11.3 Air Quality Assessment

Air Quality Assessment
First Citizens Bank – Long Beach Project
City of Long Beach, California

Kimley»Horn
Expect More. Experience Better.

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July 2024

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LIST OF ABBREVIATED TERMS

AQMP	Air Quality Management Plan
AB	Assembly Bill
ADT	Average Daily Traffic
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAAQS	California Ambient Air Quality Standards
CCAA	California Clean Air Act
CalEEMod	California Emissions Estimator Model
CEQA	California Environmental Quality Act
CO	Carbon monoxide
cy	cubic yards
DPM	Diesel particulate matter
FCAA	Federal Clean Air Act
H_2S	Hydrogen sulfide
Pb	Lead
LST	Localized significance threshold
$\mu g/m^3$	Micrograms per cubic meter
mg/m^3	Milligrams per cubic meter
NAAQS	National Ambient Air Quality Standards
NO_2	Nitrogen dioxide
NO_x	Nitrogen oxide
O_3	Ozone
PM_{10}	Particulate matter less than 10 microns in diameter
$PM_{2.5}$	Particulate matter less than 2.5 microns in diameter
ppm	Parts per million
ROG	Reactive organic gases
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SRA	Source receptor area
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SCAG	Southern California Association of Governments
sf	Square foot
SO_{4-2}	Sulfates
SO_2	Sulfur dioxide
TAC	Toxic air contaminant
U.S. EPA	U.S. Environmental Protection Agency
C_2H_3Cl	Vinyl chloride
VOC	Volatile organic compound

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1 INTRODUCTION

This report documents the results of an Air Quality Assessment completed for the First Citizens Bank Trust (First Citizens Bank) ("Applicant")– Long Beach Project ("Project" or "proposed Project"). The purpose of this Air Quality Assessment is to evaluate the potential construction and operational emissions associated with the Project and determine the level of impact the Project would have on the environment.

1.1 Project Location and Setting

The proposed Project site is in the county of Los Angeles (County) in the city of Long Beach (City), approximately 20 miles south of downtown Los Angeles; see **Exhibit 1: Regional Vicinity Map**. The approximately 36,775 SF (0.87 acre) proposed Project site consists of three parcels (APN: 7145-006-010, -011, 012) located at 3450-3470 Long Beach Boulevard. Regional access to the proposed Project site is provided via Interstate Highway 405 (I-405), that runs west and south of the proposed Project site. Local access to the proposed Project site is provided via Long Beach Boulevard and Wardlow Road.

As shown on **Exhibit 2: Project Vicinity Map**, the proposed Project site is vacant and highly disturbed. The proposed Project site was previously used for oil drilling and three decommissioned and plugged oil wells are located on the eastern, western, and southern portions of the site. A fourth decommissioned oil well is located on the southeastern periphery of the site. The proposed Project site is largely devoid of vegetation, excluding a narrow band of vegetation featuring patches of grass and four palm trees bordering Long Beach Boulevard, a cluster of two palm trees located in the northeast corner of the proposed Project site, and a single palm tree located on the eastern side of the proposed Project site, towards the southeast corner. Several large branches of a ficus tree planted on an adjacent property overhang the proposed Project site in the northeast corner of the site.

1.2 Project Description

The proposed Project is depicted on **Exhibit 3: Conceptual Site Plan**. As shown, the Applicant proposes to develop an approximately 12,469 GSF, two-story office/bank building on three parcels (APN: 7145-006-010, -011, -012). A lot merger is proposed as part of the Project to combine the three parcels into one. The building would have a FAR of 0.34. The net occupiable building space is 7,821 SF. The proposed building height would be 34 feet and would not exceed two stories, with the exception of a 51-foot tower.[1] The proposed building would be situated in the northeast corner of the proposed Project site with parking areas provided to the west and south of the building. A total of 44 vehicular parking stalls are proposed. Eight of the proposed parking stalls would accommodate electric vehicles, providing access to an electric vehicle charging station. Vehicular access to the proposed Project site would be provided via a single driveway from Long Beach Boulevard. A marked pedestrian walkway would connect the sidewalk along Long Beach Boulevard with the front of the proposed building. The proposed Project would include a walk-up Automated Teller Machine (ATM); however, the proposed Project would not include a drive-thru teller or drive-thru ATM facility.

The proposed Project would include grading and minimal amounts of excavation necessary for installation of utilities to the proposed building. The proposed land use is typically a permitted use by right in the CCA Zoning District. However, because of Project-related excavation, the proposed Project's location in the

[1] LBMC zoning regulations (§ 21.15.1330) define the height of a building with a sloped roof as "the vertical distance above grade to the midpoint height of the highest sloped roof." For the proposed building, this distance amounts to 34 feet, although the peak of the building (the roof ridge) is 42 feet above grade and the tower is 51 feet above grade.

City's methane zone, and the presence of decommissioned and plugged oil wells on the Project site, the proposed Project is subject to the City's methane gas mitigation ordinance, which states that methane gas mitigation is required for all newly constructed buildings to be located "…less than or equal to three hundred (300) feet from any active, or one hundred (100) feet of an idle and/or abandoned oil/gas well."[2]

To comply with Section 18.78.080 and Chapter 18.79 of the LBMC, the Applicant is proposing to install a Vapor Intrusion Mitigation System (VIMS) to limit potential vapor intrusion impacts and to develop a site-specific Soil Management Plan to excavate and treat contaminated soils during construction. A waiver from LBE Abandonment Standards for the two unverified wells described in Section 2.2.1 has not been granted by the City as of the date of this Initial Study. However, if approved, project design features and/or mitigation measures determined to be acceptable by the City will be included as part of the Project and described in an EIR.

Architectural Design

The proposed building would be located toward the northeastern corner of the proposed Project site, with parking areas situated to the west and south. The building would feature two stories, approximately 15-feet each, and an approximately 16-foot hipped roof. The main building height would be approximately 34 feet in height, and 42 feet above grade. An approximately 51-foot tower, featuring a square bell roof topped with a finial, would be incorporated in the center front of the building. The roof would be copper clad, featuring copper rain gutters and downspouts, underlaid by dark wood corbels. The building exterior would be treated with a white exterior insultation finish system (stucco). The first floor of the building would feature an arcade along the front of the building. An array of photovoltaic (PV) solar panels would be mounted on the roof at the rear of the building and channelized signage identifying the bank would be mounted on the front tower. An eight-foot, stucco-covered perimeter wall would be constructed along the northern, eastern, and southern edges of the property. The western side fronting Long Beach Boulevard, would remain open to the street. The proposed building would be architecturally distinct, in terms of scale and color, but would be of similar size and height as surrounding buildings and would contribute to the eclectic architecture of the surrounding area.

Open Spaces and Landscaping

The existing landscaping on the proposed Project site, as described in Section 2.2.1, would be removed and the proposed Project would include landscaping throughout the parking area, around the periphery of the proposed Building, and along the proposed Project site boundaries. The proposed vegetation includes various trees, shrubs, and other ground cover vegetation. The proposed Project's open space/landscaping would represent approximately 20 percent of the proposed Project site. Landscaping for the proposed Project would be consistent with the requirements of the City's Municipal Code (LBMC) Chapter 21.42, *Landscaping Standards*.

Parking and Access

The City's parking regulations, found in LBMC Chapter 21.41, *Off-Street Parking and Loading Requirements,* identify the required number of parking spaces for particular land uses. Banks require a minimum of five parking spaces per 1,000 SF of gross floor area (GFA). The net occupiable building space is 7,821 SF, and it is anticipated a minimum of 39 parking spaces would be required based on the LBMC's

[2] LBMC, Chapter 18.79.

definition of GFA.[3] However, under the most conservative estimates accounting for all 12,469 SF of the proposed building, the LBMC could require up to a minimum of 63 parking spaces.

As previously described, a total of 44 vehicular parking stalls are proposed. Eight of the proposed parking stalls would accommodate electric vehicles, providing access to an electric vehicle charging station. While Zoning Regulations establish a minimum parking standard, new State Legislation such as Assembly Bill 2097 (AB 2097), adopted September 2022, prohibits a public agency from imposing any minimum automobile parking requirement on any residential, commercial, or other development project, that is located within 1/2 mile of public transportation. The Project Site is located within one half-mile of high-quality public transportation. As such, the Project is not required to provide the 63 parking spaces determined by the Zoning Regulation. However, the proposed parking spaces are still subject to development standards of the Zoning Regulations.

Vehicular access to the proposed Project site would be provided via one driveway at Long Beach Boulevard. The driveway would provide access to the on-site parking spaces. Adjacent to the driveway, a marked pedestrian walkway would connect the sidewalk along Long Beach Boulevard with the walk-up ATM at the front of the proposed building.

Utilities and Infrastructure

Electric power would be provided to the proposed Project site by Southern California Edison and supplemented by a PV solar panel array installed on the back side of the proposed building roof. Water and sewer service would be provided by Long Beach Water. The proposed Project would not use natural gas; however natural gas service in the area is provided by the City of Long Beach Utility Services. Trash and recycling collection would be provided by City of Long Beach Utility Services.

[3] Per LBMC Chapter 21.41 (§ 21.41.216), Gross Floor Area (GFA) excludes utility and elevator cores, stairwells and restrooms.

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0 0.25 0.5 1 Miles

Exhibit 1: Regional Vicinity Map

FIRST CITIZENS BANK & TRUST - LONG BEACH PROJECT

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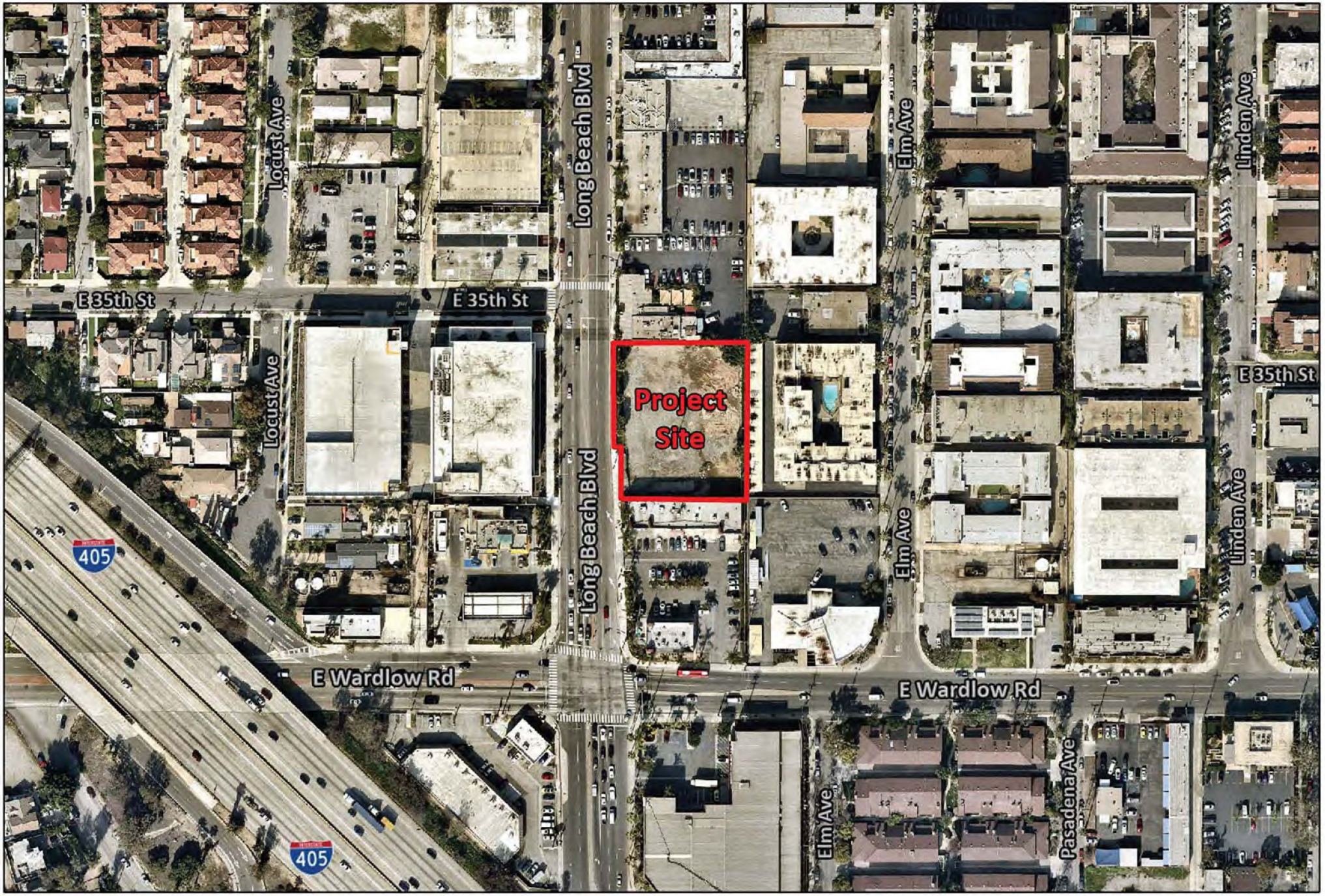

Exhibit 2: Project Vicinity Map

FIRST CITIZENS BANK & TRUST - LONG BEACH PROJECT

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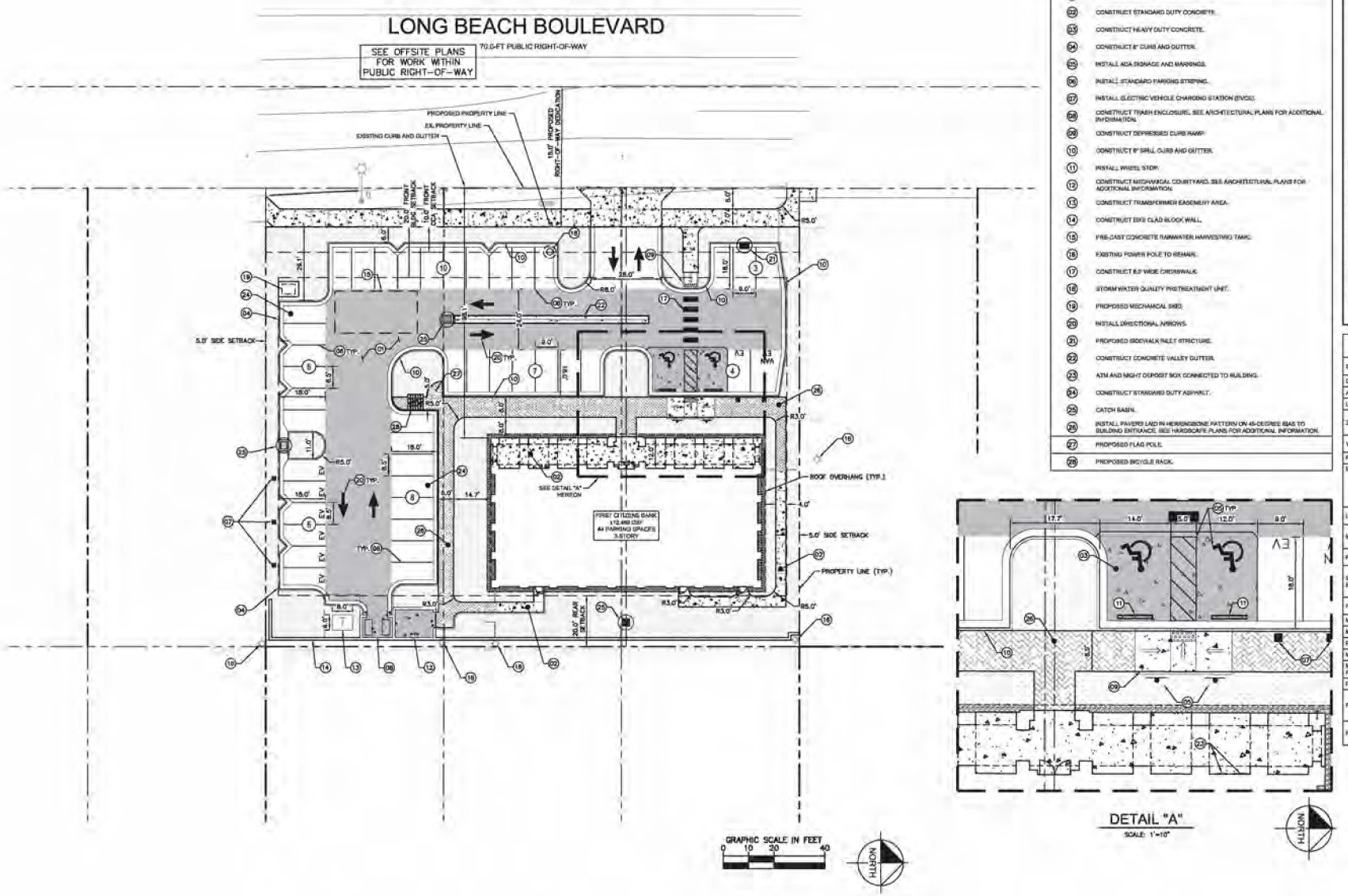

SITE CONSTRUCTION NOTES

01	CONSTRUCT HEAVY DUTY ASPHALT.
02	CONSTRUCT STANDARD DUTY CONCRETE.
03	CONSTRUCT HEAVY DUTY CONCRETE.
04	CONSTRUCT 6" CURB AND GUTTER.
05	INSTALL ADA SIGNAGE AND MARKINGS.
06	INSTALL STANDARD PARKING STRIPING.
07	INSTALL ELECTRIC VEHICLE CHARGING STATION (EVCS).
08	CONSTRUCT TRASH ENCLOSURE. SEE ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION.
09	CONSTRUCT DEPRESSED CURB RAMP.
10	CONSTRUCT 8" SPILL CURB AND GUTTER.
11	INSTALL WHEEL STOP.
12	CONSTRUCT MECHANICAL COURTYARD. SEE ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION.
13	CONSTRUCT TRANSFORMER EASEMENT AREA.
14	CONSTRUCT 8'#3 CLAD BLOCK WALL.
15	PRE-CAST CONCRETE RAINWATER HARVESTING TANK.
16	EXISTING POWER POLE TO REMAIN.
17	CONSTRUCT 6.0' WIDE CROSSWALK.
18	STORM WATER QUALITY PRETREATMENT UNIT.
19	PROPOSED MECHANICAL SHED.
20	INSTALL DIRECTIONAL ARROWS.
21	PROPOSED SIDEWALK/RAILT STRUCTURE.
22	CONSTRUCT CONCRETE VALLEY GUTTER.
23	ATM AND NIGHT DEPOSIT BOX CONNECTED TO BUILDING.
24	CONSTRUCT STANDARD DUTY ASPHALT.
25	CATCH BASIN.
26	INSTALL PAVERS LAID IN HERRINGBONE PATTERN ON 45-DEGREE BIAS TO BUILDING ENTRANCE. SEE HARDSCAPE PLANS FOR ADDITIONAL INFORMATION.
27	PROPOSED FLAG POLE.
28	PROPOSED BICYCLE RACK.

SITE LEGEND

- PROPERTY LINE
- SETBACK LINE
- STANDARD CURB AND GUTTER
- SPILL CURB AND GUTTER
- (8) PARKING SPACE COUNT
- SIGN (SEE PLAN)
- WHEEL STOP
- ACCESSIBLE PARKING MARKING (V INDICATES VAN ACCESSIBLE)
- DIRECTIONAL PAVEMENT ARROWS
- DEPRESSED CURB RAMP
- STANDARD DUTY ASPHALT
- HEAVY DUTY ASPHALT
- STANDARD DUTY CONCRETE
- HEAVY DUTY CONCRETE
- PAVERS - SEE HARDSCAPE PLAN FOR ADDITIONAL INFORMATION
- LANDSCAPE PER LANDSCAPE PLANS

SITE DATA TABLE

SITE ADDRESS:	3450 LONG BEACH BOULEVARD, LONG BEACH, CALIFORNIA, 90807
COORDINATES:	33.8194 N, 118.1886 W
APN #:	7140-008-010, -011, & -012
LOT AREA:	0.86 AC.
ZONING:	COMMUNITY COMMERCIAL AUTOMOBILE ORIENTED (CCA) AND WITHIN HIGH-RISE OVERLAY DISTRICT (HR-4).
WATERSHED:	COMPTON CREEK-LOS ANGELES RIVER WATERSHED
FLOOD PLAIN:	ZONE X
BUILDING SETBACKS:	FRONT: 10-FT (CCA); 10-FT (HR-4 IF BUILDING UNDER 45-FT); 25' (HR-4 IF BUILDING OVER 45-FT); REAR AND SIDE: 5-FT IF ADJACENT TO NON-RESIDENTIAL & 20-FT IF ADJACENT TO REAR YARD OF RESIDENTIAL DISTRICT (CCA)
LANDSCAPE BUFFER:	REQUIRED ON ALL 4 SIDES IF BUILDING HEIGHT OVER 45-FT
MAX. IMPERVIOUS:	NO MORE THAN 90% OF ON-SITE AREA NOT COVERED BY STRUCTURES, DRIVEWAYS, AND APPROVED PARKING.
PROP. IMPERVIOUS:	28,819 SF (0.66 AC.) 0.66 / 0.86 = 77% IMPERVIOUS
SIDEWALK AND ENCLOSURE AREA:	SIDEWALK: 2,400 SF ENCLOSURES: 275 SF TOTAL IMPERVIOUS NOT STRUCTURES/DRIVEWAY/PARKING: 15,730 SF
PROP. PERVIOUS:	8,611 SF 0.2 / 0.86 = 23% < 30%
MAX. F.A.R.	NO F.A.R. REQUIREMENT PER CCA ZONING
MAX. BUILDING HEIGHT:	2 STORIES, 28-FT (CCA) + 4 STORIES (HR-4)
PROP. BUILDING HEIGHT:	41'-8"
MIN. LOT SIZE:	10,000 SF
MAX. BUILDING SIZE PER PARKING REQUIREMENT:	12,469 SF GROSS FLOOR AREA (GFA)
PROP. BUILDING SIZE:	7,307 SF
PARKING REQUIRED:	5 SPACES PER 1,000 GFA 12,469 SF / 1,000 SF = 12.5 12.5 * 5 SPACES = 63 SPACES REQUIRED 7 EV SPACES REQ., 2 EVCS REQ.
PARKING PROVIDED:	2 ADA SPACES, 8 EV SPACES, 34 STANDARD SPACES TOTAL: 44 SPACES

BUILDING DATA:
9,600 SF ALLOWABLE > 7,307 SF PROVIDED
3,347 SF (1ST OCC)
4,580 SF (2ND+3RD)

SPRINKLED
(1,231 SF EXTERIOR ARCADE)
6,181 GSF FOOTPRINT (191 FT/8)
5,302 GSF (2ND FLR PERIMETER)
12,469 GROSS BUILDING SF

DETAIL "A"
SCALE: 1"=10'

SOURCE: Conceptual Site Plan Preliminary Layout dated April 12, 2023

Exhibit 3: Conceptual Site Plan

FIRST CITIZENS BANK - LONG BEACH PROJECT

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2 ENVIRONMENTAL SETTING

2.1 Climate and Meteorology

The California Air Resources Board (CARB) divides the State into 15 air basins that share similar meteorological and topographical features. The Project is located within the South Coast Air Basin (SCAB), which includes the non-desert portions of Los Angeles, Riverside, and San Bernardino counties, as well as all of Orange County. The SCAB is on a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean on the southwest and high mountains forming the remainder of the perimeter.[4] Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions. These factors along with applicable regulations are discussed below.

The SCAB is part of a semi-permanent high-pressure zone in the eastern Pacific. As a result, the climate is mild and tempered by cool sea breezes. This usually mild weather pattern is occasionally interrupted by periods of extreme heat, winter storms, and Santa Ana winds. The annual average temperature throughout the 6,645-square-mile SCAB ranges from low 60 to high 80 degrees Fahrenheit with little variance. With more oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas.

Contrasting the steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all annual rainfall occurs between the months of November and April. Summer rainfall is reduced to widely scattered thundershowers near the coast, with slightly heavier activity in the east and over the mountains.

Although the SCAB has a semiarid climate, the air closer to the Earth's surface is typically moist because of the presence of a shallow marine layer. Except for occasional periods when dry, continental air is brought into the SCAB by offshore winds, the "ocean effect" is dominant. Periods of heavy fog are frequent and low clouds known as high fog are characteristic climatic features, especially along the coast. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the SCAB.

Wind patterns across the SCAB are characterized by westerly or southwesterly on-shore winds during the day and easterly or northeasterly breezes at night. Wind speed is typically higher during the dry summer months than during the rainy winter. Between periods of wind, air stagnation may occur in both the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During winter and fall, surface high-pressure systems over the SCAB, combined with other meteorological conditions, result in very strong, downslope Santa Ana winds. These winds normally continue for a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east affect the diffusion of pollutants by inhibiting the eastward transport of pollutants. Air quality in the SCAB generally ranges from fair to poor and is similar to air quality in most of coastal southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions.

In addition to the characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, two distinct types of temperature inversions control the vertical depth through which air pollutants are mixed. These inversions are the marine inversion and the radiation inversion. The height of

[4] South Coast Air Quality Management District, *CEQA Air Quality Handbook*, 1993.

the base of the inversion at any given time is called the "mixing height." The combination of winds and inversions is a critical determinant leading to highly degraded air quality for the SCAB in the summer and generally good air quality in the winter.

2.2 Air Pollutants of Concern

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by State and federal laws. These regulated air pollutants are known as "criteria air pollutants" and are categorized into primary and secondary pollutants.

Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO_X), sulfur dioxide (SO_2), coarse particulate matter (PM10), fine particulate matter ($PM_{2.5}$), and lead are primary air pollutants. Of these, CO, NO_X, SO_2, PM10, and PM2.5 are criteria pollutants. ROG and NO_X are criteria pollutant precursors and form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. For example, the criteria pollutant ozone (O_3) is formed by a chemical reaction between ROG and NO_X in the presence of sunlight. O_3 and nitrogen dioxide (NO_2) are the principal secondary pollutants. Sources and health effects commonly associated with criteria pollutants are summarized in **Table 1: Air Contaminants and Associated Public Health Concerns.**

Toxic Air Contaminants

Toxic air contaminants (TACs) are airborne substances that can cause short-term (acute) or long-term (i.e., chronic, carcinogenic or cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes more than 200 compounds, including particulate emissions from diesel-fueled engines.

CARB identified diesel particulate matter (DPM) as a TAC. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine. Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Due to their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

Table 1: Air Contaminants and Associated Public Health Concerns

Pollutant	Major Man-Made Sources	Human Health Effects
Particulate Matter (PM10 and PM2.5)	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles, and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; asthma; chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility.
Ozone (O_3)	Formed by a chemical reaction between reactive organic gases/volatile organic compounds (ROG or VOC)[1] and nitrogen oxides (NO_X) in the presence of sunlight. Motor vehicle exhaust industrial emissions, gasoline storage and transport, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
Sulfur Dioxide (SO_2)	A colorless gas formed when fuel containing sulfur is burned and when gasoline is extracted from oil. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron, and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to O_3. Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Lead (Pb)	Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Due to the phase out of leaded gasoline, metals processing is the major source of lead emissions to the air today. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.	Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children, resulting in learning deficits and lowered IQ.

Notes:
[1] Volatile Organic Compounds (VOCs or Reactive Organic Gases [ROG]) are hydrocarbons/organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including ROGs and VOCs. Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).

Source: California Air Pollution Control Officers Association (CAPCOA), *Health Effects*, http://www.capcoa.org/health-effects/, accessed January 2023.

Ambient Air Quality

CARB monitors ambient air quality at approximately 250 air monitoring stations across the State. These stations usually measure pollutant concentrations ten feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. Existing levels of ambient air quality, historical

trends, and projections near the Project are documented by measurements made by the South Coast Air Quality Management District (SCAQMD), the air pollution regulatory agency in the SCAB that maintains air quality monitoring stations which process ambient air quality measurements.

Pollutants of concern in the SCAB include O_3, PM10, and PM2.5. The closest air monitoring station to the Project that monitors ambient concentrations of these pollutants is Long Beach – Signal Hill Monitoring Stations (located approximately 20 miles to the south of the Project site). Local air quality data from 2020 to 2022 are provided in **Table 2: Ambient Air Quality Data,** which lists the monitored maximum concentrations and number of exceedances of State or federal air quality standards for each year.

Table 2: Ambient Air Quality Data

Criteria Pollutant	2020	2021	2022
Ozone (O_3) [1]			
1-hour Maximum Concentration (ppm)	0.083	0.064	0.077
8-hour Maximum Concentration (ppm)	0.078	0.062	0.059
Number of Days Standard Exceeded			
CAAQS 1-hour (>0.09 ppm)	4	0	1
NAAQS 8-hour (>0.070 ppm)	4	0	1
Carbon Monoxide (CO)			
1-hour Maximum Concentration (ppm)	--	--	--
Number of Days Standard Exceeded			
NAAQS 1-hour (>35 ppm)	--	--	--
CAAQS 1-hour (>20 ppm)	--	--	--
Nitrogen Dioxide (NO_2)			
1-hour Maximum Concentration (ppm)	--	--	--
Number of Days Standard Exceeded			
NAAQS 1-hour (>0.100 ppm)	--	--	--
CAAQS 1-hour (>0.18 ppm)	--	--	--
Particulate Matter Less Than 10 Microns (PM10) [1]			
National 24-hour Maximum Concentration	*	*	57.9
State 24-hour Maximum Concentration	*	*	53.0
State Annual Average Concentration (CAAQS=20 µg/m³)	*	*	*
Number of Days Standard Exceeded			
NAAQS 24-hour (>150 µg/m³)	*	*	0
CAAQS 24-hour (>50 µg/m³)	*	*	5
Particulate Matter Less Than 2.5 Microns (PM2.5) [1]			
National 24-hour Maximum Concentration	*	*	26.7
State 24-hour Maximum Concentration	*	*	26.7
Number of Days Standard Exceeded	*		
NAAQS 24-hour (>35 µg/m³)	*	*	

Notes:
NAAQS = National Ambient Air Quality Standards; CAAQS = California Ambient Air Quality Standards; ppm = parts per million; µg/m³ = micrograms per cubic meter; – = not measured; * Insufficient (or no) data
[1] Measurements taken at the Long Beach- Signal Hill Monitoring Station at 1710 E 20th Street, Long Beach, California 90755 (CARB# 70033)

Source: All pollutant measurements are from the CARB Aerometric Data Analysis and Management system database (https://www.arb.ca.gov/adam) except for CO and NO_2, which were retrieved from the CARB Air Quality and Meteorological Information System (https://www.arb.ca.gov/aqmis2/aqdselect.php).

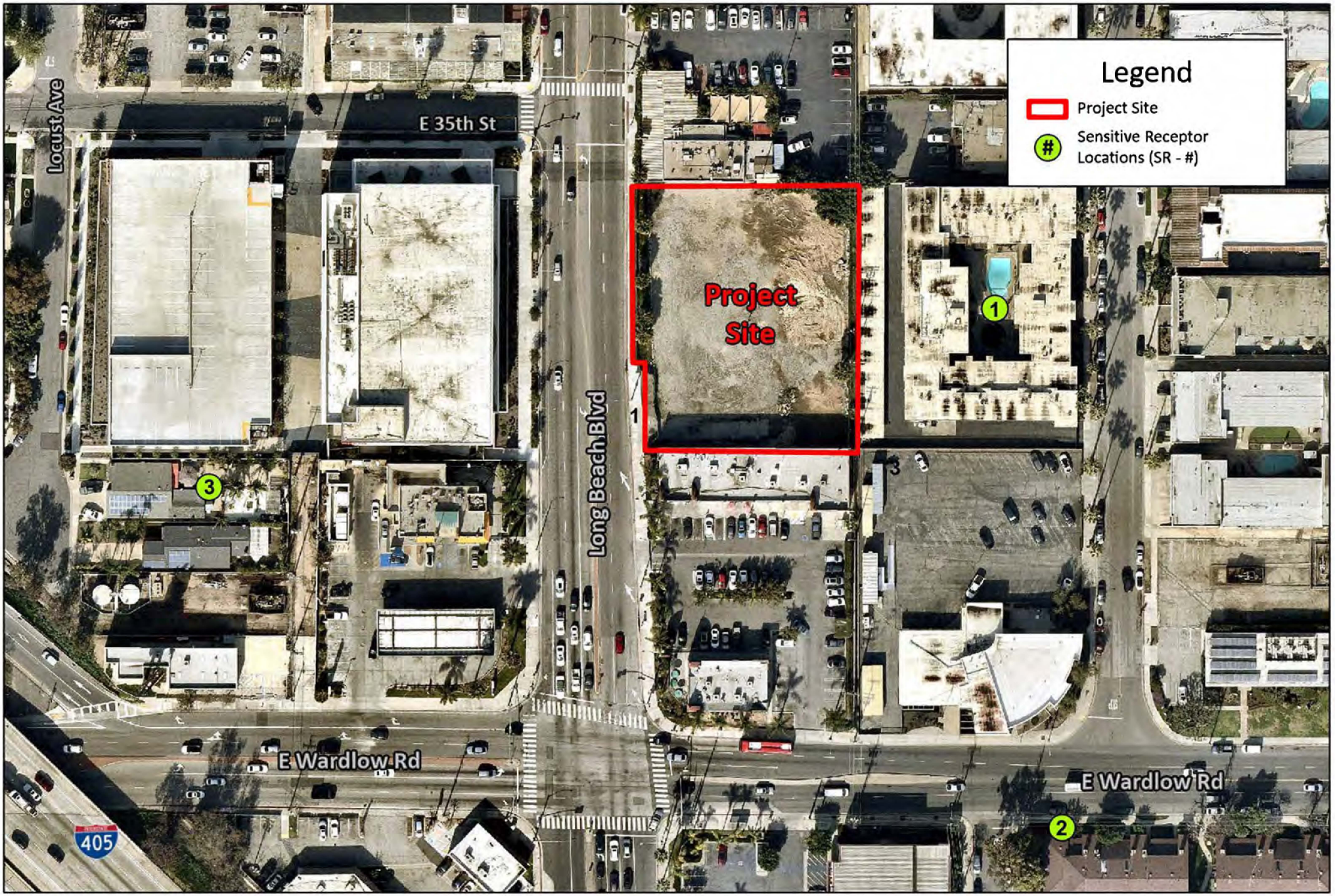
2.3 Sensitive Receptors

Sensitive populations are more susceptible to the effects of air pollution than is the general population. Sensitive receptors that are in proximity to localized sources of toxics are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Sensitive land uses within 1,000 feet of the Project site consist of multi-family and single-family residential communities. Sensitive land uses nearest to the Project are listed in **Table 3: Sensitive Receptors** and shown in **Exhibit 4: Sensitive Receptor Locations**.

Table 3: Sensitive Receptors

Receptor Description	Distance[1] and Direction from the Project
Multi-Family Residential Dwellings	40 feet to the east
Single-Family Residential Dwellings	300 feet to the southwest

Source: Google Earth, 2023.
1. Distance measured from the Project site boundary to the nearest sensitive receptor property line.



0 45 90 180 Feet

Exhibit 4: Sensitive Receptor Locations

FIRST CITIZENS BANK - LONG BEACH PROJECT

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3 REGULATORY SETTING

3.1 Federal

Federal Clean Air Act

Air quality is federally protected by the Federal Clean Air Act (FCAA) and its amendments. Under the FCAA, the United States Environmental Protection Agency (U.S. EPA) developed the primary and secondary National Ambient Air Quality Standards (NAAQS) for the criteria air pollutants including O_3, NO_2, CO, SO_2, PM10, PM2.5, and lead. Proposed projects in or near nonattainment areas could be subject to more stringent air-permitting requirements. The FCAA requires each state to prepare a State Implementation Plan (SIP) to demonstrate how it will attain the NAAQS within the federally imposed deadlines.

The U.S. EPA can withhold certain transportation funds from states that fail to comply with the planning requirements of the FCAA. If a state fails to correct these planning deficiencies within two years of Federal notification, the U.S. EPA is required to develop a Federal implementation plan for the identified nonattainment area or areas. The provisions of 40 Code of Federal Regulations Parts 51 and 93 apply in all nonattainment and maintenance areas for transportation-related criteria pollutants for which the area is designated nonattainment or has a maintenance plan. The U.S. EPA has designated enforcement of air pollution control regulations to the individual states. Applicable federal standards are summarized in **Table 4: State and National Ambient Air Quality Standards**.

3.2 State of California

California Air Resources Board

CARB administers the air quality policy in California. The California Ambient Air Quality Standards (CAAQS) were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in **Table 4**, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility reducing particulates, hydrogen sulfide, and sulfates.

The California Clean Air Act (CCAA), which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with CAAQS. These AQMPs also serve as the basis for the preparation of the SIP for meeting federal clean air standards for the State of California. Like the U.S. EPA, CARB also designates 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 three calendar years. Exceedances that are affected by highly irregular or infrequent events such as wildfires, volcanoes, etc. are not considered violations of a State standard, and are not used as a basis for designating areas as nonattainment. The applicable State standards are summarized in **Table 4**.

Table 4: State and National Ambient Air Quality Standards

Pollutant	Averaging Time	State Standards[1]	Federal Standards[2]
Ozone (O_3) [2, 5, 7]	8 Hour	0.070 ppm (137 µg/m³)	0.070 ppm
	1 Hour	0.09 ppm (180 µg/m³)	NA
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)
	1 Hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm (339 µg/m³)	0.10 ppm[11]
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)	0.053 ppm (100 µg/m³)
Sulfur Dioxide (SO_2) [8]	24 Hour	0.04 ppm (105 µg/m³)	0.14 ppm (365 µg/m³)
	1 Hour	0.25 ppm (655 µg/m³)	0.075 ppm (196 µg/m³)
	Annual Arithmetic Mean	NA	0.03 ppm (80 µg/m³)
Particulate Matter (PM10) [1, 3, 6]	24-Hour	50 µg/m³	150 µg/m³
	Annual Arithmetic Mean	20 µg/m³	NA
Fine Particulate Matter (PM2.5) [3, 4, 6, 9]	24-Hour	NA	35 µg/m³
	Annual Arithmetic Mean	12 µg/m³	12 µg/m³
Sulfates (SO_{4-2})	24 Hour	25 µg/m³	NA
Lead (Pb) [10, 11]	30-Day Average	1.5 µg/m³	NA
	Calendar Quarter	NA	1.5 µg/m³
	Rolling 3-Month Average	NA	0.15 µg/m³
Hydrogen Sulfide (H_2S)	1 Hour	0.03 ppm (0.42 µg/m³)	NA
Vinyl Chloride (C_2H_3Cl) [10]	24 Hour	0.01 ppm (26 µg/m³)	NA

Notes:

ppm = parts per million; µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; – = no information available.

1 California standards for O_3, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM10, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e. all standards except for lead and the PM10 annual standard), then some measurements may be excluded. Measurements are excluded that CARB determines would occur less than once per year on the average. The Lake Tahoe carbon monoxide standard is 6.0 ppm, a level one-half the national standard and two-thirds the State standard.

2 National standards shown are the "primary standards" designed to protect public health. National standards other than for O_3, particulates and those based on annual averages are not to be exceeded more than once a year. The 1-hour O_3 standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour O_3 standard is attained when the 3-year average of the 4th highest daily concentrations is 0.070 ppm or less. The 24-hour PM_{10} standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 µg/m₃. The 24-hour $PM_{2.5}$ standard is attained when the 3-year average of 98th percentiles is less than 35 µg/m³.

3 Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM_{10} is met if the 3-year average falls below the standard at every site. The annual $PM_{2.5}$ standard is met if the 3-year average of annual averages spatially-averaged across officially designed clusters of sites falls below the standard. NAAQS are set by the U.S. EPA at levels determined to be protective of public health with an adequate margin of safety.

4 On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour O_3 concentration per year, averaged over three years, is equal to or less than 0.070 ppm. U.S. EPA will make recommendations on attainment designations by October 1, 2016, and issue final designations October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the O_3 level in the area.

5 The national 1-hour O_3 standard was revoked by the U.S. EPA on June 15, 2005.

6 In June 2002, CARB established new annual standards for PM2.5 and PM10.

7 The 8-hour California O_3 standard was approved by the CARB on April 28, 2005 and became effective on May 17, 2006.

8 On June 2, 2010, the U.S. EPA established a new 1-hour SO_2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO_2 NAAQS however must continue to be used until one year following U.S. EPA initial designations of the new 1-hour SO_2 NAAQS.

9 In December 2012, U.S. EPA strengthened the annual PM2.5 NAAQS from 15.0 to 12.0 µg/m³. In December 2014, the U.S. EPA issued final area designations for the 2012 primary annual PM2.5 NAAQS. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.

10 CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure below which there are no adverse health effects determined.

11 National lead standard, rolling 3-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.

Source: South Coast Air Quality Management District, *Air Quality Management Plan*, 2016; California Air Resources Board, *Ambient Air Quality Standards*, May 6, 2016.

3.3 Regional

South Coast Air Quality Management District

The SCAQMD is the air pollution control agency for Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino counties. The agency's primary responsibility is ensuring that State and federal ambient air quality standards are attained and maintained in the SCAB. The SCAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, conducting public education campaigns, and many other activities. All projects are subject to SCAQMD rules and regulations in effect at the time of construction.

The SCAQMD is also the lead agency in charge of developing the AQMP, with input from the Southern California Association of Governments (SCAG) and CARB. The AQMP is a comprehensive plan that includes control strategies for stationary and area sources, as well as for on-road and off-road mobile sources. SCAG has the primary responsibility for providing future growth projections and the development and implementation of transportation control measures. CARB, in coordination with federal agencies, provides the control element for mobile sources.

The 2016 AQMP was adopted by the SCAQMD Governing Board on March 3, 2017. The purpose of the AQMP is to set forth a comprehensive and integrated program that would lead the SCAB into compliance with the federal 24-hour PM2.5 air quality standard, and to provide an update to the SCAQMD's commitments towards meeting the federal 8-hour O_3 standards. The AQMP incorporates the latest scientific and technological information and planning assumptions, including the *Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS) and updated emission inventory methodologies for various source categories. As part of its air quality planning, SCAG has prepared the Regional Comprehensive Plan and Guide and the Connect SoCal – The 2020-2045 RTP/SCS. The 2020-2045 RTP/SCS was determined to conform to the federally mandated SIP for the attainment and maintenance of the NAAQS. The 2020-2045 RTP/SCS will be incorporated into the 2022 AQMP. Both the Regional Comprehensive Plan and AQMP are based, in part, on projections originating with county and city general plans.

On October 1, 2015, the U.S. EPA strengthened the NAAQS for ground-level O_3. The 2022 AQMP, adopted by the South Coast AQMD Governing Board on December 2, 2022, was developed to address the requirements for meeting the 2015 8-hour O_3 standard. The 2022 AQMP builds upon measures already in place from previous AQMPs. It also includes a variety of additional strategies such as regulation, accelerated deployment of available cleaner technologies (e.g., zero emissions technologies, when cost-effective and feasible, and low NO_X technologies in other applications), best management practices, co-benefits from existing programs (e.g., climate and energy efficiency), incentives, and other FCAA measures to achieve the 2015 8-hour ozone standard. The 2022 AQMP incorporates the latest scientific and technological information and planning assumptions, including the 2020-2045 RTP/SCS and updated emission inventory methodologies for various source categories.

The SCAQMD has published the CEQA Air Quality Handbook (approved by the SCAQMD Governing Board in 1993 and augmented with guidance for Local Significance Thresholds [LST] in 2008). The SCAQMD guidance helps local government agencies and consultants to develop environmental documents required

by California Environmental Quality Act (CEQA) and provides identification of suggested thresholds of significance for criteria pollutants for both construction and operation (see discussion of thresholds below). With the help of the CEQA Air Quality Handbook and associated guidance, local land use planners and consultants are able to analyze and document how proposed and existing projects affect air quality in order to meet the requirements of the CEQA review process. The SCAQMD periodically provides supplemental guidance and updates to the handbook on their website.

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial counties and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. Under federal law, SCAG is designated as a Metropolitan Planning Organization and under State law as a Regional Transportation Planning Agency and a Council of Governments.

The State and federal attainment status designations for the SCAB are summarized in **Table 5: South Coast Air Basin Attainment Status**. The SCAB is currently designated as a nonattainment area with respect to the State O_3, PM_{10}, and $PM_{2.5}$ standards, as well as the national 8-hour O_3 and $PM_{2.5}$ standards. The SCAB is designated as attainment or unclassified for the remaining State and federal standards.

Table 5: South Coast Air Basin Attainment Status

Pollutant	State	Federal
Ozone (O_3) (1 Hour Standard)	Non-Attainment	Non-Attainment (Extreme)
Ozone (O_3) (8 Hour Standard)	Non-Attainment	Non-Attainment (Extreme)
Particulate Matter (PM2.5) (24 Hour Standard)	–	Non-Attainment (Serious)
Particulate Matter (PM2.5) (Annual Standard)	Non-Attainment	Non-Attainment (Moderate)
Particulate Matter (PM10) (24 Hour Standard)	Non-Attainment	Attainment (Maintenance)
Particulate Matter (PM10) (Annual Standard)	Non-Attainment	–
Carbon Monoxide (CO) (1 Hour Standard)	Attainment	Attainment (Maintenance)
Carbon Monoxide (CO) (8 Hour Standard)	Attainment	Attainment (Maintenance)
Nitrogen Dioxide (NO_2) (1 Hour Standard)	Attainment	Unclassifiable/Attainment
Nitrogen Dioxide (NO_2) (Annual Standard)	Attainment	Attainment (Maintenance)
Sulfur Dioxide (SO_2) (1 Hour Standard)	Attainment	Unclassifiable/Attainment
Sulfur Dioxide (SO_2) (24 Hour Standard)	Attainment	–
Lead (Pb) (30 Day Standard)	–	Unclassifiable/Attainment
Lead (Pb) (3 Month Standard)	Attainment	–
Sulfates (SO_{4-2}) (24 Hour Standard)	Attainment	–
Hydrogen Sulfide (H_2S) (1 Hour Standard)	Unclassified	–

Source: South Coast Air Quality Management District, *Air Quality Management Plan*, 2016; United States Environmental Protection Agency, *Nonattainment Areas for Criteria Pollutants (Green Book)*, 2020.

The following is a list of SCAQMD rules that are required of construction activities associated with the Project:

- **Rule 402 (Nuisance)** – This rule prohibits the discharge from any source whatsoever such quantities of 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. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.
- **Rule 403 (Fugitive Dust)** – This rule requires fugitive dust sources to implement best available control measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. This rule is intended to reduce PM10 emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. PM10 suppression techniques are summarized below.
    a) Portions of a construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized.
    b) All on-site roads will be paved as soon as feasible or watered periodically or chemically stabilized.
    c) All material transported off-site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.
    d) The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.
    e) Where vehicles leave a construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the workday to remove soil tracked onto the paved surface.
- **Rule 431.2 (Sulfur Content of Liquid Fuels)** – This rule limits the sulfur content in diesel and other liquid fuels for the purpose of both reducing the formation of sulfur oxides and particulates during combustion and to enable the use of add-on control devices for diesel fueled internal combustion engines.
- **Rule 1113 (Architectural Coatings)** – This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce ROG emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating categories.

3.4 Local

City of Long Beach General Plan

The Air Quality Element of the City's General Plan was adopted in 1996 and sets forth the goals, objectives, and policies that guide the City in the implementation of its air quality improvement programs and strategies.[5] The Air Quality Element acknowledges the interrelationships among transportation and land

[5] City of Long Beach, General Plan, Air Quality Element, http://www.longbeach.gov/lbds/planning/advance/general-plan/.

use planning in meeting the City's air quality goals. The following goals and policies are applicable to the Project

Goal 6: Minimize particulate emissions from the construction and operation of roads and buildings, from mobile sources, and from the transportation, handling and storage materials.

Policy 6.1: Control Dust. Further reduce particulate emissions from roads, parking lots, construction sites, unpaved alleys, and port operations and related uses.

Goal 7: Reduce emissions through reduced energy consumption.

Policy 7.1: Energy Conservation. Reduce energy consumption through conservation improvements and requirements.

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

4.1 Air Quality Thresholds

Based upon the criteria derived from Appendix G of the CEQA Guidelines, a project normally would have a significant effect on the environment if it would:

- **AQ-1:** Conflict with or obstruct implementation of the applicable air quality plan.
- **AQ-2:** Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in nonattainment under an applicable state or federal ambient air quality standard.
- **AQ-3:** Expose sensitive receptors to substantial pollutant concentrations.
- **AQ-4:** Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

SCAQMD Thresholds

The significance criteria established by SCAQMD may be relied upon to make the above determinations. According to the SCAQMD, an air quality impact is considered significant if the Project would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The SCAQMD has established thresholds of significance for air quality during construction and operational activities of land use development projects, as shown in **Table 6: South Coast Air Quality Management District Emissions Thresholds.**

Table 6: South Coast Air Quality Management District Emissions Thresholds

Criteria Air Pollutants and Precursors	Pounds per Day	
	Construction-Related	Operational-Related
Reactive Organic Gases (ROG)	75	55
Carbon Monoxide (CO)	550	550
Nitrogen Oxides (NO_X)	100	55
Sulfur Oxides (SO_X)	150	150
Coarse Particulates (PM10)	150	150
Fine Particulates (PM2.5)	55	55
Source: South Coast Air Quality Management District, *South Coast AQMD Air Quality Significance Thresholds,* April 2019.		

Localized Carbon Monoxide

In addition to the daily thresholds listed above, development associated with the Project would also be subject to the ambient air quality standards. These are addressed though an analysis of localized CO impacts. The significance of localized impacts depends on whether ambient CO levels near the Project are above State and national CO standards (the more stringent California standards are 20 ppm for 1-hour and 9 ppm for 8-hour). The SCAB has been designated as attainment under the 1-hour and 8-hour standards.

Localized Significance Thresholds

In addition to the CO hotspot analysis, the SCAQMD developed LSTs for emissions of NO_2, CO, PM10, and PM2.5 generated at new development sites (off-site mobile source emissions are not included in the LST

analysis). LSTs represent the maximum emissions that can be generated at a project without expecting to cause or substantially contribute to an exceedance of the most stringent State or national ambient air quality standards. LSTs are based on the ambient concentrations of that pollutant within the Project source receptor area (SRA), as demarcated by the SCAQMD, and the distance to the nearest sensitive receptor. LST analysis for construction is applicable for all projects that disturb 5 acres or less on a single day. The City of Long Beach is located within SCAQMD SRA 4. **Table 7: Local Significance Thresholds for Construction/Operations**, shows the LSTs for a 1-acre, 2-acre, and 5-acre project in SRA 4 within 25 meters of the Project. The nearest sensitive receptors closest to the proposed Project site are the multifamily residential uses located approximately 40 feet (12 meters) to the east. Therefore, the threshold distance of 25 meters was conservatively used for the analysis based on the SCAQMD LST methodology guidance. LSTs associated with all acreage categories at 25 meters are provided in **Table 7** for informational purposes. The table shows that the LSTs increase as acreages increase. It should be noted that LSTs are screening thresholds and are therefore conservative. The construction LST acreage is determined based on daily acreage disturbed. The operational LST acreage is based on the total area of the Project site. The one-acre LST threshold was used for the 0.87-acre Project site.

Table 7: Local Significance Thresholds for Construction/Operations

Project Size	Pounds per Day			
	Nitrogen Oxide (NO_x)	Carbon Monoxide (CO)	Coarse Particulates (PM10)	Fine Particulates (PM2.5)
1 Acre	57/57	585/585	4/1	3/1
2 Acres	82/82	842/842	7/2	5/1
5 Acres	123/123	1,530/1,530	14/4	8/2
Source: South Coast Air Quality Management District, *Localized Significance Threshold Methodology*, July 2008.				

4.2 Methodology

This air quality impact analysis considers construction and operational impacts associated with the Project. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model version 2022.1 (CalEEMod). CalEEMod is a Statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Air quality impacts were assessed according to methodologies recommended by CARB and the SCAQMD.

Construction equipment, trucks, worker vehicles, and ground-disturbing activities associated with Project construction would generate emissions of criteria air pollutants and precursors. Daily regional construction emissions are estimated by assuming construction occurs at the earliest feasible date (i.e., a conservative estimate of construction activities) and applying off-road, fugitive dust, and on-road emissions factors in CalEEMod.

Project operations would result in emissions of area sources (consumer products), energy sources (natural gas usage), mobile sources (motor vehicles from Project generated vehicle trips), and stationary sources (i.e., emergency generators). Project-generated increases in operational emissions would be predominantly associated with stationary sources and motor vehicle use. Project-generated vehicle emissions are based on trip generation within the *First-Citizens Bank - Long Beach Project Draft Initial Study* (Initial Study), prepared by Kimley-Horn (dated May 2024). The number of trips generated by the

proposed Project was approximated using the Institute of Transportation Engineers (ITE) land use code 710 (General Office Building) and ITE land use code 911 (Walk-In Bank). According to the Initial Study, the Project would generate 293 total daily vehicle trips. The Project-generated trips have been incorporated into CalEEMod as recommended by the SCAQMD. Other operational emissions from area, energy, and stationary sources were quantified in CalEEMod based on land use activity data.

As discussed above, the SCAQMD provides significance thresholds for emissions associated with proposed Project construction and operations. The proposed Project's construction and operational emissions are compared to the daily criteria pollutant emissions significance thresholds in order to determine the significance of a Project's impact on regional air quality.

The localized effects from the Project's on-site emissions were evaluated in accordance with the SCAQMD's LST methodology, which uses on-site mass emissions rate look-up tables and Project-specific modeling. LSTs 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 and are developed based on the ambient concentrations of that pollutant for each SRA and distance to the nearest sensitive receptor.

5 POTENTIAL IMPACTS AND MITIGATION

5.1 Air Quality Analysis

Threshold AQ-1: Would the Project conflict with or obstruct implementation of the applicable air quality plan?

As part of its enforcement responsibilities, the United States Environmental Protection Agency (U.S. EPA) requires that each state with nonattainment areas prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, State, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under State law, the California Clean Air Act (CCAA) requires an air quality attainment plan to be prepared for areas designated as nonattainment regarding the National Ambient Air Quality Standards (NAAQS) and CAAQS. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

The SCAQMD is required, pursuant to the federal Clean Air Act (FCAA), to reduce criteria pollutant emissions for which SCAB is in nonattainment. To reduce such emissions, the SCAQMD prepared the 2022 Air Quality Management Plan (AQMP), which establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving State and national air quality standards. The AQMP is a regional and multi-agency effort including the SCAQMD, the California Air Resources Board (CARB), the Southern California Association of Governments (SCAG), and the U.S. EPA. The AQMP's pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SCAG's Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which includes the latest growth forecasts for the region and provides updated emission inventory methodologies for various source categories. SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans.

Criteria for determining consistency with the AQMP are defined by the following indicators:

- **Consistency Criterion No. 1: A proposed 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 the timely attainment of the AQMP's air quality standards or the interim emissions reductions.**
- **Consistency Criterion No. 2: A proposed project would not exceed the AQMP's assumptions or increments based on the years of the project buildout phase.**

Consistency Criterion No. 1 refers to the CAAQS and NAAQS. As indicated in **Table 8** and **Table 9** under Threshold AQ-2, project construction and operational emissions would be below South Coast AQMD's thresholds. As the proposed Project would not generate localized construction or regional construction or operational emissions that would exceed SCAQMD thresholds of significance, the proposed Project would not violate any air quality standards. Therefore, the proposed Project would be consistent with Criterion No. 1.

Consistency Criterion No. 2 refers to SCAG's growth forecasts and associated assumptions included in the AQMP. The future air quality levels projected in the AQMP are based on SCAG's growth projections, which are based, in part, on the general plans of cities located within the SCAG region. Therefore, projects that are consistent with the applicable assumptions used in AQMP development would not jeopardize

attainment of the air quality levels identified in the AQMP, even if they exceed the SCAQMD's recommended daily emissions thresholds.

Concerning Consistency Criterion No. 2, the AQMP contains air pollutant reduction strategies based on SCAG's latest growth forecasts; SCAG's growth forecasts were defined in consultation with local governments and with reference to local general plans. Therefore, it is reasonable to conclude that if a project is consistent with the applicable general plan land use designation, and if the general plan was adopted prior to the applicable AQMP, then the increase in vehicle miles traveled (VMT) and/or population generated by said project would have been included in the applicable AQMP's assumed VMT and population growth.

The proposed Project would not conflict with the Community Commercial designation's intended uses (a range of automobile-oriented commercial uses). Additionally, with a FAR of approximately 0.34, the proposed Project would be below the Community Commercial land use designations permitted FAR of 4.0. The proposed Project's proposed land uses would be consistent with the General Plan's land use designations, which are the basis for the AQMP. Therefore, the proposed Project's forecast population growth and VMT would be consistent with the AQMP's assumed population growth and VMT for the proposed Project site. It is also noted that the Project's construction and operational air emissions would not exceed the SCAQMD regional thresholds, and localized emissions during construction and operations would not exceed SCAQMD LST thresholds; see Threshold AQ-2 and Threshold AQ-3 below for further analysis. As such, the proposed Project would be consistent with Criterion No. 2.

Therefore, the proposed Project would not conflict with or obstruct implementation of the applicable air quality plan. Impacts would be less than significant.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold AQ-2: 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 state or federal ambient air quality standard?

Construction Emissions

Project construction activities would generate short-term criteria air pollutant emissions. The criteria air pollutants of primary concern at the proposed Project site include ozone-precursor pollutants (i.e., ROG and NO_x) and PM10 and PM2.5. Construction-related emissions are short term and temporary, lasting only while construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SCAQMD's thresholds of significance.

Construction activities temporarily generate emissions from site grading, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and movement of construction equipment, especially on unpaved surfaces. Airborne particulate matter emissions are largely dependent on the amount of ground disturbance associated with site preparation activities, as well as weather conditions and the application of water.

The proposed Project's construction-related emissions were calculated using the CARB-approved CalEEMod computer program[6], which is designed to model emissions for land use development projects, based on typical construction requirements. For purposes of this analysis, proposed Project construction would occur over approximately 14 months, with site preparation and grading anticipated to begin in late 2024. While the exact start date of construction remains to be determined, a November 2024 construction start date was used for modeling purposes to ensure a conservative analysis. CalEEMod uses lower emissions factors in future years due to more stringent standards, regulatory and technological improvements, and fleet turnover. This approach is conservative given that emissions factors decrease in future years. See **Appendix A** for additional information regarding the construction assumptions used in this analysis.

Table 8: Construction-Related Emissions (Maximum Pounds Per Day) presents the proposed Project's estimated maximum daily construction-related emissions and indicates that all criteria pollutant emissions would remain below their respective thresholds. While impacts would be less than significant, the proposed Project would be subject to compliance with SCAQMD Rules 402, 403, and 1113, to further reduce specific construction-related emissions. The proposed Project emissions would not worsen ambient air quality, create additional violations of federal and State standards, or delay SCAB's AQMP goal for meeting attainment standards. Therefore, the proposed Project's construction-related air quality impacts would be less than significant.

Table 8: Construction-Related Emissions

Construction Year	Pollutant (Maximum Pounds per Day)					
	Reactive Organic Gases (ROG)	Nitrogen Oxide (NOx)	Carbon Monoxide (CO)	Sulfur Dioxide (SO_2)	Coarse Particulate Matter (PM10)	Fine Particulate Matter (PM2.5)
2024	1.22	11.50	11.20	0.02	5.97	3.09
2025	6.31	10.20	10.50	0.02	5.90	3.03
SCAQMD Threshold	75	100	550	150	150	55
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Note: No mitigation was applied to construction equipment. Refer to **Appendix A** for Model Data Outputs.						

Operational Emissions

The proposed Project's operational emissions would be associated with area sources, energy sources, stationary sources, and mobile sources. CalEEMod was used to calculate the proposed Project's area source, energy source, generator source, and mobile source pollutant emissions. **Table 9: Operational Emissions (Maximum Pounds Per Day)** provides the CalEEMod estimated emissions from proposed Project operations. It is noted that emission rates differ from summer to winter because weather factors are dependent on the season and these factors affect pollutant mixing, dispersion, ozone formation, and other factors. As shown in **Table 9**, Project operational emissions would not exceed SCAQMD daily thresholds.

[6] CalEEMod Version 2022.1.

Table 9: Operational Emissions

Source	Pollutant (Maximum Pounds per Day)[1]					
	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO_x)	Carbon Monoxide (CO)	Sulfur Dioxide (SO_2)	Coarse Particulate Matter (PM10)	Fine Particulate Matter (PM2.5)
Area	0.40	<0.01	0.55	<0.01	<0.01	<0.01
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.95	0.62	6.88	0.01	0.53	0.10
Emergency Generator[2]	1.69	4.71	4.30	0.01	0.25	0.25
Total Emissions	***3.04***	***5.33***	***11.73***	***0.02***	***0.78***	***0.35***
SCAQMD Threshold	55	55	550	150	150	55
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Notes:
1. Emissions were calculated using the California Emissions Estimator Model version 2022.1. (CalEEMod), as recommended by the SCAQMD. Worst-case seasonal maximum daily emissions are reported.
2. Emissions were calculated with CARB OFFROAD 1.0.2.

Source: CalEEMod version 2022.1; see **Appendix A** for model outputs.

The Project's operational emissions sources are described below.

- **Area Source Emissions.** Area-specific CalEEMod default inputs were used to calculate the proposed Project's area source emissions. Area source emissions would be generated from gasoline-powered landscaping and maintenance equipment, and consumer products (such as household cleaners). Area source emissions would also be generated from consumer products, architectural coatings, and landscaping that were previously not present on the proposed Project site. Typically, area sources are small sources that contribute very little emissions individually, but when combined may generate substantial amounts of pollutants.
- **Energy Source Emissions.** CalEEMod default inputs were used to calculate the proposed Project's energy source emissions. Energy source emissions would typically be generated from a project's electricity usage. The proposed Project's primary uses of electricity would be for water heating and space heating and cooling, ventilation, lighting, appliances, and electronics. The proposed Project would not include natural gas.
- **Mobile Source Emissions.** CalEEMod default inputs, vehicle mix, and trip distances were used to calculate the proposed Project's mobile source emissions, along with trip generation estimates from the Initial Study. The number of trips generated by the project was approximated using relevant ITE land use codes and incorporated into CalEEMod as recommended by the SCAQMD. Mobile source emissions are generated from motor vehicle use, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_x, PM10, and PM2.5 are all pollutants of regional concern. NO_x and ROG react with sunlight to form ozone, known as photochemical smog. Additionally, wind currents readily transport PM10 and PM2.5. However, CO tends to be a localized pollutant that disperses rapidly at the source. Project-generated vehicle emissions have

been estimated using CalEEMod. The proposed Project would result in a total of 293 daily vehicle trips.

- **Emergency Backup Generators**. One backup generator was assumed for the Project. Backup generators would only be used in the event of a power failure and would not be part of the Project's normal daily operations. Emissions from an emergency backup generator for the Project was calculated separately from CalEEMod; refer to **Appendix A**. However, CalEEMod default emissions rates were used. If backup generators are required, the end user would be required to obtain a permit from the SCAQMD prior to installation. Emergency backup generators must meet SCAQMD's Best Available Control Technology (BACT) requirements and comply with SCAQMD Rule 1470 (Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines), which would minimize emissions.

Total Emissions. Based on the proposed land uses and operational characteristics, **Table 9** summarizes the CalEEMod estimated emissions from proposed Project operations and indicates the proposed Project's unmitigated area, energy, mobile, and generator source emissions combined would not exceed SCAQMD thresholds for worst-case seasonal maximum daily emissions for any criteria air pollutants. As such, the proposed Project would not violate any air quality standards or contribute substantially to an existing or projected air quality violation. The proposed Project's operational air quality impacts would be less than significant.

Cumulative Short-Term Emissions

The SCAB is designated nonattainment for ozone, PM10, and PM2.5 for State standards and nonattainment for ozone and PM2.5 for federal standards. The SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the AQMP pursuant to the FCAA mandates. SCAQMD rules, mandates, and compliance with adopted AQMP emissions control measures would also be imposed on construction projects throughout SCAB, which would include related cumulative projects. As concluded above, the proposed Project's construction-related air quality impacts would be less than significant. Compliance with SCAQMD rules and regulations would further minimize the construction-related emissions. Therefore, construction emissions, in combination with those from other projects in the area, would not substantially deteriorate the local air quality. The proposed Project's construction-related emissions would not result in a cumulatively considerable contribution to significant cumulative air quality impacts.

Cumulative Long-Term Impacts

The South Coast AQMD has not established separate significance thresholds for cumulative operational emissions. The nature of air emissions is largely a cumulative impact. As a result, no single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, individual project emissions contribute to existing cumulatively significant adverse air quality impacts. The SCAQMD developed the operational thresholds of significance based on the level above which individual project emissions would result in a cumulatively considerable contribution to SCAB's existing air quality conditions. Therefore, a project that exceeds the SCAQMD operational thresholds would also be a cumulatively considerable contribution to a significant cumulative impact.

As concluded above, the proposed Project's operational-related air quality impacts would be less than significant. As a result, operational emissions would not result in a cumulatively considerable contribution to significant cumulative air quality impacts. Additionally, adherence to SCAQMD rules and regulations

would alleviate potential impacts related to cumulative conditions on a project-by-project basis. Therefore, Project operations would not contribute a cumulatively considerable net increase of any nonattainment criteria pollutant.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold AQ-3: Would the Project expose sensitive receptors to substantial pollutant concentrations?

Localized Construction Significance Analysis

The sensitive receptors closest to the proposed Project site are the multifamily residential uses located approximately 40 feet (12 meters) to the east. To determine potential impacts to sensitive receptors, the SCAQMD recommends addressing LSTs for construction. LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SC AQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with project-specific level analyses.

Since CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, the data provided in **Table 10: Equipment-Specific Grading Rates** was used to determine the maximum daily disturbed acreage for comparison to LSTs. For this Project, the appropriate SRA for the localized significance thresholds is SRA 4 area because this SRA includes the proposed Project site. LSTs apply to NO_X, CO, PM10, and PM2.5. The SCAQMD produced look-up tables for projects that disturb areas less than or equal to five acres. Based on the daily equipment modeled in CalEEMod, Project construction is anticipated to disturb approximately 1.5 acres in a single day.

Table 10: Equipment-Specific Grading Rates

Construction Phase	Equipment Type	Equipment Quantity	Acres Graded per 8-Hour Day	Operating Hours per Day	Acres Graded per Day
Grading	Tractors	1	0.5	8	0.5
	Graders	1	0.5	8	0.5
	Dozers	1	0.5	8	0.5
	Scrapers	0	0	8	0
				Total Acres Graded per Day	**1.5**

Source: CalEEMod version 2022.1.; see **Appendix A** for model outputs.

The SCAQMD's methodology indicates that "off-site mobile emissions from the proposed Project should not be included in the emissions compared to LSTs." Therefore, for the construction LST analysis, only emissions included in the CalEEMod "on-site" emissions outputs were considered. LSTs are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. SCAQMD's LST guidance recommends using the 25-meter threshold for receptors located 25 meters or less from a project site. The sensitive receptors nearest the proposed Project site are residential uses located approximately 40 feet (12 meters) to the east of the proposed Project site. The above 1.5 acres graded is interpolated from the 1-acre, 2-

acre, and 5-acre project. Therefore, the LSTs for 1.5 acres at 25 meters were used for the construction analysis.

Table 11: Localized Significance of Construction Emissions, shows daily localized emissions during each phase of construction. In addition, paving and architectural coating emissions were also combined because these activities are anticipated to overlap. **Table 11** shows that construction would not result in significant concentrations of pollutants at nearby receptors. Therefore, the proposed Project's construction-related activities would result in a less than significant impact concerning LSTs.

Table 11: Localized Significance of Construction Emissions

Construction Activity	Pollutant (Maximum Pounds per Day)[1]			
	Nitrogen Oxide (NOx)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM10	Fine Particulate Matter (PM2.5)
Site Preparation (2024)	4.60	5.56	0.24	0.22
Grading (2024)	11.4	10.70	0.53	0.49
Grading (2025)	10.1	10.00	0.46	0.43
Paving (2025)	0.35	0.42	0.02	0.01
Building Construction (2025)	5.14	6.94	0.22	0.20
Architectural Coating (2025)	0.88	1.14	0.03	0.03
Maximum Daily Emissions	32.47	34.76	1.50	1.38
SCAQMD Localized Screening Threshold (1.5 acres at 25 meters)	111	816	7	4
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**
Source: CalEEMod version 2022.1.; see **Attachment 1** for model outputs.				

Localized Operational Significance Analysis

According to the SCAQMD LST methodology, operational LSTs apply to on-site sources. LSTs for receptors located at 25 meters for SRA 4 were utilized in this analysis. The one-acre LST threshold was used for the 0.87-acre Project site. **Table 12: Localized Significance of Operational Emissions** compares the on-site operational emissions to the LST thresholds and indicates the proposed Project's maximum daily operational emissions of these pollutants would not result in significant concentrations at nearby sensitive receptors. Therefore, proposed Project operations would result in a less than significant impact concerning LSTs.

Table 12: Localized Significance of Operational Emissions

Activity	Pollutant (Maximum Pounds per Day)			
	Nitrogen Oxide (NO_X)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM10)	Fine Particulate Matter (PM2.5)
On-Site Emissions (Area, Generator, and Energy Sources)	0.57	0.53	0.05	0.05
SCAQMD Localized Screening Threshold (1 acre at 25 meters)	91	664	1	1
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**
Source: CalEEMod version 2022.1.; see **Attachment 1** for model outputs.				

The proposed Project would not involve the use, storage, or processing of carcinogenic or non-carcinogenic toxic air contaminants (TACs), and no significant toxic airborne emissions would result from the proposed Project operations. Project construction activities are subject to regional, State, and federal regulations and laws concerning toxic air pollutants that would protect sensitive receptors from substantial concentrations of these emissions. Therefore, Project impacts concerning the release of TACs would be less than significant.

Criteria Pollutant Health Impacts

On December 24, 2018, the California Supreme Court issued an opinion identifying the need to provide sufficient information connecting a project's air emissions to health impacts or explain why such information could not be ascertained (*Sierra Club v. County of Fresno* [Friant Ranch, L.P.] [2018] 6 Cal.5th 502). The SCAQMD has set its CEQA significance thresholds based on the FCAA, which defines a major stationary source (in extreme ozone nonattainment areas such as the SCAB) as emitting 10 tons per year. The thresholds correlate with the trigger levels for the federal New Source Review (NSR) Program and SCAQMD Rule 1303 for new or modified sources. The NSR Program was created by the FCAA to ensure that stationary sources of air pollution are constructed or modified in a manner that is consistent with attainment of health-based NAAQS. The NAAQS establish the levels of air quality necessary, with an adequate margin of safety, to protect the public health. Therefore, projects that do not exceed the SCAQMD's mass emissions thresholds would not violate any air quality standards or contribute substantially to an existing or projected air quality violation and no criteria pollutant health impacts would occur.

NO_X and ROG are precursor emissions that form ozone in the atmosphere in the presence of sunlight where the pollutants undergo complex chemical reactions. It takes time and the influence of meteorological conditions for these reactions to occur, so ozone may be formed at a distance downwind from the sources. Breathing ground-level ozone can result in health effects that include reduced lung function, inflammation of airways, throat irritation, pain, burning, or discomfort in the chest when taking a deep breath, chest tightness, wheezing, or shortness of breath. In addition to these effects, evidence from observational studies strongly indicates that higher daily ozone concentrations are associated with increased asthma attacks, increased hospital admissions, increased daily mortality, and other markers of morbidity. The consistency and coherence of the evidence for effects upon asthmatics suggests that ozone can make asthma symptoms worse and can increase sensitivity to asthma triggers.

The SCAQMD's 2022 AQMP focuses on the 2015 8-hour ozone standard with achieving attainment in 2037. The largest source of NO_X emissions (an O_3 precursor) in 2018 were related to on-road sources. The 2022 AQMP also emphasizes a shift in focus beyond on-road emissions to off-road sources. The 2022 AQMP identifies a 67 percent NO_X reduction beyond the current 2037 baseline and about 83 percent below current levels. In order to achieve this, the SCAQMD identifies the need for widespread adoption of zero emissions (ZE) technologies across all mobile sectors and stationary sources.

The control strategy for the 2022 AQMP includes aggressive new regulations and the development of incentive programs to support early deployment of advanced technologies. The two key areas for incentive programs are (1) promoting widespread deployment of available ZE and low NO_X technologies and (2) developing new ZE and ultra-low NO_X technologies for use in cases where the technology is not

currently available. SCAQMD will prioritize distribution of incentive funding in EJ areas and seek opportunities to focus benefits on the most disadvantaged communities. The 2022 AQMP includes a total of 49 control measures. In addition to the NO_X measures, the 2022 AQMP relies on co-benefits from climate and energy efficiency programs for further reductions, limited strategic measures for VOC reductions, and other actions.

The SCAQMD's air quality modeling demonstrates that NO_X reductions prove to be much more effective in reducing ozone levels and will also lead to a significant decrease in $PM_{2.5}$ concentrations. NO_X-emitting stationary sources regulated by the SCAQMD include Regional Clean Air Incentives Market (RECLAIM) facilities (e.g., refineries, power plants, etc.), natural gas combustion equipment (e.g., boilers, heaters, engines, burners, flares) and other combustion sources that burn wood or propane. The AQMP identifies robust NO_X reductions from new regulations on RECLAIM facilities, non-refinery flares, commercial cooking, and residential and commercial appliances. Such combustion sources are already heavily regulated with the lowest NO_X emissions levels achievable but there are opportunities to require and accelerate replacement with cleaner zero-emission alternatives, such as residential and commercial furnaces, pool heaters, and backup power equipment. The SCAQMD plans to achieve such replacements through a combination of regulations and incentives. Technology-forcing regulations can drive development and commercialization of clean technologies, with future year requirements for new or existing equipment. Incentives can then accelerate deployment and enhance public acceptability of new technologies.

The AQMP also emphasized that beginning in 2012, continued implementation of previously adopted regulations will lead to NO_X emission reductions of 68 percent by 2023 and 80 percent by 2031. With the addition of 2016 AQMP proposed regulatory measures, a 30 percent reduction of NO_X from stationary sources is expected in the 15-year period between 2008 and 2023. This is in addition to significant NO_X reductions from stationary sources achieved in the decades prior to 2008.

As previously discussed, the Project's construction-related and operational emissions would not exceed SCAQMD thresholds, thus, would be less than significant; see **Table 8 and Table 9,** respectively. The on-site Project emissions' localized effects on nearby receptors were also found to be less than significant; see **Table 11** and **Table 12**. The LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable NAAQS or CAAQS. The LSTs were developed by the SCAQMD based on the ambient concentrations of that pollutant for each SRA and distance to the nearest sensitive receptor. The ambient air quality standards establish the levels of air quality necessary, with an adequate margin of safety, to protect public health, including protecting the health of sensitive populations such as asthmatics, children, and the elderly. As shown above, Project-related emissions would not exceed the regional thresholds or the LSTs, and therefore would not exceed the ambient air quality standards or cause an increase in the frequency or severity of existing violations of air quality standards. Therefore, sensitive receptors would not be exposed to criteria pollutant levels more than the health-based ambient air quality standards.

Carbon Monoxide Hotspots

An analysis of CO "hot spots" is needed to determine whether the change in the level of service of an intersection resulting from the proposed Project would have the potential to result in exceedances of the CAAQS or NAAQS. It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when vehicles are idling at intersections. Vehicle emissions standards have become increasingly

stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations have steadily declined.

Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard. The AQMP is the most recent version that addresses CO concentrations. As part of the SCAQMD *CO Hotspot Analysis*, the Wilshire Boulevard/Veteran Avenue intersection, one of the most congested intersections in Southern California with approximately 100,000 average daily traffic (ADT), was modeled for CO concentrations. This modeling effort identified a CO concentration high of 4.6 ppm, which is well below the 35-ppm federal standard. The proposed Project would not produce the volume of traffic required to generate a CO hot spot in the context of SCAQMD's *CO Hotspot Analysis*. As the CO hotspots were not experienced at the Wilshire Boulevard/Veteran Avenue intersection even as it accommodates 100,000 ADT, it can be reasonably inferred that CO hotspots would not be experienced at any Project area intersections from the proposed Project's 293 ADT. Therefore, the proposed Project would result in minimal emissions far below SCAQMD thresholds; impacts would be less than significant.

Construction-Related Diesel Particulate Matter

Construction of the proposed Project would generate diesel particulate matter (DPM) emissions from the use of off-road diesel equipment required. The amount to which the receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer.

The use of diesel-powered construction equipment would be temporary and episodic. The duration of exposure would be short and exhaust from construction equipment would dissipate rapidly. Current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 30, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities.

The California Office of Environmental Health Hazard Assessment (OEHHA) has not identified short-term health effects from DPM. Construction is temporary and would be transient throughout a site (i.e., move from location to location) and would not generate emissions in a fixed location for extended periods of time. Construction activities would be subject to and would comply with California regulations limiting the idling of heavy-duty construction equipment to no more than five minutes to further reduce nearby sensitive receptors' exposure to temporary and variable DPM emissions. For these reasons, DPM generated by construction activities would not expose sensitive receptors to substantial amounts of air toxins, and the proposed Project would result in a less than significant impact.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold AQ-4: Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Construction

Odors that could be generated by construction activities are required to follow SCAQMD Rule 402 to prevent odor nuisances on sensitive land uses. SCAQMD Rule 402, Nuisance, states:

> *A person shall not discharge from any source whatsoever such quantities of 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.*

During construction, emissions from construction equipment, such as diesel exhaust and VOCs from architectural coatings and paving activities may generate odors. However, these odors would be temporary, are not expected to affect a substantial number of people and would disperse rapidly. Therefore, the proposed Project's construction-related impacts concerning odors would be less than significant.

Operations

The SCAQMD *CEQA Air Quality Handbook* identifies certain land uses as odor sources (i.e., agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding). The Project proposes development of office use, which would not involve the types of uses that would emit objectionable odors affecting substantial numbers of people. The proposed Project would not include any of the land uses that have been identified by the SCAQMD as odor sources. Project operations would not create objectionable odors and there would be no impact.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than Significant Impact.

5.2 Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

The cumulative setting for air quality includes the City of Indio and SCAB. SCAB is designated as a nonattainment area for State standards of O_3, PM10, and PM2.5. The SCAB is designated as a nonattainment area for federal standards of O_3 and PM2.5, attainment and serious maintenance for national PM_{10} standards, and is designated as unclassified or attainment for all other pollutants. Cumulative growth in population and vehicle use could inhibit efforts to improve regional air quality and attain the ambient air quality standards.

Cumulative Impacts and Mitigation Measures

The SCAQMD's approach to assessing cumulative impacts is based on the AQMP forecasts of attainment of ambient air quality standards in accordance with requirements of the FCAA and CCAA. As discussed above, the proposed Project would be consistent with the AQMP, which is intended to bring SCAB into attainment for all criteria pollutants. Since the Project's estimated construction and operational emissions would not exceed the applicable SCAQMD daily significance thresholds that are designed to assist the

region in attaining both NAAQS and CAAQS, cumulative impacts would be less than significant with mitigation incorporated.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

6 REFERENCES

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13. United States Environmental Protection Agency, *National Ambient Air Quality Standards Table*, 2016.
14. United States Environmental Protection Agency, *Nonattainment Areas for Criteria Pollutants*, 2019.
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Appendix A

Air Quality Modeling Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Nar	FCB Long Beach
Constructic	########
Operationa	2025
Lead Agency	
Land Use S	Project/site
Analysis Le	County
Windspeec	2.3
Precipitatic	17.4
Location	3450 Long Beach Blvd, Long Beach, CA 90807, USA
County	Los Angeles-South Coast
City	Long Beach
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4726
EDFZ	7
Electric Uti	Southern California Edison
Gas Utility	Long Beach Gas & Oil
App Versio	2022.1.1.13

1.2. Land Use Types

Land Use S	Size	Unit	Lot Acreag	Building Ar	Landscape	Special Lan	Population	Description
Bank (with	3.12	1000sqft	0.07	3120	8611			
Parking Lot	16.4	1000sqft	0.38	0	0			
General Of	9.58	1000sqft	0.22	9580	0			

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Un/Mit.	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Unmit.	0.64	0.54	5.23	7.26	0.01	0.22	0.07	0.29	0.2	0.02	0.22		1427	1427	0.06	0.02	0.39	1435
Daily, Winter (Max)																		
Unmit.	1.46	6.31	11.5	11.2	0.02	0.54	5.43	5.97	0.49	2.6	3.09		1903	1903	0.08	0.03	0.02	1914
Average Daily (Max)																		
Unmit.	0.48	0.74	3.82	5.22	0.01	0.16	0.38	0.43	0.15	0.17	0.22		1004	1004	0.04	0.02	0.14	1010
Annual (Max)																		
Unmit.	0.09	0.14	0.7	0.95	< 0.005	0.03	0.07	0.08	0.03	0.03	0.04		166	166	0.01	< 0.005	0.02	167

2.2. Construction Emissions by Year, Unmitigated

Year	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily - Summer (Max)																		
2025	0.64	0.54	5.23	7.26	0.01	0.22	0.07	0.29	0.2	0.02	0.22		1427	1427	0.06	0.02	0.39	1435
Daily - Winter (Max)																		
2024	1.46	1.22	11.5	11.2	0.02	0.54	5.43	5.97	0.49	2.6	3.09		1903	1903	0.08	0.03	0.02	1914
2025	1.34	6.31	10.2	10.5	0.02	0.46	5.43	5.9	0.43	2.6	3.03		1900	1900	0.08	0.03	0.02	1911
Average Daily																		
2024	0.13	0.11	1	1.05	< 0.005	0.05	0.38	0.43	0.04	0.17	0.22		174	174	0.01	< 0.005	0.02	175

2025	0.48	0.74	3.82	5.22	0.01	0.16	0.16	0.32	0.15	0.06	0.21		1004	1004	0.04	0.02	0.14	1010
Annual																		
2024	0.02	0.02	0.18	0.19	< 0.005	0.01	0.07	0.08	0.01	0.03	0.04		28.8	28.8	< 0.005	< 0.005	< 0.005	28.9
2025	0.09	0.14	0.7	0.95	< 0.005	0.03	0.03	0.06	0.03	0.01	0.04		166	166	0.01	< 0.005	0.02	167

2.4. Operations Emissions Compared Against Thresholds

Un/Mit.	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Unmit.	1.13	1.35	0.63	7.43	0.01	0.01	0.52	0.53	0.01	0.09	0.1	9.87	1859	1869	1.1	0.08	5.58	1925
Daily, Winter (Max)																		
Unmit.	1.02	1.24	0.68	6.46	0.01	0.01	0.52	0.53	0.01	0.09	0.1	9.87	1794	1803	1.11	0.08	0.17	1855
Average Daily (Max)																		
Unmit.	1.07	1.29	0.66	6.72	0.01	0.01	0.49	0.5	0.01	0.09	0.1	9.87	1734	1744	1.1	0.08	2.3	1797
Annual (Max)																		
Unmit.	0.19	0.24	0.12	1.23	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.02	1.63	287	289	0.18	0.01	0.38	297

2.5. Operations Emissions by Sector, Unmitigated

Sector	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Mobile	1.03	0.95	0.62	6.88	0.01	0.01	0.52	0.53	0.01	0.09	0.1		1521	1521	0.08	0.06	5.55	1548
Area	0.1	0.4	< 0.005	0.55	< 0.005	< 0.005		< 0.005	< 0.005		< 0.005		2.27	2.27	< 0.005	< 0.005		2.28
Energy	0	0	0	0	0	0		0	0		0		317	317	0.02	< 0.005		318
Water												3.5	19.1	22.6	0.36	0.01		34.1
Waste												6.37	0	6.37	0.64	0		22.3
Refrig.																	0.03	0.03
Total	1.13	1.35	0.63	7.43	0.01	0.01	0.52	0.53	0.01	0.09	0.1	9.87	1859	1869	1.1	0.08	5.58	1925
Daily, Winter (Max)																		
Mobile	1.02	0.94	0.68	6.46	0.01	0.01	0.52	0.53	0.01	0.09	0.1		1458	1458	0.09	0.07	0.14	1481
Area		0.31																
Energy	0	0	0	0	0	0		0	0		0		317	317	0.02	< 0.005		318
Water												3.5	19.1	22.6	0.36	0.01		34.1
Waste												6.37	0	6.37	0.64	0		22.3
Refrig.																	0.03	0.03
Total	1.02	1.24	0.68	6.46	0.01	0.01	0.52	0.53	0.01	0.09	0.1	9.87	1794	1803	1.11	0.08	0.17	1855
Average Daily																		
Mobile	1	0.92	0.66	6.35	0.01	0.01	0.49	0.5	0.01	0.09	0.1		1397	1397	0.09	0.07	2.26	1421
Area	0.07	0.37	< 0.005	0.38	< 0.005	< 0.005		< 0.005	< 0.005		< 0.005		1.56	1.56	< 0.005	< 0.005		1.56
Energy	0	0	0	0	0	0		0	0		0		317	317	0.02	< 0.005		318
Water												3.5	19.1	22.6	0.36	0.01		34.1
Waste												6.37	0	6.37	0.64	0		22.3
Refrig.																	0.03	0.03
Total	1.07	1.29	0.66	6.72	0.01	0.01	0.49	0.5	0.01	0.09	0.1	9.87	1734	1744	1.1	0.08	2.3	1797
Annual																		
Mobile	0.18	0.17	0.12	1.16	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.02		231	231	0.01	0.01	0.37	235
Area	0.01	0.07	< 0.005	0.07	< 0.005	< 0.005		< 0.005	< 0.005		< 0.005		0.26	0.26	< 0.005	< 0.005		0.26
Energy	0	0	0	0	0	0		0	0		0		52.4	52.4	< 0.005	< 0.005		52.6
Water												0.58	3.15	3.73	0.06	< 0.005		5.65
Waste												1.05	0	1.05	0.11	0		3.69
Refrig.																	0.01	0.01
Total	0.19	0.24	0.12	1.23	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.02	1.63	287	289	0.18	0.01	0.38	297

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Onsite																		
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Off-Road E	0.6	0.5	4.6	5.56	0.01	0.24		0.24	0.22		0.22		858	858	0.03	0.01		861
Dust From Material Movement							0.53	0.53		0.06	0.06							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Off-Road E	0.03	0.03	0.25	0.3	< 0.005	0.01		0.01	0.01		0.01		47	47	< 0.005	< 0.005		47.2
Dust From Material Movement							0.03	0.03		< 0.005	< 0.005							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Off-Road E	0.01	0.01	0.05	0.06	< 0.005	< 0.005		< 0.005	< 0.005		< 0.005		7.78	7.78	< 0.005	< 0.005		7.81
Dust From Material Movement							0.01	0.01		< 0.005	< 0.005							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Offsite																		
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Worker	0.02	0.02	0.03	0.32	0	0	0.07	0.07	0	0.02	0.02		66.9	66.9	< 0.005	< 0.005	0.01	67.7
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Worker	< 0.005	< 0.005	< 0.005	0.02	0	0	< 0.005	< 0.005	0	< 0.005	< 0.005		3.72	3.72	< 0.005	< 0.005	0.01	3.77
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0	0	< 0.005	< 0.005	0	< 0.005	< 0.005		0.62	0.62	< 0.005	< 0.005	< 0.005	0.62
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.3. Grading (2024) - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Onsite																		
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Off-Road E	1.41	1.19	11.4	10.7	0.02	0.53		0.53	0.49		0.49		1713	1713	0.07	0.01		1719
Dust From Material Movement							5.31	5.31		2.57	2.57							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Off-Road E	0.09	0.08	0.74	0.69	< 0.005	0.03		0.03	0.03		0.03		111	111	< 0.005	< 0.005		111
Dust From Material Movement							0.34	0.34		0.17	0.17							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Off-Road E	0.02	0.01	0.13	0.13	< 0.005	0.01		0.01	0.01		0.01		18.3	18.3	< 0.005	< 0.005		18.4
Dust From Material Movement							0.06	0.06		0.03	0.03							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Offsite																		
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Worker	0.04	0.03	0.04	0.48	0	0	0.1	0.1	0	0.02	0.02		100	100	< 0.005	< 0.005	0.01	102
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

Hauling	0.01	< 0.005	0.12	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01		89.3	89.3	< 0.005	0.01	0.01	93.7
Average Daily																		
Worker	< 0.005	< 0.005	< 0.005	0.03	0	0	0.01	0.01	0	< 0.005	< 0.005		6.58	6.58	< 0.005	< 0.005	0.01	6.67
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005		5.77	5.77	< 0.005	< 0.005	0.01	6.06
Annual																		
Worker	< 0.005	< 0.005	< 0.005	0.01	0	0	< 0.005	< 0.005	0	< 0.005	< 0.005		1.09	1.09	< 0.005	< 0.005	< 0.005	1.1
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005		0.95	0.95	< 0.005	< 0.005	< 0.005	1

3.5. Grading (2025) - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Onsite																		
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Off-Road E	1.29	1.09	10.1	10	0.02	0.46		0.46	0.43		0.43		1714	1714	0.07	0.01		1720
Dust From Material Movement							5.31	5.31		2.57	2.57							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Off-Road E	0.02	0.02	0.18	0.18	< 0.005	0.01		0.01	0.01		0.01		30.2	30.2	< 0.005	< 0.005		30.3
Dust From Material Movement							0.09	0.09		0.05	0.05							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Off-Road E	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005		< 0.005	< 0.005		< 0.005		5	5	< 0.005	< 0.005		5.01
Dust From Material Movement							0.02	0.02		0.01	0.01							
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Offsite																		
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Worker	0.04	0.03	0.04	0.44	0	0	0.1	0.1	0	0.02	0.02		98.3	98.3	< 0.005	< 0.005	0.01	99.5
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0.01	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01		87.8	87.8	< 0.005	0.01	0.01	92
Average Daily																		
Worker	< 0.005	< 0.005	< 0.005	0.01	0	0	< 0.005	< 0.005	0	< 0.005	< 0.005		1.76	1.76	< 0.005	< 0.005	< 0.005	1.78
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005		1.55	1.55	< 0.005	< 0.005	< 0.005	1.62
Annual																		
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0	0	< 0.005	< 0.005	0	< 0.005	< 0.005		0.29	0.29	< 0.005	< 0.005	< 0.005	0.29
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005		0.26	0.26	< 0.005	< 0.005	< 0.005	0.27

3.7. Building Construction (2025) - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Onsite																		
Daily, Summer (Max)																		
Off-Road E	0.62	0.52	5.14	6.94	0.01	0.22		0.22	0.2		0.2		1305	1305	0.05	0.01		1309
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Daily, Winter (Max)																		
Off-Road E	0.62	0.52	5.14	6.94	0.01	0.22		0.22	0.2		0.2		1305	1305	0.05	0.01		1309
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Off-Road E	0.38	0.32	3.17	4.28	0.01	0.13		0.13	0.12		0.12		804	804	0.03	0.01		807

Onsite truc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Annual																	
Off-Road E	0.07	0.06	0.58	0.78	< 0.005	0.02		0.02	0.02		0.02	133	133	0.01	< 0.005		134
Onsite truc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Offsite																	
Daily, Summer (Max)																	
Worker	0.02	0.02	0.02	0.28	0	0	0.05	0.05	0	0.01	0.01	56.2	56.2	< 0.005	< 0.005	0.21	57
Vendor	< 0.005	< 0.005	0.08	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	66	66	< 0.005	0.01	0.18	69
Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Daily, Winter (Max)																	
Worker	0.02	0.02	0.02	0.24	0	0	0.05	0.05	0	0.01	0.01	53.3	53.3	< 0.005	< 0.005	0.01	53.9
Vendor	< 0.005	< 0.005	0.08	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	66.1	66.1	< 0.005	0.01	< 0.005	68.9
Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average Daily																	
Worker	0.01	0.01	0.01	0.16	0	0	0.03	0.03	0	0.01	0.01	33.3	33.3	< 0.005	< 0.005	0.05	33.8
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	40.7	40.7	< 0.005	0.01	0.05	42.5
Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Annual																	
Worker	< 0.005	< 0.005	< 0.005	0.03	0	0	0.01	0.01	0	< 0.005	< 0.005	5.52	5.52	< 0.005	< 0.005	0.01	5.59
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	6.74	6.74	< 0.005	< 0.005	0.01	7.04
Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

3.9. Paving (2025) - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Onsite																		
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Off-Road E	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		0.03																
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Off-Road E	0.05	0.04	0.35	0.42	< 0.005	0.02		0.02	0.01		0.01		65.4	65.4	< 0.005	< 0.005		65.6
Paving		< 0.005																
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Off-Road E	0.01	0.01	0.06	0.08	< 0.005	< 0.005		< 0.005	< 0.005		< 0.005		10.8	10.8	< 0.005	< 0.005		10.9
Paving		< 0.005																
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Offsite																		
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Worker	0.08	0.07	0.08	1.03	0	0	0.23	0.23	0	0.05	0.05		229	229	0.01	0.01	0.02	232
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Worker	0.01	0.01	0.01	0.09	0	0	0.02	0.02	0	< 0.005	< 0.005		18.5	18.5	< 0.005	< 0.005	0.03	18.7
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Worker	< 0.005	< 0.005	< 0.005	0.02	0	0	< 0.005	< 0.005	0	< 0.005	< 0.005		3.06	3.06	< 0.005	< 0.005	0.01	3.1
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

3.11. Architectural Coating (2025) - Unmitigated

Location	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Onsite																		
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Off-Road E	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		5.56																
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Off-Road E	0.01	0.01	0.05	0.07	< 0.005	< 0.005		< 0.005	< 0.005		< 0.005		8.05	8.05	< 0.005	< 0.005		8.08
Architectural Coatings		0.34																
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Off-Road E	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005		< 0.005	< 0.005		< 0.005		1.33	1.33	< 0.005	< 0.005		1.34
Architectural Coatings		0.06																
Onsite truc	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Offsite																		
Daily, Summer (Max)																		
Daily, Winter (Max)																		
Worker	< 0.005	< 0.005	< 0.005	0.05	0	0	0.01	0.01	0	< 0.005	< 0.005		10.7	10.7	< 0.005	< 0.005	< 0.005	10.8
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Average Daily																		
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0	0	< 0.005	< 0.005	0	< 0.005	< 0.005		0.65	0.65	< 0.005	< 0.005	< 0.005	0.66
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Annual																		
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0	0	< 0.005	< 0.005	0	< 0.005	< 0.005		0.11	0.11	< 0.005	< 0.005	< 0.005	0.11
Vendor	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Hauling	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Land Use	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Bank (with	0.64	0.6	0.36	3.86	0.01	0.01	0.28	0.28	0.01	0.05	0.05		815	815	0.05	0.04	2.95	831
Parking Lot	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
General Of	0.39	0.35	0.27	3.02	0.01	< 0.005	0.24	0.25	< 0.005	0.04	0.05		706	706	0.03	0.03	2.6	717
Total	1.03	0.95	0.62	6.88	0.01	0.01	0.52	0.53	0.01	0.09	0.1		1521	1521	0.08	0.06	5.55	1548
Daily, Winter (Max)																		
Bank (with	0.63	0.59	0.39	3.67	0.01	0.01	0.28	0.28	0.01	0.05	0.05		782	782	0.05	0.04	0.08	795
Parking Lot	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
General Of	0.39	0.35	0.29	2.79	0.01	< 0.005	0.24	0.25	< 0.005	0.04	0.05		676	676	0.04	0.03	0.07	686
Total	1.02	0.94	0.68	6.46	0.01	0.01	0.52	0.53	0.01	0.09	0.1		1458	1458	0.09	0.07	0.14	1481
Annual																		
Bank (with	0.11	0.1	0.07	0.64	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01		118	118	0.01	0.01	0.19	120
Parking Lot	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
General Of	0.07	0.06	0.05	0.52	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01		113	113	0.01	< 0.005	0.19	115
Total	0.18	0.17	0.12	1.16	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.02		231	231	0.01	0.01	0.37	235

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Land Use	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Bank (with Drive-Through)													44.3	44.3	< 0.005	< 0.005		44.5
Parking Lot													20.9	20.9	< 0.005	< 0.005		21
General Office Building													252	252	0.02	< 0.005		253
Total													317	317	0.02	< 0.005		318
Daily, Winter (Max)																		
Bank (with Drive-Through)													44.3	44.3	< 0.005	< 0.005		44.5
Parking Lot													20.9	20.9	< 0.005	< 0.005		21
General Office Building													252	252	0.02	< 0.005		253
Total													317	317	0.02	< 0.005		318
Annual																		
Bank (with Drive-Through)													7.33	7.33	< 0.005	< 0.005		7.36
Parking Lot													3.46	3.46	< 0.005	< 0.005		3.48
General Office Building													41.6	41.6	< 0.005	< 0.005		41.8
Total													52.4	52.4	< 0.005	< 0.005		52.6

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Land Use	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Bank (with	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parking Lot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
General Of	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Daily, Winter (Max)																		
Bank (with	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parking Lot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
General Of	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Annual																		
Bank (with	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parking Lot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
General Of	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

4.3. Area Emissions by Source

4.3.2. Unmitigated

Source	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Consumer Products		0.27																
Architectural Coatings		0.03																
Landscape	0.1	0.09	< 0.005	0.55	< 0.005	< 0.005		< 0.005	< 0.005		< 0.005		2.27	2.27	< 0.005	< 0.005		2.28
Total	0.1	0.4	< 0.005	0.55	< 0.005	< 0.005		< 0.005	< 0.005		< 0.005		2.27	2.27	< 0.005	< 0.005		2.28
Daily, Winter (Max)																		
Consumer Products		0.27																
Architectural Coatings		0.03																
Total		0.31																
Annual																		
Consumer Products		0.05																
Architectural Coatings		0.01																

Landscape	0.01	0.01	< 0.005	0.07	< 0.005	< 0.005		< 0.005	< 0.005		< 0.005		0.26	0.26	< 0.005	< 0.005	0.26
Total	0.01	0.07	< 0.005	0.07	< 0.005	< 0.005		< 0.005	< 0.005		< 0.005		0.26	0.26	< 0.005	< 0.005	0.26

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Land Use	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Bank (with Drive-Through)												0.24	2.16	2.4	0.02	< 0.005		3.18
Parking Lot												0	0	0	0	0		0
General Office Building												3.26	16.9	20.2	0.34	0.01		31
Total												3.5	19.1	22.6	0.36	0.01		34.1
Daily, Winter (Max)																		
Bank (with Drive-Through)												0.24	2.16	2.4	0.02	< 0.005		3.18
Parking Lot												0	0	0	0	0		0
General Office Building												3.26	16.9	20.2	0.34	0.01		31
Total												3.5	19.1	22.6	0.36	0.01		34.1
Annual																		
Bank (with Drive-Through)												0.04	0.36	0.4	< 0.005	< 0.005		0.53
Parking Lot												0	0	0	0	0		0
General Office Building												0.54	2.8	3.34	0.06	< 0.005		5.12
Total												0.58	3.15	3.73	0.06	< 0.005		5.65

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

Land Use	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Bank (with Drive-Through)												1.57	0	1.57	0.16	0		5.49
Parking Lot												0	0	0	0	0		0
General Office Building												4.8	0	4.8	0.48	0		16.8
Total												6.37	0	6.37	0.64	0		22.3
Daily, Winter (Max)																		
Bank (with Drive-Through)												1.57	0	1.57	0.16	0		5.49
Parking Lot												0	0	0	0	0		0
General Office Building												4.8	0	4.8	0.48	0		16.8
Total												6.37	0	6.37	0.64	0		22.3
Annual																		
Bank (with Drive-Through)												0.26	0	0.26	0.03	0		0.91
Parking Lot												0	0	0	0	0		0
General Office Building												0.79	0	0.79	0.08	0		2.78
Total												1.05	0	1.05	0.11	0		3.69

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Land Use	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Bank (with Drive-Through)																	0.01	0.01
General Office Building																	0.02	0.02
Total																	0.03	0.03
Daily, Winter (Max)																		
Bank (with Drive-Through)																	0.01	0.01
General Office Building																	0.02	0.02
Total																	0.03	0.03

Annual																		
Bank (with Drive-Through)																	< 0.005	< 0.005
General Office Building																	< 0.005	< 0.005
Total																	0.01	0.01

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Equipment	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Total																		
Daily, Winter (Max)																		
Total																		
Annual																		
Total																		

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Equipment	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Total																		
Daily, Winter (Max)																		
Total																		
Annual																		
Total																		

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Equipment	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
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

Vegetation	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Total																		
Daily, Winter (Max)																		
Total																		
Annual																		
Total																		

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Land Use	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Total																		
Daily, Winter (Max)																		
Total																		
Annual																		

Total

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Species	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily, Summer (Max)																		
Avoided																		
Subtotal																		
Sequestered																		
Subtotal																		
Removed																		
Subtotal																		
Daily, Winter (Max)																		
Avoided																		
Subtotal																		
Sequestered																		
Subtotal																		
Removed																		
Subtotal																		
Annual																		
Avoided																		
Subtotal																		
Sequestered																		
Subtotal																		
Removed																		
Subtotal																		

5. Activity Data

5.1. Construction Schedule

Phase Nam	Phase Type	Start Date	End Date	Days Per W	Work Days	Phase Description
Site Prepar	Site Prepar	########	########	5	20	
Grading	Grading	########	1/9/2025	5	30	
Building Cc	Building Cc	########	########	5	225	
Paving	Paving	########	########	5	29	
Architectur	Architectur	########	########	5	22	

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Nam	Equipment	Fuel Type	Engine Tier	Number pe	Hours Per I	Horsepow	Load Factor
Site Prepar	Graders	Diesel	Average	1	8	148	0.41
Site Prepar	Tractors/L	Diesel	Average	1	8	84	0.37
Grading	Graders	Diesel	Average	1	6	148	0.41
Grading	Rubber Tir	Diesel	Average	1	6	367	0.4
Grading	Tractors/L	Diesel	Average	1	7	84	0.37
Building Cc	Cranes	Diesel	Average	1	4	367	0.29
Building Cc	Forklifts	Diesel	Average	2	6	82	0.2
Building Cc	Tractors/L	Diesel	Average	2	8	84	0.37
Paving	Tractors/L	Diesel	Average	1	7	84	0.37
Paving	Cement an	Diesel	Average	4	6	10	0.56
Paving	Pavers	Diesel	Average	1	7	81	0.42

Paving	Rollers	Diesel	Average	1	7	36	0.38
Architectur	Air Compre	Diesel	Average	1	6	37	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Nam	Trip Type	One-Way T	Miles per T	Vehicle Mix
Site Preparation				
Site Prepar	Worker	5	18.5	LDA,LDT1,LDT2
Site Prepar	Vendor		10.2	HHDT,MHDT
Site Prepar	Hauling	0	20	HHDT
Site Prepar	Onsite truck			HHDT
Grading				
Grading	Worker	7.5	18.5	LDA,LDT1,LDT2
Grading	Vendor		10.2	HHDT,MHDT
Grading	Hauling	1.27	20	HHDT
Grading	Onsite truck			HHDT
Building Construction				
Building Cc	Worker	4.06	18.5	LDA,LDT1,LDT2
Building Cc	Vendor	2.08	10.2	HHDT,MHDT
Building Cc	Hauling	0	20	HHDT
Building Cc	Onsite truck			HHDT
Paving				
Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Paving	Vendor		10.2	HHDT,MHDT
Paving	Hauling	0	20	HHDT
Paving	Onsite truck			HHDT
Architectural Coating				
Architectur	Worker	0.81	18.5	LDA,LDT1,LDT2
Architectur	Vendor		10.2	HHDT,MHDT
Architectur	Hauling	0	20	HHDT
Architectur	Onsite truck			HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Str	PM10 Redu	PM2.5 Reduction

5.5. Architectural Coatings

Phase Nam	Residential	Residential	Non-Reside	Non-Reside	Parking Area Coated (sq ft)
Architectur	0	0	19050	6350	983

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Nam	Material Im	Material Ex	Acres Grad	Material Di	Acres Paved (acres)
Site Prepar	0	0	10	0	
Grading	300	0	22.5	0	
Paving	0	0	0	0	0.38

5.6.2. Construction Earthmoving Control Strategies

Control Str	Frequency	PM10 Redu	PM2.5 Reduction

5.7. Construction Paving

Land Use	Area Pavec	% Asphalt

Bank (with	0	0
Parking Lot	0.38	100
General Of	0	0

5.8. Construction Electricity Consumption and Emissions Factors

Year	kWh per Y	CO2	CH4	N2O
2024	0	532	0.03	< 0.005
2025	0	532	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use T	Trips/Weel	Trips/Satur	Trips/Sund	Trips/Year	VMT/Week	VMT/Satur	VMT/Sund	VMT/Year
Bank (with	189	189	189	69068	855	999	999	327100
Parking Lot	0	0	0	0	0	0	0	0
General Of	104	104	104	37904	878	878	878	320522

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Typ	Unmitigated (number)

5.10.2. Architectural Coatings

Residential	Residential	Non-Reside	Non-Reside	Parking Area Coated (sq ft)
0	0	19050	6350	983

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0
Summer D	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Land Use	Electricity (	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Bank (with	30389	532	0.033	0.004	0
Parking Lot	14351	532	0.033	0.004	0
General Of	172590	532	0.033	0.004	0

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Wa	Outdoor Water (gal/year)
Bank (with	123624	120766
Parking Lot	0	0
General Of	1702689	0

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton	Cogeneration (kWh/year)
Bank (with	2.91	
Parking Lot	0	
General Of	8.91	

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use T	Equipment	Refrigerant	GWP	Quantity (k	Operations	Service Lea	Times Serviced
Bank (with	Household	R-134a	1430	0.02	0.6	0	1
Bank (with	Other com	R-410A	2088	< 0.005	4	4	18
General Of	Household	R-134a	1430	0.02	0.6	0	1
General Of	Other com	R-410A	2088	< 0.005	4	4	18

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment	Fuel Type	Engine Tier	Number pe	Hours Per I	Horsepowe	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment	Fuel Type	Number pe	Hours per I	Hours per `	Horsepowe	Load Factor

5.16.2. Process Boilers

Equipment	Fuel Type	Number	Boiler Ratir	Daily Heat	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation	Vegetation	Initial Acre	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cc	Initial Acre	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity S	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

Climate Ha	Result for F	Unit
Temperatu	6.19	annual days of extreme heat
Extreme Pr	4.3	annual days with precipitation above 20 mm
Sea Level R	0	meters of inundation depth
Wildfire	0	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 climat
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
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 (2040–2059 average under RCP 8.5), and consider different increments of sea level
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

6.2. Initial Climate Risk Scores

Climate Ha	Exposure S	Sensitivity	Adaptive C	Vulnerability Score
Temperatu	1	0	0	N/A
Extreme Pr	N/A	N/A	N/A	N/A

Sea Level R	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	N/A	N/A	N/A	N/A
Air Quality	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 adap
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 Ha	Exposure S	Sensitivity	Adaptive C	Vulnerability Score
Temperatu	1	1	1	2
Extreme Pr	N/A	N/A	N/A	N/A
Sea Level R	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	N/A	N/A	N/A	N/A
Air Quality	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 adap
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	24.9
AQ-PM	53.5
AQ-DPM	78.5
Drinking W	34.7
Lead Risk H	49.3
Pesticides	0
Toxic Relea	99.4
Traffic	89
Effect Indicators	
CleanUp Si	58.2
Groundwat	84.8
Haz Waste	52.6
Impaired W	87
Solid Waste	11.6
Sensitive Population	
Asthma	59.9
Cardio-vasc	53.6
Low Birth W	97.7
Socioeconomic Factor Indicators	
Education	39.2
Housing	84.5
Linguistic	27.3

Poverty	34
Unemployr	63.4

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 Pov	62.92827
Employed	88.14321
Median HI	54.77993
Education	
Bachelor's	54.85692
High schoo	4.581034
Preschool e	25.61273
Transportation	
Auto Acces	19.90248
Active com	57.92378
Social	
2-parent h	63.42872
Voting	70.64032
Neighborhood	
Alcohol ava	43.82138
Park access	54.45913
Retail dens	73.82266
Supermark	56.79456
Tree canop	66.80354
Housing	
Homeowne	34.47966
Housing ha	28.85923
Low-inc ho	64.03182
Low-inc rer	79.48159
Uncrowdec	39.88195
Health Outcomes	
Insured adı	68.56153
Arthritis	9.2
Asthma ER	45
High Blood	8.4
Cancer (ex	6.6
Asthma	73
Coronary H	7.5
Chronic Ob	40
Diagnosed	31
Life Expect	6.7
Cognitively	32
Physically	17
Heart Attac	63
Mental Hea	75
Chronic Kic	15
Obesity	62
Pedestrian	87
Physical He	53
Stroke	13

Health Risk Behaviors	
Binge Drinl	90
Current Sm	77
No Leisure	58
Climate Change Exposures	
Wildfire Ris	0
SLR Inunda	0
Children	15
Elderly	9.7
English Spe	58
Foreign-bo	51
Outdoor W	74
Climate Change Adaptive Capacity	
Impervious	13
Traffic Den	96
Traffic Acc	87
Other Indices	
Hardship	41
Other Decision Support	
2016 Votin	19

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroS	78
Healthy Pla	51
Project Loc	No
Project Loc	No
Project Loc	Wilmington Long Beach Carson

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

Measure Ti	Co-Benefits Achieved

7.5. Evaluation Scorecard

Category	Number of Total Point	Max Possit	Weighted Score

7.6. Health & Equity Custom Measures

Measure Ti	Sponsor

8. User Changes to Default Data

Screen	Justification
Constructio	Anticipated construction schedule
Operations	Anticipated trip generation
Operations	No natural gas

Emergency Backup Generator Emissions

	Fuel Type	Quantity	HP	LF	Hours/Year per Unit	Hours per Day	HP-hr per day	Total hp-hr per year
Standard Generator	Diesel	1	750	0.74	50	1	750	37,500

	HC	ROG	TOG	CO	NO_X	CO_2	PM_{10}	$PM_{2.5}$	PM	SO_X
Emissions Rates (g/hp-hr)	0.14	1.0205827	1.1249089	2.6	2.85	521.63114	0.15	0.15	0.15	0.00494
Pounds/Day	0.23	1.69	1.86	4.30	4.71	862.50	0.25	0.25	0.25	0.01
Tons/Year	0.01	0.04	0.05	0.11	0.12	21.56	0.01	0.01	0.01	0.00
Metric tons/year						19.56				

Source: Emissions rates from CalEEMod Guide Appenix D, Table 12.1