered during construction, all work shall stop, and a qualified archaeologist

shall be notified. The archaeologist shall record the site and consult the City on potential eligibility. The archaeologist shall prepare a report according to current professional standards and include recommendations for avoiding, mitigating, or relocating the resource.

Implementation of **MM-CUL-2** would reduce potentially significant impacts resulting from inadvertent damage or destruction of unknown archaeological resources during the construction phase of the Project, and therefore the impacts would be less than significant with mitigation.

CUL (c). Disturb any human remains, including those interred outside of dedicated cemeteries?

Less than Significant with Mitigation. Due to the previously disturbed nature of the Project Sites, encountering and disturbing human remains is unlikely. However, if human remains were discovered during excavation activities associated with Project construction, the Applicant would implement the protocols discussed in Section 3.6.2.4 above to ensure impacts would be less than significant. If the discovery includes human remains, the County Coroner must be contacted to implement HSC Section 7050.5 and, if required, PRC Section 5097 et seq. Compliance with the California Public Resource Code.

Implementation of **MM-CUL-1** and **MM-CUL-2** would mitigate potentially significant impacts to human remains to less than significant.

3.7 Energy

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. ENERGY. Would the Project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

3.7.1 Environmental Setting

Energy capacity, or electrical power, is generally measured in watts while energy use is measured in watt-hours. For example, if a light bulb has a capacity rating of 100 watts, the energy required to keep the bulb on for 1 hour would be 100 watt-hours. If ten 100-watt bulbs were on for 1 hour, the energy required would be 1,000 watt-hours or 1 kilowatt-hour (kWh).

On a utility scale, a generator's capacity is typically rated in megawatts, which is one million watts, while energy usage is measured in megawatt-hours (MWh) or gigawatt-hours (GWh), which is one billion watt-hours. The Energy Resources Department (City of Long Beach) is the utility that provides electrical and natural gas services to the Project Site.

3.7.2 Impact Assessment

ENG (a). Would the Project result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less Than Significant. The Project would comply with Title 24 of the California Building Standards Code (Part 6) and the 2019 CALGreen Code. As designed, the Project includes energy-efficient features such as: water efficient plumbing fixtures; energy efficient appliances; high-R value insulation; paint coatings with low volatile organic compound levels; high efficiency light fixtures; and solar-ready rooftop infrastructure. The estimated electricity consumption for the proposed development is 55,161 kilowatt hours per year (kWh/year) and total natural gas consumption is estimated at 306,683 thousand British thermal units (kBTU/year). These estimates represent a nominal increase in demand from SCE and SCGC, which delivered approximately 39,400 GWh of electricity and 2.2 billion therms of gas, respectively, in 2022. Therefore, the Project would not result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources and impacts would be less than significant.

ENG (b). Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact. The Project would comply with Title 24 of the California Building Standards Code (Part 6) and the 2019 CALGreen Code. As designed, the Project includes energy-efficient features such as: water efficient plumbing fixtures; energy efficient appliances; high-R value insulation; paint coatings with low volatile organic compound levels; high efficiency light fixtures; and solar-ready rooftop infrastructure. Furthermore, the Project would not obstruct any plans for renewable energy development and provide the opportunity for homeowners to install solar panels for on-site generation. Accordingly, the Project would not obstruct a state or local plan for renewable energy or energy efficiency.

3.8 Geology and Soils

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GEOLOGY AND SOILS. Would the Project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☒	☐
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☒	☐
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

3.8.1 Environmental Setting

3.8.1.1 Geology and Soils

The City of Signal Hill is located in the Peninsular Ranges Geomorphic Province within an area known as the Los Angeles Coastal Plain. Signal Hill is a surface expression of the northwesterly Newport-Inglewood structural fault zone and is underlain by thousands of feet of marine and nonmarine sediments that rest above metamorphic basement rock. The current surface

expression of the area consists of Holocene- and Pleistocene-age sediments. Generally, the sediments present in Signal Hill are composed of weathered alluvium and are classified as silts and sands (City 1986). The dominant geologic unit is comprised of old paralic (interfingered) deposits consisting primarily of silt and sand with scattered gravel and fossiliferous lenses, capped locally with a reddish-brown weathered (soil) zone of clayey silt to clayey sand. This unit is described as being potentially corrosive to concrete, having limited expansion potential, and moderate expansion potential in clayey sections (City 2016). The remainder of Signal Hill consists of young alluvial floodplain deposits composed mostly of soft clay, silt and loose to moderately dense sand and silty sand as well as coarser-grained young alluvial fan and valley deposits composed of clay, sand, gravel and cobbles. These units have localized areas of moderate to high expansion potential and are considered to have a higher potential for liquefaction. Areas mapped as these units are those areas which the CDOC mapped as liquefaction zones. The Project Site is situated within the paralic deposits defined as Qop by the City of Signal Hill and Qol by the California Geologic Survey (City 2016, CSG 2012). The geologic units designated in Signal Hill are shown in Figure 3.8-1 and described in Table 3.8-1.

Table 3.8-1: Geologic Units in Signal Hill

Unit	Description
Qop / Qol	City (Qop): Old paralic deposits (late to middle Pleistocene) – In the Signal Hill area, these are composed primarily of silt and sand with scattered gravel and fossiliferous lenses, capped locally with a reddish-brown weathered (soil) zone of clayey silt to clayey sand. These interfingered strandline, beach, estuarine, and colluvial deposits are mostly poorly sorted, moderately permeable, and medium dense to dense. The silt and sand sections, where exposed in slope faces, are susceptible to erosion and surficial slumping; the clayey sections may have a moderate expansion potential. May be corrosive to concrete. CGS (Qol): Old Lacustrine, Playa, and Estuarine (Paralic) Deposits (late to middle Pleistocene); slightly to moderately consolidated, moderately dissected fine-grained sand, silt, mud, and clay from lake, playa, and estuarine deposits of various types
Qya / Qya	City (Qya): Young alluvial floodplain deposits (Holocene and Late Pleistocene) – Composed mostly of soft clay, silt and loose to moderately dense sand and silty sand. These deposits are mostly poorly consolidated, poorly sorted, and permeable, and therefore potentially susceptible to liquefaction and differential settlement. Locally, these deposits may have a moderate to high expansion potential. CGS (Qya): Young Alluvial Valley Deposits (Holocene to Late Pleistocene); unconsolidated to slightly consolidated, undissected to slightly dissected clay, silt, sand, and gravel along stream, valleys and alluvial flats of larger rivers.
Qyfa / Qyl	City (Qyfa): Young alluvial fan and valley deposits (Holocene and Late Pleistocene) – Composed of clay, sand, gravel and cobbles. These deposits are mostly poorly consolidated and poorly sorted, and are therefore compressible, potentially susceptible to collapse, liquefaction, and seismically-induced differential settlement. Locally, these deposits may have a moderate to high expansion potential. CGS (Qyl): Young Lacustrine, Playa, and Estuarine (Paralic) Deposits (Holocene to Late Pleistocene); unconsolidated to slightly consolidated, undissected to slightly dissected fine-grained sand, silt, mud, and clay from lake, playa, and estuarine deposits of various types.
Not mapped / af	City (af): Artificial fill (compacted and uncompacted) – deposits of various thicknesses are known to occur locally in the Signal Hill area but are not mapped in the General Plan. These deposits are typically associated with petroleum exploration and drilling activities, grading, and construction. Fills impacted with

Unit	Description
	petroleum hydrocarbons and heavy metals may be encountered in areas that were previously part of an oilfield. These deposits are mostly poorly consolidated, poorly sorted, potentially compressible, and may have a moderate to high expansion potential. CGS (af): Artificial Fill; deposits of fill resulting from human construction, mining, or quarrying activities; includes engineered fill for buildings, roads, dams, airport runways, harbor facilities, and waste landfills.

Source: City 2016, California Geologic Survey (2012)

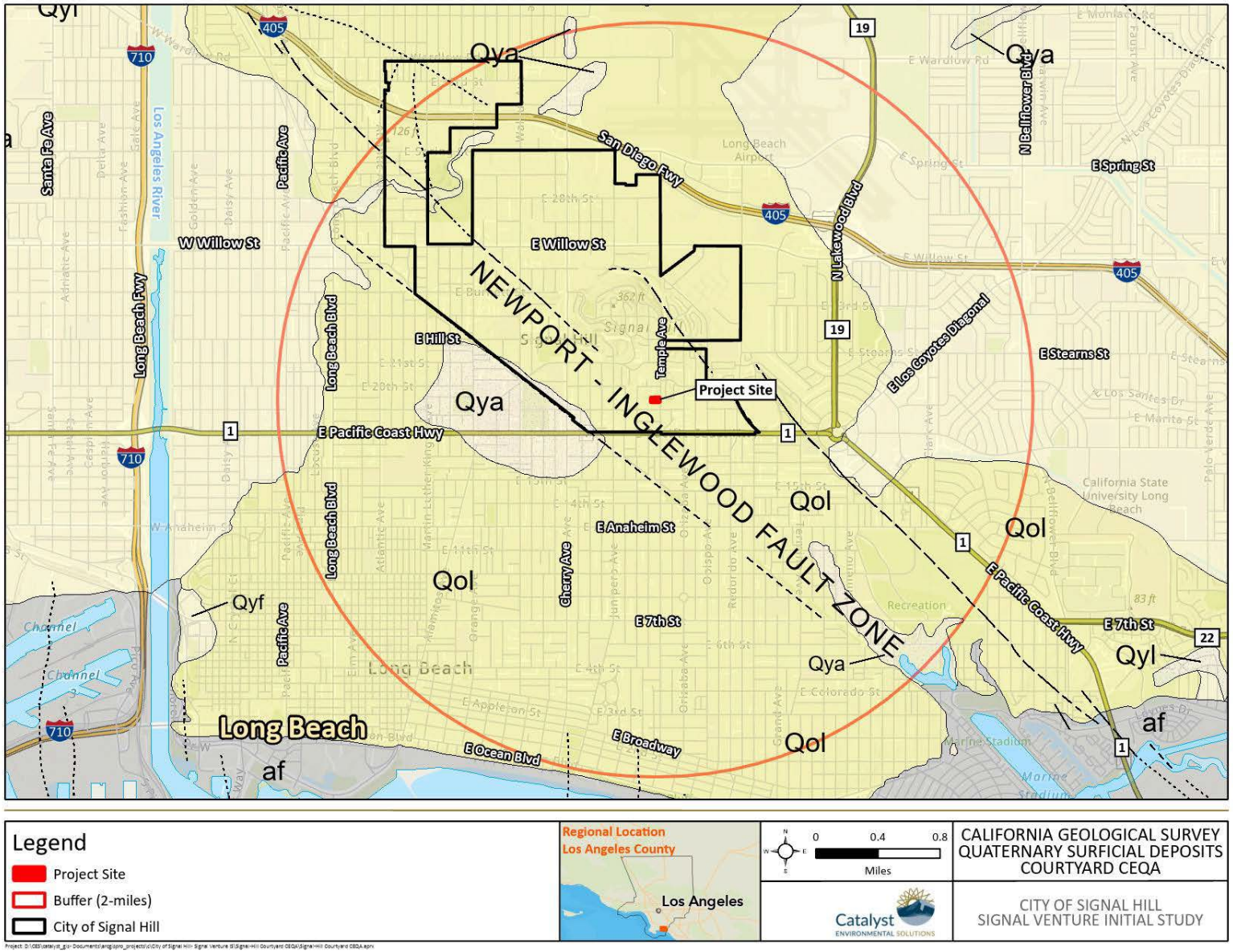


Figure 3.8-1: Geologic Units Designated in Signal Hill

3.8.1.2 Faulting and Seismicity

The City of Signal Hill is located in a seismically active region, and major regional faults create the risk of substantial earth shaking and potential ground rupture in the area. Within Los Angeles County, there are over 50 active and potentially active fault segments, an undetermined number of buried faults, and at least four blind-thrust faults capable of producing damaging earthquakes. Earthquakes and associated ground shaking present a multitude of potentially dangerous consequences that can include ground rupture, ground failure, liquefaction, and landslides.

The California Geological Survey defines an active fault as a fault showing evidence for activity within the last 11,000 years. The Newport-Inglewood Fault System is a seismically active system that cuts diagonally across Signal Hill. This fault is the most significant seismic feature in the area and contains five faults which are within or in the immediate vicinity of Signal Hill, four of which are active or potentially active (Cherry Hill, Pickler, Northeast Flank, and Reservoir Hill faults) (City 2016) as shown in Figure 3.8-2. The Newport-Inglewood Fault System is designated as an Alquist-Priolo fault zone (City 2016). The Project Site is not located within an Alquist-Priolo fault zone (CDOC 2021).

The CDOC maps earthquake hazard zones, which are defined areas subject to the following three types of geologic ground failures: (1) fault rupture, where the surface of the earth breaks along a fault; (2) liquefaction, in which the soil temporarily turns to quicksand and cannot support structures; and, (3) earthquake-induced landslides (CDOC 2021). As shown in Figure 3.8-2, limited areas within the City of Signal Hill pose potential seismically-induced landslide and liquefaction risks. No portion of the Project Site is located within areas susceptible to seismically induced landslides or within a liquefaction zone (CDOC 2021, City 2016).

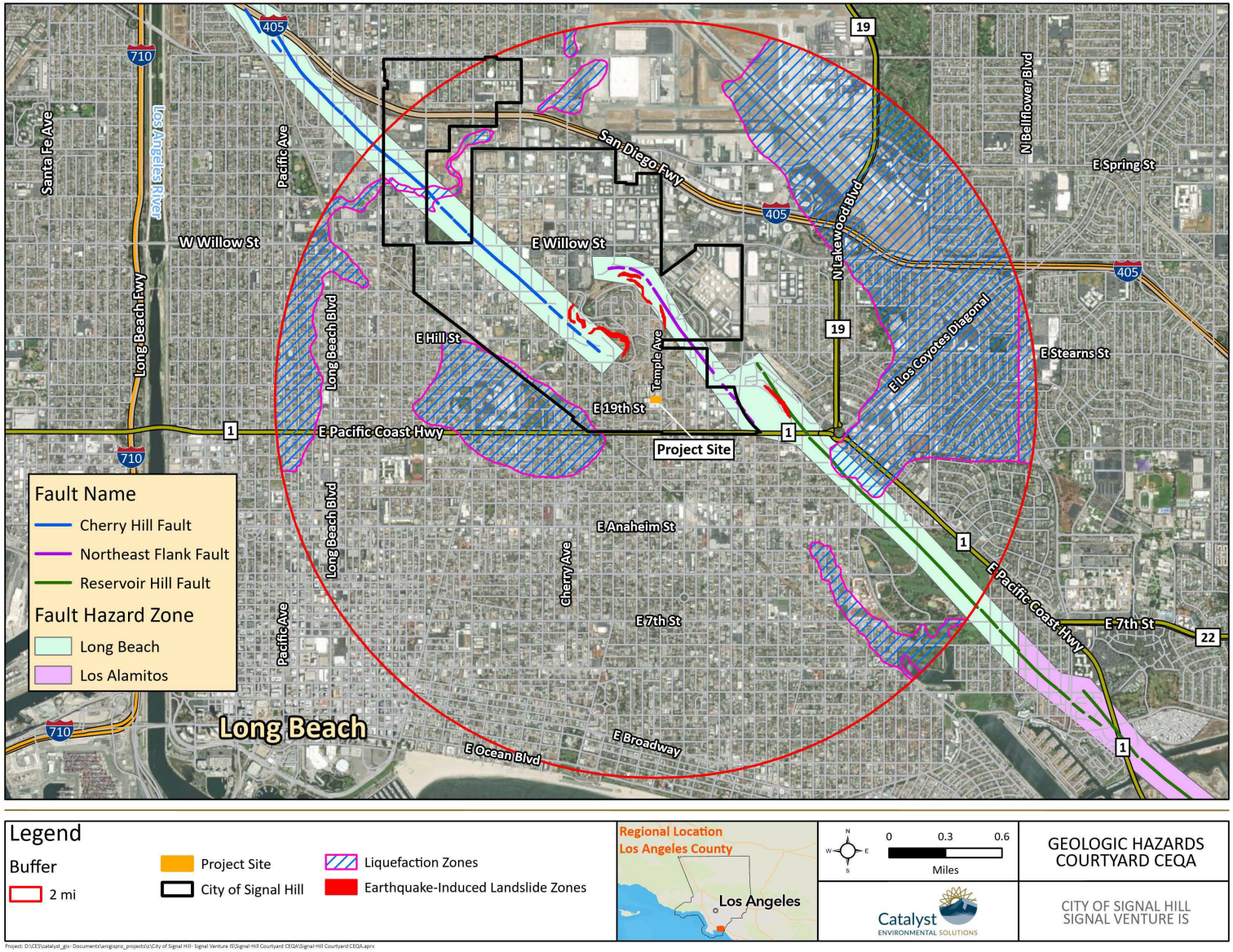


Figure 3.8-2: Geologic Hazards in Signal Hill

3.8.1.3 Landslides

Unstable hillslopes are areas susceptible to landslides. Landslides consist of the downslope movement of soil and rock under the influence of gravity. The geologic and topographic features of the landscape are the primary determinants of the shear strength of the hillslope materials (i.e., resistance to landslides) and hillslope shear stress (i.e., propensity for landslides). Landslides occur when the shear stress exceeds the shear strength of the materials forming the slope (Highland and Bobrowsky 2008). The best indicator of high landslide potential is evidence of previous landsliding (Highland and Bobrowsky 2008). Landslides can be classified as active or dormant, based on how recently they have moved. Active landslides typically display cracks or sharp, bare scarps. Vegetation is usually sparser on active landslides than on adjacent stable ground, and if trees are present, they are usually leaning, indicating that ground movement has occurred since they became established. Dormant landslide features have typically been modified by weathering, erosion, and vegetative growth and succession. Active landslides are generally more unstable than dormant landslides and may require mitigation measures to avoid mobilization. Excavation, the use of heavy equipment, soil saturation, or the removal of root support can mobilize active landslides. Although dormant landslides are less likely to be mobilized by human activities, portions of dormant landslides (e.g., their steep headwalls and margins) are often unstable.

As shown in Figure 3.8-2, areas that are susceptible to landslides are located in areas of higher elevation within Signal Hill. The City was most recently impacted in 1998 when a portion of steep, unstable natural slope below Panorama Drive eroded due to heavy El Niño rains (City 2016). As stated in the City General Plan Safety Element (2016), no significant landslide events have occurred in the City of Signal Hill since the adoption of the 2012 Mitigation Plan. There are two remaining areas with landslide potential in the City, one is located north of Panorama Drive and the other is located southwest of Sunset View Park (City 2016). No portion of the Project Site is located within areas susceptible to seismically induced landslides or within a liquefaction zone (CDOC 2021, City 2016).

3.8.1.4 Subsidence

Subsidence is the sinking or gradual lowering of the earth's surface. Natural geologic causes of subsidence include basin-downwarp, fault movement, sediment compaction, and relaxation of deep earth stresses. Man-made causes include groundwater pumping, mining, oil and gas production, river channelization, and surface loading (City 2016). The Project does not propose actions that would cause further subsidence within the area.

The Port of Long Beach area experienced significant subsidence historically, primarily due to oil and gas extraction in the Wilmington Oilfield (City 2016). To address subsidence, the City of Long Beach successfully tested waterflooding and repressuring operations, which halted the subsidence and mostly stabilized surface elevations (Baghdikian et al. 2010). To prevent further

subsidence, water was injected into areas where oil was removed. The City of Long Beach instituted a water injection volume equal to 105% of the total volume of produced fluids (oil, gas, and water) to prevent further reservoir compaction and subsidence (Baghdikian et al. 2010). The maximum elevation loss was 29 feet, which created a land surface "subsidence bowl", the extent of which affected the Signal Hill area by up to two feet as shown in Figure 3.8-3 (Baghdikian et al. 2010, City of Long Beach 2022).

The Project Site is located within the portion of Signal Hill that was affected by the identified subsidence up to two feet. Surface elevation is monitored annually in the City of Long Beach, which found that elevations throughout the Alamitos Bay, Naples, Central City, Civic Center, the offshore islands, and the City of Long Beach north of the Wilmington Oil Field (area closest to the Project Site) were stable during the 12-month period of November 2020 through November 2021 (City of Long Beach Energy Resources Department 2021).

3.8.1.5 Paleontological Resources

The majority of the City of Signal Hill is underlain by old paralic deposits of late to middle Pleistocene age which have the potential to include paleontological resources as marine mollusks have been observed in these deposits in Signal Hill (PCR 2017). Accordingly, excavations into these deposits have the potential to encounter paleontological resources.

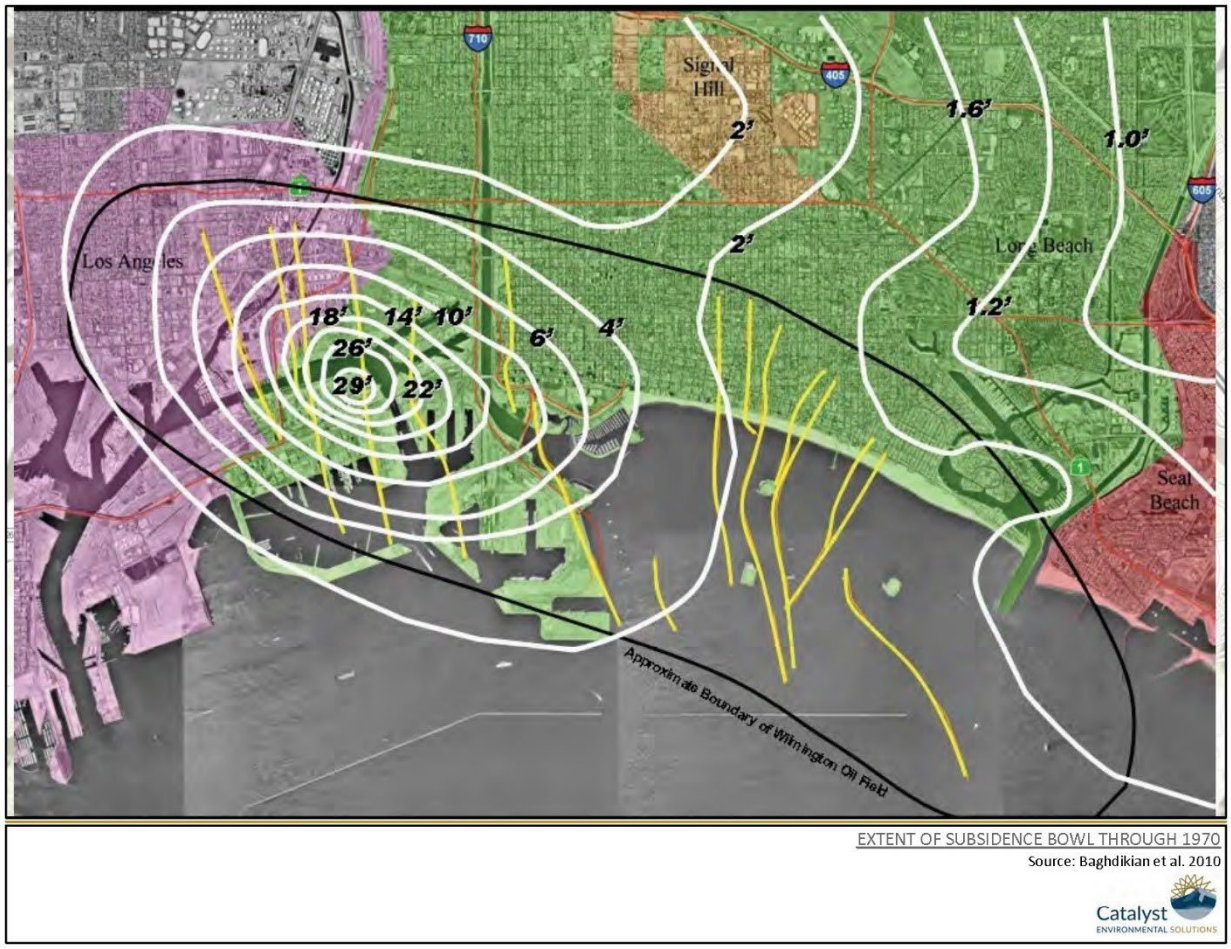


Figure 3.8-3: Extent of Subsidence Bowl through 1970

3.8.2 Impact Assessment

GEO (a) Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

1) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issues by the State Geologist for the area or based on other substantial evidence of a known fault?

No Impact: The proposed Project is not located within the Alquist-Priolo earthquake fault zone as observed in Figure 3.8-2. The nearest Alquist-Priolo Earthquake Fault Zones are approximately 0.3 miles to the northwest (Cherry Hill Fault) and northeast (Northeast Flank Fault). The proposed Project would be required to adhere to all current seismic building code requirements but would not result in fault rupture; therefore, no impacts would occur.

2) Strong seismic ground shaking?

Less than Significant: The Project Site is located within the general seismically active Southern California region, and therefore, could be subject to seismic ground motion. However, the Project would be constructed in accordance with all applicable seismic safety requirements within the California Building Code. Therefore, the Project would have a less than significant impact.

3) Seismic-related ground failure, including liquefaction?

No Impact: The proposed Project is not located within a liquefaction zone as identified in Figure 3.8-2. To have potential for liquefaction, three simultaneous conditions are necessary: cohesion-less soils, high ground water, and ground shaking. All three of these conditions are not expected to exist simultaneously in Signal Hill. The proposed Project would not exacerbate existing environmental conditions and would not directly or indirectly cause potential substantial adverse effects involving strong seismic ground shaking. Therefore, the Project would have no impact.

4) Landslides?

No Impact: The proposed Project is not located within a landslide zone as shown in Figure 3.8-2 and within the General Plan Safety Element. Therefore, the Project would have no impact.

GEO (b) Would the Project result in substantial soil erosion or the loss of topsoil?

Less than Significant: Construction of the Project will include grading activities throughout the site. However, the site is relatively flat and a precise grading plan has been developed which includes the installation of NPDES during construction, as well erosion control measures to address rains or high winds to mitigate potential erosion impacts. Additional BMPs and applicant proposed measures would also be implemented, as identified in Table 2.1-2. Therefore, the Project would have a less than significant impact.

Geo (c). Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

No Impact. As provided in Figure 3.8-2, the Project Site is situated within the paralic deposits (Qol) and is not located within a landslide or liquefaction hazard area. Therefore, the Project would have no impact.

Geo (d). Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

No Impact. The proposed Project will not expose people or structures to potential substantial adverse effects related to expansive soils. The Project is located within areas mapped as geologic unit Qol, which has a limited expansion potential, with moderate expansion potential present only in localized clayey areas (City 2016). Soils within the Project area is composed

primarily of silt and sand which are generally non-expansive to slightly expansive. Therefore, the Project would have no impact.

Geo (e). Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. The proposed Project will be serviced by the Los Angeles County Sanitation District and will not result in the use of septic tanks or alternative wastewater disposal systems. Therefore, the Project would have no impact and no mitigation measures are proposed.

Geo (f). Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than Significant with Mitigation. The Project Site is situated within a previously disturbed area and no paleontological resources or unique geologic features were reported during previous site investigation activities. However, since the majority of Signal Hill, including the Project Site, are underlain by deposits that have the potential to include paleontological resources, there is potential to encounter resources during excavation activities which could result in a potentially significant impact.

MM GEO-1: **Worker Environmental Awareness Training**. All contractors and earth moving personnel shall be given Worker Environmental Awareness training by a qualified paleontological resource specialist prior to any ground-disturbing activities to discuss the activity's potential for impacting paleontological resources. The training shall inform personnel of the types of artifacts and features that may be encountered, the procedures to be followed if paleontological materials are unearthed at a Project Site, contact information for appropriate reporting parties, and the regulatory requirements for the protection of paleontological resources. If unrecorded paleontological resources are encountered during Project-related ground-disturbing activities, a qualified paleontological resources specialist shall be contacted to assess the potential significance of the find. The paleontologist shall determine whether the resource is potentially unique and, if so, develop appropriate mitigation, such as avoidance or data recovery.

Incorporation of **MM GEO-1** would protect resources and develop treatment measures to effectively eliminate potentially significant impacts to previously undiscovered paleontological resources. Therefore, impacts would be reduced to a less than significant level.

3.9 Greenhouse Gas Emissions

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. GREENHOUSE GAS EMISSIONS. Would the Project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

3.9.1 Environmental Setting

Recent significant changes in global climate patterns have been associated with global warming, an average increase in the temperature of the atmosphere near Earth's surface. Global warming has been attributed to the accumulation of greenhouse gas (GHG) emissions in the atmosphere. GHGs trap heat in the atmosphere, which in turn heats the surface of the Earth. Some GHGs occur naturally and are emitted to the atmosphere through natural processes, while others are created and emitted solely through human activities. The emission of GHGs through the combustion of fossil fuels (i.e., fuels containing carbon) in conjunction with other human activities appears to be closely associated with global warming.

The standard state definition of GHG includes six substances: carbon dioxide (CO_2); methane (CH_4); nitrous oxide (N_2O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); and sulfur hexafluoride (SF_6) (CARB 2014). Tropospheric O_3 (a short-lived, not-well-mixed gas) and black carbon are also important climate pollutants. CO_2 is the most abundant GHG, and collectively CO_2, CH_4, and N_2O amount to 80 percent of GHG effects.

For each GHG, a global warming potential (GWP) has been calculated to reflect how long emissions remain in the atmosphere and how strongly energy is absorbed on a per-kilogram basis relative to CO_2. GWP is a metric that indicates the relative climate forcing of a kilogram of emissions when averaged over the period of interest (both 20-year and 100-year horizons are used for the GWPs shown in Table 3.9-1). To account for this higher potential, emissions of other GHGs are frequently expressed in the equivalent of CO_2, denoted as CO_2e. CO_2e is a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect.

Table 3.9-1: Global Warming Potential for Selected Greenhouse Gases

Pollutant	Lifetime (Years)	Global Warming Potential (20-Year)	Global Warming Potential (100-Year)

Carbon Dioxide	100	1	1
Nitrous Oxide	121	264	265
Nitrogen Triflouride	500	12,800	16,100
Sulfur Hexafluoride	3,200	17,500	23,500
Perfluorocarbons	3,000-50,000	5,000-8,000	7,000-11,000
Black Carbon	days to weeks	270-6,200	100-1,700
Methane	12	84	28
Hydrofluorocarbons	Uncertain	100-11,000	100-12,000

Source: CARB 2014.

The primary effect of rising global concentrations of atmospheric GHG is a rise in the average global temperature of approximately 0.2 degrees Celsius per decade, determined from meteorological measurements worldwide between 1990 and 2005. Climate change modeling using emission rates shows that further warming is likely to occur given the expected rise in global atmospheric GHG concentrations from innumerable sources of GHG emissions worldwide, which would induce further changes in the global climate system during the current century.

Scientific understanding of the fundamental processes responsible for global climate change has improved over the past decade. However, significant scientific uncertainties remain. For example, uncertainties exist in predictions of local effects of climate change, occurrence of extreme weather events, and effects of aerosols, changes in clouds, shifts in the intensity and distribution of precipitation, and changes in oceanic circulation. Due to the complexity of the climate system, the uncertainty surrounding the implications of climate change may never be eliminated. Because of these uncertainties, there continues to be significant debate as to the extent to which increased concentrations of GHGs have caused or would cause climate change, and with respect to the appropriate actions to limit and/or respond to climate change. In addition, it may not be possible to link specific development projects to future specific climate change impacts, though estimating project-specific impacts is possible.

3.9.2 Impact Assessment

3.9.2.1 Significance Criteria

Appendix G of the CEQA Guidelines are used to determine whether the Project would result in significant impacts related to air quality. The criteria listed below consider if the Project would:

a. Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

b. Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? Conflict with or obstruct implementation of the applicable air quality plan.

The SCAQMD has not adopted GHG thresholds of significance for CEQA. Per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the Project will comply with an approved plan or mitigation program that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area of the Project. To qualify, such a plan or program must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of greenhouse gas emissions." Put another way, CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of less than significance for GHG emissions if a project complies with regulatory programs to reduce GHG emissions.

Even in the absence of clearly defined thresholds for GHG emissions, the CEQA Guidelines Section 15064.4 provides guidance to lead agencies for determining the significance of impacts from GHG emissions. Section 15064.4(a) provides that 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 GHG emissions resulting from a project. Section 15064.4(a) further provides that a lead agency shall have the discretion to determine, in the context of a particular project, whether: (1) to use a model or methodology to quantify GHG emissions resulting from a project and which model methodology to use and/or (2) to rely on qualitative analysis or performance-based standards. Pursuant to the State CEQA Guidelines Section 15064.4(a), the analysis presented herein uses a model or methodology to quantify GHG emissions resulting from the Project. The analysis contained herein provides a good-faith effort to describe, calculate, and estimate GHG emissions resulting from the Project. Based on guidance from the SCAQMD, total construction GHG emissions resulting from a project is amortized over a period of 30 years and added to operational GHG emissions to account for their contribution to GHG emissions over the lifetime of a project.

Although the Project's GHG emissions have been quantified, neither CARB, SCAQMD, SCAG, nor the City of Signal Hill has adopted quantitative significance thresholds for assessing impacts related to GHG emissions applicable to the proposed Project. While no thresholds have been adopted, the SCAQMD has been evaluating GHG significance thresholds since April 2008. Most recently, in September 2010, SCAQMD proposed a tiered efficiency target approach to evaluate potential GHG impacts from various uses. This tiered approach allowed for flexibility when analyzing GHG emissions based on project size, land use type, or other characteristics. The various tiers include: (1) potential CEQA exemptions for certain projects; (2) compliance with a

qualified GHG reduction strategy; (3) comparison with separate screening level thresholds for industrial (10,000 $MTCO_2e$/year), commercial (1,400 $MTCO_2e$/year), residential (3,500 $MTCO_2e$/year), and mixed-use (3,000 $MTCO_2e$/year) projects or comparison against a single numerical screening threshold of 3,000 $MTCO_2e$/year for all non-industrial projects; (4) consistency with compliance options, including a performance-based reduction analysis (i.e., compare with a Business-As-Usual level), compliance with AB 32, and/or comparison with efficiency-based thresholds (i.e., quantitative thresholds that are based on a per capita efficiency metric; 4.8 $MTCO_2e$/service population/year for project level analysis and 6.6 $MTCO_2e$/service population/year for plan level analysis); and/or (5) implement offsite mitigation to reduce GHG emission impacts to a less-than-significant level. The draft GHG guidance is included as part of the periodic updates to SCAQMD's Air Quality Handbook; however, the SCAQMD draft interim guidance was never officially adopted. Additionally, the efficiency targets proposed under SCAQMD's Tier 4 threshold are no longer applicable as they were specific to outdated AB 32 goals and do not consider the recently adopted 2030 GHG reduction targets contained in Senate Bill (SB) 32 and Executive Order B-30-15. Instead, the 2017 Climate Change Scoping Plan was recently approved by California ARB on December 14, 2017, and sets the state on a course to reduce GHG emissions an additional 40 percent below 1990 levels by 2030 under SB 32 (CARB 2017b). Under the 2017 Climate Scoping Plan, the CARB recommends statewide efficiency targets of no more than 6.0 $MTCO_2e$/service population/year by 2030 and no more than 2.0 $MTCO_2e$/service population/year by 2050; however, it is important to note that these efficiency targets are intended to apply to sum of all sectors and are not appropriate for evaluating GHG emissions specific to the land use sector, such as the proposed Project. To date, the CARB, SCAQMD, and the City have not adopted new efficiency targets established consistent with SB 32 for each sector for the 2030 and 2050 target years; however, various other organizations have published technical guidance evaluating potential 2030 efficiency metrics. For instance, in October 2016, the Association of Environmental Professionals (AEP) published *The Final White Paper Beyond 2020 and Newhall: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California* (2016). AEP's technical guidance presents data and calculations for a potential adjusted statewide 1990 land use sector emissions inventory and new metric for 2030 of 2.7 $MTCO_2e$/service population/year for the land use sector.

In addition to evaluation of a projects impacts against a quantifiable significant threshold, per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can also be found not cumulatively considerable if the Project would comply with an approved plan or mitigation program that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area of the Project. To qualify, such a plan or program must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of

such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plan, [and] plans or regulations for the reduction of greenhouse gas emissions." Thus, CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of non-significance for GHG emissions if a project complies with programs and/or other regulatory schemes to reduce GHG emissions.

In light of this shifting regulatory environment and available threshold concepts recommended by expert agencies, for the purposes of this CEQA analysis, a project's contribution to cumulative impacts to global climate change would be considered significant if the proposed project would:

- Generate net new GHG emissions exceeding the bright line numeric threshold of 3,000 MTCO2e/year; or
- Conflict with (and thereby be inconsistent with) the applicable regulatory plans and policies to reduce GHG emissions, which include the emissions reduction measures included within the Green Building Code, SCAG's 2016-2040 RTP/SCS; AB/SB 32 and SB 375; the OPR and Climate Action Team recommendations; and CARB's Climate Change Scoping Plan.

GHG (a). Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction Emissions

Less Than Significant. Construction of the proposed Project would generate GHG emissions over a 16-month construction period. Exhaust emissions would result from construction equipment and machinery as well as from vehicular traffic generated by construction activities. Construction and operation GHG emissions were estimated using SCAQMD's CalEEMod 2022.1 model (**Appendix D**) based on assumptions detailed in Section 2.2, including the Project's construction schedule and operation activities. Short-term construction emissions (e.g., off-road equipment and vehicle trips) and annual long-term operation emissions associated with the proposed Project were evaluated. **Appendix D** includes all GHG emissions assumptions and calculations. Based on the results of this modeling, construction emissions would result in a maximum of 190.49 MTCO2e per year. Total project GHG emissions for construction are shown in Table 3.9-2.

Table 3.9-2. Estimated Project Construction GHG Emissions

Construction Year	GHG ($MTCO_2e$/year)
2024	49.59
2025	140.90
TOTAL	**190.49**

Source: CalEEMod Results in Appendix D.

Operational and Maintenance Emissions

Less Than Significant. As presented in Section 2.3, long-term operational sources of GHG include area source emissions which includes landscape maintenance equipment, use of consumer products, and other everyday sources, energy source emissions emitted as a result of activities in buildings when electricity and natural gas are used as energy sources, mobile-source emissions based on the number of daily trips generated and VMT, and emissions related to solid waste, water usage, and wastewater generation. These emissions are estimated to contribute a total of approximately 110.90 MTCO2e per year as summarized in Table 3.9-3.

Table 3.9-3: Annual Operational GHG Emissions

Emission Source	GHG ($MTCO_2e$/year)
Mobile	73.79
Area	2.68
Energy	29.68
Water	2.74
Waste	1.99
Refrigerants	0.02
TOTAL	**110.90**

Source: CalEEMod Results in Appendix D.

Amortized Annual Emissions

Less Than Significant. As summarized in Table 3.9-2 above, total GHG construction emissions would be approximately 190.49 MTCO2e. In accordance with SCAQMD guidance, the total GHG emissions from construction were amortized (i.e., averaged annually) over a 30-year timeframe, with a resulting annual emission of 6.2 MTCO2e per year. Table 3.9-4 presents the total annual GHG emissions for the proposed Project are estimated to be 117.25 MTCO2e per year for the duration of the Project.

Table 3.9-4. Proposed Project Amortized Annual GHG Emissions

Emission Source	GHG ($MTCO_2e$/year)
Construction (amortized over 30-year life of Project)	6.35
Operations (i.e., mobile, area, water, etc.)	110.90
Total	**117.25**
Threshold	**3,000**
Exceed Threshold?	*No*

Source: CalEEMod Results in Appendix D.

As summarized in the regulatory framework (**Appendix B**), the SCAQMD does not have numeric thresholds for GHG emissions for CEQA. Per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if

the Project will comply with an approved plan or mitigation program that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area of the Project. To qualify, such a plan or program must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a "air quality attainment or maintenance plan and/or plans or regulations for the reduction of greenhouse gas emissions." Put another way, CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of less than significance for GHG emissions if a project complies with regulatory programs to reduce GHG emissions.

In the absence of any adopted numeric threshold, the significance of the proposed project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b) by considering whether the proposed project complies with applicable plans, policies, regulations, and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. At the time of this writing, the City of Signal Hill has not developed an applicable Climate Action Plan. Therefore, for the purposes of this analysis, the applicable GHG reduction plan to evaluate the proposed project against is the CARB 2022 Scoping Plan update. Measures included in the Scoping Plan update would indirectly address GHG emission levels associated with construction activities, including the phasing-in of cleaner technology for diesel engine fleets (including construction equipment) and the development of a low-carbon fuel standard. Policies formulated under the mandate of AB 32 that apply to construction-related activity either directly or indirectly, are assumed to be implemented Statewide and would affect the Project should those policies be implemented before construction begins. Specifically, implementation of AB 32 control measures for reduced vehicle emissions would decrease GHG emissions from the Project.

In addition, the proposed Project would not conflict with population growth projections of the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), or its goals associated with GHG reductions. Specifically, the estimated potential growth associated with the Project is anticipated to be 32 persons, which is based on the ratio of four persons per household. This estimate is well within the growth forecasts contained in the 2020-2045 RTP/SCS and the proposed Project would not contribute to population growth outside of those projections. As such, the Project would be consistent with the current land use designation for the Project Site and would not create housing or otherwise lead to substantial unplanned population growth in the vicinity and is considered consistent with the GHG reduction goals of the 2020-2045 RTP/SCS. The Project represents an infill development within an existing urbanized area that is well served by public transportation within one half mile of the Project Site. The Project is estimated to generate less than 76 trips per day (based on a trip rate of roughly 9.6 one-way trips per day per household). This small number of new trips would not result in any VMT impacts and would also not conflict with SCAG's 2020-2045 RTP/SCS.

The plan consistency analysis above demonstrates that the Project is consistent with plans, policies, regulations and GHG reduction actions/strategies outlined in CARB's Scoping Plan and SCAG's 2020-2045 RTP/SCS. As the proposed Project would not conflict with applicable plans, policies, and regulations adopted for the purpose of reducing emissions of GHGs, the proposed Project's impacts related to GHG emissions would be less than significant. Further, based on the results of the quantitative analysis as described above, the Project would result in 117.25 MTCO2e per year (including long-term operational GHG emissions and short-term construction emissions amortized over 30 years). This is well below the bright-line threshold of 3,000 MTCO2e per year established by the SCAQMD for non-industrial projects. Because the Project is consistent and does not conflict with the applicable plans, policies, and regulations, and because the Project's incremental increase in GHG emissions of 117.25 MTCO2e per year is below the applicable numeric threshold of 3,000 MTCO2e per year, impacts would be less than significant.

GHG (b). Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant. As described above, California has enacted several pieces of legislation that relate to GHG emissions and climate change, much of which sets aggressive goals for GHG reductions within the state. The first and most far-reaching is AB 32, now followed by SB 32, in which CARB must ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. While AB 32 establishes control measures that would apply to light, medium, and heavy-duty vehicles, and the proposed project would operate those types of vehicles, these measures are being implemented at the state level and the proposed project would not interfere with the implementation of the control measures. Implementation of AB 32 control measures for reduced vehicle emissions would decrease GHG emissions from the Project. Further, the Project would be consistent with the CARB's Scoping Plan, and SCAG's 2020–2045 RTP/SCS, therefore, would neither generate GHG emissions that may have a significant impact on the environment nor conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions. Specifically, the Project would not conflict with the emission reduction measures discussed within CARB's Scoping Plan and subsequent updates, particularly their emphasis on the identification of emission reduction opportunities that promote economic growth while achieving greater energy efficiency and accelerating the transition to a low-carbon economy. In addition, as recommended by CARB's Scoping Plan and updates, the Project would use "green building" features consistent with the CalGreen Building Code. As discussed above, the Project would generate only a small number of new vehicle trips that would not result in any VMT impacts and would also not conflict with SCAG's 2020–2045 RTP/SCS. Accordingly, the proposed Project would be conducted in compliance with applicable plans, policies and regulations adopted for the purpose of reducing the emissions of GHGs and impacts would be less than significant.

3.10 Hazards and Hazardous Materials

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. HAZARDS AND HAZARDOUS MATERIALS. Would the Project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?	☐	☐	☒	☐
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

3.10.1 Environmental Setting

3.10.1.1 Previous Uses

Historical Oil Drilling Operations (1930s – 1940s)

During the 1930s and 1940s, the Project Site was actively used for oil production, similar to many other parcels located throughout the City of Signal Hill. Two plugged and abandoned oil wells are located on the Project Site. Oil Well #79 was previously operated by Dabney-Johnston Oil Corporation and is located in the southwest corner of the Project Site (APN: 7216-021-002). Oil well #79 was drilled in 1930/1931 and abandoned in 1941. Oil well #3 was previously operated by The Termo Company located in the southeast corner of the site (APN: 7216-020-

011). Oil well #3 was drilled in 1930/1931, plugged in 1941/1942 and re-abandoned in 1980 to remove a previously lost bailer and other miscellaneous materials.

A Phase II Soil and Soil Gas Investigation, completed by DL Science to determine significant sub surface impacts, reported that Methane Gas Leak tests were conducted in February, July, and August 2015, the results of which found neither of the wells were leaking methane in concentrations exceeding the City of Signal Hill threshold[1] of 500 parts per million by volume (ppmv). Concrete vent cones with vent cone risers were placed and filled with gravel above each well; these cones remain in place presently.

No accidental releases have been identified on the California State Water Control Board Geotracker database or the CalGEM WellSTAR database for either oil well (CSWCB 2023; CalGEM; 2023). Both Oil well #79 and Oil Well #3 were deemed plugged and abandoned by the city oil services coordinator pursuant to Chapter 16.24 - Development Standards for Properties Containing Abandoned Wells of the City of Signal Hill Municipal Code. However, per section 16.24.040 of the City code, the 24-month validation is terminated and will require another investigation permit and clearance upon project approval. Figure 3.10-1 below provides the location of the oil wells on the Project Site in relation to the proposed developments.

Historical Automotive Uses (1940s- 1960s)

Several previous investigation reports from Mearns, DL Science, and SCE Engineers identified previous automotive repair and related uses on the Project Site between the 1940s and 1960s. Findings and actions taken from site investigations and remediation are detailed below in Section 3.10.1.2.

1 The City of Signal Hill Municipal Code Section 16.24.040 requires leak testing for properties containing abandoned oil wells. Sub Section D states, “A leak test report shall be prepared by a state licensed geotechnical or civil engineer or state registered environmental assessor, class II, and shall be submitted to the city for review and approval by the Oil Services Coordinator. A well shall be considered leaking if the leak test report indicates the meter read is greater than 500 parts per million.” Additional Project Development Guidance Available online: https://www.cityofsignalhill.org/16/Community-Development. Accessed February 27, 2024.

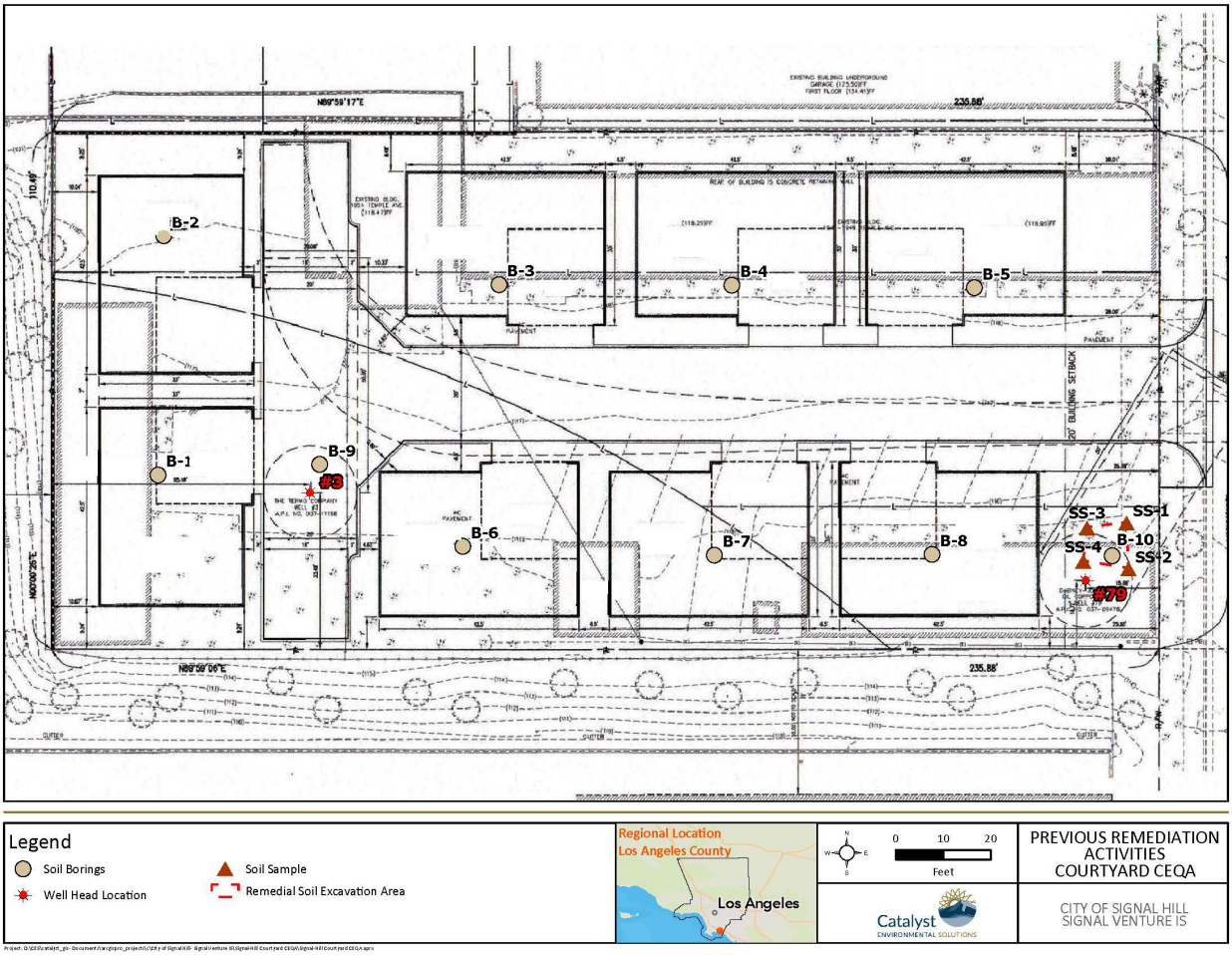


Figure 3.10-1: Previous Investigation and Remediation Activities

3.10.1.2 Site Investigations and Remediation

Phase I Environmental Site Assessment (2008)

A Phase I Environmental Site Assessment (Phase I) was conducted in November 2008. The Phase I identified oil operations (as discussed in Section 3.10.1.4 above) and automotive-related activities that operated on the Project Site between the 1940's and 1960's. The Phase I also identified earthquake rubble from the 1933 Long Beach earthquake was used as on-site fill material in the site vicinity and a cesspool was reported to exist in an unpaved area at the northwest corner of the Project Site. Evidence of Recognized Environmental Condition and Controlled Recognized Environmental Condition was identified and the Phase I concluded that the potential for contamination related to petroleum hydrocarbons (TPH), heavy metals and volatile organic compounds appeared to be high and that an environmental assessment was warranted. The Phase I recommended that the potential for vapor intrusion be mitigated by a methane mitigation system (e.g., venting and vapor barrier system) and that asbestos-containing materials and lead-based materials be property abated and disposed prior to demolition of existing on-site structures.

Phase II Environmental Site Assessment - Subsurface Soil and Soil Gas Investigation (2021)

A follow up Phase II Subsurface Soil and Soil Gas Investigation was performed as a technical recommendation to the Phase I (2021). Ten sampling locations (B-1 – B-10) were performed on the Project Site. One soil sample yielded concentrations of mercury exceeded the Department of Toxic Substances (DTSC) Human and Ecological Risk Office (HERO) Note 3 Screening Limit and TPH. The soil gas investigation samples found concentrations of chlorinated volatile organic compounds (CVOCs) but resulted below all screening levels. The investigative results of boring site B-10 determined concentrations of mercury would pose a significant health risk to future users of the site under the most conservative assumptions using a residential land use scenario and maximum reported concentrations. The Phase II recommended the following:

- Passive Methane Mitigation System includes the following methane mitigation measures for proposed structures at the subject site;
- Additional soil investigation be conducted in the vicinity of boring B-10 to determine the lateral extent of significant mercury concentrations at that location and to evaluate the feasibility, scope of work and potential cost to remediate soil using conventional dig-and-haul methods in accordance with Federal, State and local regulations;
- A baseline HHRA provided to the owners as risk managers with an understanding of the actual and potential risks to human health and the environment posed by the site and any uncertainties associated with the assessment; and,
- Soil Excavation was to be conducted until all confirmation samples resulted below DTSC limit concentrations of 1 mg/kg.

Four additional follow up sampling locations (SS-1 – SS-4) and testing was conducted in 2021 in the southeastern portion of the Project Site at sampling location B-10 to determine the extent of soil with elevated mercury concentrations. A 10 by 10 by 10-foot excavation (approximately 27-cubic yards) was recommended at sampling site B-10 to remove mercury-impacted soil.

Phase III Environmental Site Assessment - Remedial Soil Excavation for Mercury Impacted Soil (2021)

Remediation was conducted December 20 and 22, 2022 and removed approximately 44 cubic yards of soil containing elevated concentrations of mercury. The excavation took place in the southeast corner of the property, adjacent to abandoned oil well #3. Confirmation samples from all walls and the floor of the excavation resulted in concentrations below the applicable thresholds (DTSC HERO Note 3 Screening Limit of 1.0 mg/kg ranging between non-detect and 0.935 mg/kg). The TPH characterization sample resulted in concentrations of 282 mg/kg and 656 mg/kg for tests TPH (diesel) and TPH (motor oil) respectively. This is below the TPH diesel DTSC HERO Note 3 Screening Limit; of 2,400 mg/kg for residential land use and below the TPH (motor oil) United States Environmental Protection Agency (USEPA) Regional Screening Level (RSL) of 230,000 mg/kg for Residential use.

During excavation, crews encountered a soil void at approximately nine feet below ground surface (bgs) at the southern end of the excavation pit below the bottom of the existing oil well vent cone. An approximately 6-inch layer of dark, dry petroleum hydrocarbons was identified extending east from the base of the vent cone at approximately 8.5 feet bgs. A characterization sample was collected from this material and photoionization detector (PID) readings were non-detect. The soil void around the wellhead was backfilled with approximately nine cubic yards of slurry material. The remaining one cubic yard of slurry was pumped into the bottom of the soil excavation pit and the pit was back filled to surface grade elevation with stockpiled on-site soil.

3.10.1.3 Baseline Human Health Risk Assessment (2022)

A Baseline Human Health Risk Assessment was conducted in February 2022 to determine the summed risk to Residents, Construction workers, and builders based on identified on site material and anticipated uses. The HHRA evaluated potential health risks to human receptors posed by concentrations of constituents detected at least one time in the soil matrix and soil vapor underling the Project Site and determined mitigation measures protective of human health for the proposed project.

The HHRA determined a summed risk of carcinogenic constituents that exceeded the target threshold of $1x10^{-6}$ for the residential occupants and exceeded the target threshold of $1x10^{-5}$ for construction workers. However, the estimated risks are between 10^{-6} and one in 10,000 (10^{-4}) which are “safe and protective of public health” (Federal Register 56(20):3535, 1991) and within a risk range acceptable to DTSC. Comments from California Environmental Protection Agency Office of Environmental Health Hazards Administration (CalEPA OEHHA) do not alter the assessed risk calculations in a manner that determines risk to exceed the previously mentioned risk range acceptable to DTSC.

The HHRA determined that institutional controls such as a methane mitigation system to be installed subslab of any proposed buildings, pursuant to the City of Signal Hill’s Oil and Gas Code (Section 16.24.080) will effectively mitigate risks and hazards due to vapor intrusion to negligible conditions ensuring the site is safe for any future intended use including as a residential property.

The HHRA determined a Soil Management Plan should be prepared prior to grading activities and that an AQMD 1166 permit should be obtained. This has been incorporated as a mitigation measure in Section 3.10.3. Additionally, the HHRA recommends construction workers to practice good hygiene practices pursuant to 29CFR 1926.1910, 8CCR 4, and 22CCR 2.4 to mitigate contact with soils containing residual concentration of the assessed constituents.

3.10.1.4 Hazardous Materials

A hazardous material is defined as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human

health and safety or to the environment if released into the workplace or the environment (HSC Section 25501(o)). The term "hazardous materials" refers to both hazardous substances and hazardous wastes. Under federal and state laws, any material, including wastes, may be considered hazardous if it is specifically listed by statute as such or if it is toxic, ignitable, corrosive, or reactive.

3.10.1.5 Hazardous Waste

CalEPA Department of Toxic Substances Control (DTSC) maintains EnviroStor, a data management system for tracking cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further. EnviroStor lists 102 permitted hazardous waste facilities under the CalEPA DTSC in California, and 718 corrective action sites. Per the current EnviroStor database (DTSC 2024), the Project Site does not contain any listed sites.

The SWRCB maintains GeoTracker, a database of environmental data from water quality regulatory programs, including oil and gas monitoring related activities. Per the current GeoTracker database (SWRCB 2024a), the Project does not contain any listed sites.

3.10.1.6 Spill Prevention and Containment

The Project has identified BMPs detailing methods for handling and managing impacted soil that may be discovered or encountered during grading activities. BMPs are detailed above in Section 2.1.3.10. Additionally, the City of Signal Hill Project Development guide recommends a Soil Management Plan (SMP) detailing the methods for handling and managing impacted soil that may be discovered or encountered during soil excavation, oil/gas leak testing, and waste soil handling specifically in the area of on-site abandoned gas wells. This has been incorporated into MM-HAZ-1 below.

3.10.1.7 Fire Hazards

The Project Site is not located within a fire hazard severity zone designated by the state, county or city. The City of Signal Hill Local Hazard Mitigation Plan does not identify a wildfire zone or mitigations applicable to the Project Site (City 2018).

3.10.2 Impact Assessment

HAZ (a). Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Less than Significant with Mitigation. Routine operation and maintenance of the Project would not involve the transport, use, or disposal of hazardous materials. The type and amount of material associated with residential units would be household cleaning products. Onsite fueling or storage of hazardous materials during occupation is prohibited as identified in Table 2.1-2.

Therefore, the operation and maintenance of the Project would have a less than significant impact and no mitigation measures are proposed.

The Project would not require the routine use or transport of hazardous materials, and all potentially hazardous materials used during construction would be used and stored in compliance with applicable federal, State, and local regulations. This includes but is not limited to SCAQMD Rule 402 (Nuisance) and Rule 403 (Fugitive Dust) which prohibit the emission of air contaminants, fugitive dust, or other materials that would cause injury, detriment, nuisance, or annoyance to nearby sensitive receptors. Specifically, compliance with SCAQMD Rule 403 ensures the contractor would apply dust suppression measures to ensure control of fugitive dust. Additionally, applicable BMPs as outlined in Section 2.1.3.10 and in Table 2.1-2 would be followed including implementation of a Spill Prevention and Control Plan to further reduce the potential for release of fuels, oils, solvents, or other toxic materials, as well as reducing the potential for sediments or pollutants to migrate offsite.

As described in Section 3.10.1, contaminated soil was identified and remediated to below applicable thresholds. ~~However, concentrations of TPH, metals, VOCs and semi-volatile organic compounds (SVOCs) were identified onsite in soil and VOCs were identified in onsite soil vapor. Therefore, t~~There is a potential for unanticipated discoveries of contaminated soil (i.e., not previously characterized during previous site investigations) during ground disturbing activities , posing a potentially significant impact. Implementation of **MM HAZ-1** would require development and implementation of a site-specific Soil Management Plan prior to construction activities that provides protocols for the characterization, safe handling, and disposal of impacted soils that may be discovered during construction activities. ~~Additionally~~If contamination is confirmed to be present, a remedial action plan or similar plan shall be developed in consultation with an appropriate regulatory oversight agency such as the DTSC or the regional water quality control board to assess and remediate impacts to below applicable thresholds. Further, SCAQMD Rule 1166 requires that an approved mitigation plan be obtained from the SCAQMD prior to excavation or grading of soil containing VOC material. Implementation of **MM HAZ-1** as well as compliance with SCAQMD Rules 402, 403, ~~and~~ 1166, and 1466 as applicable in addition to compliance with local Building and Municipal code requirements, would ensure impacts resulting from the Project's construction would be reduced to less than significant. Therefore, with implementation of **MM HAZ-1**, Project construction and operations would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials and the Project would have a less than significant impact with mitigation.

MM HAZ-1:- **Soil Management Plan and Remedial Action Plan**.

Prior to initiating any ground disturbing activities on the Project Site, the project applicant shall prepare a Soil Management Plan (SMP) that is submitted to and reviewed and approved by the California Department of Toxic Substances Control (DTSC), the Los Angeles Regional Water

Quality Control Board (LARWQCB), the Los Angeles County Fire Department (LACFD) Site Mitigation Unit (SMU), or other applicable regulatory agency having jurisdiction to review or approve the SMP. The SMP shall be prepared by a Registered Environmental Assessor or other qualified expert and shall address the findings previous site investigations and radiation actions conducted at the site, and/or subsequent relevant studies. During construction, the contractor shall implement the SMP. If unidentified or suspected contaminated soil or groundwater evidenced by stained soil, noxious odors, or other factors, is encountered during site preparation or construction activities on any portion of the Project Site, work shall stop in the excavation area of potential contamination. Upon discovery of suspect soils or groundwater, the contractor shall notify the applicable regulatory agency and retain a Registered Environmental Assessor or other qualified professional to collect soil samples to confirm the type and extend of contamination that may be present.

If contamination is confirmed to be present, any further ground disturbing activities within areas of identified or suspected contamination shall be conducted according to a site-specific Remedial Action Plan (RAP), prepared by a qualified professional. The contractor shall follow all procedural direction given by the applicable regulatory agency, and in accordance with the RAP to ensure that suspect soils are isolated, protected from runoff, and disposed of in accordance with transport laws and the requirements of the licensed receiving facility. If contaminated soil or groundwater is encountered and identified constituents exceed human health risk levels, ground disturbing activities shall not recommence within the contaminated areas until remediation is complete and a "no further action" letter is obtained from the appropriate regulatory agency or direction is otherwise given from the appropriate regulatory agency for a course of action that would allow that construction to recommence within any such areas. The project applicant shall submit the "no further action" letter or notification documenting direction from the regulatory agency to the City prior to resumption of any ground disturbing activity on the relevant portion of the Project Site. If compounds in soil are identified in concentrations that trigger SCAQMD's Rules 1166 or 1466, the SMP will require compliance with such rules. ~~A Soil Management Plan shall be developed in consultation with the appropriate regulatory authoritiesin the event that previously unidentified, obvious, or suspected hazardous materials, contamination, debris, or other features or materials that could present a threat to human, health or the environment are discovered during construction. Construction activities shall cease immediately until the affected area is evaluated by a qualified professional. and the remedial action agreed upon shall be completed. Work shall not resume in the affected area until appropriate actions have been implemented in accordance with the remediation plan. A SCAQMD Rule 1166 permit shall be obtained prior to remediation activities as required. The~~ The Soil Management Plan and Remedial Action Plan (as applicable) shall include the following:

- Remediation goals and cleanup criteria that could include, but are not necessarily limited to, excavation and on-site treatment, excavation and off-site treatment, and/or removal of contaminated soil and/or groundwater;
- A detailed description of the access points and haul-out routes for remedial activities, remediation methods and procedures; mitigation of dust: minimization or avoidance of disturbance to sensitive ecosystems; and verification soil sampling and analysis. Included in the discussion shall be information on disposal sites, transport and disposal methods, as well as recordkeeping methods for documenting remediation, regulatory compliance, and health and safety programs for on-site workers; and
- Removal of oil development equipment and debris.

HAZ (b). Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less than Significant. The State California Geologic Energy Management Division (CalGEM) data indicates the presence of two abandoned oil wells on the Project Site. However, the Project has followed compliance with the City's Oil and Gas Code regarding development on properties with abandoned oil wells which requires the well to be located, excavated, and tested for methane leaking, then surveyed and a vent cone installed with supervision by the City's Oil Services Coordinator. A Well Abandonment Report (WAR) was prepared and reviewed by the City's Petroleum Engineer who concurred with the finding that the well abandonment meets the City standards for construction over/near an abandoned well. The WAR was approved by the City's Oil Services Coordinator in 2021. In addition, the City's Oil and Gas Code also requires the entire Project Site to be tested for methane levels pursuant to Section 16.24.040 of the Signal Hill Municipal Code.

Due to the presence of the two abandoned oil wells, the investigative findings in Section 3.10.1, and the methane mitigation requirements presented in the City of Signal Hill, Community Development Department, Methane Mitigation System (December 12, 2023), a Modified Active Methane Mitigation System including the following features would be installed as part of the Project as proposed by the City's Environmental Consultant in Section 2.1.3.2.

Institutional controls (i.e., a methane mitigation system) to be installed subslab of any proposed building, pursuant to the City of Signal Hill's Oil and Gas Code Section 16.24.080 will effectively mitigate risks and hazards due to vapor intrusion to negligible conditions ensuring the site is safe for any further intended use including as a residential property.

Additionally, the Project has been designed to ensure both abandoned wells are accessible in an emergency capacity. No habitable facilities will be placed on top of or within close proximity to either abandoned well as defined in the City of Signal Hill Code (Section 16.24.050). Therefore, the Project would result in a less than significant impact.

HAZ (c). Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. The Project is not located within one-quarter mile of an existing or proposed school. The nearest school to the Project Site is Nieto Herrera Elementary School which is 0.3 miles to the south. No locations for new schools are currently being developed by the City of Signal Hill or are proposed in the General Plan. Therefore, the Project would have no impact.

HAZ (d). Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. The Project is not located on a site that is included on the Department of Toxic Substances' EnviroStor database, or on the Cortese list database pursuant to Government Code Section 65962.5 (DTSC, 2024). Additionally, the Project Site is not located on a site that is included in the California Water Board's Geotracker Database which identifies sites that impact or have the potential to impact water quality in California. Therefore, the Project would have no impact.

HAZ (e). For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?

Less than Significant. The Project sits less than 2 miles away from Long Beach Airport. However, the Project is not located within any airport land use plan areas. The City of Signal Hill is not within the airport's planning boundary or influence area. As such, the proposed Project would not expose people working or visiting the site to excessive noise levels associated with airport activities; therefore, the Project would have a less than significant impact.

HAZ (f). Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant. The Project would increase the number of residents within a response area; however, the Project does not require any specialized response, nor does it place new land uses in an area that is subject to potential threats such as high fire hazard area, flood, or known hazardous materials or substance releases. The Project does not impair or interfere with any plan identified in the City of Signal Hill General Plan Safety Element or the Local hazard mitigation plan (City, 2018). Additionally, the Project is compliant with the minimum driveway width and design pursuant to Title 15 of the Signal Hill Municipal Code as well as the Los Angeles County Fire Department. Therefore, the Project would have a less than significant impact.

HAZ (g). Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

No Impact. The Project is located completely within an urbanized area and does not contain any Moderate, High, or Very High Fire Hazard Severity Zones designated by CAL FIRE. Additionally, the Safety element of the General plan does not identify Wildfire zones within the City. Therefore, the Project would have no impact.

3.11 Hydrology and Water Quality

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
X. HYDROLOGY AND WATER QUALITY. Would the Project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?	☐	☐	☐	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:	☐	☐	☒	☐
a. Result in a substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
b. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
c. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐
d. Impede or redirect flood flows?	☐	☐	☐	☒
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

3.11.1 Environmental Setting

The City of Signal Hill is located within the boundaries of both the Los Cerritos Channel and the Lower Los Angeles River watersheds. The Los Cerritos Channel Watershed consists of a small, urbanized watershed that encompasses 17,711 acres in the Los Cerritos Channel and Alamitos Bay Watershed Management Area. This watershed includes the Cities of Bellflower, Cerritos, Downey, Lakewood, Long Beach, Paramount, and Signal Hill, as well as unincorporated land. Approximately 531 acres of Signal Hill is included in this watershed which makes up 3% of the total watershed area (Los Cerritos Channel Watershed Group 2017). This watershed has an associated watershed management plan. Signal Hill also comprises approximately 774 acres of the Lower Los Angeles River Watershed and is located within the Lower Los Angeles River

Watershed Management Area, which has an associated watershed management plan (Lower Los Angeles River Watershed Group 2015). The Newport-Inglewood Fault is the topographical feature that dictates the direction that surface water drains into these two watersheds. Surface water runoff originating on Signal Hill's north side slope (north of the Newport-Inglewood Fault) generally flows into the Los Cerritos Channel Watershed, while the runoff from the south side slope generally flows into the Lower Los Angeles River Watershed (Sespe Consulting 2022).

Los Angeles River Reach 1 is the closest surface water body to Signal Hill, located approximately 1.2 miles east from the City's eastern boundary. All surface water runoff is directed to surface water bodies outside the City via Municipal Separate Storm Sewer ("MS4") discharges. The City is surrounded by areas under the jurisdiction of the City of Long Beach; therefore, any discharges originating from within the City must pass through the City of Long Beach before reaching any receiving waters (Sespe Consulting 2022). The City is served by two stormwater flood control facilities, the Hamilton Bowl and the California Bowl, which control major portions of the City's drainage before discharging to the MS4 and provide opportunities for urban-runoff capture, treatment, infiltration, and monitoring. Specifically, the Hamilton Bowl is a 15-acre flood control facility, owned and operated by the Los Angeles County Flood Control District. Approximately half of the City's stormwater runoff flows to the Hamilton Bowl where it is retained and eventually discharged into the Los Angeles River (Sespe Consulting 2022).

3.11.1.1 Topography and Climate

The topography of Signal Hill is defined by the hill located in the central southeast portion of the City that formed along the Newport-Inglewood Fault Zone. Elevation in the City ranges from 25 feet above sea level in the southwest portion to 370 feet above sea level at the hilltop plateau (City 1986). Slopes generally vary from 10 to 80 percent, with the steepest slopes occurring along and adjacent to the Hilltop area. The greatest percentage of slope change occurs on the southerly slopes of Signal Hill with an average of 40 percent slope and increasing to as much as 80 percent slope. Slopes in the adjacent areas are more gradual and primarily ranges from 5 to 10 percent (City 1986).

The City is located within Southern California's coastal plain, and experiences a Mediterranean climate with warm, dry summers and mild winters. Historical climate data collected from the Western Regional Climate Center's Long Beach Daugherty Field Station for the period of January 1, 1949, to June 9, 2016, indicates an average monthly temperature maximum of 83.9°F for August and an average monthly minimum of 45.3°F for December. Average annual precipitation has historically been approximately 12 inches, with the most precipitation occurring between November and April (Sespe Consulting 2022a).

3.11.1.2 Surface Water

No surface water bodies exist within the City. The nearest surface water body is the Los Angeles River Reach 1 located approximately 1.2 miles east from the City's eastern boundary. All surface

water runoff is directed to surface water bodies outside the City via Municipal Separate Storm Sewer ("MS4") discharges. Given the unique geography of the City, and the fact that it is surrounded on all sides by areas under the jurisdiction of the City of Long Beach, any discharges originating from within the City must pass through the City of Long Beach before reaching any receiving waters.

The City is also served by two stormwater flood control facilities, namely the Hamilton Bowl and the California Bowl; however, both basins also fall within the City of Long Beach. These two facilities control major portions of the City's drainage before discharging to the MS4 and provide opportunities for urban-runoff capture, treatment, infiltration, and monitoring. Specifically, the Hamilton Bowl is a 15-acre flood control facility, owned and operated by the Los Angeles County Flood Control District. Approximately half of the City's stormwater runoff flows to the Hamilton Bowl where it is retained and eventually discharged into the Los Angeles River (Sespe Consulting 2022a).

Signal Hill sanitary sewers connect to the City of Long Beach sewer line. Sewage treatment service to the City is provided by the County Sanitation Districts of Los Angeles County Sanitation District (#29). The construction and connection of local sewers and laterals to the district has been and will remain the responsibility of the City of Signal Hill (City 2022c).

3.11.1.3 Groundwater

Signal Hill and the surrounding area overlie two main groundwater basins, the West Coast Basin and the Central Basin. These groundwater basins are separated by the Newport-Inglewood Fault Zone, which partially restricts the flow of groundwater.

Signal Hill's water supply consists primarily of groundwater produced from the Central Basin and treated surface water. The City currently utilizes two groundwater production wells which make up approximately 90% of the water supply (City 2022b). Imported water is used as a supplemental supply during periods of high demand or in the case that a well is shut down for maintenance or other issues that may arise (City 2021a). The total pumping capacity of wells operated by the City is 3,585 gallons per minute. As stated in the City's Urban Water Management Plan, the newest well, Well No. 9, came online in October 2017 and is located within the City, northeast of the intersection of Cherry Avenue and 28th Street (City 2021a). The City has drilled another well, Well No. 10, which was completed in 2022.

The City pays a replenishment assessment to the Water Replenishment District of Southern California for each acre-foot of water that is pumped out of the Central Basin. The Water Replenishment District manages the groundwater replenishment and groundwater quality activities in 43 cities that overlie the Central Basin and West Coast Basin in southern Los Angeles County (WRD 2022).

Estimated indoor residential water consumption is based on per capita daily water use rate of 34.5 gallons per day as cited by the Residential End Uses of Water published by the Water

Research Foundation (2016). Accordingly, total indoor water use for the eight residential units is 298,190 gallons per year (based on assumed occupancy of four residents per dwelling). Further, estimated water use for site landscaping for the proposed Project is 24,442 gallons per year (gpy) which is below the calculated maximum allowed water allowance of 52,678 gpy and in compliance with the criteria of California Model Water Efficient Landscape Ordinance. In addition, the Project will adhere to the City's Water Conservation Program and water conservation ordinance (Ordinance No. 2009-04-1399) which may require reduced water use for landscaping during times of water shortages.

Groundwater Quality

Historical over-pumping of groundwater has resulted in seawater intrusion, primarily in the West Coast Basin, and seawater intrusion barriers and spreading grounds are being operated to minimize additional future impacts (Flow Science 2014). A review of groundwater samples collected from monitoring and production wells was conducted to characterize groundwater quality. Results showed that constituent concentrations in groundwater production zones were below applicable regulatory thresholds in the groundwater basins with the exception of total dissolved solids (TDS) and chloride primarily in the West Coast Basin, where seawater intrusion has resulted in exceedances of California's Secondary Maximum Contaminant Levels (MCLs) (Flow Science 2014). In their 2014 report, Flow Science also indicated that Superfund sites located in the Los Angeles basin have not impacted groundwater quality in the Signal Hill-Long Beach area and that contamination events and subsequent cleanups in the Signal Hill-Long Beach area appear to have been limited to soil and to shallow aquifers that are not used for drinking water production (Flow Science 2014).

Overall, groundwater quality within the Central and West Coast basins remains very good in Water Year 2020-2021, with only some areas facing poor water quality from natural or anthropogenic sources (WRD 2022). Some of the water quality constituents were above the Primary MCLs, which are the drinking water standards established for public health. Some water quality constituents were above the Secondary MCLs, which impact the aesthetics of the water, such as taste, odor, and color, but do not impact health (WRD 2022). For constituents that do not have enforceable levels established, the CalEPA, SWRCB, Division of Drinking Water established health-based advisory levels known as Notification Level and Response Level.

The following water quality constituent maximums were detected above the Primary MCLs in the Central Basin based on data collected from Water Year 2018-2021 by DDW: arsenic (3% of sampled production wells), Trichloroethylene (9% of sampled production wells, Tetrachloroethylene (6% of sampled production wells), perchlorate (1% of sampled production wells), and hexavalent chromium (3% of sampled production wells). In addition, the following water quality constituent maximums were detected above the Secondary MCLs based on data collected from Water Year 2018-2021 by Division of Drinking Water: iron (6% of sampled wells)

and manganese (17% of sampled wells). Lastly, 1,4-dioxane was detected at concentrations above the Notification Level in 71 percent of production wells that were tested (WRD 2022).

Due to the quality of the groundwater in the Central Basin, minimal water treatment occurs prior to entering the potable water system. Groundwater quality is not expected to be a constraint on groundwater as a source of water in the future for the City (City 2021a). The City provides annual water quality reports which analyzes over 50 regulated and unregulated organic chemicals. None of these chemicals were detected at or above the reporting limit in groundwater or surface water sources in 2021 (City 2021b).

Groundwater Levels

On average, water levels fell by nearly 4 feet across the Water Replenishment District's service area[2] in Water Year 2020-2021 (WRD 2022). In Water Year 2020-2021, groundwater levels decreased across the Central Basin with the greatest decrease occurring in the northern portion of the basin where water levels decreased by up to 20 feet compared to the previous year (WRD 2022). Decreases in water level ranged from 3 to 15 feet in other areas of the Central Basin, with the majority of the basin decreasing between 1 to 5 feet in groundwater elevation (WRD 2022). The City boundaries fall within the area with a decrease of 1 to 5 feet as well as areas of no significant change in groundwater elevation. Changes in groundwater levels within the West Coast Basin were variable in Water Year 2020-2021. Overall, water levels remained relatively unchanged from the previous year, and some areas have increased by up to 4 feet or decreased by 2 feet compared to Water Year 2019-2020. Overall, there was a loss in groundwater storage within the Central Basin of approximately 66,900 acre-feet in Water Year 2020-2021, and there was no appreciable change in groundwater storage in the West Coast Basin (WRD 2022).

3.11.1.4 Flood Hazards

In general, Signal Hill is not subject to flood hazards and there are no special flood hazard areas in the City. Due to topography, infrequent but intense rainfall can present minimal flooding problems in parts of the City. Areas with the greatest potential for rainfall-related flooding are in localized areas to the south, southeast, and southwest of the Hilltop area (City 2016).

According to the Federal Emergency Management Agency's most recent Federal Insurance Rate Map (FIRM) (FIRM 06037C1966G effective 4/21/2021) the Project Site is not located in or near a special flood hazard area.

3.11.1.5 Project Site Surface Runoff and Drainage

The Project Site currently accepts storm water runoff from the adjacent property to the north (APN 7216-020-012) which drains into the municipal storm drain system. As part of the Project,

[2] WRD's service area includes 43 cities that overlie the Central Basin and West Coast Basin in southern Los Angeles County.

runoff from the adjacent property would be collected and discharged via a separate pipe toward Temple Avenue.

3.11.2 Impact Assessment

HYD (a). Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less Than Significant. The Project Site currently accepts storm water runoff from the adjacent property to the north (APN 7216-020-012) which drains into the municipal storm drain system. The Project would include a stormwater drainage and erosion control system. Stormwater runoff would be collected by a system throughout the property of inlet drains, catch basins, a trench drain, and permeable pavement that feeds into an CUDO® Stormwater Infiltration System. The stormwater drain system will be installed to the manufacturer's specification and complies with County of Los Angeles Department of Public Works LID Standards Manual (2014). In addition, applicable BMPs would be followed as outlined in Section 2.1.3.10 and in Table 2.1-2, above.

The Project would provide drought tolerant landscaping (i.e., blue glow agave, creeping mahonia, golden rain tree,) and water-conscious automatic irrigation that would comply with the City of Signal Hill Water Conservation in Landscaping Code (13.10.010). The annual estimated total landscaping water use for the proposed Project is 24,442 gallons per year (gpy) which is below the calculated maximum allowed water allowance of 52,678 gpy and in compliance with the criteria of California Model Water Efficient Landscape Ordinance. Water from irrigation would percolate into the soil before entering the CUDO® Stormwater Infiltration System described above. Therefore, the Project would result in less than significant impacts to water quality standards, waste discharge requirements, or surface water and/or ground water quality.

HYD (b). Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?

Less Than Significant. The Project's estimated total indoor water use for the eight residential units is 298,190 gallons per year (based on assumed occupancy of four residents per dwelling). Estimated water use for site landscaping for the proposed Project is 24,442 gallons per year (gpy) which is below the calculated maximum allowed water allowance of 52,678 gpy and in compliance with the criteria of California Model Water Efficient Landscape Ordinance. In addition, the Project would adhere to the City's Water Conservation Program and water conservation ordinance (Ordinance No. 2009-04-1399) which may require reduced water use for landscaping during times of water shortages. Further, as described in the City's Urban Water Management Plan for 2020, "the City's groundwater right of 2,022 AFY is in the Central Basin Aquifer. The City's existing potable water demand is currently 1,918 AFY. Therefore, even under

the condition of not being able to access groundwater carryover rights, the City is expected to have enough supply to meet the demands during the drought years." Further, there are no groundwater recharge locations near the Project Site. Therefore, the Project would have less than significant impacts regarding groundwater supplies or groundwater recharge.

HYD (c). Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. Result in a substantial erosion or siltation on- or off-site;

Less Than Significant. The Project Site does not contain a stream or river, but will increase impervious surfaces at the site through the construction of 8 dwellings. However, as described above in HYD (a), the Project would include a stormwater drainage and erosion control system that would comply with County of Los Angeles Department of Public Works LID Standards Manual (2014). Also, pavers at the site will be permeable to rainwater. In addition, the Project would adhere to BMPs and abatement measures to minimize and limit the extent and magnitude of potential erosion and siltation. These measures are identified per resource in Table 2.1-2 above. Therefore, Project impacts to erosion or siltation would be less than significant.

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

Less Than Significant. As described above in HYD(a) above, the Project would include a stormwater drainage and erosion control system that would comply with County of Los Angeles Department of Public Works LID Standards Manual (2014). As described in the LID Report (**Appendix E**), the purpose of a CUDO infiltration system is to capture stormwater runoff, store the runoff, and then allow it to percolate into the ground via the open space area of the cubes and perforations in the side wall. The system is backfilled with a Class I material defined by ASTM D2321 as a cleaned open graded rock or a Class II permeable sand. The rock or sand provide additional storage capacity but also allow for a percolation interface with the native material. Therefore, the Project would have less than significant impacts regarding flooding on- or offsite.

iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;

Less Than Significant. The Project Site currently accepts storm water runoff from the adjacent property to the north (APN 7216-020-012) which drains into the municipal storm drain system. However, as described above in HYD(a) above, the Project would include a stormwater drainage and erosion control system that would comply with County of Los Angeles Department of Public Works LID Standards Manual (2014). The addition of the stormwater drainage and erosion

control system would reduce sources of polluted runoff. Therefore, Project impacts would be less than significant with regard to runoff water and additional sources of polluted runoff.

iv. Impede or redirect flood flows?

No Impact. As described in Section 3.11.1.4, the Project Site is not located in a special flood hazard zone, nor does the Project Site contain a wetland or riparian resources (i.e., stream or river). The Project will increase impervious surfaces at the site through the construction of the proposed developments. However, as described above in HYD (a), the Project would include a stormwater drainage and erosion control system that would comply with County of Los Angeles Department of Public Works LID Standards Manual (2014). Therefore, the Project would result in no impact with regard to the impediment or redirection of flood flows.

HYD (d). In flood hazard, tsunami, or seiche zones, would the Project risk release of pollutants due to project inundation?

No Impact. As described above (Section 3.11.1.4 of this IS), the Project Site is not located in a special flood hazard zone. Therefore, the Project would result in no impacts related to the release of pollutants due to project inundation during a flood, tsunami, or located in a seiche zone.

HYD (e). Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant. The estimated indoor residential water consumption for the Project is based on per capita daily water use rate of 34.5 gallons per day as cited by the Residential End Uses of Water published by the Water Research Foundation (2016). Accordingly, total indoor water use for the eight residential units is 298,190 gallons per year (based on assumed occupancy of four residents per dwelling). Further, estimated water use for site landscaping for the proposed Project is 24,442 gallons per year (gpy) which is below the calculated maximum allowed water allowance of 52,678 gpy and in compliance with the criteria of California Model Water Efficient Landscape Ordinance. As described in the City's Urban Water Management Plan for 2020, "the City's groundwater right of 2,022 AFY is in the Central Basin Aquifer. The City's existing potable water demand is currently 1,918 AFY. Therefore, even under the condition of not being able to access groundwater carryover rights, the City is expected to have enough supply to meet the demands during the drought years." Further, the Project will adhere to the City's Water Conservation Program and water conservation ordinance (Ordinance No. 2009-04-1399) which may require reduced water use for landscaping during times of water shortages. The stormwater drain system will be installed to the manufacturer's specification and would comply with County of Los Angeles Department of Public Works LID Standards Manual (2014). Therefore, the Project would result in less than significant impacts regarding water quality control or sustainable groundwater management plans.

3.12 Land Use and Planning

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. Land Use and Planning. Would the Project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

3.12.1 Environmental Setting

The Project Site is designated for high density residential by the City General Plan Land Use Element. The surrounding land uses are also predominantly residential, including high density, low density, single family, and multifamily residential uses. Temple Avenue provides sole access to the site.

3.12.2 Impact Assessment

LUP(a). Physically divide an established community?

No Impact. The Project is an infill housing development that would fully develop a 0.6 acre lot. The lot is surrounded by residential uses on each side and would blend into the surrounding neighborhood. This development would not change, limit, or restrict the existing transportation format or access to any existing facilities or properties. Therefore, the Project would have no impact on dividing an established community.

LUP(b). Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less Than Significant. The Project is not compliant with the RH setback requirements for a lot exceeding 20,000 sqft. This would require a zoning ordinance amendment from RH to SP-21 which would modify the setbacks on the Project Site while maintaining general consistency with the surrounding neighborhood residential uses. Therefore, this action would not conflict with any applicable City guidance/zoning on avoiding or mitigating an environmental effect. While the Project would be a low density residential development, it would blend into the surrounding area, which is predominately high density residential development and not cause a

significant environmental impact; therefore, the Project would generate less than significant impacts to applicable zoning and regulations that guide environmental protection.

3.13 Mineral Resources

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. Mineral Resources. Would the Project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☒	☐
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☒	☐

3.13.1 Environmental Setting

The California Geological Survey (CGS) identifies three classes of Mineral Resource Zone (MRZ). MRZ-1 is an area with no significant mineral deposits, while MRZ-2 is an area with significant mineral deposits, and MRZ-3 is an area containing known mineral occurrences of undetermined mineral significance (CGS 2021). The Mineral Resource Zone classification areas in Signal Hill are shown in the California Geological Survey's mineral resources map, "Generalized Mineral Land Classification Map of Los Angeles County: South Half" (CGS 1994). The Project Site is located within the MRZ-3 zone, where the significance of the minerals cannot be determined. The City of Signal Hill planning documents do not identify any mineral resources.

The majority of the City of Signal Hill is located within the Long Beach Oil Field. As a result, Signal Hill contains active, idle, and plugged and abandoned wells throughout the City. The Project area is located within an area previously utilized for petroleum extraction, however, the wells have been plugged and abandoned since 1941. The Project area has since been developed for residential uses.

3.13.2 Impact Assessment

MIN (a). Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

Less Than Significant. The Project Site is not located within a known mineral resource zone. While the Project Site is located within the Long Beach Oil Field which is an active oil field and extraction area, there are no active extraction activities occurring on the Project Site.

Additionally, the City of Signal Hill prohibits the drilling of any new well or wells within the surface location in any residential zoning district pursuant to Signal Hill municipal code section 16.16.010. Because the Project Site's existing ordinance prohibits oil drilling, the Project would not result in the loss of an available mineral resource. Therefore, the Project would result in a less than significant impact.

Min (b). Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Less than Significant. The Signal Hill General Plan does not designate important mineral resource recovery sites within the City limits. As described above, despite being located within the Long Beach Oil Field, the City of Signal Hill prohibits the drilling of any new well or wells within the surface location in any residential zoning district. Therefore, the Project would result in a less than significant impact.

3.14 Noise

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. Noise. Would the Project:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?	☐	☐	☒	☐

3.14.1 Environmental Setting

3.14.1.1 Definitions

The following terms are employed in this noise impact assessment:

- Decibel (dB): A unit division, on a logarithmic scale, whose base is the tenth root of ten, used to represent ratios of quantities proportional to power. In simple terms, if the power is multiplied by a factor of ten, then ten is added to the representation of the power on the

decibel scale. If 0 dB represents 1 unit of power, 30 dB represents one thousand units, 60 dB represents one million units, etc.

- A-Weighted Sound Level (dBA): Sound pressure level measured using the A-weighting network, a filter which discriminates against low and very high frequencies in a manner similar to the human hearing mechanism at moderate sound levels. The A-weighted sound level is generally used when discussing environmental noise impacts.
- L_{50}, L_{25}, $L_{8.3}$, $L_{1.7}$: The A-weighted noise level that is equaled or exceeded by the designated percentage of time within the sample. In other words, L_{50} is the noise level that is exceeded 50% of the time (i.e., 30 minutes in an hour), L_{25} is the noise level exceeded 25% of the time (i.e., 15 minutes in an hour), $L_{8.3}$ is exceeded 8.3% of the time (i.e., 5 minutes in an hour), etc.
- Maximum Noise Level (L_{max}). The instantaneous maximum noise level measured during the sample period.
- Equivalent Continuos Noise Level (L_{eq}). The average noise level over a designated time period. This is often referred to as "equivalent sound level", hence the "eq" subscript. The "equivalence" is to a sound of constant level that has the same total acoustic energy content.
- Ambient (i.e., Background) Noise Level: The current noise level in the vicinity of the proposed Project that results from the combination of all sources, near and far.
- Noise-Sensitive Receptors: Per the City of Signal Hill – General Plan, noise-sensitive receptors are those uses that have associated human activities that may be subject to stress or significant interference from noise. Potentially sensitive uses as designated by the City primarily include residences, schools, churches, and libraries.
- Day-Night Average Level (L_{dn} – dBA): The long-term time average sound level, weighted as follows:
    - Frequency response is filtered using the A-weighting network.
    - Daytime noise (7:00 a.m. to 10:00 p.m.) is not weighted.
    - Nighttime noise (10:00 p.m. to 7:00 a.m.) is weighted by +10 decibels.
- Community Noise Equivalent Level (CNEL – dBA): The long-term time average sound level, weighted as follows:
    - Frequency response is filtered using the A-weighting network.
    - Daytime noise (7:00 a.m. to 7:00 p.m.) is not weighted.
    - Evening noise (7:00 p.m. and 10:00 p.m.) is weighted by +5 decibels.
    - Nighttime noise (10:00 p.m. and 7:00 a.m.) is weighted by +10 decibels.

3.14.1.2 Local Noise Environment

The existing ambient noise environment is consistent with that of a densely developed urban area. Because of the active urban environment, naturally elevated baseline noise levels are common and generally persistent. Existing noise sources near the Project Site receptors include traffic/transportation noise, oil and gas operations north of 20th Street, and natural sounds (wind, dogs barking, etc.). Other existing intermittent yet significant noise sources included motorcycles and occasional aircraft flyovers. These surrounding noise sources constitute the existing physical conditions. Short-term noise measurements as reported in the City of Signal Hill Noise Element near the Project area (corner of 19th Street and Temple Avenue), 59 dBA L_{eq}. Per City of Signal Hill Municipal Code 19.16.020(B), presumed ambient noise levels in residential zones is 60 dBA during daytime hours (7:00 a.m. to 10:00 p.m.) and 50 dBA during nighttime hours (10:00 p.m. to 7:00 a.m.).

3.14.2 Impact Assessment

NOI (a). Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction

Less Than Significant. Short-term construction noise impacts could result from demolition, grading, and building construction activities as well as transporting equipment, materials, and workers to the Project Site. Per City of Signal Hill Municipal Code Section 9.15.050, construction activities are restricted to the hours between 7:00 a.m. and 6:00 p.m. on weekdays. Construction noise is usually made up of intermittent peaks and continuous lower levels of noise from equipment cycling through use. The types and numbers of construction equipment near any specific receptor location would vary over time. Table 2.2-1 lists equipment expected to be used during the demolition, site preparation, grading, project construction, paving/surfacing, landscaping, and architectural coating phases of construction with the typical expected equipment noise levels and usage factors listed in the Federal Highway Administration (FHWA) Roadway Construction Noise Model User's Guide (FHWA 2006). For the purposes of a conservative analysis, the noisiest phase of construction, Project Construction, was modeled using the computer noise propagation model SoundPLAN Essential (version 5.1), which calculates noise impacts taking into account terrain features including relative elevations of noise sources, receivers, and intervening objects, ground effects due to areas of pavement and unpaved ground, and atmospheric effects on sound propagation. The noise model conservatively assumes that construction equipment presented in Table 2.2-1 for the Project Construction phase will be operated simultaneously. To reflect the nature of earthwork and construction activities, equipment was modeled as an area source distributed over the Project footprint. The total sound energy of the area source was modeled with all pieces of equipment

operating simultaneously. In actual practice, however, the types and numbers of construction equipment near any specific receptor location will vary over time.

The cumulative noise for all construction equipment is propagated to the nearest sensitive receptors to estimate the maximum change in noise levels resulting from construction activities associated with the proposed Project as summarized in Table 3.14-1 and illustrated in Figure 3.14-1. As shown in Table 3.14-5 and Figure 3.14-1, construction activities would not increase noise levels above the presumed ambient noise level of 60 dBA during daytime hours. As detailed in Section 3.14.2, the City of Signal Hill Municipal Code prohibits operation of any machinery or equipment that would increase noise levels at the property line of any property to exceed the ambient noise level by more than 5 dB. Accordingly, the noise threshold for the residential sensitive receptors surrounding the Project Site is assumed to be 65 dBA.

Table 3.14-1: Modeled Maximum Project Construction Sound Levels (L_{eq}, dBA).

Sensitive Receptors	Modeled Daytime Construction Noise Level[1]	Presumed Ambient Noise Level (Day)	Noise Standard[2] (Day)	Exceed Standard?
S1	45.4	60	65	No
S2	44.7	60	65	No
S3	51.2	60	65	No
S4	41.6	60	65	No
S5	46.0	60	65	No
S6	46.7	60	65	No
S7	41.2	60	65	No
S8	52.0	60	65	No
S9	49.2	60	65	No

Notes:

1. Modeled noise level is associated with construction equipment. Modeled construction noise levels less than ambient would not be expected to increase noise levels at the modeled receptors.
2. The noise standard for construction activities as provided in the City of Signal Hill Municipal Code Section 9.16.060 prohibits operation of machinery, equipment, etc. that would create noise which would cause the noise level at the property line of any property to exceed the ambient noise level by more than 5 dB.

As detailed in Table 3.14-1, temporary construction noise would not exceed the noise standard. Accordingly, noise impacts during construction activities would be less than significant.

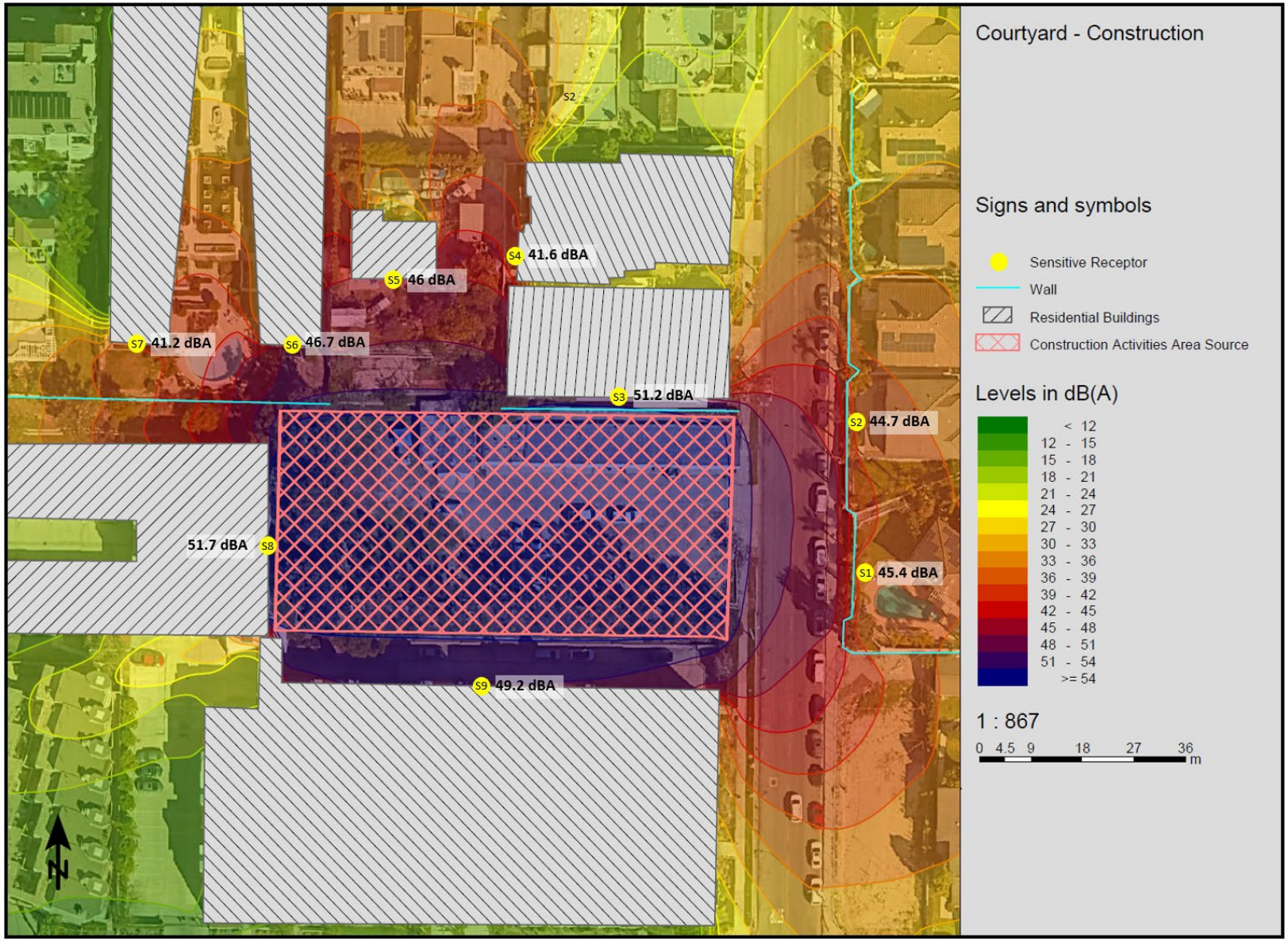


Figure 3.14-1: Modeled Construction Noise

Operation

Less Than Significant. Upon completion of the Project, on-site operational noise would be generated by heating, ventilation, and air conditioning (HVAC) equipment installed for the new buildings. According to noise data provided by the manufacturer, the HVAC units generate noise levels of approximately 67 dBA at a reference distance of 3 feet from the operating units during maximum heating or air conditioning operations. Project mechanical equipment would be located between buildings and would be shielded from nearby land uses by the buildings, walls, and privacy fences to attenuate noise and avoid conflicts with adjacent uses and to comply with noise limitation requirements provided in Section 9.16.060 of the City of Signal Hill Municipal Code, which prohibits the noise from such equipment causing an increase in the ambient noise level by more than five decibels. The proposed parking areas also have the potential to generate noise due to cars entering and exiting, engines accelerating, braking, car alarms, squealing tires, and other general activities associated with people using the parking areas (i.e., talking, opening/closing doors, etc.). The sound of slow-moving vehicles, engines starting, doors closing, and people talking in the parking areas would be expected to reach maximum levels of 50 to 60 dBA at a distance of 50 feet. These noise sources were modeled using the computer noise propagation model SoundPLAN Essential (version 5.1). Operational noise is propagated to the property line to estimate the maximum change in long-term noise levels as summarized in Table 3.14-2 with daytime noise and illustrated in Figure 3.14-2 and nighttime noise illustrated in Figure 3.14-3. As shown in Table 3.14-2 and Figure 3.14-2 and Figure 3.14-3, operational noise would not exceed the presumed ambient daytime or nighttime noise levels, and thus would not increase noise levels beyond the property line.

Table 3.14-2. Modeled Maximum Project Operations Sound Levels (L_{eq}, dBA).

Sensitive Receptors	Modeled Daytime/Nighttime Operational Noise Level[1]	Presumed Ambient Noise Level (Day/Night)	Noise Standard[2] (Day)	Exceed Standard?
(N) North Boundary	42.9/39.0	60/50	65/55	No
(W) West Boundary	45.9/45.3	60/50	65/55	No
(S) South Boundary	42.7/38.9	60/50	65/55	No
(E) East Boundary	40.6/37.0	60/50	65/55	No

Notes:

1. Modeled noise level is associated with parking areas and HVAC units which are assumed to be operational 24-hours per day. Modeled operational noise levels less than the presumed ambient noise level would not be expected to increase noise levels at the property line.
2. The noise standard as provided in the City of Signal Hill Municipal Code Section 9.16.060 prohibits operation of machinery, equipment, etc. that would create noise which would cause the noise level at the property line of any property to exceed the ambient noise level by more than 5 dB.

As detailed in Table 3.14-2, noise levels associated with the development would not exceed the noise standard. Accordingly, long-term noise impacts would be less than significant.

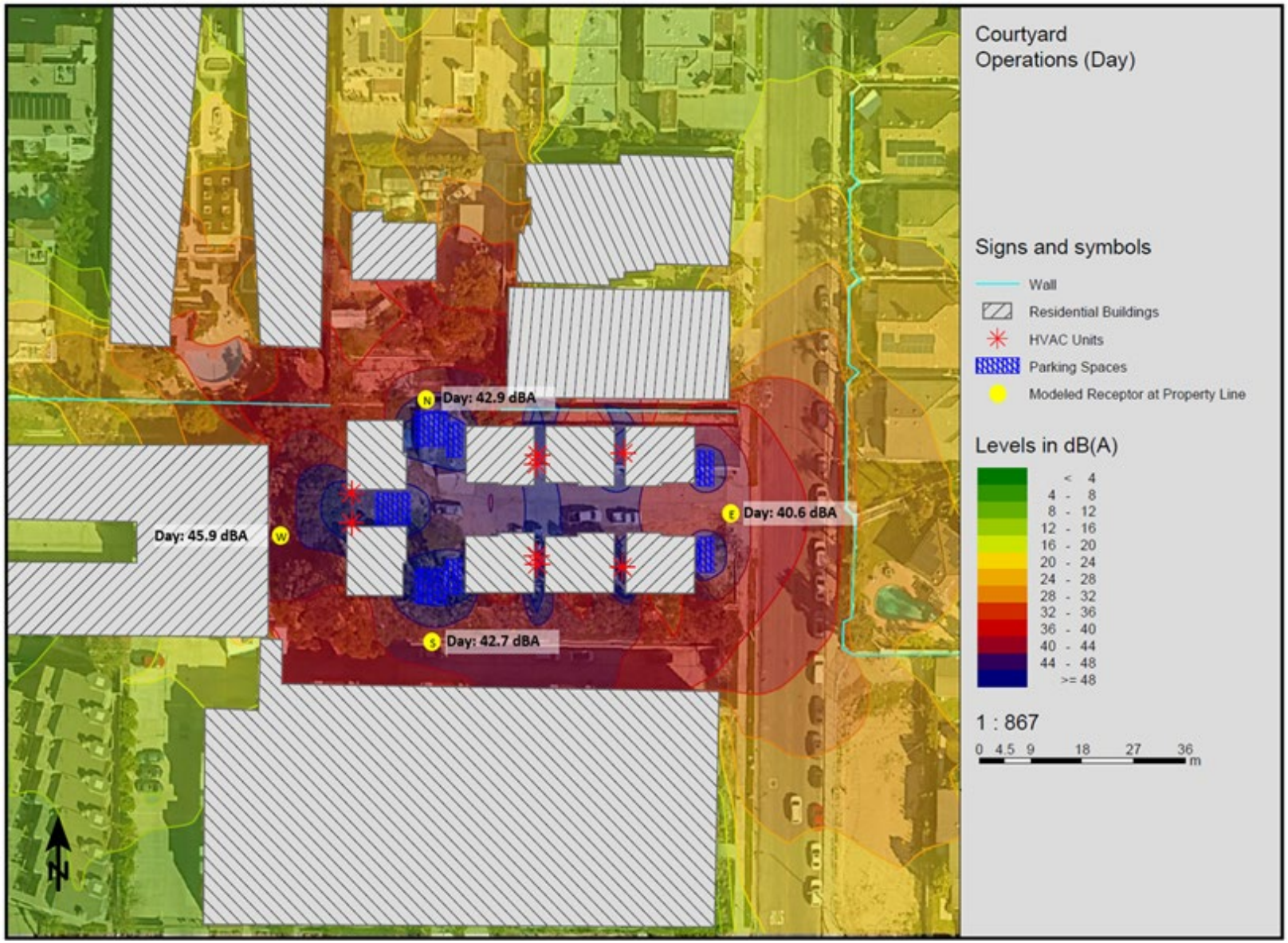


Figure 3.14-2: Modeled Operational Noise (Day)

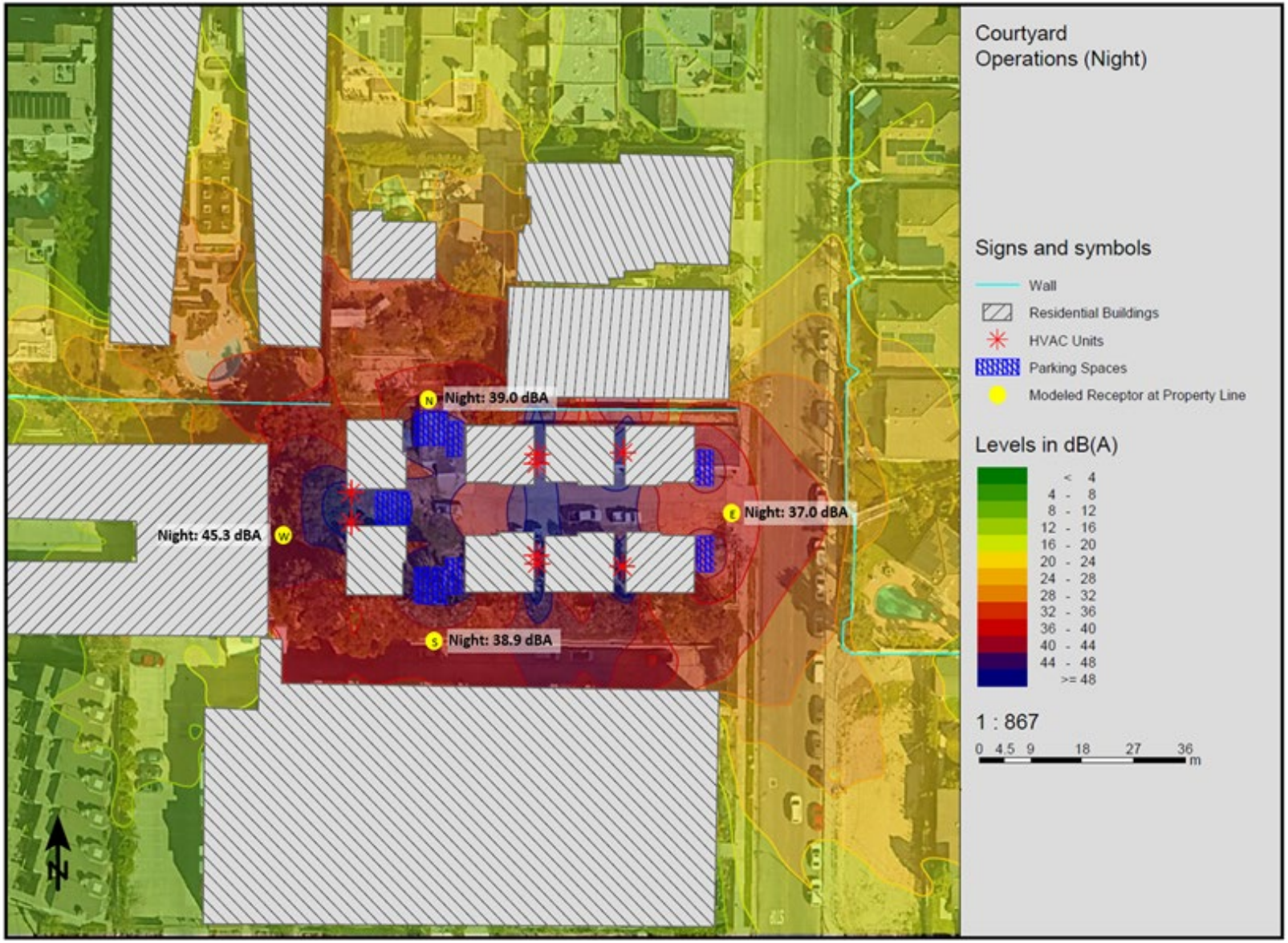


Figure 3.14-3: Modeled Operational Noise (Night)

NOI (b). Would the Project result in generation of excessive groundborne vibration or groundborne noise levels?

Construction

Less Than Significant. Construction would result in temporary ground vibration. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. Construction activities most likely to cause vibration include operation of heavy construction equipment. Vibration levels from surface construction including demolition, excavation, pile driving, etc. are typically less than 0.10 to 0.20 in/sec at 10 feet from the source. Ground-borne vibration dissipates very rapidly with distance, reducing the typical construction-related vibrations to less than the threshold of 0.2 in/sec for typical non-engineered timber and masonry buildings at a distance greater than 10 feet from the source and to an imperceptible level at about 200 feet from the source (FTA 2018). No residence or other offsite sensitive receptor structures are located within 10 feet of Project construction activities.

Construction would also result in additional heavy vehicle trips on local roadways accessing the Project Site. Rubber-tire heavy vehicles traveling on roadways typically will not produce perceptible vibration at adjacent buildings. Roadways providing access to the Project are located at a distance of at least 20 feet from any offsite residence or any other sensitive receptor structure. Therefore, vibration impacts during construction would be expected to be less than significant.

Operations

Once completed, the proposed Project would not have any operational sources of vibration. Further, the speed limit on the adjacent roadways is 55 miles per hour and the road surface is in good condition. As trucks enter and exit the site, they would traverse the asphalt drive at very low speeds. As noted in FTA (2018), rubber tires and suspension systems provide vibration isolation, and therefore, it is unusual for ground-borne vibration associated with on-road vehicle movement to be perceptible. Therefore, long-term impacts associated with the proposed Project would be less than significant.

NOI (c). For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?

Less Than Significant. The Long Beach Airport is located approximately 1.4 miles northeast of the Project Site. The Long Beach Airport is not a private airstrip and there are no private airstrips within the vicinity of the proposed Project. The City of Signal Hill is not within the airport's planning boundary or influence area. As such, the proposed Project will not expose

people working or visiting the site to excessive noise levels associated with airport activities and impacts would be less than significant.

3.15 Population and Housing

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. POPULATION AND HOUSING. Would the Project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

3.15.1 Environmental Setting

The Project Site is located in a developed urban area that is surrounded by residential development. The City of Signal Hill is located in Los Angeles County in the southern area of the greater Los Angeles Metropolitan Area. Signal Hill covers just over two square miles and is surrounded by the City of Long Beach (City 2022d). As of July 2022, the total population of Signal Hill is approximately 11,381. This is an approximate 4.0 percent decrease in population from April 1, 2020 (U.S. Census Bureau 2023). The largest growth in population occurred in the 10 years between 1980 and 1990, and a significant increase also occurred from 2000 to 2010 (City 2014). From April 2010 to January 2020, the City's population grew by 696 persons or 6.3 percent. The annual average increase in population during this period was almost 70 persons (City 2022d).

3.15.2 Impact Assessment

POP(a). Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less Than Significant. The Project's potential population growth is anticipated to be 32 people, with a ratio of four people per residence. According to the Growth Forecast Technical Report prepared by SCAG for the 2020-2045 RTP/SCS, the City of Signal Hill is projected to add a total of 900 residents from 2018 through the year 2045. The number of residents (32) that will be added is well within this growth forecast and would not represent substantial unplanned population growth. Nor would the Project induce indirect population growth by providing housing or create the need for new or expanded infrastructure. Thus, the proposed Project would have a less than significant impact on population growth.

POP(b). Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. A primary goal of the Project is to provide housing to the citizens of Signal Hill. The site does not presently provide housing and development of the Project would not remove, replace, or displace any housing. Therefore, the Project would not displace any existing people/households.

3.16 Public Services

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. PUBLIC SERVICES. Would the Project:				
b) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	☐	☐	☒	☐
a. Fire protection?	☐	☐	☒	☐
b. Police protection?	☐	☐	☒	☐
c. Schools?	☐	☐	☒	☐
d. Parks?	☐	☐	☒	☐
e. Other public facilities?	☐	☐	☒	☐

3.16.1 Environmental Setting

The Project Site is located in southeast Signal Hill, which is serviced by the Los Angeles County Fire Department, Signal Hill Police Department, Long Beach Unified School District, and Signal Hill Parks, Recreation, and Library Services Department. Each service is described below.

3.16.1.1 Los Angeles Fire Department

The Project Site is within Signal Hill which is serviced by the Los Angeles County Fire Department (LACoFD), which provides all fire protection services and emergency

medical/paramedic services within the City of Signal Hill. The closest fire station to the Project Site is Signal Hill Station No. 60 which is located at 2300 E. 27th Street (City 2022c). Fire protection services provided include fire suppression and protection, emergency medical services, response to vehicle accidents and hazardous incidents, and safe haven services within the City. Station No. 60 is staffed with a four-person paramedic engine company which consists of one Fire Captain, one Fire Fighter Specialist, and two Fire Fighter Paramedics.

The LACoFD also has mutual aid agreement with the City of Long Beach which provides Fire Station No. 7 as a second station which may provide assistance if necessary. It is located at 2295 Elm Avenue, Long Beach, CA 90806. Station No. 7 is staffed with a four-person paramedic assessment engine company which consists of one Fire Captain, one Engineer, one Fire Fighter Paramedic, and one Fire Fighter, and a four-person truck which consists of one Fire Captain, one Engineer, and two Fire Fighters. This station is approximately 1.68 miles northwest of the Project Site.

Station No. 60 is part of Battalion 9, which includes nine fire stations located in the cities of Bellflower, Cerritos, Hawaiian Gardens, Lakewood, and Paramount (City 2016). In addition to Station No. 7, the Long Beach Fire Department operates fire stations near the boundaries of Signal Hill and can respond to calls for service if needed. The following fire stations are within the area of Signal Hill as described by the Signal Hill General Plan Safety Element:

- No. 122 – 1.2 miles from City
- No. 45 – 2.9 miles from City
- No. 9 - 0.8 miles from City
- No. 17 – 0.9 miles from City

3.16.1.2 Signal Hill Police Department

Police services in the Project area are provided by the Los Angeles Police Department (LAPD) through the Signal Hill Police Department (SHPD) which is located at 2745 Walnut Avenue (Signal Hill Police 2022). The SHPD employs 34 sworn officers and 19 civilian staff and the station includes a fully functional Emergency Operations Center (EOC). The SHPD has mutual aid agreements in place with the Long Beach Police Department, Los Angeles County Sheriff's Department, and other regional law enforcement agencies, which allow for assistance from other agencies in the event of a major crime or natural disaster that could not effectively be handled with the available local resources in Signal Hill (City 2016).

3.16.1.3 Schools

The Project Site is located within the Long Beach Unified School District (LBUSD). According to the LBUSD website School Finder, the Project Site is located within the attendance boundaries

for Alvarado Elementary School (K–5), Nelson Academy Middle School (6-8), and Wilson High School (9-12) (LBUSD 2024). The Project Site does not occur on school properties.

To identify school needs, the LBUSD developed a comprehensive districtwide Facilities Master Plan (FMP). The FMP creates a plan for the future investment of each educational facility within the LBUSD. According to the most recent FMP (2022), the Projected number of enrolled students within the next 10 years will dip below 60,000 students due to a 1.6% annual decline in enrollment (LBUSD 2022). In the 2019-2020 school year, Alvarado Elementary had 362 students enrolled in K-5 and is expected to have an enrollment of 341 students for the 2026-27 school year. In the 2021-22 school year, Nelson Academy had a total of 826 students enrolled within grades 6-8 with a permanent capacity of 913 students and a projected growth decline of 96 students by 2026 (LBUSD 2022). In the 2019-20 school year, Wilson High school had an enrollment of 3,661 students and is projected to lose 312 students by 2026 (LBUSD 2022). Based on the Projected District-wide decrease in the number of students enrolled, there will be excess capacity in the campuses near the Project.

3.16.1.4 Parks

The Parks and Recreation Department provides park and recreational services to the City and maintains ten total parks within the City boundaries. The Project Site is within a mile of four city parks: Raymond Arbor, Discovery Well, Sunset View, and Hilltop Parks (City 2024b). In addition to dedicated parks within the City, the three elementary schools located within the boundaries of the City and schools within one half mile of City boundaries in Long Beach Unified School District contribute 64.74 acres of open space to the City (City 1986).

According to the 2021 Signal Hill Parks and Recreation Master Plan, total acres of park space within the City is 24.5 (City 2021d). The City wants a park to person ratio of four acres per 1000 people, but in 2021, this ratio was 1.52 acres per 1000 people well below their goal. Further, their current ratio is below the Quimby Act threshold of 3 acres per 1000 people. The Project would be required to pay a park and recreation impact fee through Signal Hill Municipal Code Section 21.40.030 – Fee for Residential Units (Section 3.16.2.10).

3.16.1.5 Other Facilities

The City of Signal Hill contains one library managed by the Signal Hill Parks, Recreation, and Library Services Department. (City 2024). The Signal Hill Public Library is 0.67 miles northwest of the Project Site. The library is located at 1800 East Hill Street. The other public facilities within the City include community and youth centers which provide community events, special events, youth and teen programs, volunteer programs, and senior services for all residents (2021d).

3.16.2 Impact Assessment

PS (a). Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically

altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

i. Fire protection?

Less Than Significant. The closest fire station to the Project Site is Signal Hill Station No. 60 which is located at 2300 E. 27th Street (City 2022c). Fire protection services provided include fire suppression and protection, emergency medical services, response to vehicle accidents and hazardous incidents, and safe haven services within the City. The LACoFD also has a mutual aid agreement with the City of Long Beach which provides Fire Station No. 7 as a second station which may provide assistance if necessary. It is located at 2295 Elm Avenue, Long Beach, CA 90806, approximately 1.68 miles northwest of the Project Site. In addition to Station No. 7, the Long Beach Fire Department operates fire stations near the boundaries of Signal Hill and can respond to calls for service if needed. The proposed project will include the construction of eight housing units with an estimated total capacity of 32 persons (based on an estimated occupancy of 4 people per unit). According to the U.S. Census Bureau, the population of Signal Hill has declined in recent years to 11,381 people (U.S. Census Bureau 2023) and the addition of 32 people is not expected to impact fire services.

As described in Section 3.16.2.8, the Project is required to be reviewed and approved by the Los Angeles County Fire Department as referenced in Implementation Program 6 of the General Plan Safety Element. Further, if the Project is determined to impact fire services the applicant would be required to pay impact fees as determined by the City and referenced in the General Plan Land Use Element and Municipal Code for government facility improvement costs. Therefore, the Project would have less than significant impact to fire protection services in the City.

ii. Police protection?

Less Than Significant. Police services for the Project are provided by the Signal Hill Police Department (SHPD) (Section 3.16.1.2). The SHPD has mutual aid agreements in place with the Long Beach Police Department, Los Angeles County Sheriff's Department, and other regional law enforcement agencies, which allow for assistance from other agencies in the event of a major crime or natural disaster that could not effectively be handled with the available local resources in Signal Hill (City 2016). Further, as described above in PS(a-i), the Project would add 32 people to the population of Signal Hill and be required to pay project impact fees for capital improvements if deemed necessary. Therefore, Project impacts related to police services would be less than significant.

iii. Schools?

Less Than Significant. The Project Site is within the Long Beach Unified School District and located between three schools: Alvarado Elementary School (K–5), Nelson Academy Middle

School (6-8), and Wilson High School (9-12) (LBUSD 2024). According to the most recent FMP (2022), the Projected number of enrolled students within the next 10 years will dip below 60,000 students due to a 1.6% annual decline in enrollment (LBUSD 2022). In the 2019-2020 school year, Alvarado Elementary had 362 students enrolled in K-5 and is expected to have an enrollment of 341 students for the 2026-27 school year. In the 2021-22 school year, Nelson Academy had a total of 826 students enrolled within grades 6-8 with a permanent capacity of 913 students and a projected growth decline of 96 students by 2026 (LBUSD 2022). In the 2019-20 school year, Wilson High school had an enrollment of 3,661 students and is projected to lose 312 students by 2026 (LBUSD 2022).

Further, Education Code Section 17620 (Section 3.16.2.6 of this IS) authorizes school districts to assess development fees within school district boundaries. Currently, the State Allocation Board (SAB) statutory school facilities fee (Level I School Fees) per single-family unit is $21,910. As such, based on the Projected District-wide decrease in the number of students enrolled, and the applicant being subject to the payment of the applicable developer fee to account for students potentially generated by the development of the Project, impacts to school services would be less than significant.

iv. Parks?

Less Than Significant. The Project is located within one mile of four city parks: Raymond Arbor, Discovery Well, Sunset View, and Hilltop Parks (City 2024b). As of 2021, the City had 1.52 park acres per 1000 people, well below the City's goal of four acres per 1000 people (City 2021d), and below the Quimby Act goal of three park acres per 1000 people. The City requires an impact fee from residential development to go towards parks and recreation in the City as outlined in the City's Municipal Code (Section 3.16.2.10 of this IS). Pursuant to Section 21.40.030 of the City's Municipal Code an "applicant for any development project which results or will result in the construction of a residential housing unit, not otherwise subject to an exemption under this title, shall be required to pay a park and recreation impact fee." The amount for a single-family dwelling unit is $11,200 per unit. The Project would be subject to this provision of the Municipal Code, and therefore, Project impacts related to parks would be less than significant.

v. Other public facilities?

Less Than Significant. The City is currently served by a single library branch (Signal Hill Public Library) and provides community centers within the City that offer programs and events for all residents. The Project would result in an increase of 32 residents to the City (based on an estimate of four occupants per dwelling). According to the U.S. Census Bureau, the population of Signal Hill has declined in recent years to 11,381 people (U.S. Census Bureau 2023) and the population growth rate is expected to grow at a slower rate than it did from 2000 to 2010 (1.73 percent; 2021d). As a result, the Project development would produce a negligible increased burden on facility use as only a small percentage of the residents would visit a particular facility

on a given day. As such, the Project would not result in a need to construct new types of other public facilities. Impacts to these facilities would be less than significant.

3.17 Recreation

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. RECREACTION. Would the Project:				
a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

3.17.1 Environmental Setting

Signal Hill recreational facilities include various parks throughout the City and walkways/trails which the public can access. The following parks are located within the City: Signal Hill Park, Hilltop Park, Sunset View Park, Discovery Well Park, Hill brook Park, and Raymond Arbor Park (City 2024b).

In 1989, the City adopted a Park and Recreation Master Plan into the General Plan (City 1989). The Signal Hill General Plan requires 4 acres of designated park or recreation space per 1,000 city population, including both passive recreational areas/open spaces and active recreational park facilities (City 1986). The Park and Recreation Master Plan was intended to help the City achieve this General Plan goal and envisioned a total of 48 acres of parks, open space, and trails.

3.17.2 Impact Assessment

REC (a). Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Less Than Significant. The Project will add a net increase of approximately 32 additional residents to the City of Signal Hill population. It is assumed some future residents of the Project Site would make use of local park facilities. The increased population associated with the Project would increase use of the existing parks, potentially leading to physical deterioration of the facilities. However, the Project would be required to pay development impacts fees which are used for community park infrastructure improvements. Therefore, the Project would result in a less than significant impact.

REC (b). Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact. The Project does not include or require the construction of recreational facilities. Therefore, the Project would have no impact.

3.18 Transportation

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. TRANSPORTATION. Would the Project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

3.18.1 Environmental Setting

Key roadways in the study area are described here. The discussion is limited to specific roadways that traverse the study intersections and serve the Project Site.

3.18.1.1 Roads

As described in the Signal Hill Circulation Element (City of Signal Hill 2009b), Signal Hill is completely surrounded by the city of Long Beach, and its transportation network. The regional roadway network consists of one interstate route (I-405), principal arterials (PCH and Cherry Avenue) and several minor arterials and collector streets. Figure 3.18-1 shows major roadways in Signal Hill.

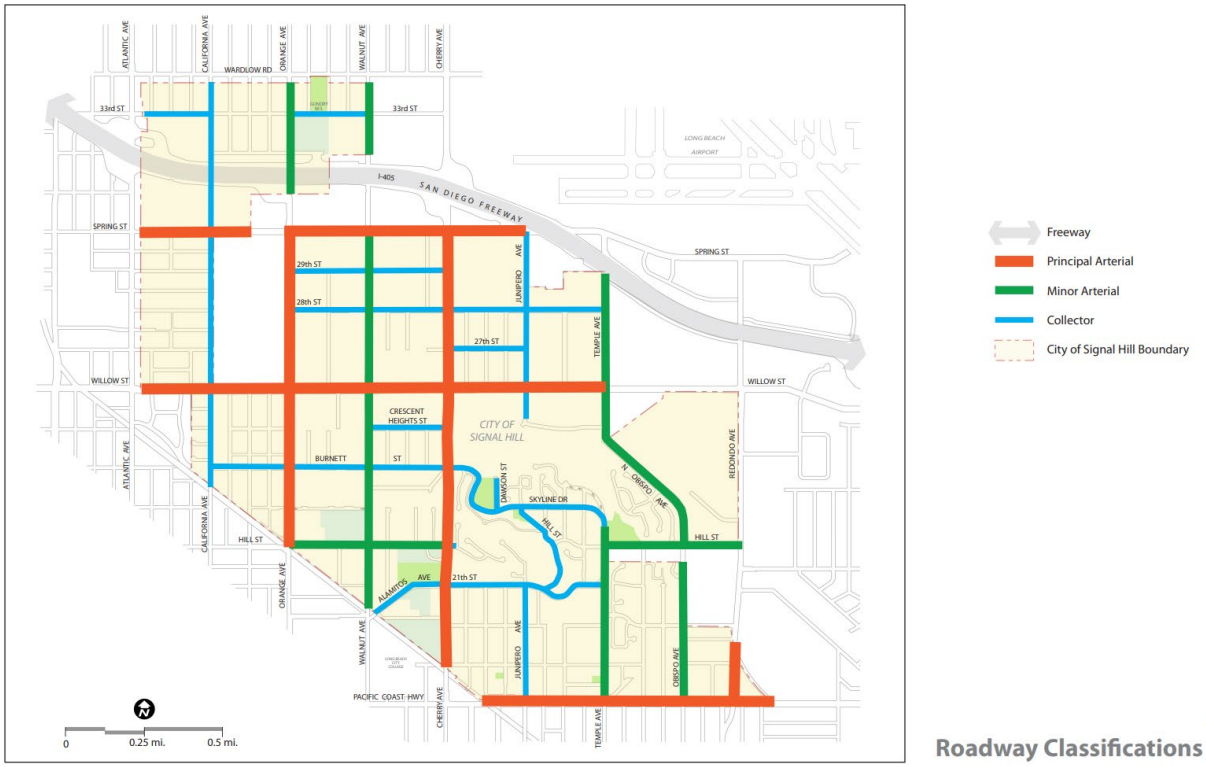


Figure 3.18-1. Regional Network in Project Area

3.18.1.2 Freeways

Freeways are controlled-access, high-speed roadways with grade-separated interchanges. They are intended to carry high volumes of traffic from region to region.

Interstate 405 (I-405) is a 10-lane freeway (include two High Occupancy Vehicle (HOV) lanes) through the Project study area providing regional north-south access through Southern California from its southern terminus at the Interstate 5 junction in Irvine to its northern terminus at the Interstate 5 junction near San Fernando.

3.18.1.3 Principal Arterials

Principal Arterials (equivalent to the FHWA's "Other Principal Arterial" classification) are important city and intercommunity routes. Principal Arterials have a minimum 100- to 110-foot right-of-way width with four moving travel lanes and a painted or raised median. Principal Arterials support the heaviest traffic volumes of all the roadway classifications, and can support a maximum ADT of 33,000 vehicles at a Level of Service (LOS) D. Principal Arterials in the Project area include:

Pacific Coast Highway (PCH; SR-1) is a six-lane divided roadway from the southern limit of E 19th Street to the limits of Village way to the west spanning the length of the southern city boundary. The City of Signal Hill General Plan classifies PCH as a Principal Arterial (100 to 110-foot right-of-way). Seven Signal Hill bus stops exist along the PCH. There is a planned Class III

bike route (shared use with pedestrian or motor vehicle traffic) spanning the length of the southern city boundary.

Cherry Avenue is a six-lane divided roadway from the north study area limits to Willow Street. Cherry Avenue transitions to a four-lane divided roadway between Willow Street and Burnett Street. The City of Signal Hill General Plan classifies Cherry Avenue as a Principal Arterial (100 to 110-foot right-of-way). On-street parking is prohibited along both sides of Cherry Avenue. There are no dedicated bicycle lanes on Cherry Avenue; however, sidewalks are currently provided along both sides of the roadway.

3.18.1.4 Minor Arterial

Minor Arterials serve traffic traveling to local destinations, tying together the various parts of the city and connecting it to nearby areas. Minor Arterials have a minimum 80-foot right-of-way width with four travel lanes and a painted median. These roadways support a maximum ADT of 12,500 vehicles at an LOS D. Minor Arterials in the Project area include:

Obispo Avenue is a 4-lane roadway from PCH in the south that transitions into Temple Avenue in the north. The City of Signal Hill General Plan classifies Obispo Avenue as a Minor Arterial (80-foot right-of-way). Obispo avenue transitions to a 2-lane roadway with a 2-way left turn painted median between E Hill Street and PCH. There are no dedicated bike lanes; however, sidewalks are currently provided along both sides of the roadway up to Hill street where the northbound sidewalk ends.

Temple Avenue is a is a 4-lane roadway from the off ramp of I-405 to PCH. Temple Avenue disconnects after transitioning into Obispo Avenue and reconnects into a 2-lane roadway after transitioning from Skyline Drive. The City of Signal Hill General Plan classifies Obispo Avenue as a Minor Arterial (80-foot right-of-way). There is a dedicated bike lane along the northern portion of Temple Avenue which ends after transitioning into Obispo Avenue. Temple Avenue is considered a Class III Bike route from PCH through the Skyline Drive transition. Sidewalks are provided along both sides of the roadway.

3.18.1.5 Collector Streets

Collector Streets collect local traffic from residential neighborhoods and commercial and industrial areas and feed the traffic to Minor and Principal Arterials. Collector Streets have a 60- to 70-foot right-of-way with two travel lanes and two parking lanes, where parking is feasible. Collector Streets with 70-foot rights-of-way may also include a painted median. This painted median increases roadway safety and improves efficiency by limiting the number of left-turning cars that queue in travel lanes; for that reason, the 70-foot right-of-way is preferred. However, where physical or environmental factors limit roadway width, a 60-foot right-of-way is permissible. Collector Streets generally carry fewer vehicles than Minor Arterials. Collector Streets in the Project area include:

Junipero Avenue is a two-lane roadway from PCH disconnecting at 21st Street and reconnects at Willow Street heading northbound. The City of Signal Hill General Plan classifies Junipero Avenue as a Collector Street (60- to 70-foot right-of-way). Parking is generally permitted on Junipero Avenue and there are no dedicated bicycle lanes nor are there any designated bike routes. Sidewalks are provided along both sides of the roadway.

21st Street is a two-lane roadway from Cherry Avenue to Temple Avenue. The City of Signal Hill General Plan classifies Junipero Avenue as a Collector Street (60- to 70-foot right-of-way). Parking is generally permitted on Junipero Avenue and there are no dedicated bicycle lanes nor are there any designated bike routes. Sidewalks are provided along both sides of the roadway.

3.18.1.6 Local Streets

The Local Street classification includes all roadways and streets not otherwise classified. These are generally 60-foot-wide rights-of-way with two travel lanes and two parking lanes where feasible, but there are several variations in roadway width. These variations are found in both older neighborhoods and in newer areas, particularly those with private streets. Local Streets are designed to serve individual properties and provide access from residential neighborhoods to Collector Streets. Local Streets include private streets owned and maintained by homeowners' associations. Local Streets carry the lowest traffic volumes of all streets in the city; most traffic on these streets is accessing local destinations, rather than passing through. Through the specific plan process, the city has approved a variety of private street configurations, including rights-of-way less than 60 feet wide. The primary local street in the vicinity of the Project is 19th Street.

3.18.1.7 Scenic Highways

The City of Signal Hill has designated a series of roadways at higher elevations as a scenic route. The existing street system provides a link between the Crescent Heights Historic District and the Alamitos 1 Well, a State Historical Monument, located at the northeast corner of Temple and Hill Street. The closest portion of this scenic route is located approximately 0.33 miles to the north of the Project Site. The closest eligible scenic highway designated by Caltrans is the stretch of Route 5 (San Juan Capistrano) that ends at Route 19 (Long Beach) approximately 0.94 miles from the Project Site.

3.18.1.8 Existing Designated Truck Routes

The City of Signal Hill has designated Truck Routes, intended to keep large trucks (i.e., weighing more than three tons) off local residential streets. Trucks must remain on the routes when driving through the City, although drivers may leave designated truck routes for deliveries or pick-ups. Local truck routes designated by the City of Signal Hill are shown in Figure 3.18-2.

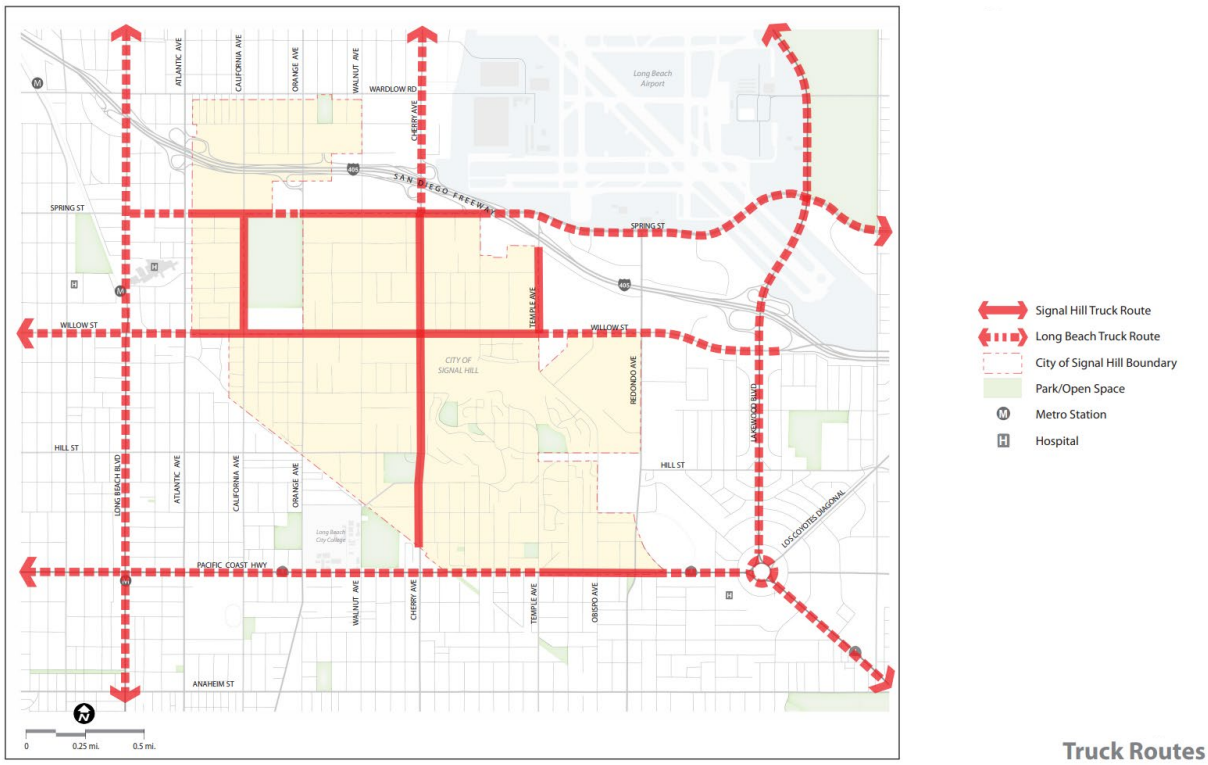


Figure 3.18-2. Designated Truck Routes

3.18.1.9 Existing Traffic Volumes

The City of Signal Hill establishes Level of Service (LOS) standards to assess the performance of a street or highway system and the capacity of a roadway. LOS is a professional industry standard by which the operating conditions of a given roadway segment or intersection are measured. LOS ranges from A through F, where LOS A represents the best operating conditions and LOS F represents the worst operating conditions. LOS A facilities are characterized as having free flowing traffic conditions with no restrictions on maneuvering or operating speeds; traffic volumes are low and travel speeds are high. LOS F facilities are characterized as having forced flow with many stoppages and low operating needs. Additionally, with the growth of the City of Signal Hill, transportation management and systems management will be necessary to preserve and increase roadway "capacity." LOS standards are used to assess the performance of a street or highway system and the capacity of a roadway.

Table 3.18-1, Existing Road Conditions, summarizes traffic conditions in Signal Hill along roadway segments in the Project area. It illustrates existing average daily traffic (ADT) as well as the ADT required to reach a LOS D for that segment. The table further reflects the capacity for LOS D, which is the minimum acceptable roadway operational LOS as defined by the City.

Table 3.18-1: Existing Road Conditions

Segment	Direction	Limits	Capacity at LOS D[1]	ADT[1]	LOS[1]
Hill Street	E-W	East of Temple Avenue	12,500	7,016	A
Cherry Avenue	N-S	South of Hill Street	33,000	29,735	D
Junipero Avenue	N-S	North of Pacific Coast Highway	12,500	2,118	A
Willow Street	E-W	East of Temple Avenue	33,000	32,136	E
Willow Street	E-W	East of Cherry Avenue	33,000	36,706	E

Notes:

Roadway capacity and ADT based on Table 13 (Existing Traffic Conditions) from City of Signal Hill General Plan Circulation Element (City of Signal Hill 2009b).

3.18.1.10 Existing Public Transit

Services provided by Long Beach Transit and Metro operate within or in the vicinity of the city; additional bus lines are accessible through the nearby Long Beach Transit Mall. Long Beach Transit is the primary public transportation provider to Signal Hill. It is a municipal transit agency operated on behalf of the City of Long Beach by a nonprofit corporation, the Long Beach Public Transportation Company. In 2007, Long Beach Transit operated a total of 249 buses on 38 bus routes, providing over 26.6 million passenger trips. Service is provided from approximately 4:30 am to 1:30 am, seven days per week. Long Beach Transit is currently in the process of upgrading its bus stops with satellite-controlled bus tracking technology known as "TranSmart." TranSmart-equipped stops provide real-time updates on routes and arrival times. Currently, only the stop at the southwest corner of Cherry Avenue and Willow Street has been upgraded; no schedule for improvements to the remaining stops within Signal Hill is currently available. Several Long Beach Transit routes serve the Project Sites, including: Routes 71/72 along Orange Avenue, Routes 21/22 along Cherry Avenue, and Route 102/104 along Willow Street.

3.18.1.11 Existing Bicycle Master Plan

Prior to the update of the City's General Plan Circulation Element there were no bikeways designated within the City. With the update in 2009, approximately 5.5 miles of bikeways along a number of routes are planned. These bikeways fall into three classes, as defined by Caltrans:

- Class I (Bike Path) Provides a completely separated right-of-way for the exclusive use of bicycles and pedestrians with crossflow by motorists minimized.
- Class II (Bike Lane) Provides a striped land for one-way bike travel on a street or highway.
- Class III (Bike Route) Provides for shared use with pedestrian or motor vehicle traffic.

Bikeways provide and encourage an alternative to the use of automobiles. Bikeways are intended to link living, working, shopping, educational, and recreational locations. The bikeways currently proposed serve a number of purposes:

- East-west routes provide access to destinations such as light rail stations, schools, CSULB, Long Beach City College, Long Beach Memorial Medical Center, and shopping centers along Atlantic and Long Beach Boulevards. Recently-widened Spring Street offers adequate space for an on-street bike lane along much of its right-of-way in the city.
- North-south routes provide access to destinations such as schools, commercial centers along Pacific Coast Highway, regional bus lines operating on 7th Street, Downtown Long Beach, beaches, civic and arts facilities, and hospitals.
- The route along Temple Street/Skyline Drive/Burnett Street provides panoramic skyline views and is heavily utilized by pedestrians.
- The route along the former Pacific Electric Railway right-of-way provides an off-street bikeway that shortens the distance for travel in a northwest-southeast direction, providing direct access from the Willow Street Blue Line Station to Long Beach City College. This bikeway is located in the city of Long Beach, along its border with Signal Hill.

The Circulation Element recommended that new bikeways should be considered by the City, particularly when they would connect with existing or proposed bikeways in the city of Long Beach. Traffic volumes and characteristics along potential routes must be considered, along with traffic safety and grade issues.

3.18.2 Impact Assessment

TRA (a). Would the Project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less Than Significant. The Project would not involve any transportation improvements or programs that would conflict with adopted policies, plans, or programs supporting alternative transportation. In addition, the proposed Project is consistent with the City of Signal Hill General Plan. Although the Project would involve vehicular traffic, it would not conflict with adopted polices, plans, and programs to encourage the use of alternative transportation. Project construction would not alter the surrounding transportation system, and therefore would not preclude the future establishment or ongoing operation of transit, bicycle, and/or pedestrian facilities. Thus, there would be no impacts to alternative transportation or bus transit. Further, per Section 21.48 of the City of Signal Hill Municipal Code, new development projects are required to provide funds for the acquisition, improvement, and expansion of street, parkway, thoroughfare, intersection, and other traffic and circulation improvements. This ordinance is intended to authorize reasonable fees to be collected related to new development so that the burdens of installing public improvements, the need for which is created by certain new development projects and which will benefit certain land in addition to such development projects. In addition to this, measures for construction traffic control must be met to ensure safety during work hours, stating that all work areas, lane closures, and all warning lights, flashers and devices used shall be protected, installed and provided in

accordance with the current Caltrans *Manual of Traffic Controls and/or Work Area Traffic Control Handbook*. With implementation of the requirements of the Signal Hill Municipal Code, impacts would be less than significant.

TRA (b). Would the Project conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?

Construction

Less Than Significant. Onroad construction vehicle trips include construction worker trips to and from the job site, off-site hauling trips, and material delivery trips as summarized in Table 2.2-2 in Section 2.2 above. The number of construction-related trips would vary each day, depending on construction phase, planned activity, and material needs. Table 3.18-2 summarizes the maximum number of trips associated with all phases of construction and the estimated maximum Project daily VMT for construction.

Table 3.18-2. Maximum Project Daily VMT - Construction

Trip Type	Maximum Number of One-Way Trips	One-Way Trip Length (miles)[2]	Daily VMT (miles)
Workers[1]	18	18.5	333
Vendor	1	10.2	10.2
Haul	41	20	820
Temporary Construction Maximum Total Daily VMT			**1,163.2**

Notes:

The daily trip rates used for determining the Project's construction and operation worker trip generation are based on the 10th Edition of ITE Trip Generation manual for General Light Industrial workers. A maximum of 10 construction workers are assumed for this conservative estimate.

Trip lengths consist of default CalEEMod values with exception of vendors for delivery of Project equipment during construction.

As summarized in Table 3.18-2, Project construction activities would generate an estimated maximum of the new project activities would generate an estimated maximum of 60 additional daily vehicle trips (equivalent to 30 roundtrips, and an estimated 1,163.2 VMT per day) due to employees, contractors, and heavy-duty work trucks travelling to and from the Project Site. These additional vehicle trips would be temporary, and once construction is complete, would not contribute to additional ongoing daily vehicles trips associated with operations. The State Office of Planning and Research (OPR) Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018) states that projects that generate fewer than 110 automobile trips per day generally maybe assumed to cause a less than significant transportation network. As the Project would generate a maximum of 60 one-way trips per day, the Project construction activities would not cause a significant increase in vehicle miles traveled and impacts would be less than significant.

Operations

Less Than Significant. Upon completion of the Project, general operations and maintenance would occur. These include vehicle circulation, unit use (utility), and Home Owners' Association (HOA) landscaping and stormwater system maintenance. Vehicle trips associated with the proposed development are generated by resident, worker, and delivery vehicles visiting the site and are based on CalEEMod defaults for residential development projects. Specifically, trip rates and trip link type are primarily from Trip Generation Manual, 10th Edition (ITE 2017). Vehicle trip purpose and length are based on the 2015 California Statewide Travel Demand Model (CSTDM) for the specific Traffic Analysis Zone (TAZ) and/or regional travel demand models from the Southern California Association of Governments (SCAG). Table 3.18-3 summarizes the vehicle trip rates and vehicle miles traveled (VMT) associated with the residential development.

Table 3.18-3. Vehicle Trips and VMT Associated with Residential Development

Trip Type	Trip Rate	VMT[1]
Weekday	75.52 trips/day	579.57 miles/day
Saturday	76.32 trips/day	585.71 miles/day
Sunday	68.4 trips/day	524.93 miles/day
Annual Trips	**27,235 trips/year**	**209,013 miles/year**

Notes:

[1] VMT=Vehicle Trips*Vehicle Trip Lengths. VMT is inclusive of all vehicle types (i.e., passenger and commercial vehicles) and trip purposes for either an "average day" or "peak day."

As summarized in Table 3.18-3, once constructed, the maximum number of trips is estimated at 76.32, with the associated daily VMT generated by the Project of 585.71 miles/day. In their Technical Advisory on Evaluating Transportation Impacts on CEQA (December 2018), OPR recommends the use of VMT metrics when analyzing land use projects and plans. Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than significant transportation impact. As such, the Project can be assumed to result in less than significant long-term impacts on transportation and circulation.

TRA (c). Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less Than Significant. The proposed Project will not increase hazards due to a design feature or incompatible uses. The site plan configuration is consistent with General Plan and zoning requirements. Further, the Project would not result in any changes to any roads, intersections, streets, highways, nor would it provide any incompatible uses to the street and highway system. All vehicles that would be used for travel to and from the Project would be licensed and comply with all appropriate transportation laws and regulations including obtaining and adhering to provisions of any required permits for oversized loads. Therefore, the Project would

not result in an increase in hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses and impacts would be less than significant.

TRA (d). Result in inadequate emergency access?

Less Than Significant. The proposed Project would be accessed by private driveways. Personnel from the Los Angeles County Fire Department will formally review the plans and final approval from Los Angeles County Fire is required for building permit issuance. Los Angeles County Fire Department requirements include adequate emergency access for single-family residences. As such, the proposed Project will not result in inadequate emergency access or disrupt the flow of traffic or emergency access to any other sites. Therefore, impacts would be less than significant.

3.19 Tribal Cultural Resources

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIX. TRIBAL CULTURAL RESOURCES.				
b) Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

3.19.1 Environmental Setting

Contemporary Native American resources, also called ethnographic resources, can include archaeological resources, rock art, and the prominent topographical areas, features, habitats,

plants, animals, and minerals that contemporary Native Americans value and consider essential for the preservation of their traditional values. These locations are sometimes hard to define and traditional culture often prohibits Native Americans from sharing these locations with the public.

This section evaluates potential impacts on tribal cultural resources, which are defined in Public Resources Code Section 21074(a)(1-2) as follows:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
    - Included or determined to be eligible for inclusion in the CRHR.
    - Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.
- A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.
- A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "non-unique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

The Project Site has undergone prior development and experienced extensive ground disturbing activities. The probability of an unidentified tribal cultural resources present in the subsurface is low.

3.19.1.1 Ethnography

The Native American people known to have inhabited the region surrounding the project area are referred to as the Gabrieliño. The Gabrieliño were hunters and gatherers with permanent villages, specialized processing sites, formal cemeteries, and trade networks with local and nonlocal groups. It is believed that they initially practiced a seasonal strategy, moving from location to location exploiting various food resources, but with technological advances they were able to maintain permanent year-round villages with reliance on acorns and marine resources.

3.19.1.2 Tribal Consultation

In accordance with Assembly Bill (AB) 52, the City sent letters to the following tribes in March 2024 notifying them of the Project and preparation of the IS/MND pursuant to Public Resources Code Section 21080.3 and providing a 30-day period to request consultation. The City of Signal Hill did not receive any requests to initiate consultation during this period.

- Gabrieleno Band of Mission Indians – Kizh Nation
- Gabrieleno/Tongva San Gabriel Band of Mission Indians
- Gabrielino/Tongva Nation
- Gabrielino Tongva Indians of California Tribal Council
- Gabrielino-Tongva Tribe

3.19.2 Impact Assessment

TCR (a). Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less than Significant with Mitigation. The City is required to comply with AB 52, and as such, sent letters inviting the Tribes to consult on the Project's potential to impact tribal cultural resources. No Tribes requested consultation ~~consulted~~ or provided additional information.

Ground disturbing activities associated with excavation for new Project construction could have a potentially significant impact on tribal cultural resources if present in the subsurface. While impacts to an archaeological resource are unlikely due to the prior disturbance activities, the City would ensure that the Applicant implements **MM TCR-1**, in addition to **MM CUL-1**, to avoid impacts to tribal cultural resources to the extent feasible.

Mitigation Measure TCR-1: Tribal Monitor. Prior to the commencement of any ground disturbing activity at the Project Site, the applicant shall retain a Native American Monitor

approved by the Gabrieleno Band of Mission Indians-Kizh Nation. A copy of the executed contract shall be submitted to the City of Signal Hill Planning and Building Department prior to the issuance of any permit necessary to commence a ground-disturbing activity. The tribal monitor will only be present on-site during the construction phases that involve ground-disturbing activities. Ground disturbing activities are defined by the Tribe as activities that may include, but are not limited to, pavement removal, potholing or auguring, grubbing, tree removals, boring, grading, excavation, drilling, and trenching, within the project area. The Tribal Monitor will complete daily monitoring logs that will provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when all ground-disturbing activities on the Project Site are completed, or when the Tribal Representatives and Tribal Monitor have indicated that all upcoming ground-disturbing activities at the Project Site have little to no potential for impacting Tribal Cultural Resources. Upon discovery of any Tribal Cultural Resources, construction activities shall cease in the immediate vicinity of the find (not less than the surrounding 100 feet) until the find can be assessed. All Tribal Cultural Resources unearthed by project activities shall be evaluated by the qualified archaeologist and Tribal monitor approved by the Consulting Tribe. If the resources are Native American in origin, the Consulting Tribe will retain it/them in the form and/or manner the Tribe deems appropriate, for educational, cultural and/or historic purposes. If human remains and/or grave goods are discovered or recognized at the Project Site, all ground disturbance shall immediately cease, and the county coroner shall be notified per Public Resources Code Section 5097.98, and Health & Safety Code Section 7050.5. Human remains and grave/burialgoods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2). Work may continue on other parts of the Project Site while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5[f]). If a non-Native American resource is determined by the qualified archaeologist to constitute a "historical resource" or "unique archaeological resource," time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and PRC Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any historic archaeological material that is not Native American in origin shall be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes.

Implementation of **MM-TCR-1 and MM-CUL-1** would reduce potentially significant impacts resulting from inadvertent damage or discovery of tribal cultural resources; therefore, impacts would be less than significant with mitigation.

3.20 Utilities and Service Systems

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIX. UTILITIES AND SERVICE SYSTEMS. Would the Project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the waste water treatment provider, which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

3.20.1 Environmental Setting

The City of Signal Hill owns and operates the municipal water system that services all business and residents located within City limits, including the Project area (City 2014). Signal Hill's water supply consists primarily of groundwater produced from the Central Basin (approximately 90 percent) which is supplemented in times of high demand with treated surface water which is purchased from the Metropolitan Water District (City 2022b; City 2021a). The City's municipal water system consists of the following: approximately 50 miles of distribution and transmission pipeline, one groundwater treatment facility, one Metropolitan Water District imported water connection, over 2,900 water service connections, three booster pump stations, three storage reservoirs, and two groundwater production wells (City 2022b).

The City of Signal Hill exclusively contracts with EDCO Disposal for solid waste and recycling collection services. The City requires that all residents, businesses, and developers within the city limits use EDCO for the collection of regular trash, recyclables, and debris (City 2022d).

The Los Angeles County Sanitation Districts provides sewage treatment service to the City of Signal Hill (Los Angeles County Sanitation Districts 2022). Signal Hill sanitary sewers connect to the City of Long Beach sewer line (City 2022c). The Los Angeles County Sanitation Districts consist of 24 independent special districts that provide wastewater and solid waste management for approximately 5.6 million people in Los Angeles County. The sewer system that serves the City of Signal Hill is owned and maintained by the Los Angeles County Sanitation Districts (District #29) (Los Angeles County Sanitation Districts 2022).

3.20.1.1 Water

The City's potable water service area lies completely within the City of Signal Hill. The water system consists of four pressure zones (Zone I, II, III, and IIIA). The water system consists of the following facilities:

- 50 miles of pipe, 4-inches to 20-inches in diameter
- 3 Storage Reservoirs (Gundry, Temple, Hilltop) with a total capacity of 7.3 MG
- 3 Wells (Well No. 7, 8, and 9) with a total capacity of 3,585 gpm
- 3 Booster Pump Stations (Gundry, Temple, Hilltop)
- 2 Pressure Regulating Stations (Walnut and Zone 3A)
- 1 Imported Water Connection (CB-19), maximum capacity of 7.5 cfs or 3,366 gpm
- 2 Groundwater Treatment Facilities
- 2 Emergency Interconnections (Lakewood and Long Beach Water Department)

The City of Signal Hill Water Department operates a system with four (4) pressure zones that distributes water to customers throughout the City of Signal Hill limits. The City limits and City water service area are approximately the same. Primary sources of water to the City are imported water from Metropolitan Water District of Southern California (MWD) and groundwater pumped from Central Groundwater Basin, through City owned and operated Well No. 7, Well No. 8, and Well No. 9. Historically, the City imports about 18 percent of its potable water supply and the remaining 82 percent is groundwater. On average, 1,741 AFY of groundwater was produced and 365 AFY of imported water was purchased (2000 to 2020). The amount of recycled water used was about 7 AFY (2000 to 2020; City 2021a).

The City utilizes chlorination to treat water supplies. Water from Well No. 7 and Well No. 8 is treated and then enters the system through the Gundry Reservoir, which acts as a forebay to the rest of the system. Well No. 9 water is treated at the site by passing through a 3-stage

nano-filtration system followed by a liquid granular activated carbon treatment. Then the water is pumped directly into the system from a clearwell. Imported water enters the system through a pressure regulating station and directly serves Zone 1 of the system. There are two other storage reservoirs, namely Temple Reservoir and Hilltop Reservoir. Water is conveyed through approximately 50 miles of transmission and distribution pipeline to 3,123 customers. The City has drilled another well (Well No. 10) to replace Well No. 8 which was destroyed (City 2021a). The City does not utilize surface or stormwater as a source of supply (City 2021a).

3.20.1.1.1 Imported Water

The City has one connection with Central Basin Municipal Water District (CBMWD), a water wholesaler to local water agencies. CBMWD purchases imported water from Metropolitan Water District of Southern California (MWD) and sells it directly to retail agencies like the City. The City's connection to CBMWD, Central Basin-19 (CB-19), is located in Bixby Road near Gaviota Street. It has a capacity to provide up to 3,300 gallons per minute (gpm) of imported water to the City's potable water system (City 2021a).

Imported water is typically utilized to meet the peak demands during the warm summer months. The CBMWD connection is a backup supply to Well No. 7 and Well No. 10. As the capacity of these two wells decreases, the amount of imported water is increased (City 2021a). Water imported by MWD comes from two main sources, the State Water Project (SWP) and the Colorado River Aqueduct (CRA).

3.20.1.1.2 Groundwater

The City draws groundwater from the Central Basin aquifer, which underlies approximately 227 square miles in southeastern Los Angeles County. It is bounded by the Hollywood Basin and the Elysian, Repetto, Merced, and Puente Hills; to the east by the Los Angeles/Orange County line; and to the south and west by the Newport-Inglewood Uplift, a series of discontinuous faults and folds that form a prominent line of northwest-trending hills including the Baldwin Hills, Dominguez Hills, and Signal Hill.

The City's Allowable Pumping allocation (APA) is set at 2,022-acre feet per year (AFY). The City is allowed to pump up to 120 percent of their APA provided that any over production is made up by under-production in the following year. Under certain circumstances, greater amounts can be extracted if approved by the Water Rights Panel (City 2021a).

Natural replenishment of the basin occurs primarily from surface flow and underflow through Whittier Narrows from the San Gabriel Valley. Intentional replenishment by the Water Replenishment District of Southern California is accomplished by capturing and spreading water at the Rio Hondo and the San Gabriel River Spreading Grounds in the Montebello Forebay. Sources of replenishment water are local storm runoff, local dry-weather urban runoff, imported water purchased from the Metropolitan Water District, and recycled water purchased

from the Los Angeles County Sanitation District. The City projects that it will require 2,300 acre feet (AF) of purchased or imported water by 2025 (City 2021a).

3.20.1.1.3 Water Conservation

The City's service area is a part of the Greater Los Angeles County (GLAC) Region. The 2013 Integrated Regional Water Management (IRWM) Plan (City 2021a) was developed to define a clear vision and direction for the sustainable management of water resources in the GLAC Region over a 25-year planning horizon. The three major imported water supplies feeding the Region are anticipated to have a delivery decrease as a result of climate change. However, the City does not anticipate that legal or quantity issues will constrain the groundwater supply in the future. In a normal water year, the City anticipates having enough supply to meet projected demands for years 2025 through 2040, with an average surplus of 2,333 acre feet per year (City 2021a). As evidence, in 2007, the year selected to represent single dry year hydrology, groundwater yield was unaffected by the drought and the City had access to enough water supply to satisfy all demands. In a single dry year, the City anticipates having enough supply to meet projected demands for years 2025 through 2040, with an average surplus of 1,913 AF per year (2021a).

The City has established water conservation requirements and best management practices for Water Shortage Contingency scenarios which helps maintain the City's water supply in normal and dry years. There are six shortage levels each with varying degrees of water usage cutbacks. Examples of water shortage response actions include the following:

- Limits on watering days
- Serving of water at eating or drinking establishments by request
- Vehicle washing prohibited
- All irrigation prohibited (with few exceptions)
- Discontinuation of water services for customers who violate provisions of declared Level 3 water supply shortage
- Conservation pricing

3.20.1.2 Wastewater

The wastewater collection system providing service to the City's water service area is owned and maintained by the Sanitation Districts of Los Angeles County (SDLAC). ~~The City's sewage is conveyed by gravity to~~Wastewater g~~G~~enerated by the Proposed Project will be treated at the A.K. Warren Water Resource Facility (formerly known as the Joint Water Pollution Control Plant) located in the City of Carson, which has a capacity of 400 million gallons a day (mgd) and currently processes an average flow of 247.2 mgd (SDLAC 2024).~~one of two SDLAC facilities: the Joint Water Pollution Control Plant (JWPCP) in the City of Carson to the east or the Long Beach~~

~~Water Reclamation Plant (LBWRP) in the City of Long Beach to the west.~~ The wastewater collected within the City's service area in 2020 was estimated at 2,041 acre feet per year. The wastewater generated within the City of Signal Hill is not treated or disposed of within the City's service area (City 2021a). Sanitary sewers in Signal Hill are connected to the City of Long Beach sewer line. The expected increase in average wastewater flow from the project, described in the plan as a subdivision of one lot to eight lots, is 1248 gallons per day using the SDLAC's wastewater generation factor of 156 gallons per day per residential unit. The Sanitation District has capacity available to serve the accommodate growth levels associated with the approved growth identified by the Regional Housing Needs Assessment (SCAG 2024) allocation. The Project Site allows for the adjacent proposed condominium homes to conduct wastewater to Temple Avenue via easement.

3.20.1.3 Stormwater

The Los Angeles County Flood Control District is responsible for provision of standards for local drainage and the City of Signal Hill is responsible for drainage control. The City does not utilize surface or stormwater as a source of supply water (City 2021a). The Project Site currently accepts storm water runoff from the adjacent property to the north (7216-020-012) which drains into the municipal storm drain system. Applicable BMPs have been outlined in Section 2.1.3.10 and in Table 2.1-2.

3.20.1.4 Electric Power

The Project Site is served power by Southern California Edison. Southern California Edison provides electricity service to more than 15 million people in a 50,000 square-mile area of central, coastal, and Southern California. During 2022, Southern California Edison delivered a total of approximately 39,400 GWh of electricity to its residential customers (CEC 2022a). The Project would not require the construction of additional electrical facilities and would connect to existing points of interconnection.

3.20.1.5 Natural Gas

Natural gas in the area is provided the Energy Resources Department (City of Long Beach). Long Beach Gas Department serves approximately 500,000 customers in the cities of Long Beach and Signal Hill and delivered 45 million therms of gas to residential customers (CEC 2022a). Signal Hill lists Long Beach Gas as the city's utility provider (City 2024c). The Project would not require the construction of additional natural gas facilities and would connect to existing points of interconnection in the ROW.

3.20.1.6 Telecommunications

Telecommunications is provided by Frontier Communications and Spectrum. The Project would not require the construction of additional telecommunication facilities and would connect to existing points of interconnection.

3.20.2 Impact Assessment

UT (a). Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less than Significant. The proposed Project would not result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities. The Project's dwellings would connect to existing points of interconnection for water, electric power, natural gas, and telecommunications.

Water

Water is supplied by the City Water Department and can be imported from the Metropolitan Water District. The City does not anticipate that legal or quantity issues will constrain the groundwater supply in the future. In a normal water year, the City anticipates having enough supply to meet projected demands for years 2025 through 2040, with an average surplus of 2,333 acre feet per year (City 2021a). As evidence, in 2007, the year selected to represent single dry year hydrology, groundwater yield was unaffected by the drought and the City had access to enough water supply to satisfy all demands. In a single dry year, the City anticipates having enough supply to meet projected demands for years 2025 through 2040, with an average surplus of 1,913 AF per year (2021a). The proposed project will not result in the construction of a new water facility or significant expansion of existing facilities. No mitigation measures are required.

Wastewater

As described above (Section 23.21.1.2 of this IS), the sanitary sewer system providing service to the City's water service area is owned and maintained by the Sanitation Districts of Los Angeles County (SDLAC). The wastewater generated within the City of Signal Hill is not treated or disposed of within the City's service area (City 2021a). ~~Sanitary sewers in Signal Hill are connected to the City of Long Beach sewer line.~~ The wastewater generated by the proposed project will be treated at the A.K. Warren Water Resource Facility (formerly known as the Joint Water Pollution Control Plant) located in the City of Carson, which has a capacity of 400 mgd and currently processes an average flow of 247.2 mgd (SDLAC 2024). The Sanitation District has capacity available to serve the accommodate growth levels associated with the approved growth identified by the Regional Housing Needs Assessment (SCAG 2024) allocation. The

proposed project will not result in the construction of a new wastewater drainage facility or significant expansion of existing facilities. No mitigation measures are required.

Stormwater

The Los Angeles County Flood Control District is responsible for provision of standards for local drainage and the City of Signal Hill is responsible for drainage control. The City does not utilize surface or stormwater as a source of supply water (City 2021a). The Project Site currently accepts storm water runoff from the adjacent property to the north (7216-020-012) which drains into the municipal storm drain system. The Project would include a stormwater drainage and erosion control system. Stormwater runoff would be collected by a system throughout the property of inlet drains, catch basins, a trench drain, and permeable pavement that feeds into an CUDO® Stormwater Infiltration System. The stormwater drain system will be installed to the manufacturer's specification and will comply with County of Los Angeles Department of Public Works LID Standards Manual (2014). Applicable BMPs have been outlined in Section 2.1.3.10 and in Table 2.1-2. The proposed project will not result in the construction of a new stormwater drainage facility or significant expansion of existing facilities. No mitigation measures are required.

Electric Power, Natural Gas, and Telecommunications

The Project Site is served power by Southern California Edison. Southern California Edison provides electricity service to more than 15 million people in a 50,000 square-mile area of central, coastal, and Southern California. Natural gas in the area is provide by the Energy Resources Department (City of Long Beach). Long Beach Gas Department serves approximately 500,000 customers in the cities of Long Beach and Signal Hill and delivered 45 million therms of gas to residential customers (CEC 2022a). Signal Hill lists Long Beach Gas as the city's utilities provider (City 2024c). Telecommunications is provided by Frontier Communications and Spectrum. The proposed project will not result in the construction of new electric power, natural gas, or telecommunications facilities or significant expansion of existing facilities. No mitigation measures are required.

UT (b). Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less Than Significant. The City's potable water service area lies completely within the City of Signal Hill. The City draws groundwater from the Central Basin aquifer, which underlies approximately 227 square miles in southeastern Los Angeles County. The City has one connection with CBMWD for imported water. CBMWD purchases imported water from Metropolitan Water District of Southern California (MWD) and sells it directly to retail agencies like the City. Imported water is typically utilized to meet the peak demands during the warm summer months. However, the City does not anticipate that legal or quantity issues will constrain the groundwater supply in the future. In a normal water year, the City anticipates having enough supply to meet projected demands for years 2025 through 2040, with an

average surplus of 2,333 acre feet per year (City 2021a). As described in the City's 2020 Urban Water Management Plan, the City will have sufficient water supplies from groundwater in normal, dry, and successive dry years. Further, per Section 21.44.030 of the Municipal Code a water impact fee will be collected prior to the issuance of any Certificate of Occupancy to mitigate impacts from the Project. In addition, the proposed project would adhere to the City's Municipal Code water conservation measures. No mitigation measures are required.

UT (c). Result in a determination by the waste water treatment provider, which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?

Less than Significant. The wastewater collection system providing service to the City's water service area is owned and maintained by the Sanitation Districts of Los Angeles County (SDLAC). The wastewater generated within the City of Signal Hill is not treated or disposed of within the City's service area (City 2021a). -Wastewater generated by the proposed project will be treated at the A.K. Warren Water Resource Facility (formerly known as the Joint Water Pollution Control Plant) located in the City of Carson~~Sanitary sewers in Signal Hill are connected to the City of Long Beach sewer line~~. The Sanitation District has capacity available to serve the accommodated growth levels associated with the approved growth identified by the Regional Housing Needs Assessment (SCAG 2024) allocation.

UT (d). Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less than Significant. The proposed project would comply with the City's refuse regulations and solid waste Municipal Codes. The Municipal Codes are designed to comply with federal, state, and local regulations. The proposed project will be serviced by EDCO, the City's franchise waste disposal company who offers collection and recycling services. No mitigation measures are required.

UT (e). Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less than Significant. The proposed project would comply with federal, state and local statutes and regulations related to solid waste. EDCO, the City's franchise waste disposal company, is a reputable organization that serves multiple jurisdictions across Southern California. EDCO personnel comply with all federal, state, and location regulations related to solid waste. No mitigation measures are required.

3.21 Wildfire

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. Wildfire: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒
e) Harm the biological integrity of drainage systems and water bodies?	☐	☐	☐	☒
f) Will there be potential impact of project construction on storm water runoff?	☐	☐	☐	☒
g) Will there be potential impact of project post-construction activity on storm water runoff?	☐	☐	☐	☒

3.21.1 Environmental Setting

The California Department of Forestry and Fire Protection's (CAL FIRE) Fire Resource and Assessment Program provides Fire Hazard Severity Zone (FHSZ) maps showing the severity of the threat of wildfires and the designation of responsibility for fire protection. CAL FIRE considers many factors to develop these maps, including fire history, existing and potential fuel sources (natural vegetation), predicted flame length, blowing embers, terrain, and typical fire weather for an area. There are three hazard levels (moderate, high, and very high) within state responsibility areas and very high in local responsibility areas (CAL FIRE 2022a; Los Angeles County Department of Regional Planning 2015).

Based on the FHSZ map for Los Angeles County, the Project Site is located within an urbanized/developed area and outside of designated FHSZs (CAL FIRE 2007, 2011). The Project area is entirely within the local responsibility area, and the Los Angeles County Fire Department provides all fire protection services and emergency medical/paramedic services within the City

of Signal Hill. The closest fire station to the Project area is Signal Hill Station #60 which is located at 2300 E. 27th Street (City 2022c).

According to the City's General Plan Safety Element (2016), Signal Hill has a low potential for wildland fire. The Safety Element outlines the following three sources of fire hazards which may arise in Signal Hill: open spaces with dry vegetation; urban development; and industry, particularly facilities associated with oil production, storage, and transportation (City 2016).

3.21.2 Impact Assessment

WFR (a). Substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact. The Project Site is located within an urbanized/developed area. According to Cal Fire, Signal Hill does not contain very high, high, or moderate fire hazard zone and is at the lowest wildland fire risk. The Project would not alter any roadways used for emergency response or evacuation. Therefore, the Project would have no impact.

WFR (b). Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

No Impact: The Project Site is not on a slope and has no exacerbated wildfire risk. According to Cal Fire, Signal Hill does not contain very high, high, or moderate fire hazard zone and is at the lowest wildland fire risk. Therefore, the Project would have no impact.

WFR (c). Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Less than Significant: According to Cal Fire, Signal Hill does not contain very high, high, or moderate fire hazard zone and is at the lowest wildland fire risk. The proposed Project includes the installation of a photovoltaic system on homes along the north side. However, these systems will be installed and operated in accordance with all federal, State, and local regulations. The Project will have landscaping that will be managed pursuant to the LID report and applicable BMPs. Both the Signal Hill Police Department and the County of Los Angeles Fire Department have reviewed the plans and indicated they can adequately service the development and no additional infrastructure is required. Therefore, the Project would have a less than significant impact.

***WFR (d). Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes*?**

No Impact. According to Cal Fire, Signal Hill does not contain very high, high, or moderate fire hazard zone and is at the lowest wildland fire risk. The proposed project is for a residential

development in an urbanized area with no likelihood of flooding or landslide as described in section 3.8. Therefore, the Project would have no impact.

3.22 Mandatory Findings of Significant Effects

Issue	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XXII. MANDATORY FINDINGS OF SIGNIFICANCE. Would the Project:				
a. Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
b. Does the Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
c. Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

3.22.1 Impact Assessment

MFS(a). Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

No Impact. The City of Signal Hill is an urbanized and highly developed area. As discussed in Section 3.5 (Biological Resources), the Project Site does not contain any water bodies/features or areas of suitable wildlife habitat. Therefore, the new residential development would not impact wildlife communities or historical resources. While three eucalyptus trees (a non-native invasive species) would be removed during Project construction, new trees and landscaping consistent with the City's landscaping design requirements and the State's model Water Efficient Landscape Ordinance (WELO) would be planted. As such, the Project does not have the potential to degrade the quality of the environment, substantially reduce the habitat of fish and wildlife species, cause a fish or wildlife population to drop, threaten to eliminate a plant or animal community or reduce the number of rare or endangered plants or animals.

MFS(b). Does the Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Less Than Significant. All impacts identified in the resource analyses (Sections 3.2-3.22) were found to be less than significant after mitigation; therefore, the Project would not have impacts that are individually limited, but cumulatively considerable. Furthermore, no other reasonably foreseeable future actions/projects are within proximity of the Project where a cumulative impact could occur. The following past, ongoing, and reasonably foreseeable future projects were considered in this cumulative analysis (City of Signal Hill Development Status Report, January 2024):

- Commercial and Industrial
    - Durant Remodel (1180 E 23rd St.)
    - New Industrial Buildings (1450 E 27th St & 2655 Walnut Ave)
    - AUHS Master Plan (1600-1680 E Hill St0
    - New Industrial Building (1701 E Creston Ave.)
    - New Industrial Building (1901 Freeman Ave.)
    - Singal Hill Business Park (2020 Walnut Ave.)
    - Costco Gas/WF ATM (2200 E Willow St./2598 Cherry Ave.)
    - LBFFA CUP (2201 Cherry Ave.)
    - New Warehouse (2457 Brayton Ave.)
    - Distribution Warehouse (2550 Orange)
    - Jimmy E's (2951 Cherry Ave.)
    - Self-Storage (3177 California Ave.)
    - 3201 Walnut (3201 Walnut Ave.)
    - Service Department Outdoor Patio (1500 E Spring St)
    - Tenant Improvement – Ne Audi Dealership (2988 Cherry Ave.)
    - Dish Wireless (2550 Orange Ave.)
    - Verizon Wireless Modification (2550 Orange Ave.)
    - AT&T (3200 E. Willow Street)
    - Dish Wireless (3275 Grant Ave.)
- Residential
    - 1900 Temple (1900 Temple Ave.)
    - 1908 Junipero (1908 Junipero Ave.
    - 1995 St. Louis (1995 St. Louis Ave.)
    - 2056 Dawson (2056 Dawson)
    - 2095 Freeman (2095 Freeman Ave.)
    - 2100 Ohio (2100 Ohio Ave.)
    - 2250 Ohio (2250 Ohio Ave.)
    - PCH Molino (2599 E. PCH)
    - SH Smart Homes (2750 E. 20th st).
    - 909 ½ E 25th St. (909 ½ E 25th St.)

- 921 ½ E 25th St. (921 ½ E 25th St.)
- 1110 ½ E. Burnett St. (1110 ½ E. Burnett St.)
- 1375 ½ A&B E 23rd St. (1375 ½ A&B E 23rd St.)
- ADU Conversion (1830 Stanley Ave., Unit C)
- 1870 ½ Temple Ave. (1870 ½ Temple Ave.)
- 1900 ½ Temple Ave. (1900 ½ Temple Ave.)
- 1965 ½ Dawson (1965 ½ Dawson Ave.)
- 1991 ½ Junipero Ave. (1991 ½ Junipero Ave.)
- 2027 ½ Junipero Ave. (2027 ½ Junipero Ave.)
- 2060 ½ Raymond (2060 ½ Raymond Ave.)
- 2100 ½ Ohio Avenue (2100 ½ Ohio Avenue)
- 2132 ½ Ohio Avenue (2132 ½ Ohio Avenue)
- 3269 ½ Lewis Ave. (3269 ½ Lewis Ave.)

MFS(c). Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant with Mitigation. The Project would not result in substantial adverse environmental effects on human beings, either directly or indirectly. All impacts identified in the resource analyses (Sections 3.2-3.22) were found to be less than significant after mitigation. Mitigation measures have been added to address potentially significant impacts to human beings, including for cultural and historic resources; tribal cultural resources; and, paleontological resources. A Mitigation Monitoring and Reporting Program has been prepared and is attached as **Appendix A**.

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	Wildfire
Paden Voget, PE	Air Quality
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	Greenhouse Gas Emissions
	Noise
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Appendix A

Mitigation Monitoring and Reporting Program

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Mitigation Monitoring and Reporting Program for the Courtyard at Signal Hill Project 1933-1939 Temple Avenue, Signal Hill, CA 90755

Public Resources Code, Section 21081.6 (Assembly Bill 3180) requires that mitigation measures identified in environmental review documents prepared in accordance with the California Environmental Quality Act (CEQA) are implemented after a project is approved. This Mitigation Monitoring and Reporting Program (MMRP) has been prepared to ensure compliance with the adopted mitigation measures during implementation of the **Courtyard at Signal Hill Project at 1933-1939 Temple Avenue** (Project).

The City of Signal Hill (City) is the lead agency under CEQA and is responsible for verifying that mitigation measures identified in the Initial Study – Mitigated Negative Declaration (IS/MND) are implemented properly. This MMRP provides the City with a mechanism for reviewing all the mitigation measures including the ability to focus on select information such as timing. The MMRP includes a checklist to be used during the mitigation monitoring period. The MMRP includes the following information for each mitigation measure:

- Description of Recommended Mitigation Measures from CEQA IS/MND
- Time Frame for Implementation
- Steps to Compliance and Verification
- Responsible Monitoring Agency

Mitigation Measure	Time Frame for Implementation	Steps to Compliance and Verification	Responsible Monitoring Agency
Biological Resources			
MM BIO-1: Pre-construction Clearance Survey. Prior to performing project activities, including demolition and ground disturbing activities, a biological reconnaissance survey will be performed to verify the presence/absence of sensitive species. If a sensitive species is identified, no further work shall progress until consultation with the CDFW and/or USFWS has occurred.	Prior to construction activities	Submit report with results of surveys, and if necessary Project-specific sensitive species management plan for review.	City of Signal Hill Planning Department
Cultural Resources			
MM CUL-1: Cultural and Historical Resources Due Diligence A CHRIS records search and formal search of potentially eligibly historical resources would be performed. Any newly identified resources would be avoided.	Prior to ground-disturbing activities	Submit due diligence report to City for review.	City of Signal Hill Planning Department
MM CUL-2: Inadvertent Discovery. In the event that any archaeological features are discovered during construction, all work shall stop, and a qualified archaeologist shall be notified. The archaeologist shall record the site and consult the City on potential eligibility. The archaeologist shall prepare a report according to current professional standards and include recommendations for avoiding, mitigating, or relocating the resource.	During ground-disturbing activities	Submit archaeologist report for review. Submit proposed site plan for alternative work location within CUP site to the City for review and approval.	City of Signal Hill Planning Department
Geology and Soils			
MM GEO-1: Worker Environmental Awareness Program All contractors and earth moving personnel shall be given Worker Environmental Awareness Program training by a qualified paleontological resource specialist prior to any ground-disturbing activities to discuss the activity's potential for impacting paleontological resources. The training shall inform personnel of the types of artifacts and features that may be encountered, the procedures to be followed if paleontological materials are unearthed at a Project site, contact information for appropriate reporting parties, and the regulatory requirements for the protection of paleontological resources. If unrecorded paleontological resources are encountered during Project-related ground-disturbing activities, a qualified paleontological resources specialist shall be contacted to assess the potential significance of the find. If an inadvertent discovery of paleontological materials is made during Program-related activities, ground disturbances in the area of the find will be halted,	Prior to ground-disturbing activities	Submit Worker Environmental Awareness Program Document to the City for review and approval. Submit records of attendance indicating date of training, location of training, and name of	City of Signal Hill Planning Department

Mitigation Measure	Time Frame for Implementation	Steps to Compliance and Verification	Responsible Monitoring Agency
and a qualified professional paleontologist will be notified regarding the discovery. The paleontologist shall determine whether the resource is potentially unique and, if so, develop appropriate mitigation, such as avoidance or data recovery.		trainer, with name and signature of all attendees to the City.	
Hazards and Hazardous Materials			
MM HAZ-1: Soil Management Plan and Remedial Action Plan. Prior to initiating any ground disturbing activities on the Project Site, the project applicant shall prepare a Soil Management Plan (SMP) that is submitted to and reviewed and approved by the California Department of Toxic Substances Control (DTSC), the Los Angeles Regional Water Quality Control Board (LARWQCB), the Los Angeles County Fire Department (LACFD) Site Mitigation Unit (SMU), or other applicable regulatory agency having jurisdiction to review or approve the SMP. The SMP shall be prepared by a Registered Environmental Assessor or other qualified expert and shall address the findings previous site investigations and radiation actions conducted at the site, and/or subsequent relevant studies. During construction, the contractor shall implement the SMP. If unidentified or suspected contaminated soil or groundwater evidenced by stained soil, noxious odors, or other factors, is encountered during site preparation or construction activities on any portion of the Project Site, work shall stop in the excavation area of potential contamination. Upon discovery of suspect soils or groundwater, the contractor shall notify the applicable regulatory agency and retain a Registered Environmental Assessor or other qualified professional to collect soil samples to confirm the type and extend of contamination that may be present. If contamination is confirmed to be present, any further ground disturbing activities within areas of identified or suspected contamination shall be conducted according to a site-specific Remedial Action Plan (RAP), prepared by a qualified professional. The contractor shall follow all procedural direction given by the applicable regulatory agency, and in accordance with the RAP to ensure that suspect soils are isolated, protected from runoff, and disposed of in accordance with transport laws and the requirements of the licensed receiving facility. If contaminated soil or groundwater is encountered and identified constituents exceed human health risk levels, ground disturbing activities shall not recommence within the contaminated areas until remediation is complete and a "no further action" letter is obtained from the appropriate regulatory agency or direction is otherwise given from the appropriate regulatory agency for a course of action that would allow that construction to recommence within any such areas. The project applicant shall submit the "no further action" letter or notification documenting direction from the regulatory agency to the City prior to resumption of any ground disturbing activity on the relevant portion of the Project Site. If compounds in soil are identified in concentrations that trigger SCAQMD's Rules 1166 or 1466, the SMP will require compliance with such rules. The Soil Management Plan and Remedial action Plan (as applicable) shall include the following: ~~**MM HAZ-1: Soil Management Plan.**~~	Prior to and during construction activities	Completion and submittal of 400-A to SCAQMD Records to be made available to City inspectors upon request Consultation with appropriate regulatory agency in the event contamination is present.	City of Signal Hill, SCAQMD, and California Department of Toxic Substances Control (DTSC), the Los Angeles Regional Water Quality Control Board (LARWQCB), the Los Angeles County Fire Department (LACFD) Site Mitigation Unit (SMU), or other applicable regulatory agency ~~SCAQMD~~

Mitigation Measure	Time Frame for Implementation	Steps to Compliance and Verification	Responsible Monitoring Agency
~~In the event that previously unidentified, obvious, or suspected hazardous materials, contamination, debris, or other features or materials that could present a threat to human, health or the environment are discovered during construction, construction activities shall cease immediately until the affected area is evaluated by a qualified professional. A Soil Management Plan shall be developed in consultation with the appropriate regulatory authorities and the remedial action agreed upon shall be completed. Work shall not resume in the affected area until appropriate actions have been implemented in accordance with the remediation plan.~~ ~~The Soil Management Plan shall include the following:~~ • Remediation goals and cleanup criteria that could include, but are not necessarily limited to, excavation and on-site treatment, excavation and off-site treatment, and/or removal of contaminated soil and/or groundwater; • A detailed description of the access points and haul-out routes for remedial activities, remediation methods and procedures; mitigation of dust: minimization or avoidance of disturbance to sensitive ecosystems; and verification soil sampling and analysis. Included in the discussion shall be information on disposal sites, transport and disposal methods, as well as recordkeeping methods for documenting remediation, regulatory compliance, and health and safety programs for on-site workers; and • Removal of oil development equipment and debris. • Compliance with SCAQMD Rule 1166, Rule 403, and Rule 1466.			
Tribal Cultural Resources			
MM TCR-1: Tribal Monitor. Prior to the commencement of any ground disturbing activity at the Project Site, the applicant shall retain a Native American Monitor approved by the Gabrieleno Band of Mission Indians-Kizh Nation. A copy of the executed contract shall be submitted to the City of Signal Hill Planning and Building Department prior to the issuance of any permit necessary to commence a ground-disturbing activity. The tribal monitor will only be present on-site during the construction phases that involve ground-disturbing activities. Ground disturbing activities are defined by the Tribe as activities that may include, but are not limited to, pavement removal, potholing or auguring, grubbing, tree removals, boring, grading, excavation, drilling, and trenching, within the project area. The Tribal Monitor will complete daily monitoring logs that will provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when all ground-disturbing activities on the Project Site are completed, or when the Tribal Representatives and Tribal Monitor have indicated that all upcoming ground-disturbing activities at the Project Site have little to no potential for impacting Tribal Cultural Resources. Upon discovery of any Tribal Cultural Resources, construction activities shall cease in the immediate vicinity of the	During to ground-disturbing activities	Maintain records of contacts with tribal representatives and proposals for monitoring of ground disturbance.	City of Signal Hill Planning Department

Mitigation Measure	Time Frame for Implementation	Steps to Compliance and Verification	Responsible Monitoring Agency
find (not less than the surrounding 100 feet) until the find can be assessed. All Tribal Cultural Resources unearthed by project activities shall be evaluated by the qualified archaeologist and Tribal monitor approved by the Consulting Tribe. If the resources are Native American in origin, the Consulting Tribe will retain it/them in the form and/or manner the Tribe deems appropriate, for educational, cultural and/or historic purposes. If human remains and/or grave goods are discovered or recognized at the Project Site, all ground disturbance shall immediately cease, and the county coroner shall be notified per Public Resources Code Section 5097.98, and Health & Safety Code Section 7050.5. Human remains and grave/burialgoods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2). Work may continue on other parts of the Project Site while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5[f]). If a non-Native American resource is determined by the qualified archaeologist to constitute a "historical resource" or "unique archaeological resource," time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and PRC Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any historic archaeological material that is not Native American in origin shall be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes.			

Appendix B

Regulatory Framework for Impact Analysis

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Appendix B – Regulatory Framework

Aesthetics

State

Farmland Mapping and Monitoring Program

The California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) assesses the location, quality, and quantity of agricultural land and conversion of these lands over time. Agricultural land is rated according to soil quality and irrigation status. The best quality land is identified as Prime Farmland.

California Land Conservation Act

The California Land Conservation Act (Williamson Act) enables local governments to enter into contracts with private landowners to restrict parcels of land to agricultural or related open space uses. In return, landowners receive lower property tax assessments.

Fire and Resource Assessment Program

The California Department of Forestry and Fire Protection (CAL FIRE) identifies forest land, timberland, and lands zoned for timberland production that support forestry resources. Programs such as CAL FIRE's Fire and Resource Assessment Program are used to identify whether forest land, timberland, or timberland production areas that could be affected are located on or adjacent to a Project Site.

Air Quality

Federal

Clean Air Act

The Federal Clean Air Act (CAA), passed in 1970 and last amended in 1990, is the primary federal law that governs air quality. The Federal CAA delegates primary responsibility for clean air to the USEPA. The USEPA develops rules and regulations to preserve and improve air quality and delegates specific responsibilities to state and local agencies. Under the act, the USEPA has established the NAAQS for six criteria air pollutants that are pervasive in urban environments and for which state and national health-based ambient air quality standards have been established. Ozone, CO, NO_2, SO_2, Pb, and PM (Including both PM_{10}, and $PM_{2.5}$) are the six criteria air pollutants. Ozone is a secondary pollutant, nitrogen oxides (NO_X) and volatile organic compounds (VOCs) are of particular interest as they are precursors to ozone formation. In

addition, national standards exist for Pb. The NAAQS standards are set at levels that protect public health with a margin of safety and are subject to periodic review and revision.

The Federal CAA requires U.S EPA to designate areas as attainment, nonattainment, or maintenance (previously nonattainment and currently attainment) for each criteria pollutant based on whether the NAAQS have been achieved. The federal standards are summarized in Table 3.4-1.

State

California Clean Air Act

The California Clean Air Act (CCAA) was adopted by CARB in 1988. The CCAA is responsible for meeting the state requirements of the Federal CAA and for establishing the CAAQS. CARB oversees the functions of local air pollution control districts and air quality management districts, which, in turn, administer air quality activities at the regional and county levels. The CCAA, as amended in 1992, requires all air districts of the state to achieve and maintain the CAAQS by the earliest practical date.

The CCAA requires CARB to designate areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a state standard for the pollutant was violated at least once during the previous 3 calendar years. As shown above in Table 3.4-1, the CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.

Exceedances that are affected by highly irregular or infrequent events are not considered violations of a state standard and are not used as a basis for designating areas as nonattainment.

California State Implementation Plan

The CAA mandates that the state submit and implement a State Implementation Plan (SIP) for areas not meeting the NAAQS. These plans must include pollution control measures that demonstrate how the standards will be met. State law makes CARB the lead agency for all purposes related to the SIP.

Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the USEPA for approval and publication in the Federal Register. The Code of Federal Regulations Title 40, Chapter I, Part 52, Subpart F, Section 52.220 lists all of the items which are included in the California SIP.

Toxic Air Contaminants Regulation

Toxic Air Contaminant (TAC) sources include industrial processes, dry cleaners, gasoline stations, paint and solvent operations, and fossil fuel combustion sources (i.e., Diesel Particulate Matter [DPM]).

In August 1998, ARB identified DPM emissions from diesel-fueled engines as a TAC. In September 2000, ARB approved a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel fueled engines and vehicles. The goal of the plan is to reduce diesel PM_{10} (inhalable particulate matter) emissions and the associated health risk by 75 percent in 2010 and by 85 percent by 2020. The plan identified 14 measures that target new and existing on-road vehicles (e.g., heavy duty trucks and buses, etc.), off-road equipment (e.g., graders, tractors, forklifts, sweepers, and boats), portable equipment (e.g., pumps, etc.), and stationary engines (e.g., stand-by power generators, etc.).

Regional

South Coast Air Quality Management District

The SCAQMD has jurisdiction over the SCAB and also regulates the Riverside County portion of the Salton Sea Air Basin and Mojave Desert Air Basin.

The 1977 Lewis Air Quality Management Act merged four air pollution control districts to create the SCAQMD to coordinate air quality planning efforts throughout southern California. It is responsible for monitoring air quality, as well as planning, implementing, and enforcing programs designed to attain and maintain State and federal ambient air quality standards. Programs include air quality rules and regulations that regulate stationary sources, area sources, point sources, and certain mobile source emissions. The SCAQMD is also responsible for establishing stationary source permitting requirements and for ensuring that new, modified, or relocated stationary sources do not create net emission increases.

All areas designated as non-attainment under the CCAA are required to prepare plans showing how they will meet the air quality standards. The SCAQMD prepares the Air Quality Management Plan (AQMP) to address CAA and CCAA requirements by identifying policies and control measures. The Southern California Association of Governments (SCAG) assists by preparing the transportation portion of the AQMP. On December 2, the SCAQMD adopted its 2022 AQMP (SCAQMP), which is now the legally enforceable plan for meeting the 24-hour $PM_{2.5}$ strategy standard.

In addition to criteria pollutants, the SCAQMD also regulates air toxics. A cornerstone of its work was the development of the Multiple Air Toxics Exposure Study (MATES-V). The monitoring program measured a broad list of air pollutants, including both gases and particulates, and estimated the risk of cancer from breathing toxic air pollution throughout the region (SCAQMD 2021).

In its role as the local air quality regulatory agency, the SCAQMD also provides guidance on how environmental analyses should be prepared. This includes recommended thresholds of significance for evaluating air quality impacts. To determine whether air quality impacts from the proposed Program or Alternatives may be significant, impacts will be evaluated and compared to the criteria in Table 3.4-5. If impacts equal or exceed any of the criteria in the table below, they are considered significant.

SCAQMD Air Quality Mass Daily Significance Thresholds

Pollutant	Mass Daily Thresholds (Construction)	Mass Daily Thresholds (Operation)
NO_X	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
SO_X	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic and Acute Hazard Index ≥ 1.0 (project increment)	
Odor	Project creates an odor or nuisance pursuant to SCAQMD Rule 402	

Source: SCAQMD 2019.

lbs/day = pounds per day

SCAQMD is currently in the process of developing an "Air Quality Analysis Guidance Handbook" (Handbook) to replace the SCAQMD CEQA Handbook. Until the Air Quality Analysis Guidance Handbook becomes available, the SCAQMD provides supplemental information to assist in air quality analysis. Specifically, the SCAQMD provides Localized Significance Thresholds (LSTs) for projects that are five acres or less. To provide a conservative assessment, each individual Project Site is considered a 1-acre construction site for the purpose of comparing to the relevant LSTs. The Project is located in SRA 4 (South Coastal LA County). Accordingly, the emissions thresholds for SRA 4 for receptors located 25 meters from individual Project Sites as summarized in the table below, are used to determine whether air quality impacts from the proposed Project within the SCAQMD may be significant.

Emission Localized Significance Thresholds for Construction and Operation (1-Acre Project Site, 25 Meters from Sensitive Receptor)

Pollutant	Localized Significance Thresholds	
	Construction	Operation

NO_x	57 lbs/day	57 lbs/day
CO	585 lbs/day	585 lbs/day
PM_{10}	4 lbs/day	1 lbs/day
$PM_{2.5}$	3 lbs/day	1 lbs/day

Source: SCAQMD 2008.

The SCAQMD has established various rules to manage air quality in the SCAB. The two rules that are applicable to the proposed project are Rules 402 and 403:

Rule 402 (Nuisance) states that a person should not emit air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

Rule 403 (Fugitive Dust) controls fugitive dust through various requirements including, but not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the Project Site, and maintaining effective cover over exposed areas.

Biological Resrouces

Federal

Clean Water Act

The Clean Water Act has provisions for protecting biological resources within the aquatic environment through identification of beneficial uses and prohibitions on fill of wetlands or other waters of the United States. The primary function of the Clean Water Act is in protecting biological resources in this instance are to ensure that any impacts to wetlands or other waters of the United States are compensated for and provide a framework for ensuring that water quality is maintained or improved. No wetlands or other waters of the United States are present on or in the vicinity of the Project Site.

Endangered Species Act

The federal ESA protects threatened and endangered species by prohibiting federal actions that would jeopardize the continued existence of such species or result in destruction or adverse modification of any critical habitat of such species. If effects to listed species are anticipated, Section 7 of the ESA requires consultation regarding protection of such species be conducted

with the USFWS and/or the National Marine Fisheries Service prior to project implementation. (16 USC 1531, 1536).

Migratory Bird Treaty Act

Congress passed the Migratory Bird Treaty Act (MBTA) in 1918 to prohibit the kill or transport of native migratory birds, or any part, nest, or egg of any such bird unless allowed by another regulation adopted in accordance with the MBTA. The prohibition applies to birds included in the respective international conventions between the United States and Great Britain, the United States and Mexico, the United States and Japan, and the United States and Russia.

Migratory bird species receive federal protection under the MBTA and state protection under the CEQA §15380(d). In the case of bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*), additional protection is offered under the federal Bald and Golden Eagle Protection Act. All birds, except European starlings, English house sparrows, rock doves (pigeons), and non-migratory game birds such as quail, pheasant, and grouse, are protected under the MBTA. No permit is issued under the MBTA; however, a project would need to employ measures that would avoid or minimize impacts to protected migratory birds.

State

California Endangered Species Act

The CESA focuses on protecting all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation.

City

City of Signal Hill General Plan and Tree Master Plan/Ordinance

Table 3.5-1 provides a review of the applicable City General Plan goals and policies. The 2023 Signal Hill Street Tree Master Plan, adopted by City Council on February 28, 2023, contains updates to the existing Tree Ordinance of the City as well as updates to the Street Tree Policy of the City. This ordinance (No. 2011-11-1441), by adding Chapter 12.05 to the Signal Hill Municipal Code, establishes standards for the planting, removal, replacement, and maintenance of all City street trees in accordance with tree species recommendations contained in the Street Tree Master Plan and to create a sense of community, pride, and recognition to individual neighborhoods.

Table 3.5-1: Applicable City of Signal Hill General Plan Goals and Policies

Element	Goal	Policy	Applicability

Environmental Resources	Goal 5: Ensure minimal degradation to the physical environment from development or operational activities and require restoration of the environment where degradation has occurred.	Policy 5.4 Reduce and eventually eliminate current environmental degradation in all areas of the city. Require restoration of the environment in these areas where it is subsequently degraded.	The Project would continue to be subject to all regulations and requirements and any future changes to the City of Signal Hill Municipal Code regarding degradation and restoration.

Cultural Resources

Federal

National Historic Preservation Act

Section 106 of the National Historic Preservation Act requires that every federal agency "take into account" how each of its undertakings could affect historic properties. Historic properties are districts, sites, buildings, structures, traditional cultural properties, and objects significant in American history, architecture, engineering, and culture that are eligible for inclusion in the National Register of Historic Places (National Park Service 2012).

State

California Register of Historical Resources: California Environmental Quality Act and California Public Resources Code

The cultural resources provisions of CEQA provide for the documentation and protection of significant prehistoric and historic-era resources. Before the approval of discretionary projects and the commencement of agency undertakings, the potential impacts of the Project on archaeological and historical resources must be considered (PRC Sections 21083.2 and 21084.1 and the CEQA Guidelines [CCR Title 14, Section 15064.5]). The significance of an archaeological or historical resource per the CEQA Guidelines is an important consideration in terms of their management. Listing on the California Register of Historical Resources, or eligibility for listing on the California Register of Historical Resources, is the primary consideration in whether or not a resource is subjected to further research and documentation. The significance of cultural resources is measured against the criteria outlined in the California Register of Historic Resources. Determining the California Register of Historical Resources eligibility of historic and prehistoric sites located within the study area is guided by the specific legal context of the site's significance as outlined in PRC Sections 21083.2 and 21084.1 and the CEQA Guidelines (CCR Title 14, Section 15064.5). In the California Register of Historical Resources cultural resources are defined as buildings, sites, structures, or objects that may have historical, architectural, archaeological, cultural, or scientific importance. A cultural resource may be eligible for listing on the California Register of Historical Resources if it:

a. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

Is associated with the lives of persons important in our past;

Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of an important creative individual or possesses high artistic values; or

Has yielded, or may be likely to yield, information important in prehistory or history.

The significance of a prehistoric archaeological resource is normally defined relative to criterion (d), and its ability "to yield, information important in prehistory." This is assessed by the type of information the resource may inform about research questions that explain prehistoric behavior. As a result, the condition or "integrity" of a prehistoric resource is critical; if the resource has been damaged and/or its original horizontal and/or vertical depositional context has been disturbed, it is possible that the ability of that resource to contribute to understanding prehistoric behavior has been compromised.

The significance of an historic-era archaeological resource and/or a built architectural resource is commonly associated with any of the four criteria listed above. Relative to criterion (d), such a resource is not normally considered "important in history" if it is less than 50 years old, given that it would otherwise not be sufficiently unique in terms of its number and distribution. The integrity of an historic-era archaeological resource is also a factor relative to its potential significance, similar to a prehistoric archaeological resource.

As a matter of policy, public agencies avoid damaging effects on historic and archaeological resources, particularly those that are California Register of Historical Resources-eligible. When impacts cannot be avoided, their effects can be mitigated through avoidance during construction phases, incorporation of a site into open space, capping resources with stable fill, deeding a site into a conservation easement, or data recovery through archaeological testing and excavation (CEQA Guidelines Section 15126.4 (b)(3)).

CEQA Guidelines also require consideration of unique archaeological sites (Section 15064.5). If an archaeological site does not meet the criteria for inclusion on the California Register of Historical Resources but does meet the definition of a unique archaeological resource as outlined in the PRC Section 21083.2, it may be treated as a significant historical resource. Treatment options under Section 21083.2 include preserving such resources in place in an undisturbed state. Other acceptable methods of mitigation under Section 21083.2 include excavation and curation, or study in place without excavation and curation if the study finds that the artifacts would not meet one or more of the criteria for defining a "unique archaeological resource".

CEQA Guidelines Section 15064.5(e) of the State also requires that excavation activities stop whenever human remains are uncovered and that the county coroner be called in to assess the remains. If the coroner determines that the remains are those of Native Americans, the Native

American Heritage Commission (NAHC) must be contacted within 24 hours. At that time, CEQA Guidelines Section 15064.5(d) directs the lead agency to consult with the appropriate Tribe(s) as identified by the NAHC and directs the lead agency (or applicant) to develop an agreement with the Tribe(s) for the treatment and disposition of the remains.

California Health and Safety Code Sections 7050.5 and 7052

In accordance with the California Health and Safety Code Sections 7050.5 and 7052, if human remains are uncovered during ground-disturbing activities, all such activities in the vicinity of the find shall be halted immediately, and the City's designated representative would be notified. The Applicant's representative would immediately notify the City planner, county coroner and a qualified professional archaeologist. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (HSC 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she must contact the NAHC by phone within 24 hours of making that determination (HSC Section 7050[c]).

California Public Resources Code Section 5097.9

The City's responsibilities for acting upon notification of a discovery of Native American human remains are identified in detail in the California Public Resources Code Section 5097.9. If remains are discovered, the Applicant would contact the City and the City or its appointed representative and the professional archaeologist shall contact the Most Likely Descendent, as determined by the NAHC, regarding the remains. The Most Likely Descendent, in cooperation with the City, would determine the ultimate disposition of the remains.

City

Signal Hill General Plan

The Environmental Resources Element (1986) of the Signal Hill General Plan addresses cultural resources in goals and policies, as outlined in the table below.

Applicable City of Signal Hill General Plan Goals and Policies

Element	Goal	Policy	Applicability
Environmental Resources	Goal 2: Maintain and enhance the City's unique cultural, aesthetic and historic areas.	Policy 2.1: Protect and enhance the State Historical Landmark at the Alamitos Well Site # 1.	The Project area is not located within this historical landmark site and would not impact it.
		Policy 2.2: Protect and enhance architectural resources in the City consistent with their significance and importance. Develop ways of	The Project Site does not contain significant architectural resources, and proposed construction and

Element	Goal	Policy	Applicability
		encouraging these resources to remain intact as the City grows and develops.	operation would not impact architectural resources in the City.

Energy

State

Senate Bill 1389

SB 1389 (PRC Sections 25300–25323) requires the California Energy Commission (CEC) to prepare a biennial integrated energy policy report to assess major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provide policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety (PRC Section 25301[a]). CEC's 2021 Integrated Energy Policy Report provides findings and recommendations for energy issues facing the state, including energy efficiency and reliability, decarbonizing buildings and California's natural has system, forecasting California's energy demand, and quantifying the benefits of clean transportation programs, such as California's transition to zero-emission vehicles. The 2021 report also provides trend updates for California's sources of crude oil and nuclear plants (CEC 2021).

Senate Bill 350, Clean Energy and Pollution Reduction Act

SB 350 established clean energy, clean air, and GHG reduction goals, which included reducing GHGs to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050. The CEC works with other state agencies, including the California Public Utilities Commission, CARB, and the California Independent System Operator to implement this bill. SB 350 increases the state's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030, which will increase the use of Renewables Portfolio Standard eligible resources including solar, wind, biomass, geothermal, and others. In addition, California is required to double statewide energy efficiency savings in electricity and natural gas end uses by 2030. To meet these goals and reduce GHG emissions, the CEC will require large utilities to develop and submit integrated resource plans, which detail how utilities will meet their customers' resource needs, reduce GHG emissions, and increase clean energy resource use (CEC 2022b).

CARB Heavy-Duty On-Road and Off-Road Vehicle Regulations

In 2004, CARB adopted an Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling in order to reduce public exposure to DPM emissions (Title13 California Code of Regulations Section2485). The measure applies to diesel-fueled commercial vehicles

with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than five minutes at any given location. While the goal of this measure is primarily to reduce public health impacts from diesel emissions, compliance with the regulation also results in energy savings in the form of reduced fuel consumption from unnecessary idling.

In addition to limiting exhaust from idling trucks, CARB also promulgated emissions standards for off-road diesel construction equipment greater than 25 horsepower (hp) such as loaders, backhoes, and forklifts, as well as many other self-propelled off-road diesel vehicles. The In-Use Off-road Diesel-Fueled Fleets regulation adopted by CARB on July 26, 2007, encourages the retirement, replacement, or repower of older engines with newer emissions-controlled models (13 CCR Section 2449). The compliance schedule requires full implementation by 2023 in all equipment for large and medium fleets and by 2028 for small fleets. While the goal of this measure is primarily to reduce public health impacts from diesel emissions, compliance with the regulation has shown an increase in energy savings in the form of reduced fuel consumption from more fuel-efficient engines.

Assembly Bill 1575

AB 1575 was adopted in 1975 by the California State Legislature and amended Public Resources Code Section 21100(b)(3) to require CEQA documents to consider the wasteful, inefficient, and unnecessary consumption of energy resources caused by a project. Since the passage of AB 1575, the California Natural Resources Agency finalized updates to the CEQA Guidelines in December 2018. New CEQA Guidelines Section 15126.2(b) treats “wasteful, inefficient, or unnecessary” energy consumption as a significant environmental impact.

Assembly Bill 1493

AB 1493, was passed in 2002, in response to the transportation sector accounting for a majority of California’s GHG emissions. It requires CARB to adopt regulations and set GHG emission standards for new passenger vehicles, light-duty trucks, and other vehicles manufactured in and after 2009 whose primary use is non-commercial personal transportation. Phase I of the legislation established standards for model years 2009 through 2016 and Phase II established standards for model years 2017 through 2025 (CARB 2022c).

City

Signal Hill General Plan

The Environmental Resources Element (1986) of the Signal Hill General Plan generally addresses resource conservation issues, including for energy, in goals and policies as outlined in the table below. The Land Use Element (2001) includes an implementation measure for its goals/policies which is related to energy.

Applicable City of Signal Hill General Plan Goals and Policies

Element	Goal	Policy	Applicability
Environmental Resources	Goal 7: Maintain and provide information to the community on environmental problems, opportunities, progress and issues.	Policy 7.1: Disseminate information about the values of alternative energy technology, including use of solar energy in Signal Hill. Policy 7.2: Develop a public information program in conjunction with the oil production industry to explain programs and progress toward improving the resource production/urban development interface.	The majority of the General Plan policies, goals, and implementation measures related to energy are general in nature. These policies are potentially applicable to the Project.
Land Use	Implementation Measure 51 for Goals/Policies	The City will consider adopting energy conservation regulations consistent with state law and local needs.	The Project area would be subject to City regulations.

Signal Hill Sustainability Programs

The City of Signal Hill implements a variety of programs and frameworks meant to promote sustainable practices including those related to reduced fossil fuel consumption and increased use of renewable energy sources. The City of Signal Hill supports Energy Upgrade California, which is a statewide initiative which encourages people to integrate energy management practices into their daily lives. Signal Hill urges residents and small businesses to become more conscious about energy use. Specific sustainability policies promoted by the City include the following: Municipal Green Building, Electrical Vehicle Charging Station, and the Sustainable Purchasing policies (City of Signal Hill 2022a). The goals and policies outlined within the City's sustainability programs are generalized and not specific to the Project. However, the Project would incorporates energy saving infrastructure including incorporation of rooftop solar panels to reduce the existing and future energy consumption associated with the development, as applicable and required by City regulations.

Geology and Soils

Alquist-Priolo Earthquake Fault Zoning Act, California Public Resources Code Sections 2621– 2630

The Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) (PRC Sections 2621–2630) was passed in 1972 to reduce the hazard of surface faulting on structures designed for human occupancy. The main purpose of the law is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The law addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards. The Alquist-Priolo Act requires the State Geologist to establish regulatory zones known as Earthquake Fault Zones around the surface traces of active faults and to issue appropriate maps. The maps are distributed to all affected cities, counties, and state agencies for their use in planning efforts.

Before a project can be permitted in a designated Alquist-Priolo Earthquake Fault Zone, cities and counties must require a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults. Because the Project would not involve the construction of any buildings, Project activities are not subject to permitting approvals based on this act.

California Public Resources Code

PRC, Chapter 1.7, Sections 5097.5 and 30244, include additional state level requirements for the assessment and management of paleontological resources. These statutes require reasonable mitigation of adverse impacts to paleontological resources resulting from development on state lands, define the removal of paleontological "sites" or "features" from state lands as a misdemeanor, and prohibit the removal of any paleontological "site" or "feature" from state land without permission of the jurisdictional agency. These protections apply only to State of California land; therefore, this is not applicable to the Project which would occur on private land.

Seismic Hazards Mapping Act

The only hazards addressed by the Alquist-Priolo Fault Zoning Act are those related to surface fault rupture, not other earthquake hazards. As such, the state passed the Seismic Hazards Mapping Act in 1990 to address non-surface rupture seismic hazards, which include liquefaction, landslides, and strong seismic ground shaking. Under the Seismic Hazards Mapping Act, the State Geologist is required to identify and map the locations of these secondary seismic hazards (CDOC 2019).

Signal Hill General Plan

The Safety Element (2016) of the Signal Hill General Plan address geology in goals and policies, as outlined in the table below.

Applicable City of Signal Hill General Plan Goals and Policies

Element	Goal	Policy	Applicability
Safety	Goal 1: Prevention: Strive to prevent man-made disasters and minimize the potential for natural disasters to impact the community.	Policy 1.d: Maintain, revise, and enforce appropriate standards and codes to minimize seismic and geologic risks.	The Project would continue to be subject to all regulations and requirements and any future changes to the City of Signal Hill Municipal Code regarding seismic designs and controls
		Policy 1.k: Regulate development in Alquist-Priolo Earthquake Fault Zones consistent with levels of acceptable risk. Require the submission of geologic and seismic reports, as well as soils	There are Alquist-Priolo Earthquake fault zones within the City of Signal Hill however

		engineering reports, in relation to applications for land development permits whenever seismic or geologic problems are suspected.	the Project is not located within one of these zones.

Paleontological Resources Preservation Act

The Paleontological Resources Preservation Act of 2002 codifies the generally accepted practice of limited vertebrate fossil collection and limited collection of other rare and scientifically significant fossils by qualified researchers. Researchers must obtain a permit from the appropriate state or federal agency and agree to donate any materials recovered to recognized public institutions, where they would remain accessible to the public and other researchers (NPS 2020).

Greenhouse Gas Emissions

State

Executive Order S-3-05

On June 1, 2005, Executive Order S-3-05 set the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels. It calls for the Secretary of CalEPA to be responsible for coordination of State agencies and progress reporting.

Executive Order B-30-15

In April 2015, Governor Edmund Brown issued an Executive Order establishing a statewide GHG reduction goal of 40 percent below 1990 levels by 2030. The emission reduction target acts as an interim goal between the AB 32 goal (i.e., achieve 1990 emission levels by 2020) and Governor Brown's Executive Order S-03-05 goal of reducing statewide emissions 80 percent below 1990 levels by 2050. In addition, the Executive Order aligns California's 2030 GHG reduction goal with the European Union's reduction target (i.e., 40 percent below 1990 levels by 2030) that was adopted in October 2014.

Assembly Bill 32 (AB 32)

In September 2006, the California Global Warming Solutions Act of 2006, also known as AB 32, was signed into law. AB 32 focuses on reducing GHG emissions in California and requires CARB to adopt rules and regulations that would achieve GHG emissions equivalent to Statewide levels in 1990 by 2020. CARB initially determined that the total Statewide aggregated GHG 1990 emissions level and 2020 emissions limit was 427 MMT of CO_2e. The 2020 target reduction was estimated to be 174 MMT of CO_2e.

To achieve the goal, AB 32 mandates that CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce Statewide GHG emissions from stationary sources, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved.

Senate Bill 32 (SB 32)

SB 32, signed September 8, 2016, updates AB 32 to include an emissions reduction goal for the year 2030. Specifically, SB 32 requires the state board to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. The new plan, outlined in SB 32, involves increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries.

Senate Bill 375 (SB 375)

Acknowledging the relationship between land use planning and transportation sector GHG emissions, SB 375 was passed by the State Assembly on August 25, 2008, and signed by the Governor on September 30, 2008. This legislation links regional planning for housing and transportation with the GHG reduction goals outlined in AB 32. Reductions in GHG emissions would be achieved by, for example, locating employment opportunities close to transit.

Under SB 375, each Metropolitan Planning Organization would be required to adopt a Sustainable Community Strategy to encourage compact development that reduce passenger VMT and trips so that the region will meet a target, created by CARB, for reducing GHG emissions. If the Sustainable Community Strategy is unable to achieve the regional GHG emissions reduction targets, then the Metropolitan Planning Organization is required to prepare an alternative planning strategy that shows how the GHG emissions reduction target could be achieved through alternative development patterns, infrastructure, and/or transportation measures.

Climate Change Scoping Plan

In 2008, CARB approved the original Climate Change Scoping Plan as required by AB 32. Subsequently, CARB approved updates to the Climate Change Scoping Plan in 2014 (First Update) and 2017 (2017 Update), with the 2017 Update considering SB 32 (adopted in 2016) in addition to AB 32 (CARB 2017b). In December 2022, CARB approved the final version of California's 2022 Climate Change Scoping Plan (2022 Scoping Plan Update), which outlines the proposed framework of action for achieving California's new AB 1279 2045 GHG target: an 85 percent reduction in GHG emissions by 2045 relative to 1990 levels. The original Climate Change Scoping Plan proposed a "comprehensive set of actions designed to reduce overall carbon GHG emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health. The

original Climate Change Scoping Plan identified a range of GHG reduction actions that included direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms, such as a cap-and-trade system, and an AB 32 implementation fee to fund the program. The 2022 Scoping Plan Update focuses on strategies for reducing California's dependency on petroleum to provide customers with clean energy options that address climate change and support clean sector jobs. SB 350 and other regulations are expected to decarbonize the electricity sector over time.

California Green Building Standards (CALGreen Code)

The California Green Building Standards Code (CCR Title 24, Part 11), commonly referred to as the CALGreen Code, went into effect on January 1, 2017. CALGreen standards require new residential and commercial buildings to comply with mandatory measures under five topical areas: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. CALGreen also provides voluntary tiers and measures that local governments may adopt that encourage or require additional measures in the five green building topics. The 2019 CALGreen code updates were published July 1, 2019, with an effective date of January 1, 2020.

The California Energy Code (CCR Title 24, Section 6) was created as part of the California Building Standards Code (CCR Title 24) by the California Building Standards Commission in 1978 to establish statewide building energy efficiency standards to reduce California's energy consumption. These standards include provisions applicable to all buildings, residential and nonresidential, which describe requirements for documentation and certificates that the building meets the standards. Compliance with Title 24 is enforced through the building permit process.

Regional

Southern California Association of Governments

To implement SB 375 and reduce GHG emissions by correlating land use and transportation planning, SCAG adopted the 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy on September 3 ,2020. The 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy reaffirms the land use policies that were incorporated into the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy. The 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy describes how the region can attain the GHG emission-reduction targets set by CARB by achieving a 19 percent reduction by 2035 compared to the 2005 level on a per capita basis. Compliance with and implementation of 2020 Regional Transportation Plan/Sustainable Communities Strategy policies and strategies would have co-benefits of reducing per capita criteria air pollutant emissions associated with reduced per capita VMT.

Hazards and Hazardous Materials

Federal

Federal Resource Conservation and Recovery Act (RCRA) 1976

Under the RCRA regulations, as established by the United States Environmental Protection Agency (EPA), hazardous wastes must be tracked from the time of generation to the point of disposal. The RCRA program also sets standards for hazardous waste treatment, storage and disposal, which is intended to have hazardous wastes managed in a manner that minimizes the present and future threat to the environment and human health. EPA has largely delegated responsibility for implementing the RCRA program in California to the Department of Toxic Substances Control (DTSC), an agency within Cal/EPA, which implements this program through the California Hazardous Waste Control Law. While it is possible that future residential land uses at the Project Site may generate or handle small quantities of hazardous wastes, the Project would not generate hazardous wastes in quantities that would subject such uses to RCRA requirements.

Occupational Safety and Health Administration, Department of Labor (29 CFR Section 1910)

Title 29 of the Code of Federal Regulations contains Occupational Safety and Health Administration Occupational Safety regulations relating to labor. Part 1910 contains provisions related to the health and safety of workers including the handing and use of hazardous materials.

State

California Occupational Safety and Health Act of 1973 – Labor Code Section 6300-6332

Cal/OSHA is responsible for developing and enforcing the workplace safety regulations in Title 8 CCR, including the handling and use of chemicals in the workplace. Cal/OSHA hazardous materials regulations require safety training, availability of safety equipment, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation.

City, County, and Regional

County of Los Angeles Fire Department

The Los Angeles County Fire Department County Fire Code contains various provisions related to safety, site design, and access applicable to the Project. Site plans are required by the County of Los Angeles Fire Department for plan check approval. Plans must be approved before the issuance of building permits. The County Fire Department has approved the Project Site plans.

SCAQMD

Rule 1166

Rule 1166 applies to facilities that have the potential for VOC leakage from storage and transfer operations, accidental spillage, or other deposition. This rule sets requirements to control the emission of VOCs from excavating, grading, handling, and treating VOC contaminated soil.

Rule 403

Fugitive dust is particulate matter that is suspended in the air by direct or indirect human activities. Two South Coast AQMD rules were adopted with the purpose of reducing the amount of fugitive dust entrained as a result of human activities. Rule 403 applies to any activity capable of generating fugitive dust.

Rule 1466

Rule 1466 applies to any owner or operator conducting earth-moving activities of soil with applicable toxic air contaminant(s) as defined in paragraph (c)(16) of the rule that have been identified as contaminant(s) of concern at a site. The rule focuses on the toxic air contaminants listed in Table I of the rule. The provisions in Rule 1466 include ambient PM10 monitoring, dust control measures, notification, signage, and recordkeeping requirements. Rule 1466 allows for alternative signage that is approved by the Executive Officer.

Signal Hill General Plan

The Environmental Resources Element (1986) and Safety Element (2016) of the City of Signal Hill General Plan address hazards and hazardous materials in goals and policies, as outlined in the table below.

Applicable City of Signal Hill General Plan Goals and Policies

Element	Goal	Policy	Applicability
Environmental Resources	Goal 5: Ensure minimal degradation to the physical environment from development or operational activities, and require restoration of the environment where degradation has occurred.	Policy 5.3: Eliminate the unsafe storage, use and transport of hazardous industrial and commercial chemicals and substances through regulations, planning and development review processes.	The Project would require temporary transportation and storage of fuel for construction activities.
	Goal 6: Ensure and protect the public safety in natural hazard areas.	Policy 6.1: Regulate development to protect the public health, safety and general welfare where studies indicate hazards due to earthquake faults, unstable soils or steep	The Project is located within the Long Beach Oil Field zone however it is not located within a close proximity to any active oil wells.

Element	Goal	Policy	Applicability
		slopes. Where needed, maintain such lands in public or private open space uses. Restrict the proximity of buildings to existing oil production uses or petroleum storage facilities that present a high risk of explosion or fire.	

Source: City 1986

City of Signal Hill Municipal Codes - Title 15: Buildings and Construction

Title 15 contains all applicable codes pertaining to real estate development, building and construction. These codes include but are not limited to the California Building Code, California Residential Code, County of Los Angeles Fire Code, and the Cal Green Building Standards Code. These codes regulate building and construction activities to ensure conformance with federal, state, and local requirements for real estate development.

City of Signal Hill Municipal Codes - Chapter 16.24: Development Standards for Properties Containing Abandoned Wells

Chapter 16.24 of the City of Signal Hill Oil and Gas Code provides development standards for properties containing abandoned wells. This chapter regulates the area of development, prerequisites to site plan and design review, well discover, leak testing, well access exhibits, well abandonment reports, abandonment equivalency standards, methane assessment and mitigation standards, and abandonment and restoration standards so that these activities may be conducted in conformance with federal, state, and local requirements, and to mitigate the impact of oil-related activities on urban residencies.

Pursuant to section 16.24.040 of the Oil and Gas Code, approved leak test reports are valid for 24 months from city acceptance. The most recent methane leak testing was conducted on site in 2021 and will require a re-test prior to the start of grading activities.

Hydrology

Federal

Clean Water Act

The Clean Water Act establishes the basic structure for regulating discharges of pollutants into the Waters of the United States and regulating quality standards for surface waters, including lakes, rivers, and coastal wetlands. The basis of the Clean Water Act was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized

and expanded in 1972. Under the Clean Water Act, USEPA has implemented pollution control programs and has developed national water quality criteria recommendations for pollutants in surface waters. In California, the SWRCB and its nine regional water quality control boards administer various sections of the Clean Water Act.

Section 402 of the Clean Water Act establishes the NPDES. Under Section 402, a permit is required for point source discharges of pollutants into navigable waters of the United States (other than dredge or fill material). Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. In California, the NPDES Permit program is administered by the SWRCB. These permits require development and adherence to SWPPPs, which include BMPs to control stormwater discharges.

Section 303 of the Clean Water Act requires that California adopt water quality standards. In addition, under Clean Water Act Section 303(d), states are required to identify "impaired waterbodies" (those not meeting established water quality standards), identify the pollutants causing the impairment, establish priority rankings for waters on the list, and develop a schedule for development of control plans to improve water quality. USEPA then approves the state's recommended list of impaired waters or adds to and/or removes waterbodies from the list.

In accordance with Section 303(d) of the Clean Water Act, the SWRCB has listed both the Los Angeles River Reach 1 and Los Cerritos Channel as water quality impaired. Los Angeles River Reach 1 (Estuary to Carson Street) is water quality impaired for: indicator bacteria, cyanide, ammonia, cadmium, copper (dissolved), lead, nutrients (algae), trash, zinc (dissolved), and pH. The Los Cerritos Channel is water quality impaired for: ammonia, Bis(2ethylhexyl) phthalate, chlordane (sediment), copper, indicator bacteria, lead, trash, zinc, and pH (SWRCB 2022).

Federal Safe Drinking Water Act and California Underground Injection Control Regulations

The SDWA was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and ground water wells. The SDWA authorizes the EPA to set national health-based standards for drinking water to protect against both naturally occurring and man-made contaminants that may be found in drinking water.

National Flood Insurance Program

The National Flood Insurance Program (NFIP) was enacted in 1968 to provide a federal program for participating communities to purchase flood insurance. The program is administered by the Federal Emergency Management Agency (FEMA), and applicable flood insurance rates are

based on the flood hazards identified on FIRMs produced and updated by FEMA. A Flood Insurance Rate Map identifies the estimated limits of the 100-year flood hazard risk, and to participate in the NFIP, local communities must adopt regulations for floodplain development to reduce flood damage, including flood proofing, elevation on fill, or floodplain avoidance. Los Angeles County participates in the NFIP. The Project Site is not located in a Special Flood Hazard Area as defined by FEMA.

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act requires the regional water quality control boards to adopt water quality control plans (Basin Plans) for the protection of surface water and groundwater quality. The Act also authorizes the RWQCBs to issue waste discharge requirements (WDRs), including NPDES Permits. Any activity, discharge, or proposed activity or discharge from a property or business that could affect California's surface, coastal, or groundwater will (in most cases) be subject to a WDR. The California Water Code authorizes the SWRCB and the RWQCBs to conditionally waive WDRs if this is in the public interest. For this Project, the Los Angeles RWQCB is the board with jurisdictional authority.

City, County, and Regional

Waste Discharge Requirements

Regional Water Quality Control Boards oversees permitting for discharges of wastewater and stormwater, as well as water basin planning and regulatory programs to attain and maintain compliance with applicable water quality standards and objectives. The Regional Water Quality Control Board is responsible for permitting discharge of produced water to percolation and evaporation ponds, drilling sumps, and wastewater disposal sumps, through issuance of WDRs, or other forms of discharge authorization such as Clean Water Act Section 401 water quality certification and WDR waivers. In addition, the Regional Water Quality Control Board also oversees the cleanup of petroleum-related spills and releases, as well as spills and releases of other chemicals.

The Project would include a stormwater drainage and erosion control system. Stormwater runoff would be collected by a system throughout the property of inlet drains, catch basins, a trench drain, and permeable pavement that feeds into an CUDO® Stormwater Infiltration System. The stormwater drain system will be installed to the manufacturer's specification and will comply with County of Los Angeles Department of Public Works LID Standards Manual (2014). Applicable BMPs have been outlined in Section 2.1.3.10 and in Table 2.1-2.

Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties

The Los Angeles Regional Water Quality Control Board Basin Plan is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. The basin plan designates beneficial uses for surface and ground waters, sets objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's antidegradation policy, and describes implementation programs to protect all waters in the region (LARWQCB 2014).

Lower Los Angeles River & Los Cerritos Watershed Management Programs

The City of Signal Hill is a permittee under the Los Angeles RWQCB Order No. R4-2012-0175, adopted on November 08, 2012, which enacted WDRs for MS4 discharges within the coastal watersheds of Los Angeles County. The MS4 Permit established strict numerical limits regarding the quantity of pollutants that can be discharged by stormwater and urban runoff. To comply with the MS4 Permit, the City has submitted Watershed Management Programs for the Lower Los Angeles River and the Los Cerritos Channel watersheds. Both programs include a commitment to reduce the quantity of pollutants carried by soil and sediment.

Los Angeles County Department of Public Works – Hydrology Manual

The Hydrology Manual (Los Angeles County Department of Public Works 2006) establishes the Los Angeles County Department of Public Work's hydrologic design procedures and techniques that are applicable to the design of local storm drains, retention and detention basins, pump stations, and major channel projects. The standards set forth in the manual dictate all hydrology calculations done under Public Works' jurisdiction. The Project Site currently accepts storm water runoff from the adjacent property to the north (7216-020-012) which drains into the municipal storm drain system. The Project would include a stormwater drainage and erosion control system. Stormwater runoff would be collected by a system throughout the property of inlet drains, catch basins, a trench drain, and permeable pavement that feeds into an CUDO® Stormwater Infiltration System. The stormwater drain system will be installed to the manufacturer's specification and will comply with County of Los Angeles Department of Public Works LID Standards Manual (2014). Finally, applicable BMPs have been outlined in Section 2.1.3.10 and in Table 2.1-2.

Signal Hill General Plan

The Environmental Resources Element (1986) and Land Use Element (2001) of the City of Signal Hill General Plan addresses hydrology and water quality in goals and policies, as outlined in the table below.

Applicable City of Signal Hill General Plan Goals and Policies

Element	Goal	Policy	Applicability
Environmental Resources	Goal 5: Ensure minimal degradation to the physical environment from development or operational activities, and require restoration of the environment where degradation has occurred.	Policy 5.2: Protect water quality and conserve water supplies through reducing and eliminating contamination from industrial operations or resource development activities. Cooperate and participate in regional water quality and water supply plans, programs and implementation measures.	Project would include a stormwater drainage and erosion control system. Further, BMPs for the containment of non-storm water runoff and erosion would be adhered to.
Land Use	Goal 3: Assure a safe, healthy, and aesthetically pleasing community for residents and businesses.	Policy 3.18: Minimize the impacts of storm water runoff to the maximum extent practicable, on the biology, water quality and integrity of natural drainage systems and water bodies	Project would implement SWPPP. Also, Project would include a stormwater drainage and erosion control system. Further, BMPs for the containment of non-storm water runoff and erosion will be adhered to.
		Policy 3.19: Maximize to the extent practicable, the percentage of permeable surfaces to allow more percolation of storm water runoff into the ground	Stormwater runoff would be collected by a system throughout the property of inlet drains, catch basins, a trench drain, and permeable pavement that feeds into an CUDO® Stormwater Infiltration System, as well as open paved areas and planter areas.
		Policy 3.20: Minimize to the extent practicable, the amount of storm water directed to impermeable areas and to the municipal separate storm water system. Build storm water pollution prevention systems into all development projects including maximizing landscaped areas and providing areas for storm water storage and sedimentation.	Stormwater runoff would be collected by a system throughout the property of inlet drains, catch basins, a trench drain, and permeable pavement that feeds into an CUDO® Stormwater Infiltration System, as well as open paved areas and planter areas.
		Policy 3.21: Require new projects to include permanent controls to reduce storm water pollutant loads from development sites including parking lots to the maximum extent practicable.	Stormwater runoff would be collected by a system throughout the property of inlet drains, catch basins, a trench drain, and permeable pavement that feeds into an CUDO®

Element	Goal	Policy	Applicability
			Stormwater Infiltration System, as well as permeable pavers and planter areas.

Source: City 1986, 2001.

City of Signal Hill Municipal Code—Chapter 12.16

The intent of Chapter 12.16 of the Municipal Code is to protect public health, welfare, and safety and to reduce the quantity of pollutants discharged to Waters of the U.S. Specifically, the provisions outlined in Chapter 12.16 intend to accomplish the following:

- Eliminate non-storm water discharges to the municipal storm drain system;
- Eliminate the discharge of pollutants into the municipal storm drain system;
- Reduce pollutants in storm water discharges to the maximum extent practicable;
- Protect and enhance the quality of Waters of the U.S. in a manner consistent with provisions of the CWA; and
- Reduce contribution of pollutants from the MS4 through interagency coordination.

This chapter focuses on ensuring any commercial, industrial, or construction activity complies with all USEPA and SWRCB stormwater discharge requirements through pollutant reduction strategies, including BMPs and low impact development with emphasis put on compliance with the municipal separate storm sewer system (MS4) Permit.

Land Use and Planning

City of Signal Hill General Plan – Land Use Element

The Land Use Element (2001) of the Signal Hill General Plan addresses lands management in the goals and policies, as outlined in the table below.

Applicable City of Signal Hill General Plan Goals and Policies

Element	Goal	Policy	Applicability
Land Use	Goal 1: Manage growth to achieve a well-balanced land use pattern that accommodates existing and future needs for housing, commercial and industrial land, open space, and community facilities and	Policy 1.1 - Encourage and manage growth in order to accommodate year 2010 moderate growth population, household and employment projections.	The Project will adhere to City requirements for new development fair share fees for capital improvements.

Element	Goal	Policy	Applicability
	services, while maintaining a healthy, diversified economy adequate to provide future City revenues.		
	Goal 2: Ensure that new development is consistent with the City's circulation system, availability of public facilities, existing development constraints, and the City's unique characteristics and natural resources	Policy 2.5: Ensure an orderly extension of essential services and facilities and preservation of a free-flowing circulation system, by requiring the provision of essential services and facilities at the developer's cost where these systems do not exist or are not already part of the City's financed annual Capital Improvement Program.	The Project will adhere to City requirements for new development fair share fees for capital improvements. The Project will also establish a homeowner's association to maintain landscaping, private streets, and other neighborhood amenities; an act the City encourages.
	Goal 3: Assure a safe, healthy, and aesthetically pleasing community for residents and businesses.	Policy 3.11: Maintain and improve, where necessary, the City's infrastructure and facilities.	The Project will adhere to City requirements for new development fair share fees for capital improvements.

Source: City 1986, 2001, 2016.

Mineral Resources

State

Surface Mining and Reclamation Act (SMARA)

Sections 2761(a) and (b) and 2790 of the Surface Mining and Reclamation Act provide for a mineral lands inventory process termed classification-designation. The California Division of Mines and Geology and the State Mining and Geology Board are the state agencies responsible for administering this process. The primary objective of the process is to provide local agencies with information on the location, need, and importance of minerals within their respective jurisdictions. It is also the intent of this process that this information be considered in future land-use decisions planning decisions. Under Surface Mining and Reclamation Act, local land use jurisdictions are the enforcing lead agencies for mineral resource issues, which state agencies guide and regulate city and county enforcement of Surface Mining and Reclamation Act.

City

City of Signal Hill Municipal Code

Chapter 16.16 of the City Municipal code identifies drilling standards for oil wells including prohibited actions and permitted zones where drilling may occur. Section 16.16.010 of the code prohibits the drilling of any new well or wells within the surface location in any residential zoning district.

Noise

Federal

Noise Control Act

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972 (42 U.S.C. §4901 et seq.), which serves three purposes:

- Establish noise emission standards for interstate commerce.
- Assist state and local abatement efforts.
- Promote noise education and research.

The Federal Office of Noise Abatement and Control was initially tasked with implementing the Noise Control Act. However, the Office of Noise Abatement and Control has since been eliminated, leaving the development of federal noise policies and programs to other federal agencies and interagency committees. For example, the Occupational Safety and Health Administration (OSHA) agency prohibits exposure of workers to excessive sound levels. The Department of Transportation assumed a significant role in noise control through its various operating agencies, including the Federal Aviation Administration (FAA), Federal Transit Administration (FTA), and Federal Highway Administration (FHWA).

The FAA regulates noise of aircraft and airports. Surface transportation system noise is regulated by a host of agencies, including the FTA (formerly the Urban Mass Transit Administration). Transit noise is regulated by the FTA, while freeways that are part of the interstate highway system are regulated by the FHWA. Finally, the federal government actively advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that “noise sensitive” uses are either prohibited from being sited adjacent to a highway or, alternately that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Since the Federal government has preempted the setting of standards for noise levels that can be emitted by the transportation sources, counties and cities are restricted to regulating the

noise generated by the transportation system through nuisance abatement ordinances and land use planning.

State

California Noise Standards

Established in 1973, the California Department of Health Services Office of Noise Control was instrumental in developing regulatory tools to control and abate noise for use by local agencies. One significant model is the "Land Use Compatibility for Community Noise Environments Matrix," which allows the local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise.

Article 4 of the California Administrative Code (California Noise Insulation Standards, Title 24, Chapter 1) requires noise insulation in new hotels, motels, apartment houses, and dwellings (other than single-family detached housing) that prevent interior Day-Night (L_{dn}) or CNEL noise levels from exceeding 45 dBA. When such structures are located within a 60-dBA Day-Night (L_{dn}) or CNEL (or greater) noise contour, an acoustical analysis is required to ensure that interior levels do not exceed the 45-dBA limit.

Government Code §65302 mandates that the legislative body of each county and city in California adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable. Figure 5 within the City of Signal Hill's General Plan – Noise Element presents "Community Noise Exposure Levels" is based upon the Governor's Office of Planning and Research (OPR) 2003 guidance, which incorporates this concept.

City

City of Signal Hill – General Plan

The City of Signal Hill General Plan (City of Signal Hill 2009a), Noise Element, has a number of goals and policies related to noise. City General Plan noise policies that apply to the Project are summarized in Table 3.14-3.

Applicable City of Signal Hill General Plan Goals and Policies

Element	Goal	Policy	Applicability
Noise	Goal 1: Protect the health, safety, and welfare of people living and working within the city from	Policy 1.a: The City will consider the severity of noise exposure in the community planning process to prevent or minimize noise impacts to existing and proposed land uses.	The Project would be subject to City regulations and applicable noise limits.

	adverse noise impacts.	Policy 1.c: Noise-sensitive land uses, including residential, transient lodging, hospitals and long-term care facilities, educational facilities, libraries, churches, and places of public assembly will not be located near major stationary noise sources. Policy 1.d: The City will inform those living and working within the city of the effects of noise pollution and will cooperate with all levels of government to reduce or minimize impacts. Policy 1.e: Require noise mitigation to ensure that noise-sensitive land uses are not exposed to noise levels of greater than 45 dB in habitable rooms and 65 dB in outdoor living areas. Policy 1.f: Where needed, the City will encourage the use of noise mitigation methods that minimize visual impacts and maintain necessary access.	

Source: City of Signal Hill 2009a.

In addition to the goals and policies above, the Noise Element of the General Plan also outlines general standards for assessing compatibility of various land use types with a range of noise levels. Specifically, Implementation Program – Number 15 specifies that new noise sources shall be mitigated to acceptable exterior levels of 65 dB CNEL or less and an interior level in habitable rooms of 45 dB CNEL or less at existing noise-sensitive land uses. The table below was also taken from the General Plan and summarizes noise level compatibility criteria for various land uses.

Signal Hill General Plan – Noise Compatibility Criteria by Land Use

Land Use Type	Interior/Exterior	Compatibility Criteria
Residential	Exterior	Outdoor living areas must be mitigated to 65 dB CNEL or less.
Residential	Interior	Habitable rooms must be mitigated to 45 dB CNEL or less.
Other Noise-Sensitive Uses	Exterior	Same as residential criterion.
Other Noise-Sensitive Uses	Interior	Same as residential criterion.
Commercial	Exterior	A noise level of 70 dB CNEL or less, or one that does not interfere with normal business activity.
Industrial	Exterior	A noise level of 75 dB CNEL or less, or one that does not interfere with normal business activity.

Source: City of Signal Hill 2009a

City of Signal Hill – Municipal Code

The City of Signal Hill – Municipal Code, specifically Title 9 (Public Peace, Morals and Welfare) and Title 16 (Oil and Gas Code), also contain various provisions that regulate both construction and operational noise from stationary and mobile sources. Applicable Signal Hill – Municipal Code noise and vibration standards and related information/policies are summarized below.

Title 9 – Public Peace, Morals and Welfare, Chapter 9.16 (Noise)

9.16.020 – Definitions. The following terms used in this chapter, unless the context clearly indicates otherwise, shall have the respective meanings set forth in this section:

A. "Ambient noise" means the all-encompassing noise associated with a given environment, being usually a composite of sounds from many sources near and far. For the purpose of this chapter, "ambient noise level" is the level obtained when the noise level is averaged over a period of fifteen minutes without inclusion of noise from isolated identifiable sources, at the location and time of day near that at which a comparison is to be made.

B. "Ambient noise level" as referred to in this chapter, means the higher of the following:

1. Actual measured ambient noise level; or

2. Presumed ambient noise level as determined from the following chart:

Zone	**Night**	**Day**
	(10 p.m. to 7 a.m.)	(7 a.m. to 10 p.m.)
Residential	50	60
Commercial	60	65
Industrial	70	70

9.16.030 – Noise standards.

A. Notwithstanding any other provision of this chapter, and in addition thereto, it is unlawful for any person to willfully make or continue, or cause to be made or continued, any loud, unnecessary, or unusual noise which disturbs the peace or quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness in the area.

9.16.050 – Construction or repairing of buildings.

A. Generally. It is the purpose of this section to promote quiet and peaceful residential areas by limiting construction activities which create disturbing noise to reasonable times and circumstances, but such limitations shall not apply where residences will not be

affected, where individual homeowners are performing maintenance work, or to emergency circumstances.

B. Limitation of Activity. No person shall carry on any construction activities, including the erection, demolition, excavation, modification, alteration or repair of any building or structures, or any other activities creating construction noise as defined in this section other than between the hours of seven a.m. and six p.m. on weekdays, except as otherwise permitted in this section.

C. Definitions. For the purposes of this section, the following words and phrases shall have the following meanings, except where the context indicates otherwise:

1. The term "weekday" does not include Saturdays, Sundays or holidays, but does include all other days. "Holidays" is defined in this section to include the following seven days: Christmas, Thanksgiving, New Year's, July 4th, Memorial Day, Labor Day and Veterans Day.

2. The term “construction noise” means noise associated with construction activities and includes but is not limited to loud, annoying or disturbing noise or sounds associated with the delivery or operation of equipment, radios, communication equipment, shouting, horns, bells, demolition, excavation digging, pouring, pounding or other similar noise.

D. Exceptions. Notwithstanding any other provision of this section, construction activities are permitted as follows:

1. An owner of a dwelling or property residing thereon may perform repair or maintenance work on such dwelling or property without regard to any limitation contained in this section.

2. During any emergency, any construction activities required to preserve life or property shall be permitted at any time, but this paragraph shall not authorize any construction activity if the building official determines that no emergency exists and notifies the property owner or person responsible for the construction activity that no such emergency exists.

3. Construction activities creating construction noise may be authorized between the hours of six p.m. and seven a.m. on weekdays or at any time on any other days if a permit for such construction activities is issued by the building official of the city or his designee in accordance with the provisions contained in this section, and is not revoked.

9.16.060 – Machinery and equipment other than that required for servicing, redrilling and reworking of existing oil wells.

A. It is unlawful for any person to operate any machinery, equipment, compressor, pump, generator, fan, air conditioning apparatus, or similar mechanical device, or provide

boarding or daycare to animals in an enclosed building (kennel) in any manner so as to create any noise which would cause the noise level at the property line of any property to exceed the ambient noise level by more than five decibels.

B. This section shall not prevent the normal operation, repair, or maintenance of household gardening equipment and hobby shop equipment or the servicing, redrilling and reworking of oil wells.

9.16.070 – Servicing, reworking and redrilling of existing oil wells.

A. Except in case of emergency well work, well servicing reworking and truck deliveries are prohibited except Monday through Friday, inclusive, from seven a.m. to seven p.m. and except for industrial areas and drill sites as shown on the oil well servicing map on file in City Hall where work shall be permitted on Saturdays and Sundays from nine a.m. to seven p.m.

B. During redrilling activities, soundproofing shall be provided in accordance with Section 16.16.110.

C.

1. During redrilling, reworking or servicing operations the operator shall be required to respond to resident complaints about noise from such operations. If the operator has not taken action to reduce the noise from such operations to a level acceptable to the complaining resident within twenty-four hours of the making of the complaint, the city may order the operator to implement one or more of the following temporary noise mitigating measures:

    a. Extension or diversion of oil service rig tailpipes away from affected dwellings.

    b. Replacement of defective or worn mufflers.

    c. Construction of sound barriers up to one hundred twenty square feet in dimension between any operating engine(s) and the affected dwelling, which barriers must comply with all Uniform Fire Code provisions then in effect.

9.16.080 – New construction of habitable space. In accordance with Title 25 of the California Administrative Code, all construction of habitable rooms in new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings, shall provide interior community noise equivalent levels (CNEL) with windows closed attributable to exterior sources less than or equal to an annual CNEL of 45 dB.

9.16.085 – New construction of residential dwellings in close proximity to oil field equipment.

9.16.087 – Existing oil field equipment violations and compliance procedures.

A. For any new development which proposes to locate any portion of any dwelling within six hundred feet of an operating oil well, injection well, or any other appurtenant oil field equipment, upon submittal of an application for development approval as described in Chapter 20.52, the city shall review the oil field map and if necessary take field noise measurements to evaluate the potential for proposed residential development to be adversely impacted by oil field equipment noise. When the city determines that proposed development may be impacted by oil field equipment noise the applicant shall submit one of the following:

1. A joint oil field equipment noise mitigation plan, approved by both the applicant and the operator of the oil field equipment in question, describing in detail the measures proposed to be completed during the construction of the proposed development to mitigate the effects of any proposed dwelling from oil field equipment noise to levels provided in Section 9.16.020(B). The joint oil field equipment noise mitigation plan shall include a certification by a state licensed acoustical engineer that the mitigation measures proposed are anticipated to reduce the effect of oil field equipment noise on the affected dwellings to levels provided for in Section 9.16.020(B). The mitigation measures may include walls, enclosures, earth berms, construction features, grade changes, reconfiguration or relocation of proposed dwelling units, reduction of dwelling unit densities, or modifications, repairs, or other alterations to the oil field equipment. All mitigation measures proposed must comply with applicable requirements of the Signal Hill Municipal Code.

2. A development applicant oil field equipment noise mitigation plan, prepared by the applicant. If the applicant owns or controls the oil facility in question, he/she may not submit a development applicant oil field equipment noise mitigation plan. A development applicant oil field equipment noise mitigation plan shall include all of the following:

a. Evidence acceptable to the director of planning that the applicant contacted the operator of the oil field equipment in question, and made a good faith effort to secure the cooperation of the operator in the preparation of a joint oil field equipment noise mitigation plan, including evidence that the developer offered to pay the reasonable costs of any modifications to oil field equipment required to meet the noise levels provided in Section 9.16.020(B);

b. Description in detail of mitigation measures, other than repairs, modifications, or other alterations to the oil field equipment, proposed to be completed during the construction of the proposed development to mitigate the effects on any proposed dwelling from oil field equipment noise to levels provided in Section 9.16.020(B), or as close to such levels as best practicable technology may permit. The mitigation measures may include walls, enclosures, earth berms,

construction features, grade changes, reconfiguration or relocation of proposed dwelling units, reduction of dwelling unit densities, provided that no such reduction shall be required which does not permit the development of at least one dwelling unit on each legal lot on the property. All mitigation measures proposed must comply with all applicable requirements of the Signal Hill Municipal Code;

c. One of the following:

i. Certification by a state licensed acoustical engineer that the mitigation measures proposed are properly designed to reduce the effect of oil field equipment noise on affected dwellings to levels provided for in Section 9.16.020(B); or

ii. Certification by a state licensed acoustical engineer that there are no mitigation measures permitted under the Signal Hill Municipal Code, other than repairs, modifications, or other alteration of the oil field equipment, which can be properly designed to reduce the effect of oil field equipment noise on affected dwellings to levels provided for in Section 9.16.020(B).

B.

1. Should the noise measurement indicate noise levels exceeding the noise levels set forth in Section 9.16.020(B), the city shall notify the operator. The notice shall state the time and date of the city's measurement, the noise level measured, and shall state that the operator must take corrective actions to remedy the violation. The corrective actions may include, but are not limited to, the following:

a. Repairs to the oil field equipment motor, belts, transmission, etc.;

b. Construction of an enclosure over the belt, motor, and/or pulleys of sufficient design and quality to mitigate noise to the greatest extent possible;

c. Construction of a wall between the offending oil field equipment and the dwelling of sufficient height and density to mitigate noise to the greatest extent possible;

d. Replacement or repair of old aboveground pumping units to achieve noise levels similar to comparable equipment in good working order.

Population and Housing

State

Housing-Element Law

State requirements mandating that housing be included as an element of each jurisdiction's general plan is known as housing-element law. The Regional Housing Need Allocation (RHNA) is the state mandated process to identify the total number of housing units (by affordability level) that each jurisdiction must accommodate in its housing element. California housing-element law requires cities to: 1) zone adequate lands to accommodate its RHNA; 2) produce an inventory of sites that can accommodate its share of the RHNA; 3) identify governmental and non-governmental constraints to residential development; 4) develop strategies and a work plan to mitigate or eliminate those constraints; and 5) adopt a housing element and update it on a regular basis. The City of Signal Hill Housing Element and related land use policies were last updated in 2022.

City

City of Signal Hill General Plan – Land Use Element

The Land Use Element (2001) of the Signal Hill General Plan addresses lands management in the goals and policies, as outlined in the table below.

Applicable City of Signal Hill General Plan Goals and Policies

Element	Goal	Applicability
Housing	Category 1: Accommodate the housing needs of all income groups as quantified by Regional Housing Needs Assessment (October 2021- October 2029). Facilitate the construction of the maximum feasible number of housing units for all income groups.	The Project will adhere to City requirements for development of housing for all income groups.
	Category 2: Reduce the number of cost burdened lower income households. Reduce the number of crowded lower income households. Increase the number of moderate income, first-time homebuyers.	The Project will adhere to City requirements for development of housing for all income groups.
	Category 3: Attain barrier and constraint free governmental codes, ordinances, and policies. Provide codes, ordinances, and policies that lead to the improvement of the housing status of residents. Achieve energy conservation during the 2021-2029 planning period.	The Project will adhere to City requirements for housing status and energy conservation.
	Category 4: Achieve a housing stock free of substandard structures. Conserve and improve the existing stock of affordable housing.	The Project will adhere to City requirements for development of housing for all income groups.
	Category 5: Attain a housing market with "fair housing choice," meaning the ability of persons of similar income levels regardless of race, color, religion, sex, marital status, familial status, disability, national origin, ancestry, sexual orientation, source of income or other arbitrary factor to have available to them the same housing choices.	The Project will adhere to City requirements for development of housing for all income groups.

Source: City 1986, 2001, 2016.

Public Services

State

Occupational Safety and Health Administration

The California Occupational Safety and Health Administration (OSHA) enforces the provisions of the State Occupational Safety and Health Act, which requires implementation of safety and health regulations under Title 24 of the California Code of Regulations (CCR). Examples of general requirements related to fire protection and prevention include maintaining fire suppression equipment specific to a Project Site; providing a temporary or permanent water supply of sufficient volume, duration, and pressure; properly operating on-site fire-fighting equipment (e.g., sprinklers); and keeping sites free from the accumulation of unnecessary combustible materials.

California Office of Emergency Services

The California Emergency Management Agency was incorporated into the Governor's Office on January 1, 2009, by Assembly Bill (AB) 38 (Nava), and merged the duties, powers, purposes, and responsibilities of the Governor's Office of Emergency Services (OES) with those of the Governor's Office of Homeland Security. Cal OES is responsible for the coordination of overall state agency response to major disasters in support of local government. The agency is responsible for ensuring the state's readiness to respond to and recover from all hazards—natural, man-made, emergencies, and disasters—and for assisting local governments in their emergency preparedness, response, recovery, and hazard mitigation efforts.

The Cal OES Fire and Rescue Division coordinates statewide response of fire and rescue mutual aid resources to all types of emergencies, including hazardous materials incidents. The Operations Section under the Fire and Rescue Division coordinates the California Fire and Rescue Mutual Aid System, and coordinated response through the Mutual Aid System includes responses to major fires, earthquakes, tsunamis, hazardous materials, and other disasters.

California Building Code

The California Building Standards Code (CBSC), in Part 2 of Title 24 of the CCR identifies building design standards, including those for fire safety. The CBSC is based on the International Building Code but has been amended for California conditions. The CBSC is updated every three years, and the current 2019 CBSC went into effect on January 1, 2020. It is effective statewide, but a local jurisdiction may adopt more restrictive standards based on local conditions under specific amendment rules prescribed by the State Building Standards Commission. Commercial and residential buildings are plan-checked by local city and county building officials for compliance with the CBSC. Typical fire safety requirements of the CBSC include the installation of fire sprinklers in all new residential, high-rise, and hazardous materials buildings; the establishment

of fire resistance standards for fire doors, building materials, and particular types of construction; and clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas.

California Fire Code

The California Fire Code (CFC), contained in Part 9 of Title 24 of the CCR, incorporates by adoption the International Fire Code of the International Code Council, with California amendments. The CFC is updated every three years, and the current 2019 CFC went into effect on January 1, 2020. It is effective statewide, but a local jurisdiction may adopt more restrictive standards based on local conditions under specific amendment rules prescribed by the State Building Standards Commission. The CFC regulates building standards in the California Building Standards Commission (CBSC), fire department access, fire protection systems and devices, fire and explosion hazards safety, hazardous materials storage and use, and standards for building inspection.

California Construction Article XIII, Section 35

Section 35 of Article XIII of the California Constitution at Subdivision (a)(2) provides: "The protection of public safety is the first responsibility of local government and local officials have an obligation to give priority to the provision of adequate public safety services." Section 35 of Article XIII of the California Constitution was adopted by the voters in 1993 under Proposition 172. Proposition 172 directed the proceeds of a 0.50-percent sales tax to be expended exclusively on local public safety services. California Government Code Sections 30051-30056 provide rules to implement Proposition 172. Public safety services include fire protection. Section 30056 mandates that cities and counties are not allowed to spend less of their own financial resources on their combined public safety services in any given year compared to the 1992-93 fiscal year. Therefore, an agency is required to use Proposition 172 to supplement its local funds used on fire protection services, as well as other public safety services. In City of Hayward v. Board of Trustee of California State University (2015) 242 Cal. App. 4th 833, the court found that Section 35 of Article XIII of the California Constitution requires local agencies to provide public safety services, including fire protection and emergency medical services, and that it is reasonable to conclude that the county will comply with that provision to ensure that public safety services are provided.

California Government Code Section 65995 (b) and Education Code Section 17620

SB 50 amended California Government Code §65995, which contains limitations on Education Code §17620, the statute that authorizes school districts to assess development fees within school district boundaries. Government Code §65995(b)(3) requires the maximum square footage assessment for development to be increased every two years, according to inflation adjustments. In March 2021, the State Allocation Board (SAB) approved increasing the allowable amount of statutory school facilities fees (Level I School Fees) from $21,715 per unit

to $21,910 per unit for single-family and $14,977 per unit to $15,112 per unit for multi-family residential per square foot of assessable space of 500 square feet or more. School districts may levy high fees if they apply to the SAB and meet certain conditions.

California Government Code, Section 66477 (Quimby Act)

The goal of the Quimby Act is to require developers to help mitigate the impacts of property improvements. The Act gives authority for passage of land dedication ordinances only to cities and counties. The fees must be paid and land conveyed directly to the local public agencies that provide park and recreation services communitywide. The act states that the dedication of land or the payment of fees shall not exceed the amount necessary to provide three acres of park area per 1,000 persons residing within a subdivision subject to this section, unless the legislative body decides to increase the amount to a higher standard such as 5 acres per 1,000 residents. The Project would be subject to the Quimby Act through Municipal Codes described below in Section 3.16.2.10.

City, County, and Regional

Los Angeles County Municipal Code - Title 32; Fire Code; Section 102.5 – Application of Residential Code

Where structures are designed and constructed in accordance with the California Residential Code, the provisions of this code shall apply as follows:

> Construction and design provisions of this code pertaining to the exterior of the structure shall apply including, but not limited to, premises identification, fire apparatus access and water supplies. Provisions of this code pertaining to the interior of the structure shall apply when specifically required by this code including, but not limited to, Section 903.2.11.7. Where interior or exterior systems or devices are installed, construction permits required by Section 105.7 of this code shall apply.
>
> Administrative, operational, and maintenance provisions of this code shall apply.

Los Angeles County Municipal Code - Title 32; Fire Code; Section 105.7 – Required Construction Permits

The fire code official is authorized to issue construction permits for any activities within the scope of this code, including but not limited to, those set forth in Sections 105.7.1 through 105.7.26.

Los Angeles County Municipal Code - Title 32; Fire Code; Section 105.7.26.2 – Land Development Plan Review

When required by law or other agencies, fire code official review and approval is required prior to final approval of the following applications: tract maps, parcel maps, final maps, planned unit developments, conditional use permits, design overlay reviews, environmental impact reviews,

road vacations, zone changes, water plan reviews, and gate design review for land development projects.

Singal Hill General Plan

The Safety Element (2016) and the Land Use Element (2001) of the Signal Hill General Plan address public services in goals and policies, as outlined in the table below.

Applicable City of Signal Hill General Plan Goals and Policies

Element	Goal	Policy	Applicability
Safety	Goal 1: Prevention: Strive to prevent man-made disasters and minimize the potential for natural disasters to impact the community.	Policy 1.h: As development and population growth occurs, review service levels and adjust service accordingly to meet the demands of continued growth and development, tourism, and other factors which could change fire-rescue service needs.	The Project is required to be approved by the Los Angeles Fire Department as per Implementation Program 6 of the General Plan Safety Element.
Land Use	Goal 1: Manage growth to achieve a well-balanced land use pattern that accommodates existing and future needs for housing, commercial and industrial land, open space, and community facilities and services, while maintaining a healthy, diversified economy adequate to provide future City revenues.	Policy 1.1 - Encourage and manage growth in order to accommodate year 2010 moderate growth population, household and employment projections.	The Project will adhere to City requirements for new development fair share fees for capital improvements.
	Goal 2: Ensure that new development is consistent with the City's circulation system, availability of public facilities, existing development constraints, and the City's unique characteristics and natural resources	Policy 2.5: Ensure an orderly extension of essential services and facilities and preservation of a free-flowing circulation system, by requiring the provision of essential services and facilities at the developer's cost where these systems do not exist or are not already part of the City's financed annual Capital Improvement Program.	The Project will adhere to City requirements for new development fair share fees for capital improvements. The Project will also establish a homeowner's association to maintain landscaping, private streets, and other neighborhood amenities; an act the City encourages.
	Goal 3: Assure a safe, healthy, and aesthetically pleasing community for residents and businesses.	Policy 3.11: Maintain and improve, where necessary, the City's infrastructure and facilities.	The Project will adhere to City requirements for new development fair share fees for capital improvements.

Source: City 1986, 2001, 2016.

Signal Hill Municipal Code

The Signal Hill Municipal Code is a City adopted set of codes that establish and organize the many facets of City-wide activities. This code includes the procedures and fees associated with development within the City and the requirements for necessitating safe and correct procedures for development.

Title 21 Public Dedication Requirements and Improvement Fees to Be Paid by Development Projects - Section 21.17.010 Construction of Improvements

Unless otherwise provided in this title, the developer shall, prior to the issuance of any certificate of occupancy or other final approval for the development project, complete construction of all local improvements and all area-wide improvements required hereunder, or provide the security established by Section 18.40.030, or pay any impact fee imposed, whichever the approving body imposes as a condition of approval.

Title 21 Public Dedication Requirements and Improvement Fees to Be Paid by Development Projects - Section 21.18.050 Conditions of Approval

As a condition of approval of any development project, the approving body shall impose conditions requiring that the developer comply with the provisions of this title. Such conditions may include specification of the required improvements; time for construction; phasing of the development project in accordance with construction of the improvements; posting of security for construction; dedication of land; payment of impact fees; reimbursement for improvements constructed, or fees paid by others; performance of necessary studies and design services; reimbursement of staff or legal expenses; and related matters. At the time of development project approval, the approving body may permit the later establishment of any of the foregoing based upon any further studies it determines to be necessary to establish or coordinate construction of funding of improvements with completion of the development project. In addition, the approving body may require the payment of fees established in accordance with the procedures established in this chapter to reimburse any person, including the city, for the previous construction of improvements which benefit the development project.

Title 21 Public Dedication Requirements and Improvement Fees to Be Paid by Development Projects - Section 21.40.030 – Fee for Residential Units

A. The applicant for any development project which results or will result in the construction of a residential housing unit, not otherwise subject to an exemption under this title, shall be required to pay a park and recreation impact fee of $11,200 for each single-family dwelling unit.

Recreation

City

Signal Hill General Plan

The Land Use Element (2001) and the Environmental Resources Element (1986) of the Signal Hill General Plan address recreation in goals and policies, as outlined in the table below.

Applicable City of Signal Hill General Plan Goals and Policies

Element	Goal	Policy	Applicability
Land Use	Goal 1: Manage growth to achieve a well-balanced land use pattern that accommodates existing and future needs for housing, commercial and industrial land, open space, and community facilities and services, while maintaining a healthy, diversified economy adequate to provide future City revenues.	Policy 1.12 - Increase the amount and improve the network of public and private open space areas for active or passive recreation.	The Project is anticipated to increase use of public recreational spaces.
Environmental Resources	Goal 3: Provide and maintain a variety of parks and recreational facilities, both passive and active, that will be conveniently located throughout the community.	Policy 3.1 - Provide parkland and recreational facilities in neighborhoods of the City currently not served with such facilities.	The Project is anticipated to increase use of public recreational spaces. The Project does not propose additional Recreation Facilities

Source: City 1986, 2001

Signal Hill Municipal Code

Title 21 (Public Dedication Requirements and Improvement Fees to be Paid by Development Projects) Chapter 21.40 (Park and Recreation Impact fees) of the city of Signal Hill Municipal Code requires that the development of single-family dwelling units are to pay a park and recreation impact fee.

Transportation

Federal

The U.S. Department of Transportation is the primary federal department concerned with transportation regulation and consists of multiple agencies, including the FHWA, FTA, and

Federal Motor Carrier Safety Administration. Federal transportation regulations are primarily found in CFR 23 and 49.

State

California Department of Transportation

The State of California Department of Transportation (Caltrans) has responsibility over the design, construction, maintenance, and operation of the California State Highway System. Caltrans has jurisdiction over State highway right-of-way and sets maximum load limits for trucks and safety requirements for oversized vehicles that operate on highways. Caltrans coordinates several statewide transportation programs that impact Signal Hill. Among these are the State Transportation Improvement Program, which funds projects included in the Regional Transportation Improvement Plan; the Congestion Mitigation and Air Quality Program, which funds projects that help achieve compliance with federal ozone and carbon monoxide requirements; and the Traffic Congestion Relief Program, which funds projects that reduce congestion, improve goods movement, and provide intermodal connectivity. The proposed Project does not include any components which would encroach into Caltrans jurisdiction.

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is a joint powers authority that was established in 1965. Federally, SCAG is a Metropolitan Planning Organization; under State law it is a Regional Transportation Planning Agency and a Council of Governments. SCAG includes Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. SCAG's responsibilities include developing long-range regional transportation plans, including the consideration of sustainable growth, growth forecasting, housing needs, and transportation improvement (SCAG 2014).

City, County, and Regional

County of Los Angeles

The County of Los Angeles adopted transportation analysis methods and project CEQA thresholds through the Transportation Impact Analysis Guidelines document (Los Angeles County Public Works 2020). Many of the Los Angeles County methods and criteria included in the document are the same as those published by OPR in their Technical Advisory document, including the net increase of 110 or more daily vehicle trips. In addition to trip count screening thresholds, the County's document also provides baseline VMT per capita data which can be used to determine a project's potential transportation impacts under CEQA. Specifically, Los Angeles County has adopted a threshold of 16.8 percent below the existing VMT of the region (North County or South County).

City of Signal Hill General Plan

The Circulation Element of the Signal Hill General Plan provides information about the transportation needs of Signal Hill and provides guidance to meet these needs and to facilitate regional transportation coordination. The Circulation Element identifies policies for addressing new development as summarized in the table below.

Applicable City of Signal Hill General Plan Goals and Policies

Element	Goal	Policy	Applicability
Circulation	Goal 1: Ensure that new development results in the preservation and enhancement of the city's circulation system.	Policy 1.a: Ensure that necessary circulation system enhancements and expansions occur concurrently with new development and are consistent with the Los Angeles County Congestion Management Program (CMP).	The Applicant would be required to pay a Traffic Impact Fee per City of Signal Hill Municipal Code Chapter 21.48. The Traffic Impact Fee is intended to offset the burdens of installing public improvements, the need for which is created by new development projects.
		Policy 1.b: Require that new development include circulation and utility system improvements, including dedication of land for widening of roadways and pedestrian and bicycle facilities, where appropriate, and construction of new public works facilities reasonably related to the impacts of the development and intended use on the existing systems.	The Applicant would be required to pay a Traffic Impact Fee per City of Signal Hill Municipal Code Chapter 21.48. The Traffic Impact Fee is intended to offset the burdens of installing public improvements, the need for which is created by new development projects.
		Policy 1.c: Develop and improve the circulation and utility systems by identifying and establishing a range of funding sources.	The Applicant would be required to pay a Traffic Impact Fee per City of Signal Hill Municipal Code Chapter 21.48. The Traffic Impact Fee is intended to offset the burdens of installing public improvements, the need for which is created by new development projects.
		Policy 1.d: Limit growth and development when the impacts of growth cannot be mitigated or will overtax the existing systems.	The proposed Project is consistent with the RH zoning for the Project Site and is consistent with the City's Smart Growth strategies and infill development.
		Policy 1.f: Ensure that new development provides adequate parking for anticipated uses; however,	The proposed Project provides parking in compliance with the off-street parking

		reductions in parking requirements should be considered where alternative modes of transportation or shared parking opportunities exist.	requirements specified in the City of Signal Hill Municipal Code.

Source: City of Signal Hill 2009b.

The City of Signal Hill considers Level of Service (LOS) D to be the lowest acceptable LOS. Consistent with the thresholds established in the Los Angeles County CMP as referenced in Policy 1.a, a Transportation Impact Analysis would not be required for projects that generate fewer than 50 weekday peak hour trips to the nearest CMP-monitored intersections or 150 weekday peak hour trips to a mainline freeway monitoring location.

City of Signal Hill Municipal Code

Section 21.48 of the City of Signal Hill Municipal Code requires new development projects to provide funds for the acquisition, improvement, and expansion of street, parkway, thoroughfare, intersection, and other traffic and circulation improvements. This ordinance is intended to authorize reasonable fees to be collected related to new development so that the burdens of installing public improvements, the need for which is created by certain new development projects and which will benefit certain land in addition to such development projects. In addition to this, measures for construction traffic control must be met to ensure safety during work hours, stating that all work areas, lane closures, and all warning lights, flashers and devices used shall be protected, installed and provided in accordance with the current Caltrans *Manual of Traffic Controls and/or Work Area Traffic Control Handbook*.

Tribal Cultural Resrouces

State

Assembly Bill 52

AB 52 requires lead agencies to consult with California Native American tribes that have requested formal consultation on a project. Accordingly, PRC sections 21080.3.1 and 21080.3.2 require that the lead agency provide for formal notification to the designated contact of, or a tribal representative of, traditionally affiliated California Native Tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section. AB 52 was ratified to provide Tribes with an ancestral connection to a project area the opportunity to provide information on the presence of potential tribal cultural resources.

California Native American Heritage Commission

In 1976, the California State Government passed AB 4239, establishing the NAHC as the primary government agency responsible for identifying and cataloging Native American cultural resources. As such, one of the NAHC's primary duties is to prevent irreparable damage to designated sacred sites, as well as prevent interference with the expression of Native American religion in California. The bill authorized the NAHC to act in order to prevent damage to and insure Native American access to sacred sites. The NAHC can request that the court issue an injunction for the site, unless it found evidence that public interest and necessity required otherwise. The NAHC has authority to identify a Most Likely Descendant when Native American human remains are discovered any place other than a dedicated cemetery. Most Likely Descendants are granted the legal authority to make recommendations regarding the treatment and disposition of the discovered remains. These recommendations, although they cannot halt work on the Project Site, give Most Likely Descendants a means by which to ensure that the Native American human remains are treated in the appropriate manner (NAHC 2022).

Utilities and Service Systems

Federal

Clean Water Act

The Clean Water Act establishes the basic structure for regulating discharges of pollutants into the Waters of the United States and regulating quality standards for surface waters, including lakes, rivers, and coastal wetlands. The basis of the Clean Water Act was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. Under the Clean Water Act, USEPA has implemented pollution control programs and has developed national water quality criteria recommendations for pollutants in surface waters. In California, the SWRCB and its nine regional water quality control boards administer various sections of the Clean Water Act.

Section 402 of the Clean Water Act establishes the NPDES. Under Section 402, a permit is required for point source discharges of pollutants into navigable waters of the United States (other than dredge or fill material). Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. In California, the NPDES Permit program is administered by the SWRCB. These permits require development and adherence to SWPPPs, which include BMPs to control stormwater discharges.

Section 303 of the Clean Water Act requires that California adopt water quality standards. In addition, under Clean Water Act Section 303(d), states are required to identify "impaired waterbodies" (those not meeting established water quality standards), identify the pollutants causing the impairment, establish priority rankings for waters on the list, and develop a schedule for development of control plans to improve water quality. USEPA then approves the state's recommended list of impaired waters or adds to and/or removes waterbodies from the list.

In accordance with Section 303(d) of the Clean Water Act, the SWRCB has listed both the Los Angeles River Reach 1 and Los Cerritos Channel as water quality impaired. Los Angeles River Reach 1 (Estuary to Carson Street) is water quality impaired for: indicator bacteria, cyanide, ammonia, cadmium, copper (dissolved), lead, nutrients (algae), trash, zinc (dissolved), and pH. The Los Cerritos Channel is water quality impaired for: ammonia, Bis(2ethylhexyl) phthalate, chlordane (sediment), copper, indicator bacteria, lead, trash, zinc, and pH (SWRCB 2022).

Federal Safe Drinking Water Act

The SDWA was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and ground water wells. The SDWA authorizes the EPA to set national health-based standards for drinking water to protect against both naturally occurring and man-made contaminants that may be found in drinking water. The listed contaminants include metals, nitrates, asbestos, total dissolved solids, and microbes.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) is the nation's primary law governing the disposal of solid and hazardous waste. The RCRA sets national goals for reducing the amount of waste generated and for ensuring that wastes are managed in an environmentally sound manner. The Solid Waste Program, established under RCRA, encourages states to develop comprehensive plans to manage nonhazardous industrial solid waste and municipal solid waste, sets criteria for municipal solid waste landfills, and prohibits the open dumping of solid waste. RCRA regulations also encourage source reduction and recycling and promote the safe disposal of municipal waste. RCRA and the California Hazardous Waste Control Law regulations are enforced by the California Department of Toxic Substances Control, the State Division of Occupational Safety and Health, the County Department of Health, and the County Fire Department. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances (USEPA 2024) The Federal Hazardous and Solid Waste Amendments (HSWA) are the 1984 amendments to RCRA that focused on waste minimization and phasing out land disposal of hazardous waste, as well as corrective action for releases (USEPA 2024) Some of the other

mandates of this law include increased enforcement authority for EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program.

National Pollution Discharge Elimination System (NPDES)

The Clean Water Act requires coverage under an NPDES construction permit for stormwater discharges to surface waters associated with various construction activities, except activities that result in disturbance of less than 1 acre of total land area which are not part of a larger common plan of development or sale. The State Water Regional Control Board has issued a Statewide NPDES Construction General Permit for stormwater discharges from construction sites (Water Quality Order No. 2009-0009-DWQ). Any project that disturbs an area of more than 1 acre, as well as linear underground/overhead project's disturbing over 1 acre, require a Notice of Intent to discharge under the Construction General Permit. The Construction General Permit includes three levels of risk for construction sites based on calculated project sediment and receiving water risk. The Construction General Permit includes measures to eliminate or reduce pollutant discharges through implementation of a Stormwater Pollution Prevention Plan (SWPPP), which describes the implementation and maintenance of Best Management Practices (BMPs) to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the Site during construction. The Construction General Permit contains receiving water limitations that require stormwater discharges to not cause or contribute to a violation of any applicable water quality standard. The permit also requires implementation of programs for visual inspections and sampling for specified constituents (e.g., nonvisible pollutants). In addition, based upon particular project risk levels, monitoring is required for stormwater discharges.

State

California Integrated Waste Management Act of 1989 (AB 939)

The California Integrated Waste Management Act of 1989 required each city or county's source reduction and recycling element to include an implementation schedule showing that a city or county must divert 50 percent of solid waste from landfill disposal or transformation on and after January 1, 2000. SB 1016, passed in 2008, now requires the 50 percent diversion requirement to be calculated in a per capita disposal rate equivalent.

California Safe Water Drinking Act (1976)

California enacted its own Safe Water Drinking Act. The California Department of Health Services (DHS) has been granted primary enforcement responsibility for the SDWA. Title 22 of the California Administrative Code establishes DHS authority and stipulates drinking water quality and monitoring standards. These standards are equal to or more stringent than federal standards.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act requires the regional water quality control boards to adopt water quality control plans (Basin Plans) for the protection of surface water and groundwater quality. The Act also authorizes the RWQCBs to issue waste discharge requirements (WDRs), including NPDES Permits. Any activity, discharge, or proposed activity or discharge from a property or business that could affect California's surface, coastal, or groundwater will (in most cases) be subject to a WDR. The California Water Code authorizes the SWRCB and the RWQCBs to conditionally waive WDRs if this is in the public interest. For this Project, the Los Angeles RWQCB is the board with jurisdictional authority.

Waste Discharge Requirements

Regional Water Quality Control Boards oversees permitting for discharges of wastewater and stormwater, as well as water basin planning and regulatory programs to attain and maintain compliance with applicable water quality standards and objectives. The Regional Water Quality Control Board is responsible for permitting discharge of produced water to percolation and evaporation ponds, drilling sumps, and wastewater disposal sumps, through issuance of WDRs, or other forms of discharge authorization such as Clean Water Act Section 401 water quality certification and WDR waivers. In addition, the Regional Water Quality Control Board also oversees the cleanup of petroleum-related spills and releases, as well as spills and releases of other chemicals.

The Project would include a stormwater drainage and erosion control system. Stormwater runoff would be collected by a system throughout the property of inlet drains, catch basins, a trench drain, and permeable pavement that feeds into an CUDO® Stormwater Infiltration System. The stormwater drain system will be installed to the manufacturer's specification and will comply with County of Los Angeles Department of Public Works LID Standards Manual (2014). Applicable BMPs have been outlined in Section 2.1.3.10 and in Table 2.1-2.

Water Conservation Act of 2009

Senate Bill X7-7 (SB X7-7), the Water Conservation Act of 2009 was signed into law in November 2009. This legislation required urban retail water suppliers to set Urban Water Use Targets for 2015 and 2020 so that a 20 percent statewide reduction in urban per capita water use could be met by 2020. Urban retail water suppliers are required to develop their water use targets and submit an Urban Water Management Plan in order to qualify for state grants and loans.

There were numerous additional requirements passed by the Legislature for the 2020 UWMPs. The major new requirements are as follows:

- Five Consecutive Dry-Year Water Reliability Assessment – analyze the reliability of water supplies to meet water use over an extended drought period.

- Drought Risk Assessment – assess water supply reliability over a five-year period from 2021 to 2025.
- Seismic Risk – address seismic risk to various water system facilities and provide a mitigation plan.
- Energy Use Information – include readily obtainable information on estimated amounts of energy for water supply extraction, treatment, distribution, storage, conveyance, and other water uses.
- Water Loss Reporting for Five Years – include the past five years of water loss audit reports.
- Water Shortage Contingency Plan – include a water shortage contingency plan with specific elements.
- Groundwater Supplies Coordination – consistency with Groundwater Sustainability Plans (GSP) if available.
- Lay Description – include a lay description of the fundamental determinations of the UWMP, especially regarding water service reliability, challenges ahead, and strategies for managing reliability risks.

California Code of Regulations Title 24

Title 24 of the California Code of Regulations, which is known as the energy efficiency standards, regulates energy consumption in new construction. The standards regulate energy consumed in buildings for heating, cooling, ventilation, water heating, and lighting. Title 24 is implemented through the local plan check and permit process.

City, County, and Regional

Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties

The Los Angeles Regional Water Quality Control Board Basin Plan is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. The basin plan designates beneficial uses for surface and ground waters, sets objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's antidegradation policy, and describes implementation programs to protect all waters in the region (LARWQCB 2014).

Lower Los Angeles River & Los Cerritos Watershed Management Programs

The City of Signal Hill is a permittee under the Los Angeles RWQCB Order No. R4-2012-0175, adopted on November 08, 2012, which enacted WDRs for MS4 discharges within the coastal watersheds of Los Angeles County. The MS4 Permit established strict numerical limits regarding

the quantity of pollutants that can be discharged by stormwater and urban runoff. To comply with the MS4 Permit, the City has submitted Watershed Management Programs for the Lower Los Angeles River and the Los Cerritos Channel watersheds. Both programs include a commitment to reduce the quantity of pollutants carried by soil and sediment.

Signal Hill 2020 Urban Water Management Plan

Urban water suppliers are required by California state law to submit an Urban Water Management Plan (UWMP) to the State Department of Water Resources at designated time periods; roughly once every five years, effective first on January 1, 1984. The 2020 UWMP is a detailed and comprehensive planning document that addresses a broad array of issues including: (1) current and future water use; (2) potable and no-potable water supplies; (3) water supply sources; and (4) water supply reliability; (5) drought risk assessment; (6) water shortage contingency planning. Instead of the typical 20-year forecast, LBWD's 2020 UWMP makes a 30-year forecast to allow for reference in future assessments completed between 2020 and 2025 when the next update is expected. Total water demand is projected to decline through 2030 as water efficiency continues to increase, then projected to continue to hold steady through 2040 as increasing water demand from population and economic growth are canceled out by reductions from conservation. By 2040, water demand is then projected to begin increasing to approximately 44,000 acre-feet by 2050 as population and economic growth surpasses the reductions in demand from conservation. Under this forecast, water use across all sectors are projected to remain steady or decline with the exception of irrigation water use, which is anticipated to increase. LBWD's supplies from groundwater, imported water purchased from MWD, and recycled water are expected to be reliable for at least the next 30 years.

Signal Hill General Plan

The Land Use Element (2001) and Circulation Element (2009b) of the City of Signal Hill General Plan addresses utilities in goals and policies, as outlined in the table elow.

Applicable City of Signal Hill General Plan Goals and Policies

Element	Goal	Policy	Applicability
Land Use	Goal 2: Ensure that new development is consistent with the City's Circulation system, availability of public facilities, existing development constraints, and the City's unique characteristics and natural resources.	Policy 2.5: Ensure an orderly extension of essential services and facilities and preservation of a free-flowing circulation system, by requiring the provision of essential services and facilities at the developer's cost where these systems do not exist or are not already part of the City's financed annual Capital Improvement Program.	Project would adhere to City General Plan and Municipal Code requirements for franchise fees or applicable infrastructure improvement fees.

Circulation	Goal 1: Ensure that new development results in the preservation and enhancement of the city's circulation system.	Policy 1.b: Require that new development include circulation and utility system improvements, including dedication of land for widening of roadways and pedestrian and bicycle facilities, where appropriate, and construction of new public works facilities reasonably related to the impacts of the development and intended use on the existing systems.	Project would adhere to City General Plan and Municipal Code requirements for franchise fees or applicable infrastructure improvement fees.
		Policy 1.f: Ensure that new development provides adequate parking for anticipated uses; however, reductions in parking requirements should be considered where alternative modes of transportation or shared parking opportunities exist.	Project includes the addition of garages and parking space within the confines of the property.
	Goal 6: Provide safe, efficient, and environmentally-friendly utilities systems and pipelines.	Policy 6.b: Concurrent with development of vacant land or with substantial reconstruction of existing development, encourage the relocation of overhead utility systems to underground systems, where appropriate and feasible.	Project would adhere to City General Plan and Municipal Code requirements for undergrounding of utility lines as appropriate and feasible.

Source: City of Signal Hill 2001, 2009b.

City of Signal Hill Municipal Code - Chapters 8.08 Refuse Regulations and 8.10 Solid Waste

The intent of Chapters 8.08 and 8.10 of the Municipal Code is to ensure the responsible handling and disposal of solid waste within the City. Specifically, the provisions outlined in the Chapters intend to accomplish the following:

- Adopt the Ordinance No. 11,886 of the county of Los Angeles, entitled "Solid Waste Ordinance of the County of Los Angeles."
- Enforce all provisions of Title 8 of the Signal Hill Municipal Code.
- Impose penalties on solid waste facilities and those illegally dumping as per Sections 8.08.050 – 8.08.110 of the Municipal Code.

City of Signal Hill Municipal Code - Chapter 12.16 Storm Water/ Urban Runoff

The intent of Chapter 12.16 of the Municipal Code is to protect public health, welfare, and safety and to reduce the quantity of pollutants discharged to Waters of the U.S. Specifically, the provisions outlined in Chapter 12.16 intend to accomplish the following:

- Eliminate non-storm water discharges to the municipal storm drain system;
- Eliminate the discharge of pollutants into the municipal storm drain system;
- Reduce pollutants in storm water discharges to the maximum extent practicable;
- Protect and enhance the quality of Waters of the U.S. in a manner consistent with provisions of the CWA; and
- Reduce contribution of pollutants from the MS4 through interagency coordination.

This chapter focuses on ensuring any commercial, industrial, or construction activity complies with all USEPA and SWRCB stormwater discharge requirements through pollutant reduction strategies, including BMPs and low impact development with emphasis put on compliance with the municipal separate storm sewer system (MS4) Permit.

City of Signal Hill Municipal Code - Title 13 Public Utilities

The intent of Title 13 of the Municipal Code is to provide guidance to utility service providers and customers regarding the following:

- Water Conservation;
- Water Service and Rates;
- Sanitary Sewer and Industrial Waste;
- Underground Utilities; and
- Landscaping Regulations

City of Signal Hill Municipal Code - Chapter 13.03 Water Conservation Program

The City maintains water conservation requirements effective at all times and the following apply to the Project:

A. Automated Watering (Irrigation) System Operation.

1. Automated watering or irrigation of any lawn, landscape, or other vegetated area with potable water is prohibited between the hours of 9:00 a.m. and 4:00 p.m. Pacific Standard Time on any day. Automated landscape irrigation systems may nevertheless be operated during these hours for very short periods of time, such as ten minutes, for the express purpose of adjusting or repairing a landscape irrigation system.

2. Automated Watering Duration Limits.

a. High Flow Sprinkler Heads (Greater than two gallons per minute). All watering activities are required to avoid visible runoff or pooling on adjacent hard surfaces. Automated sprinkler heads with flow rates greater than two gallons per minute may be operated up to a maximum of ten minutes (per valve station) on each authorized day so long as no visible runoff or pooling occurs. If runoff or pooling is visible, the sprinkler station run time shall be further reduced to eliminate runoff and pooling. Watering is prohibited from 9:00 a.m. to 4:00 p.m. daily.

b. Low Flow Sprinkler/Rotator Heads (Less than two gallons per minute). All watering activities are required to avoid visible runoff and pooling on adjacent hard surfaces. Automated sprinkler heads with flow rate less than two gallons per minute may be operated up to a maximum of twenty minutes (per valve station) on each authorized day so long as no visible runoff or pooling occurs. If runoff is visible, the sprinkler station run time shall be further reduced to eliminate runoff and pooling. Watering is prohibited from 9:00 a.m. to 4:00 p.m. daily.

c. Drip Watering Systems (Less than two gallons per hour). Properly installed automated drip systems with flow rates less than two gallons per hour are exempt from day and duration limitations so long as no visible runoff or pooling is created. Watering is prohibited from 9:00 a.m. to 4:00 p.m. daily.

G. Limits on Washing Vehicles. Using water to wash or clean a vehicle, including but not limited to any automobile, motorcycle, truck, van, bus, recreational vehicle, boat or trailer, camping or cargo trailer, whether motorized or not is prohibited, except by use of a hand-held bucket or similar container, or a hand-held hose equipped with a positive self-closing water shut off nozzle or device. No excessive water flow or runoff as defined in Section 13.03.040 is permitted. This provision does not apply to any commercial car washing facility. (Ord. 2015-09-1478 § 3 (part); Ord. 2009-04-1399 § 1 (part))

City of Signal Hill Municipal Code - Chapter 13.04 Water Service and Rates

Section 13.04.030 – Connection – Permit Required

It is unlawful for any person to tap, open, or connect to, or cause, permit, or allow to be tapped, opened, or connected to any water main or pipe without first having made application to the department and received a permit therefor. (Ord. 596 § 2 (part), 1966: prior code § 21.04.180)

City of Signal Hill Municipal Code - Chapter 13.08 Underground Utilities

Whenever the council creates an underground utility district and orders the removal of poles, overhead wires, and associated overhead structures therein as provided in Section 13.08.040, it shall be unlawful for any person or utility to erect, construct, place, keep, maintain, continue, employ, or operate poles, overhead wires and associated overhead structures in the district after the date when the overhead facilities are required to be removed by such ordinance

except as said overhead facilities may be required to furnish service to an owner or occupant of property prior to the performance by such owner or occupant of the underground work necessary for such owner or occupant to continue to receive utility service as provided in Section 13.08.040, and for such reasonable time required to remove the facilities after the work has been performed, and except as otherwise provided in this chapter. (Ord. 95-07-1197 § 2 (part); Ord. 68-10-628 § 1 (part): prior code § 7.01.05)

City of Signal Hill Municipal Code - Chapter 13.10 Water Conservation in Landscaping

A. After December 1, 2015, and consistent with Executive Order No. B-29-15, this chapter shall apply to all of the following landscape projects:

1. New development projects with an aggregate landscape area equal to or greater than five hundred square feet requiring a building or landscape permit, plan check or design review. (Ord. 2015-11-1481 § 1 (part))

Section 13.10.190 - Stormwater Management and Rainwater Retention

E. It is recommended that stormwater projects incorporate any of the following elements to improve on-site stormwater and dry weather runoff capture and use:

- Grade impervious surfaces, such as driveways, during construction to drain to vegetated areas;
- Minimize the area of impervious surfaces such as paved areas, roof and concrete driveways;
- Incorporate pervious or porous surfaces (e.g., gravel, permeable pavers or blocks, pervious or porous concrete) that minimize runoff;
- Direct runoff from paved surfaces and roof areas into planting beds or landscaped areas to maximize site water capture and reuse;
- Incorporate rain gardens, cisterns, and other rain harvesting or catchment systems;
- Incorporate infiltration beds, swales, basins and drywells to capture stormwater and dry weather runoff and increase percolation into the soil; and
- Consider constructed wetlands and ponds that retain water, equalize excess flow, and filter pollutants. (Ord. 2015-11-1481 § 1 (part))

City of Signal Hill Municipal Code - Title 21 Public Dedication Requirements and Improvement Fee to be Paid by Development Projects - Chapter 21.44 Water System Impact Fee

The purpose of this chapter is to provide a mechanism by which the city can finance the reasonable costs of constructing new water system facilities made necessary by development projects, through the imposition of water system connection charges. This fee shall be known as the water system connection charge. (Ord. 91-06-1100 § 1 (part))

City of Signal Hill Municipal Code - Section 21.44.030 Residential connection charge

A. The applicant for any development project which includes any residential dwelling units shall be required to pay a water system connection charge thereof at the time an application for utility service is received by the city. This charge shall be based upon meter size and capacity, calculated from a proportionate share of the total additional water system facilities attributable to new residential development. This residential connection charge is calculated on the pro rata basis of the cost of providing new water system facilities, the proportionate share of replacement water system facilities caused by new residential development projects, and the cost of obtaining additional water rights to service new residential development.

Wildfire

Federal

United States Department of Interior: Office of Wildland Fire

The Department of the Interior is organized into ten bureaus and dozens of smaller offices, including the Office of Wildland Fire. On behalf of the Secretary of the Interior, the Office of Wildland Fire oversees a Wildland Fire Management Program spanning multiple bureaus that manage over 535 million acres of public and Tribal lands: including the Bureau of Indian Affairs, the Bureau of Land Management, the National Park Service, and the USFWS. The Department of Interior is appropriated funds from Congress for the implementation of a suite of activities that make up the Wildland Fire Management Program, including preparedness, suppression, fuels management, facilities, burned area rehabilitation, and science. Each program spans a range of tasks and receives specific funding through an annual budget justification. The Interior Fire Executive Council, the Wildland Fire Leadership Council, and many other groups collaborate to establish program goals and priorities (DOI 2022).

State

California Department of Forestry and Fire Protection

Preventing wildfires in the State Responsibility Area is a vital part of CAL FIRE's mission. While these efforts have occurred since the early days of the Department, CAL FIRE has adapted to the evolving destructive wildfires and succeeded in significantly increasing its efforts in fire prevention. The Department's Fire Prevention Program consists of multiple activities including wildland pre-fire engineering, vegetation management, fire planning, education and law enforcement. Typical fire prevention projects include brush clearance, prescribed fire, defensible space inspections, emergency evacuation planning, fire prevention education, fire hazard severity mapping, and fire-related law enforcement activities (CAL FIRE 2022a). The fire

hazard severity maps prepared by CAL FIRE designate Signal Hill as a local responsibility area, and none of the Project area is within the state responsibility area.

Public Resources Code 4291

California PRC 4291 states that property owners within State Responsibility Areas are responsible for ensuring that their property is in compliance with California's building and fire codes that call for homeowners to take proactive steps to protect their property from a wildfire. The law requires that homeowners in State Responsibility Areas clear out flammable materials such as brush or vegetation around their buildings to 100 feet (or the property line) to create a defensible space buffer. This helps halt the progress of an approaching wildfire and keeps firefighters safe while they defend the property (CAL FIRE 2022b).

California Code of Regulations Title 14

CCR Title 14 states that future design and construction of structures and developments in State Responsibility Area shall provide for basic emergency access and perimeter wildfire protection measures, including private water supply reserves for emergency fire use and vegetation modification (CAL FIRE 2022b).

County

Brush Clearance Inspection Program

The Brush Clearance Program is a joint effort between the County of Los Angeles Fire Department and the County of Los Angeles Department of Agricultural Commissioner/Weights and Measures, Weed Hazard and Pest Abatement Bureau (Weed Abatement Division). This unified enforcement legally declares both improved and unimproved properties a public nuisance, and where necessary, requires the clearance of hazardous vegetation.

These measures create "Defensible Space" for effective fire protection of property, life and the environment. The Department's Brush Clearance Unit enforces the Fire Codes as it relates to brush clearance on improved parcels, coordinates inspections and compliance efforts with fire station personnel, and provides annual brush clearance training to fire station personnel (LACFD 2022b).

Appendix C

Project Plans

Catalyst
ENVIRONMENTAL SOLUTIONS

The Courtyard at Signal Hill

8 - DETACHED SINGLE FAMILY DWELLINGS

1933-1947 TEMPLE AVENUE, SIGNAL HILL CA. 90755

SPECIFIC PLAN SP 21, TTM 74232

BUILDING CODE

PROPOSED NEW CONSTRUCTION: EIGHT DETACHED SFR

TYPE OF CONSTRUCTION: V-B FULLY SPRINKLERED
OCCUPANCY GROUP R DIVISION 3

CLIMATE ZONE 6

SEISMIC HAZARD ZONE 4

WIND LOAD 110 MPH

EXPOSURE C

EXTERIOR WALLS: DISTANCE TO PROP. LINE >3'

FIRE RESISTANCE – 0 HR (CRC SEC. R302, TABLE R302.1(2))

OPENINGS – NON RATED

ARCHITECT'S HAZARDOUS MATERIAL DISCLAIMER

1. OIL WELL ABANDONMENT, METHANE TESTING, METHANE GAS MITIGATION SYSTEM, AND OTHER ENVIRONMENTAL MITIGATION AND PERMITTING ARE NOT PART OF THESE PLANS. ANY ENVIRONMENTAL INFORMATION IS SHOWN FOR REFERENCE ONLY.
2. DCS –BOZENA JAWORSKI (ARCHITECT) IS NOT LIABLE FOR PERFORMANCE OF OWNER'S , ENVIROMENTAL CONSULTANTS AND GOVERNMENTAL AGENCIES.
3. THE BUYER'S OF HOMES AND HOMEOWNERS ASSOCIATION AGREE AND EXPRESSLY ACKNOWLEDGE THAT THE PROFESSIONALS WHO PREPARED THE ARCHITECTURAL PLANS ACCEPT NO RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF THE ENVIRONMENTAL TESTS, REPORTS AND OTHER DOCUMENTS, AND THE DESIGN PROFESSIONALS WHO PREPARED THESE PLANS DISCLAIM ALL WARRANTIES, EXPRESSES OR IMPLIED, WITH RESPECT TO THE PLANS AND BUYERS USE OF THE SAME.
4. THE REQUIREMENTS AND RECOMMENDATIONS LISTED BELOW ARE NOT PART OF THE ARCHITECT' SCOPE OF SERVICES.
5. GOVERNMENTAL AGENCIES REQUIRE OWNER/DEVELOPER/BUILDER TO:
   - A. TEST EXISTING STRUCTURES BEFORE DEMOLITION FOR THE PRESENCE OF ASBESTOS AND LEAD; HAVE A LICENSED CONTRACTOR TO PERFORM ABATEMENT IN COMPLIANCE WITH WITH GOVERNING REGULATIONS
   - B. COMPLY WITH CITY OF SIGNAL HILL OIL AND GAS CODE REQUIREMENTS FOR ABANDONED OIL WELLS; AND ALL OTHER APPLICABLE LAW AND REGULATIONS,
   - C. ORDER A METHANE SITE ASSESMENT AND COMPLY WITH RECOMMENDATIONS
   - D. INSTAL GAS METHANE SYSTEM BARRIER AND VENTILATION
   - E. SUBMIT PROJECT PLANS TO CALGEM FOR REVIEW
   - F. RETAIN CONSULTANT TO PREPARE A SOIL MANAGEMENT PLAN PRIOR TO ANY GRADING ACTIVITIES, TO PROVIDE INSTRUCTIONS FOR THE CONTRACTOR HOW TO PROCEED IN TH EVENT DISCOVERY OF THE DISCOLORED OR ODIFEROUS SOIL, OR UNKNOWN DEBRIS.

ZONING INFO

LEGAL DESCRIPTION

REAL PROPERTY IN THE CITY OF SIGNAL HILL, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:
PARCEL 1: (APN: 7216-020-011)
LOTS 11, 12 AND 13 OF THE PRICE AND PETERSON TRACT, IN THE CITY OF SIGNAL HILL, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 12, PAGE 85 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.
EXCEPT FROM SAID LOT 13 THAT PORTION THEREOF LYING SOUTH OF A LINE PARALLEL WITH AND 219.56 FEET NORTH OF THE CENTER LINE OF 19TH STREET, AS ESTABLISHED ON JANUARY 20, 1948. ALSO EXCEPTING THEREFROM ALL MINERAL, OIL, GAS AND OTHER HYDROCARBON SUBSTANCES IN OR UNDER SAID LAND.
ALL THAT PORTION OF FARM LOT 22 OF THE ALAMITOS TRACT, IN THE CITY OF SIGNAL HILL, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS SHOWN ON MAP RECORDED IN BOOK 36, PAGE 37, ET SEQ., OF MISCELLANEOUS RECORDS,, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, LYING EAST OF A LINE PARALLEL WITH AND 265.88 FEET WEST OF THE CENTER LINE OF TEMPLE AVENUE AND LYING NORTH OF A LINE PARALLEL WITH AND 219.56 FEET NORTH OF THE CENTER LINE OF 19TH STREET, AS ESTABLISHED ON JANUARY 20, 1948, AND LYING SOUTHWEST OF THE SOUTHWEST LINE OF PRICE AND PETERSON TRACT, AS SHOWN ON MAP RECORDED IN BOOK 12, PAGE 85, OF MAPS, RECORDS OF SAID COUNTY. EXCEPT THEREFROM ALL MINERAL, OIL, GAS AND OTHER HYDROCARBON SUBSTANCES IN OR UNDER SAID LAND.

ASSESSOR'S PARCEL NO.:
7216-020-011 & 7216-021-002

LOT AREA: 235.88'x110.48'= 26,061 SF

EASEMENTS

1. FIDELITY NATIONAL PRELIMINARY TITLE SHOWS SEVERAL EASEMENTS LOCATED ON SUBJECT SITE.
2. FOR EASEMENT INFORMATION REFER TO FIDELITY NATIONAL PRELIMINARY TITLE AND TO TENTATIVE MAP BY CORE ENGINEERING
3. NEW BUILDING STRUCTURES ARE PROPOSED OVER THE EXISTING EASEMENTS AS REQUESTED BY OWNER/DEVELOPER
4. OWNER/DEVELOPER IS RESPONSIBLE FOR EITHER SECURING EASEMENTS QUITCLAIMS OR OBTAINING NO INTERFERENCE LETTER FROM GOVERNMENTAL AGENCIES.
5. OWNER/ DEVELOPER HAS VERBALLY AGREED TO PROVIDE NEW EASEMENT TO CONVEY WASTE AND STORM WATER FROM SMART HOMES PROJECT LOCATED TO THE NORTH OF THE SUBJECT SITE. FOR EASEMENT INFORMATION REFER TO TENTATIVE MAP AND ATTACHED EASEMENT DRAFT.

PROJECT TEAM

DEVELOPER:
SIGNAL VENTURES LLC
9 LYRA WAY,
COTO DE CAZA, CA 92679
CONTACT:
VINEET SHARMA
TELEPHONE: 310-987-1204
GUY ALEXANDER
TELEPHONE: 714-270-3311
guyalexanderiii@gmail.com

DESIGN ARCHITECT:
DCS- DESIGN CONSTRUCTION SERVICES INC.
2201 E. WILLOW ST, STE. D, #319
SIGNAL HILL, CA. 90755
CONTACT: BOZENA JAWORSKI
TELEPHONE: (657) 203-1583
bjaworskidcs@gmail.com

STRUCTURAL ENGINEER:
–

CIVIL ENGINEER:
CORE ENGINEERING
23172 PLAZA POINTE DRIVE #145
LAGUNA HILLS, CA 92653
CONTACT: AMIR DEHIMI, P.E.
BUSINEES: 949-954-7244
www.corestructure.com

SOIL ENGINEER:
R MCCARTHY CONSULTING, INC.
23 CORPORATE PLAZA, SUITE 150
NEWPORT BEACH, CA 92660
OFFICE: 949-629-2539
REPORT: #20171102-01

LANDSCAPE ARCHITECT:
SEGURA ASSOCIATES, INC
PO BOX 964
LA VERNE, CA. 91750
CONTACT: TOM SEGURA
TELEPHONE: 909-624-2700

PLANNING NOTES

1. ALL EXISTING OVERHEAD UTILITIES EXCLUSIVELY SERVING THE SITE SHALL BE REMOVED AND ALL NEW ON SITE UTILITIES TO BE PROVIDED UNDERGROUND.
2. PAD ELEVATION IS TO BE VERIFIED BY A LICENSED SURVEYOR OR CIVIL ENGINEER PRIOR TO REQUESTING A FOUNDATION INSPECTION.
3. BUILDING HEIGHT IS TO BE VERIFIED BY A LICENSED SURVEYOR OR CIVIL ENGINEER PRIOR TO REQUESTING A FOUNDATION INSPECTION AND PRIOR TO REQUESTING A FRAMING INSPECTION.
4. ALL EXPOSED METAL FLASHING OR TRIM TO BE ANODIZED OR PAINTED TO MATCH BUILDING EXTERIOR.
5. GARAGE MUST BE PROVIDED WITH AUTOMATIC ELECTRONIC GARAGE OPENERS.
6. ROOF TOP EQUIPMENT AND VENT STACKS SHALL BE PAINTED A NEUTRAL COLOR, SO AS TO NOT NEGATIVELY IMPACT VIEWS FROM THE PUBLIC RIGHT-OF-WAY. SUCH EQUIPMENT SHALL BE PAINTED AND/OR SCREENED SUBJECT TO THE APPROVAL OF THE PLANNING DEPARTMENT BASED ON FIELD INSPECTION.
7. FINAL ADEQUACY OF LANDSCAPE MATERIALS AND COVERAGE IS SUBJECT TO FIELD INSPECTION BY PLANNING DEPT. STAFF. ADDITIONAL LANDSCAPING FOUND NECESSARY UPON INSPECTION SHALL BE INSTALLED BY APPLICANT PRIOR TO OCCUPANCY.
8. EXTERIOR LIGHTING SHALL BE SHIELDED / DIRECTED SO AS NOT TO IMPACT ADJACENT PROPERTIES.
9. EACH DWELLING MUST BE PROVIDED WITH 72 CU.FT. OF STORAGE AREA. THIS STORAGE MAY BE PROVIDED IN THE GARAGE.

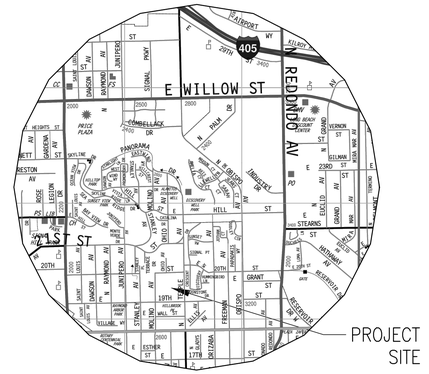
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A2.4 ELEVATIONS AND FINISH SCHEDULES
A3.1 SECTION A (TYP)
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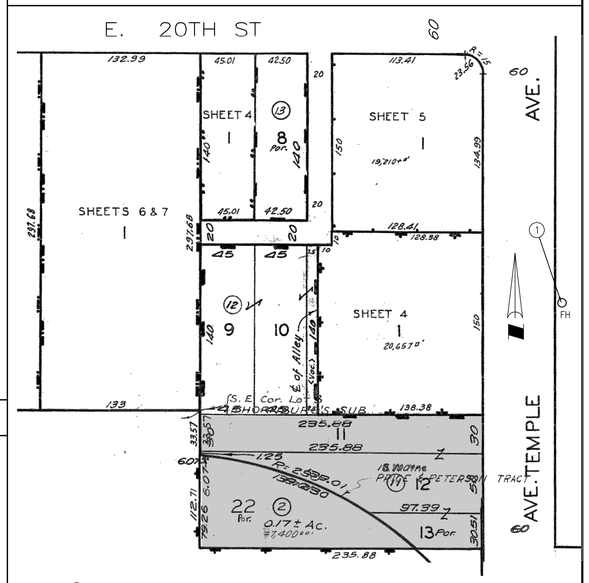
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VICINITY MAP



PLOT PLAN



① (E) FIRE HYDRANT LOCATED ACROSS TEMPLE AVE. DISTANCE APPROX. 140' TO NORTH, ALONG EAST SIDE AND 60' ACROSS TEMPLE. TOTAL APPROX. 200' TO THE DRIVEWAY ENTRANCE CENTER.

RH ZONING STANDARDS & DEVIATION TO SP21

CATEGORY	RH STANDARDS	PROPOSED SP-21	DEVIATION
DWELLING UNIT DENSITY	21 DU PER AC MAX 12 UNITS ON SITE	8 DWELLING UNITS	NONE, REDUCTION 33%
SETBACKS			
FRONT	20'	DWELLING 13'-6", 15' AND 26' AVG. 20' RET WALLS, FENCES, PARKING 5'	VARIES, AVG 20' SEE NOTE #1
SIDE	5'	SOUTH SIDE – 7'-0" NORTH SIDE – 8-6"	NONE, INCREASE OVER 40%
REAR	10'	10'	NONE
SPACE BETWEEN BUILDINGS	10' MIN. APPLICABLE TO BUILDINGS ON THE SAME LOT	6'-4" BETWEEN BUILDINGS	ZONING STANDARDS – DEVIATION BUILDING CODE FULL COMPLIANCE
OFF-STREET PARKING	THREE CAR GARAGE REQUIRED FOR 4 AND 5 BEDROOMS	TWO CAR GARAGE PER DU AND ONE ASSIGNED SURFACE PARKING	NONE
GUEST PARKING	1 SPACE FOR 4 UNITS, 2 SPACES FOR 8 UNITS	TWO SPACES ON SITE (9'X20' MIN DIMS), TWO SPACES AT CURB	NONE
OPEN SPACE MIN DIMS.	25% 10'x10'	18.37% MIN. DIM. 7'	NO OPEN SPACE REQUIREMENT, FOR SPECIFIC PLAN SUBDIVISION FORMAT. DEVIATION 7%
HEIGHT		LESS THAN 25'	NONE
PROJECTIONS	18" EAVE, CHIMNEYS, ETC		NONE
LOT COVERAGE	50%	40%	NONE

NOTES:
1. (E) BUILDING AT NORTH SIDE AT 1957 TEMPLE AVENUE FRONT SETBACK 8'-6"
   (E) BUILDING AT SOUTH SIDE AT 1903 TEMPLE AVENUE FRONT SETBACK 10'-0"

PROJECT DATA

COURTYARD			ZONING DATA			NEW LOTS													
LOT#	DU #	ADDRESS: TEMPLE AVE	LOT PL DIMS	DEDUCT/ADD	LOT AREA SQ.FT.	FOOTPRINT SQ.FT	FAR%	1ST FLR AREA SQ.FT.	2ND FLR AREA SQ.FT.	TOTAL AREA	GARAGE AREA	LOT COVERAGE %	FRONT YARD	REAR YARD	SIDE YARD	PROJECT FRONT YARD	PROJECT SIDE YARD	GARAGE	SURFACE PARKING
LOT 1	1	1933	59'-5"X 46'-0"		2,732.32	1,730	0.78	1,261	883.00	2,144	469	79.38	3'-6"& 5'-6"	8'-6"	3'-2" & 5'	2'		2 CARS	1 CAR
LOT 2	2	1935	45'-10" X 46'-0"		2,108.18	1,306	1.00	851	1,270.50	2,122	455	101.6	3'-6"& 5'-6"	8'-6"	3'-2"			2 CARS	1 CAR
LOT 3	3	1937	53'-8" X 46'-0"	(11x12/2)=60.5	2,408.32	1,306	0.88	851	1,287.00	2,138	455	89.54	3'-6"& 5'-6"	8'-6"	3'-2" &11'	2'	5'	2 CARS	1 CAR
LOT 4	4	1939	55'-3" X 46'-5"		2,563.00	1,306	0.83	851	1,287.00	2,138	455	84.24	3'-6"& 5'-6"	10'-0"	5'-2" &10'-7"	2'		2 CARS	1 CAR
LOT 5	5	1941	55'-3" X 46'-5"		2,563.00	1,306	0.83	851	1,270.50	2,122	455	83.57	3'-6"& 5'-6"	10'-0"	3'-2"			2 CARS	1 CAR
LOT 6	6	1943	53'-8" X 44'-6"	(11x12/2)=60.5	2,326.59	1,306	0.91	851	1,270.50	2,122	455	92.06	3'-6"& 5'-6"	7'-0"	3'-2" &11'		5'	2 CARS	1 CAR
LOT 7	7	1945	45'-10" X 44'-6"		2,038.67	1,306	1.05	851	1,287.00	2,138	455	105.9	3'-6"& 5'-6"	7'-0"	3'-2"	2'		2 CARS	1 CAR
LOT 8	8	1947	47'-8" X 44'-6"	6X24'-6"=147	2,264.32	1,306	0.94	851	1,270.50	2,122	455	94.6	3'-6"& 5'-6"	7'-0"	3'-2", 5' & 11'		1'	2 CARS	1 CAR
LOT A					7,056.60														
TOTAL					26,061.00	10,872	0.65	7,218.00	9,826.00	17,044	3,654	42						16 SPACES	8 SPACES
																			2 GUEST
NOTES																	TOTAL PARKING SPACES		26
LOT AREAS AND PL DIMENSIONS BASED ON TENTATIVE MAP																			

FAR= (GROSS FLOOR AREA-GARAGE SQUARE FEET) / NET LOT AREA

LOT COVERAGE: "LOT COVERAGE" MEANS THAT PORTION OF A LOT OR BUILDING SITE WHICH IS OCCUPIED BY ANY BUILDING OR STRUCTURE,

OPEN SPACE:

RH REQUIRED 25%,OF 26,061 LOT AREA= 6,507 SQ. FT.
SP2.1 DEVIATION: PROVIDED 4,789 SQ. FT. = 18.37 %

1. OPEN AREA DEVIATION – SP 21 STANDARD REQUESTS TO INCLUDE IN OPEN SPACE CALCULATION THE AREA OF THE FRONT SETBACK LOCATED BEHIND RETAINING WALLS AND FENCES – DEVIATION

PRELIMINARY PLANS

DCS
DESIGN CONSTRUCTION SERVICES INC.
2201 E. Willow, Suite D, #319
Signal Hill, CA 90755
657-203-1583

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PROJECT #4913

REVISIONS

1	02-23-2023	PRELIMINARY SITE PLAN
2	05-23-23	SPECIFIC PLAN 1ST SUB
3	06-29-2023	FIRE DEPT. CORRECT
4	02-08-2024	ADD AC UNIT, HOA LANDSCAPE
5	03-21-2024	NEIGHBORHOOD MEETING
6	05-31-24	VIEW MODIFICATIONS
–	–	
–	–	

OWNER

SIGNAL VENTURES LLC

9 LYRA WAY,
COTO DE CASA,
CA 92679

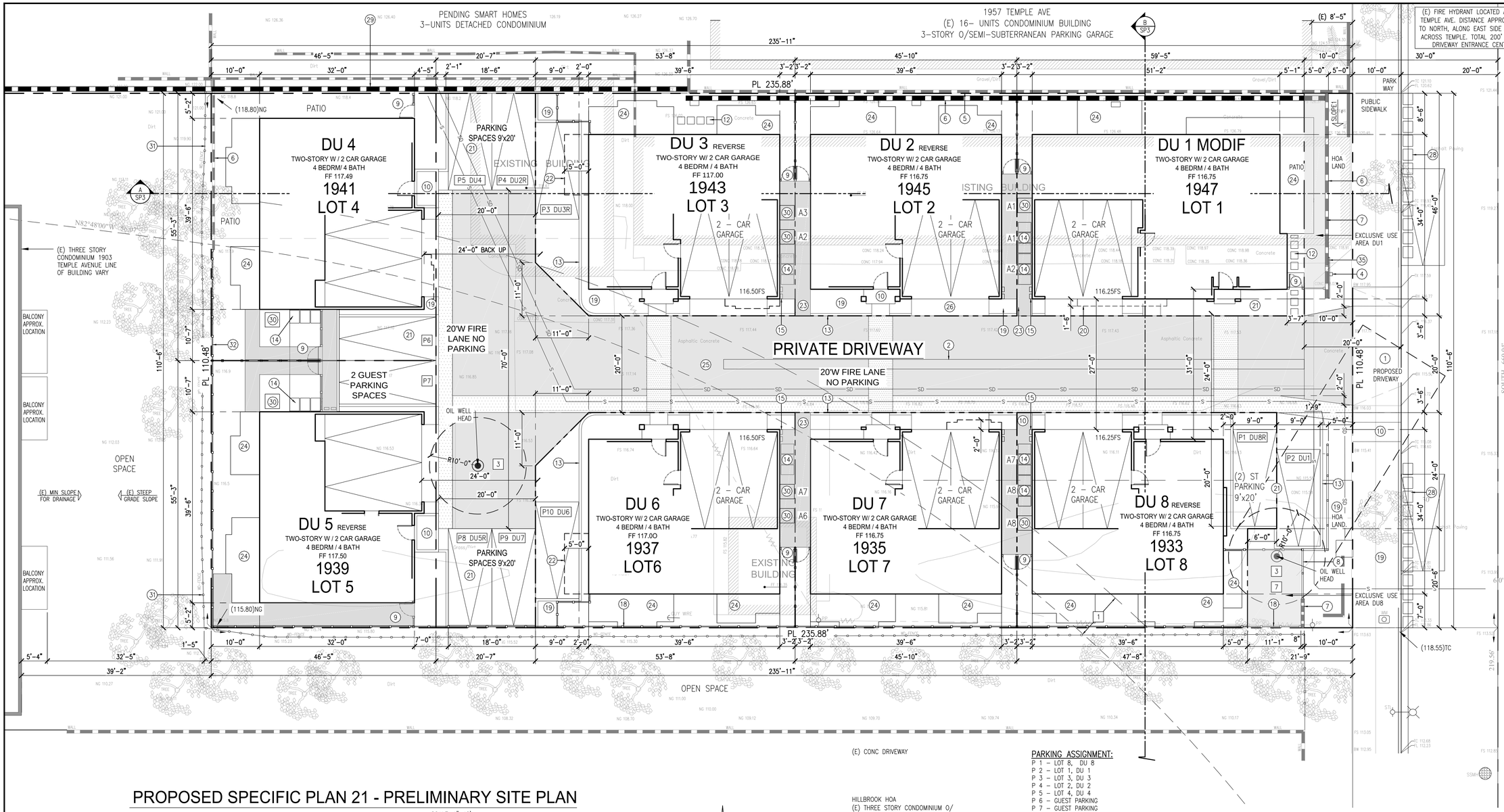
EIGHT DWELLING UNITS

1933-1947 TEMPLE AVENUE
SIGNAL HILL, CA

SITE PLAN

SHEET TITLE

T01



(E) CONC DRIVEWAY

HILLBROOK HOA
(E) THREE STORY CONDOMINIUM O/ SEMI- SUBTERRANEAN PARKING GARAGE
1903 TEMPLE AVENUE

PARKING ASSIGNMENT:
P 1 – LOT 8, DU 8
P 2 – LOT 1, DU 1
P 3 – LOT 3, DU 3
P 4 – LOT 2, DU 2
P 5 – LOT 4, DU 4
P 6 – GUEST PARKING
P 7 – GUEST PARKING
P 8 – LOT 5, DU 5
P 9 – LOT 7, DU 7
P 10 – LOT 6, DU 6

PROPOSED SPECIFIC PLAN 21 - PRELIMINARY SITE PLAN

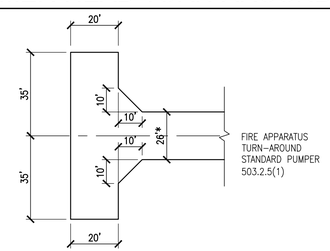
SCALE: 1"=10'

0 5 10 15 20 30

SITE PLAN KEY NOTES

1. DRIVEWAY WITH PERMEABLE PAVERS, REFER TO CIVIL ENGINEERING PLANS
2. STORM WATER INFILTRATION SYSTEM
3. N.A.
4. KNOX BOX FOR FIRE DEPARTMENT EMERGENCY ACCESS.
5. (E) RETAINING WALL
6. (N) RETAINING WALL, VINYL FENCE ON TOP
7. 5'H STUCCO WALL ON TOP OF RETAINING WALL
8. METAL PICKET DECORATIVE FENCE WITH REMOVABLE PANELS. LOCATED IN THE AREA OF OIL WELL ACCESS.
9. 2'-8" WIDE GATE
10. CONC. LANDING
11. PEBBLES
12. 18" SQ. STEPPING CONC. TILES
13. CONC. CURB
14. (3) TRASH BINS: RECYCLE, WASTE, ORGANIC WASTE
15. SMART GAS METER LOCATION SUBJECT TO APPROVAL BY LB GAS DEPT
16. (E) RET WALL WITH WD. FENCE ON TOP
17. DOWNSPOUT MUST DISCHARGE TO APPROVED LID DRAINAGE STRUCTURES
18. (N) VINYL FENCE MAY INCLUDE RET. WALL PER CE PLANS.
19. HOA LANDSCAPE
20. 2ND FLR OVERHANG
21. PERMEABLE PAVERS
22. BALCONY OVERHANG
23. CONC. WALKWAY INTEGRATED COLOR
24. CONCRETE PATIO W/ INTEGRATED COLOR
25. FIRE DEPARTMENT HAMMERHEAD TURN- AROUND 20' WIDE TO BE APPROVED BY LA COUNTY FD. REQUIRED 26', ALLOWED FOR SFR 20', CONSIDER ALL HOMES FS
26. GARAGE CONCRETE APRON
27. GATE PROTECTIVE RAIL
28. WASTE CANS LOCATION ON PICKUP DAY APPROVED BY EDCO
29. PROPOSED RET. WALL AT ADJACENT SITE
30. AC UNIT
31. (E) WOOD FENCE
32. (N) 6'H SOLID VINYL FENCE
33. 3'-6"W PEDESTRIAN PATH DELINEATION
34. RET. WALL W/METAL PICKET DECORATIVE FENCE
35. COURTYARD SIGN

HAMMER-HEAD TURN-AROUND



*MAY BE REDUCED TO 20' FOR SINGLE FAMILY RESIDENCES

PROJECT NOTES

1. PIPE EASEMENT TO BE LEGALLY REMOVED BY CLIENT. SEE CIVIL ENGINEER PLANS.
2. RECORDING OF THE PROPOSED 6' WIDE SEWER AND STORM WATER PIPES EASEMENT FOR SMART HOMES IS SUBJECT TO THE APPROVAL OF THE COURTYARD PROJECT BY CITY OF SIGNAL HILL.
3. ABANDONED OIL WELLS RIG ACCESS SHALL BE PROVIDED IN COMPLIANCE WITH CITY OF SIGNAL HILL STANDARDS.
4. PROJECT SITE PLAN IS BASED ON THE TOPOGRAPHIC SURVEY PREPARED BY GEORGE BARAJAS, DATED 04-07-2022. PLEASE NOTE THIS IS NOT AN ALTA SURVEY.
5. SITE PLAN WILL BE MODIFIED AS SOON AS THE CAD GRADING PLAN IS PROVIDED BY CIVIL ENGINEER.
6. LOCATION OF OIL WELLS IS BASED ON CORE ENGINEERING GRADING PLAN DATED : 09-21-2022. CIVIL ENGINEER SHALL VERIFY THE REQUIRED COVERAGE FOR OIL WELL HEAD.
7. EXCLUSIVE USE DU 8

GENERAL NOTES

1. FOR SITE PREPARATION, GRADING, EXCAVATION REFER TO SOIL REPORT AND CITY OF SIGNAL HILL REQUIREMENTS
2. FOR GRADING, PAVING AND DRAINAGE REFER TO CIVIL ENG. PLANS
3. FOR RETAINING WALLS AND FOOTINGS REFER TO STRUCTURAL ENG. PLANS
4. FOR HARDSCAPE, LANDSCAPING & IRRIGATION SEE LANDSCAPING PLANS
5. FOR SITE DEMOLITION REFER TO DEMOLITION PLAN AND TO ENVIRONMENTAL CONSULTANT WORK PLAN
6. ALL EXCAVATIONS SHOULD BE MADE IN ACCORDANCE WITH CAL-OSHA REQUIREMENTS.
7. GRADING/RETAINING WALL CONTRACTOR SHOULD PERFORM WORK IN A MANNER NOT TO UNDERMINE ANY OF EXISTING STRUCTURES AND RETAINING WALLS FOOTINGS.

PRELIMINARY PLANS

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DESIGN CONSTRUCTION SERVICES INC.
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657-203-1583

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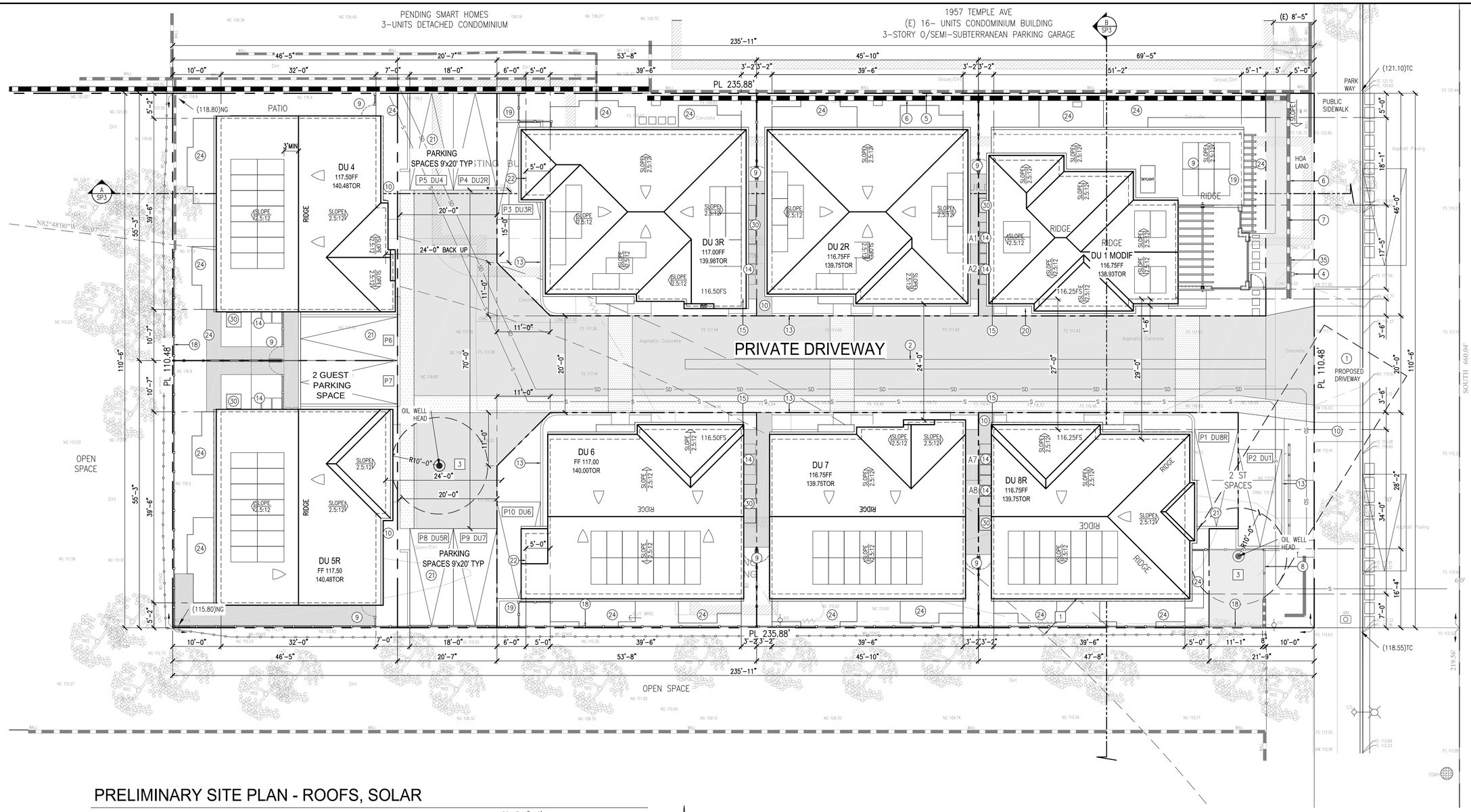
EIGHT DWELLING UNITS

1933-1947 TEMPLE AVENUE
SIGNAL HILL, CA

SITE PLAN

SHEET TITLE

SP1



PRELIMINARY SITE PLAN - ROOFS, SOLAR

FIRE ACCESS

SCALE: 1"=10'

0 5 10 15 20 30

SITE PLAN KEY NOTES

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35. COURTYARD SIGN

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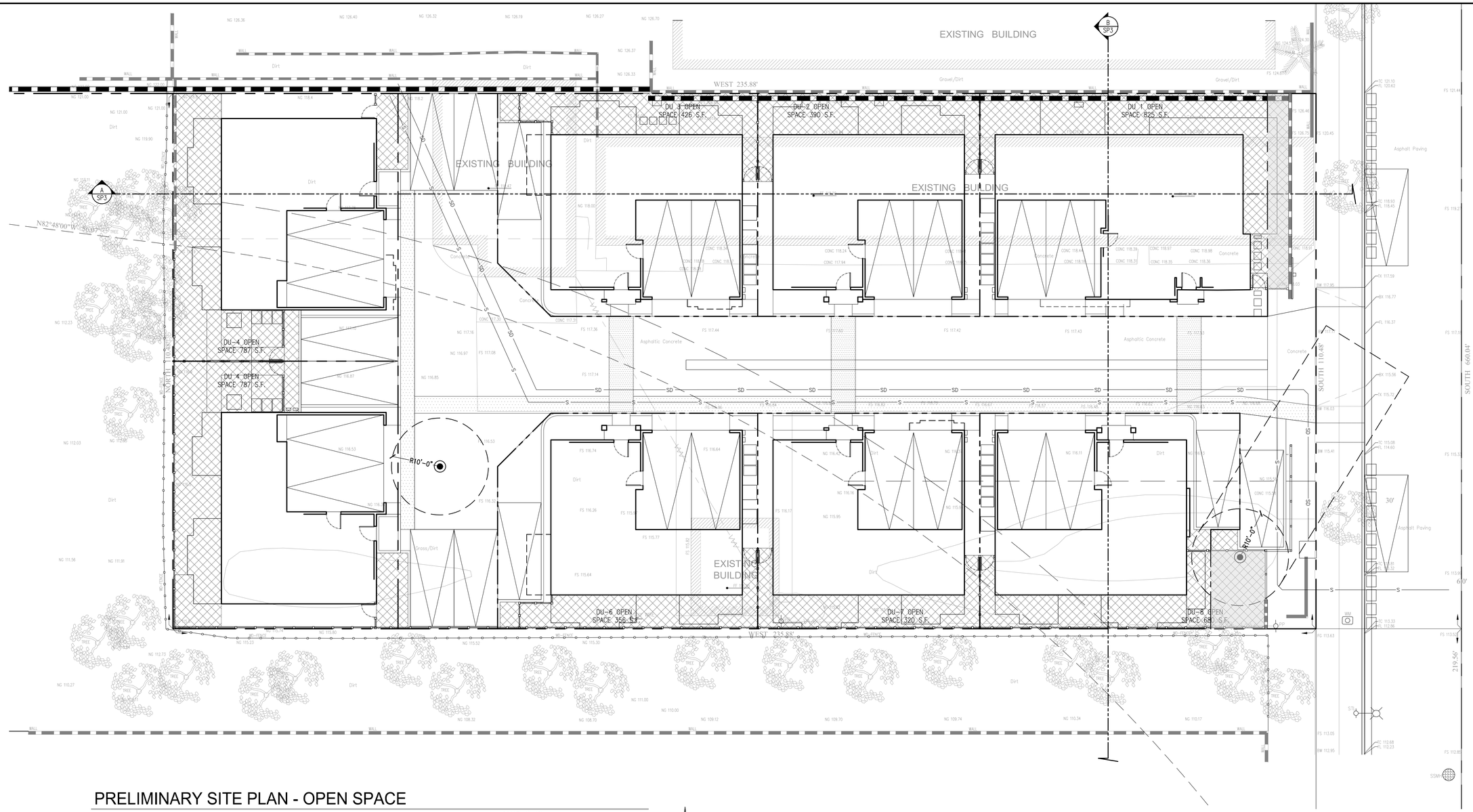
EIGHT DWELLING UNITS

1933-1947 TEMPLE AVENUE
SIGNAL HILL, CA

ROOF SITE PLAN

SHEET TITLE

SP2



PRELIMINARY SITE PLAN - OPEN SPACE

OPEN SPACE:

RH REQUIRED 25%,OF 26,061 LOT AREA= 6,507 SQ. FT.
SP2.1 DEVIATION: PROVIDED 4,789 SQ. FT. = 18.37 %

OPEN SPACE SYMBOL

SCALE: 1"=10'

0 5 10 15 20 30

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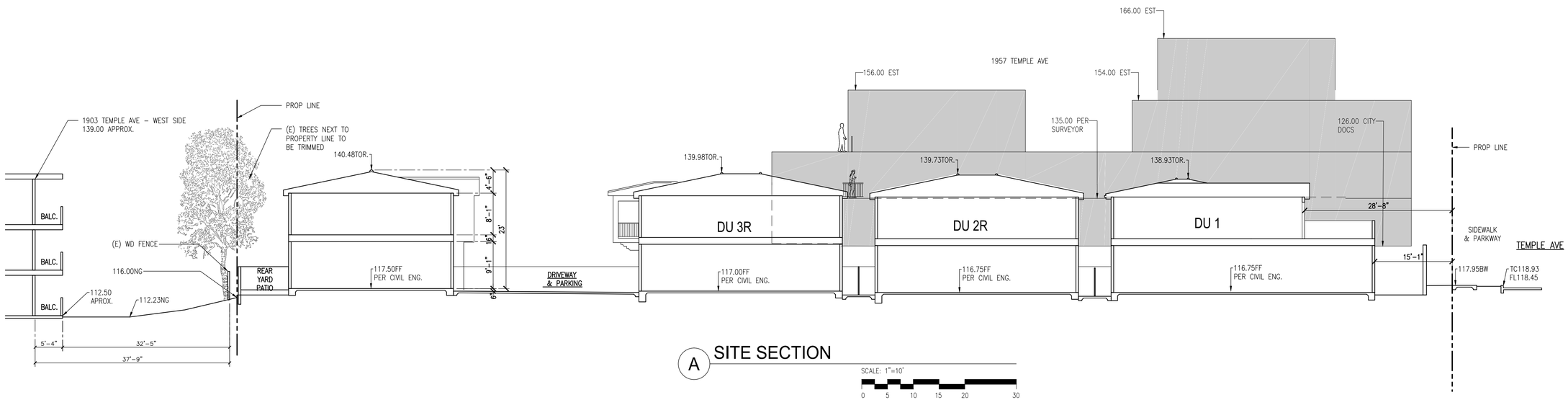
EIGHT DWELLING UNITS

1933-1947 TEMPLE AVENUE
SIGNAL HILL, CA

PRELIMINARY SITE PLAN
OPEN SPACE

SHEET TITLE

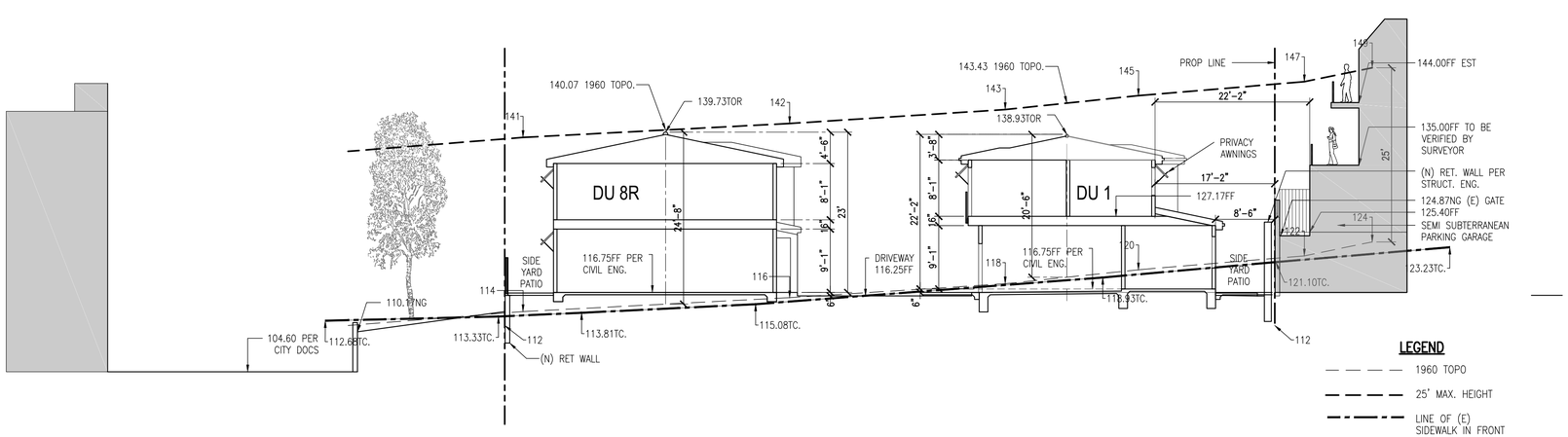
SP2.1



A SITE SECTION

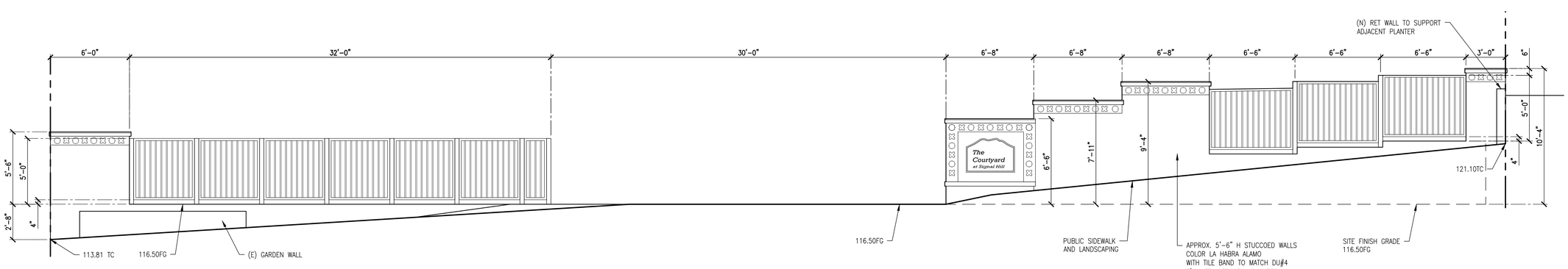
SCALE: 1"=10'

0 5 10 15 20 30



B SITE SECTION

1"=10'



TEMPLE AVENUE ENTRANCE WALLS

1"=10'

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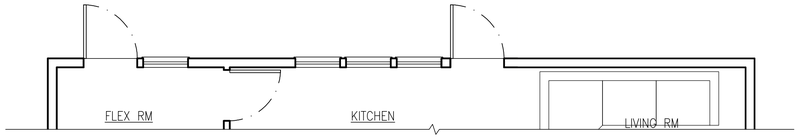
EIGHT DWELLING UNITS

1933-1947 TEMPLE AVENUE
SIGNAL HILL, CA

SITE SECTIONS

SHEET TITLE

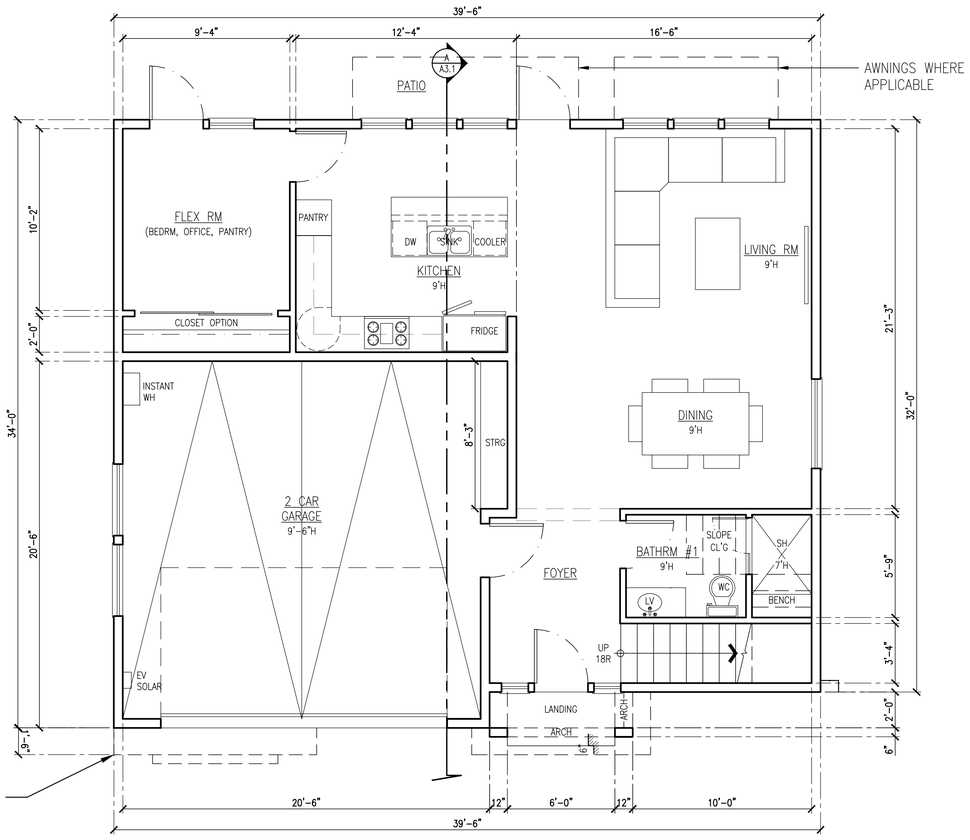
SP3

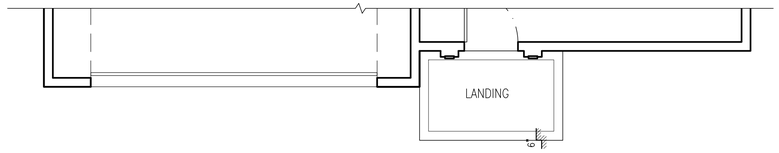


PARTIAL FLOOR PLAN MODIFICATION

DU 8R

1/4"=1'-0"

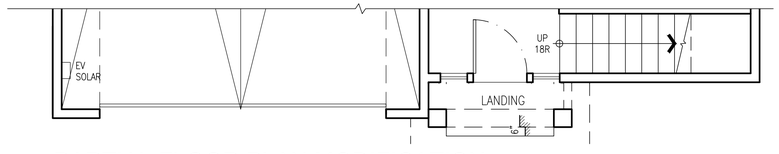




PARTIAL FLOOR PLAN MODIFICATION

ENTRY TYPE DU'S 4 & 5R

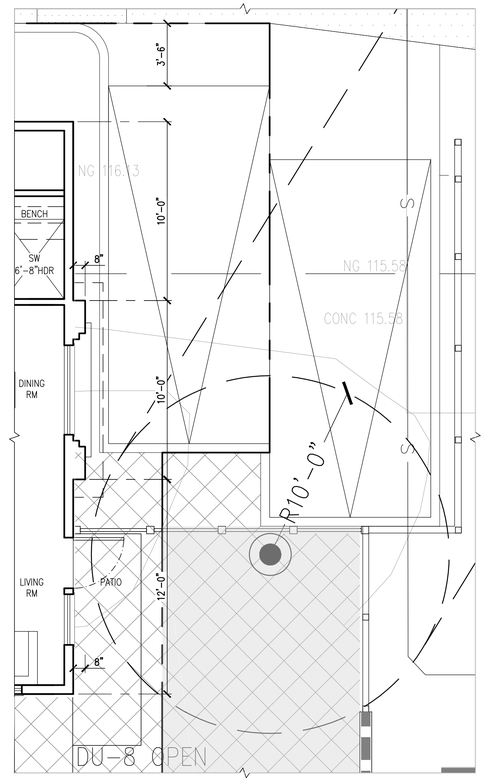
1/4"=1'-0"



PARTIAL FLOOR PLAN MODIFICATION

DU'S 2R, 6, 8R

1/4"=1'-0"



PARTIAL FLOOR MODIFICATION

DU 8R

1/4"=1'-0"

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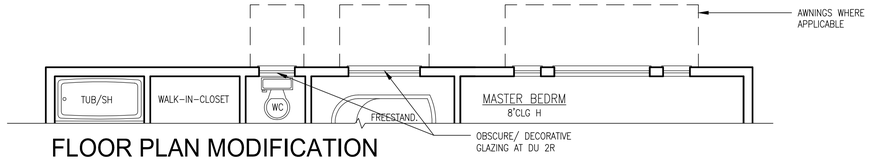
EIGHT DWELLING UNITS

1933-1947 TEMPLE AVENUE
SIGNAL HILL, CA

1ST FLOOR PLAN

SHEET TITLE

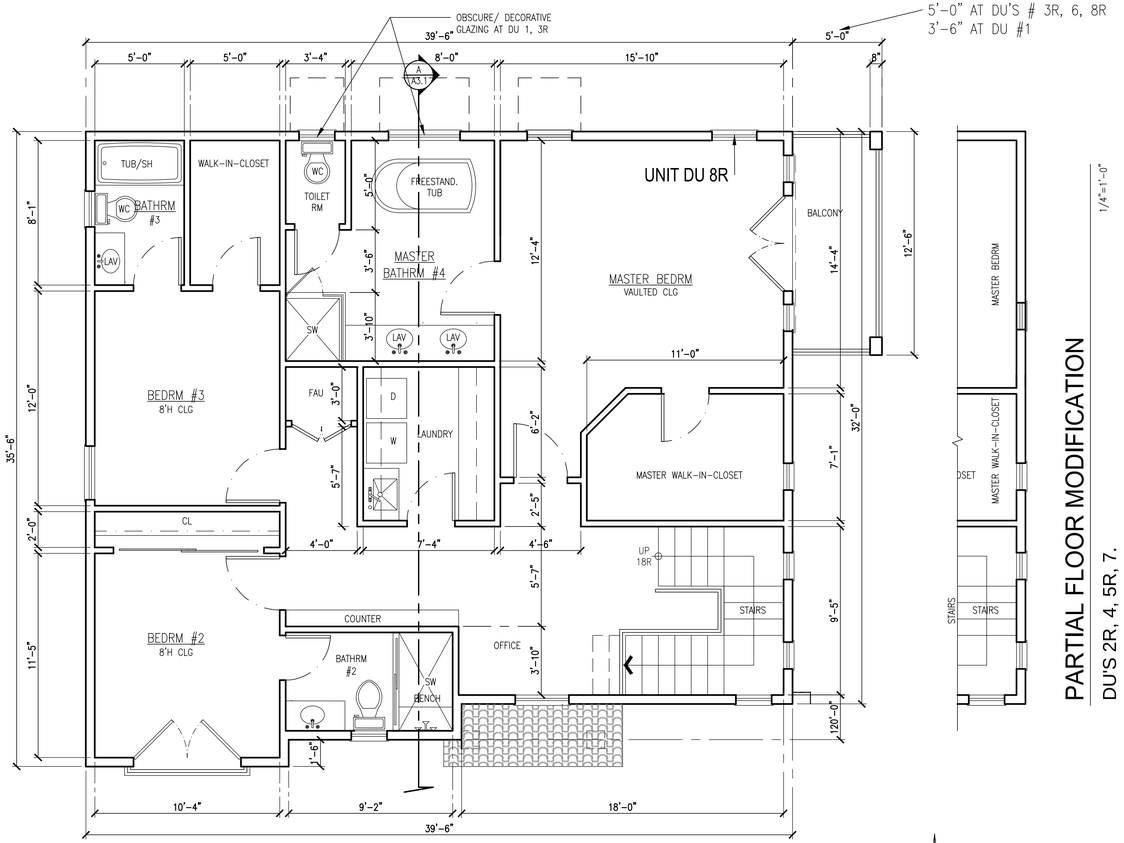
A1.1



FLOOR PLAN MODIFICATION

DU'S: 2R, 4, 5R, 7.

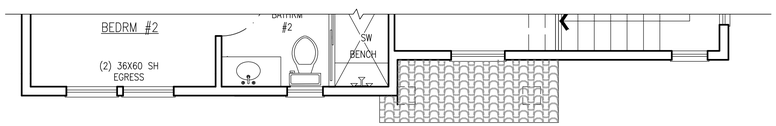
1/4"=1'-0"



SECOND FLOOR PLAN

DU'S 3R, 4, 7.
BALCONY DU'S: 3R, 6.

1/4"=1'-0"



SECOND FLOOR PLAN MODIFICATION

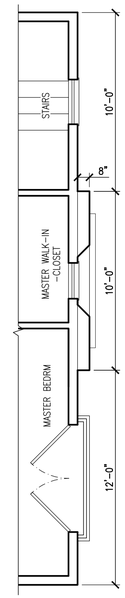
DU'S 2R, 5R, 6, 8R

1/4"=1'-0"

PARTIAL FLOOR MODIFICATION

DU'S 2R, 4, 5R, 7.

1/4"=1'-0"



PARTIAL FLOOR MODIFICATION

DU 8R

1/4"=1'-0"

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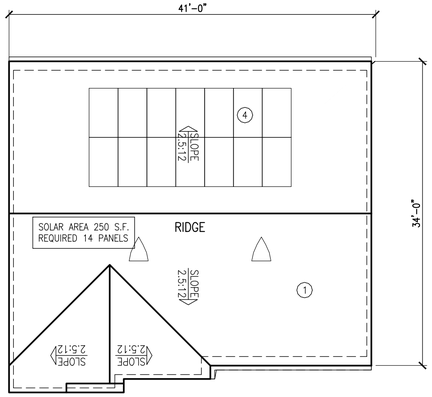
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1933-1947 TEMPLE AVENUE
SIGNAL HILL, CA

2ND FLOOR PLAN

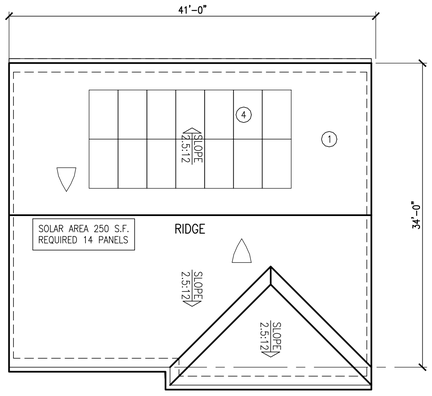
SHEET TITLE

A1.2



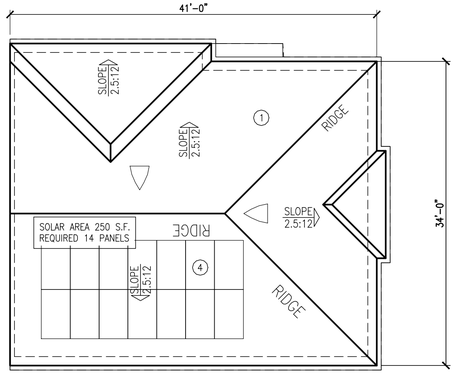
ROOF PLAN DU'S 4, 7

1/4"=1'-0"



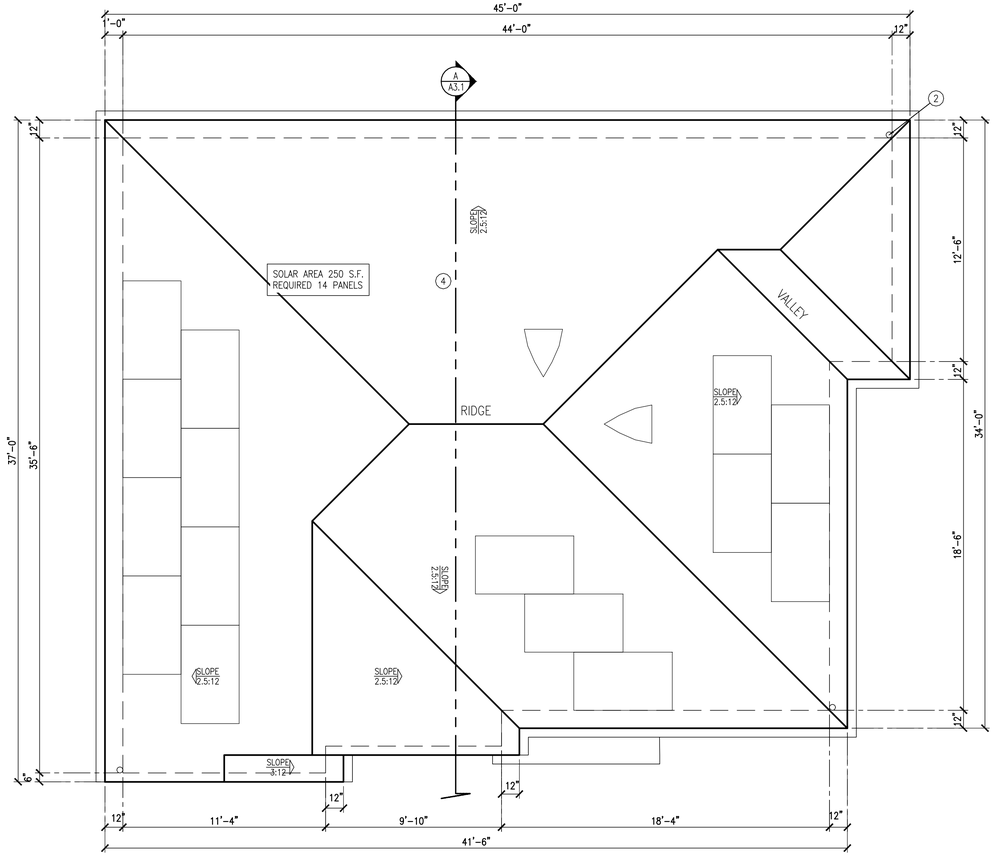
ROOF PLAN DU'S 5R & 6

1/4"=1'-0"



ROOF PLAN DU 8R

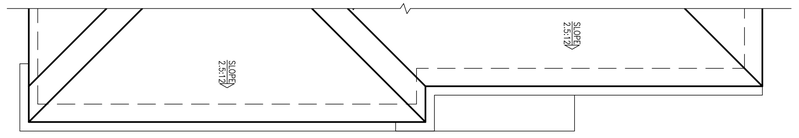
1/4"=1'-0"



ROOF PLAN DU'S 3R

1/4"=1'-0"

GABLE ROOF AT OVERHANG DU'S 3R, 4, 7.
HIP ROOF AT BALCONY DU'S 3R, 8R
GABLE ROOF AT BALCONY DU 6



PARTIAL ROOF MODIFICATION DU 2R

1/4"=1'-0"

-

ROOF KEY NOTES

1. CONC. ROOF TILE
   MANUF: EAGLE ROOFING
   TYPE: CAPISTRANO
   COLOR: AS NOTED ON COLOR MATRIX
   IAMPO UES ER 1900 VALID THROUGH 01-31-2026

   SCC 8830 ALBUQUERQUE BLEND
   CRRC # 0918-050
   EMI. 0.90
   SRI 15
   A. SRI 19

   3680 - LOS PADRES BLEND
   CRRC # 0918-0013
   EMI. 0.91
   SRI 25
   A. SRI 25

   INSTALLATION:
   CONCRETE ROOF TILES MUST BE IN ACCORDANCE WITH THE CURRENT CONCRETE AND CLAY ROOF TILE INSTALLATION MANUAL FOR MODERATE CLIMATE REGIONS, PUBLISHED BY THE TILE ROOFING INSTITUTE AND WESTERN STATES ROOFING CONTRACTORS ASSOCIATION.
   THIS REPORT AND THE TRI/WSRCA INSTALLATION MANUAL MUST BE AVAILABLE AT THE JOBSITE AT ALL TIMES DURING INSTALLATION.

   DECK
   INSTALL TTILES O/UNDERLAYMENT O/ MIN. 15/32" THICK EXT. GRADE PLYWOOD ATTACH WITH 11 GA CORROSION RESISTANT NAILS PER CRC SEC. R905.3.6.

   UNDERLAYMENT
   (2) TWO LAYERS OF #30 ASPHALT SATURATED UNDERLAYMENT LAID WITH 19" OVERLAP (CRC R905.33)
2. 4"ø DOWNSPOUTS AND 5" GUTTER 24 GA.GI. ROUTED PER CE PLAN
3. FLASHING, COUNTER FLASHING, GUTTERS, DOWNSPOUTS, MIN 24 GA GAL METAL CORROSION RESISTANT.
4. CONCEPTUAL PLAN FOR SOLAR ZONE
   15 PANELS AREA: 260 S.F.
   PANELS APROX: 61"x41"x2" (17.37 S.F.)
   SIGNAL HILL LATITUDE: 33.797337

PRELIMINARY PLANS

DCS
DESIGN CONSTRUCTION SERVICES INC.
2201 E. Willow, Suite D, #319
Signal Hill, CA 90755
657-203-1583

DCS BOZENA JAWORSKI ARCHITECT EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHTS AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY, WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE DCS ARCHITECT.

PROJECT #4913

REVISIONS

1	02-23-2023	PRELIMINARY SITE PLAN
2	05-23-23	SPECIFIC PLAN 1ST SUB
3	06-29-2023	FIRE DEPT. CORRECT
4	02-08-2024	ADD AC UNIT, HOA LANDSCAPE
5	03-21-2024	NEIGHBORHOOD MEETING
6	05-31-24	VIEW MODIFICATIONS
–	–	
–	–	

OWNER

SIGNAL VENTURES LLC

9 LYRA WAY,
COTO DE CASA,
CA 92679

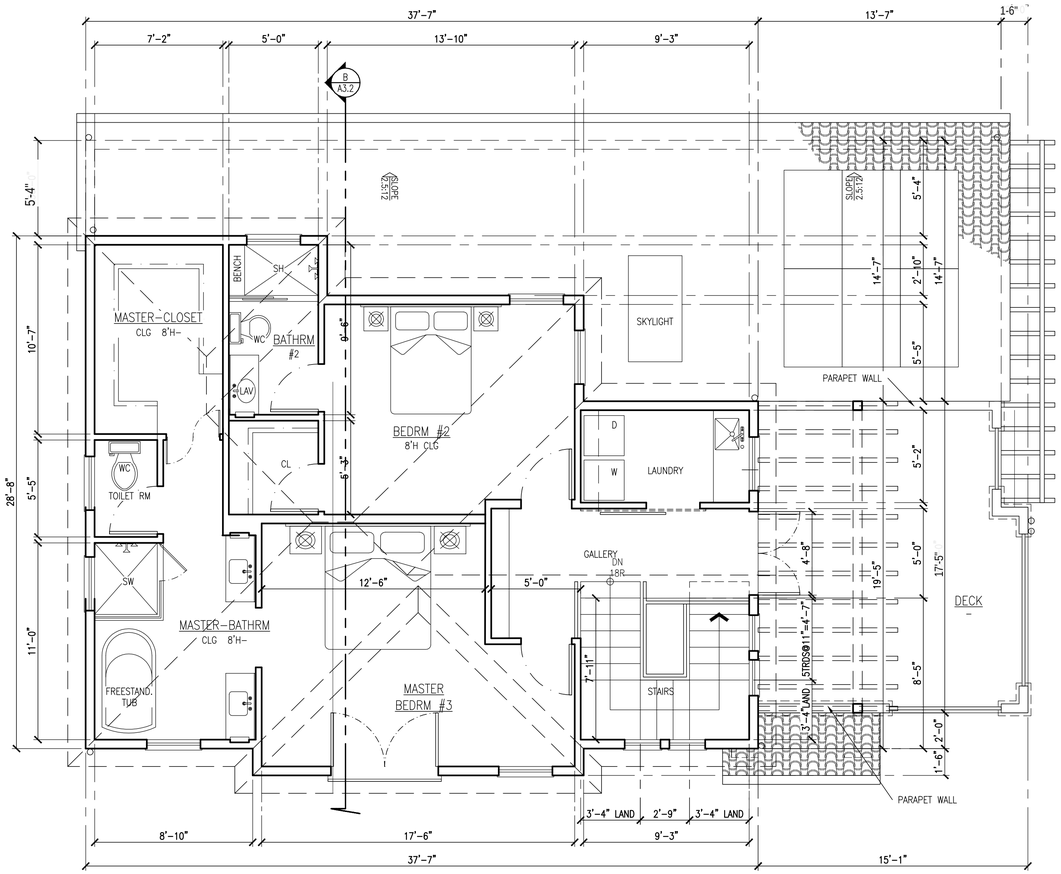
EIGHT DWELLING UNITS

1933-1947 TEMPLE AVENUE
SIGNAL HILL, CA

ROOF PLAN

SHEET TITLE

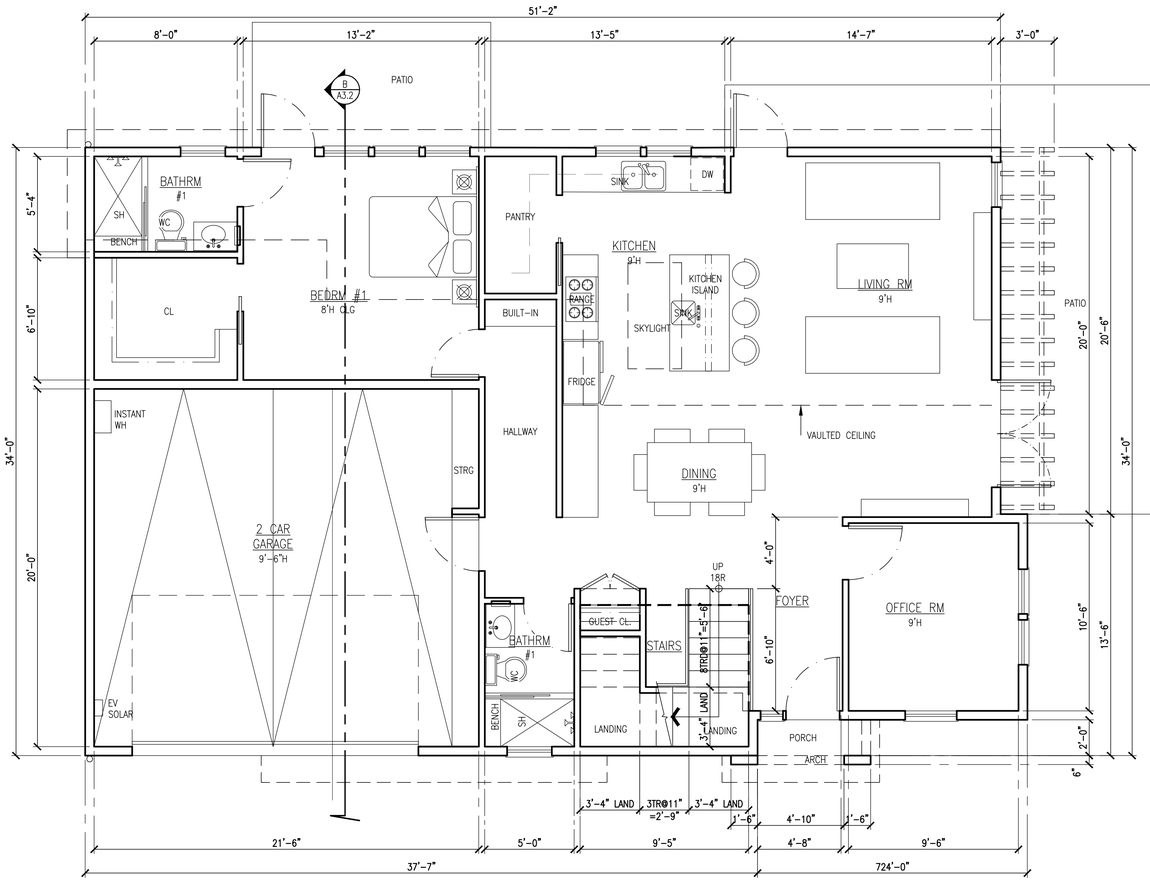
A1.3



SECOND FLOOR PLAN

DU 1 MODIFIED

1/4"=1'-0"



FIRST FLOOR PLAN

DU 1 MODIFIED

1/4"=1'-0"

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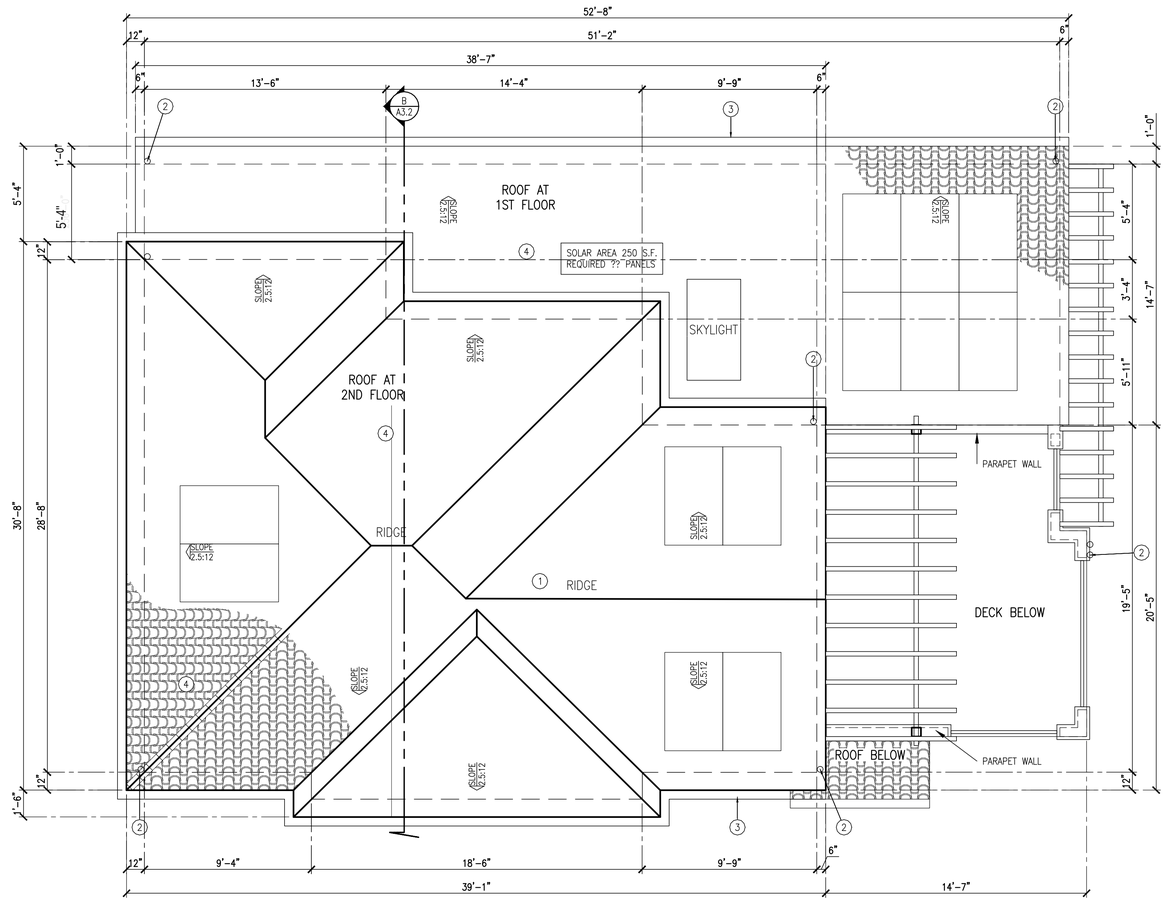
EIGHT DWELLING UNITS

1933-1947 TEMPLE AVENUE
SIGNAL HILL, CA

1ST AND 2ND FLOOR PLANS

SHEET TITLE

A1.4



ROOF PLAN

DU 1 MODIFIED

1/4"=1'-0"

FLOOR PLANS KEY NOTES

1 CONC. ROOF TILE
MANUF: EAGLE ROOFING
TYPE: CAPISTRANO
COLOR: AS NOTED ON COLOR MATRIX
IAMPO UES ER 1900 VALID THROUGH 01-31-2026

SCC 8830 ALBUQUERQUE BLEND
CRRC # 0918-050
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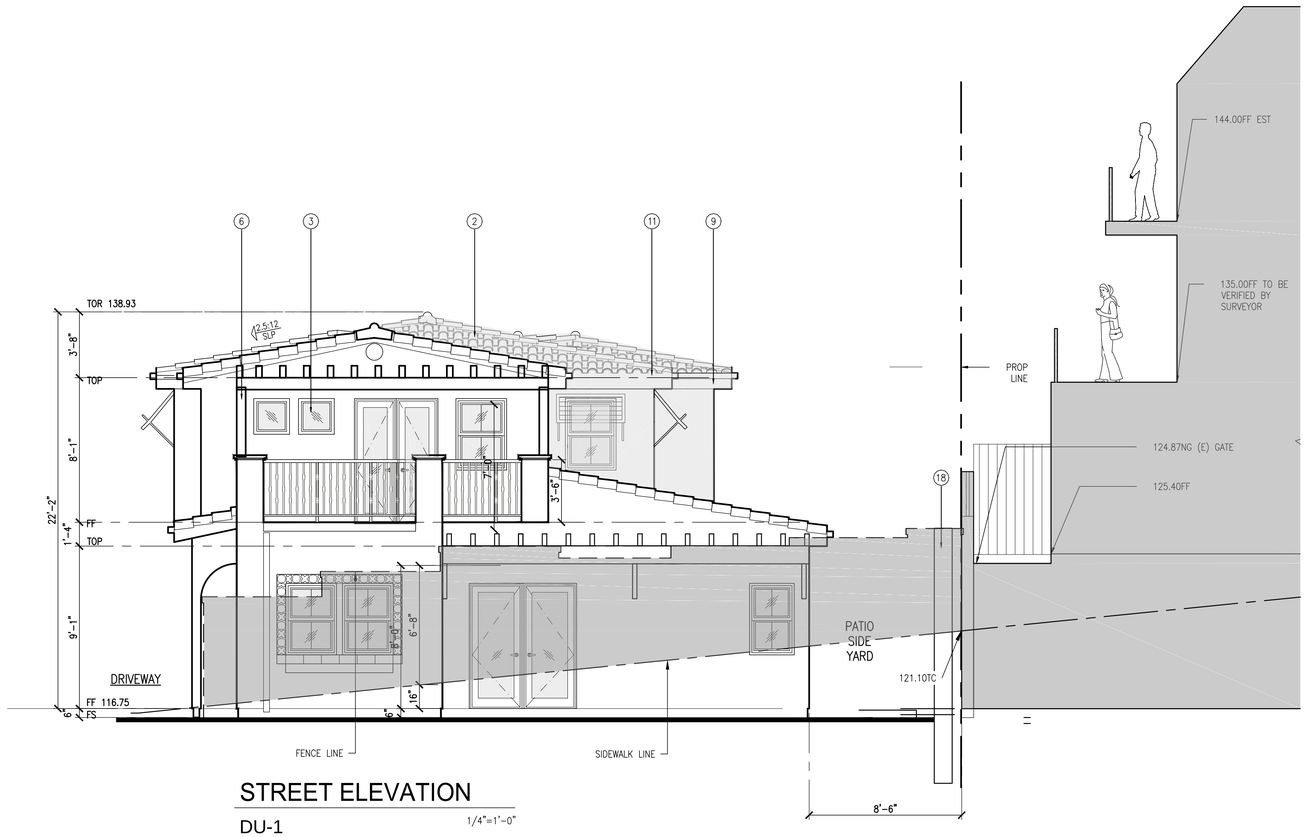
EIGHT DWELLING UNITS

1933-1947 TEMPLE AVENUE
SIGNAL HILL, CA

ROOF PLAN

SHEET TITLE

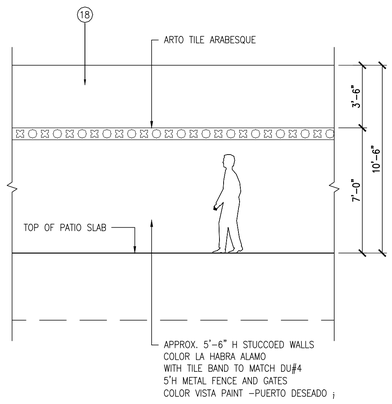
A1.5



STREET ELEVATION

DU-1

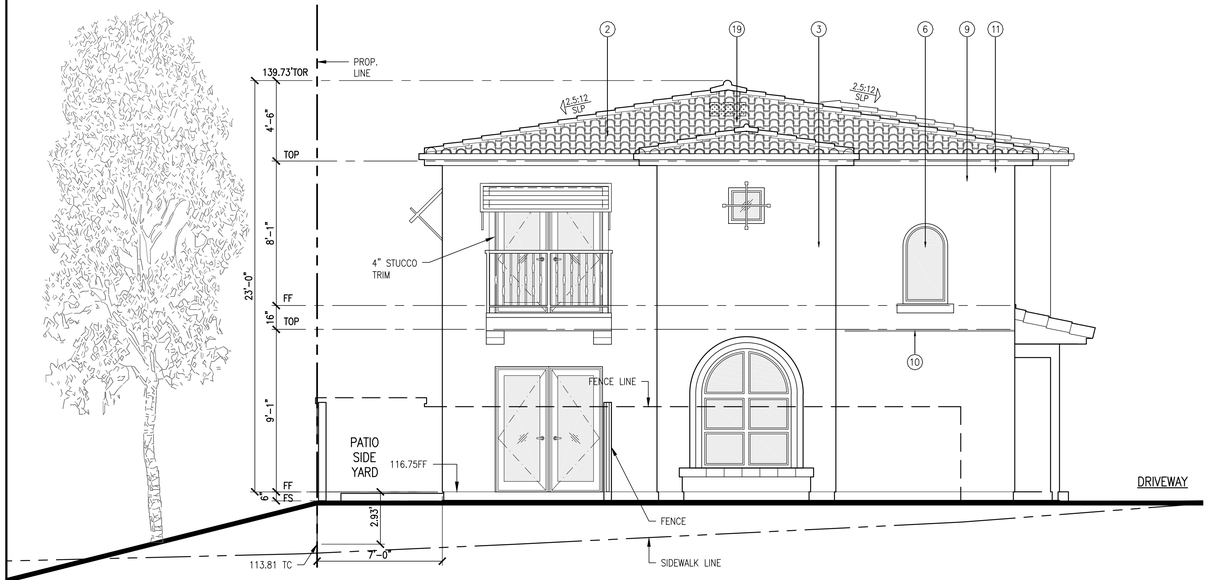
1/4"=1'-0"



RETAINING WALL AT PATIOS AREA

DU-1, DU-2, DU-3

1/4"=1'-0"



STREET ELEVATION

DU 8

1/4"=1'-0"



8A

LIGHT FIXTURES PROGRESS LIGHTING
WISH–LED WALL LANTERN.
OUTDOOR P6085 9"X12" BULB LED OR EQUAL.
MODEL: ETCHED, WHITE LINEN.
FINISH: ANTIQUE BRONZE.



8B

UTILITY LIGHT: WALL MOUNT, OUTDOOR.
PROGRESS LIGHTING
CYLINDER –2 LIGHTS
MD: P563001
DIM: 4.5"X8.25"
FINISH: ANTIQUE BRONZE

ELEVATIONS KEY NOTES

1. AWNINGS –BAHAMA STYLE
   MAT: ALUMINUM
   FINISH: POWDER COATED
   COLOR: BRONZE
   INSTALL 8" ABOVE WINDOW OPENING, EXTEND MIN 6" AT JAMB.
   ATTACHMENT PER MANUFACTURER INSTALLATION GUIDELINES
2. ROOFING: CONCRETE TILES
   MANUF: EAGLE ROOFING PRODUCT
   PROFILE: CAPISTRANO
   WEIGHT: 900 LB/100 S.F.
   COLOR: SEE DESIGN MATRIX
3. STUCCO:
   MANUF. LA HABRA,
   SBMF BASE 100
   COLOR: SEE DESIGN MATRIX
   TEXTURE: FINE, 100 % ACRYLIC BASED ELASTOMERIC FINISH WITH DPR
4. 55 GAL RAIN BARRELS
5. ETO DOORS RM1, WOOD MAHOGANY
6. WINDOWS / DOORS
   MANUF: MILGARD TRINSIC SERIES
   VINYL
   COLOR: SEE DESIGN MATRIX
7. GARAGE DOOR:
   MANUF.: CLOPAY OR EQUAL
   SECTIONAL TYPE: INSULATED STEEL DOOR
   COLOR: SEE DESIGN MATRIX
   GLASS: TEMPERED GLASS, REFLECTIVE COATING

8A. LIGHT FIXTURES PROGRESS LIGHTING
   MODEL: WISH–LED WALL LANTERN.
   OUTDOOR P6085 9"x12" BULB LED OR EQUAL.
   GLASS: ETCHED, WHITE LINEN.
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   PROGRESS LIGHTING
   CYLINDER –2 LIGHTS
   MD: P563001
   DIM: 4.5"x8.25"
   FINISH: ANTIQUE BRONZE

9. FASCIA: STUCCO
10. STUCCO CONTROL JOINT
11. D.S. & GUTTERS: COLOR MATCH WINDOW COLOR
12. WEEP SCREED (TYP). KEEP CLEAR 2" TO CONCRETE, 6" TO EARTH
13. 18"x18" GABLE VENT W.I. BARS
    COLOR: TO MATCH DUNN EDWARDS –NIGHT FALL DE5804
    INSTALL CORROSION–RESISTANT WIRE SCREEN, WITH OPENINGS MAX. 1/4" AND MIN 1/16"
14. (E) CMU WALL
15. CONC. WALKWAY
16. SOLAR PANELS
17. LANDSCAPING
18. RETAINING WALL
19. O'HAGGIN 26 GA. GAL STEEL VENTS
    COLOR TO MATCH ROOF TILES
19. TRASH RECYCLE & GREEN WASTE BINS
20. GAS METER
21. 200 AMPS ELECTRIC PANEL
22. AC UNITS
23. KING ARCHITECTURAL METALS FORGED STEEL BALUSTER, CENTER BALL KNUCKLE 13–47026–171 (SIM) SHOP DRAWINGS REQUIRED FOR OWNERS APPROVAL.

FOOTING DEPTH VARIES.
FOR FOOTING DEPTH SEE GRADING AND STRUCTURAL PLANS.

PRELIMINARY PLANS

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OWNER

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COTO DE CASA,
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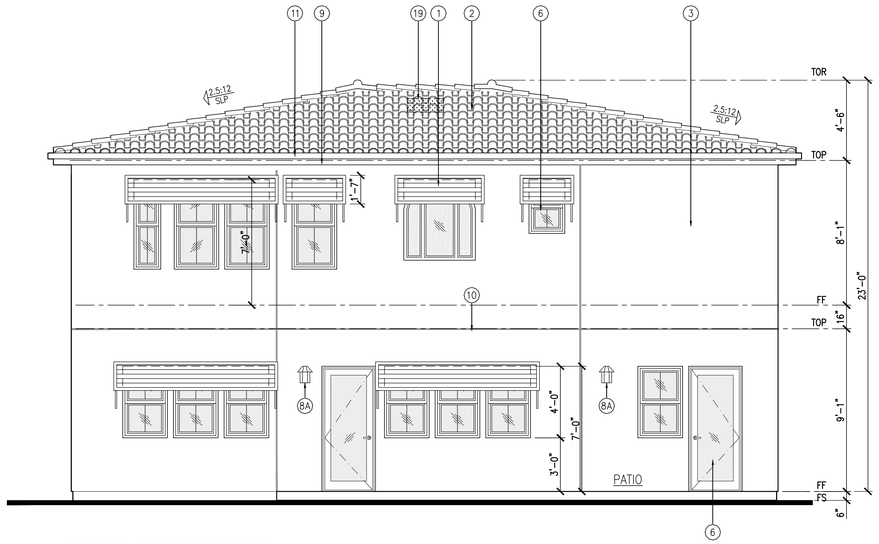
EIGHT DWELLING UNITS

1933-1947 TEMPLE AVENUE
SIGNAL HILL, CA

ELEVATIONS

SHEET TITLE

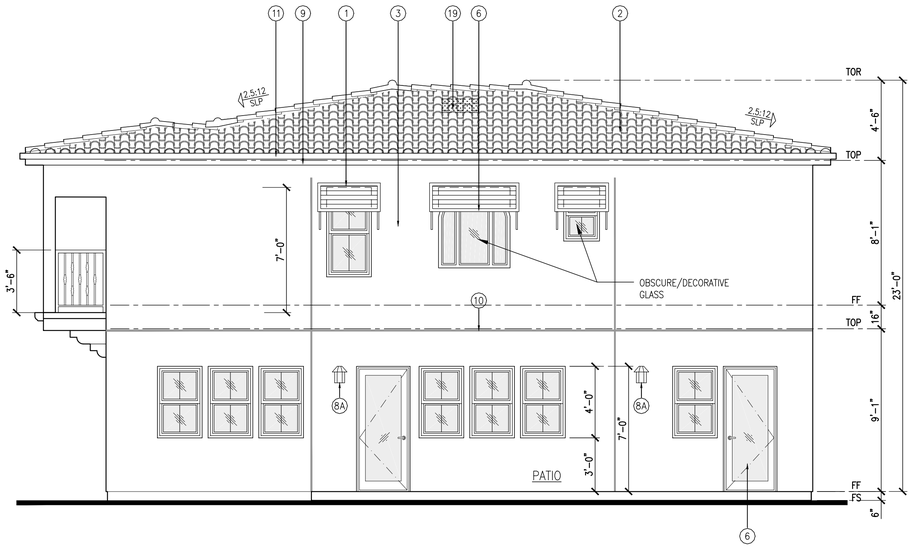
A2.1



REAR ELEVATION

DU2 NO AWNINGS ON FIRST FLOOR,
DU8 MODIFIED ROOF

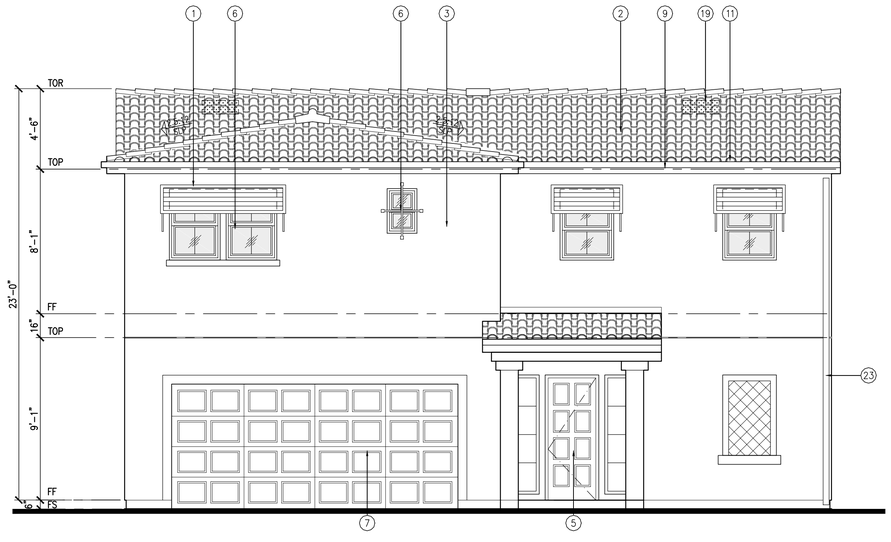
1/4"=1'-0"



REAR ELEVATION

DU-3R

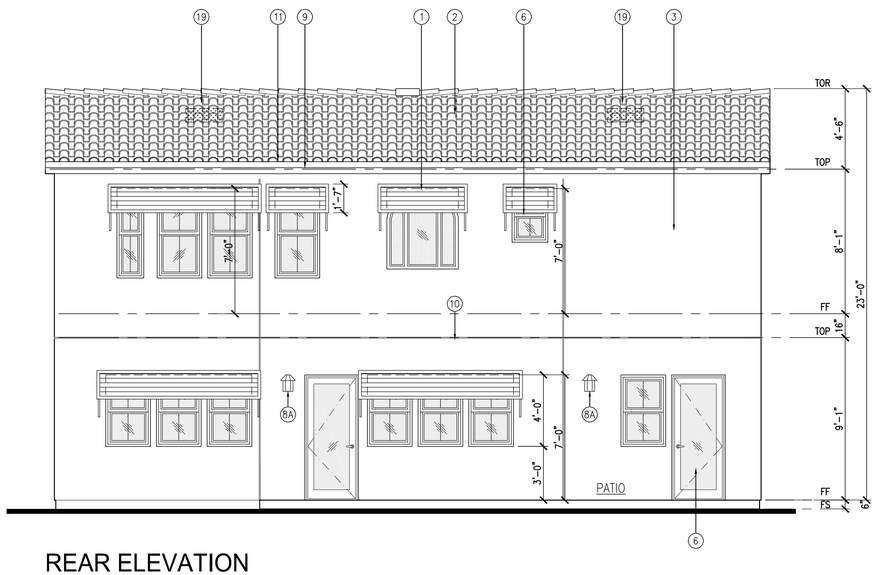
1/4"=1'-0"



FRONT / DRIVEWAY ELEVATION

DU'S 5R, 6
DU-8R MODIFIED ROOF

1/4"=1'-0"



REAR ELEVATION

DU's: 4, 5R, 6, 7

1/4"=1'-0"

FOR ELEVATION MODIFICATIONS
REFER TO DESIGN MATRIX

ELEVATIONS KEY NOTES

1. AWNINGS –BAHAMA STYLE
   MAT: ALUMINUM
   FINISH: POWDER COATED
   COLOR: BRONZE
   INSTALL 8" ABOVE WINDOW OPENING, EXTEND MIN 6" AT JAMB.
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2. ROOFING: CONCRETE TILES
   MANUF: EAGLE ROOFING PRODUCT
   PROFILE: CAPISTRANO
   WEIGHT: 900 LB/100 S.F.
   COLOR: SEE DESIGN MATRIX
3. STUCCO:
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   SBMF BASE 100
   COLOR: SEE DESIGN MATRIX
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4. 55 GAL RAIN BARRELS
5. ETO DOORS RM1, WOOD MAHOGANY
6. WINDOWS / DOORS
   MANUF: MILGARD TRINSIC SERIES
   VINYL
   COLOR: SEE DESIGN MATRIX
7. GARAGE DOOR:
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   COLOR: SEE DESIGN MATRIX
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8A. LIGHT FIXTURES PROGRESS LIGHTING
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   OUTDOOR P6085 9"x12" BULB LED OR EQUAL.
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   FINISH: ANTIQUE BRONZE.
8B. UTILITY LIGHT: WALL MOUNT, OUTDOOR.
   PROGRESS LIGHTING
   CYLINDER –2 LIGHTS
   MD: P563001
   DIM: 4.5"x8.25"
   FINISH: ANTIQUE BRONZE
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10. STUCCO CONTROL JOINT
11. D.S. & GUTTERS: COLOR MATCH WINDOW COLOR
12. WEEP SCREED (TYP). KEEP CLEAR 2" TO CONCRETE, 6" TO EARTH
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    COLOR: TO MATCH DUNN EDWARDS –NIGHT FALL DE5804
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FOR FOOTING DEPTH SEE GRADING AND STRUCTURAL PLANS.

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OWNER

SIGNAL VENTURES LLC

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EIGHT DWELLING UNITS

1933-1947 TEMPLE AVENUE
SIGNAL HILL, CA

ELEVATIONS

SHEET TITLE

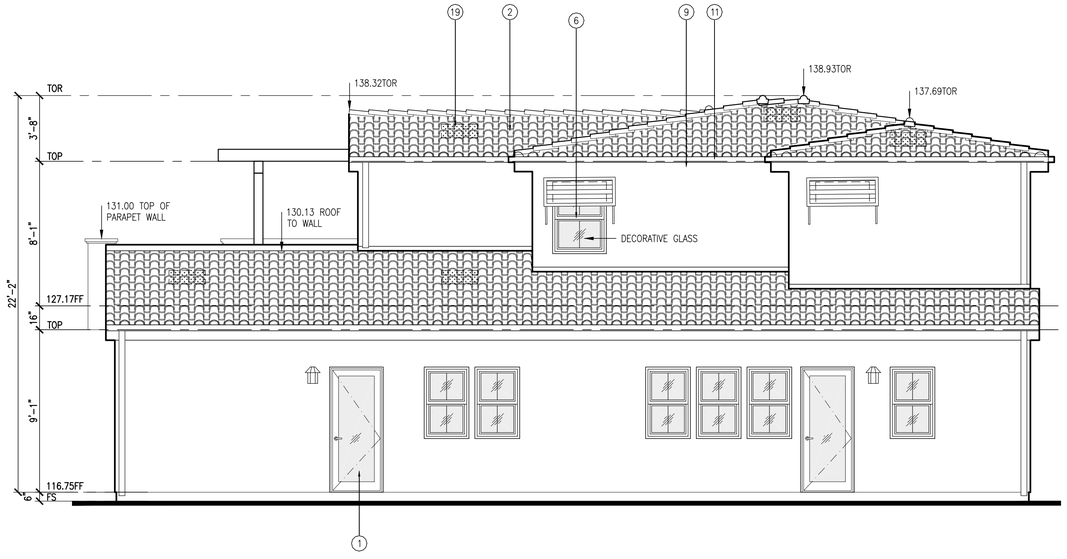
A2.2



FRONT DRIVEWAY ELEVATION

DU-1

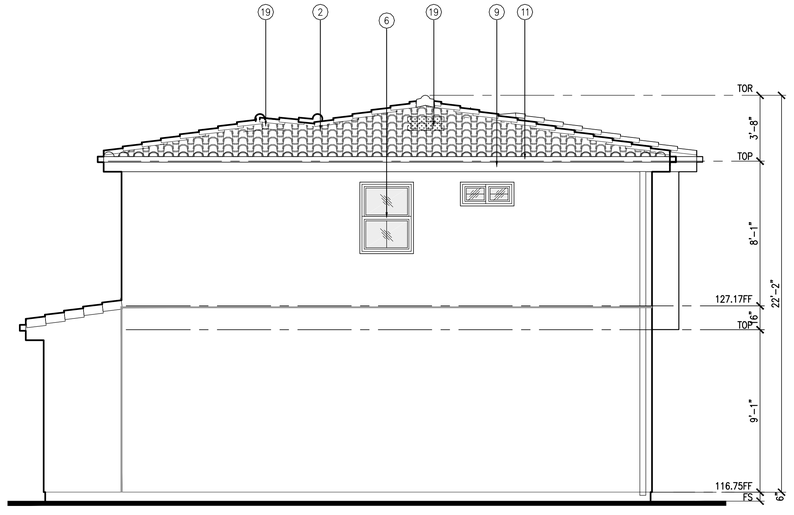
1/4"=1'-0"



REAR ELEVATION

DU-1

1/4"=1'-0"



SIDE ELEVATION

DU-1

1/4"=1'-0"

ELEVATIONS KEY NOTES

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–	–	

OWNER

SIGNAL VENTURES LLC

9 LYRA WAY,
COTO DE CASA,
CA 92679

EIGHT DWELLING UNITS

1933-1947 TEMPLE AVENUE
SIGNAL HILL, CA

ELEVATIONS

SHEET TITLE

A2.3

DESIGN MATRIX
COLOR AND MATERIAL SCHEDULE

DU#	FLOOR PLAN	OVEHANG ROOF STYLE	BALCONY	MAIN ROOF PLAN	ROOF "S" TILE	GARAGE DOOR STYLE	GARAGE DOOR COLOR	ENTRY PORCH STYLE	ENTRY DOOR STYLE	WINDOWS COLOR	STUCCO COLOR	ACCENT COLOR
1	"A" WITH OVERHANG	GABLE	3'-6"/HIP ROOF	HIP	A	B	8750	C	D	ESPRESSO	X-81 OATMEAL	7454
2R	A	NA	NONE	HIP	B	A	8434	A	C	FOG	X-524 ALAMO	8429
3R	"A" WITH OVERHANG	GABLE	5'-0"/HIP ROOF	HIP	A	B	8750	C	B	ESPRESSO	X-81 OATMEAL	7454
4	"A" WITH OVERHANG	GABLE	NONE	GABLE	B	C	8434	B	A	FOG	X-524 ALAMO	8429
5R	A	NA	NONE	GABLE	A	B	8750	B	D	ESPRESSO	X-81 OATMEAL	7454
6	A	NA	5'-0"/HIP ROOF	GABLE	B	A	8434	A	C	FOG	X-524 ALAMO	8429
7	"A" WITH OVERHANG	GABLE	NONE	GABLE	A	B	8750	C	A	ESPRESSO	X-81 OATMEAL	7454
8R	A	NA	5'-0"/HIP ROOF	GABLE/HIP	B	C	8434	A	B	FOG	X-81 OATMEAL	8429
ENTRANCE WALLS											ALAMO	

COLORS BY VISTA PAINT KALEIDOSCOPE

(OLD NUMBERS)

GARAGE DOOR COLOR:

8750 MOHAWK VALLEY

8434 SILVER SPREE

ACCENT COLOR:

7454 AQUAMARINE

8429 BRAVO BROWN

CAPISTRANO TILE BLENDS
CAPISTRANO:

A- LOS PADRES BLEND #3680

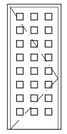
B- ALBUQUERQUE #SCC8830

RAILING & METAL FENCES:

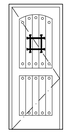
7381 PUERTO DESEADO



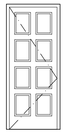
WINDOW FLOWER SAMPLE



ENTRY DOOR A
ETO EXTERIOR DOOR
DU 4, DU 7
DANUM MULTI-LITE
DOOR WITH OBSCURE
WHITE LAMINATED GLASS



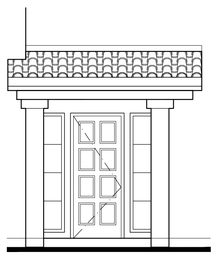
ENTRY DOOR B
ETO EXTERIOR DOOR
DU 1, DU 3, DU 8.
RM1
MAHOGANY



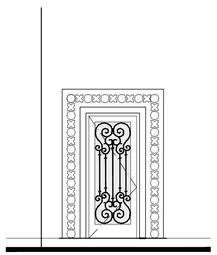
ENTRY DOOR C
ETO EXTERIOR DOOR
DU2, DU 6.
MAHOGANY
8 PANELS



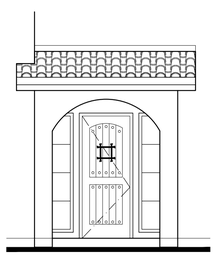
ENTRY DOOR D
ETO EXTERIOR DOOR
DU DU 5.
FD1 MONTECARLO
MAHOGANY



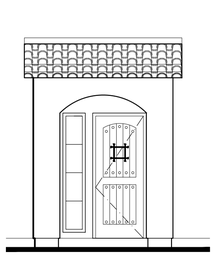
ENTRY PORCH STYLE A
DU 2, 6, 8



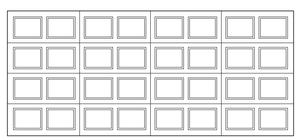
ENTRY PORCH STYLE B
DU 4, 5, TILE VARIATION



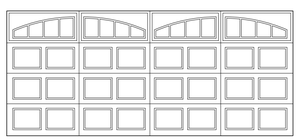
ENTRY PORCH STYLE C
DU 3, 7



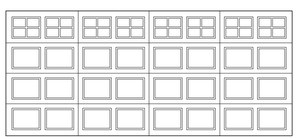
ENTRY PORCH DU 1
DU 1



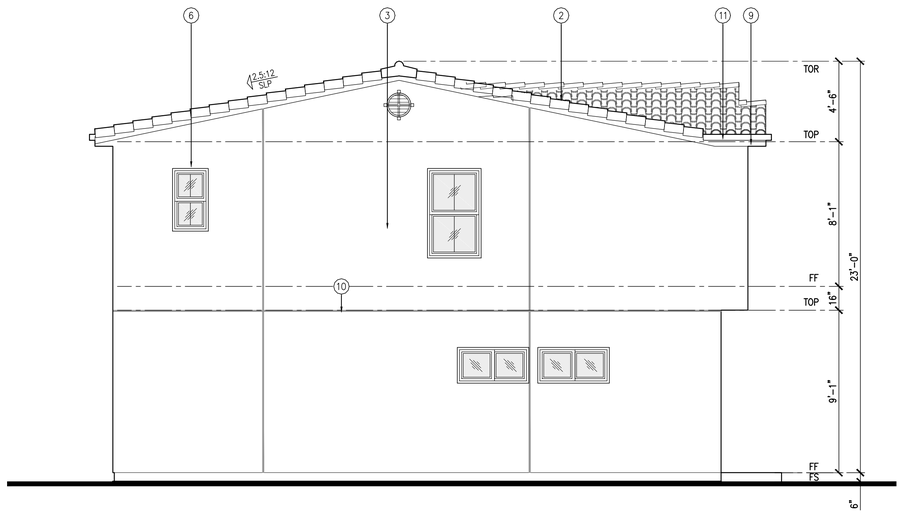
GARAGE DOOR A
DU 2, DU 6.



GARAGE DOOR B
DU 1, 3, 5.



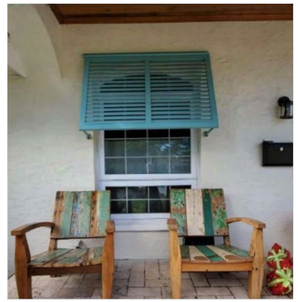
GARAGE DOOR C
DU 4, 8.



SIDE ELEVATION

1/4"=1'-0"

DU's: 4, 7
DU's: 3R WITH MAIN HIP ROOF
DU's: 5R, 8R NO GABLE OVERHANG



AWNING ACCENT COLOR



ARTO TILE ARABESQUE DU #4



TILE ACCENT AROUND DOOR
TILE DU#5



BERMUDA AWNINGS ACCENT COLORS

ELEVATIONS KEY NOTES

1. AWNINGS -BAHAMA STYLE
   MAT: ALUMINUM
   FINISH: POWDER COATED
   COLOR: BRONZE
   INSTALL 8" ABOVE WINDOW OPENING, EXTEND MIN 6" AT JAMB.
   ATTACHMENT PER MANUFACTURER INSTALLATION GUIDELINES
2. ROOFING: CONCRETE TILES
   MANUF: EAGLE ROOFING PRODUCT
   PROFILE: CAPISTRANO
   WEIGHT: 900 LB/100 S.F.
   COLOR: SEE DESIGN MATRIX
3. STUCCO:
   MANUF. LA HABRA,
   SBMF BASE 100
   COLOR: SEE DESIGN MATRIX
   TEXTURE: FINE, 100 % ACRYLIC BASED ELASTOMERIC FINISH WITH DPR
4. 55 GAL RAIN BARRELS
5. ETO DOORS RM1, WOOD MAHOGANY
6. WINDOWS / DOORS
   MANUF: MILGARD TRINSIC SERIES
   VINYL
   COLOR: SEE DESIGN MATRIX
7. GARAGE DOOR:
   MANUF.: CLOPAY OR EQUAL
   SECTIONAL TYPE: INSULATED STEEL DOOR
   COLOR: SEE DESIGN MATRIX
   GLASS: TEMPERED GLASS, REFLECTIVE COATING
8A. LIGHT FIXTURES PROGRESS LIGHTING
   MODEL: WISH-LED WALL LANTERN.
   OUTDOOR P6085 9"x12" BULB LED OR EQUAL.
   GLASS: ETCHED, WHITE LINEN.
   FINISH: ANTIQUE BRONZE.
8B. UTILITY LIGHT: WALL MOUNT, OUTDOOR.
   PROGRESS LIGHTING
   CYLINDER -2 LIGHTS
   MD: P563001
   DIM: 4.5"x8.25"
   FINISH: ANTIQUE BRONZE
9. FASCIA: STUCCO
10. STUCCO CONTROL JOINT
11. D.S. & GUTTERS: COLOR MATCH WINDOW COLOR
12. WEEP SCREED (TYP). KEEP CLEAR 2" TO CONCRETE, 6" TO EARTH
13. 18"x18" GABLE VENT W.I. BARS
    COLOR: TO MATCH DUNN EDWARDS -NIGHT FALL DE5804
    INSTALL CORROSION-RESISTANT WIRE SCREEN, WITH OPENINGS MAX. 1/4" AND MIN 1/16"
14. (E) CMU WALL
15. CONC. WALKWAY
16. SOLAR PANELS
17. LANDSCAPING
18. RETAINING WALL
19. O'HAGGIN 26 GA. GAL STEEL VENTS
    COLOR TO MATCH ROOF TILES
19. TRASH RECYCLE & GREEN WASTE BINS
20. GAS METER
21. 200 AMPS ELECTRIC PANEL
22. AC UNITS
23. KING ARCHITECTURAL METALS FORGED STEEL BALUSTER, CENTER BALL KNUCKLE 13-47026-171 (SIM) SHOP DRAWINGS REQUIRED FOR OWNERS APPROVAL.

FOOTING DEPTH VARIES.
FOR FOOTING DEPTH SEE GRADING AND STRUCTURAL PLANS.

PRELIMINARY PLANS

DCS

DESIGN CONSTRUCTION SERVICES INC.

2201 E. Willow, Suite D, #319
Signal Hill, CA 90755
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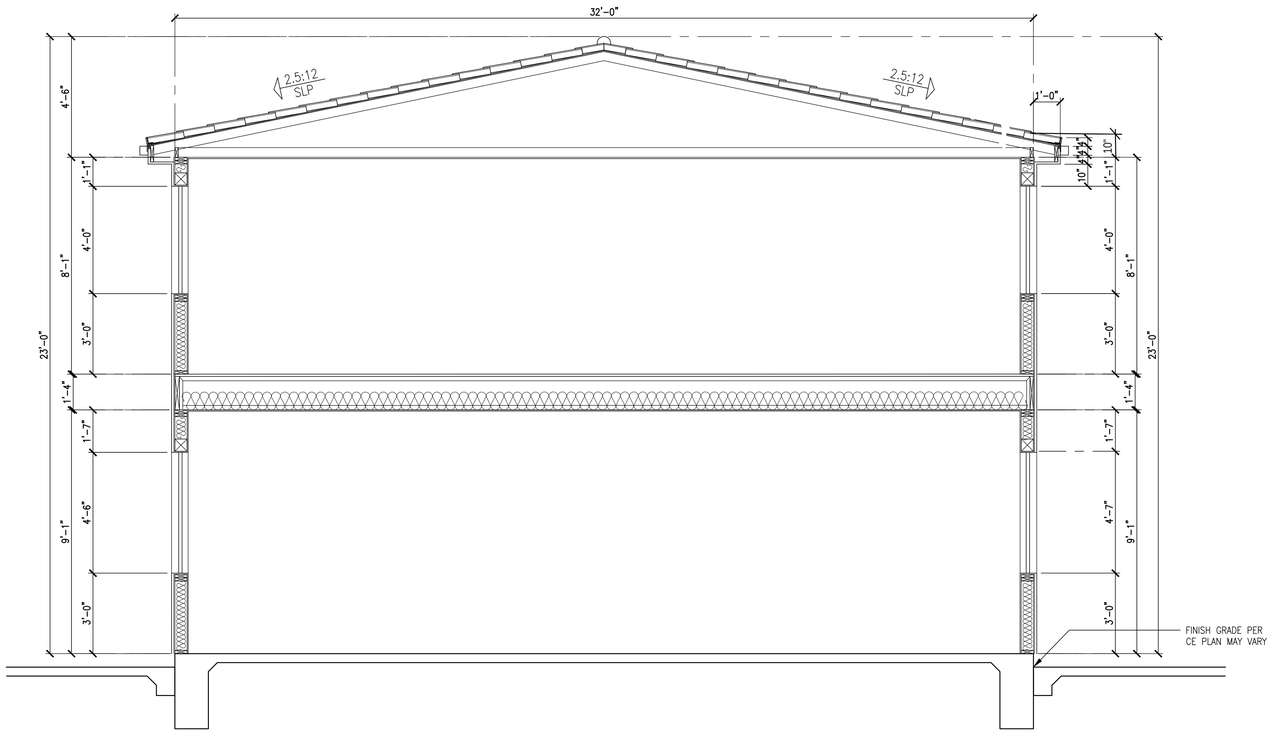
EIGHT DWELLING UNITS

1933-1947 TEMPLE AVENUE
SIGNAL HILL, CA

ELEVATIONS

SHEET TITLE

A2.4



A SECTION (TYP)

3/8"=1'-0"

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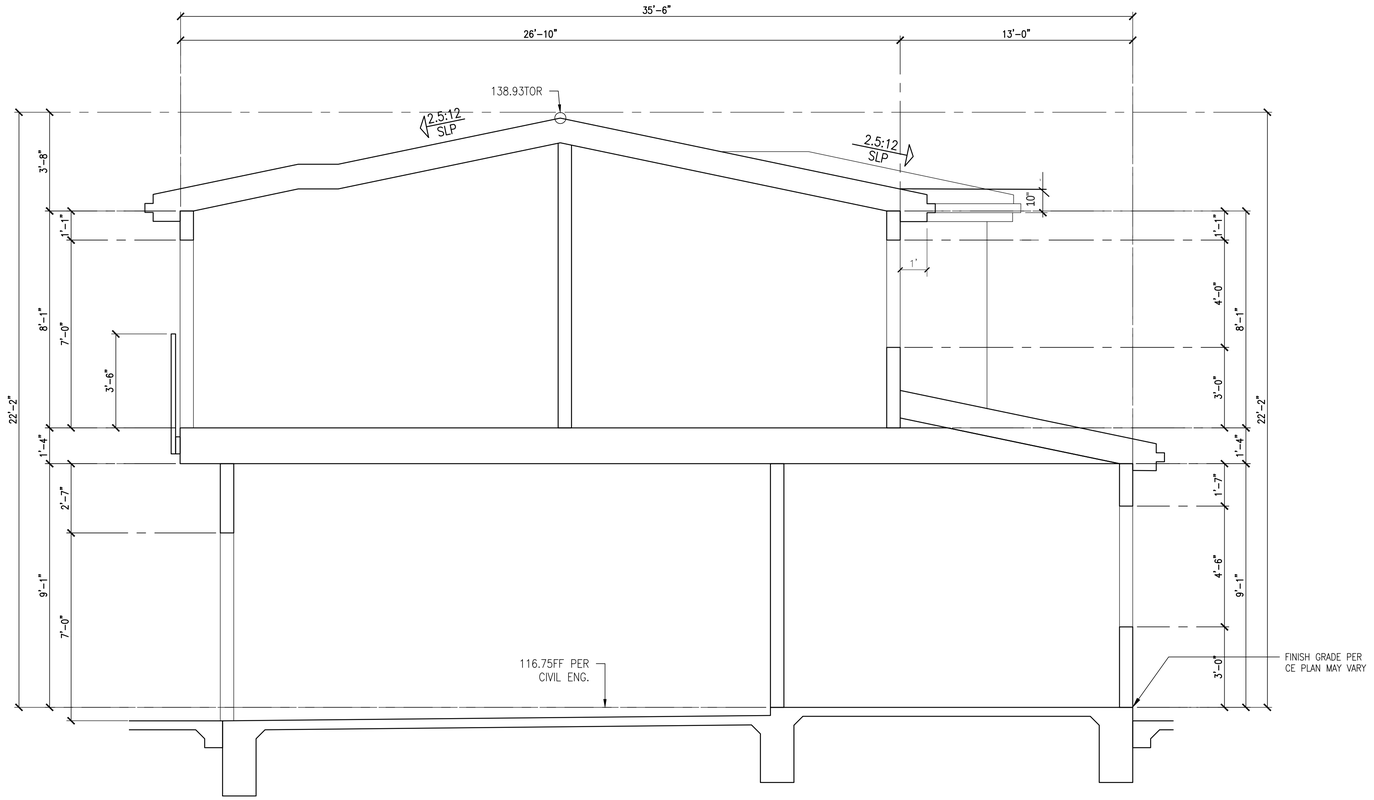
EIGHT DWELLING UNITS

1933-1947 TEMPLE AVENUE
SIGNAL HILL, CA

SECTION A (TYP)

SHEET TITLE

A3.1



B DU1 SECTION

3/8"=1'-0"

PRELIMINARY PLANS

DCS

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1933-1947 TEMPLE AVENUE
SIGNAL HILL, CA

SECTION A
DU1

SHEET TITLE

A3.2

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Courtyard Development
Construction Start Date	10/1/2024
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.30
Precipitation (days)	18.4
Location	1933 Temple Ave, Signal Hill, CA 90755, USA
County	Los Angeles-South Coast
City	Signal Hill
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4737
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Long Beach Gas & Oil
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Single Family Housing	8.00	Dwelling Unit	0.42	20,728	7,369	0.00	24.0	—
Other Non-Asphalt Surfaces	0.17	Acre	0.17	0.00	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.64	0.53	5.18	7.15	0.01	0.22	0.04	0.26	0.20	0.01	0.21	—	1,372	1,372	0.06	0.02	0.22	1,378
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.67	26.2	15.2	12.6	0.03	0.57	2.94	3.51	0.53	1.23	1.76	—	4,705	4,705	0.23	0.48	0.18	4,855
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.40	0.69	3.21	4.43	0.01	0.13	0.07	0.17	0.12	0.02	0.13	—	847	847	0.03	0.01	0.08	851
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.07	0.13	0.59	0.81	< 0.005	0.02	0.01	0.03	0.02	< 0.005	0.02	—	140	140	0.01	< 0.005	0.01	141

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.64	0.53	5.18	7.15	0.01	0.22	0.04	0.26	0.20	0.01	0.21	—	1,372	1,372	0.06	0.02	0.22	1,378
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.67	1.28	15.2	12.6	0.03	0.57	2.94	3.51	0.53	1.23	1.76	—	4,705	4,705	0.23	0.48	0.18	4,855
2025	0.69	26.2	5.19	7.12	0.01	0.22	0.23	0.42	0.20	0.05	0.23	—	1,370	1,370	0.06	0.02	0.02	1,376
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.14	0.11	1.14	1.35	< 0.005	0.05	0.07	0.12	0.05	0.02	0.07	—	296	296	0.01	0.01	0.08	300
2025	0.40	0.69	3.21	4.43	0.01	0.13	0.03	0.17	0.12	0.01	0.13	—	847	847	0.03	0.01	0.06	851
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.02	0.02	0.21	0.25	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	—	49.0	49.0	< 0.005	< 0.005	0.01	49.6
2025	0.07	0.13	0.59	0.81	< 0.005	0.02	0.01	0.03	0.02	< 0.005	0.02	—	140	140	0.01	< 0.005	0.01	141

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.64	2.86	0.42	6.51	0.02	0.58	0.42	1.00	0.57	0.11	0.68	79.0	801	880	0.61	0.02	1.70	904
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.59	2.82	0.43	5.92	0.02	0.58	0.42	1.00	0.57	0.11	0.68	79.0	781	860	0.61	0.02	0.19	883

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.45	0.89	0.28	2.44	0.01	0.05	0.40	0.45	0.05	0.10	0.15	9.20	643	653	0.40	0.02	0.80	670
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.08	0.16	0.05	0.45	< 0.005	0.01	0.07	0.08	0.01	0.02	0.03	1.52	107	108	0.07	< 0.005	0.13	111

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.27	0.24	0.17	1.96	< 0.005	< 0.005	0.42	0.42	< 0.005	0.11	0.11	—	463	463	0.02	0.02	1.56	470
Area	2.36	2.61	0.17	4.52	0.01	0.57	—	0.57	0.56	—	0.56	74.9	144	219	0.22	< 0.005	—	226
Energy	0.01	< 0.005	0.08	0.03	< 0.005	0.01	—	0.01	0.01	—	0.01	—	179	179	0.01	< 0.005	—	179
Water	—	—	—	—	—	—	—	—	—	—	—	0.64	15.4	16.0	< 0.005	< 0.005	—	16.5
Waste	—	—	—	—	—	—	—	—	—	—	—	3.43	0.00	3.43	0.34	0.00	—	12.0
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.15	0.15
Total	2.64	2.86	0.42	6.51	0.02	0.58	0.42	1.00	0.57	0.11	0.68	79.0	801	880	0.61	0.02	1.70	904
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.26	0.24	0.19	1.81	< 0.005	< 0.005	0.42	0.42	< 0.005	0.11	0.11	—	444	444	0.02	0.02	0.04	450
Area	2.32	2.57	0.17	4.07	0.01	0.57	—	0.57	0.56	—	0.56	74.9	143	218	0.22	< 0.005	—	225
Energy	0.01	< 0.005	0.08	0.03	< 0.005	0.01	—	0.01	0.01	—	0.01	—	179	179	0.01	< 0.005	—	179
Water	—	—	—	—	—	—	—	—	—	—	—	0.64	15.4	16.0	< 0.005	< 0.005	—	16.5
Waste	—	—	—	—	—	—	—	—	—	—	—	3.43	0.00	3.43	0.34	0.00	—	12.0
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.15	0.15

Total	2.59	2.82	0.43	5.92	0.02	0.58	0.42	1.00	0.57	0.11	0.68	79.0	781	860	0.61	0.02	0.19	883
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.26	0.23	0.18	1.82	< 0.005	< 0.005	0.40	0.40	< 0.005	0.10	0.10	—	439	439	0.02	0.02	0.66	446
Area	0.19	0.65	0.01	0.59	< 0.005	0.04	—	0.04	0.04	—	0.04	5.13	10.6	15.8	0.02	< 0.005	—	16.2
Energy	0.01	< 0.005	0.08	0.03	< 0.005	0.01	—	0.01	0.01	—	0.01	—	179	179	0.01	< 0.005	—	179
Water	—	—	—	—	—	—	—	—	—	—	—	0.64	15.4	16.0	< 0.005	< 0.005	—	16.5
Waste	—	—	—	—	—	—	—	—	—	—	—	3.43	0.00	3.43	0.34	0.00	—	12.0
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.15	0.15
Total	0.45	0.89	0.28	2.44	0.01	0.05	0.40	0.45	0.05	0.10	0.15	9.20	643	653	0.40	0.02	0.80	670
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.05	0.04	0.03	0.33	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	72.6	72.6	< 0.005	< 0.005	0.11	73.8
Area	0.03	0.12	< 0.005	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	0.85	1.76	2.61	< 0.005	< 0.005	—	2.68
Energy	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	29.6	29.6	< 0.005	< 0.005	—	29.7
Water	—	—	—	—	—	—	—	—	—	—	—	0.11	2.55	2.65	< 0.005	< 0.005	—	2.74
Waste	—	—	—	—	—	—	—	—	—	—	—	0.57	0.00	0.57	0.06	0.00	—	1.99
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	0.08	0.16	0.05	0.45	< 0.005	0.01	0.07	0.08	0.01	0.02	0.03	1.52	107	108	0.07	< 0.005	0.13	111

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	0.51	4.69	5.79	0.01	0.19	—	0.19	0.17	—	0.17	—	852	852	0.03	0.01	—	855
Demolition	—	—	—	—	—	—	1.28	1.28	—	0.19	0.19	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.7	11.7	< 0.005	< 0.005	—	11.7
Demolition	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.93	1.93	< 0.005	< 0.005	—	1.94
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.06	0.64	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	134	134	0.01	< 0.005	0.01	135
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.08	0.02	1.37	0.51	0.01	0.01	0.28	0.29	0.01	0.08	0.09	—	1,058	1,058	0.06	0.17	0.06	1,110
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.86	1.86	< 0.005	< 0.005	< 0.005	1.89
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.5	14.5	< 0.005	< 0.005	0.01	15.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.31
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.40	2.40	< 0.005	< 0.005	< 0.005	2.52

3.3. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.60	0.50	4.60	5.56	0.01	0.24	—	0.24	0.22	—	0.22	—	858	858	0.03	0.01	—	861
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.8	11.8	< 0.005	< 0.005	—	11.8
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.95	1.95	< 0.005	< 0.005	—	1.95
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.03	0.32	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	66.9	66.9	< 0.005	< 0.005	0.01	67.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.93	0.93	< 0.005	< 0.005	< 0.005	0.94
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.15	0.15	< 0.005	< 0.005	< 0.005	0.16
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	1.19	11.4	10.7	0.02	0.53	—	0.53	0.49	—	0.49	—	1,713	1,713	0.07	0.01	—	1,719
Dust From Material Movement	—	—	—	—	—	—	2.08	2.08	—	1.00	1.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	23.5	23.5	< 0.005	< 0.005	—	23.5
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.89	3.89	< 0.005	< 0.005	—	3.90
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.48	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	100	100	< 0.005	< 0.005	0.01	102
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.22	0.06	3.75	1.39	0.02	0.04	0.76	0.80	0.04	0.21	0.24	—	2,892	2,892	0.16	0.46	0.17	3,034
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.40	1.40	< 0.005	< 0.005	< 0.005	1.41
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	39.6	39.6	< 0.005	0.01	0.04	41.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.23	0.23	< 0.005	< 0.005	< 0.005	0.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.56	6.56	< 0.005	< 0.005	0.01	6.89

3.7. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.56	5.60	6.98	0.01	0.26	—	0.26	0.23	—	0.23	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.78	0.97	< 0.005	0.04	—	0.04	0.03	—	0.03	—	181	181	0.01	< 0.005	—	182
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.14	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.0	30.0	< 0.005	< 0.005	—	30.1
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.18	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	38.5	38.5	< 0.005	< 0.005	< 0.005	39.0
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	27.6	27.6	< 0.005	< 0.005	< 0.005	28.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.43	5.43	< 0.005	< 0.005	0.01	5.51
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.83	3.83	< 0.005	< 0.005	< 0.005	4.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.90	0.90	< 0.005	< 0.005	< 0.005	0.91
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.63	0.63	< 0.005	< 0.005	< 0.005	0.66
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.52	5.14	6.94	0.01	0.22	—	0.22	0.20	—	0.20	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.52	5.14	6.94	0.01	0.22	—	0.22	0.20	—	0.20	—	1,305	1,305	0.05	0.01	—	1,309
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.37	0.31	3.09	4.17	0.01	0.13	—	0.13	0.12	—	0.12	—	784	784	0.03	0.01	—	787
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.56	0.76	< 0.005	0.02	—	0.02	0.02	—	0.02	—	130	130	0.01	< 0.005	—	130
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	39.8	39.8	< 0.005	< 0.005	0.15	40.4
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	27.1	27.1	< 0.005	< 0.005	0.07	28.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.17	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	37.7	37.7	< 0.005	< 0.005	< 0.005	38.2
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	27.1	27.1	< 0.005	< 0.005	< 0.005	28.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	23.0	23.0	< 0.005	< 0.005	0.04	23.3
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	16.3	16.3	< 0.005	< 0.005	0.02	17.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.81	3.81	< 0.005	< 0.005	0.01	3.86
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.70	2.70	< 0.005	< 0.005	< 0.005	2.82
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	0.51	4.37	5.31	0.01	0.19	—	0.19	0.18	—	0.18	—	823	823	0.03	0.01	—	826
Paving	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.3	11.3	< 0.005	< 0.005	—	11.3
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.87	1.87	< 0.005	< 0.005	—	1.87
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	1.03	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	229	229	0.01	0.01	0.02	232
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.19	3.19	< 0.005	< 0.005	0.01	3.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.53	0.53	< 0.005	< 0.005	< 0.005	0.53
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	25.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.83	1.83	< 0.005	< 0.005	—	1.84
Architectural Coatings	—	0.36	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.30	0.30	< 0.005	< 0.005	—	0.30
Architectural Coatings	—	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.55	7.55	< 0.005	< 0.005	< 0.005	7.64
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.10	0.10	< 0.005	< 0.005	< 0.005	0.11
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.02	0.02	< 0.005	< 0.005	< 0.005	0.02
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Landscaping (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.86	1.51	< 0.005	0.03	—	0.03	0.02	—	0.02	—	245	245	0.01	< 0.005	—	246
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.71	6.71	< 0.005	< 0.005	—	6.73
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.11	1.11	< 0.005	< 0.005	—	1.11
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	32.8	32.8	< 0.005	< 0.005	< 0.005	33.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.91	0.91	< 0.005	< 0.005	< 0.005	0.92
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.15	0.15	< 0.005	< 0.005	< 0.005	0.15
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.27	0.24	0.17	1.96	< 0.005	< 0.005	0.42	0.42	< 0.005	0.11	0.11	—	463	463	0.02	0.02	1.56	470
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.27	0.24	0.17	1.96	< 0.005	< 0.005	0.42	0.42	< 0.005	0.11	0.11	—	463	463	0.02	0.02	1.56	470
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.26	0.24	0.19	1.81	< 0.005	< 0.005	0.42	0.42	< 0.005	0.11	0.11	—	444	444	0.02	0.02	0.04	450
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.26	0.24	0.19	1.81	< 0.005	< 0.005	0.42	0.42	< 0.005	0.11	0.11	—	444	444	0.02	0.02	0.04	450
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.05	0.04	0.03	0.33	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	72.6	72.6	< 0.005	< 0.005	0.11	73.8
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.05	0.04	0.03	0.33	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	72.6	72.6	< 0.005	< 0.005	0.11	73.8

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	80.4	80.4	< 0.005	< 0.005	—	80.7
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	80.4	80.4	< 0.005	< 0.005	—	80.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	80.4	80.4	< 0.005	< 0.005	—	80.7
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	80.4	80.4	< 0.005	< 0.005	—	80.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	13.3	13.3	< 0.005	< 0.005	—	13.4
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	13.3	13.3	< 0.005	< 0.005	—	13.4

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.01	< 0.005	0.08	0.03	< 0.005	0.01	—	0.01	0.01	—	0.01	—	98.3	98.3	0.01	< 0.005	—	98.6
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	< 0.005	0.08	0.03	< 0.005	0.01	—	0.01	0.01	—	0.01	—	98.3	98.3	0.01	< 0.005	—	98.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.01	< 0.005	0.08	0.03	< 0.005	0.01	—	0.01	0.01	—	0.01	—	98.3	98.3	0.01	< 0.005	—	98.6
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	< 0.005	0.08	0.03	< 0.005	0.01	—	0.01	0.01	—	0.01	—	98.3	98.3	0.01	< 0.005	—	98.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.3	16.3	< 0.005	< 0.005	—	16.3
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.3	16.3	< 0.005	< 0.005	—	16.3

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	2.32	2.09	0.17	4.07	0.01	0.57	—	0.57	0.56	—	0.56	74.9	143	218	0.22	< 0.005	—	225
Consumer Products	—	0.44	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.04	0.04	< 0.005	0.45	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.22
Total	2.36	2.61	0.17	4.52	0.01	0.57	—	0.57	0.56	—	0.56	74.9	144	219	0.22	< 0.005	—	226
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	2.32	2.09	0.17	4.07	0.01	0.57	—	0.57	0.56	—	0.56	74.9	143	218	0.22	< 0.005	—	225
Consumer Products	—	0.44	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	2.32	2.57	0.17	4.07	0.01	0.57	—	0.57	0.56	—	0.56	74.9	143	218	0.22	< 0.005	—	225
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.03	0.03	< 0.005	0.05	< 0.005	0.01	—	0.01	0.01	—	0.01	0.85	1.62	2.47	< 0.005	< 0.005	—	2.55
Consumer Products	—	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	0.01	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.14	0.14	< 0.005	< 0.005	—	0.14
Total	0.03	0.12	< 0.005	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	0.85	1.76	2.61	< 0.005	< 0.005	—	2.68

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.64	15.4	16.0	< 0.005	< 0.005	—	16.5
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.64	15.4	16.0	< 0.005	< 0.005	—	16.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.64	15.4	16.0	< 0.005	< 0.005	—	16.5
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.64	15.4	16.0	< 0.005	< 0.005	—	16.5

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.11	2.55	2.65	< 0.005	< 0.005	—	2.74
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.11	2.55	2.65	< 0.005	< 0.005	—	2.74

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	3.43	0.00	3.43	0.34	0.00	—	12.0
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.43	0.00	3.43	0.34	0.00	—	12.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	3.43	0.00	3.43	0.34	0.00	—	12.0
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	3.43	0.00	3.43	0.34	0.00	—	12.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.57	0.00	0.57	0.06	0.00	—	1.99
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.57	0.00	0.57	0.06	0.00	—	1.99

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.15	0.15
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.15	0.15
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.15	0.15
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.15	0.15
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	10/1/2024	10/7/2024	5.00	5.00	—
Site Preparation	Site Preparation	10/8/2024	10/14/2024	5.00	5.00	—
Grading	Grading	10/15/2024	10/21/2024	5.00	5.00	—
Building Construction	Building Construction	10/22/2024	11/3/2025	5.00	270	—
Paving	Paving	11/4/2025	11/10/2025	5.00	5.00	—
Architectural Coating	Architectural Coating	11/11/2025	11/17/2025	5.00	5.00	—
Landscaping	Trenching	11/11/2025	11/24/2025	5.00	10.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	2.00	6.00	84.0	0.37
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	1.00	367	0.40
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73

Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	6.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	4.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Landscaping	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	10.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	15.0	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT

Site Preparation	—	—	—	—
Site Preparation	Worker	5.00	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	7.50	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	41.0	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	2.88	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	0.86	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.58	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Landscaping	—	—	—	—
Landscaping	Worker	2.50	18.5	LDA,LDT1,LDT2

Landscaping	Vendor	—	10.2	HHDT,MHDT
Landscaping	Hauling	0.00	20.0	HHDT
Landscaping	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	41,974	13,991	0.00	0.00	0.00

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	6,500	—
Site Preparation	0.00	0.00	2.50	0.00	—
Grading	0.00	1,633	3.75	0.00	—
Paving	0.00	0.00	0.00	0.00	0.35

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Single Family Housing	0.17	100%
Other Non-Asphalt Surfaces	0.17	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	532	0.03	< 0.005
2025	0.00	532	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Single Family Housing	75.5	76.3	68.4	27,235	580	586	525	209,013
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—

Wood Fireplaces	0
Gas Fireplaces	7
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	1
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
41974.2	13,991	0.00	0.00	457

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	55,161	532	0.0330	0.0040	306,683
Other Non-Asphalt Surfaces	0.00	532	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	298,190	1,606,178
Other Non-Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	6.37	—
Other Non-Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	6.82	annual days of extreme heat
Extreme Precipitation	4.00	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A

Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	22.2
AQ-PM	65.3
AQ-DPM	82.8
Drinking Water	25.8
Lead Risk Housing	64.4
Pesticides	0.00
Toxic Releases	99.6
Traffic	75.1
Effect Indicators	—
CleanUp Sites	77.0
Groundwater	97.5
Haz Waste Facilities/Generators	88.4
Impaired Water Bodies	0.00
Solid Waste	93.7
Sensitive Population	—
Asthma	48.0
Cardio-vascular	54.7
Low Birth Weights	84.3
Socioeconomic Factor Indicators	—
Education	58.1
Housing	45.6
Linguistic	43.3
Poverty	58.5
Unemployment	47.0

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	32.15706403
Employed	52.68831002
Median HI	32.92698576
Education	—
Bachelor's or higher	51.02014629
High school enrollment	100
Preschool enrollment	11.52316181
Transportation	—
Auto Access	46.70858463
Active commuting	52.52149365
Social	—
2-parent households	20.03079687
Voting	65.61016297
Neighborhood	—
Alcohol availability	26.84460413
Park access	81.35506224
Retail density	88.87463108
Supermarket access	51.14846657
Tree canopy	47.51700244
Housing	—
Homeownership	22.86667522
Housing habitability	27.5888618
Low-inc homeowner severe housing cost burden	86.05158476

Low-inc renter severe housing cost burden	31.04067753
Uncrowded housing	19.18388297
Health Outcomes	—
Insured adults	10.6249198
Arthritis	0.0
Asthma ER Admissions	54.9
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	25.3
Cognitively Disabled	13.7
Physically Disabled	55.6
Heart Attack ER Admissions	51.6
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	64.7
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—

Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	40.5
Elderly	86.8
English Speaking	57.4
Foreign-born	57.8
Outdoor Workers	50.5
Climate Change Adaptive Capacity	—
Impervious Surface Cover	14.3
Traffic Density	78.6
Traffic Access	49.9
Other Indices	—
Hardship	69.5
Other Decision Support	—
2016 Voting	13.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	79.0
Healthy Places Index Score for Project Location (b)	34.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Development of eight two-story single-family residential units (4 bedrooms, 4 baths, inclusive of 432 sqft garage), paved area is approximately 7621 sqft, landscaped area is per LID report 7369 sqft.
Construction: Construction Phases	Phase duration per applicant provided 11/26/2023
Construction: Off-Road Equipment	All equipment per CalEEMod defaults with exception of Lanscaping equipment per applicant inclusive of one skidsteer, 8 hours/day
Construction: Paving	For conservative emissions estimates, driveway is assumed to be 100 asphalt, although permeable pavers may actually be used.
Operations: Water and Waste Water	100% Aerobic wastewater treatment at Long Beach Water Reclamation Plan

Appendix E

Low Impact Development Report

Catalyst
ENVIRONMENTAL SOLUTIONS

LOW IMPACT DEVELOPMENT STUDY

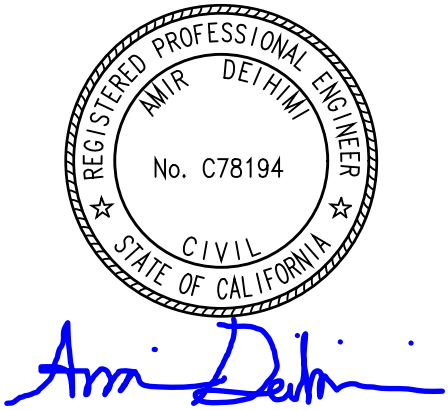
(LID)

Project Location:

1933 Temple Ave,
Signal Hill, CA 90755

Prepared for:

SIGNAL VENTURES LLC
821 W TAFT AVE,
ORANGE, CA 92865



Preparation Date

April 04, 2023

I. Introduction

The project consists of the design and construction of eight new single family houses for BHT Temple Venture, LLC at 2671 Bayshore Dr, Newport Beach, CA 91384. No Infrastructure will be transferred to Public Agencies. No known Significant Ecological Area (SEA).

A. Project Description

The proposed development will drain to underground Cudo to infiltrate.

The proposed project site is approximately 0.598-acres without dedication, with 0.197 acres of impervious area, and 0.401 acres of pervious area.

Total Area = 26,061 SF	= 0.598 acres
Building Area	= 10,448 SF
Hardscape Area	= 1,134 SF
Gravel Driveway	= 6,840 SF
Landscape Area	= 7,639 SF

This project is a Large-Scale Designated Project, as defined by the County of Los Angeles Department of Public Works low Impact Development Standards Manual, dated February 2014 for the following reasons:

Large-Scale Non-Designated Projects – all residential development and redevelopment of five units or greater and all non-residential development or redevelopment.

- Where 50 percent or more of the impervious surface of a previously developed site is proposed to be altered and the previous development project was not subject to post-construction stormwater quality control measures, the entire development site (e.g., both the existing development and the proposed alteration) must meet the requirements of the LID Standards Manual.
- Where less than 50 percent of the impervious surface of a previously developed site is proposed to be altered and the previous development project was not subject to post-construction stormwater quality control measures, only the proposed alteration must meet the requirements of the LID Standards Manual.

B. Drainage Characteristics

The drainage area of the project site is approximately 0.598 acres. The area is on a sloped ground. The area is sloping from north toward the south direction. The drainage area is composed of building, driveway, parking and Landscaping. The existing run off is draining towards to south direction from north direction.

With the construction of building & driveway, the proposed drainage system of the area is described as follows:

All of storm water at the front yard, back yard, side yard and driveway will be collected by area drains. All storm water will go through the drain in the landscaping and then through the CUDO system. If the CUDO system is full, stromwater will overflow from the southeast corner catch basin to the street via parkway drain.

C. Pollutants of Concerns

Pollutants of concern include trash and dried leaves, twigs from the trees and shrubs, silt, pesticides and fertilizers in the planter areas.

II. Best Management Practices (BMPs)

The following is a list of all BMPs to be implemented on site:

A. Structural BMPs

1. Kristar FloGard Catch Basin Filter Insert

Kristar Trench Dain Filter Insert, by Kristar Enterprises, Inc. which will be installed in trench drain, are being proposed as structural BMPs for the removal of silt and debris in storm water runoff. The filter inserts have been selected to accommodate, up to and including, the 85th percentile storm event.

2. Cudo System

The project will propose to install a cudo system to treat stromwater.

B. Non-structural BMPs

1 Open paved areas and planter areas

a. Regular sweeping of all open and planter areas, at a minimum, on a weekly basis in order to prevent dispersal of pollutants that may collect those surfaces.

b. Regular pruning of trees and shrubs in the planter areas to avoid formation of dried leaves and twigs, which are normally blown by the wind during windy days. These dried leaves are likely to clog the surface inlets of the drainage system when rain comes, which would result to flooding of the surrounding area due to reduced flow capacities of the inlets.

c. Trash and recycling containers shall be used such that, If they are to be located outside or apart from the principal structure, are fully enclosed and watertight in order to prevent contact of storm water with waste matter, which can be a potential source of bacteria and other pollutants in runoff. These containers shall be emptied and wastes disposed of properly on a regular basis.

2. Education and Training

The owner shall be made aware of the structural BMPs installed in the project. Information materials, such as brochures, shall also be provided for their complete information. The Owner shall also be briefed about chemical management and proper methods of handling and disposal of wastes and should understand the on-site BMPs and their maintenance requirements.

3. Landscaping

Minimize the use of pesticides and fertilizers to the maximum extent practical.

4. Monitoring and Maintenance

a. All BMPs shall be operated, monitored, and maintained for the life of the project and at a minimum, all structural BMPs shall be inspected, cleaned-out, and where necessary, repaired, at

the following minimum frequencies: 1) prior to October 15th each year; 2) during each month between October 15th and April 15th of each year and, 3) at least twice during the dry season (between April 16 and October 14 of each year).

b. Debris and other water pollutants removed from structural BMPs during cleanout shall be contained and disposed of in a proper manner

c. The drainage system and associated structures and BMPs shall be maintained according to manufacturer's specification to ensure maximum pollutant removal efficiencies.

EXHIBITS

EXHIBIT 1: GRADING AND DRAINAGE PLAN

APPENDIX A

LID CALCULATIONS

PRECISE GRADING PLAN

FOR

THE COURTYARD

1933 TEMPLE AVENUE, SIGNAL HILL, CA 90755

GENERAL NOTES

1. ALL WORK AND MATERIAL REQUIRED BY THESE PLANS SHALL BE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION," LATEST EDITION, INCLUDING AMENDMENTS AND SUPPLEMENTS THERETO AS PROMULGATED BY A.G.C. AND A.P.W.A., THE UNIFORM BUILDING CODE CHAPTER 33 (EXCAVATION AND GRADING) AND ORDINANCES OF THE CITY OF SIGNAL HILL.

2. APPLICABLE GEOLOGIC AND/OR SOIL REPORTS WHICH HAVE BEEN REVIEWED AND APPROVED BY THE BUILDING OFFICIAL INCLUDING ALL SUPPLEMENTS, ADDENDA, AND AMENDMENTS THERETO ARE INCLUDED AS PART OF THEIR PLANS BY REFERENCE. COPIES OF THESE REPORTS ARE ON FILE IN THE OFFICES OF _____ (CIVIL ENGINEER) AND CITY OF SIGNAL HILL BUILDING AND SAFETY DEPARTMENT ALL RECOMMENDATIONS CONTAINED THEREIN MUST BE FOLLOWED.

3. THE CONTRACTOR IS REQUIRED TO FAMILIARIZE HIMSELF WITH THE PLANS, THE SOIL AND/OR GEOLOGIC REPORTS, CONDITIONS OF THE GRADING PERMIT AND THE SITE PRIOR TO COMMENCING WORK. ALL SLOPES SHALL BE A MAXIMUM OF 2:1 OR FLATTER AS RECOMMENDED BY THE SOIL ENGINEER.

4. PROPOSED STARTING DATE _____; PROPOSED COMPLETION DATE _____.

5. ESTIMATED QUANTITY OF CUT _____ CU. YDS. ESTIMATED QUANTITY OF FILL _____ CU. YDS.

6. NO WORK WHATSOEVER SHALL BE STARTED IN OR ABOUT A GRADING PROJECT WITHOUT FIRST GIVING AT LEAST TWO (2) WORKING DAYS NOTICE TO THE BUILDING OFFICIAL AND THE CIVIL ENGINEER.

7. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES, CONDUITS, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST KNOWLEDGE OF THE CIVIL ENGINEER THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLAN. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THESE DRAWINGS. THE CONTRACTOR FURTHER ASSUMES ALL LIABILITY AND RESPONSIBILITY FOR THE UTILITY PIPES, CONDUITS, OR STRUCTURES SHOWN OR NOT SHOWN ON THIS DRAWING. THE CIVIL ENGINEER TAKES NO RESPONSIBILITY FOR UNDERGROUND STRUCTURES AND LINES NO SHOWN ON THE PLANS.

8. THE OWNERS OF POLE LINES, PIPELINES, AND OTHER SUBSTRUCTURES IN THE AREA COVERED BY THESE PLANS SHALL BE NOTIFIED BY THE CONTRACTOR AT LEAST TWO (2) WORDING DAYS PRIOR TO COMMENCING WORK.

9. SECURE PERMISSION FROM THE CITY ENGINEER OF CONSTRUCTION, GRADING AND/OR DISCHARGE OF DRAINAGE WITHIN THE STREET RIGHT-OF-WAY.

10. THE HOURS OF OPERATION FOR GRADING AND MAINTENANCE OF EQUIPMENT SHALL BE PER CITY CODE.

11. CONTRACTOR SHALL KEEP THE CONSTRUCTION AREA SUFFICIENTLY DAMPENED TO CONTROL DUST CAUSED BY GRADING AND CONSTRUCTION. CONTRACTOR SHALL AT ALL TIMES PROVIDE REASONABLE CONTROL OF DUST CAUSED BY WIND.

12. ALL DEBRIS, EXCAVATED VEGETATION, AND/OR CONSTRUCTION MATERIALS ARE TO BE REMOVED FROM THE SITE. ALL EXCAVATED EARTH AND ROCK, REGARDLESS OF ITS SOURCE, NOT USED IN THE PLANNED FILLS WILL BE REMOVED FROM THE SITE. DEBRIS OR EARTH MUST BE REMOVED TO AN APPROVED FILL SITE, COUNTY DUMP, OR OTHER AUTHORIZED DUMPING LOCATION.

13. THE APPROVED SET OF PLANS, INCLUDING ALL APPROVED REVISIONS THERETO, SHALL BE ON THE JOB SITE AT ALL TIMES.

14. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CIVIL ENGINEER AND THE BUILDING OFFICIAL UPON DISCOVERING ANY DISCREPANCIES, ERRORS, OR OMISSIONS IN THE PLANS AND SHALL RECEIVE CLARIFICATION OF THOSE ITEMS PRIOR TO PROCEEDING.

15. NO CHANGES IN THE PLANS WILL BE MADE AND NO EXTRA WORD PERFORMED UNLESS SO APPROVED BY THE CIVIL ENGINEER AND BUILDING OFFICIAL.

16. WHEN EXPANSIVE SOILS AR ENCOUNTERED ON THE SITE, THE SOIL ENGINEER SHALL BE CONSULTED FOR RECOMMENDATIONS AS TO ITS SUITABILITY TO ACCEPT FILL OR TO BE USED AS FILL, OR POSSIBLE REMOVAL FROM BENEATH BUILDING SITES.

17. EXISTING GROUND TO BE FILLED SHALL FIRST BE STRIPPED OF VEGETATION, NONCOMPLYING FILL, OR OTHER INCOMPETENT MATERIAL. NO FILL SHALL BE PLACED UNLESS THE UNDERLYING SOIL OR BEDROCK HAS BEEN INVESTIGATED AND APPROVED BY THE SOIL ENGINEER AND/OR GEOLOGIST. SUBDRAINS WILL BE REQUIRED IN ALL NATURAL DRAINAGE COURSES OR SEEPAGE AREAS TO BE COVERED BY THE FILL, EXCEPT WHERE RECOMMENDED BY THE SOIL ENGINEER OR GEOLOGIST AS NOT BEING NECESSARY. THE LOCATION OF SUBDRAINS MUST BE RECORDED IN PLAN AND ELEVATION AND SHOWN ON "AS BUILT" PLANS.

18. NO ROCK OR SIMILAR MATERIAL GREATER THAN 12" IN DIAMETER WILL BE PLACED IN THE FILL UNLESS RECOMMENDATIONS FOR SUCH PLACEMENT HAVE BEEN SUBMITTED BY THE SOIL ENGINEER IN ADVANCE AND APPROVED BY THE BUILDING OFFICIAL.

19. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE CIVIL ENGINEER, SOIL ENGINEER, ENGINEERING GEOLOGIST, AND BUILDING OFFICIAL AT LEAST TWO (2) WORKING DAYS IN ADVANCE OF ANY REQUIRED INSPECTIONS AND/OR TESTS.

20. CONTINUOUS INSPECTION SHALL BE PROVIDED BY THE SOIL ENGINEER OR HIS RESPONSIBLE REPRESENTATIVE FOR ALL FILLS THAT WILL EXCEED A VERTICAL HEIGHT OR DEPTH OF THIRTY (30) FEET.

21. FILL IS TO BE COMPACTED TO NOT LESS THAN 90% OF MAXIMUM DENSITY AS DETERMINED BY TESTING. (FILL TO BE PLACED IN LEVEL LAYERS NOT EXCEEDING 6" IN DEPTH AND MECHANICALLY COMPACTED WITH SHEEPSFOOT ROLLER, CRAWLER TRACTOR, AND WATER.)

22. TESTS TO DETERMINE FIELD DENSITY OF THE COMPACTED FILL SOILS SHALL BE MADE ON THE BASIS OF NOT LESS THAN ONE TEST FOR EACH 2-FOOT VERTICAL LIFT OF THE FILL BUT NOT LESS THAN ONE TEST FOR EACH 500 CUBIC YARDS OF MATERIAL PLACED. AT LEAST ONE-HALF OF THE REQUIRED TESTS SHALL BE MADE AT THE LOCATION OF THE FINAL FILL SLOPE, EXCEPT THAT NOT MORE THAN ONE SUCH TEST NEED BE MADE FOR EACH 50 HORIZONTAL FEET OF SLOPE IN EACH 2- FOOT VERTICAL LIFT. ADDITIONAL TESTS SHALL BE PERFORMED WHERE DEEMED NECESSARY BY THE SOIL ENGINEER OR THE BUILDING OFFICIAL. ALL SUCH DENSITY TEST SHALL BE REASONABLY UNIFORMLY DISTRIBUTED WITHIN THE FILL OR FILL SLOPE SURFACE. RESULTS OF SUCH TESTING AND LOCATION OF TEST SHALL BE PRESENTED IN THE SOIL ENGINEER'S REPORT.

23. FIELD DENSITY WILL BE DETERMINED AS RECOMMEMDED BY SOIL ENGINEER AND APPROVED IN ADVANCE BY THE BUILDING OFFICIAL.

24. SUFFICIENT TESTS OF SOIL PROPERTIES, INCLUDING SOIL TYPES AND SHEAR STRENGTH, SHALL BE MADE DURING GRADING OPERATIONS TO VERIFY COMPLIANCE WITH DESIGN CRITERIA. THE RESULTS OF SUCH TESTING SHALL BE FURNISHED TO THE BUILDING OFFICIAL UPON THE COMPLETION OF GRADING OPERATION OR WHEN NECESSITATED BY VARYING FIELD CONDITIONS, UPON REQUEST BY THE BUILDING OFFICIAL.

25. GRADING SHALL NOT VARY MORE THAN 0.02 FEET UNDER AREAS TO BE PAVED FOR WALKS, DRIVEWAYS, CURB AND GUTTER, AND BUILDING OR STRUCTURE SLABS.

26. ENGINEER MUST SET GRADE STAKES FOR ALL DRAINAGE DEVICES AND CONTRACTOR SHALL OBTAIN INSPECTION OF THE BUILDING OFFICIAL BEFORE POURING.

27. PROVISIONS WILL BE MADE FOR CONTRIBUTORY DRAINAGE AT ALL TIMES.

28. SEPARATE PLANS FOR TEMPORARY DRAINAGE AND EROSION CONTROL MEASURES TO BE USED DURING THE RAINY SEASON WILL BE SUBMITTED AND APPROVAL OBTAINED PRIOR TO OCTOBER 1. THE CONTROL DEVICES SHOWN ON SAID PLANS WILL BE INSTALLED BY NOT LATER THAN NOVEMBER 1, AND MAINTAINED IN OPERABLE CONDITION UNTIL APRIL 15TH. (PLANS ARE TO BE PREPARED BY THE CIVIL ENGINEER.)

29. FINISHED GRADING WILL BE COMPLETED AND APPROVED AND SLOPE PLANTING AND IRRIGATION SYSTEMS INSTALLED BEFORE OCCUPANCY OF BUILDINGS.

30. INSPECTION OF EXCAVATION AND FILLS. THE PERMITTEE OR HIS AGENT SHALL NOTIFY THE BUILDING OFFICIAL A MINIMUM OF TWENTY-FOUR (24) HOURS BEFORE THE GRADING OPERATION IS READY FOR EACH OF THE FOLLOWING INSPECTIONS:

A. INITIAL INSPECTION: WHEN THE PERMITTEE IS READY TO BEGIN WORK, BUT BEFORE ANY GRADING OR BRUSHING IS STARTED.

B. TOE INSPECTION: AFTER THE NATURAL GROUND IS EXPOSED AND PREPARED TO RECEIVE, FILL OUT BEFORE ANY FILL IS PLACED.

C. EXCAVATION INSPECTION: AFTER THE EXCAVATION EMPLACEMENT IS STARTED, BUT BEFORE THE VERTICAL DEPTH OF THE EXCAVATION EXCEEDS TEN FEET.

D. FILL INSPECTION: AFTER THE FILL EMPLACEMENT IS STARTED, BUT BEFORE THE VERTICAL HEIGHT OF THE LIFTS EXCEEDS TEN FEET.

E. DRAINAGE DEVICE INSPECTION: AFTER FORMS AND PIPES ARE IN PLACE, BUT BEFORE ANY CONCRETE IS PLACED.

F. ROUGH GRADING: THE SITE WILL BE CONSIDERED READY FOR ROUGH GRADING CERTIFICATION WHEN THE FOLLOWING ITEMS ARE COMPLETE:

a. GRADING TO APPROPRIATE FINAL ELEVATIONS. (+0.10 FT.)

b. STAKING OF PROPERTY LINES.

c. LOCATION AND GRADIENT OF CUT AND FILL SLOPES.

d. LOCATION, CROSS-SECTIONAL CONFIGURATION AND FLOW-LINE GRADIENT OF DRAINAGE SWALES AND TERRACES (GRADING READY FOR PAVING).

e. BERMS INSTALLED WHERE INDICATED.

f. REQUIRED DRAINAGE SLOPES PROVIDED ON BUILDING PADS.

g. APPROVED IRRIGATION SYSTEM PLANS (WHERE REQUIRED).

h. RECEIPT OF GRADING INSPECTION CERTIFICATE (ROUGH GRADING).

G. FINAL GRADING: THE SITE WILL BE CONSIDERED READY FOR FINAL GRADING CERTIFICATION WHEN THE FOLLOWING ITEMS ARE COMPLETE:

a. ALL REQUIRED DEVICES HAVE BEEN INSTALLED.

b. SLOPE PLANTING ESTABLISHED AND IRRIGATION SYSTEMS PROVIDED
c. (WHERE REQUIRED)

d. ADEQUATE PROVISIONS HAVE BEEN MADE FOR DRAINAGE OF SURFACE
e. WATERS FOR EACH BUILDING SITE.

f. AS GRADED PLAN AND REQUIRED REPORTS HAVE BEEN SUBMITTED.

g. THE GRADING CONTRACTOR SHALL SUBMIT A STATEMENT IN WRITING THAT THE WORK UNDER HIS DIRECTION WAS PERFORMED IN ACCORDANCE WITH THE APPROVED PLANS AND REQUIREMENTS OF THIS CODE OR WHEREIN SUCH WORK WAS NOT IN ACCORDANCE WITH SUCH PLANS AND CODE (GRADING CONTRACTOR'S STATEMENT).

31. THE BUILDING OFFICIAL WILL APPROVE THE WORK INSPECTED OR WILL NOTIFY THE PERMITTEE OR HIS AGENT WHEREIN IF IT FAILS TO COMPLY WITH THE APPROVED PLANS AND SPECIFICATIONS AND APPLICABLE CODES.

32. ALL EXISTING WATER WELLS SHALL BE CAPPED IN ACCORDANCE WITH THE ORDINANCES AND STANDARDS OF THE CITY OF SIGNAL HILL.

33. ALL CISTERNS, CESSPOOLS, SEPTIC TANKS, UNDERGROUND VAULTS, BURIED TANKS, PIPELINES OR SIMILAR UNDERGROUND STRUCTURES FOUND TO EXIST DURING GRADING OPERATIONS SHALL BE REMOVED AND/OR FILLED TO THE SATISFACTION OF THE BUILDING OFFICIAL.

34. ALL ELEVATIONS, CONTOURS, CULTURAL FEATURES AND STRUCTURES SHOWN AS EXISTING ARE SHOWN ACCURATELY AS THEY EXISTED ON (DATE)_____ AS DETERMINED BY A SURVEY PERFORMED BY _____ DATED _____.

35. THE STOCKPILING OF EXCESS MATERIAL SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO EXCAVATION.

36. ALL OIL WELLS SHALL BE ABANDONED IN ACCORDANCE WITH STATE LAWS AND THE APPROVALS OF THE DIVISION OF OIL AND GAS OF THE DEPARTMENT OF NATURAL RESOURCES.

37. PRIOR TO FINAL APPROVAL, THE DESIGN CIVIL ENGINEER SHALL CERTIFY TO THE GRADING OPERATION.

38. DIRT ACCESS RAMPS OVER CURB AND GUTTER TO CONSTRUCTION SITES ARE NOT ALLOWED. WHEN NECESSARY FOR ENTRANCE TO SUCH CONSTRUCTION SITES, ASPHALT RAMPS WITH A MINIMUM 4" DIAMETER PIPE WILL BE CONSTRUCTED. SEE STANDARD PLAN NO. 234. ALL BASE, GRAVEL, SOIL OR OTHER MATERIAL CARRIED INTO THE ROADWAY BY CONTRACTOR'S PERSONNEL OR EQUIPMENT WILL BE CLEANED AS NECESSARY AND NO LESS THAN ONCE A DAY. TRUCK HAULING, BASE, GRAVEL, FILL OR EXPORT MATERIAL WITHIN CITY LIMITS WILL BE TARPED AS NECESSARY TO PERMIT MATERIALS FROM SPILLING INTO THE ROADWAY.

39. IF AT ANY TIME DURING CONSTRUCTION OF GRADING ANY PREVIOUSLY UNKNOWN WELLS OR PIPELINES ARE ENCOUNTERED ALL WORK WILL IMMEDIATELY CEASE UNTIL CLEARANCE IS RECEIVED FROM DEPARTMENT OF OIL AND GAS TO CONTINUE.

40. THE CITY ENGINEER'S SIGNATURE OF APPROVAL ON THESE PLANS SHALL NOT RELIEVE THE DESIGN CIVIL ENGINEER, CONTRACTOR AND OWNER FROM THE COMPLIANCE WITH STATE, COUNTY AND CITY CODES.

THE DESIGN CIVIL ENGINEER IS RESPONSIBLE FOR: CONFIRMING AND CORRELATING ALL DESIGN FEATURES, SPECIFICATIONS, QUANTITIES, DIMENSIONS AND PERMITS, AND PERFORMING THE WORK IN A PROFESSIONAL MANNER.

THESE PLANS HAVE BEEN CHECKED BY THE CITY OF SIGNAL HILL ONLY FOR CONFORMANCE WITH CITY STANDARDS AND SPECIFICATIONS, COMPLIANCE WITH DEVELOPMENT CONDITIONS, AND FOR GENERAL CONCEPTUAL APPROVAL OF THE DESIGN SHOWN THEREON. NO DETAILED MATHEMATICAL CHECK WAS MADE FOR THE ACCURACY OF THE EXISTING OF PROPOSED DIMENSIONS, LINES OR GRADES SHOWN INCLUDING ALL EXISTING UTILITIES SHOWN OR NOT SHOWN.

THE CITY ENGINEER'S SIGNATURE OF APPROVAL IS BASED ON CONFORMANCE OF THE PREVIOUS STATEMENTS.

41. CONSTRUCTION WITHIN THE PUBLIC RIGHT OF WAY SHALL REQUIRE A SEPARATE PERMIT.

42. RETAINING WALLS ARE NOT A PART OF THE GRADING PERMIT. A SEPARATE BUILDING PERMIT IS REQUIRED.

43. NOT WITH STANDING ANY OF THE ABOVE, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE TO ENSURE THAT ALL EROSION CONTROL MEASURES AND PRACTICES PROVIDED FOR THIS PROJECT ARE CONSISTENT WITH THE "CONSTRUCTION STORM WATER POLLUTION PREVENTION PLAN" FOR THIS PROJECT INCLUDING ANY MODIFICATIONS MADE FROM THE INFORMATION SHOWN HEREIN.

PAVING NOTES

1. AGGREGATE BASE SHALL BE CRUSHED AGGREGATE BASE ONLY, AS SPECIFIED IN SECTION 200-2 OF THE STANDARD SPECIFICATIONS. PLACEMENT SHALL BE AS SPECIFIED IN SECTION 301-2 OF THE STANDARD SPECIFICATIONS AND AT THE DEPTH AND LOCATIONS SHOWN ON THE PLANS.

2. A TACK COAT SHALL BE APPLIED TO ALL CONTACT SURFACES, INCLUDING ALL AREAS COLD PLANED OR SAWCUT, AND BETWEEN SUCCESSIVE COURSES AT A RATE OF 0.05 GALLON PER SQUARE YARD. TACK COAT SHALL BE AR-1000 PAVING ASPHALT.

3. REMOVE ALL ABANDONED PIPE LINES AND RELOCATE ALL ACTIVE PIPELINES WITHIN 12 INCHES OF BOTTOM OF THE CRUSHED AGGREGATE BASE AT NO COST TO THE CITY.

4. THE ASPHALT CONCRETE BASE COURSE SHALL BE CLASS B WITH PG 64-10 PAVING ASPHALT. THE ASPHALT CONCRETE FOR THE SURFACE COURSE, ASPHALT CONCRETE TRANSITIONS, LEVELING COURSE AND OVERLAYS SHALL BE CLASS C2 OR D2 WITH PG 64-10 PAVING ASPHALT.

5. a. MINIMUM STRUCTURAL SECTION FOR ON-SITE CONSTRUCTION IS 3' AC/4" CAB. STRUCTURAL SECTION SHALL BE BASED ON THE 'R' VALUE STATED IN THE SOIL REPORT AND A MINIMUM TI = 4.0

b. OFF-SITE (PUBLIC RIGHT OF WAY) :

STREET (LOCAL) MINIMUM - 4" AC/6" CAB, TI = 6.0
ALLEY MINIMUM - 6" PCC/4" CAB, TI = 6.0
SPECIAL DESIGN REQUIRED FOR OTHER STREETS.

6. SPECIAL DESIGN IS REQUIRED WHERE SITE IS USED BY OIL COMPANIES TO SERVICE THEIR FACILITIES AND REQUIRES APPROVAL OF THE OIL COMPANY WITH SIGNATURE ON THE PLANS.

STORM WATER NOTES:

MINIMUM BMP REQUIREMENTS FOR CONSTRUCTION ACTIVITIES FOR ALL DEVELOPMENT CONSTRUCTION PROJECTS

- ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEETFLOW, SWALES AREA DRAINS, NATURAL DRAINAGE COURSES OR WIND.
- STOCKPILES OR EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROMT HE SITE BY THE FORCE OF WIND AND WATER.
- FUELS, OILS, SOLVENTS AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROMT HE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
- NON-STORM WATER RUNOFF FROM EQUIPMENT AND VEHICLE WASHING AND ANY OTHER ACTIVITY SHALL BE CONTAINED AT THE PROJECT SITE.
- EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
- TRASH AND CONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.
- SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE RAODWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
- ANY SLOPE WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND OR WATER.
- ADDITIONAL BMPs WILL BE IMPLEMENTED AS DEEMED NECESSARY BY CITY INSPECTORS.

WM-1 MATERIAL DELIVERY AND STORAGE

PROVIDE A MATERIAL SOTRAGE AREA WITH SECONDARY CONTAINMENT AND/OR WEATHER PROTETION. NOTE THE MAINTENANCE PRACTICES AND SCHEDULE PROPOSED FOR THIS AREA.

WM-2 MATERIAL USE

HAZARDOUS MATERIALS, FERTILIZERS, PESTICIDES, PLASTERS, SOVENTS, PAINTS, AND OTHER COMPOUNDS MUST BE PROPERLY HANDLED IN ORDER TO REDUCE THE RISK OF POLLUTION OR CONTAMINATION. TRAINING AND INFORMATION ON PROCEDURES FOR THE PROPER USE OF ALL MATERIALS MUST BE AVAILABLE TO THE EMPLOYEES THAT APPLY SUCH MATERIALS.

WM-4 SPILL PREVENTION AND CONTROL

IDENTIFY SPILL PREVENTION AND CONTROL MEASURES THAT WILL BE TAKEN FOR ALL PROPOSED MATERIALS.IDENTIFY THE METHODS, BY WHICH ACCIDENTAL SPILLS WILL BE CLEANED AND PROPERLY DISPOSED OF.

WM-5 SOLID WASTE MANAGEMENT

PROVIDE DESIGNATED WASTE COLLECTION AREAS AND CONTAINERS. ARRANGE FOR REGULAR DISPOSAL. PROVIDE COVERED STORAGE WITH SECONDARY CONTAINMENT. CONTAINERS ARE REQUIRED TO PROTECT WASTE FROM RAIN TO PREVENT WATER POLLUTION AND PREVENT WIND DISPERSAL.

WM-6 HAZARDOUS WASTE MANAGEMENT

HAZARDOUS MATERIALS MUST BE DISPOSED OF IN ACCORDANCE WITH STATE AND FEDERAL REGULATIONS. IDENTIFY THE PROPOSED METHODS OF DISPOSAL AND ANY SPECIAL HANDLING CONTRACTS THAT MAY BE APPLICABLE.

WM-7 CONTAMINATED SOIL MANAGEMENT

PREVENT OR REDUCE THE DISCHARGE OF POLLUTANTS TO STORMWATER FROM CONTAMINATED SOIL AND HIGHLY ACIDIC OR ALKALINE SOILS BY CONDUCTING PRE-CONSTRUCTION SURVEYS, INSPECTING EXCAVATIONS REGULARLY, AND REMEDIATING CONTAMINATED SOIL PROMPTLY.

WM-8 CONCRETE WASTE MANAGEMENT

STORE DRY AND WET MATERIALS UNDER COVER. AVOID ON-SITE WASHOUT EXCEPT IN DESIGNATED AREAS AWAY FROM DRAINS, DITCHES, STREETS, AND STREAMS. CONCRETE WASTE DEPOSITED ON SITE SHALL SET-UP, BE BROKEN APART, AND DISPOSED OF PROPERLY. CONTAINMENT AND PROPER DISPOSAL IS REQUIRED FOR ALL CONCRETE WASTE.

WM-9 SANITARY / SEPTIC WASTE MANAGEMENT

UNTREATED RAW WASTEWATER IS NOT TO BE IDSCHARGED OR BURIED. SANITARY SEWER FACILITIES ON SITE ARE REQUIRED TO BE IN COMPLIANCE WITH LOCAL HEALTH AGENCY REQUIREMENTS. SANITARY OR SEPTIC WASTES MUST BE TREATED OR DISPOSED OF IN ACCORDANCE WITH STATE AND LOCAL REQUIREMENTS.

TC-1 STABILIZED CONSTRUCTION ENTRANCE

A STABILIZED ENTRANCE IS REQUIRED FOR ALL CONSTRUCTION SITES TO ENSURE THAT DIRT AND DEBRIS ARE NOT TRACKED ONTO THE ROAD OR ADJACENT PROPERTY. MAINTENANCE OF SUCH A SYSTEM IS REQUIRED FOR THE DURATION OF THE PROJECT. SUCH STABILIZATION MAY BE OF ROCK OR PAVED.

SE-1 SILT FENCE — ERODED SEDIMENTS MUST BE RETAINED ON SITE AND NOT
SE-3 SEDIMENT TRAP — PERMITTED TO ENTER THE DRAINAGE SYSTEM. MAY BE
SE-8 SAND BAGS — WAIVED AT THE SOLE DISCRETION OF THE CITY INSPECTOR IF OTHER EROSION CONTROL BMPs ARE DEEMED SUFFICIENT.

SHEET INDEX

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EARTH WORK QUANTITY

CUT	1,802	C.Y.
FILL	118	C.Y.
EXPORT	1,633	C.Y.
LOT SIZE:	26,061	SQ-FT
TOTAL IMPERVIOUS AREA:	8,605	SQ-FT

NOTE:
QUANTITIES SHOWN HERE ON ARE FOR PERMIT AND/OR BONDING PURPOSE ONLY.

OWNER

SIGNAL VENTURES LLC
821 W TAFT AVE,
ORANGE, CA 92865

DESIGN ARCHITECT

DCS DESIGN CONSTRUCTION SERVICES,
2201 E. WILLOW ST, STE D#319
SIGNAL HILL, CA 90755

SOIL ENGINEER

R MCCARTHY CONSULTING, INC.
23 CORPORATE PLAZA, SUITE 150
NEWPORT BEACH, CA 92660
949.629.2539 OFFICE

CIVIL ENGINEER

CORE STRUCTURE, INC.
23172 PLAZA POINTE DRIVE, SUITE #145
LAGUNA HILLS, CA 92653
(949) 954-7244

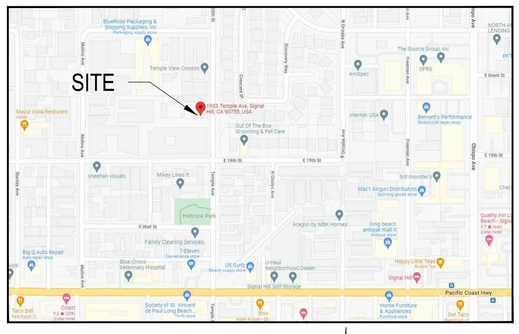
BASIS OF BEARING

THE BEARINGS SHOWN HEREON ARE BASED ON THE BEARING SOUTH OF A COURSE IN THE STREET CENTERLINE OF TEMPLE AVENUE AS SHOWN ON THE MAP OF THE PRICE & PETERSON TRACT , M.B. 12, PAGE 85.
APN: 7216-020-011
APN: 7216-021-002

BENCH MARK

CITY OF SIGNAL HILL BENCH MARK NO 055 LOCATION: PACIFIC COAST HWY. & TEMPLE AVE. DESCRIPTION: SE COR. BRASS CAP MON IN WELL 57' S & 22' E/O C.L INT. (3.5' E/O C.F. & 7' S/O B.C.R.) C.L.B. NO. 104
ELEVATION = 77.441' (1985)

SURVEY PROVIDED BY GM SURVEYING, SURVEYOR NAME: GEORGE BAJARAS, LIC# PLS 8399



VICINITY MAP
NOT TO SCALE

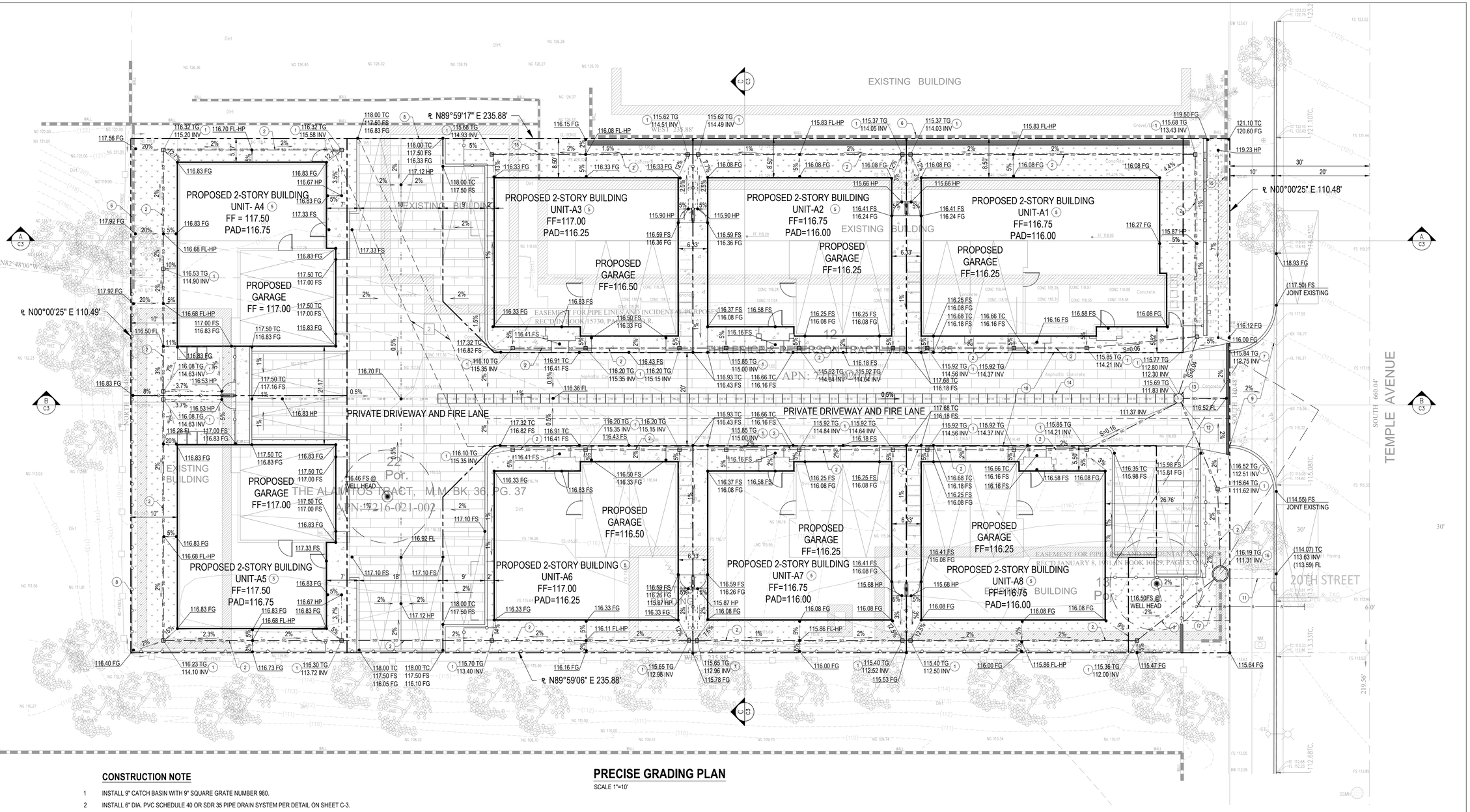
811 SECTION 4216 / 4217 OF THE GOVERNMENT CODE REQUIRES A DIGALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOU DIGALERT I.D. NUMBER CALL UNDERGROUND SERVICE ALERT TOLL FREE 1-800-422-4133 TOW WORKING DAY BEFORE YOU DIG.

REGISTERED PROFESSIONAL ENGINEER — AMIR DEIHIMI — No. C78194 Exp. 09-30-25 — CIVIL — STATE OF CALIFORNIA

REVISIONS					REFERENCES	
NO.	DATE	INITIAL	DESCRIPTION	APP.		

SCALE: AS SHOWN	DATE	SHEET
PREPARED UNDER THE SUPERVISION OF AMIR DEIHIMI R.C.E. NO. 78194 EXP 9/30/2025	05/23/2024	C-1 1 OF 5 SHEETS
DESIGNED BY A.L.		
REVIEWED BY A.L.		
APPROVED _____ CITY ENGINEER		

THE COURTYARD TITLE SHEET 1933 & 1939 TEMPLE AVENUE	SHEET C-1 1 OF 5 SHEETS
CITY OF SIGNAL HILL	22035 PLAN NUMBER



LEGEND

100	EXISTING CONTOUR
100	PROPOSED CONTOUR
100FS	SPOT ELEVATION
	PROPOSED CONCRETE AREA
	PROPOSED RETAINING WALL
	PROPOSED LANDSCAPE AREA
	PROPOSED PLANTER
	PROPOSED DRIVEWAY
SD	PROPOSED STORM DRAIN
	FLOW LINE
	PROPERTY LINE
S	SEWER LINE
X.X%	SURFACE SLOPE
S=X.X	STORM DRAIN SLOPE

PAD	PROPOSED PAD ELEVATION
FS	PROPOSED FINISHED SURFACE
FG	PROPOSED FINISHED GROUND
FF	PROPOSED FINISHED FLOOR
INV	INVERT OF PIPE
TG	TOP OF GRATE
PL	PROPERTY LINE
TW	TOP OF WALL
HP	HIGH POINT

CONSTRUCTION NOTE

1. INSTALL 9" CATCH BASIN WITH 9" SQUARE GRATE NUMBER 980.
2. INSTALL 6" DIA. PVC SCHEDULE 40 OR SDR 35 PIPE DRAIN SYSTEM PER DETAIL ON SHEET C-3.
3. INSTALL 24" x 24" BOTTOMLESS CATCH BASIN PER DETAIL 3 ON SHEET C-3.
4. INSTALL 18" DIA. PERFORATED PIPE DRAIN SYSTEM.
5. CONSTRUCT NEW BUILDING PER ARCHITECTURAL PLAN.
6. EXISTING WALL TO REMAIN.
7. INSTALL TRENCH DRAIN.
8. CONSTRUCT NEW WALL PER ARCHITECTURAL PLAN.
9. CONSTRUCT NEW DRIVEWAY APPROACH PER SPPWC STD. PLAN 110-2.
10. INSTALL PERMEABLE PAVER ON DRIVEWAY.
11. CONSTRUCT ONE (1) 1'-0" PARKWAY DRAIN PER SPPWC STD 151-2.
12. INSTALL 6" DIA. PVC SCHEDULE 80 PIPE DRAIN SYSTEM.
13. INSTALL CUDO WATER STORAGE SYSTEM MAINTENANCE ACCESS.
14. INSTALL 80 UNIT CUDO STORMWATER INFILTRATION SYSTEM DETAIL SEE SHEET C-3.
15. EXISTING WALL TO BE DEMOLISHED.
16. INSTALL SUMP PUMP AND SUMP PIT WITH ALHAMBRA GRATE.
17. INSTALL NEW SEWER LINE AND CLEANOUTS.

PRECISE GRADING PLAN

SCALE 1"=10'

PROPOSED EASEMENT NOTES

2 AN EASEMENT FOR SANITARY SEWER LINE, SUMP PUMP AND STORM WATER DRAIN LINE. (PENDING)

NOTE: FOR SMART HOMES SEWER AND STORM WATER EASEMENT AND CONSTRUCTION DRAWINGS REFER TO SMART HOMES CIVIL ENGINEER APPROVED PLANS. LOCATION OF SUMP PIT AND SEWER LINE SHOWN FOR GENERAL COORDINATION ONLY.

N

20 10 0 10 20

SCALE 1"= 10'

REGISTERED PROFESSIONAL ENGINEER
AMIR DEIHIMI
No. C78194
Exp. 09-30-25
CIVIL
STATE OF CALIFORNIA

REVISIONS

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REFERENCES

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DATE: 05/23/2024

PREPARED UNDER THE SUPERVISION OF
AMIR DEIHIMI
R.C.E. NO. 78194 EXP 9/30/2025

DESIGNED BY A.L.

REVIEWED BY A.L.

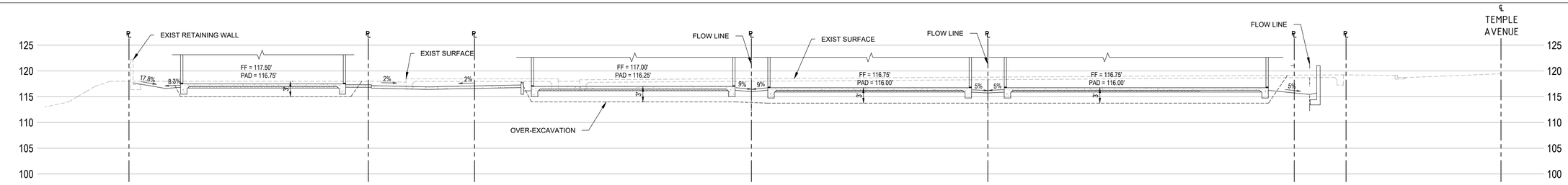
APPROVED _____ CITY ENGINEER

THE COURTYARD
PRECISE GRADING & DRAINAGE PLAN
1933 & 1939 TEMPLE AVENUE

CITY OF SIGNAL HILL

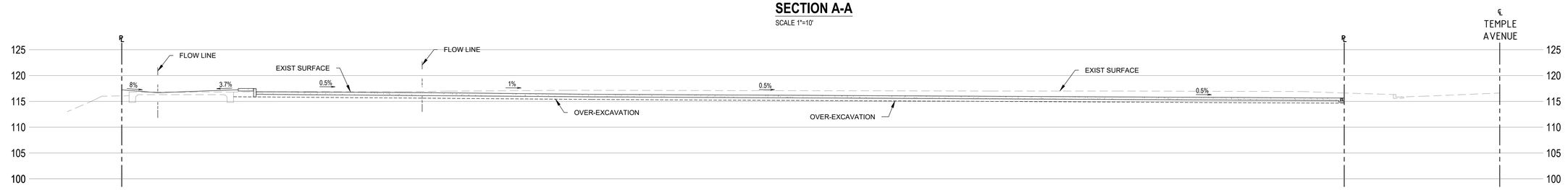
SHEET
C-2
2 OF 5 SHEETS

22035
PLAN NUMBER



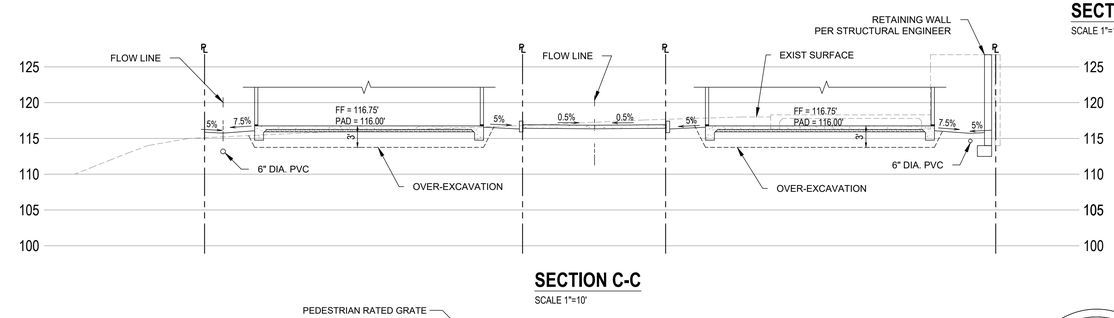
SECTION A-A

SCALE 1"=10'



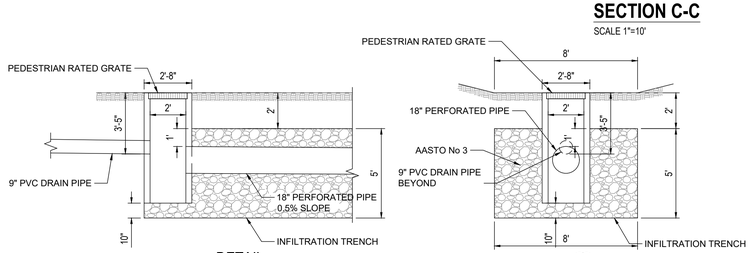
SECTION B-B

SCALE 1"=10'



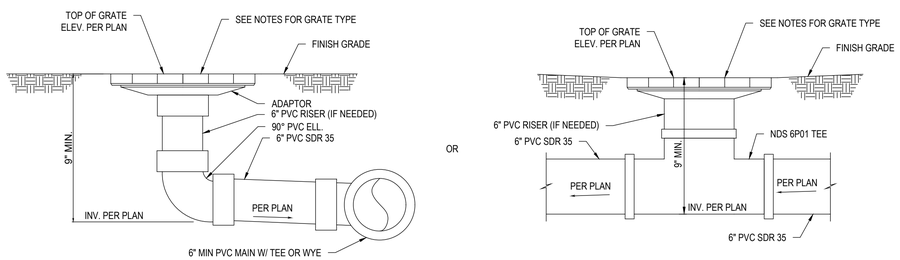
SECTION C-C

SCALE 1"=10'



DETAIL
BOTTOMLESS CATCH BASIN 3

1/4"=1'-0"

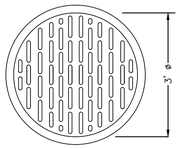


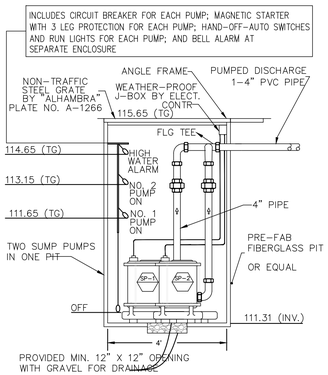
NOTE:

1. ALL FITTINGS BY: NDS, INC. (OR EQUAL) PHONE: 1-800-726-1994
2. REFER TO GRADING PLAN FOR FINISH GRADING.
3. DO NOT GLUE GRATE OR RISER TO PIPE.
4. GLUE "I.P.S. WELD ON" #773 SOLVENT (MEDIUM BODIED FAST SET) FOR PIPE THRU 6" Ø.
5. ALL PIPES TO BE 6" Ø PVC SDR 35 .

DETAIL
INLET DRAIN 2

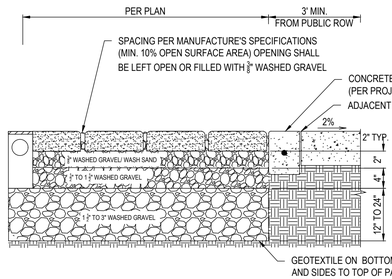
NOT TO SCALE





SUMP PUMP 2 (RAINWATER)

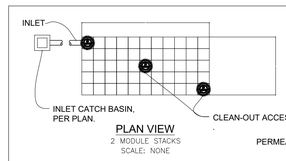
NTS



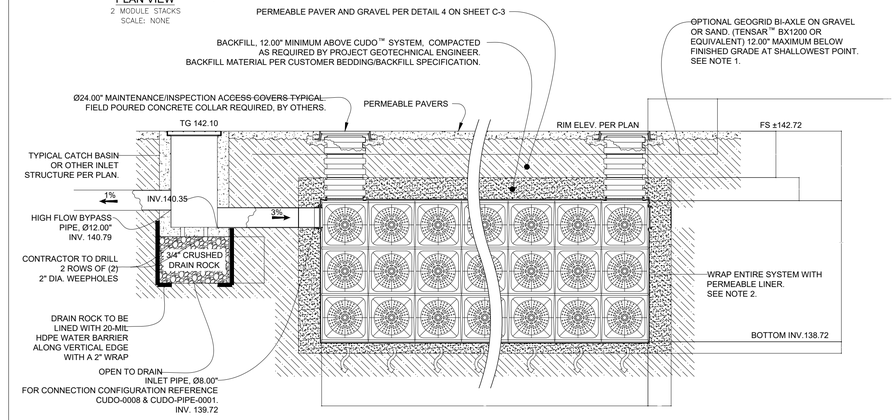
CUDO-IN-0001

DETAIL
PERMEABLE PAVEMENT 4

NOT TO SCALE



PLAN VIEW
2 MODULE STACKS
SCALE: NONE



SECTION / CUTAWAY VIEW

SCALE: NONE

NOTES:

1. INSTALL GEOGRID LAYER (TENSAR™ BX1200 OR EQUIVALENT) IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
2. SYSTEM ENCASED ENTIRELY WITH NONWOVEN POLYPROPYLENE GEOTEXTILE FILTER FABRIC AS REQUIRED.
3. FIELD POURED CONCRETE COLLAR REQUIRED AROUND ALL ACCESS COVERS & HATCHES, BY OTHERS.
4. ALL EXTERNAL PIPING & ANGLES BY OTHERS. REFER TO PLANS.

CUDO® Stormwater Infiltration System - *Typical Installation Detail* Impermeable Pavement Area

Oldcastle® Stormwater Solutions
7921 Southpark Plaza, Suite 200 | Littleton, CO | 80120 | Ph: 800.579.8819 | oldcastlestormwater.com

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DRAWING NO.	REV.	SIZE	SCALE	DATE	SHEET
CUDO-IN-0001	C	ECO-0154 ZHD 2/6/18	JPR 7/21/08		SHEET 1 OF 1

REGISTERED PROFESSIONAL ENGINEER — AMIR DEIHIMI — No. C78194 Exp. 09-30-25 — CIVIL — STATE OF CALIFORNIA

REVISIONS

NO.	DATE	INITIAL	DESCRIPTION	APP.

REFERENCES

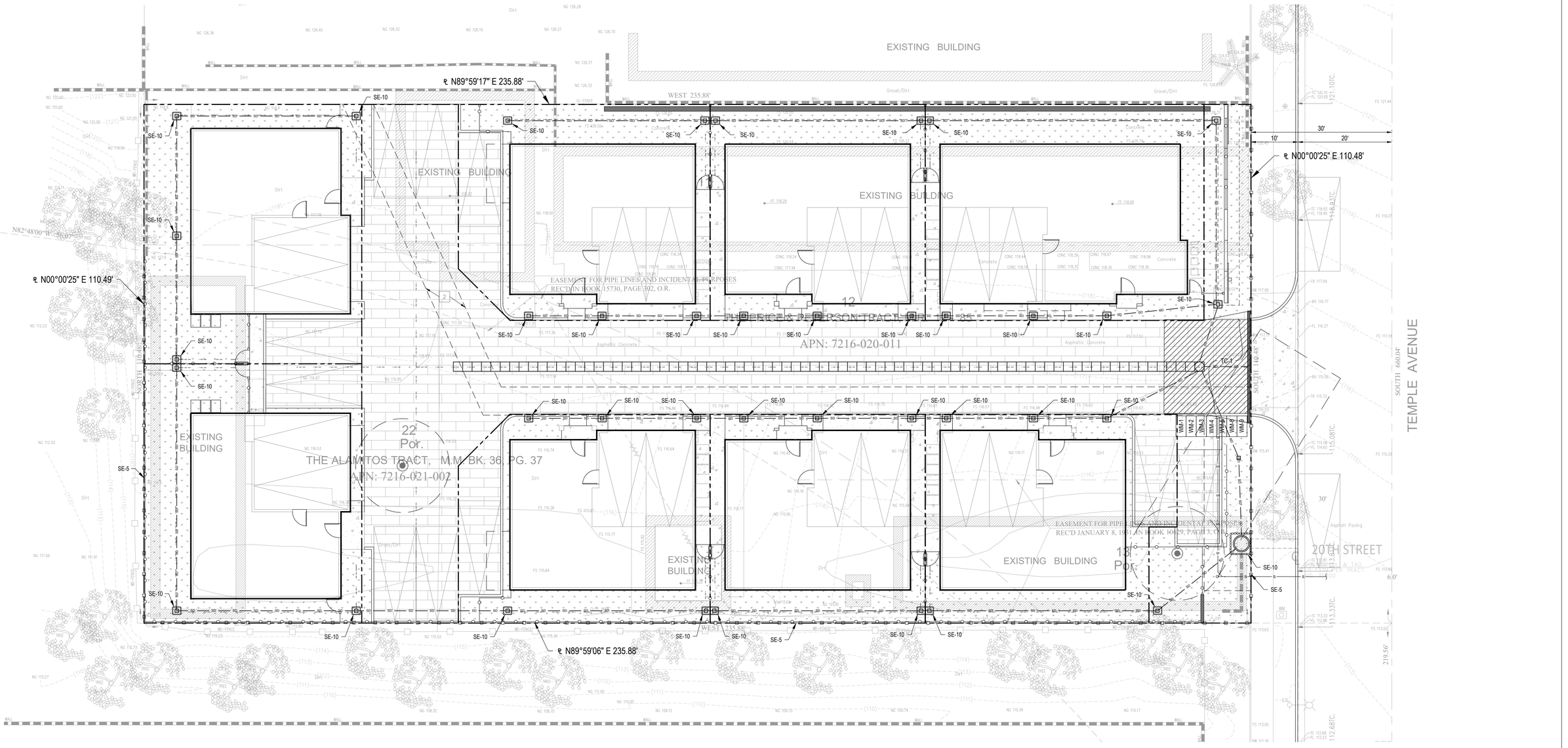
SCALE: AS SHOWN		DATE
PREPARED UNDER THE SUPERVISION OF AMIR DEIHIMI R.C.E. NO. 78194 EXP 9/30/2025		05/23/2024
DESIGNED BY	A.L.	
REVIEWED BY	A.L.	
APPROVED ____ CITY ENGINEER		

THE COURTYARD
SECTIONS & DETAILS
1933 & 1939 TEMPLE AVENUE

CITY OF SIGNAL HILL

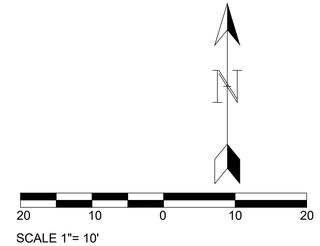
SHEET
C-3
3 OF 5 SHEETS

22035
PLAN NUMBER



EROSION CONTROL PLAN

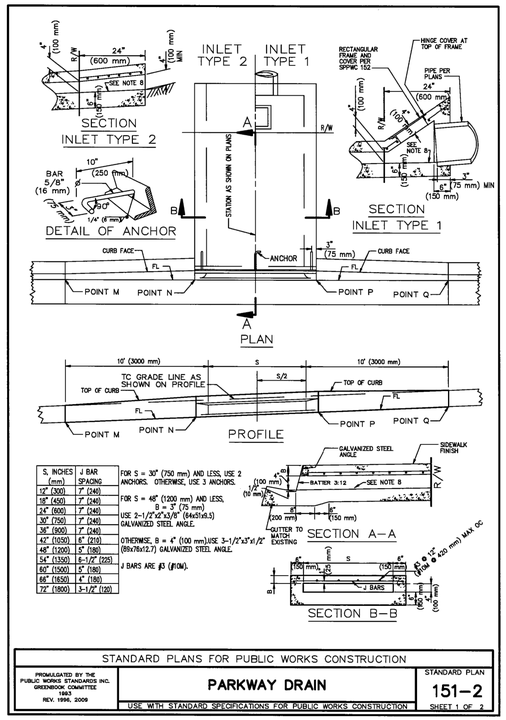
SCALE 1"=10'



SCALE 1"= 10'

REGISTERED PROFESSIONAL ENGINEER
AMIR DEIHIMI
No. C78194
Exp. 09-30-25
CIVIL
STATE OF CALIFORNIA

REVISIONS					REFERENCES		SCALE: AS SHOWN	DATE	THE COURTYARD EROSION CONTROL PLAN 1933 & 1939 TEMPLE AVENUE	SHEET C-4 4 OF 5 SHEETS
NO.	DATE	INITIAL	DESCRIPTION	APP.			PREPARED UNDER THE SUPERVISION OF AMIR DEIHIMI R.C.E. NO. 78194 EXP 9/30/2025	05/23/2024		
							DESIGNED BY A.L.			
							REVIEWED BY A.L.			
							APPROVED _____ CITY ENGINEER		CITY OF SIGNAL HILL	22035 PLAN NUMBER



S, INCHES (mm)	J BAR SPACING
12" (300)	7" (240)
18" (450)	7" (240)
24" (600)	7" (240)
30" (750)	7" (240)
36" (900)	7" (240)
42" (1050)	6" (210)
48" (1200)	5" (180)
54" (1350)	5-1/2" (225)
60" (1500)	5" (180)
66" (1650)	4" (180)
72" (1800)	3-1/2" (120)

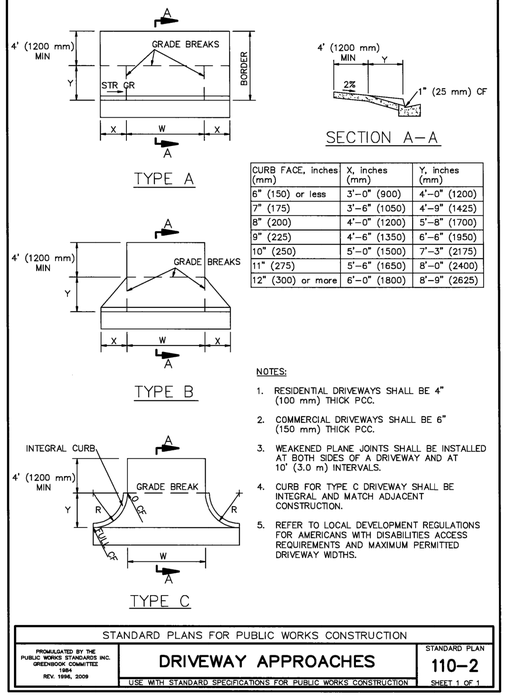
FOR S = 30" (750 mm) AND LESS, USE 2 ANCHORS. OTHERWISE, USE 3 ANCHORS.

FOR S = 48" (1200 mm) AND LESS, B = 3" (75 mm) USE 2–1/2"x2"x3/16" (64x51x5.5) GALVANIZED STEEL ANGLE.

OTHERWISE, B = 4" (100 mm),USE 3-1/2"x3"x1/2" (89x76x12.7) GALVANIZED STEEL ANGLE.

J BARS ARE #3 (#10M).

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION		
PROMULGATED BY THE PUBLIC WORKS STANDARDS INC. GREENBOOK COMMITTEE 1963 REV. 1996, 2009	**PARKWAY DRAIN** USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION	STANDARD PLAN 151–2 SHEET 1 OF 2



CURB FACE, inches (mm)	X, inches (mm)	Y, inches (mm)
6" (150) or less	3'–0" (900)	4'–0" (1200)
7" (175)	3'–6" (1050)	4'–9" (1425)
8" (200)	4'–0" (1200)	5'–8" (1700)
9" (225)	4'–6" (1350)	6'–6" (1950)
10" (250)	5'–0" (1500)	7'–3" (2175)
11" (275)	5'–6" (1650)	8'–0" (2400)
12" (300) or more	6'–0" (1800)	8'–9" (2625)

NOTES:

1. RESIDENTIAL DRIVEWAYS SHALL BE 4" (100 mm) THICK PCC.
2. COMMERCIAL DRIVEWAYS SHALL BE 6" (150 mm) THICK PCC.
3. WEAKENED PLANE JOINTS SHALL BE INSTALLED AT BOTH SIDES OF A DRIVEWAY AND AT 10' (3.0 m) INTERVALS.
4. CURB FOR TYPE C DRIVEWAY SHALL BE INTEGRAL AND MATCH ADJACENT CONSTRUCTION.
5. REFER TO LOCAL DEVELOPMENT REGULATIONS FOR AMERICANS WITH DISABILITIES ACCESS REQUIREMENTS AND MAXIMUM PERMITTED DRIVEWAY WIDTHS.

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION		
PROMULGATED BY THE PUBLIC WORKS STANDARDS INC. GREENBOOK COMMITTEE 1954 REV. 1996, 2009	**DRIVEWAY APPROACHES** USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION	STANDARD PLAN 110–2 SHEET 1 OF 1

NOTES

1. FLOOR OF BOX SHALL BE TROWELED SMOOTH.
2. IF THE TOE OF SLOPE IS ALLOWED WITHIN THE R/W, INLET TYPE 1 BEGINS AT THE TOE RATHER THAN AT THE R/W LINE.
3. FOR OPEN DITCH (TYPE 2), THE 24" (600 mm) EXTENSION BEYOND THE R/W LINE IS NOT REQUIRED WHEN BACK OF WALK IS 24" (600 mm) OR MORE FROM THE R/W LINE; HOWEVER, THE PIPE SHALL EXTEND TO THE R/W LINE IN ANY EVENT.
4. TOP OF INLET STRUCTURE (TYPE 1 & 2) SHALL BE FLUSH WITH ADJACENT SURFACE WHERE PRACTICAL.
5. A HEADED STEEL STUD 5/8" x 6–3/8" WITH A 1" HEAD (16 x 160 mm, 25 mm HEAD) ATTACHED BY A FULL PENETRATION BUTT WELD MAY BE USED AS AN ALTERNATE ANCHOR.
6. NORMAL CURB FACE AT POINT M AND Q. CURB FACE IS B + 5" (125 mm) AT POINT N AND P.
7. THE 3" (75 mm) LEG OF THE 5/8" (16 mm) DIA ANCHORS SHALL BE PARALLEL TO THE TOP OF SIDEWALK.
8. SLOPE = 2.0%

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION		
	PARKWAY DRAIN	STANDARD PLAN 151–2 SHEET 2 OF 2

EROSION CONTROL BMPS

EC-1	SCHEDULING	SCHEDULE PREPARED BY CONTRACTOR SHALL BE ON-SITE DURING CONSTRUCTION.

TEMPORARY SEDIMENT CONTROL

SE-5	FIBER ROLLS	INSTALL WHERE SHOWN ON PLAN.
SE-7	STREET SWEEPING AND VACUUMING	STREET SHALL BE SWEEPED, SEDIMENT COLLECTED, AND DISPOSED OF OFF-SITE ON A DAILY BASIS.
SE-10	STORM WATER INLET PROTECTION	ONCE INLET RISERS ARE CONSTRUCTED, SURROUND RISERS WITH GRAVEL BAGS OR CAP THE RISER TO REDUCE SEDIMENT INTRODUCTION TO THE AREA DRAIN SYSTEM.

WIND EROSION CONTROL BMPS

WE-1	WIND EROSION CONTROL	WATER OR COVER MATERIAL SHALL BE USED TO ALLEVIATE DUST NUISANCE ON THE ROUGH GRADED PADS AND ANY STOCKPILE AREAS.

TRACKING CONTROL

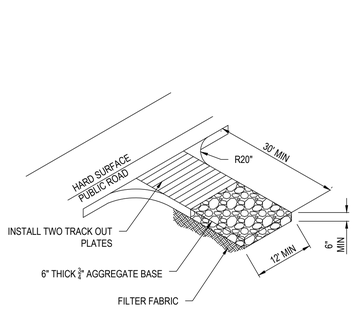
TC-1	STABILIZED CONSTRUCTION EXIT	RUMBLE RACK SHALL BE PLACED ON THE DRIVEWAY TO ENSURE THAT ALL VEHICLES LEAVING THE SITE PASS OVER THE DEVICES BEFORE ENTERING THE PUBLIC STREET.

NON-STORMWATER MANAGEMENT

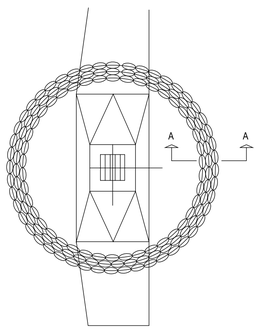
NS-1	WATER CONSERVATION PRACTICES	MAINTAIN WATER EQUIPMENT TO PREVENT NON-STORMWATER DISCHARGES.
NS-3	PAVING AND GRADING OPERATIONS	APPLY PARAMETER CONTROLS AND VACUUMING TO PREVENT NON-STORMWATER DISCHARGE.
NS-6	ILLICIT CONNECTION / ILLEGAL DISCHARGE	CONTRACTOR SHALL REPORT ILLICIT CONNECTIONS OR ILLEGALLY DUMPED MATERIALS ON SITE TO THE RESIDENT ENGINEER IMMEDIATELY AND CONTRACTOR SHALL TAKE NO FURTHER ACTION UNTIL THE RESIDENT ENGINEER PROVIDE A RESPONSE/
NS-7	POTABLE WATER / IRRIGATION	EXCISE CARE DURING CONSTRUCTION TO PREVENT NON-STORMWATER DISCHARGES.
NS-8	VEHICLE AND EQUIPMENT CLEANING	ALL VEHICLES AND EQUIPMENT WILL BE CLEANED OFF-SITE.
NS-9	VEHICLE AND EQUIPMENT FUELING	ALL VEHICLES AND EQUIPMENT WILL BE FUELED OFF-SITE.
NS-10	VEHICLE AND EQUIPMENT MAINTENANCE	ALL VEHICLES AND EQUIPMENT WILL BE MAINTAINED OFF-SITE.
NS-12	CONCRETE CURING	APPLIES TO ALL CONCRETE CONSTRUCTION.
NS-13	CONCRETE FINISHING	APPLIES TO ALL CONCRETE CONSTRUCTION.

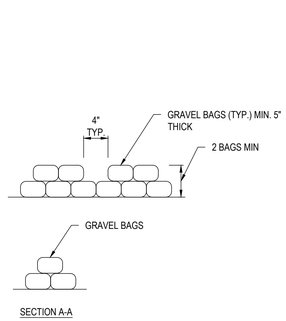
WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL

WM-1	MATERIAL DELIVERY AND STORAGE	MATERIALS SHALL BE STORED ON-SITE IN ORIGINAL MARKED CONTAINERS AND COVERED FROM RAIN AND WIND. MATERIAL INVENTORY SHALL CONSIST OF SUPPLY REQUIRED FOR A FEW DAYS.
WM-2	MATERIAL USE	MATERIALS FOR CONSTRUCTION SHALL BE USED IN ACCORDANCE WITH PRODUCT DIRECTION.
WM-3	STOCKPILE MANAGEMENT	MATERIALS STOCKPILES SHALL BE SURROUNDED BY A TEMPORARY SEDIMENT BARRIER AND COVERED TO MAINTAIN DUST CONTROL.
WM-4	SPILL PREVENTION AND CONTROL	AMPLE CLEAN-UP SUPPLIES FOR STORED MATERIALS SHALL BE KEPT ON-SITE. EMPLOYEE SHALL BE EDUCATED ON THE CLASSIFICATION OF SPILLS AND APPROPRIATE RESPONSES.
WM-5	SOLID WASTE MANAGEMENT	SOLID WASTE FROM CONSTRUCTION ACTIVITIES SHALL BE STORED IN APPROPRIATE CONTAINERS. FULL CONTAINERS SHALL BE DISPOSED OF PROPERLY.
WM-8	CONCRETE WASTE MANAGEMENT	AN ON-SITE CONCRETE WASHOUT AREA SHALL BE CONSTRUCTED, USED, AND DISPOSED OF IN A MANNER WHICH MEETS THE REQUIREMENT OF THE CITY.
WM-9	SANITARY / SEPTIC WASTE MANAGEMENT	ON-SITE FACILITY SHALL BE PROVIDED AND MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF THE PROJECT.

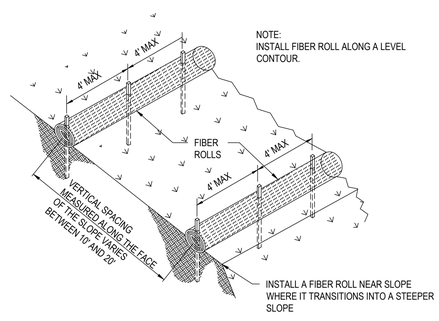


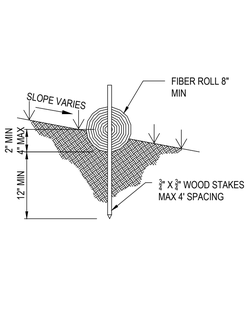
DETAIL
STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE





DETAIL
GRAVEL BAG FOR INLETS
NOT TO SCALE





DETAIL
FIBER ROLLS
NOT TO SCALE



REVISIONS					REFERENCES		SCALE: AS SHOWN	DATE	THE COURTYARD EROSION CONTROL DETAILS 1933 & 1939 TEMPLE AVENUE	SHEET C-5 5 OF 5 SHEETS
NO.	DATE	INITIAL	DESCRIPTION	APP.			PREPARED UNDER THE SUPERVISION OF AMIR DEIHIMI R.C.E. NO. 78194 EXP 9/30/2025	05/23/2024		
							DESIGNED BY A.L.			
							REVIEWED BY A.L.			
							APPROVED _____ CITY ENGINEER		CITY OF SIGNAL HILL	22035 PLAN NUMBER

Cudo Calculation

Total Area	0.598 acres
Soil Type	14
Impervious Area	0.2659 acres
Pervious Area	0.3324 acres
Percent Impervious	73.04%
Length of Flow Path	426
85th Percentile	0.6 inch
Q =	0.0338 cfs
V =	583.856 CF

Use 60 unit cudo system.
Total capacity: V-design = 80 x 7.6 CF = 608 CF > 583.856 CF, OK

Storage Capacity

2 x 2 x 2 x 95 = 7.6 ft3 (Storage Capacity)

(80 x 3) = 240 CUDO

Infiltration Rate	= 0.3 inch. / hr. = 0.025 ft. / hr.
Drain in 96 hrs.	= 0.025 ft. / hr. x 96 hr. = 2.4 ft.
Area (infiltration)	= V / 4.08 ft. = 583.856 ft3 / 4.08 ft. = 143.10 ft2

Area proposed > Area required
240 ft2 > 143.10 ft2

APPENDIX B

OPERATION AND MAINTENANCE PLAN

Operations and Maintenance (O&M) Plan

for

1933 Temple Avenue

Signal Hills, CA 90755

Tract No. 29304

APN: 7216-020-011

Owner:

Signal Venture, LLC
821 W Taft Ave
Orange, CA 92865

Operations and Maintenance Plan

BMP Applicable? Yes/No	BMP Name and BMP Implementation, Maintenance, and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Person or Entity with Operation & Maintenance Responsibility
Non-Structural Source Control BMPs			
Yes	**Education for Property Owners, Tenants and Occupants** Practical information material will be provided to the owner on general good housekeeping practices for each type of site occupancy that contributes to protection of storm water quality.	Before Occupancy	*Owners*
Yes	**Activity Restriction** No car washing will be permitted on the premises. No changing of oil or other auto repairs will be permitted on the premises. Do not sweep grass clippings, dead leaves into catch basins, or other landscaping related debris into catch basins. Do not perform paint cleanup activities in paved areas or allow rinse water from these activities to enter the storm drain system. Clean brushes containing water-based paint in a sink that is connected to the sanitary sewer system. Do not use detergents or other chemical additives when washing concrete sidewalks or building exteriors, use potable water only and collect wash water runoff using a vacuum truck, for proper offsite disposal. Keep premises, as well as trash container areas, free of litter.	When buy the property	Owners
Yes	**Common Area Landscape Management** Management of landscaped areas shall be performed consistent with the following: "Management Guidelines for Use of Fertilizers and Pesticides"	ongoing	Owners
Yes	**BMP Maintenance** The responsible party (owner, agency name, phone number, and address) for implementation of each non-structural BMP and scheduled cleaning of all structural BMP controls shall be identified in this LID	During Original installation and yearly	Owners

Operations and Maintenance Plan

BMP Applicable? Yes/No	BMP Name and BMP Implementation, Maintenance, and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Person or Entity with Operation & Maintenance Responsibility
No	**Title 22 CCR Compliance** Insert BMP narrative.		
No	**Spill Contingency Plan** Insert BMP narrative.		
No	**Underground Storage Tank Compliance** Insert BMP narrative.		
No	**Hazardous Materials Disclosure Compliance** Insert BMP narrative.		
No	**Uniform Fire Code Implementation** Insert BMP narrative.		
No	**Common Area Litter Control** Insert BMP narrative.		
No	**Employee Training** Insert BMP narrative.		
No	**Housekeeping of Loading Docks** Insert BMP narrative.		
Yes	**Common Area Catch Basin Inspection** owner to have privately owned catch basins cleaned and maintained, as frequently as necessary, to prevent sediment, garden waste, and trash, or other pollutants from entering the public streets and storm drain systems	yearly	Owners
Yes	**Street Sweeping Private Streets and Parking Lots** Drive aisles and parking lots shall be swept on a regular basis using a vacuum sweeper to reduce the discharge of pollutants into the storm drain system from paved surfaces.	ongoing	Owners
No	**Retail Gasoline Outlets** Insert BMP narrative.		

BMP Applicable? Yes/No	BMP Name and BMP Implementation, Maintenance, and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Person or Entity with Operation & Maintenance Responsibility
Structural Source Control BMPs			
No	**Provide Storm Drain System Stenciling and Signage** Insert BMP narrative.		
Yes	**Design and Construct Outdoor Material Storage Areas to Reduce Pollutant Introduction** Procedures and practices for the proper handling and storage of materials in a manner that minimizes or eliminates the discharge of these materials to the ground, storm drain system or to watercourses.	During construction	Owners
Yes	**Design and Construct Trash and Waste Storage Areas to Reduce Pollutant Introduction** Trash and Waste management procedures and practices are designed to minimize or eliminate the discharge of pollutants offsite, to the ground, drainage systems or watercourses.	During construction	Owner
No	**Use Efficient Irrigation Systems & Landscape Design** Insert BMP narrative.		
No	**Protect Slopes and Channels and Provide Energy Dissipation** Insert BMP narrative.		
No	**Loading Docks** Insert BMP narrative.		
No	**Maintenance Bays** Insert BMP narrative.		
Yes	**Vehicle Wash Areas** Vehicle cleaning procedures and practices are used to minimize or eliminate the discharge of pollutants from vehicle and equipment cleaning operations to the ground, storm drain system or to watercourses.	During construction	Owners
No	**Outdoor Processing Areas** Insert BMP narrative.		

Operations and Maintenance Plan

BMP Applicable? Yes/No	BMP Name and BMP Implementation, Maintenance, and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Person or Entity with Operation & Maintenance Responsibility
Yes	**Equipment Wash Areas** equipment cleaning procedures and practices are used to minimize or eliminate the discharge of pollutants from vehicle and equipment cleaning operations to the ground, storm drain system or to watercourses.	During construction	Owners
Yes	**Fueling Areas** Vehicle and equipment fueling procedures and practices are designed to minimize or eliminate the discharge of fuel spills and leaks onto the ground (impervious or pervious site surfaces) or into storm drain systems or to watercourses.	During construction	Owners
No	**Hillside Landscaping** Insert BMP narrative.		
No	**Wash Water Controls for Food Preparation Areas** Insert BMP narrative.		
No	**Community Car Wash Racks** Insert BMP narrative.		
Treatment Control BMPs			
Yes	**Treatment Control BMP # 1** Cudo infiltration system	During Original installation and yearly	Owners

Forms to Record BMP Implementation, Maintenance, and Inspection

The form that will be used to record implementation, maintenance, and inspection of BMPs is attached.

Cudo Operations and Maintenance Manual

See attached.

Oldcastle Precast®

CUDO® CUBES

Operations and Maintenance Manual

(Underground Retention / Detention / Infiltration / Water Reuse Systems)

Stormwater

CUDO® Stormwater Cube - Modular Stormwater Systems

Description / Basic Function

CUDO is a modular stormwater system comprised of a grouping of modular polypropylene or concrete cubes that when constructed form an underground storage area for stormwater. This system can be used for infiltration, retention, detention or water reuse. CUDO can help achieve runoff detainment and storage to help attenuate the peak flow to pre-construction levels and can help conform to current Low Impact Development requirements.

Infiltration

The purpose of a CUDO infiltration system is to capture stormwater runoff, store the runoff, and then allow it to percolate into the ground via the open space area of the cubes and perforations in the side wall. The system is backfilled with a Class I material defined by ASTM D2321 as a cleaned open graded rock or a Class II permeable sand. The rock or sand provide additional storage capacity but also allow for a percolation interface with the native material. The ground water is "recharged" with this type of system.

Detention

The purpose of a CUDO detention system is to capture stormwater runoff, store the runoff, and then allow it to be released at a controlled rate through an appropriately sized orifice control. A detention system helps attenuate the peak flow from the site assuring that pre-development runoff flows are not exceeded as a result of the development. A CUDO detention requires the cubes to be encapsulated with an impermeable liner for the polypropylene system or the seams of the concrete system to be sealed with a water proof mastic.

Retention

A CUDO retention system is a hybrid system. It is a combination of a detention system and an infiltration system. A retention system is utilized to attenuate peak flow as well as promote groundwater re-charge. A retention system is outfitted with an overflow pipe at the top of the system which allows the system to fill for infiltration but also outlet if the ground is saturated.

Water Reuse

The purpose of a water-reuse CUDO system is to capture and store water for future use. The system is constructed in a similar fashion to a detention system but instead of a controlled outlet the system is constructed with an emergency overflow. A water reuse system is a Low-Impact Development (LID) device that helps attenuate peak flows as well as conserve water. Water may be reused through an active pump system or passive irrigation.

Inspection/Cleanout Ports

Inspection and cleanout ports are 18-inch diameter vertical risers connected to the uppermost polypropylene CUDO cubes or up to 30-inch manhole access connected to the concrete CUDO. They are used for entrance into the system, or for access to place vacuum truck hoses or water-jetting devices or CCTV equipment. Ports are strategically located near inlet and outlet pipes and in other areas or probable deposition in the system. It is recommended to keep surface level access lids sealed and bolted at all times when the system is in service.

Inlet Bay

Some systems are configured so that pretreatment of the stormwater occurs within the CUDO system. In this case, the CUDO system will house an inlet bay. The inlet bay is separated from the rest of the CUDO system by sidewall plugs and is intended to separate gross pollutants, trash and debris and floatables from the CUDO system and pre-treatment device. The bay contains its own sump area and unique access ports.

Maintenance Overview for CUDO

State and Local regulations require that stormwater storage systems be maintained and serviced on a recurring basis. The purpose of maintaining a clean and obstruction free CUDO system is to ensure the system performs the intended function of the primary design. Trash and debris, floatables, gross pollutants and sediment can build up in the CUDO leading to clogging of the native soil interface or blockage of the inlet or outlet pipes. This can cause the system to function improperly by limiting storage volume, limiting the design percolation rates or impeding flow in and out of the system. Downstream and upstream, areas could run the risk of flooding and deleterious environmental impact.

Recommended Frequency of Service

It is recommended that the CUDO stormwater systems be serviced on a regularly occurring basis. Ultimately the frequency depends on the amount of runoff, pollutant loading, and interference from trash, debris and gross pollutants as well as proper maintenance of upstream pretreatment devices. However, it is recommended that each installation be inspected at least two times per year to assess service needs.

Recommended Timing of Service

Guidelines for the timing of service are as follows:

1. For areas with a definite rainy season the system should be serviced prior to and following the rainy season.
2. For areas subject to year-round rainfall service should occur on a regularly occurring basis. (A minimum of two times per year.)
3. For areas with winter snow and summer rain the system should be serviced prior to and after the snow season.
4. For installed devices that are subject to dry weather flows only (i.e. wash racks, parking garages, etc...) the unit should be serviced on a regularly occurring basis. (A minimum of two times per year.)

Inspection

An inspection should be performed when the system is new. This allows the owner to establish a baseline condition for comparison to future inspections. Sediment build up can typically be monitored without entering the system. (No confined space entry.) Initial and subsequent inspection data should be recorded and filed for reference. Some regulatory agencies require that the results of the inspections be documented and reported. Inspection reports should comply with regulatory requirements and be submitted as required.

Inspection Procedures

5. Locate the inspection, cleanout and access ports. Inspection and cleanout ports are typically 18-inch diameter. Access ports are typically 24-inch or 30-inch diameter. Pictures should be taken to document the location or a site map should be generated to detail the as-built locations of the ports.
6. Unbolt and remove the access port lids.
7. Insert a measuring device into the opening making note of a point of reference to determine the quantity of sediment and other accumulated material. If access is required to measure, ensure only certified confined space entry personnel having appropriate equipment are allowed to enter the system.
8. In addition, for accessible concrete CUDO systems personnel should utilize appropriate confined space entry procedures to enter the system and photograph its condition.
9. Inspect inlet and outlet locations for obstructions. Obstructions should be removed at this time.
10. Inspect the structural components of the system.
11. Fill in the CUDO Inspection/Maintenance Data Sheet and send a copy to the regulatory agency if necessary.

Disinfection of Water Reuse System

Periodic disinfection of water held for reuse may be required to abate bacteria and algae growth. This may be done using calcium hypochlorite tablets or by the addition of an ozone generator in a small recirculation system.

Maintenance

Cleanout of the CUDO system should be considered if there is sediment buildup of two or more inches at over 50% of the inspection ports. Cleaning shall be performed if sediment buildup is two inches or more over 75% of the system floor. In the event of a spill of a foreign substance, cleanout of the system should be considered.

Maintenance Procedures

1. Locate the inspection, cleanout and access ports. Inspection and cleanout ports are typically 18-inch diameter. Access ports are typically 24-inch or 30-inch diameter. Pictures should be taken to document the location or a site map should be generated to detail the as-built locations of the ports.
2. Unbolt and remove the access port lids.
3. Measure the sediment buildup at each port. If access is required to measure ensure only certified confined space entry personnel having appropriate equipment are allowed to enter the system.
4. A thorough cleaning of the system (inlets, outlets, ports, and inlet bays) shall be performed by either a vacuum truck or by manual methods.
5. Inspect inlet and outlet locations for obstructions. Obstructions should be removed at this time.
6. Inspect the structural components of the system.
7. Fill in the CUDO Inspection/Maintenance Data Sheet and send a copy to the regulatory agency if necessary.

Inspection / Maintenance Requirements

Below are some recommendations for equipment and training of personnel to inspect and maintain a CUDO system.

Personnel: OSHA Confined Space Entry Training is a prerequisite for entrance into a system. In the state of California personnel should be CalOSHA certified.

Equipment:
Record Taking (pen, paper, voice recorder)
Proper Clothing (appropriate footwear, gloves, hardhat, safety glasses, etc.)
Flashlight
Tape Measure
Measuring Stick
Pry Bar
Traffic Control (flagging, barricades, signage, cones, etc.)
First Aid Materials
Debris and Contaminant Containers
Vacuum Truck

Disposal of Gross Pollutants, Hydrocarbons, and Sediment

The collected gross pollutants, hydrocarbons, and sediment shall be offloaded from the vacuum truck into DOT approved containers for disposal. Once in the container the maintenance contractor has possession and is responsible for disposal in accordance with local, state and federal agency requirements.

Note: As the generator, the landowner is ultimately responsible for the proper disposal of the collected materials. Because the material likely contains petroleum hydrocarbons, heavy metals, and other harmful pollutants, the materials must be treated as EPA class 2 Hazardous Waste. Proper disposal is required.

CUDO® CUBES

OUR MARKETS

BUILDING STRUCTURES

COMMUNICATIONS

WATER

ENERGY

TRANSPORTATION

RECORD OF BMP IMPLEMENTATION, MAINTENANCE, AND INSPECTION

Today's Date: _____

Name of Person Performing Activity (Printed): _____

Signature: _____

BMP Name (As Shown in O&M Plan)	Brief Description of Implementation, Maintenance, and Inspection Activity Performed

APPENDIX C

EDUCATION MATERIAL

Core Structure, Inc., 23172 Plaza Pointe Dr., Suite 145, Laguna Hills, CA 92653

949-954-7244

Keeping Our Air and Water Clean ...

Beginning January 1, 1999, Rule 1171 of the South Coast Air Quality Management District (SCAQMD) will require repair and maintenance cleaning operations, including cleaning operations in the auto repair industry, to use water-based cleaners instead of the solvents which are used today.

Making the switch to water-based cleaners is expected to remove *over 20 tons* of smog-forming compounds from the air we breathe.

While use of water-based cleaners leads to better air quality, we must not forget that our water resources must also be kept clean. Improper disposal of water-based cleaners can lead to contamination of the ocean, rivers, and groundwater below us...water we depend on for drinking and survival.

This guide will provide you with valuable information on proper disposal practices to help keep our environment clean.

CORE

A Guide to the Disposal of

USED Water-Based Cleaners



Auto Repair & Maintenance Shops

Keeping Our Environment Clean!

City of Los Angeles • Bureau of Sanitation
Industrial Waste Management Division

Did You Know? ...

- Just as solvent cleaners require proper disposal, so do water-based cleaners. In order to protect our environment, used water-based cleaners must be disposed of in a responsible manner.
- Many water-based cleaners are labeled as non-toxic and bio-degradable as packaged, but once these cleaners have been used, they will contain high levels of oils, grease, metals and solvents.
- Most used water-based cleaners qualify as hazardous waste.
- Because of the high levels of pollutants, it is illegal to discharge used water-based cleaners into storm drains, gutters, or in the street.
- It is illegal to dispose of water-based cleaners into the sewer system unless you have approval from your local sewerage agency.

Remember ...

It is illegal to discharge used water-based cleaners into storm drains, gutters, or in the street!



Disposal of Used Water-Based Cleaners

The recommended method of disposal for used water-based cleaners is hauling by a registered hazardous waste transporter. It is your shop's responsibility to verify if your waste hauler is a legally registered transporter. Remember to always maintain waste disposal records in your shop.

If Disposing to the Sewer ...

It is best to legally haul used cleaner off-site. However, if you are interested in discharging used cleaner into the sewer, contact your local sewerage agency for specific requirements.

In general, you will need to ...

- Remove the oil, grease, metals and solvents from the used cleaner by established techniques.
- After treatment, have a lab test the cleaner to determine if it will meet your sewerage agency's requirements for disposal.
- Contact your sewerage agency for permission to discharge.

Your sewerage agency may also require that an Industrial Wastewater Permit be obtained and associated permit fees be paid. Since the used cleaner may be a hazardous waste, you may also be required to obtain a tiered permit from the state if you wish to treat your used cleaner for sewer disposal.

You Can Reduce Costs ...

- You can extend the life of your water-based cleaner by using oil skimmers, filters and absorbents.
- Keep used water-based cleaners separate from other wastewater in your shop. It is easier to dispose of hazardous waste when they are not mixed with other wastes.
- Operate at the optimal concentration and temperature for your water-based cleaner. Contact trade organizations and vendors on how to get the most from your cleaner.
- Avoid spot cleaning parts with solvent-based spray cleaners as these cleaners contain very high levels of toxic organics.

Questions?

Rule 1171 and how to convert to water-based cleaning:
SCAQMD Small Business Hotline
(800) 388-2121

Tiered Permitting or Treatment of Hazardous Waste:
Department of Toxic Substances Control
Southern California Office
(562) 590-4868

Industrial Wastewater Discharge Requirements,
Contact the Sewerage Agency in Your Area:

City of Los Angeles
Bureau of Sanitation
Industrial Waste Management Division
(213) 237-0600

Los Angeles County Sanitation Districts
Industrial Waste Section
(562) 699-7411 ext. 2900

Orange County Sanitation Districts
Source Control Division
(714) 962-2411 ext. 3600

Riverside and San Bernardino County Areas
Inland Empire Permit Assistance Center
(909) 391-0723 or (800) 466-1780

Core Structure, Inc., 23172 Plaza Pointe Dr., Suite 145, Laguna Hills, CA 92653 949-954-7244

How can you help in your community?
Como puedes ayudar en tu comunidad?

Home & Garden
Casa y Jardines

- Properly use and store all hazardous household products, including cleaners, solvents and paints.
  Use y almacene de manera adecuada productos domésticos peligrosos, incluyendo limpiadores, solventes, y pinturas.
- Be an environmentally aware consumer. Buy non-toxic products for use in your home and garden whenever possible.
  Sea un consumidor consciente del medio ambiente. Compre productos que no sean tóxicos para su casa o jardín.
- Use pesticides, herbicides and fertilizers carefully and sparingly.
  Use pesticidas, herbicidas y fertilizantes cuidadosamente y a la medida justa.
- Conserve water and reduce the amount of runoff by not over-watering your lawn and garden.
  Conserve el agua y reduzca la cantidad de derrame no sobre-regando el y jardín.
- Use a broom rather than a hose to clean up garden clippings, dirt and litter from sidewalks, patios and driveways.
  Use una escoba en vez de la manguera al limpiar tierra y basura de las aceras, patios y caminos de entrada.
- Compost yard trimmings and leaves. Do not sweep them into the streets or catch basins.
  Convierta ramas y hojas en abono. No las barra a la calle o drenajes.
- Divert rain spouts and other sources of runoff onto grass or vegetation.
  Desvie los caños y otros recursos de derrame hacia el césped o la vegetación.
- Dispose of pet waste in trash cans. Leaving it on the lawn sends harmful bacteria into the storm drains whenever you water or when it rains.
  Deseche el excremento de los animales en botes de basura. Si se dejan en el césped, estos crearan bacterias dañinas que iran hacia los drenajes cuando se riege o cuando llueva.
- Donate unwanted paint, fertilizer, etc. to friends or community organizations.
  Regale pintura, fertilizante, etc. a sus amistades u organizaciones comunitarias.

Automotive
Automóviles

- When changing car fluids, use a drip pan to collect any spills. If a spill occurs, soak it up using an absorbent material such as kitty litter or sawdust and dispose of it properly.
  Cuando cambie lubricantes, use un envase debajo del goteo para contener cualquier derrame. Si un derrame ocurriera, limpielo usando cualquier material absorbente, como aserrín o "kitty litter", luego deseche de manera apropiada.
- Wash your car with biodegradable soap using as little water as possible. Shut off the hose while washing your car and then rinse.
  Lave su vehículo con jabón biodegradable usando la menor cantidad de agua posible. Cierre la llave del agua mientras lo lave y luego enjuágelo.
- Keep a trash bag in the car and use it! Do not throw anything out the window.
  ¡Mantenga una bolsa de basura dentro del carro y úsela! No arroje nada por la ventana.
- Keep up car maintenance to reduce leakage of oil, anti-freeze and other fluids.
  Dé un buen mantenimiento a su carro para reducir derrames de aceite, anticongelante u otros lubricantes.
- Buy batteries, anti-freeze and motor oil from stores that will recycle used products, or
  Take these items to a local Household Hazardous Waste roundup.
  Compre baterías, anticongelantes y aceites para motores en tiendas que reciclen los productos que ha usado, ó
  lleve estos productos a su centro de colección local de desechos domésticos peligrosos.

SPILL RESPONSE AGENCIES
AGENCIAS PARA EL CONTROL DE DERRAMES

City of Los Angeles
Stormwater Program Hotline
(800) 974-9794

Los Angeles County
(888) CLEAN-LA / 253-2652

RECYCLING & HAZARDOUS WASTE DISPOSAL
RECICLAGE Y DESECHO DE DESPERDICIOS PELIGROSOS

City of Los Angeles
Small Business Hazardous Waste Hotline
(800) 98-TOXIC / 988-6942

City of L.A. Recycling
(800) 773-CITY

Los Angeles County
Department of Public Works
(888) CLEAN-LA / 253-2652

TO REPORT ILLEGAL DUMPING
PARA REPORTAR ARROJOS ILEGALES

City of Los Angeles
Stormwater Program Hotline
(800) 974-9794

Los Angeles County
Department of Public Works
Illegal Dumping Hotline
(888) CLEAN-LA / 253-2652

TO REPORT CLOGGED CATCH BASINS
PARA REPORTAR DRENAJES TAPADOS

City of Los Angeles
Stormwater Program Hotline
(800) 974-9794

Los Angeles County
Department of Public Works
(888) CLEAN-LA / 253-2652

WATERSHED PROTECTION
CITY OF LOS ANGELES
www.LAstormwater.org

Illustration and Design: Oscar Amaro
Printed on Recycled Paper

As a covered entity under Title II of the Americans with Disabilities Act, the City of Los Angeles does not discriminate on the basis of disability and, upon request, will provide reasonable accommodation to ensure equal access to its programs, services, and activities.

THE OCEAN BEGINS
El Oceano Empieza



IN YOUR NEIGHBORHOOD
En Su Vecindad

Core Structure, Inc., 23172 Plaza Pointe Dr., Suite 145, Laguna Hills, CA 92653 949-954-7244

How So?
Water running off your yard, sidewalk or street flows down gutters to curbside openings called catch basins.
Curbside catch basin
Anything carried by this runoff — pesticides, pet waste, oil and anti-freeze from leaky cars and trucks, foam containers and plastic bags — ends up trashing the beaches, polluting the ocean, and harming wildlife... and humans. This contaminated flow is the reason some of our most scenic beaches are closed to the public after a heavy rainstorm.
Just one quart of used motor oil dumped into a catch basin can pollute 250,000 gallons of ocean water!
Unlike the wastewater from inside homes and businesses that flows to sewers and treatment plants, curbside runoff water flows to the ocean untreated. That's because the storm drain system was designed to prevent flooding during heavy rains by quickly diverting billions of gallons of rainwater to the ocean.
Underground storm drain tunnel
The open portions of this system are called flood control channels.
Flood control channel
Even during the driest day in Southern California, we produce tens of millions of gallons of runoff, the result of activities such as car washing, lawn watering and yard cleanup.
For our own protection, and for a cleaner ocean, we need to keep trash off the streets, out of catch basins, and runoff water free from pollutants.
¿Cómo Puede Ser?
El agua que se desborda en jardines, aceras y calles se vierte a las cloacas, las cuales la transportan hasta las aperturas en las cabezas llamadas alcantarillas.
De allí, es vaciada al sistema del alcantarillado pluvial, el cual es una gran red de tuberías y canales que eventualmente terminan en el océano.
Cualquier cosa acarreada por este flujo, como por ejemplo pesticidas, excremento de animales, aceite o anticongelante derramados de carros y envases plásticos terminan muriendo en las playas, contaminando el océano, dañando a la fauna y al mismo tiempo a los humanos. Este flujo contaminado es la razón del cierre al público de algunas de nuestras playas más hermosas luego de una tormenta severa.
¡Hasta un cuarto de galón de aceite de automóvil arrojado dentro del drenaje puede contaminar 250,000 galones de agua marina!
A diferencia de las aguas que fluyen de las casas y negocios por medio del sistema de desagüe hacia las plantas de tratamiento, el agua que fluye por las calles va al océano sin ser tratada. El sistema de drenaje de lluvias es diseñado para prevenir inundaciones durante tormentas severas. Este sistema recoge rápidamente billones de galones de agua de las calles llevándolos directamente al océano.
Aún durante el día más seco en el sur de California se producen decenas de millones de galones de agua que fluyen por las calles como resultado de actividades tales como el lavado de carros, a riego y limpieza de jardines y patios.
Por nuestra propia protección debemos impedir que la basura llegue a nuestras calles y cloacas de lluvia, así como asegurar que el agua que fluye hacia las calles, esté libre de contaminantes.
Hacia el mar
Depending upon their composition, products take different lengths of time to break down (bio-degrade) in the environment. Here are average times for these products.
Según la composición de los productos, estos varían en la cantidad de tiempo para descomponerse en el medio ambiente. Los siguientes son los periodos promedios para esos productos.
Paper towel/toalla de papel
2-4 weeks/semanas
Newspaper/periódico
6 weeks
Cardboard/cartón
2 months/meses
Tin can/lata
50 years/años
Polystyrene cup
vaso de espuma plástica
50 years
Plastic bottle
botella de plástico
450 years
Disposable diaper
pañal desechable
450 years
• Every year, over 40 tons of trash washes up on our beaches.
• Approximately 80% of that trash could have been recycled.
• An average of 870,000 cigarette butts are tossed into the streets every month. These eventually wash into the storm drain system and onto the beaches and ocean. Fish and birds swallow cigarette butts often mistaking them for food, and die.
• The County of Los Angeles spends an average of $1.3 million cleaning the beaches after rainstorms every year.
BEACH CLOSED

Attachment A

Response to Comments

Courtyard ISMND - Responses to Comments

Commentor	Comment	Response	Changes made in EIR
Department of Toxic Substances	Mitigation Measure HAZ-1: Soil Management Plan states, "A Soil Management Plan shall be developed in consultation with the appropriate regulatory authorities and the remedial action agreed action shall be completed." A SMP alone cannot sufficiently identify and document the potential contaminants that may pose a threat to human health and the environment. DTSC recommends that a cleanup plan, a Removal Action Workplan (RAW) or Remedial Action Plan (RAP), be prepared to adequately address all site impacts after complete characterization.	Comments made on Mitigation measures - RAP or RAW to be used instead of SMP. Signal Hill Development plan states that a soil management plan be developed. This soil management plan is a blanket term used to describe actions associated with any potential remediaion. MM HAZ-1 Notes that " A Soil Management Plan shall be developed in consultation with the appropriate regulatory authorities and the remedial action agreed upon shall be completed. Work shall not resume in the affected area until appropriate actions have been implemented in accordance with the remediation plan." The mitigation measure will be futher clarified to include the SMP and RAP process and applicable oversight agency.	3.10.2 - MM HAZ-1: MM HAZ-1: Soil Management Plan and Remedial Action Plan. Prior to initiating any ground disturbing activities on the Project Site, the project applicant shall prepare a Soil Management Plan (SMP) that is submitted to and reviewed and approved by the California Department of Toxic Substances Control (DTSC), the Los Angeles Regional Water Quality Control Board (LARWQCB), the Los Angeles County Fire Department (LACFD) Site Mitigation Unit (SMU), or other applicable regulatory agency having jurisdiction to review or approve the SMP. The SMP shall be prepared by a Registered Environmental Assessor or other qualified expert, and shall address the findings previous site investigations and radiation actions conducted at the site, and/or subsequent relevant studies. During construction, the contractor shall implement the SMP. If unidentified or suspected contaminated soil or groundwater evidenced by stained soil, noxious odors, or other factors, is encountered during site preparation or construction activities on any portion of the Project Site, work shall stop in the excavation area of potential contamination. Upon discovery of suspect soils or groundwater, the contractor shall notify the applicable regulatory agency, and retain a Registered Environmental Assessor or other qualified professional to collect soil samples to confirm the type and extend of contamination that may be present. If contamination is confirmed to be present, any further ground disturbing activities within areas of identified or suspected contamination shall be conducted according to a site-specific Remedial Action Plan (RAP), prepared by a qualified professional. The contractor shall follow all procedural direction given by the applicable regulatory agency, and in accordance with the RAP to ensure that suspect soils are isolated, protected from runoff, and disposed of in accordance with transport laws and the requirements of the licensed receiving facility. If contaminated soil or groundwater is encountered and identified constituents exceed human health risk levels, ground disturbing activities shall not recommence within the contaminated areas until remediation is complete and a "no further action" letter is obtained from the appropriate regulatory agency or direction is otherwise given from the appropriate regulatory agency for a course of action that would allow that construction to recommence within any such areas. The project applicant shall submit the "no further action" letter or notification documenting direction from the regulatory agency to the City prior to resumption of any ground disturbing activity on the relevant portion of the Project Site. If compounds in soil are identified in concentrations that trigger SCAQMD's Rules 1166 or 1466, the SMP will require compliance with such rules.
Department of Toxic Substances	The City of Signal Hill and the South Coast Air Quality Management District are indicated as appropriate reporting agencies but are not recognized as appropriate oversight. Consultation should occur with proper oversight therefore, DTSC recommends the City of Signal Hill enter into a voluntary agreement to address contamination at brownfields and other types of properties or receive oversight from a self-certified local agency, DTSC or the Regional Water Quality Control Board. If entering into one of DTSC's voluntary agreements, please note that DTSC uses a single standard Request for Lead Agency Oversight Application for all agreement types. Please apply for DTSC oversight using this link: Request for Agency Oversight Application. Submittal of the online application includes an agreement to pay costs incurred during agreement preparation. If you have any questions about the application portal, please contact your Regional Brownfield Coordinator.	At this time no remedial action will be required and therefore no oversite will be necessary. In the event of identified soil needing remediation consultation would occur with the DTSC, RWQCB, or a self-certified local agency (Los Angeles County).	Addressed in previous comment, see directly above.
Department of Toxic Substances	DTSC recommends that all imported soil and fill material should be tested to assess any contaminants of concern meet screening levels as outlined in DTSC's Preliminary Endangerment Assessment (PEA) Guidance Manual. Additionally, DTSC advises referencing the DTSC Information Advisory Clean Imported Fill Material Fact Sheet if importing fill is necessary. To minimize the possibility of introducing contaminated soil and fill material there should be documentation of the origins of the soil or fill material and, if applicable, sampling be conducted to ensure that the imported soil and fill material are suitable for the intended land use. The soil sampling should include analysis based on the source of the fill and knowledge of the prior land use. Additional information can be found by visiting DTSC's Human and Ecological Risk Office (HERO) webpage.	No soil will be imported as a result of the project. 1,802 Cubic Yards of material will be cut from the Project Site. All cut soil to be used onsite as fill material shall be tested using screening levels as outlined in DTSC's Preliminary Endangerment Assessment (PEA) Guidance Manual before use. Approximately 1,633 Cubic yards of soil will be exported as a result of grading activities. This clarification will be reflected in the document.	2.2 - Cut material will be stockpiled on site to be used for necessary fill activities, eliminating the need to import soil. All stockpiled soil to be used for "fill" activities shall be tested to assess potential contaminants of concern that meet screening levels as outlined in DTSC's Preliminary Endangerment Assessment (PEA) Guidance Manual before use.
Los Anageles County Sanitation Districts	The wastewater flow originating from the proposed project will discharge directly to the Districts' Alamitos Pumping Plant Trunk Sewer, located in Temple Avenue north of East 19th Street. The Districts' 8-inch diameter trunk sewer has a capacity of 1.1 million gallons per day (mgd) and conveyed a peak flow of 0.3 mgd when last measured in 2021. A 6-inch diameter or smaller direct connection to a Districts' trunk sewer requires a Trunk Sewer Connection Permit issued by the Districts. An 8-inch diameter or larger direct connection to a Districts' trunk sewer requires submittal of Sewer Plans for review and approval by the Districts. For additional information, please contact the Districts' Engineering Counter at (562) 908-4288, extension 1205, or engineeringcounter@lacsd.org.	Information will be included in the ISMND	1.5.5Los Angeles County Sanitation District (LACSD) Permit Alamitos Pumping Plant Trunk Sewer Wastewater flow originating from the proposed project will discharge directly to the District's Alamitos Pumping Plant Trunk Sewer, located in Temple Avenue north of East 19th Street. The District(s) 8-inch diameter trunk sewer has a capacity of 1.1 million gallons per day (mgd) and conveyed a peak flow of 0.3 mgd when last measured in 2021. A 6-inch diameter or smaller direct connection to a District's trunk sewer requires a Trunk Sewer Connection Permit issued by the District(s). An 8-inch diameter or larger direct connection to a District's trunk sewer requires submittal of Sewer Plans for review and approval by the District(s).
Los Anageles County Sanitation Districts	The wastewater generated by the proposed project will be treated at the A.K. Warren Water Resource Facility (formerly known as the Joint Water Pollution Control Plant) located in the City of Carson, which has a capacity of 400 mgd and currently processes an average flow of 247.2 mgd.	The ISMND will be ammended with this updated information	Revised 3.20.1.2 to reflect data changes
Los Anageles County Sanitation Districts	The expected increase in average wastewater flow from the project, described in the plan as a subdivision of one lot to nine lots, is 1,728 gallons per day, after all structures on the project site are demolished. For a copy of the Districts' average wastewater generation factors, go to www.lacsd.org, under Services, then Wastewater Program and Permits and select Will Serve Program, and click on the Table 1, Loadings for Each Class of Land Use link.	The ISMND will be amended with this updated information. There will be a total of eight (8) units as a result fo the Project and therefore the expected increase in average wastewater flow from the project, described in the plan as a subdivision of one lot to eight lots, is 1248 gallons per day using the SDLAC's wastewater generation factor of 156 gallons per day per residential unit.	Revised 3.20.1.2 and 3.20.2 reflect data changes
Los Anageles County Sanitation Districts	The Districts are empowered by the California Health and Safety Code to charge a fee to connect facilities (directly or indirectly) to the Districts' Sewerage System or to increase the strength or quantity of wastewater discharged from connected facilities. This connection fee is used by the Districts for its capital facilities. Payment of a connection fee may be required before this project is permitted to discharge to the Districts' Sewerage System. For more information and a copy of the Connection Fee Information Sheet, go to https://www.lacsd.org/services/wastewater-sewage/wastewater-rates. In determining the impact to the Sewerage System and applicable connection fees, the Districts will determine the user category (e.g. Condominium, Single Family Home, etc.) that best represents the actual or anticipated use of the parcel(or facilities on the parcel(s) in the development. For more specific information regarding the connection fee application procedure and fees, please contact the Districts' Wastewater Fee Public Counter at connectionfee@lacsd.org or (562) 908-4288, extension 2727.	The Applicant has been made aware that a fee may be incurred when connecting facilities to the district sewage system or to increase the strength or quantity of wastewater discharged from connected facilities.	No Changes Made.
Los Anageles County Sanitation Districts	In order for the Districts to conform to the requirements of the Federal Clean Air Act (CAA), the capacities of the Districts' wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). Specific policies included in the development of the SCAG regional growth forecast are incorporated into clean air plans, which are prepared by the South Coast and Antelope Valley Air Quality Management Districts in order to improve air quality in the South Coast and Mojave Desert Air Basins as mandated by the CAA. All expansions of Districts' facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecast for the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The available capacity of the Districts' treatment facilities will, therefore, be limited to levels associated with the approved growth identified by SCAG. As such, this letter does not constitute a guarantee of wastewater service, but is to advise the applicant that the Districts intend to provide this service up to the levels that are legally permitted and to inform the applicant of the currently existing capacity and any proposed expansion of the Districts' facilities.	It is noted that service will be provided up to the levels that are legally permitted.	No Changes Made.
California Department of Transportation	The mission of Caltrans is to provide a safe and reliable transportation network that serves all people and respects the environment. Senate Bill 743 (2013) has codified into CEQA law and mandated that CEQA review of transportation impacts of proposed development be modified by using Vehicle Miles Traveled (VMT) as the primary metric in identifying transportation impacts for all future development projects. You may reference the Governor's Office of Planning and Research (OPR) for more information: https://opr.ca.gov/ceqa/#guidelines-updates As a reminder, VMT is the standard transportation analysis metric in CEQA for land use projects after July 1, 2020, which is the statewide implementation date.	VMT is utilized as the standard transportaton analysis metric for this Project	No Changes Made.
California Department of Transportation	Caltrans is aware of challenges that the region faces in identifying viable solutions to alleviating congestion on State and Local facilities. With limited room to expand vehicular capacity, this project should incorporate multi-modal and complete streets transportation elements that will actively promote alternatives to car use and better manage existing parking assets. Prioritizing and allocating space to efficient modes of travel such as bicycling and public transit can allow streets to transport more people in a fixed amount of right-of-way.	Each residential unit will have a garage in which alternative modes of transportation can be stored. Several Long Beach Transit routes serve the Project Site, including: Routes 71/72 along Orange Avenue, Routes 21/22 along Cherry Avenue, and Route 102/104 along Willow Street. Per Section 21.48 of the City of Signal Hill Municipal Code, new development projects are required to provide funds for the acquisition, improvement, and expansion of street, parkway, thoroughfare, intersection, and other traffic and circulation improvements. This ordinance is intended to authorize reasonable fees to be collected related to new development so that the burdens of installing public improvements, the need for which is created by certain new development projects and which will benefit certain land in addition to such development projects. In addition to this, measures for construction traffic control must be met to ensure safety during work hours, stating that all work areas, lane closures, and all warning lights, flashers and devices used shall be protected, installed and provided in accordance with the current Caltrans Manual of Traffic Controls and/or Work Area Traffic Control Handbook.	No Changes Made.
California Department of Transportation	Caltrans encourages city planning that promotes complete streets and pedestrian safety through measures like road diets, recognized for enhancing safety and being cost-effective when combined with street resurfacing. City planning should focus on reducing single-occupancy vehicle trips, improving safety, lowering vehicle miles traveled (VMT), and cutting greenhouse gas emissions.	It is noted that CalTrans encourages cities to reduce single-occupancy vehicle trips, improving safety, lowering vehicle miles traveled (VMT), and cutting greenhouse gas emissions.	No Changes Made.
California Department of Transportation	The project's construction activities are expected to generate a maximum of 60 additional daily vehicle trips (30 round trips) and around 1,163.2 VMT per day, due to the movement of workers and heavy-duty trucks to and from the site. These trips are temporary and will cease once construction ends, without impacting operational traffic. As stated in the OPR Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018), projects generating fewer than 110 daily trips typically result in less-than-significant transportation impacts; therefore, the project's impact would be minimal.	This data is consistent with the ISMND as written. It is noted that this is consistent with a less-than-significant transportation impact.	No Changes Made.
California Department of Transportation	Once constructed, the project is expected to generate a maximum of 76.32 trips per day, resulting in approximately 585.71 VMT per day. Per OPR's Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018), projects generating fewer than 110 daily trips typically pose a less-than-significant transportation impact unless substantial evidence indicates otherwise. Since the project falls well below this threshold, it is anticipated to have minimal long-term impacts on transportation and circulation.	This data is consistent with the ISMND as written. It is noted that this is consistent with a less-than-significant transportation impact.	No Changes Made.
California Department of Transportation	As a reminder, any transportation of heavy construction equipment and/or materials which require use of oversized transport vehicles on State highways will need a Caltrans transportation permit. We recommend large-size truck trips be limited to off-peak commute periods. Truck drivers should cover construction trucks with tarpaulin to avoid debris spillage onto the State Highway.	Discussion of an oversized/overweight vehicles permit is added in the 1.5 Required Permits/Approvals and Responsible Agencies.	1.5.6 California Department of Transportation: Oversize/overweight vehicles The California Department of Transportation (Caltrans) has discretionary authority with respect to highways under its jurisdiction and may, upon application and if good cause appears, issue a special permit to operate or move a vehicle or combination of vehicles or special mobile equipment of a size or weight of vehicle or load exceeding the maximum limitations specified in the California Vehicle Code. The Caltrans Office of Commercial Vehicle Operations is responsible for the issuance of these special transportation permits for oversize/overweight vehicles on the State Highway System.
California Department of Transportation	We recommend large-size truck trips be limited to off-peak commute periods.	Per City of Signal Hill Municipal Code Section 9.15.050, construction activities are restricted to the hours between 7:00 a.m. and 6:00 p.m. on weekdays. Additional reccommendations for truck trips associated with hauling of construction debris and cut material during off-peak hours to the extent feasible are added in Section 2.2 Project Construction.	2.2 Project Construction: Truck trips associated with hauling construction debris and cut material will be scheduled for off-peak hours to the extent feasible.
California Department of Transportation	Truck drivers should cover construction trucks with tarpaulin to avoid debris spillage onto the State Highway.	Notes on transportation of debris are added in Section 2.2 Project Construction.	2.2 Project Construction: Transportation of debris materials on highways will be covered with Tarpaulin or similar material to reduce debris spillage.

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Department of Toxic Substances	DTSC recommends that all imported soil and fill material should be tested to assess any contaminants of concern meet screening levels as outlined in DTSC's Preliminary Endangerment Assessment (PEA) Guidance Manual. Additionally, DTSC advises referencing the DTSC Information Advisory Clean Imported Fill Material Fact Sheet if importing fill is necessary. To minimize the possibility of introducing contaminated soil and fill material there should be documentation of the origins of the soil or fill material and, if applicable, sampling be conducted to ensure that the imported soil and fill material are suitable for the intended land use. The soil sampling should include analysis based on the source of the fill and knowledge of the prior land use. Additional information can be found by visiting DTSC's Human and Ecological Risk Office (HERO) webpage.	No soil will be imported as a result of the project. 1,802 Cubic Yards of material will be cut from the Project Site. All cut soil to be used onsite as fill material shall be tested using screening levels as outlined in DTSC's Preliminary Endangerment Assessment (PEA) Guidance Manual before use. Approximately 1,633 Cubic yards of soil will be exported as a result of grading activities. This clarification will be reflected in the document.	2.2 - Cut material will be stockpiled on site to be used for necessary fill activities, eliminating the need to import soil. All stockpiled soil to be used for "fill" activities shall be tested to assess potential contaminants of concern that meet screening levels as outlined in DTSC's Preliminary Endangerment Assessment (PEA) Guidance Manual before use.

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California Department of Transportation	The mission of Caltrans is to provide a safe and reliable transportation network that serves all people and respects the environment. Senate Bill 743 (2013) has codified into CEQA law and mandated that CEQA review of transportation impacts of proposed development be modified by using Vehicle Miles Traveled (VMT) as the primary metric in identifying transportation impacts for all future development projects. You may reference the Governor's Office of Planning and Research (OPR) for more information: https://opr.ca.gov/ceqa/#guidelines-updates As a reminder, VMT is the standard transportation analysis metric in CEQA for land use projects after July 1, 2020, which is the statewide implementation date.	VMT is utilized as the standard transportaton analysis metric for this Project	No Changes Made.

California Department of Transportation	Caltrans is aware of challenges that the region faces in identifying viable solutions to alleviating congestion on State and Local facilities. With limited room to expand vehicular capacity, this project should incorporate multi-modal and complete streets transportation elements that will actively promote alternatives to car use and better manage existing parking assets. Prioritizing and allocating space to efficient modes of travel such as bicycling and public transit can allow streets to transport more people in a fixed amount of right-of-way.	Each residential unit will have a garage in which alternative modes of transportation can be stored. Several Long Beach Transit routes serve the Project Site, including: Routes 71/72 along Orange Avenue, Routes 21/22 along Cherry Avenue, and Route 102/104 along Willow Street. Per Section 21.48 of the City of Signal Hill Municipal Code, new development projects are required to provide funds for the acquisition, improvement, and expansion of street, parkway, thoroughfare, intersection, and other traffic and circulation improvements. This ordinance is intended to authorize reasonable fees to be collected related to new development so that the burdens of installing public improvements, the need for which is created by certain new development projects and which will benefit certain land in addition to such development projects. In addition to this, measures for construction traffic control must be met to ensure safety during work hours, stating that all work areas, lane closures, and all warning lights, flashers and devices used shall be protected, installed and provided in accordance with the current Caltrans Manual of Traffic Controls and/or Work Area Traffic Control Handbook.	No Changes Made.
California Department of Transportation	Caltrans encourages city planning that promotes complete streets and pedestrian safety through measures like road diets, recognized for enhancing safety and being cost-effective when combined with street resurfacing. City planning should focus on reducing single-occupancy vehicle trips, improving safety, lowering vehicle miles traveled (VMT), and cutting greenhouse gas emissions.	It is noted that CalTrans encourages cities to reduce single-occupancy vehicle trips, improving safety, lowering vehicle miles traveled (VMT), and cutting greenhouse gas emissions.	No Changes Made.
California Department of Transportation	The project's construction activities are expected to generate a maximum of 60 additional daily vehicle trips (30 round trips) and around 1,163.2 VMT per day, due to the movement of workers and heavy-duty trucks to and from the site. These trips are temporary and will cease once construction ends, without impacting operational traffic. As stated in the OPR Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018), projects generating fewer than 110 daily trips typically result in less-than-significant transportation impacts; therefore, the project's impact would be minimal.	This data is consistent with the ISMND as written. It is noted that this is consistent with a less-than-significant transportation impact.	No Changes Made.
California Department of Transportation	Once constructed, the project is expected to generate a maximum of 76.32 trips per day, resulting in approximately 585.71 VMT per day. Per OPR's Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018), projects generating fewer than 110 daily trips typically pose a less-than-significant transportation impact unless substantial evidence indicates otherwise. Since the project falls well below this threshold, it is anticipated to have minimal long-term impacts on transportation and circulation.	This data is consistent with the ISMND as written. It is noted that this is consistent with a less-than-significant transportation impact.	No Changes Made.
California Department of Transportation	As a reminder, any transportation of heavy construction equipment and/or materials which require use of oversized transport vehicles on State highways will need a Caltrans transportation permit. We recommend large-size truck trips be limited to off-peak commute periods. Truck drivers should cover construction trucks with tarpaulin to avoid debris spillage onto the State Highway.	Discussion of an oversized/overweight vehicles permit is added in the 1.5 Required Permits/Approvals and Responsible Agencies.	1.5.6 California Department of Transportation: Oversize/overweight vehicles The California Department of Transportation (Caltrans) has discretionary authority with respect to highways under its jurisdiction and may, upon application and if good cause appears, issue a special permit to operate or move a vehicle or combination of vehicles or special mobile equipment of a size or weight of vehicle or load exceeding the maximum limitations specified in the California Vehicle Code. The Caltrans Office of Commercial Vehicle Operations is responsible for the issuance of these special transportation permits for oversize/overweight vehicles on the State Highway System.
California Department of Transportation	We recommend large-size truck trips be limited to off-peak commute periods.	Per City of Signal Hill Municipal Code Section 9.15.050, construction activities are restricted to the hours between 7:00 a.m. and 6:00 p.m. on weekdays. Additional reccommendations for truck trips associated with hauling of construction debris and cut material during off-peak hours to the extent feasible are added in Section 2.2 Project Construction.	2.2 Project Construction: Truck trips associated with hauling construction debris and cut material will be scheduled for off-peak hours to the extent feasible.
California Department of Transportation	Truck drivers should cover construction trucks with tarpaulin to avoid debris spillage onto the State Highway.	Notes on transportation of debris are added in Section 2.2 Project Construction.	2.2 Project Constructution: Transportation of debris materials on highways will be covered with Tarpaulin or similar material to reduce debris spillage.