



MEMORIAL PARK REDEVELOPMENT AND EXPANSION PROJECT

Draft Environmental Impact Report (Appendices Volume I)

State Clearinghouse Number: 2025021055



Prepared for:

City of Santa Monica
City Planning Division
1685 Main Street
Santa Monica, CA 90401

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September 2025



APPENDIX A

Initial Study



Memorial Park Redevelopment and Expansion Project (SP2509)

Initial Study

June 2025

Prepared for:

City of Santa Monica
Planning and Community Development Department
1685 Main Street
Santa Monica, CA 90401

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Acronyms

AB	Assembly Bill
ADA	Americans with Disabilities Act
AF	acre-foot
AFY	acre-foot per year
APN	Assessor Parcel Number
AQMP	Air Quality Management Plan
BERD	Built Environment Resource Directory
BTU	British thermal unit
C&D	construction and demolition
CAA	Clean Air Act
CAAP	Climate Action and Adaptation Plan
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
CalEPA	California Environmental Protection Agency
CalEEMod	California Emissions Estimator Model
CALFIRE	California Department of Forestry and Fire Protection
CalGreen	California Green Building Standards
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CCAA	California Clean Air Act
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFC	chlorofluorocarbon
CGS	California Geological Survey
CH ₄	methane
CHRIS	California Historical Resources Inventory System
CIS	Coastal Interceptor Sewer
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
CPA	Clean Power Alliance
CREC	Controlled recognized environmental condition
dBA	A-weighted decibel
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EIR	Environmental Impact Report
EMS	Emergency Medical Services
ESCP	erosion and sediment control plan
EV	electric vehicle
FHSZ	Fire Hazard Severity Zone
ft/s	foot per second
gpm	gallon per minute

GSP	Groundwater Sustainability Plan
HCD	Housing and Community Development
HRA	Health Risk Assessment
HWRP	Hyperion Water Reclamation Plant
I-	Interstate
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
kBTU	kilo British thermal units
kWh	kilowatt hours
LCP	Local Coastal Program
LEED	Leadership in Energy and Environmental Design
LID	low impact development
LRA	Local Responsibility Area
LRT	Light Rail Transit
LUCE	Land Use and Circulation Element
LUP	Land Use Program
LUST	leaking underground storage tank
MBTA	Migratory Bird and Treaty Act
MG	million gallons
MGD	million gallons per day
MT	metric ton
MTBE	methyl tertiary-butyl ether
MUBL	Mixed-Use Boulevard Low
MWD	Metropolitan Water District of Southern California
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NC	Neighborhood Commercial
NFA	no further action
NO ₂	nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System
O ₃	ozone
OEM	Office of Emergency Management
OHP	Office of Historic Preservation
OSHA	Occupational Safety and Health Administration
PAL	Police Activities League
Pb	lead
PCE	perchloroethylene
PDWF	Peak Dry Weather Flow
PE	Pacific Electric
PLD	Public Landscape Division
PM ₁₀	particulate matter
PM _{2.5}	fine particulate matter
PPV	peak particle velocity
PRC	Public Resources Code
PWWF	Peak Wet Weather Flow

REC	recognized environmental condition
RHNA	Regional Housing Needs Allocation
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
sf	square foot
SGMA	Sustainable Groundwater Management Act
SLF	Sacred Land File
SMC	Santa Monica College
SMC	Sustainable Management Criteria
SMFD	Santa Monica Fire Department
SMHRI	Santa Monica Historic Resources Inventory
SMMC	Santa Monica Municipal Code
SMMUSD	Santa Monica-Malibu Unified School District
SMPD	Santa Monica Police Department
SMPL	Santa Monica Public Library
SMURFF	Santa Monica Urban Runoff Recycling Facility
SO ₂	sulfur dioxide
SOC	Standards of Coverage
SoCal Gas	Southern California Gas Company
SP	Southern Pacific
SR-	State Route
SRA	source receptor area
SWMP	Sustainable Water Master Plan
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TDS	total dissolved solids
UFMP	Urban Forest Master Plan
USC	U.S. Code
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VMT	vehicle miles traveled
VOC	volatile organic compound

Introduction

This Initial Study (IS) evaluates the potential environmental impacts resulting from the implementation of the proposed Memorial Park (Park) Redevelopment and Expansion Project (Project). The City of Santa Monica (City) prepared this IS in compliance with the relevant provisions of the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000 et. seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387).

Purpose and Legal Authority

In accordance with CEQA, discretionary projects that have the potential to result in either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment, must undergo analysis to disclose the potential significant effects during the decision-making process. The provisions of CEQA apply to California governmental agencies, including local agencies, regional agencies, State agencies, boards, commissions, and special districts. As the lead agency with the principal responsibility for conducting the environmental review (CEQA Guidelines Section 15051), the City has prepared this IS to disclose the potential environmental impacts of the proposed Project and define the scope of the environmental review document.

This IS addresses all environmental issues listed in Appendix G of the CEQA Guidelines (see *Environmental Factors Potentially Affected*). During the preparation of the IS, it was determined that the proposed Project may have potentially significant environmental impacts on Air Quality, Cultural Resources and Tribal Cultural Resources, and Hazards and Hazardous Materials warranting preparation of an Environmental Impact Report (EIR) (CEQA Guidelines Section 15063[b][1]). Pursuant to CEQA Guidelines Section 15063(c)(3)(A) through (C), this IS will assist in the preparation of the EIR by:

- ▶ Focusing the EIR on the effects determined to be significant;
- ▶ Identifying the effects determined not to be significant; and
- ▶ Explaining the reasons for determining that potentially significant effects would not be significant.

Executive Summary

Project Title:

Memorial Park Redevelopment and Expansion Project (SP2509)

Lead agency name and address:

City of Santa Monica
City Planning Division
1685 Main Street, Room 212
Santa Monica, CA 90401

Contact person and phone number:

Rachel Kwok, Environmental Planner
City Planning Division
Planning & Community Development Department
(310) 458-8341

Project location:

1401 Olympic Boulevard
Santa Monica, CA 90401
See Figure 1 (below) for the proposed location and vicinity map.

Project sponsor's name and address:

City of Santa Monica
City Planning Division
1685 Main Street, Room 212
Santa Monica, CA 90401

General plan designation:

Parks and Open Space

Zoning:

OS (Parks and Open Space)

Description of Project:

The City of Santa Monica (Project Proponent and Lead Agency) is proposing to expand the existing parkland and modernize the existing public recreation facilities at the Park to better serve community demands, improve accessibility to park amenities, and provide an improved community hub.

Project Background

The Project site is comprised of two parcels: the existing 10.3-acre Memorial Park (Assessor Parcel Number [APN] 4283-010-901); and the 2.9-acre former Fisher Lumber site (APN 4283-010-902). Together, these parcels total approximately 13.2 acres (County of Los Angeles Office of the Assessor 2025).

The original facilities at the Park were constructed in the 1930s, at which time it served as the location of the Santa Monica Municipal Stadium that a Santa Monica baseball team used. The Park was also used for early- to mid-century motorbiking and midget car racing and was home to the Riviera Kennel Club dog show of 1941. The Park was re-established as a City park in the 1950s, providing important community facilities in a geographically central location of the City.

Fisher Hardware and Lumber, originally founded in 1923, was one of the oldest commercial retail businesses in the City. The former Fisher Lumber site, located at 14th Street and Colorado Avenue, was the original retail location for Fisher Lumber and Hardware; however, in 2005, the business relocated to a new location on Lincoln Boulevard and Colorado Avenue. The former Fisher Lumber site was sold to KC Riverstone in early 2003, but shortly afterward in 2004 the City purchased the site with the intention of expanding Memorial Park. At the time, the City's Public Landscape Division (PLD) operations were headquartered at the Santa Monica Airport but were displaced by the construction of Airport Park. In 2005, the City Council approved the relocation of PLD operations from the Airport to the former Fisher Lumber site on an interim basis. Since that time, PLD has occupied the former Fisher Lumber / "Colorado Yards" site.

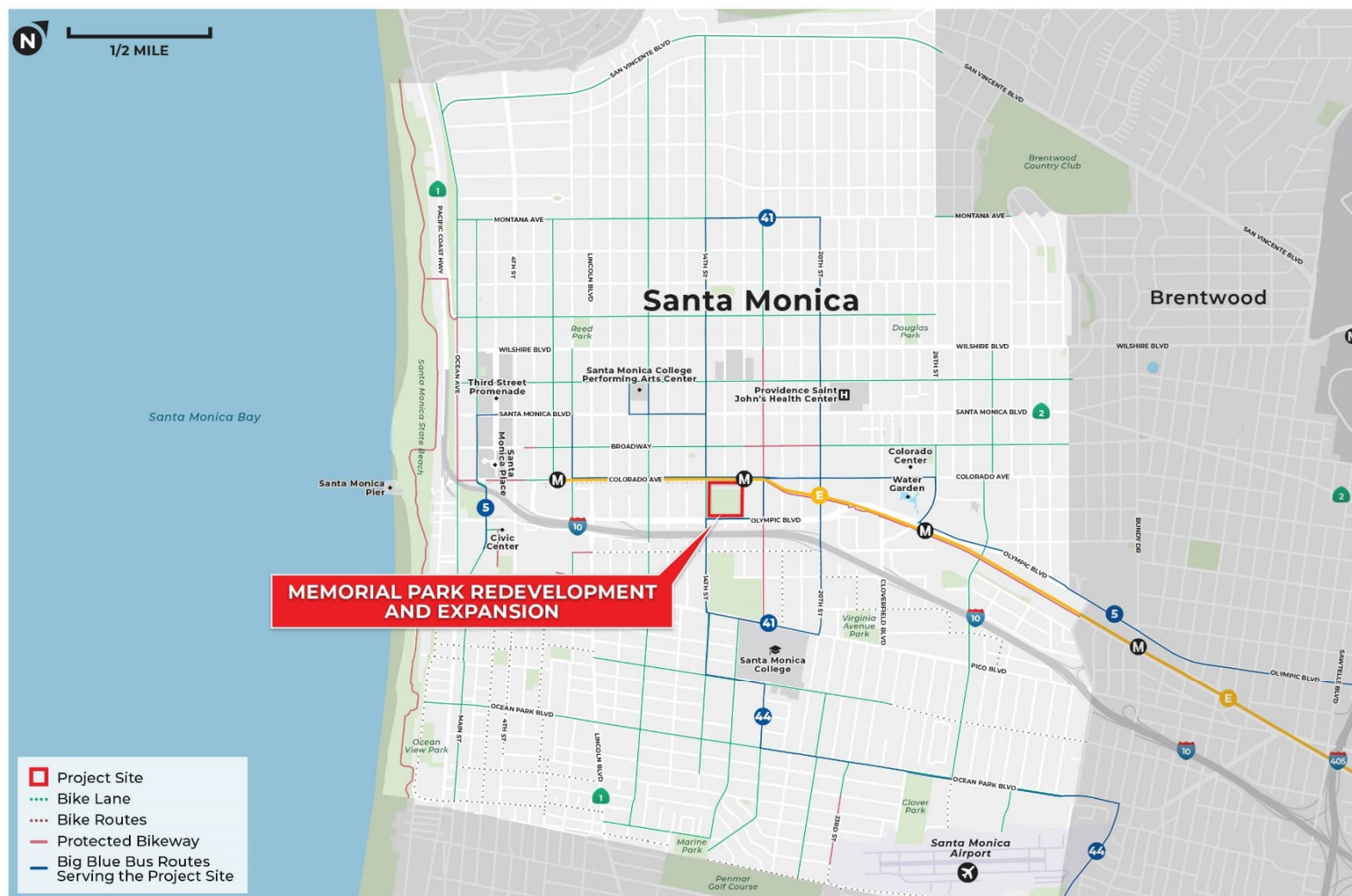
Memorial Park is important to the City's overall park system as it serves as the primary park for baseball and softball as well as being the home for the City's only public gymnasium, skate park, and pickleball courts.

Project Location, Surrounding Land Uses, and Land Use/Zoning Designations

The Project site is centrally located within the City's Pico Neighborhood and bound by Colorado Avenue to the north, 14th Street to the west, Olympic Boulevard to the south, and 16th Street to the east. Vehicle access to the Park is currently provided via the surface parking lots along 14th Street and a vehicular gate at 16th Street. Pedestrian entries are provided along 14th Street, Olympic Boulevard, and 16th Street. The former Fisher Lumber site is accessed via curb cuts along 14th Street and 16th Street.

The Land Use and Circulation Element (LUCE), adopted on July 6, 2010, and amended in May 2023, is the City's guiding land use and transportation plan that encompasses the community's vision for Santa Monica's future. The LUCE is designed to preserve the City's character, protect neighborhoods, manage the City's transportation systems, and encourage additional housing in a sustainable manner that ensures a high quality of life for all residents through the horizon year of 2030. The LUCE sets forth the land use designations for the Project site and surroundings to actualize the planning goals described in the LUCE.

Figure 1. Project Vicinity



Memorial Park Redevelopment and Expansion Project Vicinity

FIGURE
1

The Project site has a Parks and Open Space land use/zoning designation pursuant to the City's LUCE. The Parks and Open Space designation allows for parks and green open space and supporting uses such as recreation centers, gymnasiums, community meeting facilities, and small-scale retail uses that support outdoor recreation (e.g., restaurants, refreshment stands, and sporting equipment and rental vendors). The Project site also is subject to the Memorial Park Activity Center Low Overlay (Overlay). The area subject to the Overlay includes the Park and Expo Light Rail Transit (LRT) Station at 17th Street. The Overlay capitalizes on the attributes of these two key resources to create an active mixed-use neighborhood. The Overlay provides the opportunity for a joint-development program incorporating City, Metro, Santa Monica-Malibu Unified School District (SMMUSD), and private land to construct new school district offices and educational facilities, other offices, a range of residential units, and local-serving retail and services. Most significantly, there is an opportunity to extend the park open space across the freeway between 14th Street and 17th Street by decking over the freeway (LUCE, 2.5-5).

The properties to the north, east, and west of the Project site have a Mixed-Use Boulevard Low (MUBL) land use/zoning designation. The MUBL designation allows for a range of uses for sections of boulevards adjacent to low-density residential neighborhoods, where it is important that new development respects and relates to the scale of existing neighborhoods. At the ground floor, uses include active, local-serving retail, open spaces such as plazas and paseos, service-oriented commercial uses, and residential and hotel uses in limited areas. Exceptions include Colorado Avenue, where artist studios or small offices also are allowed. Above the ground floor, multi-family affordable, workforce, and market-rate housing is the predominant use. Accordingly, the Project site is surrounded by a range of land uses including restaurant, retail, commercial and office, educational, storage, and mixed-use residential uses. The specific uses to the north, east, and west of the Project site include the following:

- North Colorado Avenue, Expo LRT and 17th Street / Santa Monica College (SMC) Station, construction materials supplier, production studio, auto repair shop, manufacturing businesses, and residences (approximately 300 feet away)
- East 16th Street, SMMUSD office, office, video production service, and Crossroads Elementary School (private school, approximately 450 feet away)
- West 14th Street, auto service, self-storage, home improvement store, and materials distribution service

Properties to the south of the Project site, across Olympic Boulevard, have a Neighborhood Commercial (NC) land use/zoning designation. The NC designation is intended to maintain existing commercial districts and allow for the creation of small neighborhood centers that provide daily goods and services easily accessible from surrounding residential neighborhoods. Allowable ground floor uses include active, local-serving retail and service commercial uses such as small restaurants, laundromats, dry cleaners, beauty/barber shops, and clothing and grocery stores. Uses above the ground floor include residential, commercial, and local-serving office uses. The specific uses to the south of the Project site include the following:

- South Olympic Boulevard, office, restaurant, Interstate (I-) 10 Freeway (approximately 275 feet away)

Existing Conditions

Memorial Park (APN 4283-010-901)

Existing recreational facilities at the Park include baseball and softball fields, tennis/pickleball courts, a skatepark, the Community Recreation Center, and a small playground.

The Park currently has six sports fields used for baseball and softball. There is one large combo field consisting of four individual sports fields, arranged in a quadrant formation along 16th Street and the former Fisher Lumber site. Together this combo field spans approximately 162,000 square feet (sf) (3.7 acres); however, the configuration and size of the combo field presents scheduling and/or use constraints due to overlapping outfields. When not in use for softball and/or baseball, the grass area within the combo field also is used for soccer games. The area is accompanied by corner bleacher seating and is lined with an 8-foot-high chain link fence. The remaining two sports fields are located along Olympic Boulevard to the south of the combo field. These south-facing fields span approximately 38,000 sf (0.87 acres) each and accommodate youth baseball teams. An 8-foot-high chain link perimeter fence and a 16-foot-high net surround the south-facing fields (to stop balls from going off-site). A restroom facility and concession stand are located between the combo field and the youth baseball fields (see Figure 2).



All six of the existing playing fields are comprised of natural grass and dirt infield skin.



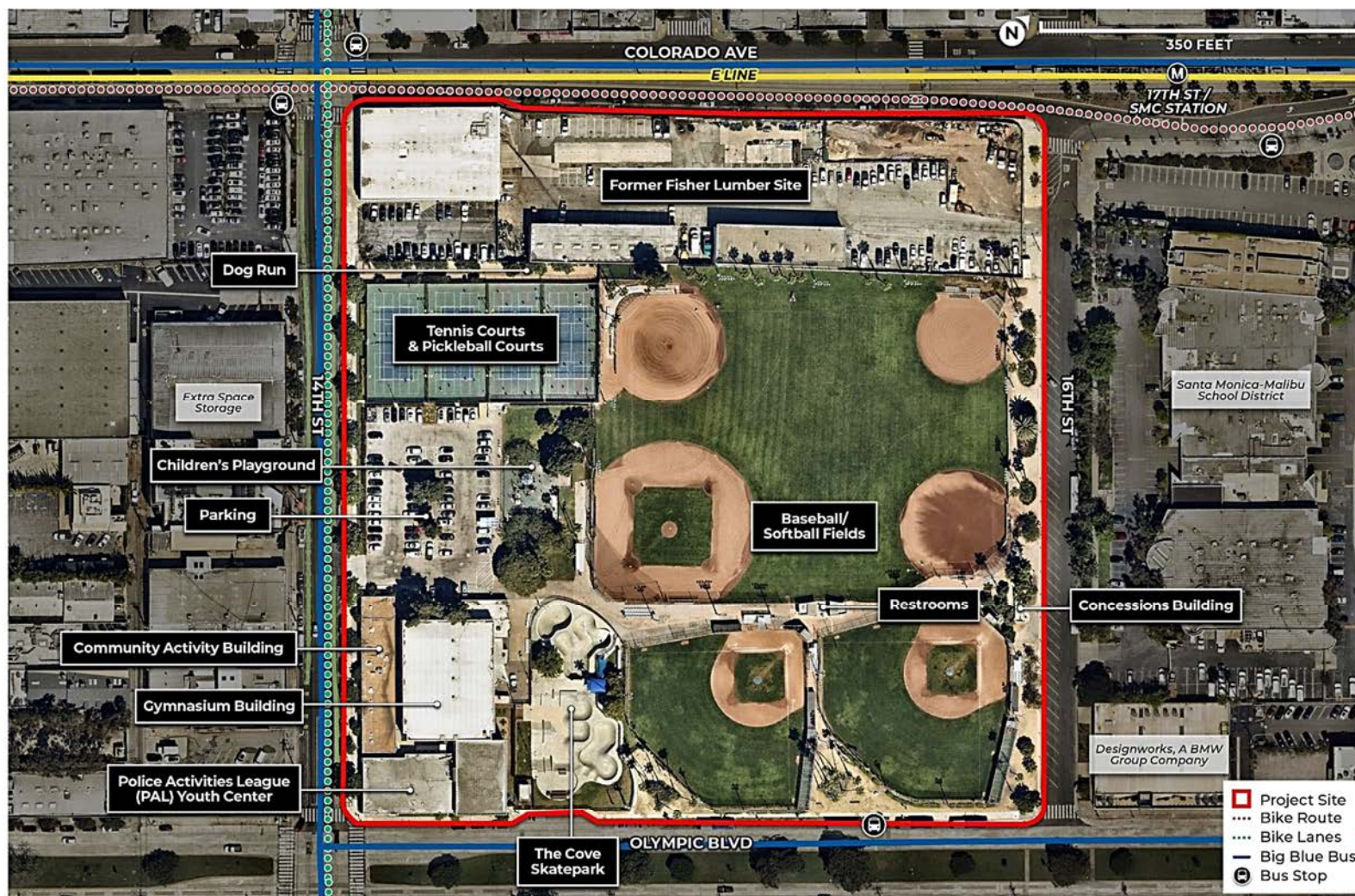
The tennis/pickleball courts are available for adults only and require fee payment.



The existing children's playground that is situated between the parking lot and combo field, includes perimeter fencing for safety.

Four tennis/pickleball courts are located at the northwestern corner of the Park. A 10-foot-high perimeter fencing and light poles for nighttime use surround the tennis/pickleball courts. The tennis/pickleball courts are open daily for public use between the hours of 8:00 AM and 10:00 PM.

Figure 2. Project Site – Existing Conditions

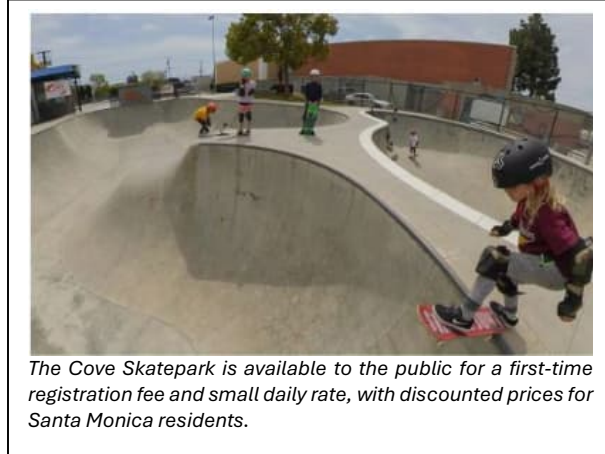


Memorial Park Redevelopment and Expansion Existing Site Plan

FIGURE
2

Between the tennis/pickleball courts and the former Fisher Lumber site is an off-leash dog run. A children's playground is located south of the tennis/pickleball courts. The playground, which covers approximately 4,200 sf, includes a play structure and three benches. Approximately 4-foot-high perimeter fencing surrounds the playground that is adjacent to a small grass area with shade trees.

South of the children's playground, "The Cove" provides a 20,000 sf skatepark for residents and non-residents. The skatepark is equipped with smooth concrete ramps, bowls, stairs, a pool with tile coping, over-vert bowl, and the Douglas Park rail. Two bleachers are provided for spectators outside of the approximately 8-foot-high perimeter fencing. Current hours of operation vary by day, opening at 12:00 PM or 1:00 PM and closing at 8:00 PM or 9:00 PM. Adult (18+) only hours are provided on Sundays between 6:00 PM and 9:00 PM and on Wednesdays between 4:30 PM and 9:00 PM. There are also BMX-only hours provided on Thursdays between 4:30 PM and 8:00 PM.



The Cove Skatepark is available to the public for a first-time registration fee and small daily rate, with discounted prices for Santa Monica residents.

The Community Recreation Center is a collection of buildings, including the original Memorial Park Gymnasium Building (designed by local architect, James Mount), Police Activities League (PAL) Youth Center, and Community Activity Building. The Memorial Park Gymnasium Building is a gymnasium equipped for basketball and volleyball, including gym rentals, drop-in practice, and pick-up games for a fee. The gym is open for basketball and volleyball Monday through Friday from 12:00 PM to 3:00 PM and 5:00 PM to 7:00 PM; Saturdays from 12:00 PM to 5:00 PM; and for volleyball only on Sundays from 1:30 PM to 5:00 PM. The Gymnasium Building also includes a public fitness room for ages 16 and older. The fitness room is open on Mondays, Tuesdays, and Thursdays from 9:00 AM to 7:00 PM; Wednesdays and Fridays from 9:00 AM to 9:00 PM; and weekends from 12:00 PM to 5:00 PM. Finally, the Community Activity Building provides community meeting rooms that are available for rent.

A public parking lot fronts 14th Street on the western portion of the park. The surface parking lot provides 79 parking spaces, including three Americans with Disabilities Act (ADA) accessible spaces, two electric vehicle (EV) charging stations, and three reserved spaces. Metered parking spaces are located along the perimeter of the park: 22 spaces on west side 14th Street, 22 spaces on Olympic Boulevard, 42 spaces on 16th Street and 19 spaces on Colorado Avenue.

The Park consists of a variety of landscape and vegetation types. The sidewalk along Olympic Boulevard is lined with grass and eight young palo verde (*Parkinsonia aculeata*) trees, and the pedestrian entry points are planted with mature palm trees and small ornamental bushes.



The original Memorial Park Gym is the City's only public gymnasium.



The fitness room is built inside the Memorial Park Gym and provides a variety of workout equipment and personal training opportunities.

14th Street is lined with 10 magnolia trees. 16th Street is comprised of western sycamore (*Platanus racemosa*), palm (e.g., Mexican Fan Palm [*Washingtonia robusta*]), and paperbark (*Melaleuca quinquenervia*) trees. The interior of the Park includes a variety of trees and hedges that surround the baseball fields, the Community Recreation Center, the parking lot, the playground, and the Cove Skatepark.

Former Fisher Lumber / “Colorado Yards” Site (APN 4283-010-902)

The former Fisher Lumber / “Colorado Yards” site borders the Park to the north, fronting Colorado Avenue. As previously described, since 2005, the City’s Public Landscape Division (PLD) has occupied the 2.9-acre site that serves as the PLD’s Parks Maintenance, Urban Forestry, and Administration headquarters. The western portion of the site is developed with a 22-foot-tall, 16,700-sf building and a 28-space surface parking lot. The eastern portion of the site is fenced off from the western portion of the site and is developed with a 23-foot-tall, 8,000-sf storage building and a 26-foot-tall, 7,000-sf warehouse. A surface parking lot at the northern edge of the site provides approximately 96 parking spaces for City vehicles and is not accessible to the public.

Given that the City’s PLD has owned and occupied this property since 2005, this City use of the property constitutes the baseline for the environmental analysis set forth in this IS. However, this IS describes the environmental effects of the property’s former use as a lumber site (e.g., hazards and hazardous materials), for informational purposes.

Site Access and Circulation

The Project site accommodates a variety of travel modes for visitors, including automobile, pedestrian, public transit, and bicycle.

As previously described, four streets surround the Park: Colorado Avenue, 16th Street, Olympic Boulevard, and 14th Street. Colorado Avenue is an east-west boulevard with one lane in each direction. Metered parallel parking is provided along the south (eastbound) side of Colorado Avenue. 16th Street provides one-way northbound connectivity between Colorado Avenue and Olympic

Boulevard. Vehicles are restricted to right turns (eastbound) only onto Colorado Avenue. Metered diagonal street parking is provided on the western side of 16th Street and parallel parking is provided along the east side of the street. Olympic Boulevard is one of the City's major east-west boulevards, with two lanes in each direction. An approximately 35-foot-long median, landscaped with trees, divides the east from the west lanes. Lastly, 14th Street is a north-south street with one lane in each direction and a Class II (i.e., striped) bicycle lane exists in both directions between Colorado Avenue and Olympic Boulevard. Both sides of the street have metered, parallel parking.



Public parking at the Project site is centrally located and provides access to the Park's amenities.

The existing surface parking lot at the Park can currently be accessed from 14th Street. As previously described, the existing surface parking lot provides 79 parking spaces, including five ADA-accessible spaces, two EV charging stations, and three reserved spaces.

The former Fisher Lumber site is accessed via curb cuts from 14th Street and 16th Street. Vehicles exiting onto 16th Street are restricted to a left turn only.

For visitors walking to the Park, each street edge is lined with 4-foot-wide sidewalks, with landscape buffers ranging from four to 8 feet in width, except for 16th Street, which has metered diagonal street parking. Pedestrian access to the Park is afforded via two entry points along Olympic Boulevard, one entry point on 14th Street, and one entry point on 16th Street. Walking paths from these entry points border the athletic fields and are lined with gravel.

Local transit, including the City's Big Blue Bus system and Expo LRT, currently serves the Park. Big Blue Bus Routes 5, 41, and 44, and Metro Line E, provide service in the immediate vicinity of the Project site (refer to Figures 2 and 3).

- ▶ Route 5 serves Downtown Santa Monica, Olympic Boulevard, and Century City. Nearby bus stops include Stop #1169 and Stop #1179 (Colorado Avenue & 14th Street) and Stop #1171 and Stop #2943 (Colorado Avenue EB & 17th Street NS).
- ▶ Route 41 serves Santa Monica College, 17th Street/SMC Station, and Montana Avenue. Nearby bus stops include Stop #1179 (Colorado Avenue WB & 14th Street NS) and Stop #3009 (Olympic Boulevard WB & 16th FS).
- ▶ Route 44 serves Santa Monica College, Ocean Park, and 17th Street/SMC Station. The bus stop closest to Memorial Park is located on Colorado Avenue & 17th Street.
- ▶ Metro Line E serves Downtown Santa Monica, Culver City, downtown Los Angeles, and East Los Angeles. The 17th Street/SMC Station is located at the northeastern corner of the Project site.

For those traveling by bicycle or other micromobility devices, the Park is accessible via the Class II bicycle lane along 14th Street that spans the east-west extent of the city. The other streets adjacent to the Park have Class III sharrows.

Project Description

The purpose of the proposed Project is to renovate and expand the existing Park to meet the increasing demand for recreational activities. The proposed Project is based on direction provided during an extensive community outreach process that the City conducted during the development of the master plan for the Park. The implementation of the proposed Project would combine the existing 10.3-acre Park with the 2.9-acre former Fisher Lumber (currently PLD's "Colorado Yards") site to create a 13.2-acre park. With the City of Santa Monica's focus on better serving the community's demands, the proposed Project would involve the development of modernized public recreation facilities, improved accessibility to amenities, and enhanced community gathering spaces.

Key components of the proposed Project include the following, which will be developed in phases:

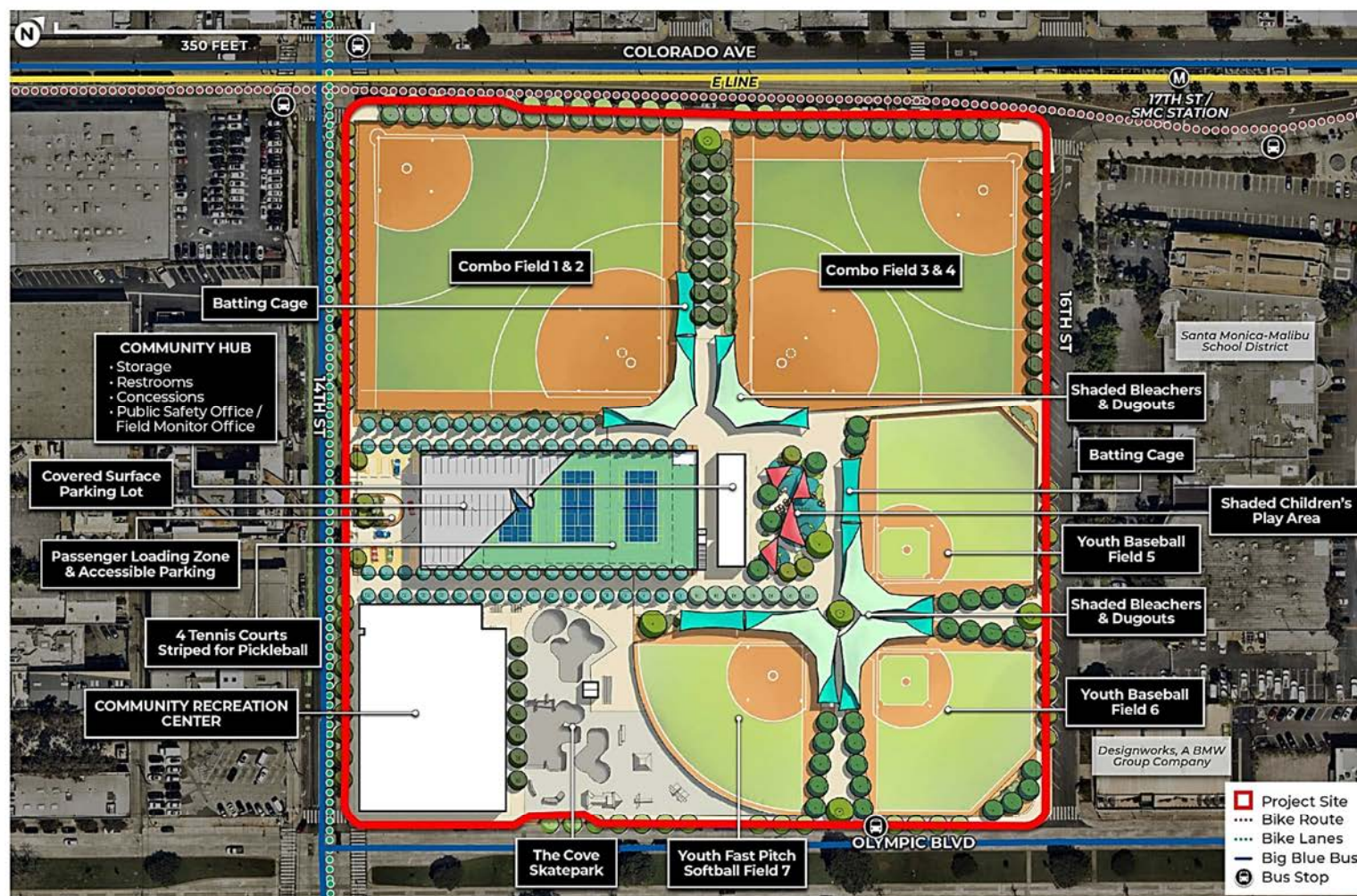
- ▶ Two synthetic turf combo fields (two playing fields per combo field);
- ▶ Three natural grass youth fields (one fast-pitch softball and two baseball fields);
- ▶ Four rooftop tennis/pickleball courts;
- ▶ A new Community Hub Building and the replacement of the children's playground with a new universally accessible playground;
- ▶ Renovation and expansion of the skate park;
- ▶ Replacement of the existing community recreation center with a new community recreation center; and
- ▶ New covered parking lot and passenger loading zone.

These components of the proposed Project are described further below and depicted in Figure 3.

Sports Fields

The proposed Project would provide a total of seven baseball/softball playing fields, including two combo fields (two playing fields per combo field), two youth baseball fields, and one youth fast-pitch softball field. The proposed Project would add a field and would provide expanded fields that would reduce schedule and use constraints associated with the existing combo field.

Figure 3. Proposed Site Plan



Memorial Park Redevelopment and Expansion Proposed Site Plan

FIGURE
3

The two combo fields (Fields 1, 2, 3, and 4) would be located side-by-side along the northern portion of the Project site, fronting Colorado Avenue. The combo fields would be comprised of 100 percent synthetic turf playing surface, including green turf for outfield and brown turf for infield areas, for low maintenance and to allow playing year-round. The synthetic turf, a movable pitching mound, multiple base alignments, and portable outfield fencing would allow for maximum combinations of softball and baseball. The flexible design can accommodate a regulation high school baseball game, an adult softball game, or two youth baseball or fast-pitch softball games played simultaneously. The entire perimeter of each combo field would be fenced with 8-foot-high chain-link perimeter fencing and the exterior of the combo fields (along 14th Street, Colorado Avenue, and 16th Street) would also contain an approximately 30-foot-tall ball stop netting to prevent balls from landing in the adjacent streets. Fields 1 and 3 would have batting cages. Both combo fields would include covered dugouts and bleachers. The bleachers would provide seating for up to approximately 200 spectators. Playing fields would be lit during evening events with LED lights affixed to approximately 55-foot-tall poles. Eight pole lights would border each of the two combo fields, with two LED lights along each of the four field lines.

Two youth baseball fields (Fields 5 and 6) would be located along the eastern border of the Project site, south of Fields 3 and 4. The youth fast-pitch softball field (Field 7) would be immediately west of Field 6. These “showcase” fields would be the primary playfields for the City of Santa Monica’s youth baseball and softball teams, sized specifically for Little League and youth fast-pitch softball. Unlike the combo fields, these youth baseball/softball fields would be covered with natural grass with dirt infield skin. The youth baseball fields would also be equipped with electronic scoreboards. Similar to the combo fields, the perimeter of each youth field would be fenced with 8-foot-tall chain-link perimeter fencing and the exterior of the youth fields (along 16th Street and Olympic Boulevard) would also contain 30-foot-tall ball stop netting. Youth fields would include covered dugouts and bleachers. The bleachers would provide seating for up to 200 spectators per playing field. Each of the baseball/softball fields would be lit using LED lights affixed to four 55-foot-tall poles, including two lights along each of the field lines.

Tennis/Pickleball Courts

Tennis/pickleball courts would be provided on a rooftop located above the proposed surface parking lot and striped for four tennis courts/16 pickleball courts. A storage shed would be provided for tennis/pickleball equipment. The rooftop tennis/pickleball courts would be accessible via a staircase and an elevator. Perimeter fencing would border the perimeter of the tennis/pickleball courts. The proposed Project would include six LED lights affixed to approximately 55-foot-tall poles, including three lights along the northern perimeter and three along the southern perimeter of the courts.

Community Hub and Children's Playground

The proposed Community Hub Building and Children's Playground would be located centrally within the Park in close proximity to the sports fields, tennis/pickleball courts, skatepark, and surface parking lot. The approximately 3,000-sf Community Hub Building would include restrooms, concessions, a storage room for park and sports equipment, and a small office for field monitor staff. The playground would be universally accessible (e.g., ADA) and integrate sail shades.



The Community Hub Building and playground's location relative to the playing fields, tennis/pickleball courts, the Cove, and parking make it the active center of the park.

The Cove Skatepark

The Cove Skatepark would be expanded and renovated to include modern skateboarding and BMX features, as well as seating and shade for spectators. The westward expansion of approximately 7,700 sf would relocate the grass perimeter and gravel entrance along Olympic Boulevard to the west side of the Cove.

Community Recreation Center

The existing 35,000-sf Community Recreation Center would be demolished and replaced with a new two-story, 50,000-sf Community Recreation Center. The redevelopment of the Community Recreation Center would integrate the functions of the existing gymnasium PAL building, community rooms, and staff offices into one facility. It would be designed with a flexible floor plan to allow for a broad array of recreational and community programs and services.

Lighting, Landscaping, and Hardscape

Outdoor lighting would provide nighttime security and wayfinding around and through the Park. As previously described, the proposed Project would include LED lights affixed to approximately 55-foot-tall poles around the perimeter of each of the proposed playing fields and the proposed tennis/pickleball courts. Additional pedestrian-scale LED pole lights would be provided along the designated walking loop, around the Community Hub Building, and at the Cove Skatepark. Up to

seven LED scoreboards would be installed—one each at of the proposed fields. Outdoor lighting would be provided in accordance with the Santa Monica Municipal Code (SMMC) Section 9.21.080 so as not to produce obtrusive glare onto the public right-of-way or adjacent properties. Code-required lighting for passageways and recesses would be provided at sufficient levels for public safety. Interior lighting in the Community Recreation Center would be designed with occupancy sensors and dimmers, where feasible and appropriate, to minimize energy use.

Streetscape improvements would be included around all four sides of the park. In addition to the sports fields' synthetic turf and natural grass, the landscape design includes mostly native trees, ornamental evergreen and deciduous trees, shade trees, and flowering trees. The remainder of the Project site would be predominantly covered with concrete, including the use of smooth concrete at The Cove Skatepark.

Access, Circulation, and Parking

Vehicular access to the site would be provided via one entry on 14th Street, midway between Colorado Avenue and Olympic Boulevard. The entry would provide a one-way passenger loading zone (i.e., pick-up/drop-off) and up to seven ADA-accessible parking spaces. The passenger loading zone would connect vehicles to a new 32,000-sf covered public parking lot that would provide up to 128 parking spaces. The new parking areas also would include spaces with charging stations that accommodate EVs.

Nearby local transit, including the City's Big Blue Bus system and the Expo LRT, would continue to serve Memorial Park. As previously described, Big Blue Bus Routes 5, 41, and 44 provide service in the immediate vicinity of the Project site; and 17th Street/SMC Station is located at the northeast corner of the Project site.

The proposed Project would include seven designated pedestrian entrances. Each side of the Park would include one or two entries. The pedestrian entrances are described below:

- ▶ 16th Street: A new pedestrian entrance between Combo Field 3 and Field 5 would be provided. The existing southern entrance would remain.
- ▶ Olympic Boulevard: The existing western entrance would be relocated to the west side of the Cove Skatepark to accommodate the skatepark expansion. The existing eastern entrance would remain.
- ▶ 14th Street: Two new pedestrian access points would be provided on each side of the parking entrance and exit roadways.
- ▶ Colorado Avenue: One new access point would be provided between the two proposed combo fields.

In addition to the pedestrian entry points, the proposed Project would include a 0.5-mile designated community walking loop. The path would be located around the perimeter of the Park along 14th Street, Colorado Avenue, and 16th Street, and traverse the Park's interior, connecting to the centrally located Community Hub. The loop would include a series of interspersed or grouped exercise stations.

The proposed Project would include a shared use path along Colorado Avenue to accommodate pedestrians and bicyclists. As previously described, there also are existing Class II bike lanes along 14th Street in both directions. Bicycle racks also would be also provided throughout the park.

Construction and Phasing

An average of 40 construction workers would be on-site at any time from 8:00 AM to 6:00 PM on Monday through Friday and 9:00 AM to 5:00 PM on Saturdays (permitted construction work hours per the City's Noise Ordinance, Chapter 4.12 of the SMMC) during construction.

Construction vehicles and equipment would include backhoes, forklifts, material-handling equipment, concrete trucks, hydraulic boom pumps, compressors, mixers, generators, portable welding machines, and miscellaneous small tools. Heavy haul traffic would vary throughout the construction of the proposed Project, ranging from a maximum of 20 to 25 heavy haul trips per day during the construction of the underground stormwater harvesting tank (Phase 0) to approximately 12 heavy haul truck trips per day during the demolition of existing buildings and hardscape during Phase 1. Additional construction vehicle trips would include material/equipment deliveries as well as light duty trucks and passenger vehicle trips for construction worker commutes to the Project site.

The proposed Project would be constructed in phases depending on funding, entitlements, and approvals. Each phase would require certain park facilities to be temporarily closed in order to accommodate construction, demolition, and staging activities. Unaffected Park facilities would remain open and operational during such time. The phasing schedule, therefore, allows for the Park to retain some usability throughout the construction schedule and prevent all Park facilities to be closed at the same time. However, given the uncertainty in the timing of implementation, the environmental analysis in this EIR conservatively considers and describes the implementation of the proposed Project in a single phase spanning a period of up to three years. This approach contemplates the greatest possible temporary construction-related impacts and long-term operational impacts associated with the proposed Project. The construction phases are as follows.

Phase 1

Phase 1 consists of the demolition and construction of the western portion of Memorial Park. Demolition activities would begin following the pending construction of the underground stormwater harvesting tank, as part of the City's SWIP, which was previously evaluated in [IS/MND for the Sustainable Water Infrastructure Project](#) and [Addendum \(State Clearinghouse Number 2016071056\)](#),¹ and would include the following:

¹ The City has developed a series of projects to achieve its goal of being water self-sufficient, ensuring water sustainability, and securing the long-term yield of groundwater resources. The Memorial Park Tank is one of two underground tanks that will be used to reduce the amount of stormwater water discharge to the Pico-Kenter outfall by harvesting up to approximately three million gallons of stormwater from a single precipitation event. Excavation associated with the Memorial Park Tank would encompass an area of approximately 0.53 acre (assuming a 172-foot-diameter circular and sloped excavation, including a 10-foot pre-stress leeway). The Memorial Park Tank would be connected to the City of Santa Monica's existing storm drain system by micro tunneling beneath existing surface and buried infrastructure.

- ▶ Clearing the former Fisher Lumber site; and
- ▶ Demolition of the existing tennis/pickleball courts, parking lot, and children's playground.

Following demolition, construction of the proposed facilities would occur:

- ▶ Construction of the first Combo Field (Fields 1 and 2);
- ▶ Construction of a covered parking lot and loading/drop-off zone;
- ▶ Construction of the tennis/pickleball courts on the parking lot rooftop; and
- ▶ Construction of the mobility and streetscape improvements along Colorado Avenue and a portion of 14th Street.

Throughout Phase 1, there would be a staging plan that allows for temporary parking on the former Fisher Lumber site, the continued use of the existing restroom and concession facility, and the potential continued use of the existing softball fields.

Phase 2

Phase 2 includes the expansion and redevelopment of Memorial Park along the remainder of Colorado Avenue and most of 16th Street. This phase would include the following components:

- ▶ Demolition of the existing eastern youth baseball field;
- ▶ Expansion of Memorial Park east into a portion of 16th Street;
- ▶ Construction of the second Combo Field (Fields 3 and 4);
- ▶ Construction of the Community Hub Building, include new restroom, concession stand, offices, and storage facility;
- ▶ Construction of the Children's Playground; and
- ▶ Construction of a temporary grass turf practice area.

Phase 3

Phase 3 includes the redevelopment of the youth baseball/softball fields and the expansion and renovation of the Cove Skatepark. This phase would include the following:

- ▶ Expansion of Memorial Park east into the remaining portion of 16th Street;
- ▶ Construction of streetscape improvements, including street trees, planters, and buffer areas along portions of 16th Street and Olympic Boulevard;
- ▶ Construction of the walking loop with exercise stations;
- ▶ Redevelopment of the temporary grass turf practice area into Field 5 for youth baseball;
- ▶ Redevelopment of the two youth fields along Olympic Boulevard into youth baseball (Field 6) and youth fast-pitch softball (Field 7) fields; and
- ▶ Expansion and redevelopment of the Cove Skatepark.

Phase 4

Phase 4 would include the demolition and redevelopment of the Community Recreation Center, along with streetscape improvements along a portion of 14th Street.

Operations

Following the completion of the proposed Project, the new facilities and programs offered at Memorial Park would not generate any increase in employees. The new facilities would simply replace existing facilities where robust programming already exists.

Environmental Sustainability

The proposed Project would comply with the most recent California Green Building Standards (CalGreen), as amended by SMMC Chapter 8.106 (Green Building Standards Code). Sustainable building strategies that would be incorporated into the proposed Project to achieve this goal include energy-efficient building systems and water-smart landscaping/irrigation. For example, the proposed Project would include photovoltaic solar panels, where appropriate and feasible. In addition, all new plumbing fixtures would be low-flow in accordance with CalGreen Title 24 and SMMC requirements. Lastly, during construction, the proposed Project would divert at least 70 percent of demolition and construction debris from being disposed in landfills in accordance with SMMC regulations.

Project Approvals Required

Approvals required for the proposed Project include, but are not limited to, the following:

- ▶ City Council certification of an EIR (CEQA Guidelines 15090), adoption of environmental findings (CEQA Guidelines Section 15091), adoption of a Statement of Overriding Considerations (if required) (CEQA Guidelines Section 15093), and adoption of a Mitigation Monitoring Reporting Program (MMRP) (CEQA Guidelines Section 15097)
- ▶ City Council approval of design plans and award of the construction contract for the proposed Project
- ▶ Any other incidental discretionary or administrative approvals needed for the construction and operation of the proposed Project including, but not limited to, a construction haul route, building permits, right-of-way permits, utility coordination, and Certificates of Occupancy.

Environmental Factors Potentially Affected:

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

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

Determination: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

- ☐ I find that the infill project WOULD NOT have a significant effect on the environment that either have not already been analyzed in a prior EIR or that are more significant than previously analyzed, or that uniformly applicable development policies would not substantially mitigate. Pursuant to Public Resources Code Section 21094.5, CEQA does not apply to such effects. A Notice of Determination (Section 15094) will be filed.
- ☐ I find that the proposed infill project will have effects that either have not been analyzed in a prior EIR, or are more significant than described in the prior EIR, and that no uniformly applicable development policies would substantially mitigate such effects. With respect to those effects that are subject to CEQA, I find that such effects WOULD NOT be significant and a NEGATIVE DECLARATION, or if the project is a Transit Priority Project a SUSTAINABLE COMMUNITIES ENVIRONMENTAL ASSESSMENT, will be prepared.
- ☐ I find that the proposed infill project will have effects that either have not been analyzed in a prior EIR, or are more significant than described in the prior EIR, and that no uniformly applicable development policies would substantially mitigate such effects. I find that

although those effects could be significant, there will not be a significant effect in this case because revisions in the infill project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION, or if the project is a Transit Priority Project, a SUSTAINABLE COMMUNITIES ENVIRONMENTAL ASSESSMENT, will be prepared.

- ☒ I find that the proposed infill project would have effects that either have not been analyzed in a prior EIR or are more significant than described in the prior EIR, and that no uniformly applicable development policies would substantially mitigate such effects. I find that those effects WOULD be significant, and an infill ENVIRONMENTAL IMPACT REPORT is required to analyze those effects that are subject to CEQA.

Amanda Schachter

Date

City Planning Manager

Evaluation of the Environmental Impacts of Infill Projects:

- 1) A brief explanation is required for all answers except “Within the Scope of Analysis in the Plan Level EIR” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “Within the Scope of Analysis in the Plan Level EIR” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “Within the Scope of Analysis in the Plan Level EIR” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants based a project-specific screening analysis).
- 2) All answers must account for the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) For the purposes of this checklist, “prior EIR” means the environmental impact report certified for a planning level decision, as supplemented by any subsequent or supplemental environmental impact reports, negative declarations, or addenda to those documents. “Planning level decision” means the enactment or amendment of a general plan, community plan, specific plan, or zoning code.
- 4) Once the lead agency has determined that a particular physical impact may occur as a result of an infill project, then the checklist answers must indicate whether the nature and magnitude of that impact has already been analyzed in a prior EIR. If the effect of the infill project is not more significant than what has already been analyzed, that effect of the infill project is not subject to CEQA. The brief explanation accompanying this determination should include page and section references to the portions of the prior EIR containing the analysis of that effect. The brief explanation shall also indicate whether the prior EIR included any mitigation measures to substantially lessen that effect and whether those measures have been incorporated into the infill project.

- 5) If the infill project would cause an effect that either was not analyzed in a prior EIR or is more significant than what was analyzed in a prior EIR, the lead agency must determine whether uniformly applicable development policies or standards that have been adopted by the lead agency, or city or county, would substantially mitigate that effect. If so, the checklist shall explain how the infill project's implementation of the uniformly applicable development policies will substantially mitigate that effect. That effect of the infill project is not subject to CEQA if the lead agency makes a finding, based upon substantial evidence, that the development policies or standards will substantially mitigate that effect.
- 6) If all effects of an infill project were either analyzed in a prior EIR or are substantially mitigated by uniformly applicable development policies or standards, CEQA does not apply to the project, and the lead agency may prepare a Notice of Exemption
- 7) Effects of an infill project that either have not been analyzed in a prior EIR, or that uniformly applicable development policies or standards do not substantially mitigate, are subject to CEQA. With respect to those effects of the infill project that are subject to CEQA, the checklist shall indicate whether those effects are potentially significant, less than significant with mitigation, or less than significant. The lead agency should indicate that an effect is "Potentially Significant" if there is substantial evidence that the effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an infill EIR is required. The infill EIR should be limited to analysis of those effects determined to be potentially significant (CEQA Guidelines Sections 15128 and 15183.3[d]).
- 8) "Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures will reduce an effect of an infill project that is subject to CEQA from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how those measures reduce the effect to a less than significant level. If the effects of an infill project that are subject to CEQA are less than significant with mitigation incorporated, the lead agency may prepare a Mitigated Negative Declaration. If all of the effects of the infill project that are subject to CEQA are less than significant, the lead agency may prepare a Negative Declaration.
- 9) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to an infill project's environmental effects in whatever format is selected.
- 10) The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significant.

I. Aesthetics/Shadows

	Potentially Significant Impact	Less Than Significant (LTS) or LTS With Mitigation	No Impact	Within the Scope of Analysis in the Plan Level EIR	Substantially Mitigated by Uniform Applicable Development Policies
AESTHETICS/SHADOWS. Except as provided in PRC Section 21099, would the project:					
a) Have a substantial adverse effect on a scenic vista?	☐	☒	☐	☐	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☒	☐	☐	☐
c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☐	☒
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	☐	☐	☒

Existing Setting

Scenic Views

The Santa Monica Local Coastal Program (LCP) Land Use Program (LUP) establishes scenic and visual resource policies for designated Scenic Corridors and Vantage Points. The 2018 LCP LUP includes development regulations to preserve visual quality around these locations and to ensure the exclusion of incompatible uses and structures. Generally, permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, minimize the alteration of natural landforms, be visually compatible with the character of surrounding areas, and, where feasible, restore and enhance visual quality in visually degraded areas. There are no identified scenic or visual resources within the vicinity of the Project site (City of Santa Monica 2019).

The California Department of Transportation (Caltrans) manages the State Scenic Highway Program that aims to protect and enhance the natural scenic corridors seen by travelers through special conservation treatment. While the City of Santa Monica does not contain a designated State Scenic Highway, the ocean view segment of State Route (SR-) 1 (Pacific Coast Highway) / I-10 (Santa Monica Freeway) is eligible for designation (Caltrans 2017). The eligible highway is approximately 0.5-miles from the Project site.

Visual Character

The Project site is located in the Pico Neighborhood, a mixed-use neighborhood comprised of retail and service-oriented businesses, manufacturing services, professional offices, and the Expo LRT. As described in *Project Location, Surrounding Land Uses, and Land Use/Zoning Designations*, the Project site is surrounded by Mixed-Use Boulevards Low and Neighborhood Commercial zones, which require development to relate and respect the surrounding residential neighborhoods. Accordingly, the surrounding building heights range between 13 feet and 35 feet.

As described above, Memorial Park is currently developed with recreational amenities and facilities, including baseball and softball fields, tennis courts, a skatepark, a children's playground, a community center, and on-site and on-street parking. Landscaping within and surrounding the Park includes several tree species (e.g., Mexican fan palms, California sycamores, and palo verde) and ornamental shrubs.

The Project site includes five existing buildings. The Community Recreation Center, which is comprised of the Gymnasium Building, the PAL Youth Center, and the Community Activity Building, has a maximum building height of 33 feet and is approximately 35,000-sf. The Project site also includes the 9-foot-tall, 397-sf concessions building and the 12-foot-tall, 1,476-sf restroom building. The remaining buildings are located on the former Fisher Lumber site. The Project site includes the 22-foot-tall, 19,600-sf Public Landscape Headquarters building; a 23-foot-tall, 6,000-sf storage building; and a 26-foot-tall, 5,500-sf warehouse.

Lighting and Shadows

The LCP LUP includes policies related to lighting, specifically open space night sky preservation. The policy establishes that any exterior lighting would be designed and sited to minimize light pollution, glare, and sky glow. New development would include lighting standards that would require visor technology or shielding to minimize light trespassing, the use of minimum lighting necessary to light walkways and entry/exit points, and the use of motion detectors for security lighting.

The SMMC establishes lighting regulations that apply to all new and replaced lighting fixtures (SMMC Section 9.21.080). Specific requirements include the following: all nonresidential building exterior doors, during the hours of darkness, shall be illuminated with a



In addition to the existing buildings at Memorial Park, the baseball fields are characterized by backstops and tall fencing as well as stadium lighting.

minimum of one foot-candle of light; all lighting fixtures shall be shielded so as not to produce obstructive glare onto the public right-of-way or adjacent properties; all luminaires shall meet the most recently adopted criteria of the Illuminating Engineering Society of North America for “Cut off” or “Full cut off” luminaires; and lighting shall not illuminate other properties in excess of a measurement of 0.4 foot candles of light.

Discussion

a-b) Less Than Significant Impact. The Project site is not located within any LCP LUP identified scenic corridors or vantage point, and/or within the vicinity of a Caltrans State Scenic Highway. The proposed Project would include the development of three new structures (i.e., the redeveloped Community Recreation Center, the rooftop tennis/pickleball courts, and Community Hub Building); however, the heights and location of these facilities would not adversely affect, deteriorate, or obstruct identified scenic views.

The redevelopment of the Community Recreation Center would replace the existing 16- to 33-foot-tall building with a two-story building with an average maximum height of 28 feet, as measured in accordance with SMMC Section 9.040.050. The redeveloped Community Recreation Center would be located within the general footprint and exhibit a similar building height as the surrounding area, which has buildings up to 35 feet tall. At these heights, the proposed buildings would not be out of scale with surrounding development, obtrusively project into the skyline, or block any public views of scenic resources (e.g., the Pacific Ocean).

There are no scenic resources (e.g., rock outcroppings or historic buildings within the viewshed of a scenic highway) located on the Project site. Although certain landscaped trees would be removed, no native trees would be removed and new trees would be planted as part of new landscaping to enhance the visual characteristics of the Project site.

Therefore, the proposed Project would result in a less than significant specific impact and would not make a cumulatively considerable contribution to a significant cumulative impact, involving a substantial adverse effect on a scenic vista and/or substantial damage to a scenic resource.

c) Substantially Mitigated by Uniform Applicable Development Policies. As previously described, the Project site is located within an urban environment and has a Parks and Open Space land use/zoning designation pursuant to the City’s LUCE. The proposed Project would comply with the following SMMC regulations that govern scenic quality and aesthetics.

Building Form and Location (SMMC Section 9.15.030): As previously described, the maximum building height regulations limit building heights at the Project site to two-stories and 28 feet. The three proposed buildings would comply with the maximum building height regulations, measuring height in accordance with SMMC Section 9.040.050. In addition, each of the proposed buildings would comply with the required minimum setbacks from the property line, including a minimum street frontage setback of 20 feet and minimum interior side and rear setback of 10 feet. Lastly, all of the proposed buildings would cover significantly less than 25 percent of the parcel.

Fences (SMMC Section 9.21.060): All of the proposed fences, including the proposed 8-foot-height chain link perimeter fencing, would comply with the setback and maximum height requirements in SMMC Section 9.21.060. In addition, the proposed Project would involve the construction of approximately 30-foot-tall ball stop netting along the five sports fields. The ball stop netting would be similar in height to the existing chain link backstops and netting at the Park.

Freestanding Structures (SMMC Section 9.21.070): The proposed Project would involve the construction of several shade sail features to provide sun protection for visitors and baseball spectators. All free-standing shade structures would have a maximum height of 28 feet, complying with the height limits established for Parks and Open Space zones.

Reflective Materials (SMMC Section 9.21.120): The proposed Project would not have more than 25 percent of a façade surface area to contain black or mirrored glass or other mirror-like material that is highly reflective. All material for roofing shall be nonreflective.



The proposed Project would involve the construction of 30-foot-tall ball netting and pole-mounted sports/field lighting that would be similar in character to the existing features at the Park.

Screening (SMMC Section 9.12.140): The proposed Project would comply with all screening requirements, including the screening of all exterior mechanical and electrical equipment on all vertical sides at least to the height of the equipment and shall be incorporated into the design of buildings to the maximum extent feasible. Screen materials would be consistent with the exterior colors and materials of the building.

Lighting (SMMC Section 9.21.080): The proposed Project would include new building exterior lighting and pedestrian lighting. All lighting would comply with SMMC requirements. All nonresidential building exterior doors, during the hours of darkness, would be illuminated with a minimum of one foot-candle of light. In addition, all lighting fixtures—including exterior building, pedestrian, and field lighting—would be shielded so as not to produce obstructive glare onto the public right-of-way or adjacent properties; all luminaires shall meet the most recently adopted criteria of the Illuminating Engineering Society of North America for “Cut off” or “Full cut off” luminaires; and lighting would not illuminate other properties in excess of a measurement of 0.4 foot candles of light. The proposed Project would provide 34, 55-foot-tall LED field lights around the baseball/softball fields and the tennis/pickleball court, for a net increase of 28 new 55-foot-tall LED field lights. While the SMMC does not include specific provisions regarding field lights, the proposed field lights would generally comply with SMMC Section 9.21.080. The placement, quantity, angle, and strength of the field lights shall be planned and designed to serve recreational uses, while also minimizing light trespass onto the surrounding properties, similar to the existing pole-mounted sports/field lighting

at the Park and in the surrounding vicinity (e.g., the pole-mounted lights for the soccer field at Crossroads Elementary School).

Architectural Review Board (SMMC Section 9.55.120): The proposed Project would be subject to design review approval by the Architectural Review Board who may approve, approve with conditions, or disapprove an application based on preserving the integrity of neighborhoods, ensuring compatibility with surrounding areas, and maintaining the quality of the local neighborhood and environment.

For the reasons stated above, compliance with the applicable sections of the SMMC would avoid the creation of significant impacts and the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact, regarding scenic quality.

d) Substantially Mitigated by Uniform Applicable Development Policies. The proposed Project would include new pedestrian and sport/field lighting. New pedestrian LED lighting would be provided throughout the site to enhance nighttime security and wayfinding, designed in accordance with SMMC Section 9.21.080, as previously described.

In addition, the proposed Project would provide 34, 55-foot-tall LED field lights around the baseball/softball fields and the tennis/pickleball court, for a net increase of 28 new 55-foot-tall LED field lights. While the SMMC does not include specific provisions regarding field lights, the proposed field lights would comply with SMMC Section 9.21.080. The placement, quantity, angle, and strength of the field lights shall be planned and designed to serve recreational uses, while also minimizing light trespass onto the surrounding properties. In addition, the field lights would be functionally and aesthetically similar to the existing pole-mounted sports/field lighting at the Park and in the surrounding vicinity (e.g., the pole-mounted lights for the soccer field at Crossroads Elementary School).

Given the urban context and the existing light sources, as well as compliance with SMMC Section 9.21.080, the proposed Project would not generate a new substantial light or glare to the area. Therefore, the proposed Project would result in a less than significant impact and would not make a cumulatively considerable contribution to a significant cumulative impact regarding light or glare impacts.

II. Agriculture and Forestry Resources

	Potentially Significant Impact	Less Than Significant (LTS) or LTS With Mitigation	No Impact	Within the Scope of Analysis in the Plan Level EIR	Substantially Mitigated by Uniform Applicable Development Policies
AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220[g]), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104[g])?	☐	☐	☒	☐	☐
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☒	☐	☐
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	☐	☐	☒	☐	☐

Existing Setting

The Project site is located in Santa Monica's Pico Neighborhood, an urbanized area with various wholesale and retail commercial stores, service-oriented businesses, professional offices, and educational facilities. As designated in the LUCE, the Project site is considered Open Space, which is eligible for parks and open space and supporting uses such as recreation centers, community centers, gymnasiums, and small-scale retail. The surrounding zoning includes Mixed-Use Boulevard Low, Neighborhood Commercial, Low-Density Residential, and Industrial Conservation.

According to the California Department of Conservation, the Project site is not within or near agricultural land uses or the presence of prime soils. Similarly, California Department of Forestry and Fire Protection (CAL FIRE) does not identify forestland or timberland zoning within the City of Santa Monica.

Discussion

a-e) No Impact. The Project site located is not within or near agricultural land, forest land, or timberland zones. The LUCE designates the Project site as Open Space, and the proposed development includes only the expansion and redevelopment of existing sports fields, playgrounds, and community buildings. The proposed Project would not involve the direct or indirect loss of farmland or forest land through the conversion to non-agricultural use or non-forest use, respectively, eliminating the potential for the proposed Project to conflict with existing zoning or Williamson Act contracts. As a result, the implementation of the proposed Project would not impact agricultural or forestry resources.

III. Air Quality

	Potentially Significant Impact	Less Than Significant (LTS) or LTS With Mitigation	No Impact	Within the Scope of Analysis in the Plan Level EIR	Substantially Mitigated by Uniform Applicable Development Policies
AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:					
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒	☐	☐	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☒	☐	☐	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☒	☐	☐	☐	☐

Existing Setting

The Project site is located in the South Coast Air Basin (Basin), which includes the non-desert portions of Los Angeles, Orange County, San Bernardino, and Riverside counties. The South Coast Air Quality Management District (SCAQMD) monitors and regulates the Air Quality Management Plan (2022) (AQMP) for the Basin.

The air quality in the Basin is influenced by a wide range of emission sources, including stationary sources (e.g., building generators, and equipment) and mobile sources (e.g., motor vehicles). The air quality at a given location is a function of several factors, including the quantity and type of emitted pollutants, wind and dispersion rates, atmospheric stability, temperature, topography, and the presence or absence of inversions. The Basin is bounded by the Pacific Ocean to the west and the San Gabriel, San Fernando, and San Jacinto Mountains to the north and east that trap air and its pollutants in the valleys below, making the Basin an area of high air pollution potential.

The Federal and State governments have identified criteria pollutants and a host of air toxics that have substantial adverse effects on human health and the environment in concentrations, and established air quality standards to control those concentrations through the Federal Clean Air Act

(CAA) and the California Clean Air Act (CCAA). The criteria pollutants for which Federal and State standards have been promulgated and which are most relevant to air quality planning and regulation in the Basin include ozone (O_3), carbon monoxide (CO), suspended particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead (Pb). In addition, there are additional toxic air contaminants (TACs) which are of concern in the Basin.

Under the CAA, Federal air quality standards, known as the National Ambient Air Quality Standards (NAAQS), were established for the six criteria air pollutants described previously. Similarly, the CCAA establishes State air quality standards, known as the California Ambient Air Quality Standards (CAAQS), which are more stringent than the NAAQS. NAAQS and CAAQS for the seven criteria pollutants, as well as the Basin's current attainment statuses, are shown in Table 1.

In summary, at the Federal level, the Basin is designated as a nonattainment area for O_3 , Pb, and $PM_{2.5}$ (U.S. Environmental Protection Agency [USEPA] 2020). The Basin is in attainment of Federal standards for SO_2 and NO_2 , a subcategory of NO_x (USEPA 2020). At the State level, the Basin, including the Los Angeles County portion of the Basin, is designated as a nonattainment area for O_3 , $PM_{2.5}$, and PM_{10} (CARB 2019a, 2019b, 2019c).

The SCAQMD has divided the region into 38 source receptor areas (SRAs). The City is located within SRA 2, which covers the northwest coastal area of Los Angeles County. Ambient air pollutant concentrations within SRA 2 are monitored at the North Los Angeles County Coastal Air Quality Monitoring Station at the West Los Angeles Veterans Affairs Medical Center (Air Quality Station 060370113), which is approximately three miles east of the City. Of the criteria pollutants discussed previously, only ambient concentrations of O_3 , CO, and NO_2 at the North Los Angeles County Coastal Air Quality Monitoring Station. Other monitoring stations within proximity to the City include the Southwest Coastal Los Angeles County Monitoring Station (SRA 3) that collects data on SO_2 , PM_{10} , and Pb, and the Central Los Angeles Monitoring Station (SRA 1) that collects data on $PM_{2.5}$.

Sources of pollutant emissions from the Park include both stationary and mobile sources, particularly those resulting from vehicular trips, energy usage, maintenance equipment, and solvents (e.g., paints), as discussed further below.

Discussion

a) Less Than Significant Impact. A project would be inconsistent with the air quality plan if its implementation would result in population and/or employment growth that exceeds growth estimates in the applicable air quality plan. Generally, a project would conflict with or potentially obstruct implementation of an air quality plan if it would contribute to population and/or employment growth in excess of that forecasted in the SCAQMD's adopted 2022 AQMP. In turn, the AQMP relies upon growth projections developed and adopted by the Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP) / Sustainable Communities Strategy (SCS) (Connect SoCal 2024), which in turn, relies upon the growth projections provided in the general plans adopted by the cities and the counties. Consequently, compliance with the City's General Plan typically results in compliance with the AQMP. In addition, the SCAQMD's Air Quality Handbook states that a consistency finding should be based on identifying whether a project would increase the frequency or severity of existing air quality violations or cause or contribute to new air quality violations.

Table 1. 2019 Los Angeles County-South Coast Air Basin Attainment Status for Criteria Pollutants

Pollutant	Averaging Period	California (CAAQS)	Federal (NAAQS)	
			Primary	Secondary
Ozone (O ₃)	1 Hour	0.09 ppm (180 µg/m ³)	--	Same as Primary Standard
	8 Hour	0.070 ppm (137 µg/m ³)	0.070 ppm (137 µg/m ³)	
Respirable Particulate Matter (PM ₁₀)	24 Hour	50 µg/m ³	150 µg/m ³	Same as Primary Standard
	Annual Arithmetic Mean	20 µg/m ³	--	
Fine Particulate Matter (PM _{2.5})	24 Hour	--	35 µg/m ³	Same as Primary Standard
	Annual Arithmetic Mean	12 µg/m ³	9 µg/m ³	15 µg/m ³
Carbon Monoxide (CO)	1 Hour	20 ppm (23 µg/m ³)	35 ppm (40 µg/m ³)	--
	8 Hour	9 ppm (10 µg/m ³)	9 ppm (10 µg/m ³)	--
Nitrogen Dioxide (NO ₂)	1 Hour	0.18 ppm (339 µg/m ³)	0.10 ppm (188 µg/m ³)	--
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	0.053 ppb (100 µg/m ³)	Same as Primary Standard
Sulfur Dioxide (SO ₂)	1 Hour	0.25 ppm (655 µg/m ³)	75 ppb (196 µg/m ³)	--
	3 Hour	--	--	0.5 ppm (1,300 µg/m ³)
	24 Hour	0.04 ppm (105 µg/m ³)	0.14 ppm (for certain areas)	--
	Annual Arithmetic Mean	--	0.030 ppm (for certain areas)	--
Lead	30 Day Average	1.5 µg/m ³	--	--
	Calendar Quarter	--	1.5 µg/m ³ (for certain areas)	Same as Primary Standard
	Rolling 3-Month Average	--	0.15 µg/m ³	
Visibility Reducing Particles	8 Hour	--	No National Standards	
Sulfates	24 Hour	25 µg/m ³		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)		
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m ³)		

Source: CARB 2024a.

Notes: ppm = parts per million; µg/m³ = micrograms per cubic meter.

The proposed Project involves the redevelopment and expansion of Memorial Park to better meet the existing recreational needs of City residents. As discussed in **Section XVI. Population and Housing**, the proposed Project would not induce or result in substantial population growth that could substantially increase air quality violations as all employees (for construction and operation) are anticipated to be drawn from within the City. The proposed Project does not involve the construction of new housing and, given that employees are likely to already live in the City (or within driving distance), would not substantially increase the population, thereby generating a need to construct new housing the construction and use of which would generate new air emissions. Therefore, the proposed Project would be consistent with growth projections used in the 2022 AQMP, no conflicts with the AQMP would occur, and air quality impacts involving noncompliance with an air quality plan will be less than significant.

b) Potentially Significant Impact. The SCAQMD has developed criteria for determining whether emissions from a project are regionally significant. SCAQMD's significance thresholds are summarized in Table 2 for criteria pollutant emissions during construction and operational activities. A project would make a cumulatively considerable contribution to a significant cumulative air quality impact, if emissions from its construction and/or operational activities exceed the corresponding SCAQMD significance thresholds.

Table 2. SCAQMD Emissions Thresholds for Significant Regional Impacts

Pollutant	Mass Daily Thresholds (lbs/day)	
	Construction	Operation
Nitrogen Oxides (NO _x)	100	55
Volatile Organic Compounds (VOC)	75	55
Respirable Particulate Matter (PM ₁₀)	150	150
Fine Particulate Matter (PM _{2.5})	55	55
Sulfur Oxides (SO _x)	150	150
Carbon Monoxide (CO)	550	550
Lead	3	3

Source: SCAQMD 2018.

Construction Emissions

As previously described, the proposed Project would be constructed in phases depending on funding, entitlements, and approvals. The construction phases are estimated to occur as follows:

- ▶ Phase 1 – Demolition and construction of the western portion of Memorial Park.
- ▶ Phase 2 – Expansion and redevelopment of Memorial Park along the remainder of Colorado Avenue and most of 16th Street.
- ▶ Phase 3 – Redevelopment of the youth baseball/softball fields and the expansion and renovation of the Cove Skatepark.
- ▶ Phase 4 – Demolition and redevelopment of the Community Recreation Center, along with streetscape improvements along a portion of 14th Street.

The construction of the proposed Project is estimated to involve an average of 40 workers located on-site at any time from 8:00 AM to 6:00 PM on Monday through Friday and 9:00 AM to 5:00 PM on Saturdays (permitted construction work hours per the City's Noise Ordinance, Chapter 4.12 of the SMMC), during construction. Construction activities would involve use of vehicles and equipment such as backhoes, forklifts, material-handling equipment, concrete trucks, hydraulic boom pumps, compressors, mixers, generators, portable welding machines, and miscellaneous small tools. Additional construction vehicle trips would include material/equipment deliveries as well as light duty trucks and passenger vehicle trips for construction worker commutes to the Project site.

Based on SCAQMD criteria, a project would have the potential to violate an air quality standard or contribute substantially to an existing violation and result in a significant impact regarding construction emissions if the project generates daily emissions exceeding any of the construction thresholds stated in Table 2. The combination of employee vehicle trips, transport of construction equipment and materials, and use of construction equipment and materials have the potential to generate emissions that exceed the daily construction emissions thresholds that apply to the Project. This is considered a potentially significant impact warranting further evaluation in an EIR, which will include a robust emissions estimate using the California Emissions Estimator Model (CalEEMod).

Operational Emissions

Operation of the proposed Project would generate emissions primarily as a result of daily visitor vehicle trips and, to a lesser degree, daily employee vehicle trips. Further, the proposed Project would substantially increase the facilities at the Park (e.g., replace the existing Community Recreation Center with a larger Community Recreation Center, and establish new lighting for the ballfields). Although the proposed Project is likely to result in the replacement of facilities with more energy conserving ones—given the increase in size, capacity, and number/types of facilities that would result in the Project—the proposed Project has the potential for to result in a net increase in emissions as compared to existing conditions which exceeds one or more of the daily operation emissions thresholds stated in Table 2. This is considered a potentially significant impact warranting further evaluation in an EIR, which will include a robust emissions estimate using CalEEMod.

c) Potentially Significant Impact. Some people, such as individuals with respiratory illnesses or impaired lung function because of other illnesses, persons over 65 years of age, and children under 14, are particularly sensitive to certain pollutants. Facilities and structures where people with these enhanced sensitivities to air pollution live or spend considerable amounts of time are known as “sensitive receptors.” Land uses identified to be sensitive receptors by SCAQMD (1993) in its *CEQA Air Quality Handbook* include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Sensitive receptors may be at risk of being affected by air emissions released from the construction of the proposed Project.

The nearest sensitive receptors to the Project site with the greatest potential to experience impacts, include recreational users of the Park itself. Additionally, numerous residences are located approximately 300 feet to the north of the Project site and the Crossroads Elementary School is located approximately 450 feet to the east of the Project site. Pollutant emissions resulting from demolition, grading, and construction activities have the potential to expose sensitive receptors to substantial pollutant concentrations, particularly to recreational users and employees at the Park who would be located within proximity to active construction areas on-site. This is considered a

potentially significant impact warranting further evaluation in an EIR, which will include a robust emissions estimate using CalEEMod. Additionally, following the completion of construction activities, recreational users and employees at the Park would be located in close proximity to I-10 (less than 300 feet to the southeast) and, as a result, could be exposed to diesel particulate matter (DPM) and/or other TACs. These potential impacts will also be explored in the EIR, which will include a Human Health Risk Assessment (HRA).

d) Potentially Significant Impact. According to the SCAQMD *CEQA Air Quality Handbook*, objectionable odors are typically associated with industrial uses such as agricultural facilities (e.g., farms and dairies), refineries, wastewater treatment facilities, and landfills. The proposed Project does not involve the establishment of uses or development the operation of which has the potential to generate objectionable odors.

However, as stated above, visitors to, and employees at, the Park would be located within close proximity to construction areas on-site. During the proposed construction activities, the application of architectural coatings and other interior and exterior finishes may produce discernible odors typical of most construction sites. Although such odors would be temporary and SCAQMD Rules 1108 and 1113 limit the amount of volatile organic compounds (VOCs) from architectural coatings and solvents, respectively, given the proximity of visitors and employees to construction areas, construction activities have the potential to generate odors that constitute a nuisance pursuant to SCAQMD Rule 402. This is considered a potentially significant impact that will be evaluated along with other potential odor-related impacts of the proposed Project, in an EIR.

IV. Biological Resources

	Potentially Significant Impact	Less Than Significant (LTS) or LTS With Mitigation	No Impact	Within the Scope of Analysis in the Plan Level EIR	Substantially Mitigated by Uniform Applicable Development Policies
BIOLOGICAL RESOURCES. Would the project:					
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☒	☐	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐	☐

	Potentially Significant Impact	Less Than Significant (LTS) or LTS With Mitigation	No Impact	Within the Scope of Analysis in the Plan Level EIR	Substantially Mitigated by Uniform Applicable Development Policies
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?	☐	☐	☒	☐	☐

Existing Setting

The City of Santa Monica is generally urbanized, with few areas of native wildlife habitat occurring in the City or immediate vicinity. The nearest wildlife habitat in the region occurs along the coast at Santa Monica State Beach and in the Santa Monica Mountains, located approximately three miles to the north, which have a mix of vegetation communities.

The Project site supports a variety of tree species, as shown in Table 3. However, the Project site and the surrounding vicinity does not support any designated or recognized sensitive habitats or mapped critical habitat for any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS). Any use of the area by such species is anticipated to be rare, transient, or episodic. Species expected to occur on-site include terrestrial species such as squirrels and birds that are commonly found in urban environments.

In addition, the Project site and the surrounding vicinity does not support any riparian habitat, wetlands, wildlife corridor/nursery site, or other sensitive natural community. Accordingly, there are no conservation plans that apply to the Project site.

Table 3. Landscaped Tree Species on the Project Site

Species	Quantity
African Fern Pine (<i>Afrocarpus falcatus</i>)	10
Aleppo Pine (<i>Pinus halepensis</i>)	1
Australian Willow (<i>Geijera parviflora</i>)	9
Bloodgood Plane (<i>Platanus X hispanica</i> 'Bloodgood')	1
Cajeput Tree (<i>Melaleuca quinquenervia</i>)	3
California Sycamore (<i>Platanus racemosa</i>)	6
Camphor Tree (<i>Cinnamomum camphora</i>)	3
Canary Island Date Palm (<i>Phoenix canariensis</i>)	1
Canary Island Pine (<i>Pinus canariensis</i>)	8
Carrotwood (<i>Cupaniopsis anacardioides</i>)	1
Chinese Juniper (<i>Juniperus chinensis</i>)	5
Columbian Plane (<i>Platanus X hispanica</i> 'Columbia')	1
Desert Museum Palo Verde (<i>Parkinsonia X</i> 'Desert Museum')	3
Fern-Leaf Catalina Ironwood (<i>Lyonothamnus floribundus</i>)	8

Species	Quantity
Firewheel Tree (<i>Stenocarpus sinuatus</i>)	6
Guadalupe Palm (<i>Brahea edulis</i>)	1
Mexican Fan Palm (<i>Washingtonia robusta</i>)	54
New Zealand Christmas Tree (<i>Metrosideros excelsus</i>)	6
Palo Verde (<i>Cercidium</i> spp.)	1
Silk Tree (<i>Albizia julibrissin</i>)	20
Southern Magnolia (<i>Magnolia grandiflora</i>)	13
Weeping Fig (<i>Ficus benjamina</i>)	2
White Mulberry (<i>Morus alba</i>)	2
Total	165

Source: City of Santa Monica 2025.

Discussion

a-c) No Impact. As previously described in *Existing Setting*, the Project site is located in the urbanized and fully developed Pico Neighborhood. No special status/sensitive species are known to occur on the Project site or within the surrounding vicinity. In addition, there is no riparian habitat, wetland habitat, or other sensitive natural communities on the Project site or within the surrounding vicinity. Consequently, there is a very low probability that sensitive or special status species would be present on the Project site. Therefore, the proposed Project would not result in adverse effects on sensitive habitat or special status species, and no impacts would occur.

d) Less Than Significant Impact. The Project site and the surrounding vicinity does not support wildfire corridors or native wildlife nursery sites that support migratory wildlife. In addition, due to the highly urbanized character of the Project site and surroundings, it is highly unlikely that native resident or migratory wildlife species movement occurs on or near the Project site. Nevertheless, trees, shrubs, and other ornamental vegetation could provide suitable nesting and roosting opportunities for (non-sensitive) migratory bird species afforded protection under the Federal Migratory Bird and Treaty Act (MBTA) and California Fish and Game Code. Disturbing or destroying active bird nests is a violation of the MBTA (16 U.S. Code [USC] 703 et seq.). In addition, nests and eggs are protected under California Fish and Game Code Section 3503. Nesting activity for migratory birds typically occurs from February 15 to August 31. Removal of landscaping would avoid the nesting bird season to the maximum extent practicable. If removal of trees or shrubs is required during this period a qualified biologist would be retained to conduct a pre-construction survey for nesting birds. The survey would be conducted within 72 hours prior to the initiation of vegetation removal. Any active nests would be avoided at a distance of 25 feet to 500 feet, as determined by the qualified biological monitor, until the monitor has verified that the young have fledged or the nest has otherwise become inactive. Therefore, implementation of the proposed Project would have a less than significant impact and would not make a considerable contribution to cumulatively significant impacts, as it relates to migratory birds.

e) Less Than Significant Impact. The implementation of the proposed Project would be in accordance with the City's Tree Code (SMMC Section 7.40.160) and City's Urban Forest Master Plan (UFMP). The Project would involve the removal of landscaped trees. The proposed Project would be subject to the UFMP Tree Relocation and Removal Plan, which would include documentation of the affected trees and be reviewed by the public and required City departments. All remaining on-site trees would be protected and maintained in place during construction in accordance with the City's

Tree Code and UFMP, which establishes tree care guidelines to protect the tree from construction and support the longevity of the trees. Specific tree care techniques would include the establishment of tree protection zones, protecting roots, and pruning roots properly during construction activities. The proposed Project would not conflict with policies that protect biological resources; therefore, it would have a less than significant impact and would not make a cumulatively considerable contribution to a significant cumulative impact.

f) No Impact. As previously mentioned, no habitat for any special status or sensitive biological species exists at the Project site or in the vicinity. Accordingly, no Habitat Conservation Plan, Natural Community Conservation Plan, or other approved habitat conservation plan applies to the Project site. Therefore, no impacts would occur as a result of the proposed Project.

V. Construction Effects

	Potentially Significant Impact	Less Than Significant (LTS) or LTS With Mitigation	No Impact	Within the Scope of Analysis in the Plan Level EIR	Substantially Mitigated by Uniform Applicable Development Policies
CONSTRUCTION EFFECTS. Would the project:					
a) Have considerable construction-period impacts due to the scope or location of construction activities?	☒	☐	☐	☐	☐

Existing Setting

The Project site is located in the Pico Neighborhood, a mixed-use neighborhood comprised of residences, schools, retail and service-oriented businesses, manufacturing services, professional offices, and the Expo Light Rail Transit system. As listed in Table 4, the Project site is located approximately 300 feet and 450 feet away from a residential neighborhood and elementary school, respectively. Such uses are considered sensitive receptors, as they represent a population who may be more susceptible to the effects of construction activities.

Table 4. Development Adjacent to the Project Site

Surrounding Land Use and Development	
North (across Colorado Avenue)	Expo LRT, service-oriented businesses, retail. Residential neighborhood, 300 feet away.
South (across Olympic Boulevard)	Professional services, restaurants, I-10.
East (across 16 th Street)	SMMUSD office, professional services, charity Crossroads Elementary School, 450 feet away.
West (across 14 th Street)	Service-oriented businesses, home improvement retail, distribution services.

Discussion

a) Potentially Significant Impact. As previously described in **Section III. Air Quality**, construction activities associated with the proposed Project would occur over a maximum 3-year period. There would be an average of 40 workers on-site at any time during permitted construction hours and the use of various construction equipment, including backhoes, forklifts, material-handling equipment, concrete trucks, hydraulic boom pumps, compressors, mixers, generators, portable welding machines, and miscellaneous small tools. The City estimates that building demolition would generate approximately 7,640 cubic yards of demolition debris and site clearing would generate approximately 20,100 cubic yards of demolition debris. In addition, there would be approximately 45,000 cubic yards of grading and an additional 9,000 cubic yards of imported fill for construction. The City estimates approximately 8,185 heavy haul trips would occur over the construction phase.

The construction activities have the potential to result in short-term impacts to a number of resource issues. However, as summarized below and described in their respective sections, there are existing regulations that would reduce many of these construction impacts to a less than significant level.

In accordance with SMMC Chapter 8.98 Construction Management Plan Ordinance, the City would prepare a Construction Management Plan that would address temporary construction effects, including transportation hazards and emergency access. The Plan would identify emergency access provisions, traffic control measures, construction staging areas, construction worker parking, designated haul routes, and other measures to facilitate automobile, pedestrian, and bicyclist safety. See **Section X. Hazards and Hazardous Materials** and **Section XIX. Transportation and Traffic** for more information.

As described in **Section XV. Noise**, construction activities associated with the proposed Project would be subject to the City's Noise Ordinance (SMMC Chapter 4.12) that regulates the permitted hours for increased ambient noise levels and groundborne vibrations that may affect the surrounding community. Construction activities associated with the proposed Project have the potential to generate noise levels that may exceed the established exterior noise limit and, therefore, would be subject to the requirements of SMMC Section 4.12.110(d), limiting construction hours to Monday through Friday, 10:00 AM to 3:00 PM. In addition, the City would be required to utilize noise reduction measures to minimize noise impacts on nearby residences. Alternatively, the City may obtain a noise permit that authorizes construction activity outside of the allowable hours. In doing so, the City would be required to develop and implement a construction noise noticing plan for occupants of properties located within 500 feet of the Project site.

As described further in **Section XI. Hydrology and Water Quality**, construction activities associated with the proposed Project would involve minor excavation, grading, and other site preparation activities that may expose fill and native soils. Nevertheless, the proposed Project would be subject to SMMC Chapter 7.10 Runoff Conservation and Sustainable Management Ordinance, which requires the development and implementation of a stormwater pollution prevention plan (SWPPP) and an erosion and sediment control plan (ESCP). The City's ordinance, in combination with National Pollutant Discharge Elimination System (NPDES) and MS4 permit requirements, would reduce impacts related to soil erosion and loss of soil.

Further, construction activities associated with the proposed Project would use electricity for temporary power for lighting, equipment, and other construction operations. Electricity use during construction would be variable depending on lighting needs and the use of electric-powered equipment. However, construction-related electricity use would be temporary and comparatively negligible compared to citywide and regional use over the long-term. See **Section VII. Energy** for more information.

As previously discussed in **Section III. Air Quality**, the proposed Project does have the potential to generate significant air quality-related impacts, particularly regarding sensitive receptors who use areas of Park that remain open and usable during construction activities. These construction-related air quality impacts will be further evaluated in an EIR, which will include a robust emissions estimate using CalEEMod.

VI. Cultural Resources

	Potentially Significant Impact	Less Than Significant (LTS) or LTS With Mitigation	No Impact	Within the Scope of Analysis in the Plan Level EIR	Substantially Mitigated by Uniform Applicable Development Policies
CULTURAL RESOURCES. Would the project:					
b) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☒	☐	☐	☐
c) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☒	☐	☐	☐	☐
d) Disturb any human remains, including those interred outside of dedicated cemeteries?	☒	☐	☐	☐	☐

Existing Setting

The cultural resources analysis in this IS was informed by a Cultural Resources Study (see Appendix E) completed by WSP and a Historic Architectural Analysis prepared by Ostashay & Associates (2025) (see Appendix F). The Historic Architectural Analysis involved a record search to identify previously documented historic resources. This records search included a review of the National Register and its annual updates, determinations of eligibility for National Register listings, the California Register, and the California Historical Resources Inventory System (CHRIS) and the Built Environment Resource Directory (BERD) both maintained by the State Office of Historic Preservation (OHP). Previously completed historic resources surveys and inventories prepared for the City of Santa Monica were also consulted, including the Santa Monica Historic Resources Inventory (SMHRI). Additionally, field inspections were conducted, including extensive photography of the Project site and its features. Similarly, the Cultural Resources Study included a records search and a pedestrian survey of the Project site.

Historic Setting

The Park parcel was vacant until 1923, when a portion of the site was informally developed into a baseball field for the Santa Monica Tigers. The site was used as a makeshift baseball diamond until the City leased the large parcel to develop the Santa Monica Municipal Stadium, dedicated on March 15, 1935. The City eventually purchased the property in 1938 and made additional but minor improvements. Besides the site of local ballgames, the Municipal Stadium was a popular event center featuring rodeos, motorcycle and midget car racing, football, boxing matches, dog shows, and more. However, by the end of the 1940s, the stadium was outdated and in need of repair. While there were plans for the renovation of the Stadium, in 1949, the City purchased the remaining parcels with the intention of demolishing the Municipal Stadium and redeveloping the site as a City park.

In 1951, the City formally established the Park that exhibited similar recreational amenities to current ones. The Park included a standard league baseball field, two little league ball fields, two tennis courts, a parking lot, landscaping, and a one-story recreation center. By 1971, the original recreation center was replaced by a vernacular contemporary style gymnasium designed by local architect James Mount. New additions were added to the facility, including the Cultural Arts Building (now called the “Community Building”) in 1976 and the PAL Youth Center in 1992.

PLD’s Colorado Yards (previously the Fisher Lumber Company site) was once the right-of-way for the Southern Pacific (SP) Railroad, which operated a freight line between Los Angeles and Santa Monica. In 1908, the Los Angeles Pacific Electric (PE) Railway leased the line to electrify it for passenger service. The PE line carried passengers along the route with several stops in between, until passenger service was discontinued in 1953. As freight line uses also declined, the tracks along Santa Monica and Sepulveda boulevards were removed and service became sparse. By the 1970s, the western end of the line terminated at the Fisher Lumber Company site at the southeast corner of 14th Street and Colorado Avenue.

The John W. Fisher Lumber Company, one of the oldest commercial retail businesses in the City, occupied a portion of the right-of-way shoulder. By January 1923, the lumberyard consisted of a one-story office structure at the northwest corner of 14th Street and Colorado Avenue, as well as a huge two-story volume lumber warehouse that measured roughly 60 feet by 90 feet and a small lumber shed. The rest of the long parcel contained pallets of timber, timber products, building supplies, and other hardware related equipment. By 1935, the lumberyard was reduced in size to allow for the construction of two large pole frame lumber sheds. In the 1970s the original office structure was demolished for the construction of a new, larger office building and a pole frame shed. The new contemporary style sales office was approximately 150 feet by 100 feet and designed by James Mount. Throughout the 1980s, the lumber site experienced other facility changes, including the construction of another pole frame storage building and the demolition of an older warehouse structure. The lumberyard company purchased the remainder of the right-of-way land from the Southern Pacific Railroad in 1995. In early 2003, the property was sold to real estate developer KC Riverside. A year later, the City purchased the land from KC Riverside with the intention of expanding the Park.

Archaeological Setting:

The Greater Los Angeles Area is known to be rich in subsurface archaeological resources. During prehistoric times, the City provided an especially favorable environment for Native American settlement given its location along the Pacific Ocean on a relatively level bluff above the Santa Monica Bay, with freshwater springs at nearby Ballona Creek and Santa Monica Canyon. While surface deposits may have been obscured by development since 1875, the City is situated on a terrace with uphill slopes trending to the north toward the Santa Monica Mountains, and it is likely that alluvial sediments eroding from those higher elevations have covered older archaeological deposits over the millennia prior to 1875. Thus, archaeological deposits dating back thousands of years could be uncovered at unknown depths anywhere in the City. Such prehistoric archaeological deposits could provide important information about the occupation, settlement practices, economy, trade, and other characteristics of Native Americans at this location during ancient times.

Various archaeological investigations have been completed throughout the City as part of the preparation for other CEQA documentation. Based on these record searches, there are no known prehistoric or archaeological sites within the immediate vicinity of the Project site. However, the

presence or absence of previously identified archaeological sites is not a reliable indicator of archaeological sensitivity. In highly developed urban settings, the original ground surface is typically not available for inspection, and prehistoric and historic archaeological deposits may be preserved beneath more recent soils. For this reason, there is a possibility that important prehistoric age resources could be found in the subsurface, especially beneath structures built before the application of environmental compliance laws requiring surveys prior to construction.

Discussion

a) Less Than Significant Impact. As described further in the Historic Architectural Report (see Appendix F), the Park does not contain any of the original elements of the Santa Monica Municipal Stadium and the existing Gymnasium Building has been altered by the construction of later additions to its north, south, east, and west elevations. Further, the overall vernacular design of the building complex does not reflect a distinctive architectural style or a distinguished example of architecture by James Mount. In considering the Fisher Lumber Company site, none of the original buildings associated with the early lumber business are extant. The three buildings currently on site are non-descript, altered structures, contemporary in design, and built in the recent past. Therefore, the implementation of the proposed Project, including the redevelopment of the Community Recreation Center and the demolition of the former Fisher Lumber Company property, would not result in adverse effects on historic resources on the Project site.

Further, the nearest potential historic resource outside of the Project site is a two-story commercial building located at 1557 14th Street (1415 Colorado Avenue). This commercial structure, built in 1955 as the Crescent Cleaners, is located across the street from the northwest corner of the Project site at the northeast corner of Colorado Avenue and 14th Street. It was previously identified in prior city-sponsored historic resources survey efforts as a potential local resource because of its distinctive Streamline Moderne characteristics. Because of the substantial distance (80 feet) and clear physical and visual separation between the Project site and the 1557 14th Street property the likelihood of any direct or indirect impacts occurring to the potential resource would be insignificant. The Streamline Moderne characteristics that convey the property's local significance and justify its eligibility as a potential City of Santa Monica landmark property would be retained unaltered upon implementation of the proposed Project. Therefore, the proposed Project would result in a less than significant impact and would not make a cumulatively considerable contribution to a significant cumulative impact, with regard to off-site historic architectural resources.

b-c) Potentially Significant Impact. While there are no documented archaeological resources or prehistoric burial grounds within the Project site or the surrounding vicinity, based on known previous human settlement within Southern California, the Project site has the potential for archaeological resources or human remains to be uncovered during construction activities. Construction activities associated with the proposed Project would involve grading and other ground disturbing activities (e.g., trenching for utilities), potentially resulting in the encounter of buried archaeological resources or human remains that were preserved at depths beneath the surfaces. Therefore, impacts to archaeological resources and human remains are considered potentially significant. The EIR will further discuss and analyze the potential impacts, as well as develop, disclose, and evaluate mitigation measures that would reduce the level of significance.

VII. Energy

	Potentially Significant Impact	Less Than Significant (LTS) or LTS With Mitigation	No Impact	Within the Scope of Analysis in the Plan Level EIR	Substantially Mitigated by Uniform Applicable Development Policies
ENERGY. Would the project:					
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☐	☐	☒
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☐	☒

Existing Setting

Electricity

Southern California Edison Company (SoCal Edison) provides electricity service to the City. In 2018, the City joined the Los Angeles Clean Power Alliance (CPA), a community electricity provider for clean power sources that include a customer choice of 40 percent, 50 percent, or 100 percent renewable energy content. Over 48,000 Santa Monica residential customers switched to CPA 100 percent Green Power on February 1, 2019, when service began for residential customers. In addition, over 5,300 commercial accounts switched to CPA on May 1, 2019, when service began for commercial customers. In 2021, the City's total annual electricity use was 690 million kilowatt hours (kWh), approximately 12 percent lower than electricity use in 2018 at 883 million kWh. Table 5 summarizes the City's electricity demand per capita compared to Los Angeles County and the State.

Table 5. 2021 State, County, and City Electricity Demand

	Population	Electricity Demand (kWh)	
		Total	Per Capita
State	39,237,836	280,179,881,800	7,140.6
County	9,829,544	66,003,285,890	6,714.8
City	91,103	689,925,464	7,573.0

Notes: The commercial sector of the City, comprised largely of Downtown businesses, generally dominates energy consumption contributing over 49 percent of total energy demands. The residential sector accounts for 37 percent (City of Santa Monica 2006, 2017a). This is the probable cause for the higher per capita electricity demand relative to the State and the County.

Sources: City of Santa Monica 2021; U. S. Census Bureau 2021.

Natural Gas

Southern California Gas Company (SoCal Gas) provides natural gas service to the City. SoCalGas serves over 21.8 million customers through 5.9 million meters from in-State and out-of-State suppliers and delivered to the City through its integrated gas pipeline system. Table 6 summarizes the City's natural gas demand per capita compared to Los Angeles County and the State.

Table 6. 2022 State, County, and City Natural Gas Demand

	Population	Natural Gas Demand (kBTU)	
		Total	Per Capita
State	39,029,342	1,170,784,574,000	29,997.5
County	9,721,138	281,961,270,400	29,005.0
City	89,951	2,564,779,815	28,513.1

1 therm = 100,000 British thermal unit (BTU) = 10,000 kilo British thermal units (kBTU)

Gas consumption data was not available from the California Energy Commission (CEC) for Alpine, Del Sierra, Lake, Inyo, Modoc, Mono, Plumas, Sierra, Siskiyou, or Tuolumne Counties. Therefore, total and per capita gas State-wide gas consumption are slightly greater than presented.

Sources: CEC 2022; U.S. Census Bureau 2022.

Discussion

a) Substantially Mitigated by Uniform Applicable Development Policies. The proposed Project would be subject to a number of State and local requirements adopted for the purpose of reducing energy consumption, such as

- ▶ CalGreen, as amended by the SMMC Chapter 8.106 Green Building Standards Code
- ▶ California Energy Code, as amended by SMMC Chapter 8.36, Energy Performance Approach Reach Code (Energy Reach Code)
- ▶ SMMC Chapter 8.108, Green Building, Landscape Design, Resource Conservation and Construction and Demolition Waste Management Standards
- ▶ SMMC Chapter 9.28.160, Electric Vehicle Charging Stations Ordinance (EV Charger Reach Code)

Electricity would be used for lighting, equipment, and other construction operations, with the total energy demand dependent on lighting and equipment type, usage, and duration. The proposed 50,000-sf Community Recreation Center and the 3,000-sf Community Hub Building would increase the demand for electricity and natural gas for building heating and cooling.

SMMC Chapter 8.108 requires new development projects to comply with water-efficient landscape and irrigation standards. Subject to approval of the proposed Project, the City would be required to submit plans and reports that demonstrate water use and irrigation system efficiency. Further, as described in **Section XI. Hydrology and Water Quality** and **Section XXI. Utilities and Service Systems**, the majority of the water demand for the proposed Project would be for landscape and irrigation and, therefore, would rely on recycled water from the Santa Monica Urban Runoff Recycling Facility (SMURFF).

In 2024, the City updated the EV Charger Reach Code to comply with the 2024 CalGreen Mid-Cycle Update. The updated regulations include a minimum percentage of parking spaces in new residential and nonresidential projects to have EV chargers installed or to be equipped with infrastructure to support future EV charging. The EV Charger Reach Code follows CalGreen Tier 1 requirements. As a non-residential project, 11 percent of the parking spaces must be equipped with Level 2 EV chargers and 18 percent of parking spaces must be Level 2 EV Capable.

Other sustainable design features that would be formalized during the design process include the installation of energy efficient HVAC systems, operable windows to increase air flow, high-performance building envelope to maximize insulation, lighting systems with occupancy sensors and dimmers, energy efficient building materials and appliances, cool roof or green roofs, and landscaping to reduce building energy loads.

Compliance with State and local requirements adopted for the purpose of reducing energy consumption would ensure that the proposed Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources. The implementation of the proposed Project would result in a less than significant impact and would not make a cumulatively considerable contribution to a significant cumulative impact regarding energy consumption.

b) Substantially Mitigated by Uniform Applicable Development Policies. As discussed in subsection a) above, the proposed Project has the potential to create a net increase in energy consumption. However, as described further in **Section XII. Land Use and Planning** with the implementation of State and local requirements adopted for the purpose of reducing energy consumption the proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The implementation of the proposed Project would result in a less than significant impact and would not make a cumulatively considerable contribution to a significant cumulative impact.

VIII. Greenhouse Gas Emissions

	Potentially Significant Impact	Less Than Significant (LTS) or LTS With Mitigation	No Impact	Within the Scope of Analysis in the Plan Level EIR	Substantially Mitigated by Uniform Applicable Development Policies
GREENHOUSE GAS EMISSIONS. Would the project:					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☒	☐	☐	☐

Existing Setting

The U.S. Environmental Protection Agency (USEPA) defines climate change as “any significant change in the measures of climate lasting for an extended period of time” (USEPA 2017). In other words, climate change includes major changes in temperature, precipitation, or wind patterns, among others, that occur over several decades or longer. These changes are caused by several factors, including oceanic processes, variations in solar radiation received by Earth, plate tectonics and volcanic eruptions, and anthropogenic activities. The potential impacts of climate change include flooding, reduced water quality and availability, sea level rise, and beach erosion.

GHGs consist of a variety of gases that have the potential to trap heat in the earth’s atmosphere; mainly water vapor,² carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), ozone (O₃), and chlorofluorocarbons (CFCs).³ Methodologies and regulations approved by the Intergovernmental Panel on Climate Change (IPCC), USEPA, and the CARB focus on CO₂, CH₄, N₂O, and CFCs.

In 2022, California generated approximately 371,100,000 metric tons (MT) of carbon dioxide equivalent (CO₂e). The primary end-use sector sources were transportation (39 percent), industry (23 percent), electricity generation and importation (16 percent), agriculture and forestry (8 percent), residential (8 percent) and commercial (6 percent) (CARB 2022). In comparison, the City generated approximately 724,970 metric tons of CO₂e, approximately 48 percent below 1990 emission total of 1,386,642 MT CO₂e. Transportation emissions were 68.5 percent of total GHG emissions while building gas usage, building electricity usage, and landfill waste represented 19.3 percent, 6.7

² Water vapor and its relationship to climate change are not clearly understood and defined, so these GHGs are not currently regulated.

³ CFCs have been banned in the United States and have no natural source, so these GHGs are not included in this analysis.

percent, and 4.7 percent, respectively. In addition, as shown in Table 7, the total per capita GHG emissions for the City was 8.1 MT CO₂e per person, compared to the State's per capita of 9.5 MT CO₂e per person (City of Santa Monica 2024e).

Table 7. 2022 State and City GHG Emissions

	Population	Greenhouse Gas Emissions (MT CO ₂ e)	
		Total	Per Capita
State	39,029,342	371,100,000	9.5
City	89,951	724,970	8.1

Sources: U.S. Census Bureau 2022; City of Santa Monica 2024b; CARB 2022.

The primary sources of GHG emissions from the use and operation of the existing facilities at Memorial Park are mobile sources (e.g., vehicle trips associated with recreational users at the Park) and secondarily energy usage of the facilities. The major sources of GHG emissions in the vicinity include motor vehicles and building energy needs, as well as the construction and maintenance of buildings, streets, and infrastructure.

Discussion

a) Potentially Significant Impact. GHG emissions would occur as a result of construction and operation activities associated with the proposed Project, both of which would generate GHG emissions, primarily from mobile sources.

The CEQA Guidelines do not establish a threshold of significance for GHG impacts; instead, lead agencies have the discretion to establish significance thresholds for their respective jurisdictions. A lead agency may look to thresholds developed by other public agencies or other expert entities, such as the California Air Pollution Control Officers Association (CAPCOA), so long as the threshold chosen is supported by substantial evidence. Neither SCAQMD nor the City have adopted a GHG significance threshold applicable to general development projects. However, the SCAQMD released a draft guidance document regarding interim CEQA GHG significance thresholds in October 2008. The SCAQMD proposed a tiered approach, whereby the level of detail and refinement needed to determine significance increases with a project's total GHG emissions. The SCAQMD also proposed a screening level of 3,000 MT CO₂e per year for mixed use or all land use projects, under which project impacts would be considered "less than significant." The 3,000 MT screening level was intended "to achieve the same policy objective of capturing 90 percent of the GHG emissions from new mixed use or all land use development projects in the residential/commercial sectors." It should be noted in Response 1 of Attachment D to SCAQMD's Board Meeting from December 5, 2008 (Agenda No. 31, Interim GHG Significance Threshold Proposal), SCAQMD staff stated: "Additional analysis is needed to further define the performance standards and to coordinate with CARB staff's interim GHG proposal. Therefore, no thresholds for residential/commercial sectors are recommended by staff at this time and the stationary source (industrial) sector threshold, if adopted by the Governing Board, will be used by the AQMD for projects where it is the lead agency." While this screening threshold was never adopted by the SCAQMD Board, the City has elected to apply this threshold in its environmental review of development projects.

GHG emissions resulting from construction would be generated by mobile sources such as heavy-haul trucks and other construction equipment. In addition, operation of the proposed Project would

generate GHG emissions mainly from mobile sources. The proposed Project also includes replacing existing facilities with substantially larger ones that have greater capacity to provide recreational programs and activities. Although new facilities are likely to be more energy efficient than existing ones to be replaced, given their increased size, capacity, and number, the proposed Project has the potential to generate a net increase in GHG emissions as compared to existing conditions.

Finally, as synthetic turf fields and plastic playground equipment breakdown, they must be disposed and replaced. Depending on the specific materials that are used in synthetic turf and plastic playground equipment, they might not be recyclable and must be disposed in landfills. The use of heavy vehicles to transport the materials to landfills and the degradation of these materials in landfills, will contribute additional GHGs to the environment.

Therefore, the proposed Project could create potentially significant impacts regarding GHG emissions that warrant further evaluation in an EIR, which will include a robust emissions estimate using the CalEEMod.

b) Less Than Significant Impact. As previously described in **Section VII. Energy**, the proposed Project would be consistent with the City's GHG reduction goals and policies established in the LUCE, SMMC Sustainable City Plan, and Climate Action Plan. Additional consistency analyses can be found in **Section VII. Energy** and **Section XII. Land Use and Planning**.

The LUCE addresses GHG emissions through its land use and transportation decisions such as focusing new land uses near transit, creating complete neighborhoods, supporting infill mixed-use projects, and promoting affordable and diverse housing near jobs and transit. The applicable LUCE goals pertaining to GHG reduction include the following:

- ▶ **Goal U2: *Integrate Land Use and Transportation for GHG Reduction.*** Integrate land use and transportation, carefully focusing new development on transit-rich boulevards and in the districts, to create sustainable active pedestrian-friendly centers that decrease reliance on the automobile; increase walking, bicycling and transit use; and improve community quality of life.
- ▶ **Goal LU16: *Sustainable Urban Form.*** Assure that buildings are sustainable, environmentally sound and contribute to the City's urban form.
- ▶ **Goal S3:** Reduce overall energy use in the City.

The City has adopted a number of State and local regulations pertaining to GHG reductions, which establish City efficiency standards for building operations, water conservation, construction waste recycling, and electric readiness requirements. Applicable SMMC regulations include, but are not limited to, the following:

- ▶ CalGreen, as amended by the SMMC Chapter 8.106 Green Building Standards Code
- ▶ California Energy Code, as amended by SMMC Chapter 8.36, Energy Performance Approach Reach Code (Energy Reach Code)
- ▶ SMMC Chapter 8.108, Green Building, Landscape Design, Resource Conservation and Construction and Demolition Waste Management Standards
- ▶ SMMC Chapter 9.28.160, Electric Vehicle Charging Stations Ordinance (EV Charger Reach Code)

The City's Sustainable City Plan targets GHG reductions from increased energy efficiency, increased renewable energy production, and reduced transportation-related emissions through increased use of alternative transportation. In particular, the Sustainable City Plan increases the percent of new and substantially rehabilitated housing that achieves Leadership in Energy and Environmental Design (LEED) certification at the LEED Silver level or higher.

Lastly, the City's Climate Action and Adaptation Plan (CAAP) establishes a City-wide framework for the City to meet its goal of carbon neutrality by 2050 and its interim goal of reducing GHG emissions to 80 percent below 1990 levels by 2030. The CAAP outlines three overarching strategies to achieve GHG emission reduction targets: Zero Net Carbon Buildings, Zero Waste, and Sustainable Mobility.

The proposed Project would be consistent with the aforementioned goals and policies related to GHG emissions. The proposed Project includes features that support multimodal transportation and reduce reliance on single-rider automobile use. The Project site is centrally located within the Pico Neighborhood with strong vehicle, bicycle, and pedestrian connectivity to surrounding communities and businesses. In addition, the proposed Project would expand the City's bike network via the construction of a new Class I shared bike path on Colorado Avenue, connecting to the Exposition Corridor Bike Path. In addition, pursuant to the City's EV Charger Reach Code, the Project would include parking spaces equipped with Level 2 EV chargers as well as parking spaces that would be Level 2 EV Capable.

The proposed Project would comply with the requirements of the City's Green Building Code that aims to reduce the use of VOC emitting materials, strengthen water efficiency conservation, increase construction waste recycling, and increase energy efficiency. Further, the proposed Project would be designed in compliance the City's Energy Reach Code. Other sustainable design features that would be finalized during the design process include the installation of energy efficient HVAC systems, operable windows to increase air flow, a high-performance building envelope to maximize insulation, lighting systems with occupancy sensors and dimmers, energy efficient building materials and appliances, cool roof or green roofs (consistent with LUCE Policy S5.6), and landscaping to reduce building energy loads (consistent with LUCE Policy S5.5).

Therefore, the proposed Project would be consistent with applicable local plans and policies, all of which are consistent with State and regional mandates that address GHG emissions. The proposed Project would have a less than significant impact and would not result in a cumulatively considerable contribution to a significant cumulative impact regarding obstructions with applicable energy plans.

IX. Geology and Soils

	Potentially Significant Impact	Less Than Significant (LTS) or LTS With Mitigation	No Impact	Within the Scope of Analysis in the Plan Level EIR	Substantially Mitigated by Uniform Applicable Development Policies
GEOLOGY AND SOILS. Would the project:					
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:					
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42	☐	☒	☐	☐	☐
ii) Strong seismic ground shaking?	☐	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐	☐
iv) Landslides?	☐	☐	☒	☐	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☐	☒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☒	☐	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☒	☐	☐	☐

	Potentially Significant Impact	Less Than Significant (LTS) or LTS With Mitigation	No Impact	Within the Scope of Analysis in the Plan Level EIR	Substantially Mitigated by Uniform Applicable Development Policies
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☒	☐	☐
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐	☐

Existing Setting

The City of Santa Monica is located within the northwestern Coastal Plain of the Los Angeles Basin and geologically bounded to the north by the Santa Monica Mountains, Elysian Hills, and Repetto Hills; to the east by the Merced Hills, Puente Hills, and Santa Ana Mountains; and to the south and west by the Pacific Ocean.

Southern California is seismically active because numerous faults exist in the region. While there are no known active or potentially active faults within the immediate vicinity of the Project site, there are numerous faults in the Los Angeles area that are categorized as active and potentially active. Active and potentially active faults within and near the City of Santa Monica include the Newport-Inglewood Fault, the Santa Monica-Hollywood-Malibu Coast Fault, and the Palos Verdes Fault. Historically, the City has experienced seismic activity from various regional faults.

Risk associated with seismic activity include tsunami and liquefaction. The Project site is located outside of the City's identified tsunami inundation zone and likely would not experience risks from tsunamis. A liquefaction risk zone is located approximately 1,000 feet from the Project site within a linear area along the coastline stretching from the waterline inland to Ocean Avenue. Aside from the specified liquefaction risk zone along the coast, there are two regions within the City that are potentially susceptible to liquefaction. However, the Project site does not lie within either of these City-identified liquefaction hazard zones (Santa Monica GIS Data n.d.).

Geologic deposits underlying the Pico Neighborhood and the Project site consist predominantly of young alluvial valley deposits (Qya1) from the late Pleistocene age (129,000 to 11,700 years ago) and consist of a Yolo loam soil composition. Specifically, the site is comprised of up to 30 feet of mostly clayey soils overlaying very dense sand. A perched groundwater zone occurs at depths between 15- to 25 feet below the ground surface (Leighton Consulting, Inc. 2010). The Project site is located approximately between 110 feet and 118 feet above sea level and is generally flat, with a slight southwest slope.

Discussion

a-i) Less Than Significant Impact. Fault rupture is the displacement that occurs along the surface of a fault during an earthquake. The California Geological Survey (CGS) designates Alquist-Priolo Earthquake Fault Zones, which are regulatory zones around active faults.⁴ These zones that extend from 200 feet to 500 feet on each side of known active faults, identify areas where potential surface ruptures along active faults could prove hazardous and identify where special studies are required to characterize hazards to habitable structures. No Alquist-Priolo Fault Zones have been identified within the City of Santa Monica to date (CGS 1986).

However, the City of Santa Monica treats the Santa Monica Fault as an active fault and, as such, has designated Fault Hazard Management Zones, which extend 380 feet to 500 feet north of the north branch and 100 feet to 600 feet south of the south branch of the Santa Monica Fault. The Project site is not located within either of these zones. Therefore, there is a low potential for a fault rupture to occur at the Project site, and there would be a less than significant Project-specific impact and the Project would not make a cumulatively considerable contribution to a significant cumulative impact.

a-ii) Substantially Mitigated by Uniform Applicable Development Policies. The Project site is in the seismically active region of Southern California and, as such, would be potentially subject to strong ground shaking in the event of an earthquake on the Santa Monica fault or any other fault in the area. The ground shaking that an area is subject to experience is primarily a function of the distance between an area and the seismic source, the type of material underlying a property, and the motion of fault displacement. The nearest faults to the Project site are the Santa Monica Fault located approximately one mile north, and the Newport-Inglewood fault located approximately 5.5 miles east of the Project site. However, the proposed facilities would comply with seismic safety design standards established by the SMMC (Article 8 Santa Monica Building Regulations that incorporate by reference and augment the California Building Code and International Building Code). Therefore, there would be a less than significant impact and the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact, regarding ground shaking.

a-iii) Less Than Significant Impact. Soil liquefaction occurs when loose, saturated, and granular soils lose their inherent shear strength due to excess water pressure that builds up during repeated movement from seismic activity. Factors that contribute to the potential for liquefaction include a low relative density of granular materials, a shallow groundwater table, and a long duration and high acceleration of seismic shaking.

According to the California Department of Conservation's *Official Map of Seismic Hazard Zones* for the Beverly Hills Quadrangle (California Department of Conservation 2025), the Project site is not located within an area susceptible to liquefaction. Earth materials located on-site consist of stiff clay and very dense sand, with groundwater occurring at least 40 feet below the surface (Leighton Consulting, Inc. 2010). Based on these considerations, the potential for liquefaction occurring at the site is considered low. Therefore, there would be a less than significant impact and the proposed

⁴ Active faults are those having historically produced earthquakes or shown evidence of movement within the past 11,000 years.

Project would not make a cumulatively considerable contribution to a significant cumulative impact, regarding soil liquefaction

a-iv) No Impact. Landslides occur when slopes become unstable and masses of earth material move downslope. Landslides are generally considered to be rapid events, often triggered during periods of rainfall or earthquakes. As previously described, the Project site is relatively flat, with a topographic relief of 8 feet over approximately 740 feet, for a 1.08 percent slope. The probability of seismically induced landslides affecting the Project site is considered nominal, due to the lack of significant slopes on the site and surrounding area. Further, the City has not mapped the Project site as being located in a Landslide Risk Area. Therefore, no impacts related to landslides would occur (City of Santa Monica 2024b).

b) Substantially Mitigated by Uniform Applicable Development Policies. Construction activities associated with the proposed Project would involve minor excavation, grading, and other site preparation activities that may expose fill and native soils. (As previously described, it is estimated that the proposed Project would involve approximately 45,000 cubic yards of grading.) The City would implement construction activities according to applicable requirements, including the City's Runoff Conservation and Sustainable Management Ordinance, to minimize soil erosion impacts. In addition, given the existing 1.08 percent slope, proposed grading and drainage is unlikely to create erosion hazards. Therefore, impacts regarding soil erosion or the loss of soil would be less than significant and the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact.

c) Less Than Significant Impact. As previously discussed, the Project site is not subject to landslides, lateral spreading, or liquefaction. Additionally, the City's Clay Pit Areas Map indicates the Project site is not located in a former clay pit area susceptible to subsidence (City of Santa Monica 2024a). Therefore, there would be a less than significant impact and the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact, regarding landslides, lateral spreading, subsidence, liquefaction or collapse.

d) Less Than Significant Impact. Expansive soils are generally clayey, swell when wetted, and shrink when dried. Wetting can occur in a number of ways (e.g., absorption from the air, rainfall, groundwater fluctuations, lawn watering, or broken water or sewer lines). Expansive soils located beneath structures can result in cracks in foundations, walls, and ceilings. Expansive soils located on slopes can cause slope failure. On-site soils have an Expansion Index of 42, which is relatively low. A consolidation test showed sampled clay had some slight expansion when wetted, and sampled clay was relatively stiff at a depth of 25 feet (Leighton Consulting, Inc. 2010). A layer of wet clay occurs within the perched groundwater table, at depths between 15 feet and 25 feet below the surface (Leighton Consulting, Inc. 2010). Therefore, impacts would be less than significant and the proposed Project would not make a considerable contribution to a significant cumulative impact, regarding expansive soils.

e) No Impact. The City of Santa Monica's wastewater (i.e., sewer) system serves the Project site. The proposed Project does not involve the use or installation of septic tanks and/or other alternative wastewater disposal systems. Therefore, no impact would occur regarding wastewater disposal systems.

f) Less Than Significant Impact. The Project site is underlain by Pleistocene age deposits, which have previously yielded identifiable vertebrate fossils in the vicinity of the Project site and elsewhere in Southern California. Construction activities associated with the proposed Project would involve grading and other ground disturbing activities; however, due to the developed nature of the Project site, it is not expected that these activities would encounter areas that have not been previously disturbed. Construction activities associated with the proposed Project would involve minor excavation (Phase 0, which would include excavation to a depth of over 10 feet for the installation of an underground stormwater harvesting tank as part of the City's SWIP, was previously evaluated in the [IS/MND for the Sustainable Water Infrastructure Project](#) and [Addendum \[State Clearinghouse Number 2016071056\]](#).) In the event that a paleontological resource is discovered during ground-disturbing activities associated with the proposed Project, work will immediately cease within 50 feet of the discovery and the find shall be assessed by a qualified paleontologist for scientific significance and collected for curation, if necessary. If significant resources are encountered, curation will occur according to accepted standards as recommended by the Paleontologist in consultation with City staff. Therefore, impacts would be less than significant and the Project would not make a cumulatively considerable contribution to a significant cumulative impact, regarding paleontological resources.

X. Hazards and Hazardous Materials

	Potentially Significant Impact	Less Than Significant (LTS) or LTS With Mitigation	No Impact	Within the Scope of Analysis in the Plan Level EIR	Substantially Mitigated by Uniform Applicable Development Policies
HAZARDS AND HAZARDOUS MATERIALS. Would the project:					
a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?	☐	☒	☐	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☒	☐	☐	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?	☒	☐	☐	☐	☐

	Potentially Significant Impact	Less Than Significant (LTS) or LTS With Mitigation	No Impact	Within the Scope of Analysis in the Plan Level EIR	Substantially Mitigated by Uniform Applicable Development Policies
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☒	☐	☐	☐	☐
e) For a project located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☒	☐	☐
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☐	☒
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐	☐

Existing Setting

The hazards and hazardous materials analysis in this IS was informed by a Phase I Environmental Site Assessment prepared by WSP (2025) (see Appendix G). This Phase I ESA was conducted in general conformance with the scope and limitations of the American Society for Testing and Materials International (ASTM) E 1527-21, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. The purpose of the Phase I ESA is to identify the confirmed presence, likely presence, or a material threat of the presence of hazardous substances or petroleum products at a real property, also known as a Recognized Environmental Condition (REC).

Hazardous materials associated with the current use of the Project site, which comprises the Park and PLD's Colorado Yards site, includes landscaping and maintenance chemicals (e.g., pesticides, herbicides, fertilizers), paints, solvents, adhesives, and oil. In addition, the City stores industrial materials, such as two above-ground fuel storage tanks of diesel fuel, bulk soil and mulch, oil and waste oil, and gasoline at the Colorado Yards site. The Colorado Yards site was formerly occupied

by Fisher Lumber Company in the early 1900s to the early 2000s, with its primary activities pertaining to treating and storing wood/lumber. The Project site also contains inactive railroad tracks (WSP 200).

Residential development, service-oriented development, wholesale and retail commercial stores, professional offices, and education facilities surround the Project site. Three of the adjoining properties have had previous uses relating to historic cleaning services or gasoline/auto service stations, as listed in hazardous waste databases. In 1949, Cazares Abdon, addressed at 1680 E. 16th Street, was listed as an historical dry cleaner. Further, Crescent Cleaners and Laundry, addressed at 1557 14th Street, was listed as an historical dry cleaner from 1928 through 1992, and included the use of perchloroethylene (PCE). No releases were reported for either property. In addition, the Project site is adjacent to Synder Diamond, located at 1399 Olympic Boulevard. The Project site was listed as a leaking underground storage tank (LUST) site, where gasoline and diesel contaminated the groundwater. However, remediation occurred, and the case was closed in 2024 with a “No Further Action (NFA)” designation (WSP 2025).

Discussion

a) Potentially Significant Impact. As previously described, the proposed Project would involve the demolition of the facilities on the Colorado Yards site and the expansion of the Park to accommodate new sports fields, a redeveloped Community Recreation Center, a covered parking lot with rooftop tennis/pickleball courts, and other supporting recreational amenities. Construction activities associated with the use of the proposed Project would involve the use of potentially hazardous materials, including vehicle fuels, oils, and transmission fluids; and operational activities would entail routine cleaning and maintenance activities using commercially available hazardous materials (e.g., cleaning fluids, detergents, and pesticides/herbicides). However, the use of such materials would not be in quantities that would be commercially reportable. Further, these materials would be transported, handled, and disposed of in compliance with all applicable Federal, State, and local regulations established by the USEPA, California Environmental Protection Agency (CalEPA), Occupational Safety and Health Administration (OSHA), California OSHA, and Department of Toxic Substances Control (DTSC). The proposed Project would have a less than significant impact and would not result in a cumulatively considerable contribution to a significant cumulative impact regarding the routine transport, use or disposal of hazardous materials.

b-d) Potentially Significant. As previously described, a Phase I ESA (WSP 2025) was prepared to identify material risks and known environmental conditions associated with the Project site. The report consisted of a review of hazardous material databases and a site reconnaissance to evaluate the current and historical land uses that may have resulted in the release of hazardous materials and the contamination of underlying soils. Soil disturbance of the contaminated soils may expose humans to hazardous materials and pose health hazards.

The Phase I ESA found that the current land uses at the Park do not pose a risk of potential hazards through soil exposure. However, the Colorado Yards site and historical on- and off-site uses may have released hazardous materials and subsequently contaminated underlying soils. Specifically, three recognized environmental conditions (RECs) and one controlled REC (CREC) were identified:

- ▶ The inactive Pacific Railroad tracks, located in the northwestern portion of the Project site, have the potential to include contaminants related to wood preservatives (e.g., creosote and arsenic) and heavy metals. Given the historical use of the railroad, the Phase I ESA concluded

that such contaminants have likely impacted the subsurface of the Project site and is considered to represent an REC.

- ▶ As previously described, the Colorado Yards site was previously occupied by Fisher Lumber Company. Treated wood is often associated with chromium, copper, and arsenic. Due to the probable outside storage of treated wood products, the Phase I ESA concludes that contaminants have likely impacted the subsurface at the Project site and is considered a REC.
- ▶ Two historical dry cleaners were identified on adjacent properties, with one listed as using PCE and/or PCE-containing equipment. Although no releases were reported, environmental impacts from dry cleaning facilities in close proximity to the site cannot be ruled out. The listings are considered RECs.
- ▶ The Synder Diamond site is listed as a LUST site, closed in 2024 with a “No Further Action” designation. Gasoline and diesel impacted groundwater and remediation occurred. Based on reported groundwater flow direction (southwest or downgradient of the Project site), extent of groundwater contamination, and closure with an NFA, the site is not considered to represent a REC for the Project site but is identified by WSP to represent a CREC.

The Project site contains RECs and the proposed Project includes grading and other ground disturbing that could expose humans and environmental resources to harm and/or contamination. This is considered a potentially significant impact that will be evaluated further in the EIR.

Additionally, the proposed Project would involve the installation of synthetic turf for the two proposed combo fields and plastic playground equipment. Synthetic turf and plastic playground equipment may contain per- and polyfluoroalkyl substances (PFAS) and could create microplastics as they breakdown. Exposure to these substances could lead to adverse human health effects. Further, microplastics containing can occur and persist in water, air, and soil resources, thereby contaminating these media. These potential adverse impacts to humans and the environment are considered potentially significant and will be further discussed and analyzed in the EIR.

e) No Impact. The Project site is not located within two miles of an airport or located within an area covered by an airport land use plan. The proposed Project does not involve placing people in proximity to aircraft operations and related hazards. Therefore, no impacts from aircraft hazards would occur.

f) Substantially Mitigated by Uniform Applicable Development Policies. The City includes a range of official disaster routes for preparation of a large scale disaster, such as a tsunami or regional fire. Disaster Routes include I-10 (Freeway Disaster Route) as well as a local City streetscape access route, which has multiple exit points from Ocean Avenue including along SR-1, Santa Monica Boulevard, and Olympic Boulevard to reach the greater Los Angeles area (County of Los Angeles 2022). The proposed Project is not expected to result in the interference of emergency response or evacuation plans. The proposed Project would consist of development within a contiguous City block and would not substantially modify the surrounding roadways. All of the construction activities associated with the proposed Project would be regulated by the City’s Construction Management Ordinance, which requires the preparation of a Construction Management Plan. The plan would identify the required emergency access points and routes to adequately serve the Project site in case of an emergency during construction. In addition, the proposed buildings, assembly areas, driveway access, and internal circulation would be required to comply with the emergency access

requirements established in the City's Fire Code. Therefore, potential impacts associated with emergency access would be reduced to a less than significant level by uniform applicable development policies.

g) No Impact. As described further in **Section XXII. Wildfire**, the proposed Project would not exacerbate wildfire risks. The site is located within an urbanized area and is not designated as a High or Very High Fire Hazard Severity Zone (FHSZ). Further, the Project site is located on predominantly flat terrain and in an urbanized area and does not exhibit characteristics that could exacerbate the spread of wildfires or post-fire hazards. The proposed Project would not involve installation of any infrastructure such as high-tension electricity lines that would exacerbate wildfire risk and would not increase public exposure to wildfires (i.e., placing residential uses in areas of high wildfire risk). Further, all proposed development would be consistent with the City's Fire Code and adequately served by the Santa Monica Fire Department (SMFD), as discussed in **Section XVI. Public Services**. For these reasons, the proposed Project would involve no impacts pertaining to wildfire-related hazards.

XI. Hydrology and Water Quality

	Potentially Significant Impact	Less Than Significant (LTS) or LTS With Mitigation	No Impact	Within the Scope of Analysis in the Plan Level EIR	Substantially Mitigated by Uniform Applicable Development Policies
HYDROLOGY AND WATER QUALITY. Would the project:					
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☐	☐	☒
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☒	☐	☐	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:					
i) result in a substantial erosion or siltation on- or off-site;	☐	☐	☐	☐	☒
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	☐	☐	☒
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☐	☐	☒
iv) impede or redirect flood flows?	☐	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant (LTS) or LTS With Mitigation	No Impact	Within the Scope of Analysis in the Plan Level EIR	Substantially Mitigated by Uniform Applicable Development Policies
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☒	☐	☐	☐

Existing Setting

Water Supply

The City of Santa Monica Water Resource Division is the water agency that provides water service to the City. The City's potable water supply consists of local groundwater and imported water from the Metropolitan Water District of Southern California (MWD). Additionally, the SMURRF produces non-potable, treated urban runoff for landscaping irrigation and other approved non-potable water uses. (See **Section XXI. Utilities and Service Systems** for additional information on water services.)

The City's local groundwater is extracted from the Santa Monica Groundwater Basin. The California Department of Water Resources (DWR) designated the subbasin as a medium-priority groundwater basin and subject to the Sustainable Groundwater Management Act (SGMA). In January 2024, DWR approved the Santa Monica Basin Groundwater Sustainability Agency's Groundwater Sustainability Plan (GSP). The GSP outlines a framework to achieve sustainable groundwater management, which includes project compliance with Sustainable Management Criteria (SMC). The SMC have been identified to avoid "undesirable results" such as significant groundwater level decline, water quality degradation, subsidence, seawater intrusion, and surface water depletions.

The City primarily relies on the groundwater supply for municipal purposes; however, natural and anthropogenic activities have contributed to contamination issues. The groundwater extracted from the Subbasin contains various levels of contaminants, such as total dissolved solids (TDS), nitrate, VOCs, and methyl tertiary-butyl ether (MTBE). In response, the City is pursuing and implementing several water supply projects to diversify its water supply portfolio, as outlined in the 2018 Sustainable Water Master Plan.

Approximately 25 percent of the City's drinking water is purchased from MWD. MWD imports water from two separate sources. One is Colorado River water that MWD delivers from Lake Havasu through a 242-mile-long aqueduct and originates as snowmelt from mountainous regions in Utah, Wyoming, and Colorado. The second is from the State Water Project whereby MWD delivers water through the 441-mile-long California Aqueduct and originates in the Sacramento-San Joaquin Delta. MWD water is filtered at MWD treatment plants and undergoes treatment before entering Santa Monica's water system (City of Santa Monica 2024a).

Water Quality

The Federal Clean Water Act establishes the framework for regulating discharges to waters of the U.S. to protect their beneficial uses. The Porter-Cologne Water Quality Act (Division 7 of the California Water Code) regulates water quality within California and establishes the authority of the State Water Resources Control Board (SWRCB) and the nine regional water boards. Storm water and urban (dry weather) runoff is considered the number one source of pollution to the Santa Monica Bay. Development within the City of Santa Monica is subject to NPDES MS4 Permit CAS004001 and the waste discharge requirements of Los Angeles Regional Water Quality Control Board (RWQCB) Order No. R4-2012-0175.

Discussion

a) Substantially Mitigated by Uniform Applicable Development Policies. The proposed Project would comply with the applicable requirements of the City's Runoff Conservation and Sustainable Management Ordinance (SMMC Section 7.10).

As previously described, construction activities associated with the proposed Project would consist of earthwork activities including minor excavation, grading, and other ground disturbing activities. During earthwork activities, exposed and stockpiled soils on the Project site could be subject to minor erosion and conveyed via storm water runoff to municipal storm drains. In accordance with SMMC Section 7.10.100, the proposed Project would comply with the established runoff requirements for construction activity. Specifically, the City would develop and implement a SWPPP that would: (1) identify potential sources of stormwater pollution at the construction site; (2) describe practices to reduce pollutants in stormwater discharges from the construction site; and (3) identify procedures the City would implement to comply with the terms and conditions of a construction general permit.

Further, implementation of the proposed Project would alter the existing pervious and impervious surface areas. SMMC Section 7.10.090 outlines the runoff reduction requirements for development. The City would develop and implement a Runoff Mitigation Plan that must demonstrate that the proposed Project would be able to store and use, infiltrate, or evapotranspire the calculated stormwater quality design volume, or the water volume generated by a 0.75-inch 24-hour storm event. The proposed Project would include low impact development (LID) elements to capture, store, and infiltrate surface water. Potential LID elements include, but are not limited to, the following: rainwater/stormwater harvesting system (e.g., rain barrels); bio-retention/bio-infiltration; green roofs; green strips; bio-swales; and pervious paving materials.

For the reasons stated above, the proposed Project would not involve construction or operational impacts that would violate a water quality or discharge requirement. The proposed Project would have a less than significant impact and would not make a cumulatively considerable contribution to a significant cumulative impact regarding ground or surface water quality. (Potential impacts related to PFAS and microplastics are discussed in **Section X. Hazards and Hazardous Materials** and will be evaluated further in the EIR.)

b) Less Than Significant Impact. As described in **Section XXI. Utilities and Service Systems**, the proposed Project is not anticipated to create substantial new demand on the City's water supply. The majority of the water demand associated with the proposed Project would result from the irrigation for the three grass sports fields and landscaping and, therefore, would rely on recycled

water from the SMURRF, rather than the groundwater supply. Additional recycled water would also be used to clean and cool the two synthetic turf combo fields. Further, the demand for potable water supplies, which is predominantly for restrooms and drinking fountains, is expected to be similar to existing demand at the Park. The proposed Project would also include landscaping and LID features, as outlined above. Therefore, the proposed Project would not substantially decrease groundwater supplies or interfere with groundwater recharge capabilities and would have a less than significant impact and would not make a cumulatively considerable contribution to cumulative impacts, regarding groundwater supplies.

c-i, ii, iii, iv) Substantially Mitigated by Uniform Applicable Development Policies. Implementation of the proposed Project would result in similar drainage patterns, rates, and volumes as existing conditions. The proposed Project would not require substantial grading or increase impervious surfaces that would result in notable erosion, flooding, or exceedance of infrastructure capacity. Stormwater runoff would continue to flow to existing City catch basins or would infiltrate through the pervious surfaces throughout the Project site. In addition, the construction activities associated with the proposed Project would comply with the previously described SMMC Section 7.10.100, Runoff Requirements for Construction Activity, and SMMC Section 7.10.090, Runoff Requirements for Development.

The municipal storm water conveyance infrastructure adequately accommodates the existing runoff from the Project site, and no downstream flooding is known to occur. Further, the City's Department of Public Works would have final review and approval of all designs/plans to ensure that adequate drainage would be provided to accommodate the storm water flows associated with the proposed Project. Therefore, the proposed Project would result in a less than significant impact and would not make a cumulatively considerable contribution to a significant cumulative impact, regarding drainage patterns or the rate of runoff.

d) No Impact. According to the City's Tsunami Response Plan, areas susceptible to tsunami inundation include areas from the ocean to approximately 0.25-miles inland. The Project site is not located within the inundation zone, as it is approximately 1.25-miles from the ocean. In addition, the Project site is not within the vicinity of enclosed bodies of water where seiches may occur. Therefore, inundation risk from a tsunami or seiche is considered very low and the proposed Project would have no impacts regarding tsunami or seiche hazards.

e) Less Than Significant Impact. The proposed Project must comply with Sustainable Management Criteria outlined in the Santa Monica Groundwater Subbasin GSP. As previously described, the proposed Project would not involve altering existing drainage patterns, obstructing groundwater supplies or recharge ability, or degrading the water quality. Therefore, the proposed Project would not conflict with or obstruct implementation of the GSP and would have a less than significant impact and would not make a cumulatively considerable contribution to a significant cumulative impact, regarding compliance with a water quality control plan or sustainable groundwater management plan.

XII. Land Use and Planning

	Potentially Significant Impact	Less Than Significant (LTS) or LTS With Mitigation	No Impact	Within the Scope of Analysis in the Plan Level EIR	Substantially Mitigated by Uniform Applicable Development Policies
LAND USE AND PLANNING. Would the project:					
a) Physically divide an established community?	☐	☒	☐	☐	☐
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☒	☐	☐	☐

Existing Setting

The City of Santa Monica is located on the western edge of Los Angeles County. The City is directly accessible via the I-10 and I-405, as well as SR-1 / Palisades Beach Road that links the City of Santa Monica to Malibu. The City of Santa Monica occupies approximately 8.25 square miles, and is mostly developed with residential, commercial, light industrial, and institutional uses.

As described in *Project Location, Surrounding Land Uses, and Land Use/Zoning Designations*, the Project site has a Parks and Open Space land use/zoning designation pursuant to the City's LUCE. The Parks and Open Space land use designation allows for parks and green open space and supporting recreational and community-related development/uses. The Project site also is subject to the Memorial Park Activity Center Low Overlay. The area subject to this Overlay includes Memorial Park and the Expo LRT Station at 17th Street. The Memorial Park Activity Center Low Overlay capitalizes on the attributes of these two key resources to create an active mixed-use neighborhood. Finally, the Project site is surrounded by a range of land uses including restaurant, retail, commercial and office, educational, storage, and mixed-use residential uses.

Discussion

a) Less Than Significant Impact. The proposed Project would combine the existing Park with the former Fisher Lumber site to create the 13.2-acre Park. The entirety of the Project site is designated as Park and Open Space under the LUCE, as the former Fisher Lumber Site was purchased by the City in 2004 with the intention of expanding the Park. In addition, the proposed Project would be subject to the SMMC Chapter 8.98 that requires the submission and approval of a Construction Management Plan to coordinate, communicate, and manage the temporary effects of construction activity on surrounding development and commuters in the community. The plan would identify emergency access provisions, traffic control measures, designated haul routes, and other measures to facilitate automobile, pedestrian, and bicyclist safety; thereby, minimizing the potential for creating physical obstructions to the surrounding neighborhood. Therefore, impacts would be less

than significant and the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact regarding the physical division of an established community.

b) Less Than Significant Impact. The Project site has a Parks and Open Space, as well as a Memorial Park Activity Center Low Overlay, land use/zoning designation pursuant to the City’s LUCE. These designations acknowledge the Park as an important, defining community feature. The Park provides important, public recreational amenities and serves as a focal point around which mixed-use retail and housing is to be located to create community gathering places within walking distance of most neighborhoods.

Given the Project site’s location and land use/zoning designations, the proposed Project would be subject to several regional, City-wide, and neighborhood/site-specific land use plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect. The following provides an analysis of the Project with these plans, policies, and regulations.

Southern California Association of Governments (SCAG) Connect SoCal 2024 (Adopted April 4, 2024)

The proposed Project would be consistent with SCAG’s *Connect SoCal 2024*’s vision for Southern California in the year 2050, which is: “A healthy, prosperous, accessible and connected region for a more resilient and equitable future” (85). Specific features of the Project that are consistent with this vision include the following:

- ▶ The Project site is centrally located in Santa Monica and accessible via the City’s Big Blue Bus system and Expo LRT. Big Blue Bus Routes 5, 41, and 44, and Metro Line E provide service in the immediate vicinity of the Project site.
- ▶ For those traveling by bicycle or other micromobility devices, the Park is accessible via the Class II bicycle lane along 14th Street that spans the east-west extent of the City. The other streets adjacent to the Park have Class III sharrows.
- ▶ The proposed Project includes the development of an approximately 16-foot-wide Class I shared use path along Colorado Avenue to accommodate pedestrians and bicyclists, and seven designated pedestrian entrances.

These features of the proposed Project promote alternative transportation modes rather than reliance on single-rider automobile trips to access the Project site, which is a primary objective of *Connect SoCal 2024*. See Table 8, *Project Consistency with the Goals and Policies of Connect SoCal 2024 and the LUCE*, below, for the analysis of consistency with the specific, applicable goals and policies of *Connect SoCal 2024* that were adopted for the purpose of avoiding or mitigating an environmental effect. As shown in Table 8, the proposed Project is consistent with all applicable goals and policies of *Connect SoCal 2024*.

City of Santa Monica LUCE (Adopted July 6, 2010; Amended May 2023)

The Project site has a Parks and Open Space land use/zoning designation pursuant to the City’s LUCE. The LUCE provides the following vision statement regarding the Parks and Open Space designation: “Areas designated as Parks and Open Space preserve, enhance, and, where possible, expand Santa Monica’s existing parks and open space, providing residents with easy access to a relaxing, visually appealing amenity that provides opportunities for healthy recreation” (2.1-58).

The Project site also is subject to the Memorial Park Activity Center Low Overlay. The area subject to this Overlay includes Memorial Park and the Expo LRT Station at 17th Street. The Memorial Park Activity Center Low Overlay capitalizes on the attributes of these two key resources to create an active mixed-use neighborhood. The Activity Center Low Overlay provides the opportunity for a joint-development program incorporating City, Metro, SMMUSD, and private land to construct new school district offices and educational facilities, other offices, and a range of residential units, and local-serving retail and services. Most significantly, there is an opportunity to extend the park open space across the freeway between 14th Street and 17th Street by decking over the freeway (LUCE, 2.5-5).

The proposed Project would actualize a key development objective for the Activity Center Low Overlay. The LUCE (2.5-5) states:

With the City's ownership of the Fisher Lumber property and Metro's acquisition of the property at the corner of Colorado Avenue and 17th Street, Colorado Avenue has the potential to open onto Memorial Park, allowing the park to be viewed and the open space to be enjoyed from the surrounding streets. The activity center overlay will be complemented by its physical proximity to the park's recreational activities, new transit facilities and the visual amenity of the park's expansive open space.

The proposed Project would enhance the Park's recreational amenities and activities, as well as provide important multimodal infrastructure that complements Metro's facilities that are located in proximity to the Park. Table 8, *Project Consistency with the Goals and Policies of SCAG's Connect SoCal 2024 and the LUCE*, below assesses the consistency of the proposed Project with the applicable goals and policies of the LUCE that were adopted for the purpose of avoiding or mitigating an environmental effect (e.g., effects regarding climate change, sustainability, air quality, aesthetics, and vehicle miles traveled [VMTs]). The policies include both City-wide requirements and specific requirements that apply to development within the Activity Center Low Overlay and/or parks, open space, and recreation. As shown in Table 8, the Project is consistent with all applicable goals and policies of *Connect SoCal 2024* and the *LUCE*.

Table 8. Project Consistency with the Goals and Policies of *Connect SoCal 2024* and the LUCE

Policy	Relationship to Project
SCAG SoCal Connect 2024	
Mobility Goal: Build and maintain an integrated multimodal transportation network - Support investments that are well-maintained and operated, coordinated, resilient and result in improved safety, improved air quality and minimized greenhouse gas emissions - Ensure that reliable, accessible, affordable and	<u>Consistent.</u> As previously described, the Project site is centrally located in the City and would provide multimodal options for accessing the site. As described in <i>Existing Conditions</i> and <i>Project Description</i> , the Park facilitates several programs and athletic opportunities for people of all ages, interests, and backgrounds. The purpose of the proposed Project is to enhance and expand on these opportunities by (in part) enhancing multimodal transportation options for accessing the Park. The Park is located within proximity to existing Big Blue Bus lines/stops and across Colorado Boulevard from the 17 th Street/SMC Station. In addition, existing cycling and micromobility features exist within

Policy	Relationship to Project
appealing travel options are readily available, while striving to enhance equity in the offerings in high-need communities Support planning for people of all ages, abilities and backgrounds	proximity to the Project site and would be enhanced with a new Class I pedestrian and cycling path that would be installed along Colorado Avenue as part of the proposed Project. The proposed Project would include the construction of a new 32,000 sf-covered public parking lot that would provide up to 128 parking spaces, including EV parking spaces. The proposed Project would result in a net increase of 18 new parking spaces, after accounting for the construction of the parking lot and the reduction of metered parking along 16th Street and Colorado Avenue resulting from the proposed Project. The combination of these features promote an integrated multimodal network that is consistent with the air quality, GHG emission reduction, and social equity Mobility Goal and subgoals of Connect SoCal 2024.
Communities Goal: Develop, connect and sustain livable and thriving communities. Create human-centered communities in urban, suburban and rural settings to increase mobility options and reduce travel distances Clean Transportation 55. Promote equitable use of and access to clean transportation technologies so that all may benefit from them	<u>Consistent.</u> As previously described, the Project site is centrally located in Santa Monica in proximity to existing Big Blue Bus system and Expo LRT stops and travel routes, cycling and micromobility paths, and pedestrian access to the Park. The proposed Project would integrate Park access points with these multimodal forms of transportation, while also expanding the number and types of (e.g., EV) parking spaces located on-site. The proposed Project also includes a new pedestrian path throughout the site for recreation and access which further encourages pedestrian access. These multimodal transportation features along with the enhanced recreational opportunities that the proposed Project would provide further the goal of creating a livable and thriving community within the City, while also facilitating clean transportation options to access the Park.
Environment Goal: Create a healthy region for the people of today and tomorrow Develop communities that are resilient and can mitigate, adapt to and respond to chronic and acute stresses and disruptions, such as climate change	<u>Consistent.</u> As described in Section IX. Geology and Soils and Section XXII. Wildfire, the Project site is not located within an area that is subject to severe climate change-related hazards (e.g., sea level rise inundation, wildfire, and/or post-wildfire hazards such as debris flows or landslides). All facilities must be designed to withstand seismic hazards pursuant to the SMMC and Building Code, as well as satisfy fire and other emergency response-related requirements (e.g., ensure that adequate water supply and pressure is available in the event of a fire and adequate emergency

Policy	Relationship to Project
- Integrate the region's development pattern and transportation network to improve air quality, reduce greenhouse gas emissions and enable more sustainable use of energy and water - Conserve the region's resources	ingress/egress is provided). As previously described, the Project site is located within proximity to, and would provide new, facilities for multimodal forms of transportation, thereby reducing reliance on single-passenger automobile trips, consistent with GHG reduction goals. Finally, the Project site is centrally located in Santa Monica, in a highly urbanized location, the development of which would not result in significant impacts to biological, scenic, open space, or other regional resources.
Complete Streets Policies 03. Pursue the development of Complete Streets that comprise a safe, multimodal network with flexible use of public rights-of-way for people of all ages and abilities using a variety of modes (e.g., people walking, biking, rolling, driving, taking transit) 04. Ensure the implementation of Complete Streets that are sensitive to urban, suburban or rural contexts and improve transportation safety for all, but especially for vulnerable road users (e.g., people, especially older adults and children, walking and biking) 05. Facilitate the implementation of Complete Streets and curb space management strategies that accommodate and optimize new technologies, micromobility devices and first/last mile connections to transit and last-mile delivery	<u>Consistent.</u> As previously described, the proposed Project involves the construction of new pedestrian, cycling, and micromobility forms of transportation in and around the Park that will further the goal of transforming the surrounding roadways into complete streets. In addition, the proposed Project would increase the number of parking spaces on-site and provide new EV parking spaces. The combination of these features will further the goal of creating a multimodal network consisting of transportation options for people of all ages and abilities which are suitable for the urban environment of the City.
Transit and Multimodal Integration 07. Encourage and support the implementation of projects, both physical and digital, that facilitate multimodal connectivity, prioritize transit and shared mobility, and result	<u>Consistent.</u> As previously described, the proposed Project involves the construction of new pedestrian, cycling, and micromobility features, as well as creating additional on-site parking and new access points integrated with surrounding transportation infrastructure. All new development must comply with the SMFD's requirements for ingress and egress, emergency response, and emergency evacuation (SMMC Chapter 8.40, Fire Code, and, by reference,

Policy	Relationship to Project
in improved mobility, accessibility and safety 11. Create a resilient transportation system by preparing for emergencies and the impacts of climate change Sustainable Development 48. Promote sustainable development and best practices that enhance resource conservation, reduce resource consumption and promote resilience	California Fire Code). Vehicular access points to the Park will comply with sight-distance, turning radius, and other requirements for vehicular access and safety. Finally, as described in Section IX. Geology and Soils, Section XVII. Public Services, and Section XXII. Wildfire, the Project site is not located within an area that is subject to severe climate change-related hazards (e.g., sea level rise inundation, wildfire, and/or post-wildfire hazards such as debris flows or landslides) and would not impede emergency evacuation routes or compromise emergency response times. However, as described in Section VII. Energy, the proposed Project would comply with State and local requirements adopted for the purpose of reducing energy consumption would ensure that the proposed Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources.
Transportation Demand Management 14. Encourage the development of transportation projects that provide convenient, cost-effective and safe alternatives to single-occupancy vehicle travel (e.g., trips made by foot, on bikes, via transit, etc.)	<u>Consistent</u>. As described above, the proposed Project includes new pedestrian, cycling, and micromobility features that would complement existing multimodal infrastructure that surrounds the Project site, thereby providing viable options to single-occupancy vehicle travel for accessing the Park.
Air Quality 51. Reduce hazardous air pollutants and greenhouse gas emissions and improve air quality throughout the region through planning and implementation efforts	As described in Section III. Air Quality, the combination of employee vehicle trips, transport of construction equipment and materials, and use of construction equipment and materials have the potential to generate emissions that exceed the daily construction emissions thresholds that apply to the Project. This is considered a potentially significant impact warranting further evaluation in an EIR, which will include a robust emissions estimate using the CalEEMod.
Climate Resilience 67. Promote sustainable water use planning, practices and storage that improve regional water security and resilience in a drier environment	<u>Consistent</u>. As described in Section XI. Hydrology and Water Quality, SMMC Section 7.10.090 outlines the runoff reduction requirements for development. The City would develop and implement a Runoff Mitigation Plan that must demonstrate that the proposed Project would be able to store and use, infiltrate, or

Policy	Relationship to Project
	evapotranspire the calculated stormwater quality design volume, or the water volume generated by a 0.75-inch 24-hour storm event. The proposed Project would include LID elements to capture, store, and infiltrate surface water. Potential LID elements include, but are not limited to, the following: rainwater/stormwater harvesting system (e.g., rain barrels); bio-retention/bio-infiltration; green roofs; green strips; bio-swales; and pervious paving materials. Further, new landscaping would consist of drought tolerant species and water conserving plumbing fixtures would be installed in new facilities thereby reducing water consumption and furthering the City's goal of reducing its reliance on imported water for the City's water supply.
City of Santa Monica LUCE	
City-wide Land Use Policies	
LU1.3 Quality of Life. Preserve neighborhood quality of life and protect neighborhoods against potential impacts related to development, traffic, noise, air quality and encroachment of commercial activities and establish standards that transition down the building envelope of commercial buildings adjacent to residential properties.	<u>Consistent.</u> As stated elsewhere in this IS, the City has designed the redevelopment of the Park to be integrated with key features of the surrounding neighborhood (e.g., multimodal transportation features such as bikeways and pedestrian facilities), to increase on-site parking opportunities, and establish enhanced recreational opportunities in proximity to residential neighborhoods. In addition, as described in Section XV. Noise, and Section XIX. Transportation and Traffic, the proposed Project would comply with the City's noise ordinances resulting in insignificant noise impacts and would not create a significant impact regarding VMTs or unsafe traveling conditions regardless of travel mode. However, as described in Section III. Air Quality, the proposed Project has the potential to generate air emissions that could adversely affect sensitive receptors located within proximity to the Project site. This is considered a potentially significant impact warranting further evaluation in an EIR.
LU1.5 Design Compatibility. Require that new infill development be compatible with the existing scale, mass and character of the residential neighborhood. New buildings should transition in size, height and scale	<u>Consistent.</u> The proposed Project would involve the redevelopment, expansion, and enhancement of public recreational facilities and amenities on the Park that would be compatible with the scale of existing development on and surrounding the Project site. Entrances to the Park and new multimodal

Policy	Relationship to Project
toward adjacent residential structures.	transportation amenities (e.g., bicycle and pedestrian paths) would be aligned with existing, surrounding facilities and infrastructure. The new parking structure would be stepped back from surrounding roadways and would not be a defining feature of street frontages around the Park. All new buildings and structures would comply with the maximum height regulations of the Parks and Open Space land use/zoning designation. Finally, the proposed Project would include new landscaping that would enhance the existing landscaping located on-site.
LU1.6 Complete Green Streets and Open Spaces. Encourage neighborhood streets to function as neighborhood gathering places that promote sociability and human interaction, and feature pedestrian- and bicycle-friendly design, within a rich canopy of street trees and parkway landscaping.	<u>Consistent.</u> As previously described, the proposed Project involves new, as well enhancements to existing, pedestrian, cycling, and micromobility facilities within and adjacent to the Park, which would enhance multimodal circulation and travel options to and around the Project site. In addition, new landscaping would be installed along the street frontages consistent with the requirements of this Policy.
LU2.5 Vehicle Trip Reduction. Achieve vehicle trip reduction through comprehensive strategies that designate land uses, establish development and street design standards, implement sidewalk, bicycle and roadway improvements, expand transit service, manage parking, and strengthen Transportation Demand Management programs that support accessibility by transit, bicycle and foot, and discourage vehicle trips at a district-wide level. Monitor progress using tools that integrate land use and transportation factors. Increase bicycle and pedestrian connectivity in transit districts and adjust bus and shuttle services to ensure success of the transit system.	<u>Consistent.</u> As previously described, the proposed Project includes enhancements to existing, and entirely new, pedestrian, cycling, and micromobility infrastructure, as well as design features, that capitalize on existing multimodal transportation options within the vicinity of the Project site (e.g., Big Blue Bus system and Expo LRT stops and travel routes).
LU2.6 Active Spaces. Focus new development in defined districts to create active spaces that can support	<u>Consistent.</u> The proposed Project involves the redevelopment and expansion of the Park that serves as an important, defining feature of the area that is

Policy	Relationship to Project
diverse local serving retail and services, walkability, arts and culture. Require, whenever possible, new development to provide convenient and direct pedestrian and bicycle connections.	subject to the Memorial Park Activity Center Low Overlay. As stated in the Project Description, the Project includes enhancements to existing, and entirely new, pedestrian infrastructure that will be integrated with surrounding pedestrian and multimodal transportation features and infrastructure.
LU3.3 Focus on Local-Serving Uses. Emphasize uses which address local-serving needs and daily resources necessary to reduce vehicle trips and vehicle miles traveled.	<u>Consistent.</u> The proposed Project would involve the redevelopment and expansion of the Park that provides important, local recreational amenities to the community. The proposed Project would include a number of multimodal features (e.g., enhancements and connections to pedestrian, cycling, and micromobility infrastructure) to encourage alternatives to VMT-generating single-passenger automobile trips.
LU4.1 Active Centers. Create active neighborhood districts that cluster services, goods, and cultural and recreational uses within walking distance of residences to create a focus for community activity and an active environment that can sustain local uses.	<u>Consistent.</u> The Project site is located within a major transit stop zone (LUCE, 4.0-59) and would provide community recreational facilities that would be accessible via pedestrian walkways and other infrastructure located on, and immediately adjacent to, the Project site, which will be enhanced as part of the proposed Project.
LU4.4 Pedestrian-Oriented Design. Engage pedestrians with ground floor uses, building design, site planning, massing and signage that promote vibrant street life and emphasize transit and bicycle access.	<u>Consistent.</u> The proposed Project includes enhancements to existing, and entirely new, pedestrian, cycling, and micromobility infrastructure that will be integrated with surrounding pedestrian and multimodal transportation features and infrastructure. Furthermore, the Project site is located across Colorado Boulevard from the 17 th Street/SMC Station and within proximity to Big Blue Bus lines/stops, which provide additional options to single-passenger automobile trips for accessing the Park.
LU4.7 Pedestrian, Bicycle and Transit Access. Emphasize pedestrian and bicycle access throughout the City, with a special focus on neighborhood gathering areas. Provide direct and convenient bicycle and pedestrian connections between destinations.	
LU8.3 Pedestrian, Bicycle and Transit Connections. Ensure pedestrian, bicycle and transit mobility by creating facilities for comfortable walking throughout the City, a complete and safe bicycle network, and convenient	

Policy	Relationship to Project
and frequent transit service that will make transit an attractive option for all types of trips	
LU15.5 Pedestrian and Bicycle Connectivity. Encourage the design of sites and buildings to facilitate easy pedestrian- and bicycle-oriented connections and to minimize the separation created by parking lots and driveways.	<u>Consistent.</u> The proposed Project would include several pedestrian and cycling features that would align with existing infrastructure surrounding the Project site and enhance opportunities to use these modes of transportation. Parking would be provided within the new parking structure, setback from 14 th Street, and would minimize separation of existing and proposed pedestrian and bicycle paths.
LU16.1 Design Buildings with Consideration of Solar Patterns. In designing new buildings, consider the pattern of the sun and the potential impact of building mass on habitable outdoor spaces and adjacent structures in order to minimize shadows on public spaces at times of the day and year when warmth is desired, and provide shade at times when cooling is appropriate, and minimize solar disruption on adjacent properties.	<u>Consistent.</u> Solar exposure was considered during the development of the conceptual master plan, particularly as it relates to the proposed sports fields. As described in Section I. Aesthetics/Shadows the redevelopment of the Community Recreation Center would replace the existing 16- to 33-foot-tall building with a two-story building with an average maximum height of 28 feet, as measured in accordance with SMMC Section 9.040.050. The redeveloped Community Recreation Center would be located within the general footprint and exhibit a similar building height as the surrounding area, which has buildings up to 35 feet tall. The proposed Project would also involve the construction of several shade sail features to provide sun protection for visitors and baseball spectators. All free-standing shade structures would have a maximum height of 28 feet, complying with the height limits established for Parks and Open Space zones.
LU17.2 Active Streets for Living. Utilize streets as the largest and most universally accessible public spaces in the community by improving them with landscaping (particularly shade trees) pedestrian facilities and other enhancements that promote active recreation and creates a system of green connections throughout the City.	<u>Consistent.</u> The proposed Project includes streetscape improvements on all four sides of the Park. The landscape design includes mostly native trees, ornamental evergreen and deciduous trees, shade trees, and flowering trees. The proposed Project includes seven designated pedestrian entrances, with one or two entries on each side of the Park. In addition to the pedestrian entry points, the proposed Project includes a 0.5-mile designated community walking loop. The path would be located around the perimeter of the Park along 14 th Street, Colorado Avenue, and 16 th Street, and traverse the Park's interior, connecting to the centrally located Community Hub. The loop would include a series of interspersed or grouped exercise

Policy	Relationship to Project
	stations. The proposed Project would include an approximately 16-foot-wide Class I shared use path along Colorado Avenue to accommodate pedestrians and bicyclists. As previously described, there also are existing Class II bike lanes along 14 th Street in both directions. Bicycle racks also would be provided throughout the park.
Colorado Avenue Policies	
B10.13 Enhance the streetscape to create an inviting pedestrian environment.	<u>Consistent.</u> The proposed Project includes streetscape improvements along Colorado Avenue, including a new Class I shared use path, landscaping, and new pedestrian entrances that would connect with a new walking loop at the Park.
Sustainability and Climate Change	
S2.1 Implement the VMT reduction policies of the Land Use and Circulation Element of the General Plan including, but not limited to: focusing new growth in mixed-use, transit oriented districts; focusing new growth along existing corridors and nodes; supporting the creation of complete, walkable neighborhoods with goods and services within walking distance of most homes; and, promoting and supporting a wide range of pedestrian, bicycle and transit improvements in the City.	<u>Consistent.</u> The proposed Project would include enhancements to existing, and entirely new, pedestrian, cycling, and micromobility infrastructure that would be integrated with surrounding pedestrian and multimodal transportation features and infrastructure. Furthermore, the Project site is located across Colorado Boulevard from the 17 th Street/SMC Station and within proximity to Big Blue Bus lines/stops, which provide additional alternatives to single-passenger automobile trips.
S5.2 Require all new municipal construction to achieve LEED Gold certification and all existing municipal facilities to achieve LEED certification wherever feasible.	<u>Consistent.</u> The proposed Project would comply with the most recent California Green Building Standards (CalGreen), as amended by Chapter 8.106 (Green Building Standards Code) of the SMMC including the updated Green Building Ordinance. Sustainable building strategies that would be incorporated into the proposed Project to achieve this goal include energy-efficient building systems and water-smart landscaping/irrigation. In addition, all new plumbing fixtures would be low-flow in accordance with Title 24 and SMMC requirements. Lastly, during construction, the proposed Project would divert at least 70 percent of demolition and construction debris from being

Policy	Relationship to Project
	disposed in landfills in accordance with SMMC regulations.
S6.1 Ensure sufficient water supplies for new development.	Consistent. As described in Section XI. Hydrology and Water Quality and Section XXI. Utilities and Service Systems , sufficient water supplies exist to support the proposed Project.
S6.3 Implement landscape water conservation requirements for new construction projects.	Consistent. The proposed Project would involve the installation of drought-tolerant landscaping and artificial turf for the sports fields.
Open Space, Parks, and Recreation	
CE1.2 Consider the use of City-owned lands and acquired additional properties to create new parkland throughout the City, exploring possible code modifications if necessary. Specific opportunities for additional parks, open spaces and green streets include: ... Expanding Memorial Park, promoting a central park in coordination with transit-oriented development.	Consistent. The purpose of the proposed Project is to enhance and expand the existing recreational facilities at Memorial Park. The proposed Project involves streetscape improvements (e.g., landscaping) and new pedestrian, cycling, and micromobility infrastructure that would align with existing infrastructure located off-site. Further, the Project site is located within proximity to Big Blue Bus lines/stops, and across Colorado Boulevard from the 17 th Street/SMC Station.
CE1.9 Continue to maintain a diverse range of recreational facilities, offering residents of all ages affordable and safe access to high-quality recreational opportunities.	Consistent. The proposed Project involves the development of new infrastructure that would facilitate a diverse program of recreational activities/opportunities for all age groups (from youth up to and including seniors). Key features include: • Two synthetic turf combo fields (two playing fields per combo field); • Three natural grass youth fields (one fast-pitch softball and two baseball fields); • Four rooftop tennis/pickleball courts; • A new Community Hub building and the replacement of the children's playground with a new universally accessible playground; • Renovation and expansion of the skate park;

Policy	Relationship to Project
	• Replacement of the existing community recreation center with a new community recreation center; and • New pedestrian loop and cycling amenities.
CE2.1 Utilize streets as public spaces by improving them with landscaping, particularly shade trees, pedestrian facilities and other enhancements to create a system of green connections throughout the City.	<u>Consistent.</u> The proposed Project includes streetscape improvements on all four sides of the Park. The landscape design includes mostly native trees, ornamental evergreen and deciduous trees, shade trees, and flowering trees. The proposed Project includes seven designated pedestrian entrances, with one or two entries on each side of the Park. The proposed Project also would include an approximately 16-foot-wide Class I shared use path along Colorado Avenue to accommodate pedestrians and bicyclists.
CE2.2 Strive to make all streets pedestrian-friendly to promote increased walkability	
CE2.6 Increase the number and diversity of trees in the community forest particularly in areas that have low tree canopy coverage.	
Circulation Element	
T10.1 Enhance and beautify existing trails, tunnels, bridges and paths for bicycling.	<u>Consistent.</u> Memorial Park is accessible via the Class II bicycle lane along 14 th Street that spans the east-west extent of the City. The other streets adjacent to the park have Class III sharrows. The proposed Project would include an approximately 16-foot-wide Class I shared use path along Colorado Avenue to accommodate cyclists and pedestrians. In addition, as stated in the Project description, the proposed Project would include streetscape improvements on all four sides of the Park which include new landscaping.

As summarized above the proposed Project would be consistent with land use plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, impacts would be less than significant and the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact, regarding consistency with environmentally-related land use plans, policies, or regulations.

XIII. Mineral Resources

	Potentially Significant Impact	Less Than Significant (LTS) or LTS With Mitigation	No Impact	Within the Scope of Analysis in the Plan Level EIR	Substantially Mitigated by Uniform Applicable Development Policies
MINERAL RESOURCES. Would the project:					
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☒	☐	☐
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☒	☐	☐

Discussion

a-b) No Impact. The Project site is located within an entirely urbanized area and there are no known mineral resources on or within the vicinity of the site. In addition, the proposed Project would not include any action that would result in the loss of access to a mineral recovery site. Therefore, the proposed Project would not have an impact regarding mineral resources.

XIV. Neighborhood Effects

	Potentially Significant Impact	Less Than Significant (LTS) or LTS With Mitigation	No Impact	Within the Scope of Analysis in the Plan Level EIR	Substantially Mitigated by Uniform Applicable Development Policies
NEIGHBORHOOD EFFECTS. Would the project:					
a) Have considerable effects on the project neighborhood?	☐	☒	☐	☐	☐

Existing Setting

“Neighborhood effects” refer to the impacts of the proposed Project, or processes related to its implementation, that might affect the quality of life of the existing residents of adjacent neighborhoods. Quality of life represents a composite impression and is usually expressed in terms of the overall environment, including the consideration of aesthetic character, ambient noise levels, and transportation/circulation.

Discussion

a) Less Than Significant Impact. As described in the following sections, the proposed Project may result in adverse effects on the surrounding neighborhood, primarily from construction-related activities. However, the completion of the proposed Project would likely result in neighborhood benefits or less than significant impacts.

As described in **Section I. Aesthetics/Shadows**, construction activities may temporarily impair the visual character of the neighborhood. Unsightly characteristics may include the presence of construction fencing, equipment, materials, and demolished landscapes and facilities. Such construction activities would be substantially noticeable for recreational users, as the Park is anticipated to be partially operational during construction, as well as passing pedestrians and passengers in vehicles.

However, construction activities would be temporary lasting for a maximum of 36 months and, as previously described, would be subject to a Construction Management Plan to coordinate, communicate, and manage the temporary effects of construction activity on surrounding residents, businesses, and commuters in the community (SMMC Chapter 8.98). The completion and operation of the proposed Project would likely benefit the overall neighborhood character by providing modernized public recreational facilities, new and redeveloped community gathering spaces, new landscaping, and refreshed concrete paving,

As described in **Section XV. Noise**, construction activities may result in increased ambient noise levels and groundborne vibrations, thereby temporarily degrading the neighborhood character. Project construction has the potential to generate noise levels that may exceed the established exterior noise limit, which would subject construction activities to Section 4.12.110(d), limiting construction hours to Monday through Friday, 10:00 AM to 3:00 PM. In addition, construction would

utilize noise reduction measures to minimize noise impacts on nearby residences. Alternatively, the City may obtain a noise permit that authorizes construction activity outside of the allowable hours. The City would be required to develop and implement a construction noise noticing plan for property occupants within 500 feet of the Project site.

Further, the proposed Project would continue with similar uses, operational hours, and programs to what currently occurs at the Park. While public parks are exempt from most noise restrictions in the City's Noise Ordinance (except for noise impacts from construction and amplifying noise equipment), the proposed Project would likely generate insignificant noise increases and, therefore, not compromise the neighborhood's character.

As described in **Section XIX. Transportation and Traffic**, construction and operation of the Park would not result in adverse impacts related to transportation or traffic. Construction activities associated with the proposed Project would be subject to the City's Construction Management Plan Ordinance, which requires the City to prepare a Construction Management Plan that addresses construction traffic and routing, emergency access provision, and other measures to facilitate vehicle, bicycle, and pedestrian safety.

Further, the proposed Project would include modified vehicular access and circulation, a new Class I shared-use path, and the narrowing of 16th Street. These changes to circulation would be subject to several City standards and regulations, including the California Fire Code, as amended by the SMMC; Caltrans Highway Design Manual Standards; and the City's Standard Bikeway Details. Compliance with such requirements would reduce the potential for transportation hazards, while also providing new multi-modal benefits to the community.

XV. Noise

	Potentially Significant Impact	Less Than Significant (LTS) or LTS With Mitigation	No Impact	Within the Scope of Analysis in the Plan Level EIR	Substantially Mitigated by Uniform Applicable Development Policies
NOISE. Would the project result in:					
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☐	☒
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☐	☒
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐	☐

Existing Setting

The Project site is located within the geographic center of Santa Monica, an urbanized area characterized by various wholesale and retail commercial stores, professional offices, and educational facilities. The ambient noise environment is largely attributed to noise from vehicle traffic and public transit (i.e., Big Blue Bus system and the Expo LRT). According to the City's Community Noise Equivalent Levels, the Project site exhibits daily average noise levels of approximately 60 A-weighted decibels (dBA) or greater. Sensitive receptors near the Project site include nearby residences, predominantly across Colorado Avenue and approximately 350 feet away from the site's northwest boundary.

The City's Noise Ordinance (SMMC Chapter 4.12, Noise) regulates excessive noise to protect the public health, safety, and overall quality of life. The Ordinance establishes maximum allowable noise levels based on the area's zoning designation, with stricter limits enforced during nighttime hours. In addition, the Ordinance regulates construction-related noise based on allowable construction hours, noise standard exceedance levels, and residential noticing procedures, as described further in the impact analysis below.

Discussion

a) Substantially Mitigated by Uniform Applicable Development Policies. The construction, demolition, and renovation activities associated with the proposed Project would require various heavy equipment and smaller power tools that would produce noise. As previously described in *Construction and Phasing*, construction would likely require the use of backhoes, forklifts, material-handling equipment, concrete trucks, hydraulic boom pumps, compressors, mixers, generators, portable welding machines, and miscellaneous small tools. Construction vehicle trips would include material/equipment deliveries as well as light duty trucks and passenger vehicle trips for construction worker commutes to the Project site. The construction techniques would likely involve excavation and the use of typical “drill and pour” cast-in-place concrete. No pile driving would be necessary for construction.

Noise-sensitive uses such as residents located as close as approximately 350 feet from the Project site have the potential to experience construction noise impacts. However, all construction activities must comply with the City’s Noise Ordinance that establishes allowable construction hours and noise exceedance levels.

As established by Section 4.12.110 of the City’s Noise Ordinance, construction activities would be restricted to the hours of 8:00 AM to 6:00 PM on weekdays, 9:00 AM to 5:00 PM on Saturdays, and no construction activities would be allowed on Sundays or public holidays.

The Noise Ordinance states that noise from construction activities shall not exceed 20 dBA over the exterior noise standards specified for the noise zone. The exterior noise standard for Noise Zone I (zone for the Project site) is set at 60 dBA during Monday through Friday 7:00 AM to 10:00 PM and Saturday and Sunday 8:00 AM to 10:00 PM. Therefore, the Ordinance allows for a maximum noise level of 80 dBA during the allowable hours for construction. If construction activities have the potential to generate noise that exceeds the maximum acceptable noise levels, the proposed Project would be subject to Section 4.12.110(d) of the City’s Noise Ordinance, which further restricts the construction activity hours to Monday through Friday, 10:00 AM to 3:00 PM. Pursuant to Section 4.12.110(e) of the City’s Noise Ordinance, the City may acquire a noise permit that authorizes construction activity outside of the allowable hours. Permit application requirements include a noticing plan for property occupants within 500 feet of the Project site and documentation regarding how the issuance of such permit will serve the public interest.

The proposed Project would be subject to Section 4.12.110(c) of the City’s Noise Ordinance that would require the City to prepare a list of construction equipment, activities (e.g., demolition, excavation, etc.), and noise reduction measures to minimize noise impacts on nearby residential uses.

Further, the City’s Noise Ordinance establishes regulations regarding the operation of the proposed Project. In accordance with Section 4.12.030(b)(5)(B) of the City’s Noise Ordinance, activities conducted on public property—including parks—are exempt from noise restrictions imposed on the property. Exceptions to the exemptions include noise impacts from construction (as previously described) and amplifying noise equipment. In addition, the proposed Project would result in insignificant population growth and increased park use; thus, increases in noise associated with the operation of the Park would be insignificant. Therefore, given that the proposed Project would not generate a substantial temporary or permanent increase in ambient noise levels that would exceed

the Ordinance, impacts would be less than significant and the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact, regarding noise.

b) Substantially Mitigated by Uniform Applicable Development Policies. Project construction activities would involve the use of various heavy equipment and smaller handheld tools that may generate groundborne vibrations. The City anticipates the use of backhoes, forklifts, material-handling equipment, concrete trucks, hydraulic boom pumps, compressors, mixers, generators, portable welding machines, and miscellaneous small tools. Amongst these equipment, material-handling equipment (e.g., bulldozers) likely would generate most construction-related vibrations. For instance, large bulldozers likely would generate 0.089 peak particle velocity (PPV) at 25 feet, 0.042 PPV at 50 feet, and 0.019 PPV at 100 feet.

The City's Noise Ordinance (Section 4.12.070) exempts vibration caused by construction activity. Despite this exemption, construction-related vibrations are unlikely to be perceptible to surrounding businesses and residences that are approximately 50 feet or farther away. Table 9, Guideline Vibration Annoyance Potential Criteria, from Caltrans' *Transportation and Construction Vibration Guidance Manual* (April 2020), provides the human response to vibration levels.

Table 9. Guideline Vibration Annoyance Potential Criteria

Human Response	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.1
Severe	2.0	0.4

Further, as previously described, construction activities would be subject to SMMC Section 4.12.110(d) that restricts the construction activity hours to Monday through Friday, 10:00 AM to 3:00 PM. Alternatively, the City may obtain a noise permit that authorizes construction activity outside of the allowable hours. The City would be required to develop and implement a construction noise noticing plan for property occupants within 500 feet of the Project site.

Therefore, the proposed Project would not create a significant impact and would not make a cumulatively considerable contribution to a significant cumulative impact, regarding excessive groundborne vibration or noise levels.

c) No Impact. The Project site is not located within two miles of an airport or located within an area covered by an airport land use plan. The proposed Project does not involve placing people in proximity to aircraft operations, including noise and vibration occurrences. Therefore, no impacts related to aircraft noise would occur.

XVI. Population and Housing

	Potentially Significant Impact	Less Than Significant (LTS) or LTS With Mitigation	No Impact	Within the Scope of Analysis in the Plan Level EIR	Substantially Mitigated by Uniform Applicable Development Policies
POPULATION AND HOUSING. Would the project:					
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new home and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☒	☐	☐	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐	☐

Existing Setting

The Project site is located within the geographic center of the City, an urbanized area characterized by various wholesale and retail commercial stores, professional offices, and educational facilities. According to the California Department of Finance, the City's population in January 2024 was approximately 92,912 (California Department of Finance 2024).

In October 2022, the City Council adopted the final draft of the 6th Cycle Housing Element and the California Department of Housing and Community Development (HCD) deemed the adopted Housing Element to be in full compliance with the State Housing Element Law. The Housing Element Update includes goals, policies, and implementation actions that support housing production, particularly affordable housing, and identify suitable sites for development. Specifically, the Housing Element Update addresses the SCAG's determination of the City's Regional Housing Needs Allocation (RHNA) (i.e., plan for the development of 8,985 dwelling units).

Discussion

a) Less Than Significant Impact. The proposed Project would not involve the development of new, or demolition of existing, housing, or the creation of employment opportunities that would increase the population of the City. Operation of the expanded and redeveloped Park would require an increase of 12 full time employees, from 48 to 60 employees. The change in employment is considered nominal, compared to the City and regional population projections (less than 0.01 percent increase in population), and would not substantially increase the demand for new housing. Further, employees would likely come from the existing workforce in or around the City and, consequently, would not create new demand for housing or increase the existing population. Therefore, the proposed Project would not involve the construction of new housing units or create

substantial employment opportunities that would indirectly increase population growth. The proposed Project would have a less than significant impact and would not make a cumulatively considerable contribution to a significant cumulative impact regarding population growth.

b) No Impact. As mentioned in discussion a), the proposed Project would not demolish housing units that would result in the displacement of people on or adjacent to the Project site. Therefore, the proposed Project would have no impact.

XVII. Public Services

	Potentially Significant Impact	Less Than Significant (LTS) or LTS With Mitigation	No Impact	Within the Scope of Analysis in the Plan Level EIR	Substantially Mitigated by Uniform Applicable Development Policies
PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:					
a) Fire protection?	☐	☒	☐	☐	☐
b) Police protection?	☐	☒	☐	☐	☐
c) Schools?	☐	☒	☐	☐	☐
d) Parks?	☐	☒	☐	☐	☐
e) Other public facilities?	☐	☒	☐	☐	☐

Existing Setting

Fire Protection

The SMFD provides fire protection services as well as emergency medical (paramedic) services within the City. The City has four permanent fire stations and one temporary station (i.e., Station No. 7) that provide the community with emergency response services. Station No. 3 is the first-response station as it is located nearest to the Project site, approximately 0.8-miles north at 1302 19th Street between Santa Monica Boulevard and Arizona Avenue. Fire Station No. 1 at 1337 7th Street is the second closest station to the Project site, approximately 0.9-miles away.

The *Santa Monica Fire Department Strategic Plan* (2023-2028) includes a summary of the SMFD's Standards of Coverage (SOC) Study regarding the adequacy of its current fire station deployment system. Findings related to response time included the following:

- ▶ Finding #8: Santa Monica's dispatch processing time of two minutes and 36 seconds to two minutes and 50 seconds is far slower than a fire service best practice of one minute and 30 seconds.
- ▶ Finding #10: At two minutes and 50 seconds, 90th percentile crew turnout performance is 50 seconds slower than a Citygate-recommended goal of two minutes or less.
- ▶ Finding #11: At five minutes and 19 seconds, 90th percentile first-unit travel time performance is thirty-three percent slower than the four minutes best practice goal for urban areas.

The SMFD has since taken strives to identify new goals and implementation plans to address response time deficiencies. Goal 2: Services, Programs, and Resources Appropriate to Carry Out Our Mission aims to elevate the SMFD by providing enhanced administrative, training, and fire prevention staffing capacity to meet the current and anticipated future City and Department needs

and workload demand. In addition, in collaboration with the Office of Emergency Management (OEM), the SMFD can identify service enhancement opportunities, including opportunities outlined in the 2023 Federal Engineering Regional Fire Dispatch Consolidation Study. Further, the SMFD Strategic Plan reaffirms the SMFD's commitment to the Fire Facilities Master Plan goals, including the renovation of Station No. 3 and the construction of a permanent Station No. 7 (City of Santa Monica 2023a).

Police Protection

The Santa Monica Police Department (SMPD) provides police protection services within the City. The SMPD is headquartered approximately one mile southwest of the Project site at Olympic Boulevard and 4th Street. The SMPD is staffed with approximately 230 sworn enforcement personnel and 250 non-sworn administrative and support staff. The SMPD divides the City into four beats and operates these beats on a 24-hour basis. The Project site is located within Beat No. 3, the police strategic division serving neighborhoods within the block defined by Pico Boulevard, Lincoln Boulevard, Wilshire Boulevard, and Centinela Avenue. This unit is comprised of one sergeant and eight officers, who provide safety to residents, visitors, and merchants by way of bicycle, foot, or vehicle. Although there are only eight officers assigned to Beat No. 3, there are 63 officers deployed across the City at all times. SMPD's maximum allowable response time to emergency calls is five minutes or less (SMPD 2015).

Schools

The SMMUSD provides public school education to the Project area. The SMMUSD operates 11 public (K–12) schools in Santa Monica, including six (K–5) elementary schools, two (6–8) middle schools, one elementary and middle school, and two high schools (including an alternative high school).

Parks

The City of Santa Monica Community and Cultural Services Department is responsible for overseeing park programming and general operation of City parks, open space, and recreational facilities. The City and SMMUSD are under a Master Facilities Agreement, which provides access to recreation and park facilities at the public schools. The Public Works Department's Public Landscape Division is responsible for providing park maintenance for the City's public parks, as well as sports fields, playgrounds, and water features. In addition, PLD provides landscaping, irrigation, and other maintenance services to the City's medians, open space, and urban forest. See **Section XVIII. Recreation** for additional information.

Libraries

The Santa Monica Public Library (SMPL) currently has five locations: the Main Library, Fairview Branch, Montana Avenue Branch, Ocean Park Branch, and Pico Branch. The SMPL maintains services related to research support, literacy, and local resource services. In addition, SMPL provides free programs and classes, such as writing workshops, computer classes, and health-related discussions.

Discussion

a) Less Than Significant Impact. The proposed Project would not result in a substantial demand increase for fire protection that would require the construction or expansion of a governmental facility.

As previously described, the SMFD Strategic Plan identified the necessary measures to address response time deficiencies, including increased staffing and inter-departmental collaboration with EOM. Other strategies to improve response times, as identified by the City's Community Risk Assessment (2020), include the relocation of an engine company to distribute units to provide timelier first responder service to all major neighborhood areas (City of Santa Monica 2020).

Although the SMFD currently faces response time deficiencies, the proposed Project is not anticipated to exacerbate these challenges. The proposed Project would not significantly increase population, employment, or activity levels to an extent that would further hinder response times or service-to-population ratios. Specifically, the proposed Project would result in 12 new employees and a negligible increase in recreational users, given the locally serving nature of the Park. In addition, the Project site is not located in an area of the City identified as having large volumes of Emergency Medical Services (EMS) incidents (i.e., Santa Monica Pier and oceanfront areas).

Further, the proposed Project would be compliant with SMMC Chapter 8 Building Regulations including, but not limited to, the Fire Code (Chapter 8.40) and Fire and Life Safety Prevention Requirements (Chapter 8.44). Requirements include provision of adequate water lines and water flows; the use of fire sprinklers, portable fire extinguishers, smoke detection systems with fire alarms, and egress lighting and exit signage; and public safety measures (e.g., adequate lighting and clear sight lines).

The proposed Project would not create additional demand for fire services or a need for additional facilities; therefore, the proposed Project would have a less than significant impact and would not make a cumulatively considerable contribution to a significant cumulative impact regarding fire services.

b) Less Than Significant Impact. The proposed Project would not result in a substantial increase in demand for law enforcement that would require the construction of a new or altered governmental facility. As previously described, the Project site is in an urban setting that has adequate facilities, staffing, and area coverage to accommodate the minimal increase in employment and activity levels. Such population increases would not result in substantially changed service-to-population ratios or response times that would necessitate the construction of new facilities. Therefore, the proposed Project would have a less than significant impact and would not make a cumulatively considerable contribution to a significant cumulative impact regarding police services.

c) Less Than Significant Impact. As described in **Section XVI. Population and Housing**, the proposed Project would not involve the construction of new housing or substantially increase employment opportunities that would directly or indirectly increase population levels. Specifically, operation of the Park would require 12 new full-time employees, increasing employment from 48 to 60 people. However, this increase in employment would be insignificant compared to the City and regional population projections. Therefore, the proposed Project would not induce a substantial increase in population that would generate an increased demand for the construction or expansion of SMMUSD facilities or programs. The impact would be less than significant and proposed Project

would not make a cumulatively considerable contribution to a significant cumulative impact involving SMMUSD school facilities or programs.

d) Less Than Significant Impact. The proposed Project would not introduce a substantial increase in population that would increase demand for park services. The proposed Project would include 12 new employees. As further explained in **Section XVIII. Recreation**, the proposed Project would enhance infrastructure and recreational services and would not result in the need for additional recreational amenities. Therefore, impacts to Park facilities would be less than significant and would not considerably contribute to a significant cumulative impact.

e) Less Than Significant Impact. The proposed Project does not involve the construction of new housing or substantially increase employment opportunities that would directly or indirectly generate new demand on library services. Specifically, operation of the Park would require 12 new full-time employees, increasing employment from 48 to 60 people. The employment increase would be insignificant, compared to the City and regional population projections. Therefore, the proposed Project would not create a substantial demand on the Santa Monica public Library system that would require the construction or expansion of library facilities. The impact would be considered less than significant and the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact regarding library services.

XVIII. Recreation

	Potentially Significant Impact	Less Than Significant (LTS) or LTS With Mitigation	No Impact	Within the Scope of Analysis in the Plan Level EIR	Substantially Mitigated by Uniform Applicable Development Policies
RECREATION.					
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☒	☐	☐	☐
b) Does the project include recreational facilities, or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☒	☐	☐	☐	☐

Existing Setting

The City's park system consists of 70 public beaches, recreational facilities, and community gathering spaces. The City's parks contain a variety of recreational facilities including multi-use athletic fields for soccer, baseball, and football, and courts for tennis, volleyball, and basketball. Other recreational opportunities in the City include swimming pools, a skate park, a lawn bowling facility, gymnasiums, off-leash dog areas, a course with exercise stations, and a variety of children's playgrounds, including water play areas. Additionally, benches, picnic tables, and barbeques are available at several City parks for informal recreational activities, and Santa Monica State Beach provides coastal entertainment and recreational opportunities for residents.

Memorial Park is important to the overall park system as it serves as the primary park for baseball/softball, as well as being the home to the City's only public gymnasium, skatepark, and pickleball courts. In addition, the Project site is the largest park within its vicinity. The table below summarizes other community parks that offer similar amenities.

Table 10. Major Community Parks and Amenities

Park Name	Amenities
Memorial Park	Baseball field, tennis court, volleyball court, exercise equipment, playground, basketball court, dog park, wi-fi, restrooms.
Airport Park	Playground, picnic tables, dog park, barbecue, wi-fi, walking loop, restrooms.
Beach Park 1	Restroom, public art, playground, picnic benches.
Clover Park	Playground, picnic tables, baseball field, barbeque, volleyball courts, tennis courts, soccer field, restrooms.
Colorado Center Park	Tennis courts, playground, exercise equipment, basketball court, volleyball court.
Douglas Park	Tennis court, playground, picnic tables, restrooms.
Gandara Park	Playground, basketball court, baseball field, soccer field, restrooms.
Historic Belmar Park	Soccer field, public art, walking loop
Ishihara Park	Playground, picnic table, exercise equipment, barbeque, wi-fi.
Joslyn Park	Dog park, basketball court, playground, picnic tables, benches
Los Amigos Park	Playground, handball court, basketball court, tennis court, soccer field, restrooms.
Marine Park	Basketball court, baseball field, barbeque, soccer field, playground, tennis court, picnic tables, free parking, restrooms.
Ocean View Park	Tennis courts, basketball courts.
Palisades Park	Walking loop, picnic tables, benches, public art, restroom.
Reed Park	Basketball court, tennis court, playground, picnic benches, wi-fi, restrooms
Tongva Park	Playground, walking path, splashpad, public art, picnic tables, benches, wi-fi, restrooms.
Virgina Avenue Park	Basketball Court, barbeque, walking path, splashpad, playground, picnic tables, wi-fi, restrooms.

Source: City of Santa Monica 2024d.

Discussion

a, b) Less Than Significant Impact. The proposed Project would include the expansion and redevelopment of the Park, which would include renovated baseball and softball fields, rooftop tennis/pickleball courts, a children’s playground, a skatepark, and two community-oriented buildings.

The expansion and renovation of these facilities would contribute to fulfilling the community’s existing demand for recreational amenities. The baseball/softball fields may increase park use by its increased field playability and constructed lights for night play. The Community Recreation Center would expand from 35,000-sf to 50,000-sf, increasing its capacity to support additional programs and visitors. The Cove Skatepark would also be expanded to serve a larger group, and the proposed

Project would result in the redevelopment and enhancement of playground amenities. In addition, the Project would include 12 new employees.

While the proposed Project may increase use at Park, it is not anticipated to result in a significant increase that would lead to the deterioration of the Park or other existing recreational facilities. Instead, the proposed Project would modernize the facilities to meet increasing community demand that otherwise would be fulfilled by existing recreational facilities on-site and located elsewhere in the City.

As discussed in **Section V. Construction Effects**, implementation of the proposed Project would occur in phases. Each phase would require certain Park facilities to be temporarily closed in order to accommodate construction, demolition, and staging activities. Unaffected Park facilities would remain open and operational during this time. The phasing schedule, therefore, allows for the Park to retain some utility for recreational users throughout the construction schedule.

For the reasons stated above, the proposed Project would have a less than significant impact regarding directly or indirectly contributing to the physical deterioration of recreational facilities, and the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact.

Potentially significant physical environmental impacts resulting from the redevelopment and expansion of the are discussed in **Section III. Air Quality**, **Section VIII. Greenhouse Gas Emissions**, **Section VI. Cultural Resources**, **Section X. Hazards and Hazardous Materials**, and **Section XX. Tribal Cultural Resources**.

XIX. Transportation and Traffic

	Potentially Significant Impact	Less Than Significant (LTS) or LTS With Mitigation	No Impact	Within the Scope of Analysis in the Plan Level EIR	Substantially Mitigated by Uniform Applicable Development Policies
TRANSPORTATION/TRAFFIC. Would the project:					
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☒	☐	☐	☐
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	☐	☒	☐	☐	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☐	☒
d) Result in inadequate emergency access?	☐	☐	☐	☐	☒

Existing Setting

Regional access to the Project site is provided via I-10, I-405, and SR-1/Palisades Beach Road. I-10 is located approximately 300 feet southeast of the Project site with the nearest on- and off-ramp approximately 0.4 miles northeast of the site. I-405 is located approximately 3 miles northeast of the Project site and provides north-south access throughout the western region of the Los Angeles Basin. SR-1 is located approximately 1 mile west of the Project site and provides access along the coast to the Pacific Palisades community and further north to the City of Malibu.

Four streets surround Memorial Park: Colorado Avenue to the north, 16th Street to the east, Olympic Boulevard to the south, and 14th Street to the west. Colorado Avenue is an east-west boulevard with one lane in each direction. There are 16 metered parallel parking spots provided along the south (eastbound) side of Colorado Avenue. 16th Street provides one-way northbound connectivity between Colorado Avenue and Olympic Boulevard. Vehicles are restricted to right turns (eastbound) only onto Colorado Avenue. Metered diagonal street parking is provided on the western side of 16th Street and parallel parking is provided on the eastern side. Together, there are 42 metered parking spaces on 16th Street. Olympic Boulevard is one of the City's major east-west boulevards, with two lanes in each direction and 22 metered parking spaces. An approximately 35-foot-long median, landscaped with grass coral trees, divides the east-bound lanes from the west-bound lanes. Lastly, 14th Street is a north-south street with one lane in each direction and a Class II (i.e., striped) bicycle lane exists in both directions between Colorado Avenue and Olympic Boulevard. There are 34 metered parking spaces on 14th street. In addition, the existing surface parking lot provides 80

parking spaces, including five ADA-accessible spaces, two EV charging stations, and three reserved spaces.

The City's Big Blue Bus and Expo LRT provide public transit to the Project site. Big Blue Bus operates four bus lines with stops adjacent to the park and/or at the nearby Expo LRT Station, including Routes 5, 41, and 44, and Metro Line E, which serve Downtown Santa Monica and Santa Monica College. The Big Blue Bus routes vary in headways; however, the forementioned routes range between 15 to 60 minutes (Big Blue Bus 2025). The Expo LRT runs every 8 to 10 minutes during most daytime hours during the weekdays and weekend days (LA Metro 2025). Further, bicycle lanes are located on 14th Street, a protected bikeway is located on 17th street, and the Expo Corridor bicycle path begins east of 17th street and runs parallel to the Expo LRT line. Colorado Avenue is designated as a bicycle route.

Discussion

a) Less Than Significant Impact. The City and SCAG have adopted programs, plans, ordinances, and policies that establish the planning framework to achieve a safe, accessible, and sustainable transportation system for all users. As described below, the proposed Project would generally complement and be consistent with the regional and City transportation visions. The primary governing documents include Connect SoCal 2024 and the City's LUCE. The following paragraphs summarize the Project's consistency with such plans, with a more comprehensive analysis provided in **Section XII. Land Use and Planning**.

Connect SoCal 2024 aims to reduce or limit new trip generation, traffic congestion associated with regional growth, and VMT, by focusing land use growth, density, and intensity within existing urbanized areas. Connect SoCal also strives to enhance the existing transportation system, maximize multi-modal transportation, and integrate land use into transportation planning. The Project would be consistent with the goals of Connect SoCal 2024, as the proposed Project would promote alternative transportation modes rather than reliance on single-rider automobile trips to access the site. Specifically, the Project site is centrally located within the City's Big Blue Bus and Expo LRT systems that have four transit stops within 0.5 miles of the site. In addition, the Project site is accessible via Class II bicycle lanes along 14th Street that span the north-south extent of the City; a protected bikeway on 17th Street; and the Expo Corridor Bicycle Path east of 17th Street. Further, the proposed Project is designed to integrate Park access points with these multimodal forms of transportation, while also expanding the number and types of parking spaces located on-site (e.g., standard, ADA, EV). The Project also includes a new pedestrian path throughout the site for recreation and access which further encourages pedestrian access.

The City's LUCE calls for the integration of land use and transportation to reduce GHGs by focusing new development near transit to create sustainable, active pedestrian-friendly development that decreases reliance on the automobile and increases alternative transportation modes. The proposed Project would complement and be consistent with these objectives, as the Project site is centrally located within an urbanized area, surrounded by residences, retail and non-retail commercial businesses, and professional offices. The proposed Project would be integrated within the community via proximity and enhanced pedestrian, bicycle, and vehicular infrastructure. In addition, the Project site's location capitalizes on existing transit routes with bus stops and the Expo LRT Station within 0.5-miles of the Project site.

For the reasons stated above, the proposed Project would have a less than significant impact regarding conflicts with programs, plans, or policies addressing the circulation system; and the

proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact.

b) Less Than Significant Impact. CEQA Guidelines Section 15064.3(a) establishes “vehicle miles traveled” as the most appropriate measure of vehicular transportation impacts, and states that other considerations may include effects on transit and non-motorized travel (e.g., bicycle and pedestrian travel). In addition, the lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household, or in any other measure.

The City has adopted screening criteria that are used to “screen” out projects from VMT analysis. The criteria consist of three tiers, as described below.

Tier 1: Does the project include the development of the following land uses, which are screened out from further analysis?

- 200 residential dwelling units or less
- 100% affordable housing
- 50,000 sf or less of commercial floor area by land use type
- New construction of educational facilities/institutions (such as increased classrooms, gym/recreational space, and other supportive areas) provided that there would be no student enrollment increase or if student enrollment is increased, 75% of the study body comes from within 2.0 miles of the school
- Expansions of civic/government use (e.g., fire and police stations) and utility facilities less than 50,000 sf or replacement of such uses/facilities (in the same or another location) to serve the community, or if larger than 50,000 sf, the project would not result in more than 50 net new additional full time equivalent employees
- Local serving parks and recreational facilities, as determined by City staff

If yes, no further analysis is required. If no, move to Tier 2.

Tier 2: Is the project located within 0.5-mile walking distance of a Metro E (Expo) LRT station or 0.25-mile walking distance of a Rapid BRT stop?

If no, conduct VMT analysis. If yes, move to Tier 3.

Tier 3: Would the project provide more parking than required by the SMMC (or if located in the Downtown, exceed parking maximums)?

If no, no further analysis is required. If yes, conduct VMT analysis.

Additionally, a land use project would be screened for VMT analysis and considered to result in a less than significant VMT impact if it would:

- Decrease total VMT in the project area as compared to existing conditions; or
- Redevelop existing VMT-generating land uses with new uses that result in a net decrease in VMT.

Fehr & Peers reviewed the proposed against the City's tiered VMT screening criteria (see Appendix I). The proposed expansion and renovation of an existing public park are land uses that are listed in Tier 1. As a result, the proposed Project is screened out from further VMT analysis. The impact would be considered less than significant and the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact regarding VMT.

c) Substantially Mitigated by Uniform Applicable Development Policies. The proposed Project would potentially introduce transportation-related hazards during construction and the operation of new vehicular and bicycle infrastructure.

Construction activities associated with the proposed Project would require the use of haul trucks, cement trucks, equipment delivery trucks, and construction worker vehicles. Increased construction traffic, particularly haul trucks and other heavy equipment, may disrupt traffic flows, obstruct visibility, and interfere with bicycle, pedestrian, and transit circulation. To avoid construction-related safety hazards, the City would be required to prepare a Construction Management Plan in accordance with City's Construction Management Ordinance (SMMC Chapter 8.98). The Construction Management Plan would address construction traffic routing and control; vehicle, bicycle, and pedestrian safety; street closures; emergency access provisions; staging areas; and construction parking. The Construction Management Plan would also establish procedures for coordination with local emergency services, training for flagman for emergency vehicles traveling through the work zone, and other measures as necessary to facilitate circulation safety. Thus, the Construction Management Plan would address the temporary traffic impacts that could occur during Project construction. As a result, the construction-related transportation hazards would be substantially mitigated by the uniform applicable development policy of the Construction Management Ordinance.

Further, the proposed Project would modify the vehicular access and circulation to accommodate a new one-way passenger loading zone (i.e., pick-up/drop off) and a new 32,000-sf covered public parking lot that would provide up to 128 parking spaces. In addition, the Park's footprint would be expanded into 16th Street, resulting in the removal of diagonal parking and a narrower road width. Project approval would be subject to City permits and compliance with the City's Fire Code and the adopted Santa Monica Standard Design Standards, which include standards for street improvements, driveway ramps, driveway line-of-sights, turning movements, etc.

In addition, the proposed Project would expand the existing bicycle network with an approximately 16-foot-wide Class I shared-use path along Colorado Avenue. The proposed bike path would be designed and constructed in accordance with the City's Standard Bikeway Details, and, in turn, with the American Disabilities Act and Caltrans Highway Design Manual Standards. Any variances to the standards would be reviewed and approved by the City's Department of Public Works Engineering Division. Therefore, transportation hazards related to operation of the Park would be less than significant with the application of uniform applicable development policies and the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact.

d) Substantially Mitigated by Uniform Applicable Development Policies. As previously described, the City would be required to prepare a Construction Management Plan in accordance with the City's Construction Management Ordinance. The Construction Management Plan would identify the required emergency access points and routes to adequately serve the Project site in case of an emergency during construction.

Further, operation of the Park would not interfere with emergency access to or around the site. The proposed Project would consist of development within a contiguous City block and would not change or hinder the existing evacuation routes or emergency personnel accessibility. Instead, the proposed Project would be consistent with the California Fire Code, as adopted by the City, which requires compliance with emergency access design standards to provide sufficient access for emergency equipment. The California Fire Code also sets standards for road dimension, design, grades, and other fire safety features. SMMC Section 9.04.10.08.060(d) states, “[t]he design, location or position of any parking layout, entry, driveway, approach, or access from any street or alley shall be approved by the Parking and Traffic Engineer.” Site plan approval from the City and SMFD would ensure that the proposed Project would provide sufficient access for emergency vehicles prior to approval. Therefore, emergency access would be maintained during construction and operation by the applicable uniform development policies. Impacts would be reduced to a less than significant level, and the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact, regarding inadequate emergency access.

XX. Tribal Cultural Resources

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

Existing Setting

The City is located within the traditional ethnographic territory of the Takic-speaking Gabrieleño/Tongva. The Gabrieleño/Tongva occupied a territory that covered more than 1,500 square miles centered in the Los Angeles Basin, extending south into a portion of Orange County, as far east as the San Bernardino-Riverside area, and north into a portion of Topanga Canyon. The Gabrieleño/Tongva territory also included the southern Channel Islands. More than 50 villages were located within this territory with populations that ranged from approximately 50 to 150 individuals.

Due to the level of historic and current urban development within the City, the full extent and density of Gabrieleño/Tongva occupation is difficult to accurately characterize as numerous resources have most likely been disturbed without professional documentation. However, the Gabrieleño/Tongva village at Kuruvungna Springs, located approximately two miles east of the Project site on the University High School campus, indicates that the Gabrieleño/Tongva occupied and utilized natural resources within the City over an extended period (City of Santa Monica 2017).

The City previously requested a City-wide Sacred Land File (SLF) request from the Native American Heritage Commission (NAHC) on December 15, 2020, during the preparation of the 6th Cycle Housing Element Update (State Clearinghouse No. 2020100575). The NAHC responded on January 4, 2021, stating that the SLF indicated the presence of Native American cultural resources within the City; however, the NAHC did not provide the location or description of these resource(s) and recommended that the City contact Native American individuals and organizations to elicit information and/or concerns regarding any cultural resource issues related to the project.

Discussion

a, b) Less Than Significant Impact. As previously described in **Section VI. Cultural Resources**, the Project site does not include any resources that are listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).

While there are no known tribal cultural resources within the Project site and surrounding vicinity, based on known Native American settlement within the greater Los Angeles region, construction activities associated with the proposed Project have the potential to uncover previously unknown tribal cultural resources. In particular, minor excavation, grading, and other ground disturbing activities could encounter and adversely affect subsurface tribal cultural resources that might be located on-site. This is considered a potentially significant impact warranting further evaluation in an EIR.

Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18, the City will conduct a Native American consultation process in parallel with the preparation of the EIR and consult with Native American Tribes to identify, evaluate, and mitigate impacts to tribal cultural resources, if a Tribe formally requests consultation.

XXI. Utilities and Service Systems

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

Existing Setting

Water Service

As described above, the City of Santa Monica Water Resource Division is the water agency that provides water service for the City. The City's potable water supply consists of local groundwater and imported water from MWD. Additionally, the SMURFF produces non-potable treated urban runoff water for landscaping irrigation and other approved non-potable water uses.

The City extracts water from the Santa Monica Groundwater Basin, utilizing 10 active groundwater wells located in the Charnock subbasin, the Olympic subbasin, and the Arcadia subbasin. The Charnock and Arcadia Water Treatment Plants treat extracted groundwater. Treated water is sent to the City-owned and operated storage reservoirs with an overall capacity of 45 million gallons (MG). In addition to the local groundwater supply, the City supplements its water service with imported water from the MWD. The MWD serves more than 145 cities and 94 unincorporated communities across Southern California via the Colorado River Aqueduct and the State Water Project's California Aqueduct. The City distributes water to approximately 18,000 metered service connections throughout a 250-mile network of water lines ranging from four to 36 inches in diameter (City of Santa Monica 2023b). (See **Section XI. Hydrology and Water Quality** for more information.)

In addition, the City operates the SMURFF that is a recycled water system. The SMURFF captures and treats urban runoff water from the storm drain system to be reused for primarily landscape irrigation, followed by street sweeping, sewer jetting, and lavatories at two facilities. The SMURFF is designed to treat up to 0.5 million gallons per day (MGD).

According to the City's 2023 Urban Water Management Plan, the City was estimated to have a non-potable water demand of 314 acre-feet (AF) and a potable water demand of 10,929 AF from June 2023 to July 2024. The City was estimated to have a non-potable water supply of up to 1,608 AF and a potable water supply of 13,609 AF during the same time period.

In November 2018, the City Council adopted an updated Sustainable Water Master Plan (SWMP), which refined the City's pathway to reduced reliance on imported water. The three major components of the 2018 SWMP are:

1. Increase water conservation efforts to permanently reduce water demand.
2. Develop sustainable and drought resilient alternative water supplies.
3. Expand local groundwater production within sustainable yield limits.

The Project site is served by an eight-inch pressurized water main that runs down Colorado Avenue and Olympic Boulevard (SaMoMAP 2024). Generally, an eight-inch pipeline can convey a maximum flow of 1,600 gallons per minute (gpm) at a velocity of 10.3 feet per second (ft/s). In addition, there is a SMURFF main line and lateral lines serving the site.

Wastewater

The City's Water Resources Division is responsible for all facilities that support the collection and conveyance of wastewater and stormwater runoff, necessary to protect the community from sewer system overflows, reduce local flooding, and promote overall water quality in the Santa Monica Bay. Wastewater is collected through the City's sewer system that includes a 72-inch diameter Coastal

Interceptor Sewer (CIS) connection and is ultimately conveyed to the Hyperion Water Reclamation Plant (HWRP) located in Playa del Rey.

To ensure that wastewater flows are adequately accommodated, the City reviews sewer lines based on the guidelines for sewer design and operations from the Los Angeles Bureau of Engineering Manual – Part F. According to this guidance, the goal is to size sewers so the depth of the Peak Dry Weather Flow (PDWF), projected for the design period, is no more than 50 percent of the pipe diameter ($d/D = 0.5$ where d = depth of flow and D = pipe diameter). The City uses this design screening criteria of $d/D=0.5$ for both PDWF and Peak Wet Weather Flow (PWWF) for utilities planning purposes, to assess whether future upgrades are needed to the sewer system. This 0.5 d/D factor applies to all the sewer segments that operate based on gravity flow but does not apply to the inverted siphon sewer that carries wastewater out of the southwest corner of Downtown Santa Monica (i.e., the Colorado Ocean Relief Sewer). In order for this section of sewer line to operate properly, it is designed to be maintained in a surcharged condition; therefore, the surcharged condition does not indicate a deficiency in this particular section of the sewer lines. Additionally, the Public Works Department uses an operational criteria of $d/D=0.75$ to ensure that wastewater flows would not result in public exposure of sewer gas emissions, including emissions of hydrogen sulfide gas.

Sewer flow from the Project site is conveyed by an eight-inch sewer gravity line that connects to the sewer connection beneath Olympic Boulevard. The sewer flow moves southwestward into a 10-inch and a 21-inch drain line, ultimately to the HWRP. The HWRP operates in accordance with water quality permits issued by the Los Angeles RWQCB. The CIS system is designed for 51.7 MGD at its terminus at the southern City boundary. The HWRP currently receives an average of 275 MGD with a maximum daily flow rate of 450 MGD and a maximum peak wet weather flow of 800 MGD (Water Collaborative Delivery Association 2024).

Solid Waste

The Resource Recovery & Recycling Division of the City's Public Works Department provides solid waste management and collection services to all Santa Monica residents and approximately 50 percent of commercial and industrial establishments. The City collects, transfers, and disposes of trash; processes green waste and food scraps for compost; recycles single-stream commingled recyclables; and provides a State-authorized e-waste collection facility. The City sorts and sends disposed items to reuse and recycling facilities, thereby diverting them from landfills whenever possible. The 2019 Zero Waste Plan Update reinforces the City's commitment of 95 percent waste diversion by 2030 with a daily rate of 1.1 pounds per person per day. As of 2018 (the most recent update), the City had a waste diversion of approximately 81 percent.

Fourteen solid waste landfill disposal facilities serve the City, including 13 landfills and one refuse-to-energy facility. Collectively, the 14 landfills have a remaining capacity of 648.7 million tons, with a maximum permitted daily capacity of 102,244 tons per day. In 2021/2022, the City generated 58,820 tons of municipal solid waste. As of 2018, 81 percent of solid waste being diverted from landfills through recycling and organics collection (City of Santa Monica 2022).

Table 11. Utilities Serving the Project Site

Water Supply	City of Santa Monica Public Works Department, Water Resources Division
Wastewater Disposal	City of Santa Monica Public Works Department, Water Resources Division; City of Los Angeles Hyperion Treatment Plant
Solid Waste	City of Santa Monica Public Works Department, Resource Recovery and Recycling Division

Discussion

a) Less Than Significant Impact. The proposed Project would include the relocation of public restrooms that would likely require a new on-site connection to the City's wastewater collection and treatment system. However, the proposed bathroom would have a similar use and capacity as the existing facility, and it would not require the expansion or construction of a new wastewater infrastructure.

In addition, the proposed Project would require electrical improvements to serve the proposed lighting amenities. As mentioned in *Project Description*, the proposed Project would include approximately 28 new sports lights and various pedestrian lights, all of which would be LED-certified and in compliance with the SMMC Section 9.21.080. (See **Section I. Aesthetics/Shadows** for more information.) Likewise, the proposed Community Recreation Center would include interior and exterior lighting, similar to its existing conditions. The needed electrical connections would be made with preexisting on-site transmission lines. The increase in electricity demand would be nominal and would not require the construction or expansion of substations or other facilities.

Further, new natural gas connections may be required to provide service to the proposed Community Hub. However, the operation of the Community Hub would not require construction or expansion of processing plants, storage facilities, or other similar structures given that demand for natural gas is unlikely to substantially increase as compared to existing conditions. The Community Recreation Center would continue to be serviced by the natural gas connections.

The proposed Project also would not involve a change in demand for stormwater drainage infrastructure (refer to **Section XI. Hydrology and Water Quality**) or telecommunications facilities. Therefore, given that the proposed Project would only require minor on-site utility upgrades, the proposed Project would have a less than significant impact and would not make a cumulatively considerable contribution to a significant cumulative impact.

b) Less Than Significant Impact. The Project is not anticipated to create a substantial demand for City water supplies. The proposed Project would require non-potable water for sports fields and landscape irrigation, and potable water for the restrooms and drinking fountains.

Assuming the three natural turf fields are 35,000-sf each and the two combo fields are 85,000-sf each, the sports fields alone would require 25 acre-feet per year (AFY).⁵ The projected non-potable

⁵ These estimates of water usage are derived from the 2002 General Plan EIR that assumed water use would be 82 gallons per day per 1,000 square feet, or the Southern California Water Company water demand factor for general public park use. This water demand factor

water supply in 2023-2024 was a maximum of 1,680 AFY. Therefore, the demand associated with the proposed Project would consist of only 1.4 percent of the available non-potable water supply. Further, this analysis reflects the conservative assumption that the combo fields would be natural turf landscapes, which require the most amount of water as compared to synthetic materials.

The expected potable water demand associated with the proposed Project would be similar to the existing demand. As a result, the water demand associated with the proposed Project could be accommodated by the City's existing and future water supply. Impacts to the City's water supply would be less than significant and the Project would not make a cumulatively considerable contribution to a significant cumulative impact regarding water supply.

c) Less Than Significant Impact. As discussed above, the proposed Project would not generate a substantial increase in wastewater. The existing wastewater collection system adequately accommodates the existing demand that is unlikely to substantially increase due to the proposed Project. Therefore, the wastewater system can adequately serve the proposed Project, impacts would be less than significant, and the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact regarding wastewater collection systems.

d) Less Than Significant Impact. Construction activities associated with the proposed Project would generate construction and demolition (C&D) waste such as asphalt, concrete, glass, and wood. The City estimates that demolition of the existing buildings would generate approximately 7,640 cubic yards of demolition debris and site clearing would generate approximately 20,200 cubic yards of demolition debris. As a result, the proposed Project would be subject to the development and implementation of a C&D Material Waste Management Plan, in accordance with SMMC Section 8.108 Subpart B. The waste management plan would identify: (1) the estimated weight or volume of C&D material by material type to be generated; (2) the maximum weight or volume of such materials that can feasibly be diverted via reuse or recycling; (3) the proposed vendor or facility to collect or receive the material; (4) the estimated weight or volume of C&D material that would be departed to Class III landfills and inert disposal facilities; and (5) a commitment to only use City permitted waste haulers. In addition, the waste management plan would require the City to divert at least 70 percent of all C&D materials generated by the proposed Project.

Using CalRecycle's Estimated Solid Waste Generation Rate for Public/Institutional sectors, the proposed buildings (i.e., Community Recreation Center and the Community Hub Building) would generate approximately 371-lb/day, or approximately 67.7-tons/year. In addition, there would be additional solid waste generated from the use of the various recreation fields, courts, and amenities.

is conservative given that it does not consider reductions in water demand for drought-tolerant species and the use of drip-irrigation systems.

Table 12. Estimated Project Generated Solid Waste

Building	Size	Waste Generation Factor ¹	Estimated Waste
Community Recreation Center	50,000	0.007 lb/sf/day	350 lbs/day
Community Hub	3,000	0.007 lb/sf/day	21 lbs/day
Total			371 lbs/day

Notes: ¹CalRecycle Estimated Solid Waste Generation Rates 2024

Despite a potential increase in solid waste generation from the expansion of the Park, implementation of the proposed Project would result in an indistinguishable increase when compared to the existing uses at the Park. Additionally, there is adequate capacity and daily permitted intake of solid waste landfills that serve the City. Therefore, any minor increase in solid waste generated by the proposed Project would be adequately accommodated by the existing landfills.

Further, as previously described, the City has achieved significant waste reduction targets and continues to strive for additional reductions in solid waste. The City met and exceeded its goals for waste diversion, as defined in the City's Sustainable City Plan, attaining a diversion rate of 81 percent by the end of 2018. The City is also currently implementing the Zero Waste Strategic Operations Plan and 2019 Zero Waste Plan Update that will enable the City to reach its zero waste goal of 95 percent diversion by 2030. These efforts will further reduce per capita waste generation, thereby reducing existing waste generation in the City and expected waste generation from implementation of the Park. Given the existing sufficient capacity of solid waste facilities combined with the City's efforts to reduce waste generation, impacts involving waste generation would be less than significant and the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact.

e) Less Than Significant Impact. The proposed Project would not conflict with policies or goals that regulate solid waste. First, the City has achieved a diversion rate of 81 percent, exceeding the requirements set by AB 939 and AB 341, which require a minimum of 75 percent of diverted materials. Second, in accordance with the Construction and Demolition Ordinance (SMMC Section 8.108.010 Subpart C), the City would be required to prepare a waste management plan and divert a minimum of 70 percent of construction and demolition debris from landfills. Lastly, as described above, the Project would not generate a substantial increase in solid waste and, therefore, would not conflict with the City's Zero Waste Plan, which aims for 95 percent diversion of waste from landfills by 2030. The operation of the Park would also include recyclable containers/bins that would be provided on-site to ensure that solid waste associated with the proposed Project would be recycled or reused to the greatest extent possible. Therefore, there would be a less than significant impact, and the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact, regarding Federal, State, and local statutes and regulations related to solid waste.

XXII. Wildfire

	Potentially Significant Impact	Less Than Significant (LTS) or LTS With Mitigation	No Impact	Within the Scope of Analysis in the Plan Level EIR	Substantially Mitigated by Uniform Applicable Development Policies
WILDFIRE: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:					
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐	☐

Existing Setting

The Project site is located within a highly urbanized environment that is not within the vicinity of wildland areas. As shown on CAL FIRE's Fire Hazard Severity Zone Map, the site is located in a Local Responsibility Area (LRA) approximately two-miles from the nearest High or Very High FHSZ associated with the Santa Monica Mountains.

Discussion

a-d) No Impact. The expansion and redevelopment of the Project site would not exacerbate wildfire risks. First, the proposed Project consists of the redevelopment and expansion of the Park and would not result in a change or hinderance to existing evacuation routes or emergency personnel

accessibility. Second, the Project site is located on predominantly flat terrain and in an urbanized area and does not exhibit characteristics that could exacerbate the spread of wildfires or post-fire hazards. Third, while the Project site may experience prevailing winds, the proposed Project would consist of urban uses, maintained landscapes, and compliance with local fire codes, thereby limiting the spread of a fire. Fourth, the proposed Project would not involve installation of any infrastructure such as high-tension electricity lines that would exacerbate wildfire risk and would not increase public exposure to wildfires (i.e., placing residential uses in areas of high wildfire risk). Lastly, in the rare event of a fire, the Project site is adequately served by the Santa Monica Fire Department, as discussed in **Section XVII. Public Services**. For these reasons, the proposed Project would involve no impacts pertaining to wildfire issues.

XXIII. Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant (LTS) or LTS With Mitigation	No Impact	Within the Scope of Analysis in the Plan Level EIR	Substantially Mitigated by Uniform Applicable Development Policies
MANDATORY FINDINGS OF SIGNIFICANCE					
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wild-life population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of rare or endangered plants or animals, or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.	☒	☐	☐	☐	☐
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐	☐

Discussion

a-c) Potentially Significant Impact. As described in **Section III. Air Quality**, **Section VII. Energy**, and **Section VIII. Greenhouse Gas Emissions**, the proposed Project has the potential to generate significant impacts regarding air quality, energy, and GHG emissions due to construction activities and the expansion and increased usage of recreational facilities as compared to what currently

occurs with the existing facilities. The thresholds used for evaluating the impacts regarding air quality and GHG emissions also serve as the thresholds for evaluating the contribution of the proposed Project to cumulative impacts regarding each of these environmental topics. Therefore, the proposed Project has the potential to create cumulatively considerable contributions to significant cumulative impacts involving each one of these topics, too.

Further, as described in **Section VI. Cultural Resources** and **Section XX. Tribal Cultural Resources**, Project construction would involve grading and other ground disturbance activities (e.g., trenching) that have the potential to adversely affect subsurface cultural resources (e.g., archaeological, tribal, or human remains) that may exist on-site. Therefore, impacts to cultural resources and tribal cultural resources are considered potentially significant, and these issues will be further analyzed in the EIR.

As described in **Section X. Hazards and Hazardous Materials**, the proposed Project involves the installation of synthetic turf for the two proposed combo fields and plastic playground equipment. Synthetic turf and plastic playground equipment are associated with the presence of per- and polyfluoroalkyl substances (PFAS), microplastics, and other chemical substances that may lead to adverse human and environmental health effects and can persist in water, air, and soil resources. These potential adverse impacts to humans and the environment are considered potentially significant and will be further discussed and analyzed in the EIR.

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APPENDIX B

Notice of Preparation (NOP) and Scoping Comments



**NOTICE OF PREPARATION AND NOTICE OF PUBLIC SCOPING MEETING FOR THE
DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE
MEMORIAL PARK REDEVELOPMENT AND EXPANSION PROJECT**

DATE: February 27, 2025

TO: State Clearinghouse, Responsible Agencies, Trustee Agencies, Organizations and Interested Parties

LEAD AGENCY: City of Santa Monica
City Planning Division
1685 Main Street
Santa Monica, CA 90401
EIR Contact: Rachel Kwok
Email: rachel.kwok@santamonica.gov

In compliance with the California Environmental Quality Act (CEQA), the City of Santa Monica (City) intends to prepare an Environmental Impact Report (EIR) for the proposed Memorial Park Redevelopment and Expansion Project (Project). In accordance with CEQA Guidelines Section 15082, the City has prepared this Notice of Preparation (NOP) to provide the public, Responsible Agencies, and other interested parties with information describing the proposed Project and its potential environmental effects in order to solicit input on the scope and content of the EIR. The EIR will address the potential effects of the proposed Project on the following environmental issue areas:

- Air Quality (including air quality modeling and a Human Health Risk Assessment)
- Hazards and Hazardous Materials (including a Phase I Environmental Site Assessment [ESA] and additional technical studies, as needed)
- Cultural and Tribal Cultural Resources (including a Historic Architectural Report, cultural resources record search, and Assembly Bill [AB] 52 consultation materials)

This analysis will be supported by a robust Initial Study (IS) and supporting technical studies, which will be appended to the EIR. Mitigation measures will be identified in the IS, if/where appropriate. Resource areas that will be addressed in the IS include:

• Aesthetics	• Mineral Resources
• Agriculture / Forestry Resources	• Noise
• Biological Recourse	• Population / Housing
• Energy	• Public Services
• Geology/Soils	• Recreation
• Greenhouse Gas Emission	• Transportation
• Hydrology/Water Quality	• Utilities / Service Systems
• Land Use / Planning	• Wildfire

PROJECT APPLICANT: City of Santa Monica
1685 Main Street
Santa Monica, CA 90401

PROJECT LOCATION AND EXISTING ONSITE USES: The Project site is comprised of two parcels located in the City of Santa Monica: the existing 10.3-acre Memorial Park (Assessor Parcel Numbers [APN] 4283-010-901); and the 2.9-acre former Fisher Lumber site (APN 4283-010-902). Together, these parcels total approximately 13.2 acres.

The Project site is centrally located within the City's Pico Neighborhood and bounded by Colorado Avenue to the north, 14th Street to the west, Olympic Boulevard to the south, and 16th Street to the east. Vehicle access to Memorial Park is currently provided via the surface parking lot along 14th Street, located in the western portion of the Project site. Pedestrian entries are provided along 14th Street, Olympic Boulevard, and 16th Street. The City's Public Landscape Division (PLD) staff, materials, and equipment are housed within the buildings located at the former Fisher Lumber site (also known as PLD's "Colorado Yards"), accessed via curb cuts along 14th Street and 16th Street.

Memorial Park is important to the overall park system as it serves as the primary park for baseball and softball as well as being the home for the City's only public gymnasium, skate park, and tennis/pickleball courts.

PROJECT DESCRIPTION: The purpose of the proposed Project is to renovate and expand Memorial Park to meet an increasing demand for recreational activities. The proposed Project would combine the existing 10.3-acre Memorial Park with the 2.9-acre former Fisher Lumber site (currently PLD's Colorado Yards) to create a 13.2-acre expanded park. With a focus on better serving community needs, the proposed Project would develop modernized public recreation facilities, improved accessibility to park amenities, and enhanced community gathering spaces. Key components of the proposed Project include the following, which will be developed in phases:

- Two synthetic turf combo fields (two playing fields per combo field)
- Three natural grass youth fields (one fast-pitch softball and two baseball fields)
- Four rooftop tennis/pickleball courts
- A new community hub building and the replacement of the children's playground with a new universally accessible playground
- Renovation and expansion of the skate park
- Replacement of the existing community recreation center with a new community recreation center
- New covered parking lot and passenger loading zone

The proposed Project would be constructed in phases depending on funding, entitlements, and approvals.

- **Phase 1** would consist of the demolition and construction of the northwestern portion of Memorial Park and southside of Colorado Avenue. Demolition activities would include the following:
 - Clear former Fisher Lumber site
 - Demolish existing tennis/pickleball courts, baseball/softball fields, parking lot, dog park and children's playgroundFollowing demolition, construction of the proposed facilities would occur:
 - Construct the first Combo Field (Fields 1 and 2)
 - Construct a covered parking lot and loading/drop-off zone
 - Construct the tennis/pickleball courts on the parking lot rooftop
 - Construct mobility and streetscape improvements along Colorado Avenue and a portion of 14th Street
 - Potentially construct a temporary dog park and/or playground
- **Phase 2** would include the expansion and redevelopment of Memorial Park along the remainder of Colorado Avenue and most of 16th Street. This phase would include the following components:
 - Demolish the existing eastern youth baseball field
 - Expand Memorial Park east into a portion of 16th Street
 - Construct the second Combo Field (Fields 3 and 4)
 - Construct the Community Hub Building, include new restroom, concession stand, offices, and storage facility
 - Construct the Children's Playground
 - Construct a temporary natural turf practice area
- **Phase 3** would include the redevelopment of the youth baseball/softball fields and the expansion and renovation of the Cove Skatepark. This phase would include the following:
 - Expand Memorial Park east into the remaining portion of 16th Street

- o Construct streetscape improvements, including street trees, planters, and buffer areas along portions of 16th Street and Olympic Boulevard
 - o Construct the walking loop with exercise stations
 - o Redevelop the temporary natural turf practice area into Field 5 for youth baseball
 - o Redevelop the two youth fields along Olympic Boulevard into youth baseball (Field 6) and youth fast-pitch softball (Field 7) fields
 - o Expand and redevelop the Cove Skatepark
- **Phase 4** would include the demolition and redevelopment of the southwest corner and construction of a Community Recreation Center building, along with streetscape improvements along a portion of 14th Street

REVIEW PERIOD: As specified by the CEQA Guidelines, this NOP will be circulated for a 30-day review period. This NOP and project site plans can be viewed online at <https://www.santamonica.gov/environmental-review/>. The City of Santa Monica welcomes agency and public input during this period regarding the scope and content of environmental information that should be included in the Draft EIR. Comments may be submitted in writing by Tuesday, April 1, 2025 and addressed to:

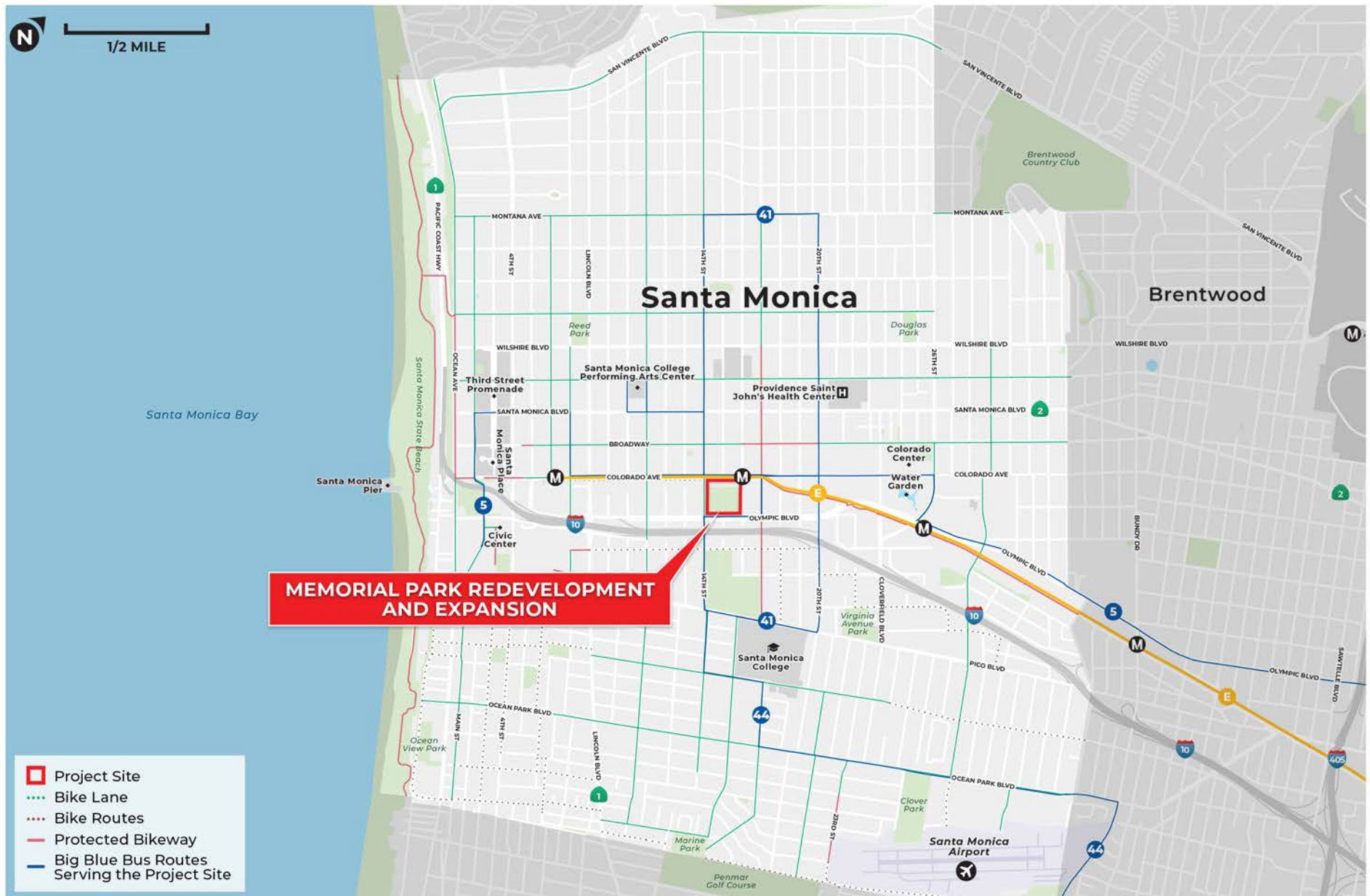
Rachel Kwok
Environmental Planner
City of Santa Monica
City Planning Division
1685 Main Street
Santa Monica, CA 90401
E-mail: rachel.kwok@santamonica.gov

SCOPING MEETING: An in-person Public Scoping Meeting for the EIR will be held to describe the proposed Project and the environmental review process, and to receive public comment on the scope and content of the EIR. The in-person Public Scoping Meeting is scheduled at the following time and location:

Wednesday, March 12, 2025
6:00 p.m. – 7:00 p.m.
Memorial Park Craft Room
1401 Olympic Blvd.
Santa Monica, CA 90404

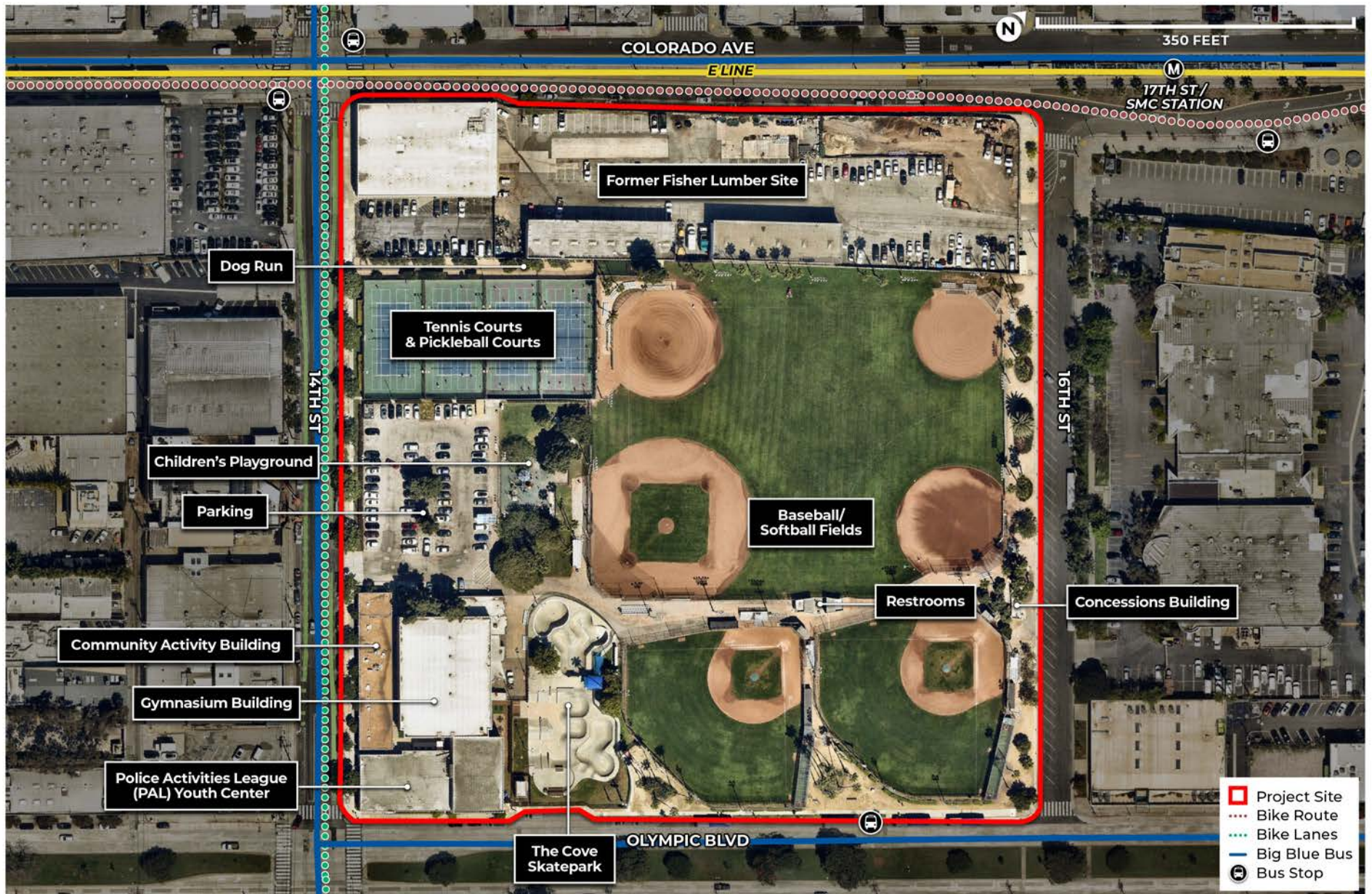
A copy of the PowerPoint presentation and a summary of the Public Scoping Meeting will be provided online (<https://www.santamonica.gov/environmental-review/>) immediately following the meeting.

ESPANOL: Este es una noticia para la preparación de un reporte sobre los posibles efectos ambientales en referencia a la construcción propuesta de un parque, lo cual puede ser de interés a usted. Para más información, llame a Anna Fernandez, al numero (310) 458-8341.



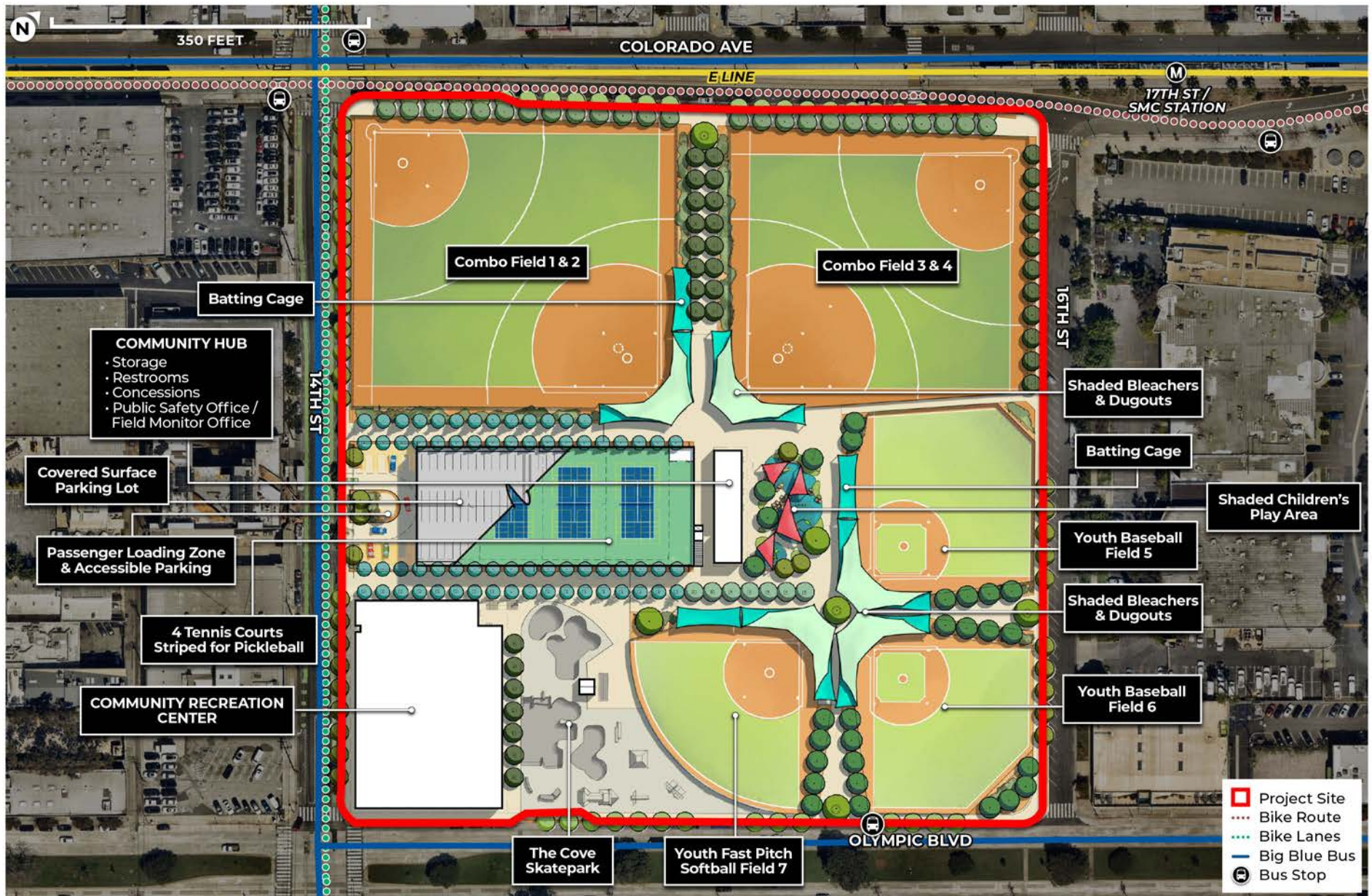
Memorial Park Redevelopment and Expansion Project Vicinity

FIGURE
1



Memorial Park Redevelopment and Expansion Existing Site Plan

FIGURE
2



Memorial Park Redevelopment and Expansion Proposed Site Plan

FIGURE
3

INDEX TO NOP COMMENTS

This appendix includes a copy of the Notice of Preparation (NOP) for the proposed Memorial Park Redevelopment and Expansion Project Environmental Impact Report (EIR), copies of all comment letters received on the NOP during the public comment period, and reference to where each individual comment is addressed in the EIR. **Table B-1** lists all comments and shows the comment set identification number for each letter or commenter. **Table B-2** identifies the location where each individual comment is addressed in the EIR.

Table B-1: Commenters on the Notice of Preparation

Individual/Agency/Affiliation	Format of Comment	Date Comment Received	NOP Comment Set	NOP Comment No.
Miya Edmonson/California Department of Transportation (Caltrans)	Letter	4/1/2025	1	1-2
Terry Saucier/SoCal Stop Artificial Turf Task Force	Letter	4/1/2025	2	1-8
Dianne Woelke/Safe Healthy Playing Fields, Inc.	Letter	3/17/2025	3	1-12
Deborah Bird and William Wright	Email	3/27/2025	4	1-8
Sonja Gilbert	Email	3/3/2025	5	1
Andreas Kemkes	Email	3/27/2025	6	1
Sarah Natalini	Email	4/2/2025	7	1-8
Jacquie Nemor	Email	3/3/2025	8	1
Sophie Pennes	Email	4/1/2025	9	1-8
Hannah Yang	Email	3/30/2025	10	1-2
Jerry Yang	Email	3/27/2025	11	1-5

Table B-2: Individual Comments on the Notice of Preparation and Responses

Comment #	Responses
Responses to Comments Received from Miya Edmonson/California Department of Transportation	
1-1	<i>Recommend including future and detailed information on the types of bicycle parking and storage facilities.</i> Chapter 2.0, <i>Project Description</i> describes the proposed bicycle parking and storage facilities, including the type, location, and quantity of facilities.
1-2	<i>Recommend including Transportation Demand Management (TDM) strategies to avoid undermining the Project's ability to encourage the use of public transit and active modes of transportation. Recommend including electric car charging spaces.</i> As described in Chapter 2.0, <i>Project Description</i>, the proposed Project would include multi-modal transportation features to encourage alternative modes of transportation and reduce reliance on single-occupancy vehicles (SOVs). The Vehicle Miles Traveled (VMT) Screening Analysis provided in Appendix I describes the location of the Project site in relation to existing multimodal features.
Responses to Comments Received from Terry Saucier/SoCal Stop Artificial Turf Task Force	
2-1	<i>Artificial turf is manufactured with petrochemicals, per- and polyfluoroalkyl (PFAS), and hazardous materials, which are harmful to child development.</i> Section 3.4, <i>Hazards and Hazardous Materials</i> and the Artificial Turf Memorandum provided in Appendix H analyze the potential impacts associated with the use of artificial turf and the potential for exposure to hazardous materials, including PFAS.
2-2	<i>Artificial turf pollutes local water, soils, and air with toxic chemicals and microplastics.</i> Section 3.4, <i>Hazards and Hazardous Materials</i> and the Artificial Turf Memorandum provided in Appendix H analyzes the potential impacts associated with the use of artificial turf and the potential for exposure to hazardous materials, including PFAS and microplastics.
2-3	<i>Artificial turf can reach high temperatures, resulting in heat stress, thermal burns, and heat island effect.</i> This comment regarding heat describes the “environment’s impact on the proposed Project,” rather than the impact of the proposed Project on the environment. Therefore, it is not an “environmental impact” pursuant to the California Environmental Quality Act (CEQA). However, this comment will be included in the administrative record for consideration by the decision-makers.
2-4	<i>Artificial turf can require more water for the purposes of cooling and cleaning, as compared to water for irrigating real grass.</i> Chapter 4.0, <i>Project Alternatives</i>, evaluates water-consumption impacts associated with the use of natural grass fields as compared to the proposed artificial turf fields.

Table B-2: Individual Comments on the Notice of Preparation and Responses

Comment #	Responses
2-5	<i>Artificial turf is an impervious surface that can adversely affect stormwater capture and can increase risk of flooding.</i> The Initial Study provided in Appendix A describes the potential impacts on stormwater capture and flooding associated with the proposed Project.
2-6	<i>Artificial turf cannot be recycled and will be either illegally dumped or sent to the landfill.</i> The Initial Study provided in Appendix A describes the potential impacts of the proposed Project regarding solid waste disposal. The City of Santa Monica would comply with all laws regarding the disposal of artificial turf at the end of its useful life.
2-7	<i>Artificial grass does not have environmental benefits. It off-gases ethylene and methane, does not support habitat or biodiversity, degrades soil, and replaces natural surfaces that can benefit kids at play.</i> Section 3.1, <i>Air Quality</i> and Section 3.3, <i>Greenhouse Gases and Climate Change</i> analyzes the potential impacts to air quality and GHGs associated with the proposed Project. The Initial Study provided in Appendix A describes the potential impacts on biological resources and geology and soils associated with the proposed Project.
2-8	<i>Artificial turf costs more than real grass fields. Recommend comparing the whole product life cycle between artificial turf and natural grass.</i> This comment describes potential economic impacts associated with the use of artificial turf versus real grass. CEQA evaluates impacts on the physical environment—not economic impacts. Although this comment does not address CEQA environmental impacts, it will be presented to the decision-makers for their consideration regarding other factors that might influence their decision (e.g., operational costs of the proposed Project).
Responses to Comments Received from Dianne Woelke / Safe Healthy Playing Fields Inc. – Letter 1	
3.1-1	<i>Microplastics leach and adsorb toxic chemicals and bacteria, thereby risking the food chain.</i> Section 3.4, <i>Hazards and Hazardous Materials</i>, and the Artificial Turf Memorandum provided in Appendix H describes potential impacts associated with the use of artificial turf and the potential for exposure to hazardous materials, including microplastics.
3.1-2	<i>Plastics such as those used in synthetic turf and microplastics, bioaccumulate and cause adverse impacts to the environment (e.g., ecosystems and biodiversity) and can compromise human health.</i> Section 3.4, <i>Hazards and Hazardous Materials</i> and the Artificial Turf Memorandum provided in Appendix H describes potential impacts associated with the use of artificial turf and the potential for exposure to hazardous materials, including microplastics.

Table B-2: Individual Comments on the Notice of Preparation and Responses

Comment #	Responses
3.1-3	<i>Plant based synthetic turf infills can contain pollutants (e.g., pesticides and PFAS) that can contaminate water and result in toxic algal blooms.</i> Section 3.4, <i>Hazards and Hazardous Materials</i> and the Artificial Turf Memorandum provided in Appendix H describes potential impacts associated with the use of artificial turf and the potential for exposure to hazardous materials, including PFAS. Additionally, the Initial Study provided in Appendix A describes the potential water-related impacts associated with the proposed Project.
3.1-4	<i>Plastic fragments can loft into the air and be dispersed in both air and water media.</i> Section 3.4, <i>Hazards and Hazardous Materials</i> and the Artificial Turf Memorandum provided in Appendix H describes potential impacts associated with the use of artificial turf and the potential for exposure to hazardous materials, including microplastics.
3.1-5	<i>Microplastics can adsorb chemicals and bacteria and can pose impacts to the food chain.</i> Section 3.4, <i>Hazards and Hazardous Materials</i> and the Artificial Turf Memorandum provided in Appendix H describes potential impacts associated with the use of artificial turf and the potential for exposure to hazardous materials, including microplastics.
3.1-6	<i>This comment lists a number of chemicals found in plastics, including (but not limited to) PFAS that are toxic, carcinogenic, and hazardous.</i> Section 3.4, <i>Hazards and Hazardous Materials</i> and the Artificial Turf Memorandum provided in Appendix H describes potential impacts associated with the use of artificial turf and the potential for exposure to hazardous materials, including PFAS and microplastics.
3.1-7	<i>Cleaning synthetic turf utilizes water and can involve use of toxic chemicals. Runoff from synthetic turf can contaminate surface and groundwater resources.</i> Section 3.4, <i>Hazards and Hazardous Materials</i> and the Artificial Turf Memorandum provided in Appendix H describes potential impacts associated with the use of artificial turf and the potential for exposure to hazardous materials. Additionally, the Initial Study provided in Appendix A describes the potential water-related impacts associated with the proposed Project.
3.1-8	<i>Synthetic turf fields can create hot environments that have the potential to injure users of the fields.</i> This comment describes an impact on the users of the proposed artificial turf fields or the “environment’s impact on the proposed Project,” rather than the impact of the proposed Project on the environment. Therefore, it is not an “environmental impact” pursuant to the CEQA. However, this comment will be included in the administrative record for consideration by the decision-makers.

Table B-2: Individual Comments on the Notice of Preparation and Responses

Comment #	Responses
3.1-9	<i>Synthetic turf fields contribute greenhouse gases (GHGs) that contribute to climate change and create heat islands.</i> Section 3.3, <i>Greenhouse Gases and Climate Change</i> analyzes the potential impacts related to GHG emissions associated with the proposed Project.
3.1-10	<i>Synthetic turf fields are not made of recyclable materials.</i> The Initial Study provided in Appendix A describes the potential impacts of the proposed Project regarding solid waste disposal. The City of Santa Monica would comply with all laws regarding the disposal of artificial turf at the end of its useful life.
3.1-11	<i>A Project alternative that uses real grass fields rather than synthetic turf, is a feasible alternative.</i> Chapter 4.0, <i>Project Alternatives</i> evaluates the impacts of an alternative involving the use of real grass fields, and compares the impacts to those of the proposed Project.
3.1-12	<i>This comment describes purported improvements to mental health from users of real grass and open space areas.</i> CEQA involves an evaluation of a project's impact on the physical environment. Nevertheless, this comment will be included in the administrative record for consideration by the decision-makers.
3.1-13	<i>This comment includes a list of potential economic costs associated with the use of turf fields.</i> This comment describes potential economic impacts associated with the use of artificial turf versus real grass. CEQA evaluates impacts on the physical environment—not economic impacts. Although this comment does not address CEQA environmental impacts, it will be presented to the decision-makers for their consideration regarding other factors that might influence their decision (e.g., operational costs of the proposed Project).
3.1-14	<i>This comment provides estimates on water usage associated with the use of synthetic turf.</i> Chapter 4.0, <i>Project Alternatives</i>, evaluates water-consumption impacts associated with the use of natural grass fields as compared to the proposed artificial turf fields.
3.1-15	<i>This comment lists hazardous materials that could be used as part of site operations.</i> Section 3.4, <i>Hazards and Hazardous Materials</i>, and the Artificial Turf Memorandum provided in Appendix H describes potential impacts associated with the use of artificial turf.

Table B-2: Individual Comments on the Notice of Preparation and Responses

Comment #	Responses
3.1-16	<i>This comment lists potential costs associated with disposing turf field materials at their end of life.</i> The Initial Study provided in Appendix A describes the potential impacts of the proposed Project regarding solid waste disposal. The City of Santa Monica would comply with all laws regarding the disposal of artificial turf at the end of its useful life.
3.1-17	<i>This comment lists liabilities from injuries and generally refers to risks from lack of disclosure of risks, and violations of the Clean Water Act.</i> Section 3.4, <i>Hazards and Hazardous Materials</i>, and the Artificial Turf Memorandum provided in Appendix H describes potential impacts associated with the use of artificial turf.
Responses to Comments Received from Dianne Woelke / Safe Healthy Playing Fields Inc. – Letter 2	
3.2-1	<i>This comment generally describes how toxic substances from synthetic materials and mulch can contaminate air, water, and soil, and create human health risks.</i> Section 3.4, <i>Hazards and Hazardous Materials</i>, and the Artificial Turf Memorandum provided in Appendix H describes potential impacts associated with the use of artificial turf.
3.2-2	<i>This comment generally describes impacts to humans (e.g., those with hearing impairments) from using plastic playground equipment.</i> CEQA evaluates impacts on the physical environment. Although this comment does not address CEQA environmental impacts, it will be presented to the decision-makers for their consideration regarding other factors that might influence their decision (e.g., operational costs of the proposed Project).
3.2-3	<i>This comment describes health impacts from human exposure to plastic playground equipment.</i> Section 3.4, <i>Hazards and Hazardous Materials</i>, describes potential impacts on human health associated with the proposed Project.
3.2-4	<i>This comment describes health impacts from human exposure to plastic crumbs used in playground surfaces.</i> Section 3.4, <i>Hazards and Hazardous Materials</i>, and the Artificial Turf Memorandum provided in Appendix H describes potential impacts associated with the use of artificial turf.

Table B-2: Individual Comments on the Notice of Preparation and Responses

Comment #	Responses
3.2-5	<i>This comment describes health impacts from human exposure to antiozonant N-(1,3-dimethylbutyl)-N-phenyl-p-phenylenediamine (6PPD) used in playground equipment.</i> Section 3.4, <i>Hazards and Hazardous Materials</i>, describes potential impacts on human health associated with the proposed Project.
3.2-6	<i>This comment cites studies regarding microplastics that plastic playground equipment can generate.</i> Section 3.4, <i>Hazards and Hazardous Materials</i>, and the Artificial Turf Memorandum provided in Appendix H describes potential impacts associated with the use of artificial turf.
3.2-7	<i>This comment describes certain elements and chemicals of crumb rubber and playground surfacing that can be harmful to humans and the environment, such as polycyclic aromatic hydrocarbons, lead, phthalates, and polyvinyl chlorides.</i> Section 3.4, <i>Hazards and Hazardous Materials</i>, describes potential impacts on human health associated with the proposed Project.
3.2-8	<i>This comment describes microplastics that plastic playground equipment, sail shades, etc. can generate.</i> Section 3.4, <i>Hazards and Hazardous Materials</i>, describes potential impacts on human health associated with the proposed Project.
3.2-9	<i>This comment compares the benefits of “natural” versus plastic playground equipment.</i> Chapter 4.0, <i>Alternatives</i>, includes an analysis of a project alternative that minimizes the use of plastic playground and compares the environmental impacts of the project alternative with the proposed Project.
3.2-10	<i>This comment describes risks to users of plastic playground equipment due to heat.</i> This comment regarding heat describes an impact on the users of the plastic playground equipment or the “environment’s impact on the proposed Project,” rather than the impact of the proposed Project on the environment. Therefore, it is not an “environmental impact” pursuant to the California Environmental Quality Act (CEQA). However, this comment will be included in the administrative record for consideration by the decision-makers.
3.2-11	<i>This comment describes chemicals that are in high density polyethylene sail shades (shade covers) that can be harmful to the environment.</i> Section 3.4, <i>Hazards and Hazardous Materials</i>, describes potential impacts on human health associated with the proposed Project.

Table B-2: Individual Comments on the Notice of Preparation and Responses

Comment #	Responses
3.2-12	<i>This comment describes chemicals that are used in photovoltaic (PV) stabilizers and flame retardants found in plastic playground equipment.</i> Section 3.4, <i>Hazards and Hazardous Materials</i>, describes potential impacts on human health associated with the proposed Project.
Responses to Comments from Deborah Byrd, Sarah Natalini, and Sophie Pennes <i>The same comments are provided in each email from the comments. The email from Sophie Pennes also provides an informational brochure regarding the items addressed in the comments.</i>	
4-, 7-, 9-1	<i>This comment states that artificial turf contains harmful chemicals (e.g., PFAS) and generates microplastics.</i> Section 3.4, <i>Hazards and Hazardous Materials</i>, and the Artificial Turf Memorandum provided in Appendix H describes potential impacts associated with the use of artificial turf and the potential for exposure to hazardous materials, including PFAS and microplastics.
4-, 7-, 9-2	<i>This comment generally describes how microplastics can create pollution.</i> Section 3.4, <i>Hazards and Hazardous Materials</i>, and the Artificial Turf Memorandum provided in Appendix I describes potential impacts associated with the use of artificial turf and the potential for exposure to hazardous materials, including microplastics.
4-, 7-, 9-3	<i>This comment describes how artificial turf can heat up creating a “heat island effect.”</i> This comment regarding heat describes an impact on the users of the proposed artificial turf fields or the “environment’s impact on the proposed Project,” rather than the impact of the proposed Project on the environment. Therefore, it is not an “environmental impact” pursuant to the California Environmental Quality Act (CEQA). However, this comment will be included in the administrative record for consideration by the decision-makers.
4-, 7-, 9-4	<i>This comment states that artificial turf is an impervious surface that impedes stormwater capture and can increase flooding risks.</i> The Initial Study provided in Appendix A describes the potential water-related impacts associated with the proposed Project.
4-, 7-, 9-5	<i>This comment describes how artificial turf can off-gas GHGs and contribute to global warming.</i> Section 3.3, <i>Greenhouse Gases and Climate Change</i> analyzes the potential impacts related to GHG emissions associated with the proposed Project.

Table B-2: Individual Comments on the Notice of Preparation and Responses

Comment #	Responses
4-, 7-, 9-6	<i>This comment describes certain adverse impacts on biological resources (e.g., soil microbes, insects, and other fauna) from the use of artificial turf.</i> The Initial Study that is included in Appendix A describes the potential impacts of the proposed Project regarding biological resources.
4-, 7-, 9-7	<i>This comments states that artificial turf is not recyclable and must be either incinerated or disposed in landfills.</i> The Initial Study provided in Appendix A describes the potential impacts of the proposed Project regarding solid waste disposal. The City of Santa Monica would comply with all laws regarding the disposal of artificial turf at the end of its useful life.
4-, 7-, 9-8	<i>This comment advocates for the use of certain grasses (e.g., drought tolerant species) rather than artificial turf for the fields included in the Project.</i> Chapter 4.0, <i>Alternatives</i>, includes an analysis of a project alternative that uses real grass turf and compares the environmental impacts of the project alternative with the proposed Project.
Response to Comments Received from Sonja Gilbert	
5-1	<i>This comment advocates for integrating more senior amenities and opportunities to walk in the shade, into the Project.</i> CEQA involves an evaluation of a project's impact on the physical environment. Nevertheless, this comment will be included in the administrative record for consideration by the decision-makers.
Response to Comment Received from Andreas Kemke	
6-1	<i>The commenter states their opposition to the use of artificial turf and provides an article regarding potential harm from microplastics and pesticides to sea stars off the coast of Washington.</i> Section 3.4, <i>Hazards and Hazardous Materials</i>, and the Artificial Turf Memorandum provided in Appendix H describes potential impacts associated with the use of artificial turf.
Response to Comment Received from Jacquie Nemor	
8-1	<i>The commenter states their preference for the use of real grass and artificial turf, given the air quality impacts regarding use of artificial turf.</i> Section 3.4, <i>Hazards and Hazardous Materials</i>, and the Artificial Turf Memorandum provided in Appendix H describes potential impacts associated with the use of artificial turf.
Responses to Comments from Hannah Yang	

Table B-2: Individual Comments on the Notice of Preparation and Responses

Comment #	Responses
10-1	<i>The commenter states their opposition to the use of artificial turf fields given that they are plastic, fossil-fuel based, and contain hazardous chemicals.</i> Section 3.4, <i>Hazards and Hazardous Materials</i>, and the Artificial Turf Memorandum provided in Appendix H describes potential impacts associated with the use of artificial turf.
10-2	<i>This comment describes certain adverse impacts on biological resources (e.g., soil microbes and other organisms) from the use of artificial turf.</i> Section 3.4, <i>Hazards and Hazardous Materials</i>, and the Artificial Turf Memorandum provided in Appendix H describes potential impacts associated with the use of artificial turf.
Responses to Comments from Jerry Yang	
11-1	<i>This comment describes potential health impacts on users of artificial turf.</i> Section 3.4, <i>Hazards and Hazardous Materials</i>, and the Artificial Turf Memorandum provided in Appendix H describes potential impacts associated with the use of artificial turf.
11-2	<i>This comment generally describes impacts to users of artificial turf, water resources, land resources, and biological resources.</i> Section 3.4, <i>Hazards and Hazardous Materials</i>, and the Artificial Turf Memorandum provided in Appendix H describes potential impacts associated with the use of artificial turf. Additionally, the Initial Study provided in Appendix A describes the potential impacts to biological resources and hydrology and water quality associated with the proposed Project.
11-3	<i>This comment generally lists impacts regarding microplastics, high temperatures experienced on turf fields, and biological resources.</i> Section 3.4, <i>Hazards and Hazardous Materials</i>, and the Artificial Turf Memorandum provided in Appendix H describes potential impacts associated with the use of artificial turf. Additionally, the Initial Study provided in Appendix A describes the potential impacts to biological resources associated with the proposed Project.
11-4	<i>This comment generally lists impacts to users of artificial turf fields.</i> This comment does not address an environmental consideration, but will be included in the administrative record for the Project so that decision-makers can consider it when determining whether to approve the Project.

Table B-2: Individual Comments on the Notice of Preparation and Responses

Comment #	Responses
11-5	<i>This comment advocates for the use of real grass fields, consisting of native, drought-tolerant species, rather than artificial turf.</i> This comment does not address an environmental consideration, but will be included in the administrative record for the Project so that decision-makers can consider it when determining whether to approve the Project.

DEPARTMENT OF TRANSPORTATION

DISTRICT 7

100 S. MAIN STREET, MS 16

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*Making Conservation
a California Way of Life*

April 1, 2025

Rachel Kwok, Environmental Planner
City of Santa Monica
1658 Main Street
Santa Monica, CA 90410

RE: Memorial Park Redevelopment
and Expansion Project– Notice of
Preparation (NOP)
SCH #2025021055
GTS #07-LA-2025-04755
LA-10/PM 2.632

Dear Rachel Kwok,

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project. The Project consists of renovating and expanding Memorial Park to meet an increasing demand for recreational activities. The proposed Project would combine the existing 10.3-acre Memorial Park with the 2.9-acre former Fisher Lumber site (currently the City of Santa Monica's Public Landscape Division (PLD) Colorado Yards) to create a 13.2-acre expanded park. With a focus on better serving community needs, the proposed Project would develop modernized public recreation facilities, improved accessibility to park amenities, and enhanced community gathering spaces.

Key components of the proposed Project include the following, which will be developed in phases:

- Two synthetic turf combo fields (two playing fields per combo field)
- Three natural grass youth fields (one fast-pitch softball and two baseball fields)
- Four rooftop tennis/pickleball courts
- A new community hub building and the replacement of the children's playground with a new universally accessible playground
- Renovation and expansion of the skate park
- Replacement of the existing community recreation center with a new community recreation center
- New covered parking lot and passenger loading zone

After reviewing the NOP, Caltrans has the following comments:

1-1 Caltrans supports design elements to enhance pedestrian access and encourages the Project to consider connectivity with the surrounding bike network and the Metro Gold/E Line. As the Project's amenities are likely to attract non-motorized users, it is recommended for future analysis to include figures and detailed information on the types of bicycle parking and storage facilities that will be incorporated into the proposed site.

1-2 For any project to help the State of California achieve its goals to improve health and reduce greenhouse gases (GHG), it is recommended to reduce Vehicle Miles Traveled (VMT) through the implementation of Transportation Demand Management (TDM) strategies as an alternative to supplying excess parking. Research looking at the relationship between land-use, parking, and transportation indicates that the amount of car parking supplied can undermine a project's ability to encourage public transit and active modes of transportation. Wherever possible, adding electrical car charging spaces would encourage the usage of plug-in hybrid vehicles (PHEVs) or fully electric vehicles (BEVs), which can help to reduce tailpipe emissions, minimize reliance on fuel, and direct resources towards alternatives for single-occupancy vehicles.

Caltrans looks forward to reviewing a more refined project proposal in the next phase, and please consider us a resource when considering potential pedestrian- and bicycle-friendly infrastructure.

If you have any questions, please contact project coordinator Frances Duong, at frances.duong@dot.ca.gov and refer to GTS #07-LA-2025-04755.

Sincerely,



Miya Edmonson
LDR/CEQA Branch Chief

Cc: State Clearinghouse

From: [Terry Saucier](#)
To: [Rachel Kwok](#)
Cc: [Recreation and Arts Department](#); [Environment Mailbox](#); [Clerk Mailbox](#); [councilmtgitems](#)
Subject: Public Comments for the Memorial Park Redevelopment and Expansion Project
Date: Tuesday, April 1, 2025 2:20:14 PM
Attachments: [Letter to City of Santa Monica Public Comments Memorial Park 4-1-25.pdf](#)

EXTERNAL

Good afternoon Ms. Kwok:

Attached please find our comments regarding the two synthetic turf playing fields proposed at Memorial Park.

We hope Santa Monica will thoroughly examine the negative impacts of artificial turf on our health, the environment and wildlife, and replace the two proposed synthetic turf fields with nature-based solutions - real natural grass.

Thank you for your consideration.

Best regards,

Terry Saucier
SoCal Stop Artificial Turf Task Force, Chair

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Albert Einstein "Look deep into nature, and then you will understand everything better. Try not to become a man of success, but rather try to become a man of value..."

<https://climate.nasa.gov/>

<https://www.climaterealityproject.org/>

Date: April 1, 2025

To: Rachel Kwok, Environmental Planner, City of Santa Monica, City of Planning Division

Re: Public Comments Draft EIR report for **Memorial Park Redevelopment & Expansion Project**
Request City of Santa Monica use real natural grass not artificial turf for 2 proposed multi-purpose fields

Thank you for the opportunity to submit these comments on behalf of the SoCal Stop Artificial Turf Task Force, a coalition that is working statewide and with officials in Los Angeles to support a ban on all new artificial turf installations. **We urge you to choose natural grass playing fields for the 2 multi-sport fields that are being proposed at Memorial Project.** The EIR needs to look at the full impacts of artificial turf on our health, the environment and wildlife. There are many reasons we need to transition away from artificial turf plastic playing fields.

2-1 We now recognize that artificial turf is manufactured with petrochemicals, and the manufacturing process uses harmful per- and polyfluoroalkyl (PFAS) substances and other hazardous chemicals. These PFAS “forever” chemicals are known carcinogens, neurotoxins, and hormone disruptors. Children and athletes who play on artificial turf are at higher risk of exposure and because PFAS chemicals bioaccumulate, it is especially harmful to children who are still developing. In fact the [Department of Toxic Substance Control](#) is currently researching chemicals of concern in artificial turf.

2-2 Artificial turf pollutes local waters, soil, and air with toxic chemicals and microplastics. Toxic chemicals can leach into the groundwater, contaminating drinking water. The EPA has recently reported that there is no safe amount of PFOA or PFOS (types of PFAS) in drinking water, and both have consistently been found in artificial turf. Toxic runoff from artificial turf contaminates rivers, lakes, and oceans with microplastics as well as PFAS. Recent studies have found that 12 to 15% of microplastics in world’s oceans are from artificial turf. The California Coastal Commission told UC Santa Barbara ([13 Dec 2023, UCS-NOID-0002-23](#)) that they could not use artificial turf on its 3-acre baseball fields and determined synthetic turf is not superior to natural grass, or sustainable.

2-3 Artificial turf is too hot, too hard, and may come with liability Issues. It can reach temperatures up to 80° higher than the air temperature, readily reaching **160°F or 180°F and more**. This can lead to serious thermal burns and heat stress. It has also been found to cause a “heat island effect,” raising the surrounding temperature in the local environment. Turf burns from friction and non-contact lower extremity injuries are also more frequent on synthetic grass.

2-4 Artificial turf must also be regularly cleaned of contaminants. Cooling and cleaning of artificial turf can require more water than would be used for the maintenance of natural, drought-tolerant grasses.

2-5 Unlike natural grasses and surfaces, artificial turf is an impervious surface (per State of California and US EPA), negatively affecting stormwater capture and increasing the risk of flooding. Additionally, because it is made of mixed plastic materials, artificial turf will never be economically viable for recycling. At the end of its 8-
2-6 to-15-year lifecycle it is sent to a landfill, illegally dumped, or sent out of state to be incinerated, where it will continue to pollute the environment. Artificial turf also off-gasses ethylene and methane (contributing to the climate crisis) versus real grasses and plants, which serve as a carbon sink. Additionally, with the passing of SB676 some California cities have already implemented artificial turf bans e.g., Carmel, Millbrae and San Marino, and others are considering pursuing regulations and bans including Los Angeles in [CF 24-0602](#).

2-7 Nothing lives in plastic grass. California is one of the world’s 36 biodiversity hotspots with more native plant species than any other state in the U.S. Not only does artificial turf not support life, it actually kills the soil and the living organisms in it. Artificial turf takes away habitat from insects, birds, and local wildlife, contributing to the loss of biodiversity. Studies also show that children benefit from interactions with natural surfaces and nature.

2-8 Artificial turf playing fields cost more than natural grass fields. Studies show that over time, artificial turf can cost 2 to 4 times more than properly installed and maintained natural grass fields; synthetic turf is a poor investment. When comparing natural grass playing fields to artificial turf, it is important to compare the entire product life cycle including the capital cost of installation, annual maintenance, sod replacement as needed for natural fields, and surface/in-fill replacement of the synthetic fields, as well as disposal of artificial turf (removal, transport, and landfill fees).

Santa Monica is a leader in sustainability and now more than ever, we need real world solutions that take into account our health, the environment and wildlife. Protect Santa Monica residents and future generations 1) examine the full impacts and costs of using artificial turf and 2) change course and choose real natural grass for the two multi-purpose fields.

Respectfully,

Terry Saucier

SoCal Stop Artificial Turf Task Force, Chair

For further information and resources visit: https://www.ncsa.la/artificial_turf

CC: City Clerk

Recreation and Arts Department

Environmental Planning

From: [D Woelke](#)
To: [Recreation and Arts Department](#); [Environment Mailbox](#); [Rachel Kwok](#); [councilmtgitems](#)
Cc: [Clerk Mailbox](#); [Noe Mendoza](#)
Subject: Re: For the public record: Memorial Park Redevelopment and Expansion Project
Date: Monday, March 17, 2025 5:08:19 PM
Attachments: [image.png](#)
[Santa Monica playground.pdf](#)
[image.png](#)
[Santa Monica 12 Mar 2025.pdf](#)

EXTERNAL

Good evening:

Attached please find our comments regarding the proposed playground at Memorial Park.

Kindly distribute copies electronically so that those who wish to avail themselves of source citations may do so.

It is our hope that Santa Monica chooses natural solutions, and moves away from products that induce climate change, negatively impact biodiversity and contribute to the tsunami of toxic and carcinogenic plastic waste.

We would be happy to answer any questions or discuss any of the points raised in the attached document or any other aspect related to synthetic turf or playground surfacing, as these comments are directed more towards the environmental impacts.

Best regards,

Dianne Woelke MSN, Board Member
Safe Healthy Playing Fields, Inc.

<https://www.safehealthyplayingfields.org>

SHPFI is an all-volunteer nonprofit 501-c-3



On Mar 11, 2025, at 11:01 PM, D Woelke <dmwoelke@gmail.com> wrote:

Good morning:

Attached please find our comments regarding the proposed synthetic turf playing fields for the above project. We will submit comments regarding the proposed playground separately.

Kindly distribute copies electronically so that those who wish to avail themselves of source citations may do so.

It is our hope that Santa Monica redirects, chooses natural solutions, and moves away from products that induce climate change, negatively impact biodiversity and contribute to the tsunami of toxic and carcinogenic plastic waste.

We would be happy to answer any questions or discuss any of the points raised in the attached document or any other aspect related to synthetic turf, as these comments are directed more towards the environmental impacts.

Best regards,

Dianne Woelke MSN, Board Member
Safe Healthy Playing Fields, Inc.

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SHPFI is an all-volunteer nonprofit 501-c-3



Safe Healthy Playing Fields Inc.



www.safehealthyplayingfields.org

12 March 2025

Memorial Park Redevelopment and Expansion Project

Santa Monica City Council, Environmental Planning and Recreation and Arts Departments:

Thank you for the opportunity to submit these comments on behalf of Safe Healthy Playing Fields, Inc (SHPFI).

SHFPI is an all-volunteer 501-c-3 non-profit. We are committed to educating communities, policy-makers and elected officials about the health, safety and financial realities of plastic fields versus grass fields and other synthetic surfaces for their parks and schools. Our constituency ranges from concerned individuals to community and civic organizations, legal, healthcare and science professionals, municipal leaders and state legislators.

SHPFI is in support of full and meaningful environmental impact review (EIR) under the California Environmental Quality Act (CEQA). Full transparency, disclosure, and a commitment to true environmental safety and to all who would be exposed to the toxic and carcinogenic chemicals known to exist in this fossil fuel-based petrochemical plastic product, whether on playing fields or used in landscaping.^{1,2} A full EIR is necessary due to multiple factors, including, but not limit to:

- Significant environmental impacts that cannot be mitigated
- Unusual circumstances
- Cumulative effects
- Greenhouse gas emissions
- Hydrology/water impacts
- Viable alternatives
- Awareness of legislative and regulatory schemes
- Awareness of the current state of science

Additionally, the use of synthetic is in direct conflict with many of Santa Monica's own ordinances.

¹ Siegela, KR, Murraya, BR, Gearhart, J, Kassotis, CD (2024). *"In vitro endocrine and cardiometabolic toxicity associated with artificial turf materials."* Environmental Toxicology and Pharmacology; (111), 104562. <https://doi.org/10.1016/j.etap.2024.104562>

² Kassotis, C (23 Sep 2024). *"Endocrine and cardiometabolic toxicity of artificial turf associated materials."* Video of presentation at NYU Langone Health symposium on plastics research. <https://www.youtube.com/watch?v=q8MDXyQKnFA>

WORRIED ABOUT PLASTIC WASTE?

A synthetic turf field is the equivalent of



3.2 million plastic bags



46 million plastic straws

Santa Monica's use of synthetic turf conflicts with:

2011 – Bag Ban

2014 – Zero Waste Plan

2017 – Commitment to Paris Climate Agreement Goals

2018 – Single Use Plastics Ban

2019 – Climate Action Plan

Synthetic turf is most often made from low density polyethylene, the same material as straws and plastic bags. It is the most globally produced and discarded fossil fuel-based petrochemical plastic.

As calculated by the Martha's Vineyard Conservancy, a single regulation sized plastic playing field is the equivalent of 3.2 million plastic bags, or 42 million plastic straws.³

Microplastics:

California's Statewide Microplastics Strategy - Senate Bill No.1263 (Chapter 609), was enacted in 2018.⁴ In addition, CA DTSC has announced its intent to add Microplastics to its Candidate Chemicals List for regulation.⁵

A 2017 study found that a single synthetic turf field loses 0.5 to 0.8% of its blades annually. This estimate is ten times lower than a previous Danish study (0.8 kg/m²). This equates to 2,000 to 3,000 pounds of microplastic blade loss per year per field.^{6,7} Newer playing fields that do not require infill poured on top of the synthetic carpet are

³ Doyle, M, Slavin, D, Thomson, R (29 Jan 2019). "Numbers flawed in turf vs. grass debate." Martha's Vineyard Times.

<https://www.mvtimes.com/2019/01/29/numbers-flawed-turf-vs-grass-debate/>

⁴ Senate Bill No. 1263 (2018). "CHAPTER 609: An act to add Chapter 3.2 (commencing with Section 35635) to Division 26.5 of the Public Resources Code, relating to pollution. State of California.

https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB1263

⁵ Safer Consumer Product Program (2023). "Proposed Addition to the Candidate Chemicals List: Microplastics." California Department of Toxic Substances Control.

https://dtsc.ca.gov/scp/candidate-chemical-list_microplastics/

⁶ Hann, S et al (2018). "Investigating Options for Reducing Releases in the Aquatic Environment of Microplastics Emitted by (but not Intentionally Added in) Products." Eunomia, United Kingdom.

https://www.eunomia.co.uk/case_study/measuring-impacts-of-microplastics/

⁷ CA DTSC (27 Aug 2024). Slide deck, presentation on Candidate Chemicals in Artificial Turf. CA EPA.

https://dtsc.ca.gov/wp-content/uploads/sites/31/2024/09/Artificial-Turf-Workshop-Slides_DTSC_Accessible.pdf

more densely woven, may have double backing,⁸ and have the potential for significantly greater microplastic blade and carpet backing loss to the environment.

Microplastics

- Plastics are synthetic materials made from organic polymers and variety of additives
- Microplastics - small pieces of plastic with a maximum dimension of 5 mm
- Artificial turf is a source of secondary microplastics
 - 0.5% to 0.8% of artificial turf fiber loss per year due to microplastic weathering = 2,000 to 3,000 pounds per year of escaped microplastics
- **Significant exposure potential**
 - Persistent and mobile in environment
 - Widespread exposure for humans and non-human organisms



SAFER CONSUMER PRODUCTS PROGRAM • DEPARTMENT OF TOXIC SUBSTANCES CONTROL

Microplastic synthetic turf blades have been found in Lake Tahoe, where researchers found high levels of polyethylene and polypropylene in the lake and “...recorded plastics concentrations more than three times higher than those sampled using a similar method in the North Atlantic subtropical gyre.”^{9,10,11}

Synthetic turf fibers have been found in the world’s oceans, ranging from 12 to over 15 percent of the microplastics found, as reported by researchers in Spain, China, Japan, Australia and Canada. Synthetic turf blades represent as much as 25% of microplastics in surface waters.¹²

This research lead to the California Coastal Commission's decision to not allow synthetic turf at UC Santa Barbara (13 Dec 2023) and stating synthetic turf is not superior to natural grass and is not sustainable.

⁸ TenCate Pivot (2024). Face weight of 120 ounces per yard², double backing, total weight 147.5 ounces per yard².

https://geosurfaces.com/wp-content/uploads/2024/05/PIVOT_1.5_Spec-1.pdf

⁹ Schultz, Madison. 2022. “UC Davis Environmental Research Center fundamental at Lake Tahoe.” Sierra Sun. Accessed 26 Oct 2023.

<https://www.sierrasun.com/news/uc-davis-environmental-research-center-fundamental-at-lake-tahoe/>

¹⁰ Spencer, C (2023). “Lake Tahoe has higher concentration of microplastics than ocean trash heap.” LA Times.

<https://www.latimes.com/california/story/2023-07-14/lake-tahoe-troubling-concentration-microplastics>

¹¹ Personal email communication from research staff at Tahoe Environmental Research Center. [Lake Tahoe Email](#)

¹² De Haan, WP, Quintana, R, Vilas, C, Cózar, A et al (1 Oct 2023). “The dark side of artificial greening: Plastic turfs as widespread pollutants of aquatic environments.” Environmental Pollution; 334, 122094. <https://www.sciencedirect.com/science/article/pii/S0269749123010965?via%3Dihub>

“Section 21080.5(d)(2)(A) of CEQA prohibits the Commission from approving a proposed development if there are feasible alternatives or feasible mitigation measures available that would substantially lessen any significant adverse effect which the activity may have on the environment. For the reasons discussed in this report, the Commission has conditioned the NOID to require design and implementation of Final Revised Project Plans that do not include the installation of artificial turf.”¹³

Additional loss of microplastics from the backing (approximately 438 pounds/per field annually), exclusive of the underlayment pad and infill.¹⁴

3.1-1

Microplastics both leach and adsorb toxic chemicals and bacteria in the environment, putting the food chain at risk.

3.1-2

With virtually all plastic ever made still in existence, the impact on the environment, ecosystems and biodiversity loss from the chemical leachate and microplastics is immense. From zooplankton, krill, whales, bees, and terrestrial animals of the Americas, macro-, micro- and nanoplastics are impacting aquatic and wildlife, and even our pets. Synthetic turf and microplastics have caused a decrease in bird populations, accumulation of microplastics on bees, and negatively impacts ocean habitats and biodiversity both above and below ground. Research from 2021 estimated that >1500 species have ingested microplastics.¹⁵ Found from the peak of Mount Everest, to the depths of the Mariana trench, microplastics and now recently, been found in high levels in air exhaled by dolphins via their blowholes.¹⁶

It is estimated that roughly one million seabirds and 100,000 marine mammals are killed annually from plastic in our oceans.

In its 2024 Report, the World Wildlife Fund reports a loss of 73% of wildlife populations in the period from 1970 to 2020.¹⁷ From cradle to grave, fossil fuel extraction to production,

¹³ California Coastal Commission (13 Dec 2023). “Notice of Impending Development UCS-NOID-0002-23 (Baseball Stadium Turf).”

<https://documents.coastal.ca.gov/reports/2023/12/W13.1a/W13.1a-12-2023-report.pdf>

¹⁴ Kole, PJ, Van Belleghem, F, Stoorvogel, JJ, Ragas, A, Löhr, AJ (10 Dec 2023). “Tire granulate on the loose: How much escapes turf? A systematic literature review.” Science of The Total Environment; (903)166221.

<https://doi.org/10.1016/j.scitotenv.2023.166221>

¹⁵ Santos, RG, Machovsky-Capuska, GE, Andrades, R (2021). “Plastic Ingestion as an Evolutionary Trap: Toward a Holistic Understanding.” Science: 373, 56–60. <https://pubmed.ncbi.nlm.nih.gov/34210877/>

¹⁶ Dziobak, MK, Fahlman, A, Wells, RS (16 Oct 2024). “First evidence of microplastic inhalation among free-ranging small cetaceans.” PlosOne.

<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0309377>

¹⁷ World Wildlife Federation (2024). “Living Planet Report: 2024. Nature is Disappearing: The Average Size of Wildlife Populations Has Fallen By a Staggering 73%.”

<https://livingplanet.panda.org/en-US/>

manufacturing, use and disposal, plastics impact healthy soil, water, ecosystems, human health and wildlife.

3.1-3

Any commitment to not use used tire crumb infill or other microplastic infill poured on top of the plastic turf carpet is a distraction meant for all to believe it is the only concern related to synthetic turf. Often sourced outside of the US, plant based synthetic turf infills can contain pesticides, PFAS, heavy metals and more. Because they add excess nutrients to soil and water, they have been implicated in increased frequency and severity of toxic algal blooms.¹⁸



3.1-4

Drainage systems, with or without filters, nor straw wattles or catchment basins, will solve the issues of micro-, meso-, or nanoplastics. These plastic fragments readily loft into the air and can travel for miles and reloit over and over. The same applies to these plastic fragments in water, carrying their toxic payloads with them.¹⁹

3.1-5

Microplastics not only leach chemicals, including endocrine disrupting forever PFAS, they adsorb other chemicals and bacteria, posing particular risk to the food chain. Even the best BMPs (Best Management Practices) will capture only a small percentage of the microplastics and virtually none of the nanoplastics, PFAS and other toxic chemicals from synthetic turf. Drainage systems are not expensive granulated activated carbon (GAC) filters.

¹⁸ US EPA (1 Feb 2024). *Nutrients and Harmful Algal Blooms Research*.
<https://www.epa.gov/water-research/nutrients-and-harmful-algal-blooms-research>

¹⁹ Lambert, S, Vercauteren, M, Catarino, AI et al (15 June 2024). "Aerosolization of micro- and nanoplastics via sea spray: Investigating the role of polymer type, size, and concentration, and potential implications for human exposure." *Environmental Pollution*; (351), 124105
<https://www.sciencedirect.com/science/article/abs/pii/S0269749124008194>

Toxic Chemicals:

As outlined in the 27 Aug 2024 presentation by the California Dept. of Toxic Substances Control (DTSC), there are multiple chemical classes of concern in synthetic turf.²⁰ Some of these chemicals include (not comprehensive):

- PFAS^{21,22,23,24,25}
- Phthalates^{26,27,28}

²⁰ Dept. of Toxic Substances Control. (27 Aug 2024). California EPA.
[Presentation Slides](#)

²¹ Glüge, J, Scheringer, M, Cousins, IA, DeWitt, JC et al (30 Oct 2020). “An overview of the uses of per- and polyfluoroalkyl substances (PFAS).” *Environ Sci Process Impacts*;22(12):2345–2373.
<https://pmc.ncbi.nlm.nih.gov/articles/PMC7784712/>

²² Woelke, D (Nov 2024). Compilation of PFAS leachate testing from synthetic turf results.
[PFAS leachate from synthetic turf](#)

²³ Dept. of Toxic Substances Control (27 Aug 2024). “Background Document on Candidate Chemicals in Artificial Turf.” California EPA.
<https://dtsc.ca.gov/wp-content/uploads/sites/31/2024/07/Background-Document-on-Candidate-Chemicals-in-Artificial-Turf.pdf>

²⁴ El DuPont de Nemours (2013)
<https://patents.justia.com/patent/8568874>

²⁵ Multi-organizational fact sheet (2022). “PFAS polymers pose serious health and environmental threats.”
https://drive.google.com/file/d/1fJDsNTIPp-YMT_7aQ0TDvTaLg2IB5PMA/view?usp=drivesdk

²⁶ Ryan-Ndegwa, S, Zamani, R, Martins, T (17 Dec 2024). “Exploring the Human Health Impact of Artificial Turf Worldwide: A Systematic Review.” *Environ Health Insights*; (18),11786302241306291
<https://doi.org/10.1177/11786302241306291>

²⁷ Safer Consumer Products Program (Aug 2024). “Background Document on Candidate Chemicals in Artificial Turf.” Dept. of Toxic Substances Control, California Environmental Protection Agency.
<https://dtsc.ca.gov/wp-content/uploads/sites/31/2024/07/Background-Document-on-Candidate-Chemicals-in-Artificial-Turf.pdf>

²⁸ IE DuPont de Nemours (2015).
<https://patents.justia.com/patent/9017788>

3.1-6
(cont.)

- Latex (including styrene butadiene)^{29,30,31,32}

²⁹ Tomarin, SA (1984). Patent
<https://patents.justia.com/patent/4497853>

³⁰ Sick, S (2017). Patent application
<https://patents.justia.com/search?q=FLOOR+PAVEMENT+STRUCTURE+WITH+GEL+L>

³¹ Sick, S (2021). Patent
<https://patents.justia.com/patent/10968565>

³² Staff writer (3 Jul 2024). “*Artificial Turf Fields.*” Institute For Climate Change, Environmental Health, and Exposomics. Mt. Sinai ICAHN School of Medicine.
[Exposomic Research](#)

3.1-6
(cont.)

- Naptha^{18,,33,34}
- Siloxanes^{35,36}
- Talc^{37,38}
- Di/Isocyanates³⁹
- Formaldehyde²⁹
- Fungicides²⁶
- Flame retardants²⁶
- Coal fly ash²⁶
- Anti-Microbial agents^{40,41,42}
- Dibutyltin Ethylene glycol⁴³

³³ Sick, S (2017) patent application
<https://patents.justia.com/patent/8568874>

³⁴ Modern Fibers Inc (1984) patent
<https://patents.justia.com/patent/4617208>

³⁵ Ferreira T, Homem V, Cereceda-Balic F et al (2024). "Are volatile methylsiloxanes in downcycled tire microplastics? Levels and human exposure estimation in synthetic turf football fields." Environ Sci Pollut Res Int. 10.1007/s11356-024-31832-1
<https://link.springer.com/article/10.1007/s11356-024-31832-1>

³⁶ Dow Global Technologies, Inc (2015) patent
<https://patents.justia.com/patent/9040627>

³⁷ Sick, S (2015) patent
<https://patents.justia.com/patent/10968565>

³⁸ Dow Global Technologies, Inc (2008) patent application
<https://patents.justia.com/patent/20100279032>

³⁹ Sick, S (2021) patent
<https://patents.justia.com/patent/11180894>

⁴⁰ Dow Chemical (2017).
<https://patents.justia.com/patent/20190078235>

⁴¹ Triclosan Fact Sheet. BioMonitoring California.
<https://biomonitoring.ca.gov/sites/default/files/downloads/TriclosanFactSheet.pdf>

⁴² Verdú, I, Gonzalez-Pleiter, M, Leganés, F et al (Mar 2021). "Microplastics can act as vector of the biocide triclosan exerting damage to freshwater microalgae." Chemosphere.
<https://www.sciencedirect.com/science/article/abs/pii/S0045653520333907>

⁴³ Sick (2017)
<https://patents.google.com/patent/WO2018122346A1>

- UV stabilizers^{30,44,45}
- Anti-Static Treatments³⁰
- Colorants

All synthetic turf tested by academic institutions and independent third party laboratories using proper methods, techniques and reporting limits have found PFAS in synthetic turf.^{46,47}

PFOS was found on the hands of young soccer players who played on synthetic turf in a small pilot study in San Diego in the summer of 2023.⁴⁸ That study is currently being replicated by the Kassotis Lab, Wayne State University, with 50 student athletes and multiple playing fields.

Of high significance, a study done by the Kassotis Lab, in conjunction with The Ecology Center (Ann Arbor, MI), "*In vitro endocrine and cardiometabolic toxicity associated with artificial turf materials*" published in the October 2024 edition of Environmental Toxicology and Pharmacology, demonstrates the cytotoxic effects of chemicals in synthetic turf to endocrine organs and cardiac development and function. This study also demonstrates the importance of looking at combined chemical exposures associated with a given product.⁴⁹ No one is ever exposed to one chemical- certainly not with plastics and definitely not with synthetic turf.

⁴⁴ International Pollutant Elimination Network. "*Communications on Recent Research: Recent Research on UV-328 Further Proves its Potential to Undergo Long-Range Transport, Bioaccumulate, and Cause Harm.*"

https://ipen.org/sites/default/files/documents/ipen-uv328-research-update-v1_2-en.pdf

⁴⁵ Awonaike, B, Lei, YD, Parajulee, A, Wania, F (1 Dec 2021). "*Phase partitioning, transport and sources of Benzotriazole Ultraviolet Stabilizers during a runoff event.*" Water Research X; (13),100115

<https://www.sciencedirect.com/science/article/pii/S2589914721000281#:~:text=High%20levels%20of%20UV328%20and%20UV234%20were,a%20sink%20than%20a%20source%20of%20BT%20UVs>

⁴⁶ Whitehead, H. D. (2023). "*Development of Analytical Methods for Highly Selective and Sensitive Analytical Analysis of Compounds Relevant to Human Health and the Environment.*" Version 1. University of Notre Dame.

<https://doi.org/10.7274/bg257d30j3m>

⁴⁷ Pollard, L, Massey, R (Aug 2024). "*Per- and Poly-fluoroalkyl Substances (PFAS) in Artificial Turf: Academic, municipal, and other testing efforts.*" Lowell Center for Sustainability, University of Massachusetts, Lowell.

https://www.uml.edu/docs/PFAS%20in%20Artificial%20Turf%20-%20Academic%20Municipal%20%26%20Other%20Tests%20Aug%202024_tcm18-386957.pdf

⁴⁸ Amenabar, T (Mar 2024). "*Study eyes safety of turf fields for kids: Scientists team up with San Diego Surf soccer club to discover if 'forever chemicals' pose risk.*" San Diego Union Tribune, originally published in the Washington Post.

https://enewspaper.sandiegouniontribune.com/infinity/article_popover_share.aspx?guid=7f93edcb-cd5b-4f9d-b8e4-ed57343daefc&share=true

⁴⁹ Siegela, KR, Murraya, BR, Gearhart, J, Kassotis, CD (2024). "*In vitro endocrine and cardiometabolic toxicity associated with artificial turf materials.*" Environmental Toxicology and Pharmacology; (111), 104562. <https://doi.org/10.1016/j.etap.2024.104562>

With chemicals of concern in both children's products and synthetic turf currently under review by the California Department of Toxic Substances Control (DTSC), it is reasonable to expect markedly lower acceptable limits for PFAS and additional chemicals.

If the industry were able to eliminate PFAS from its products some day, it would still be plastic, with myriad toxic, carcinogenic and hazardous chemicals.

Regulation in process in CA!

Early chemgrass, made without PFAS, was brittle. The synthetic turf industry has had 60 years to self-regulate. Were it capable of doing so, it would not be under review for regulation by DTSC at this time.

The California Department of Toxic Substances Control has determined it will be bringing synthetic turf under regulation for per- and polyfluoroalkyl substances (PFAS) that have been found in 100% of synthetic turf tested by academic, non-profit organizations and independent testing in commercial laboratories to date.^{50,51} They are also reviewing information on flame retardants, endocrine disrupting and neurotoxic phthalates, antimicrobials, colorants, and more, and will make additional announcements at a future date.^{52,53,54,55,56} Regulation will have major implications regarding disposal of these fossil fuel-based petrochemical products as well as the ability to replace these fields in the future.

Non-essential uses of PFASs are, well, non-essential. Phasing them out can protect human health and the environment. Eliminating unnecessary sources of PFASs is more protective and far less expensive than trying to deal with these persistent chemicals after they are already in products and the environment.

[CA DTSC PFAS fact sheet](#)

⁵⁰ Whitehead, H. D. (2023). *"Development of Analytical Methods for Highly Selective and Sensitive Analytical Analysis of Compounds Relevant to Human Health and the Environment."* Version 1. University of Notre Dame.

<https://doi.org/10.7274/bg257d30j3m>

⁵¹ Pollard, L, Massey, R (Aug 2024). *"Per- and Poly-fluoroalkyl Substances (PFAS) in Artificial Turf: Academic, municipal, and other testing efforts."* Lowell Center for Sustainability, University of Massachusetts, Lowell.
https://www.uml.edu/docs/PFAS%20in%20Artificial%20Turf%20-%20Academic%20Municipal%20%26%20Other%20Tests%20Aug%202024_tcm18-386957.pdf

⁵² DTSC (27 Aug 2024). *"Virtual Workshop on Candidate Chemicals in Artificial Turf"* [Meeting Recording](#)

⁵³ DTSC (27 Aug 2024). [Background Document](#)

⁵⁴ DTSC (27 Aug 2024). [Meeting Agenda](#)

⁵⁵ DTSC (27 Aug 2024). [Presentation Slides](#)

⁵⁶ DTSC (27 Aug 2024). [CalSAFER website](#)

Based on the current state of science, installation of synthetic turf is knowingly and willfully choosing to expose children, adults, bystanders, maintenance workers, vulnerable populations, wild and aquatic life to an increased risk of disease, disability, and even death due to the toxic and carcinogenic chemicals found in, and leaching to air, water and soil from synthetic turf.

In addition to CA DTSC, the City of Los Angeles is working on a highly supported ordinance that would ultimately ban synthetic turf.⁵⁷

The cities of Millbrae and San Marino have enacted ordinances banning synthetic turf under SB676- Allen (2023)⁵⁸ and additional cities are currently considering taking action.

In addition to the CA Statewide Microplastics Strategy - Senate Bill No.1263 (Chapter 609, 2018),⁵⁹ CA DTSC has announced its intent to add Microplastics to the Candidate Chemicals List.⁶⁰

Impervious surfacing:

“Grass doesn’t waste water. People do!”

Dr. James Baird, UC Riverside Turfgrass Management Program

Plastic turf does not save water: Synthetic turf requires approximately 989 gallons of water to produce 1 square meter of turf⁶¹ estimated to be the equivalent of watering a square meter of natural grass for 18 years. Additional water is required for cooling to a safe temperature for playing as well as for cleaning pollution, bodily fluids (like blood and vomit), animal waste, mold, bacteria and more from plastic turf and is often a condition of warranty.

Per various maintenance manuals, cleaning of synthetic turf requires the use of toxic chemicals, which will be added to the toxic run-off that leaches from the plastic to soil, air and water.

⁵⁷ City of Los Angeles (2024-present). “Synthetic Grass / Artificial Turf / Polyfluoroalkyl Substances (PFAS) / Forever Chemicals / Health and Environmental Risks / Drought-Friendly Landscaping.” <https://cityclerk.lacity.org/lacityclerkconnect/index.cfm?fa=ccfi.viewrecord&cfnumber=24-0602>

⁵⁸ Allen, B (8 Oct 2023). “Allen. Local ordinances and regulations: drought-tolerant landscaping An act to amend Section 53087.7 of the Government Code, relating to local government.” https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=202320240SB676

⁵⁹ Senate Bill No. 1263 (2018). “CHAPTER 609: An act to add Chapter 3.2 (commencing with Section 35635) to Division 26.5 of the Public Resources Code, relating to pollution. State of California.” https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB1263

⁶⁰ Safer Consumer Product Program (2023). “Proposed Addition to the Candidate Chemicals List: Microplastics.” California Department of Toxic Substances Control. https://dtsc.ca.gov/scp/candidate-chemical-list_microplastics/

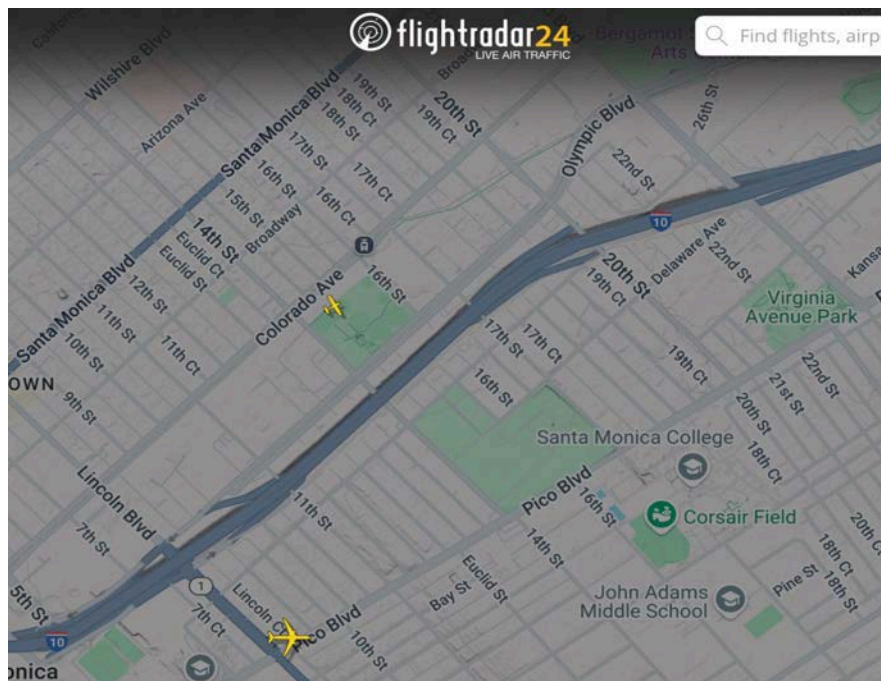
⁶¹ Waterwise UK. “How to save water: Artificial Grass’s Footprint.” <https://www.waterwise.org.uk/save-water/>

Synthetic turf is an **impervious, or impermeable, surface**, despite what the industry tells you. The US EPA and the State of California are clear on this issue.⁶²

*“...areas such as gravel roads...that will be compacted through design or use to reduce their impermeability.” It further has defined impervious surfaces as...[a]ny surface that prevents or significantly impedes the infiltration of water into the underlying soil. This can include but is not limited to: roads, driveways, parking areas and other areas created using non porous material; buildings, rooftops, structures, **artificial turf** and compacted gravel or soil.”*

“Pollutants from aerial and terrestrial sources accumulate on impervious surfaces until runoff from a precipitation event carries sediment, nutrients, metals, and pesticides into stormwater drains and directly to local water bodies. As impervious surfaces increase, stormwater runoff increases in quantity, speed, temperature, and pollutant load. When impervious surfaces reach 10–20% of local watershed area, surface runoff doubles and continues to increase until, at 100% impervious surface coverage, runoff is five times that of a forested watershed. Excessive stormwater runoff also increases the potential for flooding.” US EPA Impervious Surface Fact Sheet⁶³

As impervious surfaces, accumulation of particulate matter, jet and leaded AVgas fuel from the multiple flight paths over Santa Monica bring even more need for concern.



⁶² US EPA, MS4 General Permit Appendix A, Definitions, Abbreviations and Acronyms, <https://www3.epa.gov/region1/npdes/stormwater/ma/2016fpd/appendix-a-2016-ma-sms4-gp.pdf>

⁶³ US EPA (2020). “EnviroAtlas: Fact Sheet, Percent Impervious Area.” <https://enviroatlas.epa.gov/enviroatlas/DataFactSheets/pdf/ESN/PercentImperviousArea.pdf>

Toxic runoff from synthetic turf contributes 27,000 gallons per one inch of rain per acre of plastic.⁶⁴ It is abundantly clear that, given the amount of synthetic turf currently installed in Santa Monica's parks alone, exclusive of schools, residential and commercial applications, that a massive amount of toxic runoff from synthetic fields is contaminating soil, surface, ground and, eventually, the city's drinking water and even the ocean.

Based on Historic Belmont Park and Airport Park synthetic turf fields alone, and nearly 57 inches of rainfall at San Monica Airport since 2022, these fields have contributed 8,233,650 gallons of toxic runoff to surface and groundwater, and the ocean. The Memorial Park Project would likely more than triple this amount.

How much PFAS is running off of Santa Monica's plastic grass playing fields?⁶⁵

Sample back-of-the-envelope calculation of PFAS contamination of turf grass runoff:

From this work, we assume the average concentration of identified non-polymeric PFAS extracted from turfgrass is about 5 ng/g.

From the internet, an average face weight for synthetic turf grass is around 50 ounces/square yard (<https://artificialturfbyfenix.com/why-synthetic-turf-face-weight-matters/>). There are also approximately 7140 m² of turf grass per standard soccer field (<https://www.footballhistory.org/field.html>). Some unit conversions yield a typical mass of blades on a synthetic turf soccer field to be around 12000 kg.

This means that an extraction similar to the one in this work would yield about 60 mg of PFAS from an entire soccer field. Since rainwater, sunlight and oxygen from the environment would not extract as efficiently as a QuEChERS extraction in the laboratory, we can estimate that this extraction would be the equivalent of five years of environmental exposure. This would indicate that approximately 12 mg of PFAS would be released each year, while the bulk of the polymeric PFAS and the plastic turf itself would remain intact.

Given 12 mg/field entering run-off water from each field and an EPA regulatory limit of around 4 ng/kg for PFOA and PFOS, this yields about 800,000 gallons of water contaminated by each artificial turf grass field annually. For reference, the United States currently has over 12,000 turf grass fields, and is installing new ones at a rate of more than 1,200 per year. (<https://www.nrpa.org/parks-recreation-magazine/2019/may/synthetic-sports-fields-and-the-heat-island-effect/>)

This is intended as only a rough approximation of PFAS load a community might face from a single field to point out the environmental impact of fPPAs in extruded plastic blades, and more thorough estimates can be calculated by the reader.

⁶⁴ Cotrone, V (undated). *"The Role of Trees and Forests in Healthy Watersheds: Managing stormwater, reducing flooding, and improving water quality."* Penn State Extension. <https://extension.psu.edu/the-role-of-trees-and-forests-in-healthy-watersheds>

⁶⁵ Peaslee, GF (27 Aug 2024), Slide deck presentation at DTSC: *"Chemicals of Concern in Synthetic Turf."* [Peaslee, GF. CA DTSC Aug 2024](#)

Heat:

Synthetic turf readily reaches temperatures of 160-180F, regardless of infill type, and has been known to reach over 220F. At a surface temperature of 118°F, a first-degree thermal burn occurs in 15 minutes, becoming a 3rd degree burn (full skin-thickness) in 20 minutes; at a temperature of 140°F, 1st degree burns occur in 3 seconds, and 3rd degree burns in 5 seconds.⁶⁶ Children have required admission to burn and intensive care units treatment of burns sustained on plastic playing surfaces.

An estimated 9,000 student athletes are treated for exertional heat illness each year.⁶⁷ The reduced functional level created by heat from synthetic surfaces, even at reasonable ambient temperatures can contribute to injuries due to compromised functional level.

As the planet heats up, athletes are increasingly impacted by heat related illness by playing on synthetic surfaces. Deaths among high school football players from heat stroke doubled from 2015 to 2017 when compared to the 5 preceding years.⁶⁸ Football players are eleven times more likely to suffer a heat related illness. Playing on synthetic turf is a contributing factor. There is an increasing incidence of heat stroke amongst athletes. Mortality is high and if a child survives heat stroke, their risk for recurrence of heat illness is increased.⁶⁹

As the body heats, it is susceptible to absorbing more chemicals. PFAS have been shown to be absorbable via the skin.⁷⁰

A reduction in hours of use will be increasingly impacted by:

- Climate change- extreme heat and atmospheric river events
- AB 1653- Intercollegiate athletic programs emergency action plans: heat illness: guidelines⁷¹

⁶⁶ Moritz AR, Henriques FC Jr (1947). Original source. *"Studies of thermal injury II: The relative importance of time and surface temperature in the causation of cutaneous burns."* Am J Pathol.; 23: 915-941.

http://www.antiscald.com/index.php?route=information/information&information_id=15

⁶⁷ Kerr, ZY, Casas, DJ, Marshall, SW, Comstock, RD (Jan 2013). *"Epidemiology of exertional heat illness among U.S. high school athletes."* J. Preventive Medicine. pubmed.ncbi.nlm.nih.gov/23253644/

⁶⁸ Wertheim, J (Oct 2022). *"With Hotter Temperatures Come More Football Deaths. And Black high school players are disproportionately affected."* Sports Illustrated. <https://www.si.com/high-school/2022/10/07/football-climate-change-daily-cover>

⁶⁹ UpToDate (2023). *"Heat Stroke in Children."* Online subscription based reference for health care providers. <https://www.uptodate.com/contents/heat-stroke-in-children>

⁷⁰ Ragnarsdóttir, O, Abou-Elwafa Abdallah, M, Harrad, S (June 2024). *"Dermal bioavailability of perfluoroalkyl substances using in vitro 3D human skin equivalent models."* Environment International; 188; 108772.b <https://www.sciencedirect.com/science/article/pii/S0160412024003581?via=ihub>

⁷¹ State of California (8 Oct 2023). *"Assembly Bill No. 1653; CHAPTER 589. An act to amend Section 35179.4 of, and to add Section 35179.8 to, the Education Code, relating to interscholastic athletics."* https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=202320240AB1653

- CIF Rule⁷² - California Interscholastic Federation Rule on air quality/particulate matter

Greenhouse Gas Emissions:

Cal. Code Regs. tit. 14 § 15064.4 (amendments effective 28 Dec 2018):

A good-faith effort, based to the extent possible on scientific and factual data, to describe, to:

- (1) Quantify greenhouse gas emissions resulting from a project; and/or
- (2) Rely on a qualitative analysis or performance-based standards

*“...public agencies **shall not** undertake actions concerning the proposed public project that would have a significant adverse effect or **limit the choice of alternatives** or mitigation measures, before completion of CEQA compliance.”*

*“In determining the significance of a project’s greenhouse gas emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project’s emissions to the effects of climate change. A project’s incremental contribution may be cumulatively considerable even if it appears relatively small compared to statewide, national or global emissions. The agency’s analysis should consider a timeframe that is appropriate for the project. **The agency’s analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes.**”*

State Air Resources Board pursuant to Division 25.5 (commencing with Section 38500) of the Health and Safety Code.

“To maximize public health, environmental, and employment benefits, the lead agency shall require measures that will reduce the emissions of greenhouse gas[s]es in the project area and in the neighboring communities of the baseball park. Not less than 50 percent of the greenhouse gas emissions reductions necessary to achieve the requirements of this clause, excluding the greenhouse gas emissions from residential uses of the project, shall be from local, direct greenhouse gas emissions reduction measures that give consideration to criteria air pollutant and toxic air contaminant emissions reductions, including, but not limited to, any of the following:

- (I) Project design features or onsite reduction measures, or both design features and onsite reduction measures.*
- (II) Off-site reduction measures in the neighboring communities.”*

Senate Bill No. 32 = CHAPTER 249. An act to add Section 38566 to the Health and Safety Code, relating to greenhouse gas[s]es.⁷³

SEC. 2. Section 38566 is added to the Health and Safety Code, to read:

⁷² California Interscholastic Federation (Oct 2023). “CIF Sports Medicine Advisory Committee Statement on Air Quality and Sport Participation. <https://www.cifstate.org/sports-medicine/aqi>

⁷³ California State Legislature (2016). “Senate Bill No. 32 = CHAPTER 249. An act to add Section 38566 to the Health and Safety Code, relating to greenhouse gas[s]es.” https://leginfo.ca.gov/faces/billNavClient.xhtml?search_phrase=4x8x16&bill_id=201520160SB32

"In adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by this division, the state board shall ensure that statewide greenhouse gas emissions are reduced to at least 40 percent below the statewide greenhouse gas emissions limit no later than December 31, 2030."

Synthetic turf off-gasses both methane and ethylene^{74,75} and continues day and night, in ever increasing amounts for the 1,000 years it takes for it to decompose.⁷⁶ Methane traps 90% more heat than carbon dioxide and is 21 times more potent. Land based plastics produce 2 times more methane and 76 times more ethylene than plastics found in waterways and oceans.

The heat islands created by plastic turf playing fields are large enough to be visible from satellites circling our planet. Even if all synthetic turf were removed from Los Angeles today, methane would linger in the atmosphere for approximately 12 years, contributing to climate change and sea level rise for hundreds of years after pollutants have been cleared from the air.⁷⁷

The Lawrence Berkeley National Laboratory released a report in April 2024 finding that the greenhouse emissions from plastics is four times those emitted by the aviation industry.⁷⁸

⁷⁴ Royer, SJ, Ferrón, S, Wilson, ST, Karl, DM (2018). "Production of Methane and Ethylene from Plastic in the Environment." PlosOne 13(8): e0200574.

<https://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0200574&type=printable>

⁷⁵ Royer, SJ (12 Nov 2018). Letter to Mayor M Bowser, Washington DC regarding synthetic turf.

[Letter to Mayor M Bowser](#)

⁷⁶ Chamas, A, Moon, H, Zheng, J (3 Feb 2020). "Degradation Rates of Plastics in the Environment." ACS Sustainable Chemistry & Engineering;(8)9.b

<https://pubs.acs.org/doi/10.1021/acssuschemeng.9b06635>

⁷⁷ National Oceanic and Atmospheric Administration. "Methane."

<https://climate.nasa.gov/vital-signs/methane/?intent=121>

⁷⁸ Karali, N, Khanna, N, Shah, N (12 Apr 2024). "Climate Impact of Primary Plastic Production." Lawrence Berkeley National Laboratory Publications.

<https://escholarship.org/uc/item/12s624vf>



Readily reaching temperatures of 160-180F, synthetic turf creates heat islands so large they extend into surrounding areas and are visible from satellites in space,

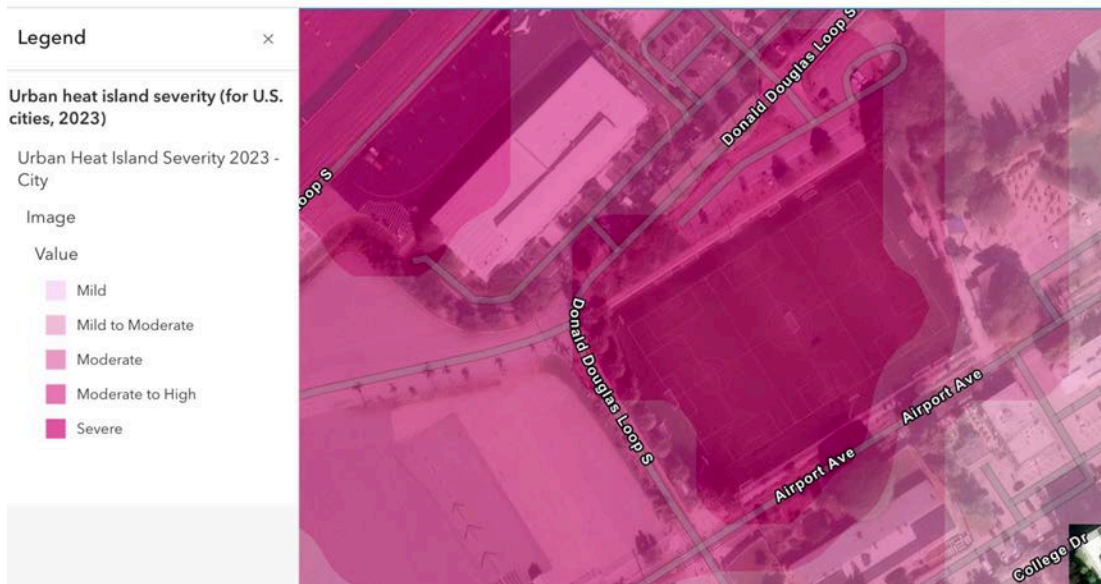
- Methane traps 90% more heat than carbon dioxide.⁷⁹
- Methane is 21 times more potent than carbon dioxide.
- Land based plastics produce 2 times more methane and 76 times more ethylene than plastics in waterways and oceans.⁴¹
- GHG emissions of 527 tons of CO₂e per ten-year use period per 7881m² plastic field.⁸⁰

Heat Island over Airport Park:

⁷⁹ Climate Reality Project (2020). "REPOWER AMERICA®: Methane Stinks: Why Natural Gas is Bad News For The Planet." https://www.climateRealityProject.org/blog/methane-stinks-why-natural-gas-bad-news-planet?_ga=2.52526049.897177029.1647384251-251106713.1647384251

⁸⁰ Magnusson, Simon, Mácsik, Josef (July 2017). "Analysis of Energy Use and Emissions of Greenhouse Gases, Metals and Organic Substances from Construction Materials Used for Artificial Turf." Resources, Conservation and Recycling: (122), Pages 362-372. <https://doi.org/10.1016/j.resconrec.2017.03>.

Urban heat island severity for U.S. cities (web map for app)



Heat Islands over Santa Monica schools

Urban heat island severity for U.S. cities (web map for app)



Not Recyclable:

Less than 6% of plastics are recycled.⁸¹ Made of mixed plastics, synthetic turf is not recyclable,

⁸¹ Dell, J, Enck, J (May 2022). "The Real Truth about the US Plastic Recycling Rate." Beyond Plastics. https://static1.squarespace.com/static/5eda91260bbb7e7a4bf528d8/t/62b2238152acae761414d698/1655841666913/The-Real-Truth-about-the-US-Plastic-Recycling-Rate-2021-Facts-and-Figures-_5-4-22.pdf

is a linear, not a circular product, and does not meet any definition of sustainability. The synthetic turf industry misrepresents its products when they make claims related to sustainability and environmental friendliness. It is not enough to use the vernacular of the day.

Circular products⁸² are “...those products that have reduced or completely no need for virgin resources and are designed with the end of their life in mind.”

The United Nations defines sustainable development⁸³ as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

The UCLA Sustainability Committee⁸⁴ notes: “In simplest terms, sustainability is about our children and our grandchildren, and the world we will leave them”.

The Rutgers Center for Sustainable Materials⁸⁵ definition:

*“Sustainable materials are materials used throughout our consumer and industrial economy that can be produced in required volumes **without depleting non-renewable resources and without disrupting the established steady-state equilibrium of the environment and key natural resource systems.**”*

The reality is, many landfills will not accept the massive amounts of plastic waste synthetic turf fields consist of. Removal of each regulation sized field would result in approximately 200 rolls weighing 2,000 pounds each, then transported 18 rolls per flat bed semi-truck to their disposal site. They are most often dumped on agricultural land or stored in warehouses and listed for resale to unsuspecting customers on Craigslist, Facebook Marketplace and other internet outlets. This is not recycling, but rather kicking the can down the road, leaving future generations to contend with the multiple long term human and environmental health effects from massive quantities of plastic waste.

We cannot stress strongly enough that there is NO independently verifiable “recycling” of synthetic turf anywhere. Again, claims are claims and do not constitute proof.

⁸² “What is a circular product?” Circular Tayside, United Kingdom.
<https://circulartayside.co.uk/what-is-a-circular-product-and-business-model/>

⁸³ United Nations (2024). “Sustainable Development Agenda: What is sustainable development?”
<https://www.un.org/sustainabledevelopment/development-agenda/#1b1981a30bdd8fde2>

⁸⁴ UCLA Sustainability Committee, quoting UN World Commission on Environment and Development
<https://www.sustain.ucla.edu/what-is-sustainability/>

⁸⁵ Rutgers University. “What are Sustainable Materials?” Department of Materials Science and Engineering, Center for Sustainable Materials. Accessed 26 Jan 2025.
<https://mse.rutgers.edu/center-sustainable-materials>



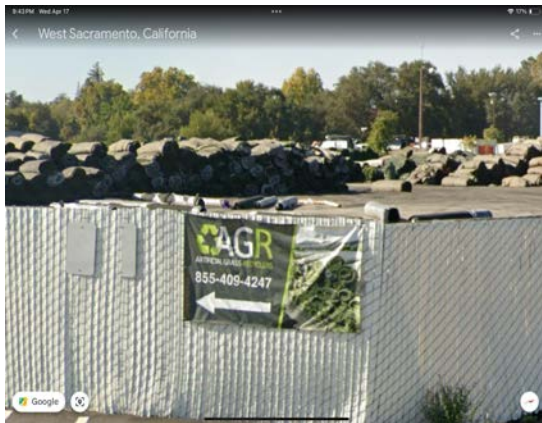
San Martin, CA



New Jersey Warehouse



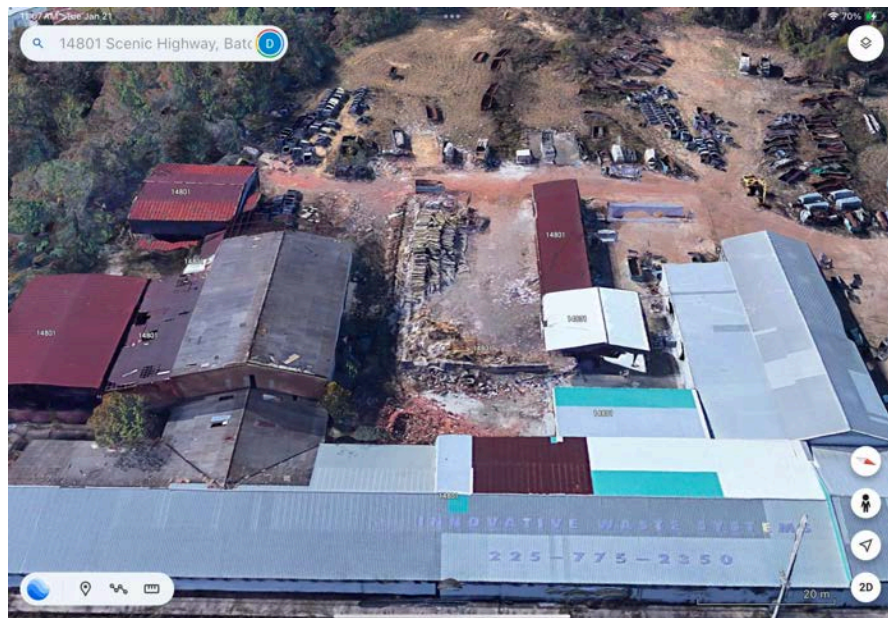
Pescadero, CA



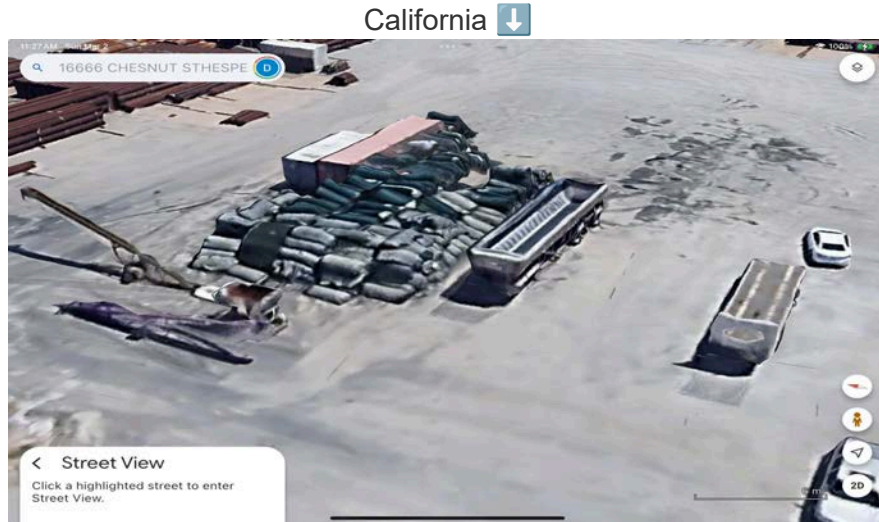
Sacramento, CA



Sherwood, OR



↑ Louisiana
Manufacturer TenCate's "recycling" facilities



Under SB54-Allen (2022),⁸⁶ “recycle” or “recycling” does not include any of the following:

- Combustion
- Incineration
- Energy generation
- Other forms of disposal
- Fuel production (except for anaerobic digestion of source separated organic materials)

To be considered recycled, covered material shall be **sent to a responsible end market.**

Viable alternative:

As required under CEQA, Santa Monica may not choose synthetic turf when there is a feasible alternative that lessens environmental impacts, which was duly noted by the California Coastal Commission in 2023 when conditioning the baseball field at UC Santa Barbara for natural grass only.

Grass fields actively sequester carbon dioxide and provide a cooling function that is especially dramatic when compared to the heat generated by synthetic turf. Grass naturally filters toxins, performs important ecosystem-services for the soil beneath, and provides widely dispersed rainwater infiltration allowing absorption and recharging of the water table. Additionally:⁸⁷

- Research suggests that grasses can accumulate and deposit carbon into the soil by approximately one-half ton of carbon per acre per year for 30 to 40 years.
- **Organic management and zero emission maintenance equipment mitigate emissions, reduce costs over time, and increase carbon sequestration.**

⁸⁶ Senate Bill No. 54: CHAPTER 75: An act to amend Section 41821.5 of, to add Chapter 3 (commencing with Section 42040) to Part 3 of Division 30 of, and to repeal Section 42064 of, the Public Resources Code, relating to solid waste.

https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=202120220SB54

⁸⁷ The Lawn Institute. “Carbon Sequestration.” Accessed 2 Feb 2025.

<https://www.thelawninstitute.org/environmental-benefits/carbon-sequestration/>

3.1-11
(cont.)

- Electric mowers for playing fields and chalk markers are available.
- Drought⁸⁸ and desert tolerant^{89,90} varieties of natural grass appropriate for lawns, parks and high use playing fields are available.
- Grass fields support biodiversity, both above and below the ground.

Open green space has mental health benefits:

Natural green spaces have been shown to mitigate aggressive behavior in adolescents⁹¹ and significantly reduce the growing risk of psychiatric disorders⁹² and suicide mortality.⁹³ Natural green spaces also reduce health risks such as asthma.⁹⁴

3.1-12

The American Psychological Association⁹⁵ finds:

“...exposure to nature has been linked to a host of benefits, including improved attention, lower stress, better mood, reduced risk of psychiatric disorders and even upticks in empathy and cooperation.”

⁸⁸ Los Angeles Times (9 Sep 2022). “Column: Has a UC Riverside researcher created the Holy Grail of drought-tolerant lawns?”
<https://www.latimes.com/california/story/2022-09-09/uc-riverside-turfgrass-research-jim-baird>

⁸⁹ Baird, J (25 Nov 2024). “Drought-friendly UCR turfgrass is now on the market: The newly commercialized Coachella™ cultivar uses up to 65% less water than California's go-to choice for lawns.” University of California, Riverside; UCR News.
<https://news.ucr.edu/articles/2024/11/25/drought-friendly-ucr-turfgrass-now-market>

⁹⁰ University of Nevada, Reno. “Turfgrasses for Urban Mojave Desert Landscapes.” UNR Extension, College of Agriculture, Biotechnology & Natural Resources.
<https://extension.unr.edu/publication.aspx?PubID=3320>

⁹¹ Younan, D., Tuvblad, C., Lianfa, L. et al (2016). “Environmental Determinants of Aggression in Adolescents: Role of Urban Neighborhood Greenspace.” J Am Acad Child Adolesc Psychiatry; 55(7):591–601.
<https://pubmed.ncbi.nlm.nih.gov/27343886/>

⁹² Engeman, K., Pedersen, C.B., Arge, L., Svenning, J.C. et al (2019). “Residential Green Space in Childhood is Associated with Lower Risk of Psychiatric Disorders From Adolescence into Adulthood.” Proceedings of the National Academy of Sciences (PNAS.org) of the United States of America
<https://www.pnas.org/doi/10.1073/pnas.1807504116>

⁹³ Asri, A.K., Tsai, H.J., Wong, P.Y. et al (2022). “Examining the Benefits of Greenness on Reducing Suicide Mortality Rate: A Global Ecological Study.” Frontiers in Public Health: Volume 10 | Article 902480.
<https://doi.org/10.3389/fpubh.2022.902480>

⁹⁴ Dong, Y, Liu, H, Zheng, T (13 Jan 2021). “The Impacts of Green Space Structure on Asthma in Toronto, Canada.” Med. Sci. Forum; 4(1), 6;
<https://doi.org/10.3390/ECERPH-3-09123>

⁹⁵ Weir, K (1 Apr 2020). “Nurtured by nature: Psychological research is advancing our understanding of how time in nature can improve our mental health and sharpen our cognition.” American Psychological Association; Vol. 51, No. 3. <https://www.apa.org/monitor/2020/04/nurtured-nature>

Research⁹⁶ on exposure to nature has shown associations with improved:

- Mental health
- Cognitive functioning
- Physical activity
- Sleep
- Blood pressure
- Cardiovascular health

⁹⁶ Jimenez, MP, DeVille, NV, Elliott, EG et al (30 Apr 2021). “*Associations between Nature Exposure and Health: A Review of the Evidence.*” Int J Environ Res Public Health; 30;18(9):4790.
<https://pmc.ncbi.nlm.nih.gov/articles/PMC8125471/>

Hidden costs associated with synthetic turf:

- 3.1-13 • Annual GMax testing- ~\$1,515. More frequently if it fails testing. A maximum result of 165 is the safety threshold advised by [Sports Field Management Association](#), a professional association with a core mission being safety of athletes of all ages and abilities, from peewee to professional. 165 is also found in the Synthetic Turf Council (STC) [Glossary of Terms](#) and [Guidelines for Synthetic Turf Performance](#) (when were Santa Monica's plastic fields last tested for hardness?)
- 3.1-14 • Annual infill replenishment- 1.5 to 5 tons of chosen infill *plant based infill is generally 4.5 times more expensive than used tire crumb
- 3.1-15 • New maintenance equipment
- 3.1-15 • Maintenance agreement costs (required by FieldTurf warranty)
- 3.1-15 • Increased water to cool plastic surface to playable temperature. *Plastic fields readily reach 150°F to 180°F. No infill turf manufacturers recommend 2,000 gallons per 80k foot² beginning 1-2 hrs. before play and repeat when temperature rises above that of natural grass (cooling effect only lasts approximately 20-50 minutes). Potable water is needed (recycled water has higher salt content, damages fibers, backing and infill).
- 3.1-15 • Cleaning solvents *failure to follow maintenance requirements can nullify warranty. Most are approved for hard surfaces only and have negative human and environmental health affects.
- 3.1-16 • Pesticides, fungicides for weed, algae and moss eruption. Many recommended glyphosate. *weed eruption is common
- 3.1-16 • Projected removal, transportation and disposal costs *will most likely be hazardous waste landfills once under regulation and with PFOA and PFOS being declared hazardous. Santa Clara County staff reported a quote of \$115k-\$148k for a small field⁹⁷; Fremont Union High School District is still paying off over \$870k for removal and "recycling" of 6 fields in summer 2024; 6 more are planned.⁹⁸ Plastic fields have needed replacement in as little as 1 to 4 yrs.
- 3.1-17 • Increased liability due to injuries, failure to disclose information regarding the toxicity to humans and the environment, and violations under the Federal Clean Water Act.

Synthetic turf is a gross misuse of taxpayer funds. It is also highly disturbing and unethical to not disclose all information to the public, particularly for a product which can negatively impact their children and the children of generations to come.

SHPFI urges you to not kick the can down the road. Should you choose to ignore the information presented here, once under regulation, you will force taxpayers to bear the costly consequences of removal, disposal and remediation of the soil prior to implementing natural grass playing fields in the future.

Its time for Santa Monica to get real!! REAL NATURAL GRASS, proper soil testing, installation and organic maintenance is the only way to protect residents and visitors to the city's playing fields. Stop the taxpayer drain! Do what is right for current and future residents...protect our children and their grandchildren's children from the toxic and cancer causing chemicals in and leaching from synthetic turf. Protect ground and drinking water, the bay and ocean from the toxic run-off from plastic fields. Stop the plastic waste and the microplastic pollution. Stop listening to the greenwashing by those who want to keep you returning for more of their plastic

⁹⁷ [Santa Clara County meeting packet 28 Jan 2025](#)

⁹⁸ [Freemont Union HS District AT removal, disposal](#)

or otherwise benefit from incentives for installation of plastic fields every 8 to 10 years on average! Regulation is in process. So, too, will be legislation.

Respectfully submitted,

Diana Conway, President
Dianne Woelke MSN, Board Member
Safe Healthy Playing Fields, Inc.
<https://www.safehealthyplayingfields.org>
SHPFI is an all-volunteer nonprofit 501-c-3



Safe Healthy Playing Fields Inc.



www.safehealthyplayingfields.org

17 March 2025

Memorial Park Redevelopment and Expansion Project Playground

Santa Monica City Council, Environmental Planning and Parks and Recreation Departments and Commission:

These comments are submitted by Safe Healthy Playing Fields, Inc. (SHPFI). As an all-volunteer 501-c-3 non-profit, we are committed to educating communities, policymakers and elected officials about the health, safety and financial realities of plastic fields versus grass fields and other synthetic surfaces for their parks and schools. Our constituency ranges from concerned individuals to community and civic organizations, legal, healthcare and science professionals, municipal leaders and state legislators.

We are writing to urge you to condition all projects within Santa Monica to **not** use used tire crumb or mulches (bound or unbound) for playgrounds, pools, waterparks, landscaping and rubberized asphalt driveway and road additives- all places where people recreate. Toxic chemicals from these products can leach into the air, water and soil, and can be absorbed via skin, inhaled and ingested, making protection of both human and environmental health necessary.

Title 14. Natural Resources. Division 6. California Natural Resources Agency Chapter 3. Guidelines for the Implementation of the California Environmental Quality Act, Article 1. General§ 15004. Time of Preparation

"...public agencies shall not undertake actions concerning the proposed public project that would (2) have a significant adverse effect or limit the choice of alternatives or mitigation measures, before completion of CEQA compliance."

"The agency's analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes."

CA REGULATORY SCHEMES and LAW:

[CA DTSC](#) - Microplastics, addition to Priority Chemicals List

[CA DTSC](#) - 6PPD in Motor Vehicle Tires

[CA DTSC](#) - Zinc in Motor Vehicle Tires

[CA DTSC](#) - Chemicals of Concern in Motor Vehicle Tires.

[CA DTSC](#) - Phthalates, Styrene, and Formaldehyde in Children's Products

[CA Statewide Microplastics Strategy](#) - Senate Bill No. 1263, Chapter 609, 2018

Plastics and Playground Equipment:

By using plastic playground surfacing and equipment in the proposed all-inclusive playground in Memorial Park, Santa Monica will increase risk and harm from toxic and carcinogenic chemicals in these products and microplastics released from them, to vulnerable populations,^{1,2,3} exclude deaf and hearing impaired individuals, and cause extensive environmental harm.

Plastic playground equipment poses significant risk from chemical exposure via dermal contact, inhalation and ingestion. Young children are particularly vulnerable to chemical exposure due to developmental windows.

Plastic playground equipment, particularly slides, create an equity barrier for hearing impaired children and adults with cochlear implants (CI).⁴ Static builds up and can completely wipe out internal software in implants, requiring an expensive visit to a CI audiologist for re-installation. The alternative would be to remove implants during play on these surfaces, imposing risk of injury when a child cannot hear caregivers. It also leaves a child to play in silence, negatively impacting necessary social interaction skills required for development.

It is possible to construct playgrounds without using plastic surfacing (i.e. used tire crumb, ethylene propylene diene monomer, polyvinyl chloride) and still meet Americans with Disabilities Act (ADA) requirements. ADA addresses accessibility, not surfacing.⁵

“The accessibility standards are minimum standards and do not require the entire play surface area to be accessible. The only required accessible surface area includes the accessible route from the entry of the play area, at least one connection to each accessible play component (points of entry and egress) and any clear space requirements adjacent to accessible play components.”⁶

Accessibility to the playground can be achieved via a concrete walkway, wooden, aluminum or similar ramp, or use of a “mobi-mat” that extends from the boardwalk towards the water. These

¹ Center for Diseases Control and Prevention. Child Development: Developmental Disability Basics. <https://www.cdc.gov/child-development/about/developmental-disability-basics.html>

² Geneva Environmental Network. Plastics and Human Health | Plastics and the Environment Series/ <https://www.genevaenvironmentnetwork.org/resources/updates/plastics-and-health/>

³ Flaws, J, Damdimopoulou, P, Patisaul, HB et al (10 Dec 2020). “Plastics, EDCs & Health. A Guide for Public Interest, Organizations and Policy Makers on Endocrine Disrupting Chemicals & Plastics.” The Endocrine Society with International Pollutants Elimination Network (IPEN). https://ipen.org/sites/default/files/documents/edc_guide_2020_v1_6ew-en.pdf

⁴ Miracle Recreation. Playgrounds for Hearing Impaired Children <https://www.miracle-recreation.com/blog/hearing-impaired-playgrounds/>

⁵ Pollard, L, Massey, R (Dec 2023). “Playground Surfacing: Choosing Safer Materials for Children’s Health and the Environment.” Toxics Use Reduction Institute, Univ. Massachusetts, Lowell. https://www.uml.edu/docs/Playground_surfacing_report_Dec2023_tcm18-377890.pdf

⁶ US Access Board (2014). “Surfacing the Accessible Playground: 7 Things Every Playground Owner Should Know About the Accessibility of Their Playground Surfaces.” <https://www.access-board.gov/ada/guides/chapter-10-play-surfaces/#>

mats are generally made of nylon, another plastic. Positioning of playground equipment so that there is a shorter distance to the lowest access point of a structure can also help reduce costs.

Per- and Polyfluoroalkyl Substances (PFAS):

“It’s not an acute toxin. It’s chronic, so it affects you by long-term exposure... There are no safe kinds. I’ve yet to see one that doesn’t cause some sort of cancer or immunosuppression.” [Dr. Graham Peaslee](#)

There are over 16,000 known chemicals found in plastics. Of the known chemicals, 4,200 are considered “highly hazardous” to human and environmental health. Of these 4,200 chemicals, only 980 have been regulated by any global agency. Per- and polyfluoroalkyl substances (PFAS) are amongst the 15 categories of chemicals of concern in plastics.⁷

Chemicals in plastics, including polybrominated diphenylethers (PBDE), neurotoxic phthalates, bisphenols and PFAS, add disease burden and health care costs in the United States. For 2018, the attributable cost of plastics to disease and health care related costs was \$249 billion; for PFAS alone, it was \$22.4 billion.⁸ The societal cost globally is estimated at \$16 trillion⁹ annually for PFAS clean ups and health care for impacted individuals.

The need to stop further PFAS exposure cannot be overstated.¹⁰ PFAS can cause multiple reproductive disorders (including a 40% decrease in female fertility; a decrease of 62.3% total sperm count in males); Crohn’s disease; breast, testicular, kidney, prostate and liver cancers. They cross the blood-brain barrier and are related to Autism Spectrum Disorder, Attention Deficit Hyperactivity Disorder, increased deaths from Parkinson’s and Alzheimer’s diseases; immunological effects; increased serum cholesterol; effects on infant birth weights; impaired glucose metabolism, insulin resistance, dyslipidemia and adiposity in children and adolescents; thyroid hormone disruption (including neonatal) and thyroid cancer. Because they are bioaccumulative, PFAS exposure can impact multiple generations. Babies are being born pre-polluted with PFAS.

(*source citations for all available upon request)

⁷ Wagner, M, Monclús, L, Arp, HPH et al (Mar 2024). “*State of the science on plastic chemicals: Identifying and addressing chemicals and polymers of concern.*” PlastChem, Norway.
<https://plastchem-project.org>

⁸ Trasande, L, Krithivasan, R, Park, K et al (Feb 2024). “*Chemicals Used in Plastic Materials: An Estimate of the Attributable Disease Burden and Costs in the United States.*” Journal of the Endocrine Society: (8), 2.
<https://doi.org/10.1210/jendso/bvad163>

⁹ Staff writer (23 May 2023). “*ChemSec identifies the top 12 PFAS producers in the world and reveals shocking societal costs. PRESS RELEASE: The global societal costs of PFAS chemicals amount to €16 trillion per year.*” ChemSec, Norway.
<https://chemsec.org/chemsec-identifies-the-top-12-pfas-producers-in-the-world-and-reveals-shocki>

¹⁰ CA Dept. Toxic Substances Control. “*PFAS Fact Sheet.*” CA EPA.
<https://dtsc.ca.gov/wp-content/uploads/sites/31/2023/09/PFAS-Factsheet.pdf>

3.2-3 | As the body heats, it is susceptible to absorbing more chemicals such as PFAS.¹¹
(cont.)

¹¹ Ragnarsdóttir, O, Abou-Elwafa Abdallah, M, Harrad, S (June 2024). *“Dermal bioavailability of perfluoroalkyl substances using in vitro 3D human skin equivalent models.”* Environment International; 188; 108772.b <https://www.sciencedirect.com/science/article/pii/S0160412024003581?via=ihub>

Surfacing materials:

SHPFI supports the use of natural, non-toxic surfacing for playgrounds:

- Engineered wood fiber (EWF)
- Wood chips/bark
- Pea gravel
- Sand

Chemical binders used for EWF, rubber or wood mulch and cork PIP (pour in place) surfacing contain toxic and carcinogenic chemicals, including, but not limited Chemistry and Analytical Sciences (CAS) registration numbers :

- Polymethylenepolyphenyl polyisocyanate, polypropyleneglycol copolymer; CAS #53862-89-8;
- Diphenylmethane Diisocyanate, isomers and homologues; CAS #9016-87-9;
- 4,4'-Methylenediphenyl diisocyanate; CAS #101-68-8.

Additionally, these chemical binders do not “bind” for long. They also break down even more quickly in hot, humid and wet environments.

It should be noted that “natural rubber,”¹² whether in mulch, shredded, tile or mat form, is still a petrochemical synthetic plastic and contains many of the chemicals found in tires, minus the debris from road use. Natural rubber, in this context, does not come from the sap of rubber trees. It is equivalent to ethylene propylene diene monomer (EPDM) and thermoplastic vulcanizate (TPV).

The following statement, initially applied to the disastrous effects of rubberized asphalt, is even more relevant for used tire crumb infill and playgrounds:

“What at first seemed like a brilliant way to get rid of mountains of old tires has given new meaning to the old saying about what paves the road to hell.”¹³

Select Chemicals in Used Tire Crumb Surfacing:

Used tire crumb has been widely used in playground surfacing, known as poured in place (PIP) surfacing. It has come under scrutiny in recent years due to the hundreds of toxic and carcinogenic chemicals it contains, which can leach into air, water and soil and their negative impacts on human and environmental health. Tire crumbs are microplastics.

The California Coastal Commission declined two recent permits for playground surfacing at Newport Beach Elementary School and a planned project for a playground in Mission Bay, San Diego.

¹² LibreTexts Chemistry. Natural and synthetic rubbers.
[https://chem.libretexts.org/Bookshelves/Organic_Chemistry/Map:_Organic_Chemistry_\(Smith\)/24:_Synthetic_Polymers/24.05:_Natural_and_Synthetic_Rubbers](https://chem.libretexts.org/Bookshelves/Organic_Chemistry/Map:_Organic_Chemistry_(Smith)/24:_Synthetic_Polymers/24.05:_Natural_and_Synthetic_Rubbers)

¹³ Andersen, P. Where Rubber Meets the Road, It's a Mess. 21 Apr 1996. Los Angeles Times.
<https://www.latimes.com/archives/la-xpm-1996-04-21-mn-60932-story.html>

6PPD, 6PPDquinone:

On 15 July 2021, Representative Katie Porter, then chair of the US House of Representatives Natural Resources Committee, Sub-committee on Oversight and Investigations, held a hearing on toxic chemicals from car tires and playing surfaces.¹⁴ This was in response to the December 2020 discovery of the antiozonant

N-(1,3-dimethylbutyl)-N-phenyl-p-phenylenediamine (6PPD) in tires. 6PPD converts to 6PPD-quinone (6PPDq) when it interacts with ozone.¹⁵ 6PPDq has resulted in a 40-90% decline in coho salmon populations- a federally designated endangered species that is also implicated in US treaties with several Native American Tribes.^{16,17} In addition to coho salmon, 6PPDq has also been found to be acutely toxic to rainbow and brook trout.¹⁸

“Even if this harmful chemical was removed from tire production today, we will be dealing with the legacy of its use for the next 15 to 20 years.” Nisqually Tribe biologist, David Troutt.¹⁹

*“6PPD is more toxic than Mercury, 27 times more toxic than Cyanide, 425 times more toxic than Arsenic and more toxic than DDT...we do know that all those same ingredients in the chemical reaction that kills salmon are in those playground and playing surfaces...What we need is research on the risks from 6PPD quinone and on the possible substitutes. We need to treat this with urgency befitting a danger to our children.”*⁸

“...tire chemicals are also a concern for the effects of air pollution on human health. The smallest particles that wear from tires contribute to the particle pollution of air.

¹⁴ Porter, K, Chair (15 Jul 2021). A congressional hearing: “Are Toxic Chemicals from Tires and Playground Surfaces Killing Endangered Salmon?” US House of Representatives Natural Resources Committee, Oversight and Investigations Subcommittee.
<https://democrats-naturalresources.house.gov/hearings/are-toxic-chemicals-from-tires-and-playground-surfaces-killing-endangered-salmon>

¹⁵ Tian, Z, Zhao, H, Peter, KT et al (2020). “A ubiquitous tire rubber-derived chemical induces acute mortality in coho salmon.” *Science*; (371, 6525a).
<https://www.science.org/doi/10.1126/science.abd6951>

¹⁶ NOAA fisheries: Coho salmon,
<https://www.fisheries.noaa.gov/species/coho-salmon>

¹⁷ Middleton Manning, R, Lusardi, R (13 July 2023). “Removing Dams from the Klamath River is a Step Toward Justice for Native Americans.” *Climate News*, UC Davis.
<https://www.ucdavis.edu/climate/news/removing-dams-klamath-river-step-toward-justice-native-americans-northern-california>

¹⁸ Brinkmann, M, Montgomery, D, Selinger, S et al (2 Mar 2022). “Acute Toxicity of the Tire Rubber-Derived Chemical 6PPD-quinone to Four Fishes of Commercial, Cultural, and Ecological Importance.” *Environmental Science and Technology Letters*. 9 (4): 333–338
<https://pubs.acs.org/doi/10.1021/acs.estlett.2c00050>

¹⁹ Troutt, D (15 July 2021). Testimony before US House of Representatives Natural Resources Committee, Oversight and Investigations Subcommittee on 6PPDq impact on coho salmon.
<https://docs.house.gov/meetings/II/II15/20210715/112886/HHRG-117-II15-Bio-TrouttD-20210715.pdf>

These particles are inhaled when we breathe, and they release chemicals when they settle on the wet surfaces inside our lungs. We know that humans living closer to busy roads have poorer health outcomes due to air pollution. It is important that we learn whether 6PPD-quinone plays a role in the toxicity documented when human cells are exposed to chemicals released from tires...Studies are needed to determine the relative contributions of 6PPD-quinone from tires during their use on vehicles as well as the various end-of-life uses of tires such as crumb rubber in playgrounds and synthetic turf fields.”²⁰

3.2-5 Synthetic playing fields and playgrounds have been shown to be contributing factors. 6PPD and 6PPDq are the latest in an extremely lengthy list of chemicals that are harmful to human and environmental health, as they can be ingested, inhaled, absorbed via skin,^{21,22} and negatively impact animal and human liver cells.²³

3.2-6 The San Francisco Estuary Institute 2021 report submitted to the California Ocean Protection Council found that tire wear particles contributed 85% of microplastics in stormwater runoff across 12 test sites in the bay area. Playgrounds, rubber infill for synthetic turf and rubberized asphalt were all found to be contributing sources of tire particles in urban runoff.²⁴



²⁰ McIntyre, J. (15 July 2021). Testimony before US House of Representatives Natural Resources Committee, Oversight and Investigations Subcommittee on 6PPDq impact on coho salmon. [McIntyre, J \(15 Jul 2021\). Testimony before US House of Rep., Natural Resources sub committee.](#)

²¹ Wan, X, Liang, G, Wang, G (1 Nov 2024). "Potential human health risk of the emerging environmental contaminant 6-PPD quinone." *Sci of Total Environment*; (949), 175057. <https://www.sciencedirect.com/science/article/abs/pii/S0048969724052070>

²² Chen, X, Le, Y, Wang, W et al (5 May 2025). "p-Phenylenediamines and their derived quinones: A review of their environmental fate, human exposure, and biological toxicity." *Journal of Hazardous Materials*; 488, 137373. <https://www.sciencedirect.com/science/article/abs/pii/S0304389425002857>

²³ Qi, Y, Qiu, A, Wei, X et al (2024). "Effects of 6PPD-Quinone on Human Liver Cell Lines as Revealed with Cell Viability Assay and Metabolomics Analysis" *Toxics* 12, no. 6: 389. <https://doi.org/10.3390/toxics12060389>

²⁴ Werbowski, LM, Gilbreath, AN, Munno, K et al (2021). "Urban Stormwater Runoff: A Major Pathway for Anthropogenic Particles, Black Rubbery Fragments, and Other Types of Microplastics to Urban Receiving Waters." *ACS ES&T Water*; 1 (6), 1420-1428. <https://pubs.acs.org/doi/full/10.1021/acsestwater.1c00017>



Multiple studies on used tire crumb have confirmed chemicals of concern to both human health and the environment.^{25,26,27,28,29} Korean researchers have found that children who play on crumb rubber are 10 times more likely to develop cancer than those who play on soil.³⁰

In 2023, research published by UCLA in conjunction with the Moore Institute for Plastic Pollution Research found playgrounds in parks release as much as five times greater microplastics from equipment and surfacing than other areas in parks.³¹ This makes synthetic turf and rubber

²⁵ California Environmental Protection Agency (19 May 2019). "Synthetic Turf Study." Meeting of Scientific Advisory Panel. Office of Environmental Health Hazard Assessment. <https://oehha.ca.gov/media/downloads/cnr/may2019turfappendicespdf.pdf>

²⁶ Perkins, AN, Inayat-Hussain, SH., Deziel, NC et al (Feb 2019). "Evaluation of Potential Carcinogenicity of Organic Chemicals in Synthetic Turf Crumb Rubber." Environ Res; 169:163-172. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6396308/#!po=78.3333>

²⁷ Skoczyńska, E, Leonards, PEG, Llompарт, M, de Boer, J (Aug 2021). "Analysis of Recycled Rubber: Development of an Analytical Method and Determination of Polycyclic Aromatic Hydrocarbons and Heterocyclic Aromatic Compounds in Rubber Matrices." Chemosphere. Vol. 276,130076 <https://doi.org/10.1016/j.chemosphere.2021.130076>

²⁸ Duque-Villaverde, A, Armada, D, Dagnac, T, Llompарт, M (15 June 2024). "Recycled tire rubber materials in the spotlight. Determination of hazardous and lethal substances." Science of The Total Environment; (929), 172674. <https://www.sciencedirect.com/science/article/pii/S0048969724028213>

²⁹ Armada, D, Llompарт, M, Celeiro, M et al (15 March 2022). "Global evaluation of the chemical hazard of recycled tire crumb rubber employed on worldwide synthetic turf football pitches." Science of Total Environment; (812), 152542. <https://doi.org/10.1016/j.scitotenv.2021.152542>

³⁰ Tarafdar, A, Oh, MJ, Nguyen-Phuong, Q et al (2020). "Profiling and Potential Cancer Risk Assessment on Children Exposed to PAHs in Playground Dust/Soil: A Comparative Study on Poured Rubber Surfaced and Classical Soil Playgrounds in Seoul." Environ Geochem Health 42, 1691–1704 <https://doi.org/10.1007/s10653-019-00334-2>

³¹ Koutnik, VS, Leonard, J, El Rassi, LA et al (1 Jan 2023). "Children's playgrounds contain more microplastics than other areas in urban parks." Science of The Total Environment; (854)158866. <https://doi.org/10.1016/j.scitotenv.2022.158866>

playground surfaces clearly major point sources of PFAS and microplastic pollution that cannot go unaddressed.

Polycyclic Aromatic Hydrocarbons (PAHs):

Multiple studies have shown PAHs in crumb rubber. Research released in 2023 has shown the bioaccessibility of most of the 16 US EPA PAHs and 8 ECHA (European Chemicals Agency) PAHs in used tire crumb.³² Newly released research from Greece found that dust from used tire crumb playgrounds top coated with EPDM showed a six fold increase in exposure to petroleum based PAHs in dust that extended beyond the playground surface and onto surrounding concrete areas.³³

Lead (Pb):

Lead and other heavy metals are found in used tire crumb and in playground surfacing.³⁴ In PIP surfacing, which is heterogeneous, lead levels can vary widely, including hot-spots with significantly higher lead readings from one area to another. Used tire crumb is known to have leachable lead.

Numerous experts worldwide have stated there is no safe level of lead exposure:

“EPA and the Centers for Disease Control and Prevention (CDC) agree that there is no known safe level of lead in a child's blood. Taking action to reduce these exposures can improve outcomes. Lead is harmful to health, especially for children.” [US EPA](#)

“There is no level of exposure to lead that is known to be without harmful effects. Lead exposure is preventable.” [World Health Organization](#)

“There is no safe level of lead exposure in children, with lasting decreases in cognition documented in children with blood levels as low as 5 micrograms per deciliter of lead in blood.” [American Academy of Pediatrics](#)

“It is also likely that when many more athletes are active on a field (e.g., 22 in a football game), the “cloud” of particulates that is generated may result in an elevated exposure relative to the particulates mobilized by a single occupant.” [Drs. Stuart L Shalat and Alan Stern](#)

“...data provide sufficient evidence to eliminate childhood lead exposure by banning all nonessential uses of lead and further reducing the allowable levels of lead in air emissions, house dust, soil, water, and consumer products.”

³² Armada, D, Martinez-Fernandez, A, Celeiro, M et al (20 Jan 2023). “Assessment of the bioaccessibility of PAHs and other hazardous compounds present in recycled tire rubber employed in synthetic football fields.” Science of The Total Environment; (857) 2, 159485.
<https://www.sciencedirect.com/science/article/pii/S0048969721076208>

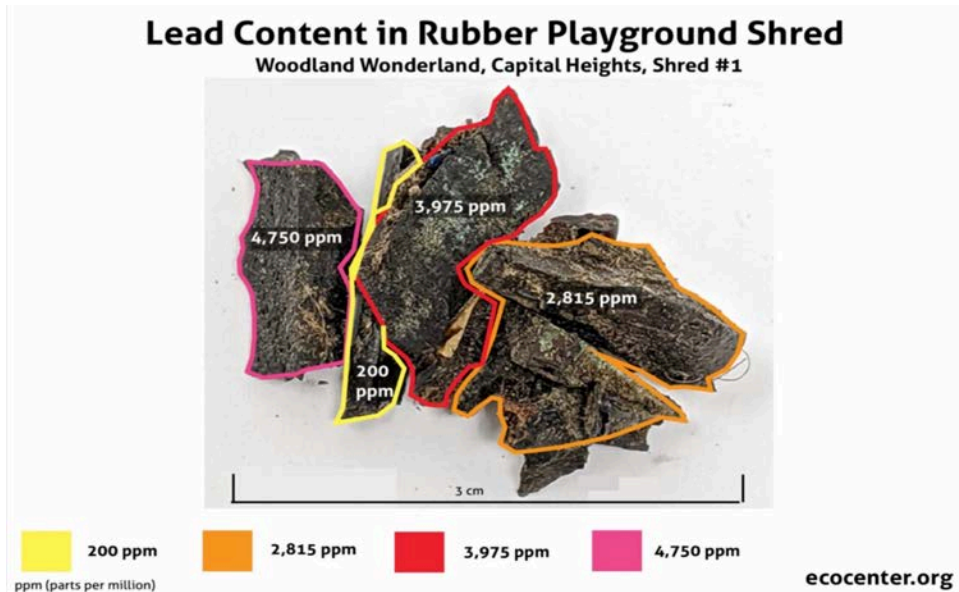
³³ Manoli, E, Fantidou, V, Kouras, A, Samara, C, (March 2025). Pre-print: “Polycyclic Aromatic Hydrocarbons in settled dust of playgrounds in Thessaloniki, Greece: Concentration levels and implications for childhood cancer risk. Environmental Research.
<https://doi.org/10.1016/j.envres.2025.121300>

³⁴ Gearhart, J (2021). Letter to Deputy Mayor of Education, Washington, DC: “Report on lead in pour in place (PIP) rubber playground at Janney Elementary School.” The Ecology Center, Ann Arbor, MI
<https://drive.google.com/file/d/1UfMzsVQ0EZKquGlnUKBgkspohlod9D-H/view?usp=drivesdk>

Pediatrician and researcher on lead, children's health and environment,
[Dr. Bruce Lanphear](#)

"No safe blood lead level in children has been identified. Children are especially at risk from lead because of their small size and developing brains. Lead exposure can affect nearly every system in the body. Even low levels of lead in blood have been shown to negatively affect a child's intelligence, ability to pay attention, and academic achievement. Removing all sources of lead exposure is important before a child is harmed." Centers for Disease Control ([CDC](#)).

3.2-7
(cont.)



Phthalates:

Phthalates are used extensively in the manufacturing of plastics. They are in plastics in playground equipment and surfacing as well as in tires. Like PFAS, they have endocrine disrupting properties.³⁵ Like lead, they also have neurotoxic effects.

*“Ortho-phthalates are diesters of phthalic acid and are the predomina[nt] type of phthalate used in commerce...They are **high-production-volume chemicals used most often as a plasticizer in polyvinyl chloride (PVC) and other plastics.**”³⁶*

As plasticizers, they are used in plastic toys, playground equipment, “natural rubber” and tire manufacturing.³⁷ Use of phthalate-containing products is choosing to risk impairment of children's I.Q.s, their brains and their overall health.

Polyvinyl Chloride (PVC) Tiles:

PVC is used in the manufacturing of playground equipment and surfacing. PVC is not a benign material. **Use of a PVC product would be willfully exposing children and the environment to one of the most toxic chemicals on the planet.**

Parents and caregivers trust that if a product is on the market, that it has undergone rigorous testing and found to be safe. Nothing could be further from the truth, and polyvinyl chloride³⁸ is a case in point that must not go unaddressed. Vinyl chloride monomer,³⁹ used in the production of polyvinyl chloride, is a category 1 carcinogen⁴⁰ and has been on the California Proposition 65 list since 1987.

Nearly 60% of PVC is chlorine. Production creates significant human and environmental concerns due to chlorinated dioxins, furans and carbon tetrachloride,⁴¹ even when there are low

³⁵ Wang, Y, Qian, H, (18 May 2021). “Phthalates and Their Impacts on Human Health.” Healthcare (Basel); 9(5), 603.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8157593/>

³⁶ Engel, SM, Patisaul, HB, Brody, C (Apr 2021). “Neurotoxicity of Ortho-Phthalates: Recommendations for Critical Policy Reforms to Protect Brain Development in Children.” Am J Public Health. 2021;111(4): 687–695.

<https://doi.org/10.2105/AJPH.2020.306014>

³⁷ Johannessen, C, Liggio, C, Zhang, X et al (Sep 2022), “Composition and transformation chemistry of tire-wear derived organic chemicals and implications for air pollution.”

Atmospheric Pollution Research; 13(9), 101533

<https://www.sciencedirect.com/science/article/pii/S1309104222002148>

³⁸ National Cancer Institute (updated June 2024). Vinyl Chloride.

<https://www.cancer.gov/about-cancer/causes-prevention/risk/substances/vinyl-chloride>

³⁹ Office of Health Hazard Assessment (2025). Proposition 65 list. “Vinyl Chloride.” CA EPA.

<https://oehha.ca.gov/media/downloads/proposition-65/p65chemicalslist.pdf>

⁴⁰ Fralish, MS, Poole, ND, Downs, JW (updated 12 Jun 2023). “Vinyl Chloride Toxicity.”

National Library of Medicine. Matthew S. Fralish; Nicholas D. Poole; John W. Downs.

<https://www.ncbi.nlm.nih.gov/books/NBK544334/>

⁴¹ Health Care Without Harm (Europe), (25 Jun 2021). “The polyvinyl chloride debate: Why PVC remains a problematic material.”

levels of exposure. It wasn't until March 2024 that the United States banned use of asbestos in chlorine.⁴² PVC playground tiles and mats also contain phthalates and per- and polyfluoroalkyl substances (PFAS).

*"Various PVC additives also have hazardous properties and, therefore when emitted, can pose a threat to the environment and human health. PVC is considered as the most environmentally damaging plastic and one of the most toxic substances for inhabitants of our planet. From cradle to grave, the PVC lifecycle (production, use, and disposal) results in the release of toxic, chlorine-based chemicals, and it is one of the world's largest dioxin sources. These toxins build up in water, air, and food chains. They cause severe health problems, including cancer, immune system damage, and hormone disruption. Everyone has measurable levels of chlorinated compounds (toxins) in their bodies."*⁴³

*"PVC...initial manufacturing did not produce a stable material, unless stabilizing chemicals were added, such as lead carbonate. Without these, PVC easily degrades and releases corrosive hydrogen chloride if heated or exposed to sunlight. Further, rigid PVC could only be made moldable and flexible by the addition of plasticizers, phthalates, used in the past to plasticize celluloid."*⁴⁴

*"Traditional methods for the storage and incineration of PVC waste lead to the release weight, highly stable covalent bonds, and hydrophobic surface properties, creating a base of harmful chlorinated compounds: hydrogen chloride and chlorine-containing dioxins huge environmental problem during its production and disposal. PVC waste is highly resistant to decomposition in the environment but often releases harmful chlorinated compounds that negatively affect the health of organisms and the ecosystem. PVC is classified as a substance with strong mutagenic and carcinogenic properties, and it is more toxic than other plastics due to the presence of chlorine atoms in it."*⁴²

In addition to the chemicals in PVC tiles and mats, highly toxic glues, adhesives and binders may be incorporated during the manufacturing process, to secure interlocking tiles or mats, or to secure the tiles to closed cell foam or foamed XLPE (cross-linked polyethylene) underlayment pad that may be used with this or other synthetic surfacing.

<https://noharm-europe.org/sites/default/files/documents-files/6807/2021-06-23-PVC-briefing-FINAL.pdf>

⁴² US EPA (18 Mar 2024). "Biden-Harris Administration finalizes ban on ongoing uses of asbestos to protect people from cancer."
<https://www.epa.gov/newsreleases/biden-harris-administration-finalizes-ban-ongoing-uses-asbestos-protect-people-cancer>

⁴³ Kudzin, MH, Piwowarska, D, Festinger, N, Chruściel, JJ (2024). "Risks Associated with the Presence of Polyvinyl Chloride in the Environment and Methods for its Disposal and Utilization." MDPI; 17(1), 173
www.mdpi.com/1996-1944/17/1/173

⁴⁴ Wagner, M, Monclús, L, Arp, HPH et al (Mar 2024). "State of the science on plastic chemicals: Identifying and addressing chemicals and polymers of concern." PlastChem, Norway.
<https://plastchem-project.org>

Plastics, including PVC and polyethylene, *will* degrade, *will* leach toxic chemicals to air, water and soil, *will* heat the environment and contribute to climate change, *will* form microplastics and *will* release their toxic payloads into the very air we breathe, the water we drink and the food we eat.

The US Environmental Protection Agency (EPA) has begun the process to ban PVC.^{45,46}

PVC tile used for playgrounds only has a six-year warranty, suggesting it may degrade rapidly in the environment, releasing micro- and nanoplastics to air, water and soil during its short “useful” life, after which time it will need to be landfilled, and likely in a hazardous waste landfill due to its toxicity. Yet another incredibly bad choice, on taxpayer dollars, for a product that harms not only children, but the environment.



⁴⁵ US EPA (13 Dec 2023). “EPA Begins Process to Prioritize Five Chemicals for Risk Evaluation Under Toxic Substances Control Act.”

<https://www.epa.gov/newsreleases/epa-begins-process-prioritize-five-chemicals-risk-evaluation-under-toxic-substances>

⁴⁶ Le Coz, E (14 Dec 2023). “EPA begins formal review of 5 toxic chemicals, including one in Ohio train derailment.” USA Today.

<https://www.usatoday.com/story/news/investigations/2023/12/14/epa-begins-process-to-potentially-ban-vinyl-chloride-used-in-pvc/71923363007/>

Microplastics:

Research by the Department of Civil and Environmental Engineering, University of California, Los Angeles, and the Moore Institute for Plastic Pollution Research, Long Beach, found “Children’s playgrounds contain more microplastics than other areas in urban parks.”²⁴

In addition to the CA Statewide Microplastics Strategy⁴⁷, CA DTSC recently announced its intent to add Microplastics to the Candidate Chemicals List.⁴⁸

Microplastics are released from plastic playground structures, synthetic surfacing materials, and hypar sails used for shade.

Microplastics not only leach chemicals, including PFAS, they adsorb other chemicals and bacteria, posing particular risk to the food chain. Even the best BMPs (Best Management Practices) will capture only a small percentage of the microplastics and virtually none of the PFAS and other toxic chemicals from plastic elements. Drainage systems are not expensive granulated activated carbon (GAC) filters.

Microplastics have been found in 1,288 marine species and 277 terrestrial and freshwater species.⁴⁹ They have even been found in air exhaled by dolphins via their blowholes.⁵⁰

PFAS from micro- and nanoplastics have been found in sea spray.⁵¹



⁴⁷ California Senator Portantino (20 Sept 2018). *Ocean Protection Council: Statewide Microplastics Strategy*. Chapter 3.2; Section 35635; Division 26.5 of the Public Resources Code, relating to pollution. https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB1263

⁴⁸ Safer Consumer Product Program (2023). “*Proposed Addition to the Candidate Chemicals List: Microplastics*.” California Department of Toxic Substances Control. https://dtsc.ca.gov/scp/candidate-chemical-list_microplastics/

⁴⁹ Jambeck, JR, Walker-Franklin, I (16 Jun 2023). “*The impacts of plastics’ life cycle*.” *One Earth*; 6(6), 600-606 <https://doi.org/10.1016/j.oneear.2023.05.015>

⁵⁰ Dziobak, MK, Fahlman, A, Wells, RS (16 Oct 2024). “*First evidence of microplastic inhalation among free-ranging small cetaceans*.” *PlosOne*. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0309377>

⁵¹ Gribkoff, E (21 Dec 2021). “*Sea spray is belching toxic chemicals back on land: Study links PFAS contamination in coastal air to breaking waves*.” *Science Advisor Newsletter*. <https://www.science.org/content/article/sea-spray-belching-toxic-chemicals-back-land>

Natural Playgrounds:

Natural playgrounds have significant benefits over plastic playgrounds:

- Significantly reduce or eliminate risk of toxic and cancer causing chemicals to humans and the environment from plastic components.
- Provide a significantly cooler environment.
- Are consistent with the National Parks and Recreation Association (NRPA) Three Pillars.^{52,53}
- Have significant physical and mental health benefits⁵⁴:
 - Boosts immunity.⁵⁵
 - Reduces asthma⁵⁶ and symptoms of Attention Deficit Hyperactivity Disorder (ADHD).⁵⁷
 - Mitigate aggressive behavior in adolescents.⁵⁸
 - Significantly reduce the growing risk of psychiatric disorders⁵⁹ and suicide mortality.⁶⁰

⁵² National Recreation and Parks Association (n.d.). "Role of Parks and Recreation in Conservation." <https://www.nrpa.org/our-work/Three-Pillars/role-of-parks-and-recreation-in-conservation/#:~:text=Clean,%20green,%20and%20accessible%20parks%20and%20open%20spaces,air,%20and%20enabling%20the%20conservation%20of%20natural%20resources>

⁵³ National Recreation and Parks Association (n.d.). "Our Three Pillars: Health and Wellbeing, Equity, Environmental Resilience." <https://www.nrpa.org/our-work/Three-Pillars/>

⁵⁴ Zhang, Y, Mavoa, S, Zhao, J (11 Sep 2020). "The Association between Green Space and Adolescents' Mental Well-Being: A Systematic Review." *Int J Environ Res Public Health*; 17(18):6640. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7557737/>

⁵⁵ Franco, A, Robson, D (10 Oct 2022). "How mud boosts your immune system." British Broadcastings Corp. (BBC). <https://www.bbc.com/future/article/20220929-how-outdoor-play-boosts-kids-immune-systems>

⁵⁶ Hartley, K, Ryan, P, Brokamp, C, Gillespie, GL (3 Jan 2020). "Effect of greenness on asthma in children: A systematic review." *Public Health Nurs*. 37(3):453–460. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9292730/>

⁵⁷ Thygesen, M, Engemann, K, Gitte, JH et al (22 Dec 2020). "The Association between Residential Green Space in Childhood and Development of Attention Deficit Hyperactivity Disorder: A Population-Based Cohort Study." *Environmental Health Perspectives*; 128(12). <https://doi.org/10.1289/EHP6729>

⁵⁸ Younan, D, Tuvblad, C, Lianfa, L et al (2016). "Environmental Determinants of Aggression in Adolescents: Role of Urban Neighborhood Greenspace." *J Am Acad Child Adolesc Psychiatry*; 55(7):591–601. <https://pubmed.ncbi.nlm.nih.gov/27343886/>

⁵⁹ Engemann, K, Pedersen, CB, Arge, L, Svenning, JC (25 Feb 2019). "Residential green space in childhood is associated with lower risk of psychiatric disorders from adolescence into adulthood." *PNSA*; 116 (11) 5188-5193 <https://doi.org/10.1073/pnas.1807504116>

⁶⁰ Asri, AJ, Tsai, HJ, Wong, PY et al (4 Jul 2022). "Examining the Benefits of Greenness on Reducing Suicide Mortality Rate: A Global Ecological Study." *Front. Public Health, Sec. Environmental Health and Exposome*;10, 902480.

- Enhance behavioral self-regulation⁶¹ and academic performance.⁶²
- Foster cognitive development,⁶³ imagination, creativity⁶⁴ and appreciation for nature.
- May reduce gun violence and vandalism.⁶⁵
- Reduce taxpayer liability for high installation, maintenance and replacement costs for items that pose risk to children and others.
- May reduce liability risks for injuries, violations of the U.S. Clean Water Act.⁶⁶

<https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2022.902480/full>

⁶¹ McCormick, R. (2017). Does access to green space impact the mental well-being of children: A systematic review. *Journal of Pediatric Nursing*, 37, 3–7.
<https://doi.org/10.1016/j.pedn.2017.08.027>

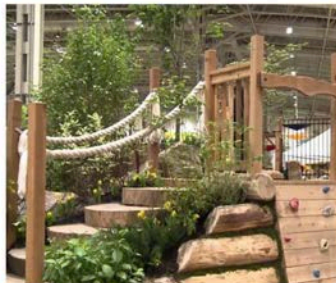
⁶² Leung, WTV, Tam, TYT, Pan, WC, Wu, CD (Jan 2019). “How is environmental greenness related to students’ academic performance in English and Mathematics?” *Landscape and Urban Planning*; vol. 181, 118-124.
<https://www.sciencedirect.com/science/article/pii/S0169204618310569>

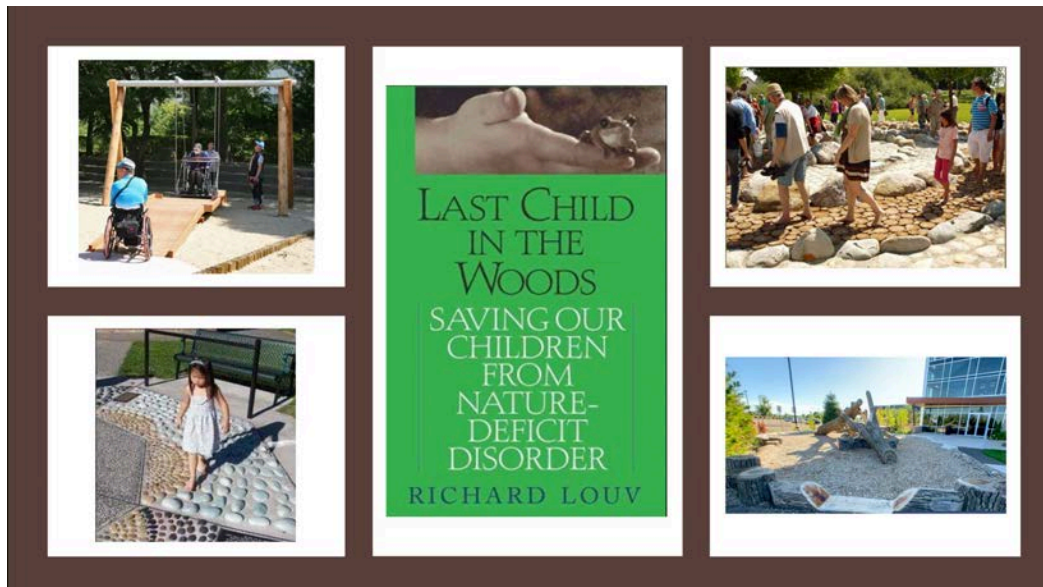
⁶³ Weir, K (1 Apr 2020). “Nurtured by nature: Psychological research is advancing our understanding of how time in nature can improve our mental health and sharpen our cognition.” *American Psychological Association*; 51(3), 50.
<https://www.apa.org/monitor/2020/04/nurtured-nature>

⁶⁴ Wojciehowski, M, Ernst, J (2018). “Creative by Nature: Investigating the Impact of Nature Preschools on Young Children’s Creative Thinking.” *The International Journal of Early Childhood Environmental Education*; 6(1), 3.
<https://files.eric.ed.gov/fulltext/EJ1193490.pdf>

⁶⁵ Branas, CC, South, E, Kondo, MC et al (2018). “Citywide cluster randomized trial to restore blighted vacant land and its effects on violence, crime, and fear.” *Proceedings of the National Academy of Sciences (PNAS)*; 115(12), 2946–2951
<https://doi.org/10.1073/pnas.1718503115>

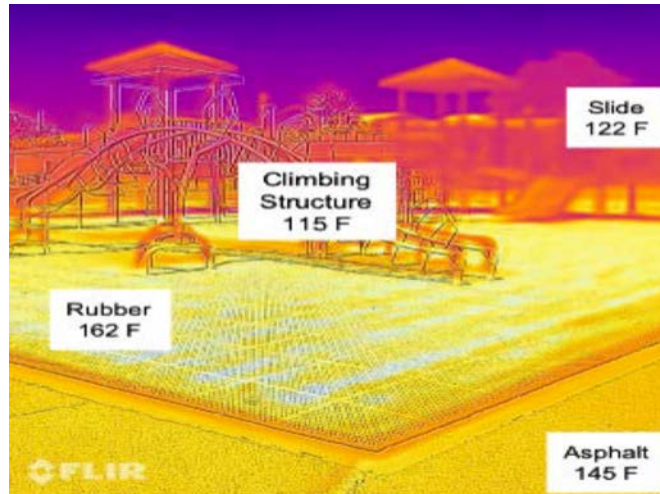
⁶⁶ US EPA (updated 29 Jan 2025). “National Pollutant Discharge Elimination System (NPDES).”
<https://www.epa.gov/npdes>





Elementary school in Watts, Los Angeles⁶⁷

⁶⁷ UCLA Luskin Center (May 2023). Policy Brief. *“Protecting Californians with Heat-Resilient Schools.”*
<https://innovation.luskin.ucla.edu/wp-content/uploads/2023/05/Protecting-Californians-with-Heat-Resilient-Schools.pdf>



Heat:

Plastics get very hot and pose a risk for thermal burns, sometimes significant enough to require hospitalization. At a surface temperature of 118°F a first-degree thermal burn occurs in 15 minutes, becoming a 3rd degree burn (full skin-thickness) in 20 minutes; at a temperature of 140°F, 1st degree burns occur in 3 seconds, and 3rd degree burns in 5 seconds.⁶⁸

High temperatures pose a serious risk for heat illness. One of the predisposing factors for heat illness are prescription drugs for treatment of attention deficit hyperactivity disorder, ADHD, which can be caused by PFAS chemicals found in plastics and medications.^{69,70}

Children are not small adults. They are more readily impacted by heat illness and heat stroke due to:⁷¹

- Heat production – Children have higher metabolic rates than adults which leads to higher heat production.
- Body surface area – Younger children absorb more heat because they have a greater body area to body mass ratio. For older children and teens, increased body fat and low fitness levels are contributing factors.

⁶⁸ Moritz AR, Henriques FC Jr (1947). Original source. "Studies of thermal injury II: The relative importance of time and surface temperature in the causation of cutaneous burns." Am J Pathol.; 23: 915-941.

http://www.antiscald.com/index.php?route=information/information&information_id=15

⁶⁹ Forns, J, Verner, MA, Iszatt, N (6 May 2020). "Early Life Exposure to Perfluoroalkyl Substances (PFAS) and ADHD: A Meta-Analysis of Nine European Population-Based Studies." Environ Health Perspect; 128(5):57002.

<https://ehp.niehs.nih.gov/doi/10.1289/EHP5444>

⁷⁰ UpToDate. "Medical Risk Factors for Heat Illness in Children."

https://www.uptodate.com/contents/image?imageKey=EM%2F73292&topicKey=EM%2F6596&source=search_result&selectedTitle=1%7E51&usage_type=default&display_rank=1#H4

⁷¹ UpToDate. "Heat Stroke in Children: Pathophysiology."

https://www.uptodate.com/contents/heat-stroke-in-children?search=Heat%20stroke%20in%20children&source=search_result&selectedTitle=1%7E51&usage_type=default&display_rank=1#H4

- Blood circulation – Children are less able to cool their body temperature by shunting their blood from their body core to their body surface due to lower cardiac output and smaller blood volume.
- Sweat production – Children produce less sweat per gland and sweat at higher body temperatures than adults.
- Fluid replenishment – Children are less likely to self-regulate hydration if unsupervised.

Children experiencing heat illness are most likely to present with significant neurological symptoms- from delirium, hallucinations, poor muscle control and unsteady gait, difficulty with speaking or unclear speech to seizures or coma. These symptoms may be readily confused with head trauma, epilepsy or drug overdose. Mortality is high and if a child survives heat stroke, their risk for recurrence of heat illness is increased.

Shade covers:

High density polyethylene (HDPE) shade sails, also known as Hypar sail⁷² are most often petrochemical based plastics, have a short life span (approximately 10 years, perhaps less in the coastal area). They are made from extruded plastics, and likely contain PFAS, particularly as they are often marketed as being waterproof. They are not recyclable. Even when made from green certified cloth, they, too, most often end up in landfills.⁷³

SHPFI would recommend consideration of:

- Canopy trees
- Pavilion structures
- Pergola structures
- Solar structures

These structures provide more flexibility in design, creativity, and customization. Natural wood and unpainted steel structures decrease microplastic pollution as paint is plastic. Galvanized steel contains zinc, which leaches into soil, surface and groundwater, adds to toxic runoff, and poses a hazard to aquatic organisms.

⁷² HDPE shade sail [Hypar shade sail](#)

⁷³ Cloth shade sail <https://sailshadeworld.us/recycle>

Beware UV and Fire Resistant Materials:

UV stabilizers are commonly used in plastics. Outdoor products, such as synthetic turf⁷⁴, pvc, rubber or other synthetic tiles and mats would be likely candidates for UV stabilizers as these plastics begin to degrade as soon as they are rolled out and exposed to UV radiation, heat, humidity, and friction from walking, running and play.⁷⁵ As with PFAS and phthalates used in PVC and other plastics, these stabilizers are generally toxic and carcinogenic to humans,⁷² aquatic organisms.⁷⁶

Flame retardants are used widely in plastics. They are highly concerning and cause both human and environmental harm. They are toxic, endocrine disrupting chemicals and carcinogenic.⁷⁷ They include such chemical classes as:

- Brominated flame retardants (BRFs)
Hexabromocyclododecane (HBCD)
Tetrabromobisphenol A (TBBPA)
- Organophosphate flame retardants (OPFRs)
- Polybrominated diphenyl ethers (PBDEs)

There are several flame retardants on the California Clean Water Act Proposition 65 List:³⁷

- Antimony trioxide
- Chlorinated tris [tris(1,3-dichloro-2-propyl) phosphate, TDCPP, and TDCIPP]
- Pentabromodiphenyl ether (PentaBDE) mixture [DE-71 (technical grade)]
- Tetrabromobisphenol A (TBBPA)
- Tris(2-chloroethyl) phosphate (TCEP)

Also on the Proposition 65 List, and released from PVC:

- 4-Chloroaniline

The California Department of Toxic Substances Control is currently reviewing UV stabilizers, flame retardants, colorants and more, that are used in synthetic turf.

⁷⁴ Awonaike, B, Lei, YD, Parajulee, A, Wania, F (1 Dec 2021). "Phase partitioning, transport and sources of Benzotriazole Ultraviolet Stabilizers during a runoff event." *Water Research X*; (13),100115
<https://www.sciencedirect.com/science/article/pii/S2589914721000281#:~:text=High%20levels%20of%20UV328%20and%20UV234%20were,a%20sink%20than%20a%20source%20of%20BT%20UVs>

⁷⁵ Nzimande, MC, Mitbe, A, Tichapondwa, S et al (16 Apr 2024). "A Review of Weathering Studies in Plastics and Biocomposites—Effects on Mechanical Properties and Emissions of Volatile Organic Compounds (VOCs)." *Polymers (Basel)*;16(8) 1103.
<https://pmc.ncbi.nlm.nih.gov/articles/PMC11054226/>

⁷⁶ Li, Y, Chen, L, Yang, H et al (1 Jan 2024). "Leaching of chemicals from microplastics: A review of chemical types, leaching mechanisms and influencing factors." *Science of The Total Environment*; 906, 167666.
<https://www.sciencedirect.com/science/article/abs/pii/S0048969723062939>

⁷⁷ International Pollution Elimination Network (IPEN), (2022). "UV-328 Communication on Recent Research."
https://ipen.org/sites/default/files/documents/ipen-uv328-research-update-v1_2-en.pdf

Parents, grandparents and caretakers should not need a PhD in analytical chemistry to send children out to play. Santa Monica must act to protect both people and the environment from the toxicity of synthetic turf and motor vehicle tire products for playgrounds, pools, waterparks, landscaping and rubberized asphalt driveways...all places where people, particularly children, recreate.

Respectfully submitted,
Diana Conway, President
Dianne Woelke MSN, Board Member
Safe Healthy Playing Fields, Inc.
<https://www.safehealthyplayingfields.org>
SHPFI is an all-volunteer nonprofit 501-c-3



From: [Deborah Bird](#)
To: [Rachel Kwok](#)
Subject: Opposition to artificial turf use in Santa Monica projects
Date: Thursday, March 27, 2025 12:26:02 PM

EXTERNAL

Dear Rachel Kwok and the City of Santa Monica,

My husband and I have read about the proposed artificial turf projects for the city of Santa Monica. We are scientists, biologists and supporters of environmental conservation. We would like to express my strong opposition to the use of artificial turf for these projects.

I agree with this list of reasons below for NOT choosing artificial turf.

- 4-1 • Artificial turf is plastic, a fossil-fuel based petrochemical, that contains hazardous chemicals including PFAS and microplastics.
- 4-2 • Artificial turf pollutes our air, water and soil. Run-off contaminates surface water, ground water, drinking water and oceans with microplastics and PFAS.
- 4-3 • Artificial turf can get 60-80° F hotter than air temperature, creating a heat island effect.
- 4-4 • Artificial turf is an impervious surface that can impede stormwater capture, increasing the risk of flooding.
- 4-5 • Artificial turf off-gases ethylene and methane, contributing to the climate crisis.
- 4-6 • Artificial turf kills the soil microbes and living organisms, takes away habitat from birds, animals, and insects, and contributes to biodiversity loss.
- 4-7 • Artificial turf is not recyclable at the end of its lifespan, and is either incinerated or added to landfills.
- 4-8 • The City of Santa Monica should not install two artificial turf fields at Memorial Park. It is not a safer playing surface, does not significantly reduce water usage, and is not a sound investment. Installing artificial turf does not take into account the true cost to our children's health and the health of our environment. The City should choose native plants and drought-tolerant grasses that use less water, thrive in our climate, recharge our groundwater, and provide food and habitat for local wildlife.

Thank you for considering our opinions,

Deborah Bird, PhD

Department of Ecology and Evolutionary Biology
UCLA
610 Charles E. Young Dr.
Los Angeles, CA 90095
Cell: 310-245-2003

William Wright, PhD
Department of Biology
Chapman University
Orange, CA
Cell: 310-245-2003

From: [Sonja Gilbert](#)
To: [Rachel Kwok](#)
Subject: Memorial Park Redevelopment Project
Date: Monday, March 3, 2025 7:06:05 AM

EXTERNAL

Hi,

I would like to submit comment regarding Memorial Park Redevelopment Project. If I sent this to the wrong person I would like to ask you to be, please, so kind to forward it to the right person.

My comment:

5-1

As with almost all other public spaces in LA there is nothing in this new project for older people, or people who just want to walk in the shade. Maybe close to refreshing water, some trees, walking pathways, bunches to rest in shade. Like in every other mayor USA city. It all about sports and youth. What you are planning is not a park. Its a sport field with additional amenities.

Look at the map of west LA. You either have to pay to get in or you have to burn in sun if you want to walk.

Thank you for listening.

[Sonja Gilbert](#)
310 920 3560

Washington state

Microplastics and pesticides aiding death of sea stars in Washington state – study

After sea star died off in Puget Sound, researchers found toxic substances impacted growth of young ones



📷 The findings come as researchers look into what has caused a mass sunflower sea star die off in the region. Photograph: naturediver/Getty Images/iStockphoto

Tom Perkins

Wed 26 Mar 2025 07:00 EDT

Microplastics and a widely used pesticide are helping kill off sea star populations in Washington state's Puget Sound, new research shows.

The findings come as researchers look into what has caused a mass sunflower sea star die off in the region. Though it's not yet clear whether the toxic substances are at the die off's root, the study found that microplastics and the pesticide have detrimental impacts on young sea stars, which could prevent the population from rebounding.

Finding that the two pollutants cause mortality in sea stars is "not good", said Allie Tissot, a doctoral candidate at Portland State University and co-author.

"Their populations are really low and there are only so many on the coast right now," Tissot said. "There are so many microplastics, contaminants and

chemicals that might be in their environment, so we don't know what the full combination of effects may be.”

Sunflower sea stars in the Pacific north-west are considered endangered by some groups as wasting sea star syndrome decimates the population, creating a domino effect that is throwing off [an ecological balance](#) in the region. Too few sunflower sea stars results in the proliferation of sea urchins that consume kelp that provide a range of benefits to aquatic life along the coast, including providing shelter for young fish.

The pesticide, Imidacloprid, has been known to devastate bee populations and [kill songbirds](#). The substance is [about to be banned](#) in the UK, but the US Environmental Protection Agency has resisted calls for a prohibition.

The study also focused on microfibers, a type of microplastic that typically comes from clothing and textiles, and is about one-fifth the size of a human hair. Microfibers are a toxic material that can also carry dangerous chemicals. Laundry machines are thought to be the main source of microfibers because the pieces shed from clothing during wash cycles.

Among other issues, the pesticide caused gut malformations and prevented the stars' stomachs from growing, which ultimately killed them. Imidacloprid, which targets mosquitos, works by preventing the insects' stomachs from growing, so it is not entirely surprising that it has the same impact on other organisms.

The microfibers also seemed to accelerate growth, a response likely stemming from the stars being unable to get enough nutrients. The contaminants may not be causing wasting sea star syndrome, Tissot said, but it could be preventing the population from recovering.

The findings also caused alarm because researchers only looked at the effects of two common contaminants - sea stars are exposed to a wide range of toxins that could impact their health.

However, help may be on the way. The state senate in Oregon, Washington's southern neighbor, is considering a bill that would require microplastic filters in new washing machines sold in the state.

Meanwhile, the federal government has proposed listing the sunflower sea star as a threatened species under the Endangered Species Act. That action would trigger a prohibition on spreading the pesticide in the region.

“The least we can do is to reduce additional stressors on marine ecosystems, such as pesticide inputs and plastic contamination,” said Jason Hodin, a study co-author and University of Washington researcher.

Most viewed

From: [Andreas Kemkes](#)
To: [Rachel Kwok](#)
Subject: MEMORIAL PARK Redevelopment & Expansion Project
Date: Thursday, March 27, 2025 11:59:15 AM

EXTERNAL

Hi Rachel,

I wanted to add my voice against the use of any artificial turf in the Memorial Park redevelopment. These days the negatives of using artificial turf should be abundantly clear, so I won't list them again in detail.

Only today, I read the following article in the Guardian

[https://urldefense.com/v3/_https://www.theguardian.com/us-news/2025/mar/26/microplastics-pesticides-sea-stars-washington-state_!!OfuUnHCITYtmmjM!u1Pd3B2uLOcYi2gUKBI9O5IKm8OtamEvrqlcOLA6_2CqSWC8dONy-OArUHVSoKYLQqeCv6vIpyiDGthp29Tyx_tlhsS6\\$](https://urldefense.com/v3/_https://www.theguardian.com/us-news/2025/mar/26/microplastics-pesticides-sea-stars-washington-state_!!OfuUnHCITYtmmjM!u1Pd3B2uLOcYi2gUKBI9O5IKm8OtamEvrqlcOLA6_2CqSWC8dONy-OArUHVSoKYLQqeCv6vIpyiDGthp29Tyx_tlhsS6$)

Please stay away from using artificial turf, particularly this close to the ocean. There are better options in almost every aspect of it.

Best Regards,

Andreas Kemkes

6-1

From: [Sarah Natalini](#)
To: [Rachel Kwok](#)
Subject: Memorial Park Redevelopment & Expansion Project
Date: Wednesday, April 2, 2025 6:13:09 PM

EXTERNAL

Hi Ms. Kwok,

As a mother and a fierce environmental advocate, I am writing in regards to the draft EIR for the Memorial Park Redevelopment & Expansion Project, so I can give my feedback about the environmental effects. I **strongly** oppose the two proposed artificial turf fields and I **strongly** request the installation of cost effective and healthier natural grass fields.

As I write this email, one of my kids is at soccer practice on an artificial turf field, which makes me sick to my stomach because although he loves the sport, I know that exposure to this field is having a major negative impact on his health.

The science is VERY clear:

- 7-1 | - Artificial turf is plastic, a fossil-fuel based petrochemical, that contains hazardous chemicals including PFAS and microplastics.
- 7-2 | - Artificial turf pollutes our air, water and soil. Run-off contaminates surface water, ground water, drinking water and oceans with microplastics and PFAS.
- 7-3 | - Artificial turf can get 60-80° F hotter than air temperature, creating a heat island effect.
- 7-4 | - Artificial turf is an impervious surface that can impede stormwater capture, increasing the risk of flooding.
- 7-5 | - Artificial turf off-gases ethylene and methane, contributing to the climate crisis.
- 7-6 | - Artificial turf kills the soil microbes and living organisms, takes away habitat from birds, animals, and insects, and contributes to biodiversity loss.
- 7-7 | - Artificial turf is not recyclable at the end of its lifespan, and is either incinerated or added to landfills.
- 7-8 | - The City of Santa Monica should NOT install two artificial turf fields at Memorial Park. It is NOT a safer playing surface, does NOT significantly reduce water usage, and is NOT a sound investment. Installing artificial turf does NOT take into account the true cost to our children's health and the health of our environment. The City should choose native plants and drought-tolerant grasses that use less water, thrive in our climate, recharge our groundwater, and provide food and habitat for local wildlife.

Please do what is right for human and planetary health and do NOT install artificial turf fields. Choose natural grass, always!

Sincerely,
Sarah Natalini
(805) 708-6883

From: [Jacquie Nemor](#)
To: [Rachel Kwok](#)
Subject: Memorial park project
Date: Monday, March 3, 2025 10:33:09 AM

EXTERNAL

8-1 | As a Life-long Santa Monica resident, I wanted to voice my opinion regarding the Memorial Park project of using artificial turf instead of real grass. Santa Monica is the always ecologically conscious and wants better air quality, which real grass does. Those were the main reason years ago for converting part of the Ocean Park parking lot into a real grass area.

From: [Sophie Pennes](#)
To: [Rachel Kwok](#)
Subject: Re: plastic turf
Date: Tuesday, April 1, 2025 5:10:31 PM

EXTERNAL

Hi Rachel! Hope I'm not too late to submit comments on this but my name is Sophie Pennes, I am an LA native and LA-based landscape designer. I was informed of a project at Santa Monica's Memorial Park and I just wanted to send in a formal comment in regards to my vehement opposition and disgust for plastic turf.

Together with LA based artist, Kelly Malka, I produced this [easy- to- read pamphlet on the dangers of plastic turf to human health and the environment](#).

Just a few more facts about this horrendous product in case you're not convinced:

- 9-1 • Artificial turf is plastic, a fossil-fuel based petrochemical, that contains hazardous chemicals including PFAS and microplastics.
- 9-2 • Artificial turf pollutes our air, water and soil. Run-off contaminates surface water, ground water, drinking water and oceans with microplastics and PFAS.
- 9-3 • Artificial turf can get 60-80° F hotter than air temperature, creating a heat island effect.
- 9-4 • Artificial turf is an impervious surface that can impede stormwater capture, increasing the risk of flooding.
- 9-5 • Artificial turf off-gases ethylene and methane, contributing to the climate crisis.
- 9-6 • Artificial turf kills the soil microbes and living organisms, takes away habitat from birds, animals, and insects, and contributes to biodiversity loss.
- 9-7 • Artificial turf is not recyclable at the end of its lifespan, and is either incinerated or added to landfills.

9-8 The City of Santa Monica should not install two artificial turf fields at Memorial Park. It is not a safer playing surface, does not significantly reduce water usage, and is not a sound investment. Installing artificial turf does not take into account the true cost to our children's health and the health of our environment. The City should choose native plants and drought-tolerant grasses that use less water, thrive in our climate, recharge our groundwater, and provide food and habitat for local wildlife.

Thanks so much for your time and interest in public input. Thanks Rachel.

--
--

Best,
Sophie Pennes
Owner, *Urban Farms LA*
www.urbanfarmsla.com
[@urbanfarmsla](#)

Nature is a tool we can use to fix our broken climate. -George Monbiot

Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it's the only thing that ever has. -Margaret Mead

For the garden is never done-- the weeds you pull today will return tomorrow, a new generation of aphids will step forward to avenge the ones you've slain, and everything you plant-- everything-- sooner or later will die. Among the many, many things the green thumb knows is the consolation of the compost pile, where nature, ever obliging, redeems this season's deaths and disasters in the fresh promise of next spring. -Michael Pollan

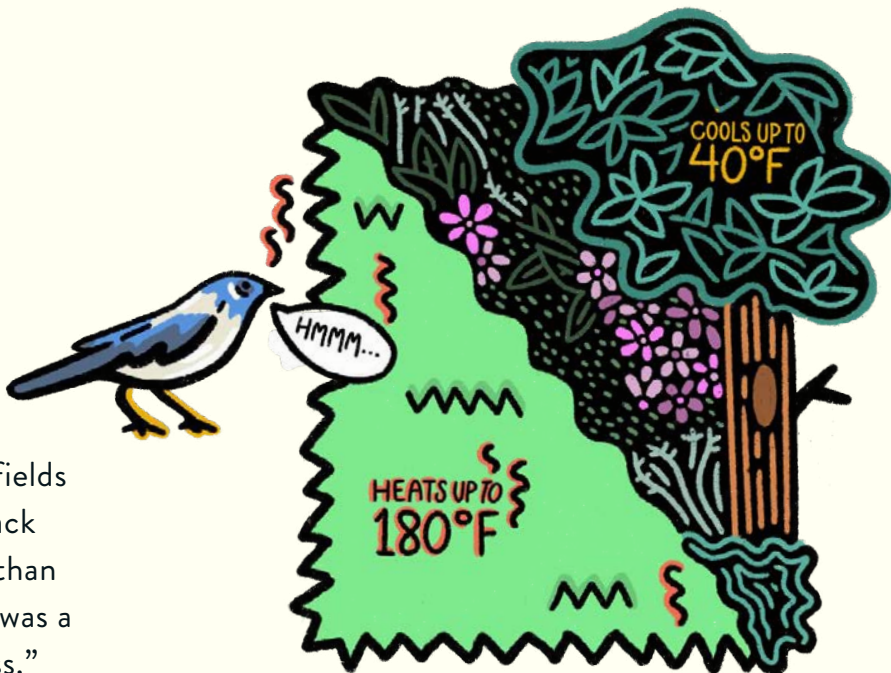
Plastic Turf Artificial Grass Fake Grass ...What is it?



The artificial turf we see on football fields or front yards today can be traced back to a 1960's invention by none other than Monsanto. The first ever plastic turf was a grass replacement called "ChemGrass," later rebranded as AstroTurf. The product is now developed and sold by several different companies and has become very popular for public recreational facilities, commercial areas as well as home use.

Turf companies claim their products to be safe for humans and pets, watering saving and environmentally friendly.

Let's break down those claims.



Human Health & Safety

Plastic turf is often made from "crumb rubber" which is essentially small granules of plastic recycled from old tires. **Even the highest "quality" plastic turf is made from polyethylene and polyurethane, which are both known toxins to human health, causing hormone disruption or chronic illnesses such as asthma.** Turf needs to be in-filled with rubber granules to create what the industry deems a more "natural grass look". Various studies including most recently from Public Employees for Environmental Responsibility and The Ecology Center showed that chemicals known as PFAs are present in artificial turf.

PFAs or polyfluoroalkyl substances are known as "forever chemicals" because they do not break down over time but rather remain in the human body and can lead to cancer and birth defects. A study conducted by Environment & Human Health Inc. found high levels of toxic chemicals in plastic turf, including lead. While the turf industry admits that chemicals including PFAs are found in artificial turf products, they cast doubt on whether or not there is a direct correlation between the chemicals and human health.

Water Saving

Plastic turf may require less water than traditional lawns but it disrupts our earth's natural water cycle in which our environment functionally absorbs and redistributes water. When living soil is covered by plants instead of layers of plastic and rubber, it can absorb and store water. Rainwater is a precious commodity, especially in Mediterranean climates like Los Angeles. When rainwater falls onto permeable surfaces like living soil or even gravel, it feeds our plants, percolates through the earth and recharges our underground aquifer, creating a healthy water table.

Roots from mature trees and plants are actually able to hold on to groundwater and cool the outside air around them through evapotranspiration. Miraculously, massive tree roots can also expel water to surrounding plants throughout the year. When you add mulch around the base of your plants, this actually saves even more water by keeping plant roots and soil temperatures cool. These natural systems help to save and increase water availability, whereas covering the ground in plastic actually disrupts this exchange of water, harming plants and wildlife.

(As a side note, it is recommended to water plastic turf occasionally, especially to offset any odor accumulation if it is being used for dogs.)



Climate Crisis

Healthy living soil covered by plants, especially large perennial plants like trees and shrubs, is extremely efficient at removing greenhouse gases from the atmosphere. **When we cover the ground in plastic rugs, we are effectively suffocating soil and the billions of microorganisms living within it that are essential for our ecosystem.** This makes it impossible for plants to do the work that we desperately need to clean the air of toxins and greenhouse gases.

Plastic turf accelerates the climate crisis by heating our homes and cities. Because plastic turf is not living, it absorbs heat and can reach up to 180° F which poses an obvious danger to pets and children. Cities suffer from the urban heat island effect due to a lack of green spaces replaced by excessive buildings and concrete. While a shade tree can lower the temperature of your home by up to 40° F on hot days, plastic turf actually exacerbates the problem.

In excessive heat, plastic turf emits toxins into the atmosphere. Solar radiation contributes to the breakdown of polyethylene, one of the main chemicals found in plastic turf, contributing to greenhouse gas emissions.

Animals & the Environment

As plastic turf degrades over time due to heavy use and solar radiation, it adds to the massive problem of microplastics in our environment. Living soil absorbs, cleans and routes rainwater into the underground aquifer. **In contrast, impermeable plastic turf sends fresh water into the gutters and oceans, carrying with it tiny plastic particles (microplastics) which then enter our waterways, food systems and eventually, us.** In fact, a 2019 study published in the Environmental Journal of Science and Technology estimated that humans ingest 39,000 to 52,000 pieces of microplastics each year either through the food, air or water we consume.

Natural grass lawns, although water thirsty, are able to absorb rainwater and do not pollute our planet with microplastics. Natural grass lawns also provide habitat for bugs and insects and therefore food sources for birds and reptiles. Birds, reptiles, insects and mammals all rely on us and each other for survival. Shade trees, shrubs, flowering plants, mulch and leaf litter all contribute in creating an ecosystem for the animals we share our cities with. They need shade, water, clean air and food sources.

Wildlife cannot live in a world covered by plastic and concrete, and neither can we.

We now know that plastic turf is dangerous to human health, the environment and our ecosystems.





What are the alternatives to plastic turf?

If you must have a lawn for your kids or dogs- **choose natural not plastic!** There are California native grasses that perform similarly to traditional lawns yet use significantly less water because they have advanced root systems (which also help draw down carbon dioxide from the atmosphere). Native grasses also perform well in shade unlike many traditional grasses!



If you don't require a lawn, opt for California native plants paired with designated walkways or sitting areas. Although lawns are seen as a cultural norm, we can and must shift that perspective to create a more livable future.

Decomposed granite, mulch, stone walkways or pavers with permeable spacing are all great options for ease and utility in your landscape. Grass lawns can be replaced by garden boxes, fruit trees, shade trees, ground cover or low maintenance California native plants which require extremely little water because they have evolved with our climate's natural rain patterns.





Information on California Native Plants & Lawn- Alternative Gardening: (click below to find out more!)

[Alternative Grasses](#)

[Audubon Society](#)

[California Native Plant Society](#)

[CalScape](#)

[Los Angeles Dept Water and Power](#)

[Native Buffalo Grass](#)

[Native Plant Garden Tour](#)

[Tree People](#)

[Urban Farms LA](#)



Sources

<https://www.peer.org/toxic-forever-chemicals-infest-artificial-turf/>

<https://www.ehhi.org/artificial-turf.php>

<https://pubs.acs.org/doi/10.1021/acs.est.9b01517>

<https://placesjournal.org/article/shade-an-urban-design-mandate/?cn-reloaded=1>

From: [Hannah](#)
To: [Rachel Kwok](#)
Subject: Public Comment on Memorial Park Redevelopment & Expansion Project
Date: Sunday, March 30, 2025 9:45:23 PM

EXTERNAL

Hi Ms. Kwok!

My name is Hannah Yang, and I'm a high schooler in California. I would like to submit a public comment on the Memorial Park Redevelopment & Expansion Project. It is here:

10-1 "I strongly oppose the two proposed artificial turf fields. Artificial turf has replaced natural, environmentally friendly grass for decades, despite artificial turf being plastic, fossil-fuel based, and containing hazardous chemicals, including PFAS (also known as "forever chemicals," which affect your cancer risk and fertility).

10-2 It constantly contaminates our environment with microplastics, and also kills soil microbes and living organisms, contributing to loss of biodiversity in our already-shrinking ecosystems. Artificial turf has not served any proper purpose except to look aesthetically pleasing, but considering the state of our climate and environment, aesthetics can no longer be a priority of our communities and government. Instead of two artificial turf fields, I request for cost-effective and healthier, natural grass fields to be installed instead. Thank you."

Thank you!

Warmly,
Hannah Yang

From: [Jerry Yang](#)
To: [Rachel Kwok](#)
Subject: CITY OF SANTA MONICA, MEMORIAL PARK Redevelopment & Expansion Project
Date: Thursday, March 27, 2025 11:23:46 PM

EXTERNAL

Dear City of Santa Monica,

As a high school student concerned about the safety of my peers, I beseech you to ban Artificial Turf. Artificial Turf is toxic and unhealthy for students to be around. When I interviewed the Football team at my school, I received feedback about the negative effects of artificial turf, including an increased injury rate, inconsistent playing surface, and high surface temperature. I have friends who play on artificial turf fields, knowing the consequences, because they have no alternatives around their area. Knowing that there are all these damaging carcinogens and forever chemicals within the grass and not being able to do anything is one of the worst feelings, and I cannot begin to describe how devastating it is to the families. Imagine if you knew that your kid and family were being exposed to carcinogens, and you couldn't do anything because you couldn't afford any better alternatives. In a push for more green space across the nation, it is disappointing that more local governments still allow for artificial turf to pollute the bodies of students, water, and land, preventing animals or plants from thriving. Artificial turf has microplastics, consistently has higher temperatures than natural turf, isn't recyclable, and kills biodiversity, just to name a few of its limitless negative effects. If you want a better, healthier, safer future for your kids, your students, your constituents, you will get rid of artificial turf. If you allow the installation of these two artificial turf fields at Memorial Park, you are dooming the next generation of kids that play in that area to dangerously high temperatures, a lack of green space, and increased rates of terminal illness. The City should choose native plants and drought-tolerant grasses that use less water, thrive in our climate, recharge our groundwater, and provide food and habitat for local wildlife.

Sincerely,
Jerry Yang

APPENDIX C

Air Quality Study and CalEEMod Results



AIR QUALITY AND GREENHOUSE GAS TECHNICAL REPORT MEMORIAL PARK REDEVELOPMENT AND EXPANSION PROJECT

**CITY OF SANTA MONICA, CITY PLANNING
DIVISION**

PREPARED BY

**WSP USA INC.
SANTA BARBARA, CA
WSP.COM**

MAY 2025



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APPENDICES

A CALEEMOD OUTPUTS

ACRONYMS AND ABBREVIATIONS

°F	degrees Fahrenheit
µg/m ³	micrograms per cubic meter
AB	Assembly Bill
APCD	Air Pollution Control District
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
ASHRAE	American Society of Heating and Air Conditioning Engineers
C ₂ H ₃ Cl	vinyl chloride
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CAAP	Climate Action & Adaptation Plan
CAAQS	California Ambient Air Quality Standards
CCAA	California Clean Air Act
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CCE	Community Choice Energy
CCR	California Code of Regulations
CDPH	California Department of Public Health
CEC	California Energy Code
CEQA	California Environmental Quality Act
CFC	chlorofluorocarbons
CH ₄	methane
City; Project Proponent and Lead Agency	City of Santa Monica
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
CPA	Clean Power Alliance
DPM	diesel particulate matter
EIR	Environmental Impact Report
EISA	Energy Independence and Security Act
g/bhp-hr	grams per brake horsepower hour
GHG	greenhouse gas
H ₂ S	hydrogen sulfide



Handbook	Air Quality Analysis Guidance
HRA	Health Risk Assessment
lbs/day	pounds per day
LCI	Office of Land Use and Climate Innovation
LEED	Leader in Energy and Environmental Design
LST	Localized Significance Threshold
LUCE	Land Use and Circulation Element
MMT	million metric tons
mpg	miles per gallon
mph	miles per hour
MT	metric tons
N ₂	nitrogen
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NO	nitric oxide
NO ₂	nitrogen dioxide
NOX	nitrogen oxides
O ₃	oxygen
Pb	lead
PM ₁₀	particles less than 10 microns in diameter
PM _{2.5}	particles less than 2.5 microns in diameter
ppm	parts per million
Project; SP2509	Memorial Park Project
PV	photovoltaic
PVC	polyvinyl chloride
RPS	Renewable Portfolio Strategy
RTP/SCS	Regional Transportation Plan / Sustainable Communities Strategy
SB	Senate Bill
SCAB or Basin	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
sf	square feet
SIP	State Implementation Plan
SMMC	Santa Monica Municipal Code
SO ₂	sulfur dioxide
SO ₄ ²⁻	sulfate ion
SOX	sulfur oxides
SRAs	source receptor areas
TACs	Toxic Air Contaminants



TDM	Transportation Demand Management
U.S	United States
USEPA	United States Environmental Protection Agency
VOC	Volatile organic compounds
WRCC	Western Regional Climate Center
X-SO ₄ ²⁻	sulfates
ZEV	zero emission vehicle



1 INTRODUCTION

WSP USA Inc. prepared this air quality and greenhouse gas (GHG) impact technical study for the Environmental Impact Report (EIR) for the City of Santa Monica (City, Project Proponent, and Lead Agency) Memorial Park Redevelopment and Expansion Project (Project; SP2509). The Project will expand the existing parkland and modernize the existing public recreation facilities at Memorial Park to better serve community demands, improve accessibility to park amenities, and provide an improved community hub. Memorial Park is an existing 10.3-acre park originally constructed in the 1930s and which serves as the primary park for baseball and softball in the City. The existing park is also home to the City's only public gymnasium, skate park, and pickleball courts. The Project will demolish existing facilities at the park and the neighboring 2.9-acre former Fisher Lumber site, and redevelop the entire 13.2 acre site with the following facilities:

- Two synthetic turf combo fields (two playing fields per combo field)
- Three grass youth fields (one fast-pitch softball and two baseball fields)
- Four rooftop tennis/pickleball courts
- A new community hub building and the replacement of the children's playground with a new universally accessible playground
- Renovation and expansion of the skate park
- Replacement of the existing community recreation center with a new community recreation center

The purpose of this report is to provide a detailed technical air quality and GHG analysis of the Project. The analysis was prepared in accordance with the *California Environmental Quality Act (CEQA)* and *Federal Conformity Guidelines* prepared by the South Coast Air Quality Management District (SCAQMD, 2020). Regional climate and meteorology, GHG emissions inventories, air quality monitoring data, and the area's attainment status with respect to criteria air pollutants are discussed. The report includes a description of federal, state, and local agencies that govern air quality and climate change, and their pertinent statutes and regulations.

It identifies potential impacts of air pollutants and GHGs of concern, including criteria pollutants (i.e., pollutants for which National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been established by the U.S. Environmental Protection Agency (USEPA), and their precursors, and the Project's potential to generate GHG emissions from construction and operation. The report describes the analytical methodologies and assumptions used for this study, as well as the results of these analyses and any required mitigation measures.

This report does not analyze the potential for the Project to result in increased human health risk, such as those risks associated with the potential for Toxic Air Contaminants (TACs) to have an effect on sensitive receptors that could occur if the Project is located near an existing significant source of TACs or if it would generate TACs in quantities that may have an adverse effect on sensitive receptors. The Project's potential impact on or exposure to increased adverse human health risk are analyzed in a separate Health Risk Assessment Report.



2 PROJECT DESCRIPTION

2.1 PROJECT LOCATION

The Project site is centrally located within the City's Pico Neighborhood and bound by Colorado Avenue to the north, 14th Street to the west, Olympic Boulevard to the south, and 16th Street to the east. Vehicle access to Memorial Park is currently provided via the surface parking lot along 14th Street, located in the western portion of the Project site. Pedestrian entries are provided along 14th Street, Olympic Boulevard, and 16th Street. The former Fisher Lumber/"Colorado Yards" site is accessed via curb cuts along 14th Street and 16th Street (Figure 1 and Figure 2).

2.2 DESCRIPTION OF PROPOSED PROJECT

The purpose of the Project is to renovate and expand the existing Park to meet the increasing demand for recreational activities. The Project is based on direction provided during an extensive community outreach process that the City conducted during the development of the master plan for the Park. The implementation of the Project will combine the existing 10.3-acre Park with the 2.9-acre former Fisher Lumber (currently PLD's Colorado Yards) site to create a 13.2-acre park. With the City's focus on better serving the community's demands, the Project will involve the development of modernized public recreation facilities, improved accessibility to amenities, and enhanced community gathering spaces.

Key components of the Project include the following, which will be developed in phases:

- Two synthetic turf combo fields (two playing fields per combo field)
- Three grass youth fields (one fast-pitch softball and two baseball fields)
- Four rooftop tennis/pickleball courts
- A new community hub building and the replacement of the children's playground with a new universally accessible playground
- Renovation and expansion of the skate park
- Replacement of the existing community recreation center with a new community recreation center
- New covered parking lot and passenger loading zone

These components of the Project are described further below and depicted in Figure 3.

2.2.1 PROPOSED RECREATIONAL FACILITIES

SPORTS FIELDS

The Project will provide a total of seven baseball/softball playing fields, including two combo fields (two playing fields per combo field), two youth baseball fields, and one youth fast-pitch softball field. The Project will add a field and would provide expanded fields that would reduce schedule and use constraints associated with the existing combo field.

The two combo fields (Fields 1, 2, 3, and 4) would be located side-by-side along the northern portion of the Project site, fronting Colorado Avenue. The combo fields would be comprised of 100 percent synthetic turf playing surface, including green turf for outfield and brown turf for infield areas, for low maintenance and to allow playing year-round. The synthetic turf, a movable pitching mound, multiple base alignments, and portable outfield fencing would allow for maximum combinations of softball and baseball. The flexible design can accommodate a regulation high school baseball game, an adult softball game, or two youth baseball or fast-pitch softball games played simultaneously. The entire



perimeter of each combo field would be fenced with 8-ft-high chain-link perimeter fencing and the exterior of the combo fields (along 14th Street, Colorado Avenue, and 16th Street) would also contain an approximately 30-ft-tall ball stop netting to prevent balls from landing in the adjacent streets. Fields 1 and 2 would have batting cages. Both combo fields would include dugouts and bleachers covered by sail shades. The bleachers would provide seating for up to approximately 200 spectators. Playing fields would be lit during evening events with LED lights affixed to approximately 55-ft-tall poles. Eight pole lights would border each of the two combo fields, with two LED lights along each of the four field lines.

Two youth baseball fields (Fields 5 and 6) would be located along the eastern border of the Project site, south of Fields 3 and 4. The youth fast-pitch softball field (Field 7) would be immediately west of Field 6. These “showcase” fields would be the primary playfields for the City’s youth baseball and softball teams, sized specifically for Little League and youth fast-pitch softball. Unlike the combo fields, these youth baseball/softball fields would be covered with natural grass with dirt infield skin. The youth fields would also be equipped with electronic scoreboards. Fields 5 and 7 would have batting cages. Similar to the combo fields, the perimeter of each youth field would be fenced with 8-ft-tall chain-link perimeter fencing and the exterior of the youth fields (along 16th Street and Olympic Boulevard) would also contain 30-ft-tall ball stop netting. Youth fields would include dugouts and bleachers covered by sail shades. The bleachers would provide seating for up to 200 spectators per playing field. Each of the baseball/softball fields would be lit using LED lights affixed to four 55-ft-tall poles, including two lights along each of the field lines.

TENNIS/PICKLEBALL COURTS

Tennis/pickleball courts would be provided on a rooftop located above the proposed surface parking lot and striped for four tennis courts/16 pickleball courts. A storage shed would be provided for tennis/pickleball equipment at the northeastern corner of the tennis/pickleball courts. The rooftop tennis/pickleball courts would be accessible via a staircase and an elevator both located at the southeastern corner of the proposed surface parking lot. Perimeter fencing would border the perimeter of the tennis/pickleball courts. The Project will include six LED lights affixed to approximately 55-ft-tall poles, including three lights along the northern perimeter and three along the southern perimeter of the courts.

COMMUNITY HUB AND CHILDREN’S PLAYGROUND

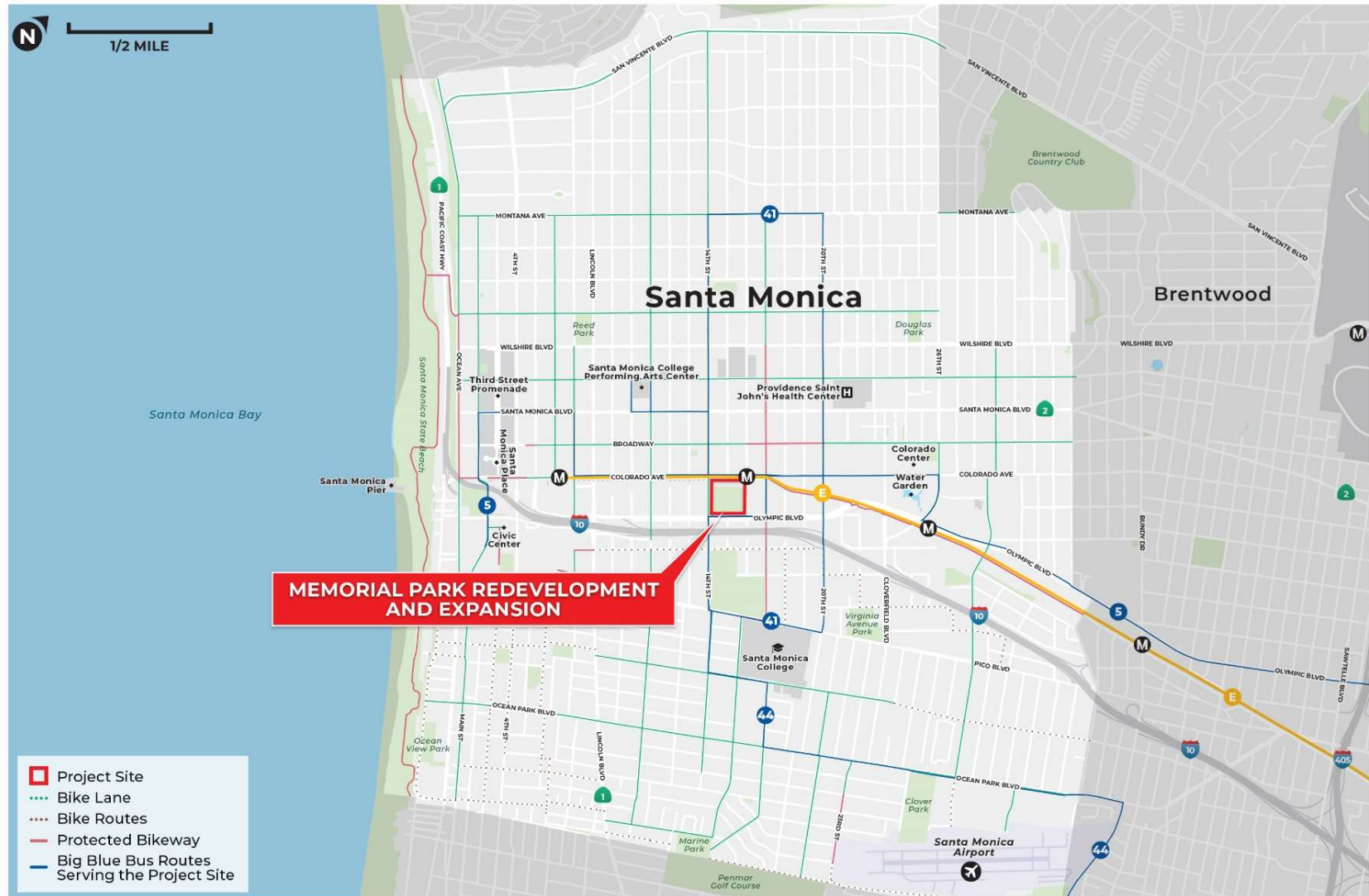
The proposed Community Hub Building and Children’s Playground would be located centrally within the park in proximity to the sports fields, tennis/pickleball courts, skatepark, and surface parking lot. The approximately 3,000-sf Community Hub Building would include restrooms, concessions, a storage room for park and sports equipment, and a small office for field monitor staff. The playground would be universally accessible (e.g., ADA) and integrate sail shades.

THE COVE SKATEPARK

The Cove Skatepark would be expanded and renovated to include modern skateboarding and BMX features, as well as seating and shade for spectators. The westward expansion of approximately 7,700 sf would relocate the grass perimeter and gravel entrance along Olympic Boulevard to the west side of the Cove Skatepark.

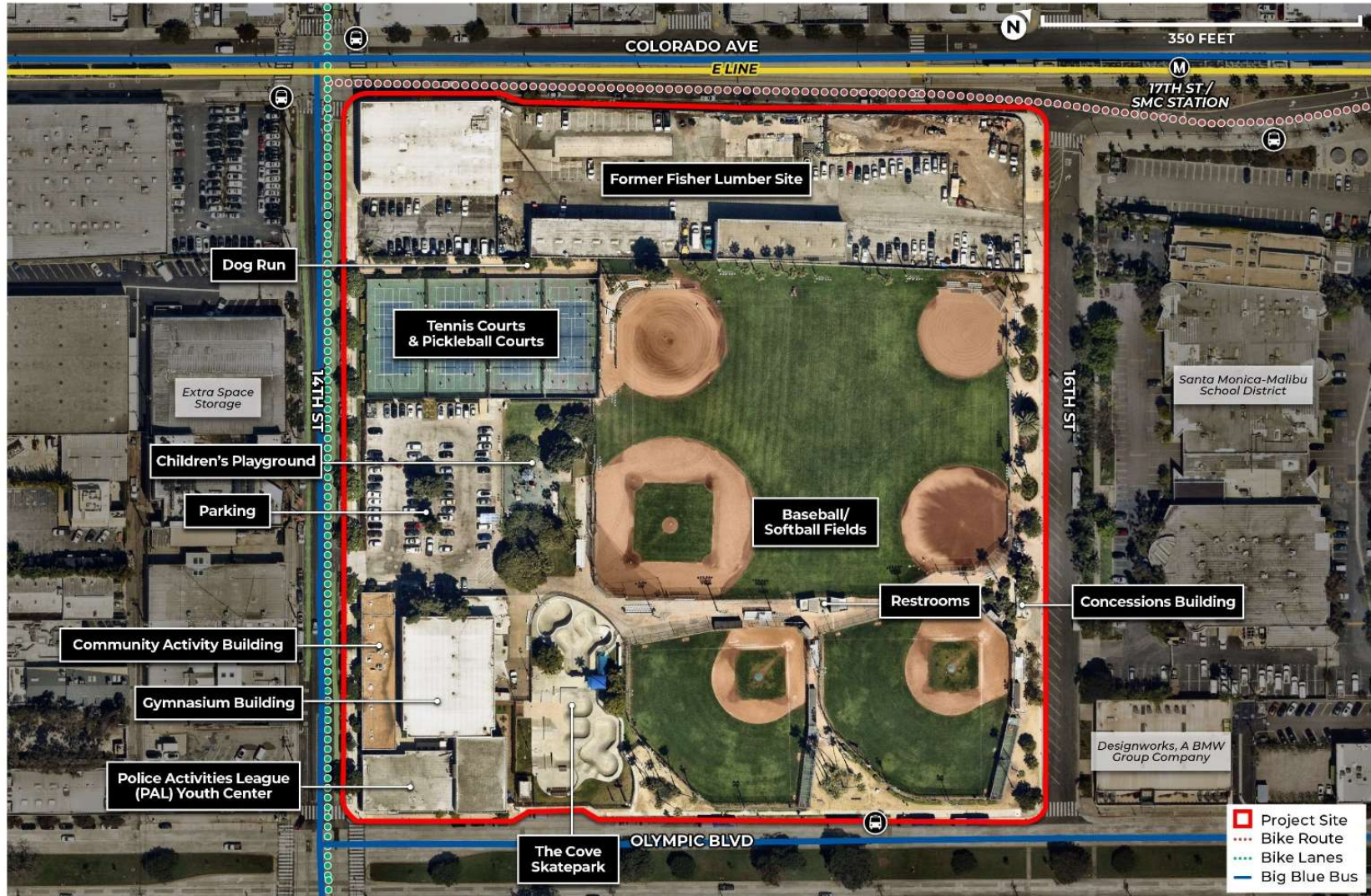
COMMUNITY RECREATION CENTER

The existing 35,000-sf Community Recreation Center would be demolished and replaced with a new two-story, 50,000-sf Community Recreation Center. The redevelopment of the Community Recreation Center would integrate the functions of the existing gymnasium PAL building, community rooms, and staff offices into one facility. It would be designed with a flexible floor plan to allow for a broad array of recreational and community programs and services.



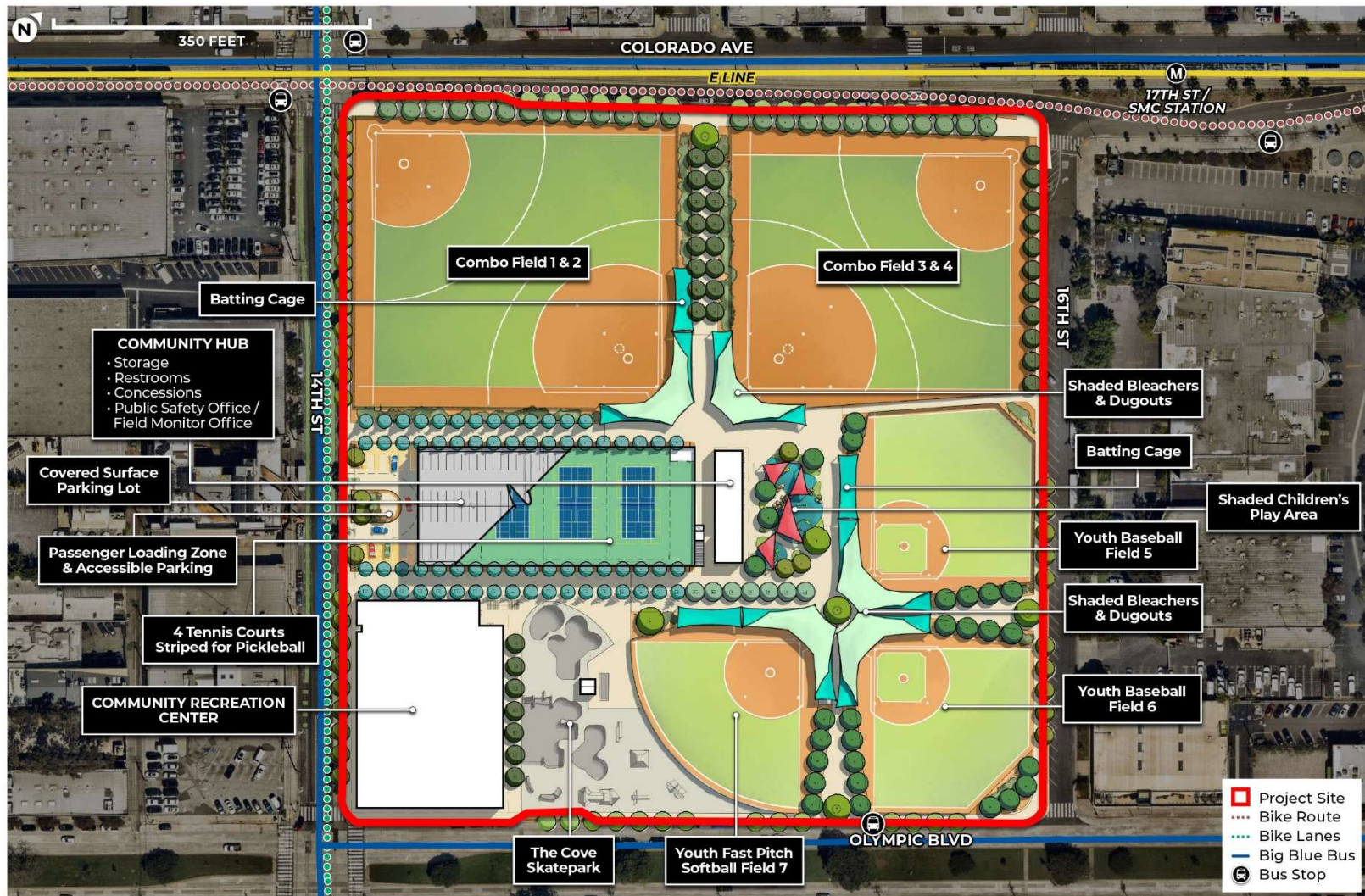
Memorial Park Redevelopment and Expansion Project Vicinity

**FIGURE
1**



Memorial Park Redevelopment and Expansion Existing Site Plan

FIGURE
2



Memorial Park Redevelopment and Expansion Proposed Site Plan

FIGURE
3

2.2.2 LIGHTING, LANDSCAPING, AND HARDSCAPE

Outdoor lighting would provide nighttime security and wayfinding around and through the Park. As previously described, the Project will include LED lights affixed to approximately 55-ft-tall poles around the perimeter of each of the proposed playing fields and the proposed tennis/pickleball courts. Additional LED pole lights would be provided along the designated walking loop, around the Community Hub Building, and at The Cove Skatepark. Outdoor lighting would be provided in accordance with the Santa Monica Municipal Code (SMMC) Section 9.21.080 so as not to produce obtrusive glare onto the public right-of-way or adjacent properties. Code-required lighting for passageways and recesses would be provided at sufficient levels for public safety. Interior lighting in the Community Recreation Center would be designed with occupancy sensors and dimmers, where feasible and appropriate, to minimize energy use.

Streetscape improvements would be included around all four sides of the park. In addition to the sports fields' synthetic turf and natural grass, the landscape design includes mostly native trees, ornamental evergreen and deciduous trees, shade trees, and flowering trees. The remainder of the Project site would be predominantly covered with concrete, including the use of smooth concrete at The Cove Skatepark.

2.2.3 ACCESS, CIRCULATION, AND PARKING

Vehicular access to the site would be provided via one entry on 14th Street, midway between Colorado Avenue and Olympic Boulevard. The entry would provide a one-way passenger loading zone (i.e., pick-up/drop-off) and up to seven ADA-accessible parking spaces. The passenger loading zone would connect vehicles to a new 32,000 sf-covered public parking lot that would provide up to 128 parking spaces. The Project will result in a net increase of 18 new parking spaces, after accounting for the construction of the parking lot and the reduction of metered parking along 16th Street and Colorado Avenue.

Nearby local transit, including the City's Big Blue Bus system and the Expo LRT, would continue to serve Memorial Park. As previously described, Big Blue Bus Routes 5, 41, and 44 provide service in the immediate vicinity of the Project site; and 17th Street/SMC Expo Station is located at the northeast corner of the Project site.

The Project includes seven designated pedestrian entrances. Each side of the Park would include one or two entries. The pedestrian entrances are described below:

- 16th Street: A new pedestrian entrance between Combo Field 2 and Field 5 would be provided. The existing entrance between Fields 5 and 6 would remain.
- Olympic Boulevard: The existing western entrance would be relocated to the west side of the Cove Skatepark to accommodate the skatepark expansion. The existing eastern entrance would remain.
- 14th Street: Two new pedestrian access points would be provided on both sides of the passenger loading zone.
- Colorado Avenue: One new access point would be provided between the two proposed combo fields, aligning with the 15th Street intersection.

In addition to the pedestrian entry points, the Project includes a 0.5-mile designated community walking loop. The path would be located around the perimeter of the Park along 14th Street, Colorado Avenue, and 16th Street, and traverse the Park's interior, connecting to the centrally located Community Hub. The loop would include a series of interspersed or grouped exercise stations.

The Project will include an approximately 16-ft-wide Class I shared use path along Colorado Avenue to accommodate pedestrians and bicyclists. As previously described, there also are existing Class II bike lanes along 14th Street in both directions. Bicycle racks also would be provided throughout the park.

2.2.4 CONSTRUCTION

An average of 40 construction workers would be on-site at any time from 8:00 AM to 6:00 PM on Monday through Friday and 9:00 AM to 5:00 PM on Saturdays (permitted construction work hours per the City's Noise Ordinance, Chapter 4.12 of the SMMC) during construction.

Construction vehicles and equipment would include backhoes, forklifts, material-handling equipment, concrete trucks, hydraulic boom pumps, compressors, mixers, generators, portable welding machines, and miscellaneous small tools. Additional construction vehicle trips would include material/equipment deliveries as well as light duty trucks and passenger vehicle trips for construction worker commutes to the Project site.

Construction staging for equipment storage and material stockpiling would occur within secured construction areas onsite. Construction areas would be screened from public view using temporary barriers. Based on the flow of goods and services to the site, traffic control may be modified but would not change significantly once construction areas are established and secured.

The Project will be constructed in phases depending on funding, entitlements, and approvals. A conceptual description of these phases is provided below. However, given the uncertainty in the timing of implementation, the analysis conservatively considers and describes the implementation of the Project in a single phase spanning a period of up to 3 years. This approach contemplates the greatest possible temporary construction-related impacts and long-term operational impacts associated with the Project. The construction phases are as follows.

PHASE 1

Phase 1 consists of the demolition and construction of the western portion of Memorial Park. Demolition activities would include the following:

- Clear former Fisher Lumber site
- Demolish existing tennis/pickleball courts, parking lot, and children's playground

Following demolition, construction of the proposed facilities would occur:

- Construct the first Combo Field (Fields 1 and 2)
- Construct a covered parking lot and loading/drop-off zone
- Construct the tennis/pickleball courts on the parking lot rooftop
- Construct mobility and streetscape improvements along Colorado Avenue and a portion of 14th Street

Throughout Phase 1, there would be a staging plan that allows for temporary parking on the former Fisher Lumber site, the continued use of the existing restroom and concession facility, and the potential continued use of the existing softball fields.

PHASE 2

Phase 2 includes the expansion and redevelopment of Memorial Park along the remainder of Colorado Avenue and most of 16th Street. This phase would include the following components of the Project:

- Demolish the existing eastern youth baseball field
- Expand Memorial Park east into a portion of 16th Street
- Construct the second Combo Field (Fields 3 and 4)
- Construct the Community Hub Building, include new restroom, concession stand, offices, and storage facility
- Construct the Children's Playground



- Construct a temporary natural turf practice area

PHASE 3

Phase 3 includes the redevelopment of the youth baseball/softball fields and the expansion and renovation of the Cove Skatepark. This phase would include the following:

- Expand Memorial Park east into the remaining portion of 16th Street
- Construct streetscape improvements, including street trees, planters, and buffer areas along portions of 16th Street and Olympic Boulevard
- Construct the walking loop with exercise stations
- Redevelop the temporary natural turf practice area into Field 5 for youth baseball
- Redevelop the two youth fields along Olympic Boulevard into youth baseball (Field 6) and youth fast-pitch softball (Field 7) fields
- Expand and redevelop the Cove Skatepark

PHASE 4

Phase 4 would include the demolition and redevelopment of the Community Recreation Center, along with streetscape improvements along a portion of 14th Street.



3 EXISTING CONDITIONS

3.1 TOPICAL BACKGROUND

In the United States (U.S), air quality is primarily characterized by ambient ground-level concentrations of seven specific pollutants identified by the USEPA to be of concern with respect to health and welfare of the public. These specific pollutants—known as “criteria air pollutants”—are pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal ambient concentration criteria are known as the NAAQS, and the California ambient concentration criteria are referred to as the CAAQS. Federal criteria air pollutants include ground-level ozone (O₃), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), respirable particulate matter ten microns or less in diameter (PM₁₀), fine particulate matter 2.5 microns or less in diameter (PM_{2.5}), and lead (Pb). **Table 3.1-1** shows the CAAQS and NAAQS concentrations for the criteria air pollutants with the corresponding averaging times.

Table 3.1-1. Criteria Air Pollutant Standards

Pollutant	Averaging Period	California (CAAQS)	Federal (NAAQS)	
			Primary	Secondary
Ozone (O ₃)	1 Hour	0.09 ppm (180 µg/m³)	--	Same as Primary Standard
	8 Hour	0.070 ppm (137 µg/m³)	0.070 ppm (137 µg/m³)	
Respirable Particulate Matter (PM ₁₀)	24 Hour	50 µg/m³	150 µg/m³	Same as Primary Standard
	Annual Arithmetic Mean	20 µg/m³	--	
Fine Particulate Matter (PM _{2.5})	24 Hour	--	35 µg/m³	Same as Primary Standard
	Annual Arithmetic Mean	12 µg/m³	9 µg/m³	15 µg/m³
Carbon Monoxide (CO)	1 Hour	20 ppm (23 µg/m³)	35 ppm (40 µg/m³)	--
	8 Hour	9 ppm (10 µg/m³)	9 ppm (10 µg/m³)	--
Nitrogen Dioxide (NO ₂)	1 Hour	0.18 ppm(339 µg/m³)	0.10 ppm (188 µg/m³)	--
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)	0.053 ppb (100 µg/m³)	Same as Primary Standard
Sulfur Dioxide (SO ₂)	1 Hour	0.25 ppm (655 µg/m³)	75 ppb (196 µg/m³)	--
	3 Hour	--	--	0.5 ppm (1,300 µg/m³)
	24 Hour	0.04 ppm (105 µg/m³)	0.14 ppm (for certain areas)	--
	Annual Arithmetic Mean	--	0.030 ppm (for certain areas)	--
Lead	30 Day Average	1.5 µg/m³	--	--
	Calendar Quarter	--	1.5 µg/m³ (for certain areas)	Same as Primary Standard
	Rolling 3-Month Average	--	0.15 µg/m³	
Visibility Reducing Particles	8 Hour	--	No National Standards	



Pollutant	Averaging Period	California (CAAQS)	Federal (NAAQS)	
			Primary	Secondary
Sulfates	24 Hour	25 µg/m ³		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)		
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m ³)		

Source: California Air Resources Board (CARB) 2024a.

Notes: ppm = parts per million; µg/m³ = micrograms per cubic meter.

3.1.1 FEDERAL CRITERIA AIR POLLUTANTS

Ozone (O₃) is a colorless gas with a sharp odor, is a highly reactive form of oxygen. High concentrations of non-anthropogenic sources of O₃ exist in the stratosphere. It also is formed in the atmosphere when anthropogenic sources of volatile organic compounds (VOC) and nitrogen oxides (NO_x) react in the presence of ultraviolet sunlight (also known as smog). The primary sources of VOC and NO_x, the components of O₃, are automobile exhaust and industrial sources. Some mixing of stratospheric O₃ downward through the troposphere to the earth’s surface does occur; however, the extent of O₃ transport is limited.

The propensity of O₃ for reacting with organic materials causes it to be damaging to living cells and cause health effects. O₃ enters the human body primarily through the respiratory tract and causes respiratory irritation and discomfort, makes breathing more difficult during exercise, and reduces the respiratory system’s ability to remove inhaled particles and fight infection. Individuals exercising outdoors, children and people with pre-existing lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible subgroups for O₃ effects.

Particulate matter (PM₁₀ and PM_{2.5}) refers to particles small enough to be inhaled into the deepest parts of the lung, which are of great concern to public health. Major sources of PM₁₀ include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood burning stoves and fireplaces; dust from construction, landfills and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. Emissions of PM_{2.5} result from fuel combustion (e.g., motor vehicles, power generation and industrial facilities), residential fireplaces and wood stoves. In addition, PM_{2.5} can be formed in the atmosphere from gases such as SO₂, NO_x, and VOC.

Respirable particles (particles less than 10 microns in diameter, denoted as PM₁₀) can accumulate in the respiratory system and aggravate health problems such as asthma, bronchitis and other lung diseases. Children, the elderly, exercising adults, and those suffering from asthma are especially vulnerable to adverse health effects of PM. A consistent correlation between elevated ambient fine particulate matter (particles less than 2.5 microns in diameter, denoted as PM_{2.5}) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the U.S. and various areas around the world. Studies have reported an association between long-term exposure to air pollution dominated by PM_{2.5} and increased mortality, reduction in life-span, and an increased mortality from lung cancer.

Daily fluctuations in PM_{2.5} concentration levels have also been related to hospital admissions for acute respiratory conditions, to school and kindergarten absences, to a decrease in respiratory function in normal children and to increased medication use in children and adults with asthma. Studies have also shown lung function growth in children is reduced with long-term exposure to PM. In addition to children, the elderly, and people with pre-existing respiratory and/or cardiovascular disease appear to be more susceptible to the effects of PM₁₀ and PM_{2.5}.

Carbon Monoxide (CO) is a colorless, odorless, relatively inert gas. It is a trace constituent in the unpolluted troposphere and is produced by both natural processes and human activities. In remote areas far from human habitation, CO occurs in the atmosphere at an average background concentration of 0.04 ppm, primarily as a result of natural processes such as forest fires and the oxidation of methane. Global atmospheric mixing of CO from urban and



industrial sources creates higher background concentrations (up to 0.20 ppm) near urban areas. The major source of CO in urban areas is incomplete combustion of carbon-containing fuels, mainly gasoline.

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

Nitrogen dioxide (NO₂) is a reddish-brown gas with a bleach-like odor and is responsible for the brownish tinge of polluted air. Nitric oxide (NO) is a colorless gas, formed from nitrogen (N₂) and oxygen (O₂) under conditions of high temperature and pressure which are generally present during combustion of fuels (e.g., motor vehicles); NO reacts rapidly with the oxygen in air to form NO₂. The two gases, NO and NO₂, are referred to collectively as NO_x. In the presence of sunlight, atmospheric NO₂ reacts and splits to form a NO molecule and an oxygen atom. The oxygen atom can react further to form O₃, via a complex series of chemical reactions involving hydrocarbons.

Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposures to NO₂ at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California (fewer or no stoves). In healthy subjects, increase in resistance to air flow and airway contraction is observed after short-term exposure to NO₂. Larger decreases in lung functions are observed in individuals with asthma and/or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups. More recent studies have found associations between NO₂ exposures and cardiopulmonary mortality, decreased lung function, respiratory symptoms and emergency room asthma visits.

Sulfur Dioxide (SO₂) is a colorless gas with a sharp odor. It reacts in air to form sulfuric acid, which contributes to acid precipitation, and sulfates, which are components of particulate matter. Main sources of SO₂ include coal and oil used in power plants and industries. Exposure of a few minutes to low levels of SO₂ can result in airway constriction in some asthmatics. All asthmatics are sensitive to the effects of SO₂. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, is observed after acute higher exposure to SO₂. In contrast, healthy individuals do not exhibit similar acute responses, even after exposure to higher concentrations of SO₂.

Lead (Pb) in the atmosphere is present as a mixture of a number of lead compounds. Leaded gasoline and lead smelters have been the main sources of lead emitted into the air. Due to the phasing out of leaded gasoline, there was a dramatic reduction in atmospheric Pb over the past three decades. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. In adults, increased Pb levels are associated with increased blood pressure. Pb poisoning can cause anemia, lethargy, seizures, and death. There is no evidence to suggest that there are direct effects of Pb on the respiratory system.

3.1.2 CALIFORNIA CRITERIA AIR POLLUTANTS

The California Environmental Protection Agency (CalEPA) establishes statewide standards and the California Air Resources Board (CARB) establishes local standards for the six common air pollutants identified above (CARB 2024a). In addition, CARB has established standards for the following four additional pollutants.

Visibility-reducing particles are a byproduct of various processes and activities involved in land use development. Deterioration of visibility is one of the most obvious manifestations of air pollution and plays a major role in the



public's perception of air quality. Visibility reduction from air pollution is often due to the presence of sulfur and NO_x , as well as PM.

Sulfates (X-SO_4^{2-}) are chemical compounds which contain the sulfate ion (SO_4^{2-}) and are part of the mixture of solid materials that comprise PM_{10} . Most of SO_x in the atmosphere are produced by oxidation of SO_2 . Oxidation of SO_2 yields sulfur trioxide, which reacts with water to form sulfuric acid, which contributes to acid deposition. The reaction of sulfuric acid with basic substances such as ammonia yields SO_4^{2-} , a component of PM_{10} and $\text{PM}_{2.5}$. Both mortality and morbidity effects have been observed with an increase in ambient SO_4^{2-} concentrations. However, studies to separate the effects of SO_4^{2-} from the effects of other pollutants have generally not been successful. Clinical studies of asthmatics exposed to sulfuric acid suggest that adolescent asthmatics are possibly a subgroup susceptible to acid aerosol exposure.

Hydrogen Sulfide (H_2S) is a colorless, flammable, poisonous compound having a characteristic rotten egg odor. It is used as a reagent and as an intermediate in the preparation of other reduced sulfur compounds. It is also a by-product of the desulfurization processes in the oil and gas industries and rayon production, sewage treatment, and leather tanning. Geothermal power plants, petroleum production and refining, and sewer gas are specific sources of H_2S in California. High H_2S exposure has been documented as a cause of sudden death in the workplace.

Vinyl Chloride ($\text{C}_2\text{H}_3\text{Cl}$) is a colorless, flammable gas at ambient temperature and pressure. It is also highly toxic and is classified as a known carcinogen by the American Conference of Governmental Industrial Hygienists and the International Agency for Research on Cancer. At room temperature, vinyl chloride is a gas with a sickly-sweet odor that is easily condensed. However, it is stored at cooler temperatures as a liquid. Due to hazardous characteristics of vinyl chloride to human health, there are no end products that use vinyl chloride in its monomer form. Vinyl chloride is a chemical intermediate, not a final product.

Vinyl chloride is an important industrial chemical chiefly used to produce polyvinyl chloride (PVC). The process involves vinyl chloride liquid fed to polymerization reactors where it is converted from a monomer to a polymer PVC. The final product of the polymerization process is PVC in either a flake or pellet form. From its flake or pellet form, PVC is sold to companies that heat and mold the PVC into end products such as PVC pipe and bottles. Vinyl chloride is not only used to make PVC products, but it is also a natural degradation product of chlorinated industrial solvents (e.g., perchloroethylene and trichloroethene). Vinyl chloride emissions are historically associated primarily with landfills and sites contaminated with chlorinated solvents.

3.1.3 GREENHOUSE GAS AND CLIMATE CHANGE

The USEPA describes climate change as “changes in global or regional climate patterns attributed largely to human-caused increased levels of atmospheric greenhouse gases” (USEPA 2025a). Climate change can include major changes in air temperature, precipitation, or wind patterns, among others, that occur over several decades or longer. These changes are caused by a number of factors, including oceanic processes, variations in solar radiation received by earth, plate tectonics and volcanic eruptions, and anthropogenic (i.e., human-related) activities. However, the primary anthropogenic driver of climate change is the release of GHGs into the atmosphere.

The “greenhouse effect” refers to Earth’s warming process which is necessary to support life. The Earth’s atmosphere consists of a variety of gases that absorb solar energy and regulate the Earth’s temperature by preventing the loss of heat to space; these gases are referred to as GHGs because they trap heat like glass of a greenhouse. Relying on decades of research, the overwhelming majority of the scientific community agrees that human activities, which include the burning of fossil fuels to produce energy and deforestation, have contributed to elevated concentration of GHGs in the atmosphere since the Industrial Revolution (National Research Council 2010). When GHGs build up in the atmosphere, they lead to a warmer climate which leads to many other potential adverse physical and environmental effects including sea level rise, flooding, increased weather variability and intensified storm events, reduced reliability of water supplies, reduced quality of water supplies, and increased stress on ecosystems that would reduce biodiversity.



Additionally, climate change may have impacts to human health due to heat waves and extreme weather events, reduced air quality, and increased climate-sensitive diseases, including food-borne, water-borne, and animal-borne diseases.

GHGs consist of a variety of gases that have the potential to trap heat, though regulations generally focus on carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). (Chloroflourocarbons [CFCs] have been banned and do not have a non-anthropogenic source; therefore, these GHGs are not included in this analysis.) The following provides a brief description of each of the remaining GHGs and their sources:

Carbon Dioxide (CO₂) is the primary greenhouse gas emitted through human activities. In 2022, CO₂ accounted for 80 percent of all U.S. GHG emissions. The production and absorption of CO₂ occurs through the burning of fossil fuels (e.g., oil, natural gas, and coal), solid waste, trees and wood products, and other chemical reactions, such as those required to manufacture cement. CO₂ is constantly being exchanged among the atmosphere, ocean, and land surface as it is both produced and absorbed by many microorganisms, plants, and animals. However, emissions and removal of CO₂ by these natural processes tend to balance. Globally, the largest source of CO₂ emissions is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, and industrial facilities. CO₂ is removed from the atmosphere (or sequestered) when it is absorbed by plants as part of the biological carbon cycle. When in balance, total CO₂ emissions and removals from the entire carbon cycle are roughly equal.

Methane (CH₄) is emitted from a variety of both human-related and natural sources. Anthropogenic sources include the production and transport of coal, natural gas, and oil, from livestock and other agricultural practices, and from the decay of organic waste in municipal solid waste landfills. In 2022, CH₄ accounted for 12% of all U.S. greenhouse gas emissions from human activities. Non-anthropogenic sources of CH₄ include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and wildfires. Methane's lifetime in the atmosphere is much shorter than CO₂, but CH₄ is more efficient at trapping radiation than CO₂. Pound for pound, the comparative impact of CH₄ is 28 times greater than CO₂ over a 100-year period (USEPA 2025b).

Nitrous Oxide (N₂O) In 2022, nitrous oxide (N₂O) accounted for 6 percent of all U.S. greenhouse gas emissions from human activities. Globally, 40 percent of total N₂O emissions come from human activities. N₂O is emitted from agriculture, land use, transportation, industry, and other activities. In addition to agricultural sources, some industrial processes (e.g., fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to the atmospheric load of N₂O (USEPA 2025b).

Non-anthropogenic sources of N₂O emissions has many sources associated with the nitrogen cycle, which is the circulation of nitrogen among the atmosphere, plants, animals, and microorganisms that live in soil and water. Nitrogen takes on a variety of chemical forms throughout the nitrogen cycle, including N₂O. Non-anthropogenic sources of emissions of N₂O are mainly from bacteria breaking down nitrogen in soils and the oceans. N₂O is removed from the atmosphere when it is absorbed by certain types of bacteria or destroyed by ultraviolet radiation or chemical reactions. N₂O molecules stay in the atmosphere for an average of 121 years before being removed by a sink or destroyed through chemical reactions. The impact of 1 pound of N₂O on warming the atmosphere is 265 times that of 1 pound of carbon dioxide.

3.2 EXISTING AIR QUALITY CONDITIONS

3.2.1 TOPOGRAPHICAL INFLUENCE AND LOCAL CLIMATOLOGY

Air quality is affected by both the rate and location of pollutant emissions, and by meteorological conditions that influence movement and dispersal of pollutants. Atmospheric conditions such as wind speed, wind direction, and air temperature gradients, along with local topography, provide the link between air pollutant emissions and air quality.



The Project site is located in the South Coast Air Basin (SCAB or Basin), including portions of what was previously known as the Southeast Desert Air Basin, all of Orange County, the non-desert portions of Los Angeles County, and most of Riverside County. The distinctive climate of the SCAB is determined by its terrain and geographic location. The SCAB is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the southwest and high mountains around its remaining perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The usually mild climatological pattern is interrupted occasionally by periods of extremely hot weather, winter storms, or Santa Ana winds.

The vertical dispersion of air pollutants in the SCAB is hampered by the presence of persistent temperature inversions. An upper layer of dry air that warms as it descends characterizes high-pressure systems, such as the semi-permanent high-pressure zone in which the SCAB is located. This upper layer restricts the mobility of cooler marine-influenced air near the ground surface and results in the formation of subsidence inversions. Such inversions restrict the vertical dispersion of air pollutants released into the marine layer and, together with strong sunlight, can produce worst-case conditions for the formation of photochemical smog.

The atmospheric pollution potential of an area is largely dependent on winds, atmospheric stability, solar radiation, and terrain. The combination of low wind speeds and low inversions produces the greatest concentration of air pollutants. On days without inversions, or on days of winds averaging over 15 miles per hour (mph), smog potential is greatly reduced (SCAQMD 1993).

The annual average high and low temperatures in the City are 67.3 degrees Fahrenheit (°F) and 55.3°F. Average winter (December, January, and February) high and low temperatures are approximately 64.3°F and 49.6°F and average summer (June, July, and August) high and low temperatures are approximately 70.4°F and 60.6°F (Western Regional Climate Center [WRCC] 2025).

On average, dry months (April - October) experience zero to 0.75 inch of rainfall and wet months (November – March) may experience one to three inches of rainfall (WRCC 2025). The month with the highest relative humidity is June (61%). The month with the lowest relative humidity is November (50%). At the Project site, the month that receives most sunshine is July, with a mean number of daily hours being 11.4 (Climate Data 2025).

3.2.2 REGIONAL ATTAINMENT STATUS

Table 3.2-1 shows the area designation status of the SCAB for each criteria pollutant for both the NAAQS and CAAQS as of 2018.

Table 3.2-1. Federal and State Attainment Status

Pollutants	Federal Classification	State Classification
Ozone (O ₃)	1&8-Hour: Non-Attainment	1&8-Hour: Non-Attainment
Particulate Matter (PM ₁₀)	Attainment (Maintenance)	Non-Attainment
Fine Particulate Matter (PM _{2.5})	Non-Attainment	Non-Attainment
Carbon Monoxide (CO)	Attainment (Maintenance)	Attainment
Nitrogen Dioxide (NO ₂)	Attainment (Maintenance)	Attainment
Sulfur Dioxide (SO ₂)	Unclassified / Attainment	Attainment
Lead (Pb)	Non-Attainment (Partial)	No State Standards
Sulfates		Attainment
Hydrogen Sulfide	No Federal Standards	Attainment
Vinyl Chloride		Attainment

Sources: NAAQS and CAAQS Attainment Status for SCAB. SCAQMD 2018.

3.2.3 LOCAL AIR MONITORING DATA

The SCAQMD has divided the Basin into source receptor areas (SRAs), based on similar meteorological and topographical features. The Project site is located in the SCAQMD's Northwest Coastal LA County SRA (SRA No. 2). The most representative station of the Project site is the West Los Angeles Station, which is located at Wilshire Blvd. and Sawtelle Blvd., Los Angeles, CA 90025, approximately 2.6 miles northeast of the Project site. The West Los Angeles Station measures NO₂ and O₃. The nearest station that monitors CO, PM₁₀, PM_{2.5}, and SO₂ is the Los Angeles-North Main Street Station, which is located at 1630 North Main Street, Los Angeles, CA 90012, approximately 15 miles east of the Project site (SCAQMD 2024).

Table 3.2-2 summarizes the air pollution monitoring results for 2022 for the Northwest Coastal LA County SRA.

Table 3.2-2. Air Quality Summary – Northwest Coastal LA County SRA

Pollutant	2022	Year 2023	2024
Ozone (O₃)			
Maximum 1-Hour Concentration (ppm)	0.081	0.109	0.093
Days > CAAQS (0.09 ppm)	0	1	1
Maximum 8-Hour Concentration (ppm)	0.070	0.066	0.069
Days > NAAQS (0.070 ppm)	0	0	0
Days > CAAQS (0.070 ppm)	0	0	0
Carbon Monoxide (CO)			
Maximum 1-Hour Concentration (ppm)	1.672	1.430	1.624
Days > NAAQS (35 ppm)	0	0	0
Days > CAAQS (20 ppm)	0	0	0
Maximum 8-Hour Concentration (ppm)	1.063	0.912	0.903
Days > NAAQS (9 ppm)	0	0	0
Days > CAAQS (9 ppm)	0	0	0
Nitrogen Dioxide (NO₂)			
Maximum 1-Hour Concentration (ppm)	0.167	0.103	0.120
Days > NAAQS (0.10 ppm)	8	2	3
Days > CAAQS (0.18 ppm)	0	0	0
Respirable Particulate Matter (PM₁₀)			
Maximum 24-Hour Concentration (µg/m ³)	61.0	58.1	53.6
Days > NAAQS (150 µg/m ³)	0	0	0
Days > CAAQS (50 µg/m ³)	5	2	1
Fine Particulate Matter (PM_{2.5})			
Maximum 24-Hour Concentration (µg/m ³)	38.1	32.1	62.4
Days > NAAQS (35 µg/m ³)	1	0	5
Sulfur Dioxide (SO₂)			
Maximum 1-Hour Concentration (ppm)	0.007	0.008	0.002
Days > NAAQS (0.075 ppm)	0	0	0
Days > CAAQS (0.25 ppm)	0	0	0
Maximum 24-Hour Concentration (ppm)	0.001	0.002	0.001
Days > NAAQS (0.14 ppm)	0	0	0
Days > CAAQS (0.04 ppm)	0	0	0

Source: CARB 2025.

Notes: ppm = parts per million; ppb = parts per billion; µg/m³ = micrograms per cubic meter.

3.3 EXISTING GHG EMISSIONS

3.3.1 U.S. EMISSIONS

The USEPA's annual *Inventory of U.S. Greenhouse Gas Emissions and Sinks* tracks U.S. greenhouse gas emissions and sinks by source, economic sector, and greenhouse. In 2022, the U.S. emitted 6,343 million metric tons of carbon dioxide equivalents (MMT CO₂ e.). U.S. emissions decreased by 3 percent from 1990 to 2022 and increased by 0.2 percent from 2021 to 2022 (14.4 MMT CO₂ e.). In 2022, CO₂ emissions from fossil fuel combustion increased by 1 percent relative to the previous year. This increase in fossil fuel consumption emissions was from increased energy use, due in part to the continued rebound in economic activity after the height of the COVID-19 pandemic. CO₂ accounted for 79.7 percent of 2022 GHG emissions while CH₄ accounted for 11.1 percent, N₂O for 6.1 percent, and fluorinated gases for 3.1 percent (UESPA 2024).

In 2022, total GHG emissions by the five major sectors generating emissions through direct fossil fuel combustion – electricity generation, transportation, industrial, agricultural, and residential and commercial—25 percent for the electric power industry, 28 percent for transportation, 23 percent for industry, 10 percent for agriculture, 13 percent for residential and commercial (USEPA 2024).

3.3.2 CALIFORNIA EMISSIONS

In 2022, California generated approximately 371.1 MMT CO₂e, 2.4 percent lower than in 2021 (380.4 MMT CO₂e.). The 2022 emissions data is representative of California's continuing long-term trend of GHG emissions declines, despite the anomalous emissions trends from 2019 through 2021, due in large part to the impacts of the COVID-19 pandemic. The largest decrease in emissions occurred in the transportation sector, with a decrease of 3.6 percent (5.2 MMT CO₂e) compared to 2021 (CARB 2024b). Transportation emission decreases are largely attributed to reduced use of fossil distillate and fossil gasoline. GHG emissions in the electricity sector decreased by 4.1 percent (2.6 MMT CO₂e) compared to 2021 due to increases in solar, wind, and hydropower power generation. GHG emissions in the industrial sector decreased by 2 percent (1.51 MMT CO₂e) compared to 2021 (CARB 2024). This decline is attributed to historic lows in oil and gas production and processing sub-sector emissions since 2000.

3.3.3 CITY OF SANTA MONICA EMISSIONS

Santa Monica has been tracking local GHG emissions for over 20 years through an annual community, sector-based emissions inventory, which measures the emissions in a given region using data from energy consumption in buildings, vehicles, waste, and aviation. The City completed the *Greenhouse Gas Emissions Inventory Update* in 2023 which provides a snapshot of the communities impacts and identifies opportunities to reduce emissions. The updated GHG emissions inventory compares community trends from 2019 to 2022 and progress towards achieving the City's goal of reducing emissions by 80% below 1990 levels by 2030.

Table 3.2-1 below illustrates the City's historical GHG emissions for select years between 1990 and 2022. In 2022, the City generated approximately 724,970 MT CO₂e. Vehicle transportation emissions, at 499,822 MT CO₂e, represented the largest share of emissions at 68.9 percent. Commercial and residential building energy represented the second and third largest source of emissions with 104,393 MT CO₂e and 81,045 MT CO₂e, accounting for 14.4 and 11.2 percent of emissions, respectively. Waste emissions accounted for 4.8 percent (34,578 MT CO₂e) of emissions. Lastly, aviation emissions accounted for just 0.7 percent (5,132 MT CO₂e) of emissions. Total emissions in 2022 were approximately 48 percent less than emissions in 2019 (1,386,642 MT CO₂e). The changes are largely driven by increased efficiency in vehicle fuel, reduced waste being sent to the landfill, a decline in natural gas consumption, and reduced aviation



activity. The emissions reduction is also owed to increased renewable energy for electricity generation, as the City began to purchase electricity from the Clean Power Alliance (CPA), electing to default all residential and commercial customers at 100 percent Green Power (City of Santa Monica 2023).

Table 3.2-1. City of Santa Monica GHG Emissions Inventory (MT CO₂e)

Subsector	1990	2000	2011	2019	2022
Waste	74,546	63,364	35,001	28,211	34,578
Vehicle Transportation	762,242	752,156	746,230	617,837	499,822
Commercial Buildings	361,338	351,986	248,482	129,234	104,393
Residential Buildings	188,515	202,331	154,667	103,576	81,045
Aviation	N/A	N/A	21,912	3,391	5,132
Total	1,386,642	1,369,836	1,206,292	882,249	724,970
% Change from 1990 Baseline	--	-1.2	-13.0	-36.4	-47.7

Source: City of Santa Monica 2023.

3.4 SENSITIVE RECEPTORS

Some people, such as individuals with respiratory illnesses or impaired lung function because of other illnesses, persons over 65 years of age, and children under 14, are particularly sensitive to certain pollutants. Land uses such as primary and secondary schools, hospitals, and convalescent homes are relatively sensitive to poor air quality because children, seniors, and people with some health issues are more susceptible to respiratory infections and other air quality-related health problems than the general public. Residential land uses are considered sensitive to poor air quality because people in residential areas are often at home for extended periods and are therefore subject to extended exposure to the type of air quality present at the residence.

The nearest sensitive receptors to the Project site, with the highest potential for the Project to impact, include numerous residences located within 500 to 600 feet to the north of the Project site. The Crossroads Elementary School is located approximately 900 feet to the east of the Project site.



4 APPLICABLE REGULATIONS

4.1 FEDERAL REGULATIONS

4.1.1 FEDERAL CLEAN AIR ACT

The Federal Clean Air Act (CAA) was passed in 1963 and amended in 1990, and was the first comprehensive Federal law to regulate air emissions from stationary and mobile sources. Among other things, the law authorizes the USEPA to establish National Ambient Air Quality Standards (NAAQS), which help to ensure basic health and environmental protection from air pollution. The Federal CAA also gives the USEPA the authority to limit emissions of air pollutants coming from sources like chemical plants, utilities, and steel mills.

4.1.2 FEDERAL CLEAN AIR ACT AMENDMENTS

In 1990, the U.S. Congress adopted the Federal Clean Air Act Amendments (CAAA), which updated the nation's air pollution control program. The CAAA established a number of requirements, including new deadlines for achieving federal clean air standards.

The USEPA is the Federal agency charged with administering the CAAA and other air quality-related legislation. As a regulatory agency, USEPA's principal functions include setting NAAQS; establishing minimum national emission limits for major sources of pollution; and promulgating regulations.

The CAAA require USEPA to approve state implementation plans (SIPs) to meet and/or maintain the NAAQS. California's SIP is comprised of plans developed at the regional or local level.

4.1.3 ENERGY INDEPENDENCE AND SECURITY ACT

The Energy Independence and Security Act (EISA) of 2007 includes several key provisions that will increase energy efficiency and the availability of renewable energy, which will reduce GHG emissions as a result. The EISA facilitates the reduction of GHG emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard that requires fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.
- Achieving approximately 25 percent greater efficiency for light bulbs by phasing out old incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020.
- Establishing a minimum average fuel economy of 35 mpg for the combined fleet of cars and light trucks by 2020.
- Directing the National Highway Traffic Safety Administration to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for trucks.



Additional provisions of EISA address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of green jobs.

4.1.4 VEHICLE EMISSIONS STANDARDS

In 2009, a national policy was adopted for fuel efficiency and emissions standards in the U.S. auto industry, which applies to passenger cars and light-duty trucks for model years 2012 to 2016 (referred to as the Pavley standards; Phase 1 standards). The standards surpass the prior Corporate Average Fuel Economy standards and require an average fuel economy standard of 35.5 miles per gallon (mpg) and 250 grams of CO₂ per mile by model year 2016, based on USEPA calculation methods. These standards were formally adopted on April 1, 2010.

In 2012, new standards were adopted for model year 2017 to 2025 for passenger cars and light-duty trucks. By 2020, new vehicles are projected to achieve 41.7 mpg – if GHG reductions are achieved exclusively through fuel economy improvements – and 213 grams of CO₂ per mile (Phase 2 standards). By 2025, vehicles are required to achieve 54.5 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 163 grams of CO₂ per mile. According to the USEPA, a model year 2025 vehicle would emit approximately one-half of the GHG emissions from a model year 2010 vehicle.

On October 25, 2016, the USEPA established rules for a comprehensive Phase 2 Heavy-Duty National Program that established fuel consumption and CO₂ standards for each of the four regulatory categories of heavy-duty vehicles. The rule also included separate standards for the engines that power combustion tractors and vocational vehicles. These standards build upon the Phase 1 and Phase 2 standards for light-duty vehicles spanning model years 2012-2025.

On March 24, 2024, the USEPA announced new, more ambitious proposed standards to further reduce harmful air pollutant emissions from light-duty and medium-duty vehicles starting with model year 2027 and through 2032 (USEPA 2024).

4.2 STATE REGULATIONS

4.2.1 CALIFORNIA CLEAN AIR ACT

The California Clean Air Act (CCAA) was enacted in 1988 (California Health & Safety Code Section 39000 et seq.). California also has ambient air quality standards (i.e., CAAQS), which predate USEPA's formation in 1970 and the original NAAQS for pollutants considered harmful to public health and the environment, including the six criteria pollutants, as well as sulfates, hydrogen sulfide, vinyl chloride (chloroethene), and visibility reducing particles. The CAAQS currently in effect for each pollutant, as well as the attainment status of the SCAB, are shown in Table 3.2-1. In 1959, California enacted legislation requiring the California Department of Public Health (CDPH) to establish air quality standards and necessary controls for motor vehicle emissions. The CCAA requires all areas of the State to achieve and maintain the CAAQS by the earliest practicable date. California law continues to mandate CAAQS, although attainment of the NAAQS has precedence over attainment of the CAAQS. The CAAQS includes more stringent standards than the NAAQS. CARB ensures the implementation of the CCAA and responds to the Federal CAA. CARB is responsible for the control of vehicle emission sources, while the local air district is responsible for enforcing standards and regulating stationary sources.

4.2.2 CALIFORNIA AIR RESOURCES BOARD

CARB, a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, CARB conducts research, sets California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the SIP. CARB is responsible for the control of vehicle emission sources, while the local air district is responsible for enforcing standards and regulating stationary sources.

4.2.3 AIR QUALITY AND LAND USE HANDBOOK: A COMMUNITY HEALTH PERSPECTIVE

In April 2005, CARB issued a guidance document on air quality and land use, *Air Quality and Land Use Handbook: A Community Health Perspective*, which serves as a general guide for considering impacts to sensitive receptors from facilities that emit TACs. The recommendations provided in the handbook are voluntary and do not constitute a requirement or mandate for either land use agencies or local air districts. The goal of the guidance document is to protect sensitive receptors, such as children, the elderly, acutely ill, and chronically ill persons, from exposure to TACs. The handbook recommends siting criteria for “sensitive land uses” near specific sources of air pollution. Specifically, CARB siting recommendations include the following: (1) avoid siting sensitive receptors within 500 feet of freeways and high-traffic roads (i.e., roads within urbanized areas carrying more than 100,000 vehicles per day); (2) avoid siting sensitive receptors within 1,000 feet of a distribution center; and (3) avoid siting sensitive receptors within 300 feet of a dry cleaning facility that uses perchloroethylene. According to CARB, the additional noncancer health risk attributable to proximity to high-volume roadways was seen within 1,000 feet and was strongest within 300 feet. Particulate pollution levels are reduced by approximately 70 percent at a distance of 500 feet from freeways. However, these recommendations are advisory and should not be interpreted as defined “buffer zones.” Rather, land use agencies are given discretion to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

4.2.4 CALIFORNIA AIR TOXICS “HOT SPOTS” INFORMATION AND ASSESSMENT ACT

The Air Toxic “Hot Spots” Information and Assessment Act identifies TAC hot spots where emissions from specific stationary source facilities may expose individuals to an elevated risk of adverse health effects. It requires that a business or other establishment identified as a significant source of toxic emissions provide the affected population with information about the health risks posed by the emissions. Health Risk Assessments (HRAs) would identify the hazard or hazardous material, assess the amount, duration, and pattern of exposure to the hazard or hazardous material, assess the amount it would take to cause negative health effects, and characterize the risk to the general population and sensitive receptors from the hazard or hazardous material. The California Office of Environmental Health Hazard Assessment provides *A Guide to Health Risk Assessment* and *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (2015) to aid with compliance with the Air Toxic “Hot Spots” Information and Assessment Act.

4.2.5 CARB OFF-ROAD MOBILE SOURCES EMISSION REDUCTION PROGRAMS

The CCAA mandates the CARB to achieve the maximum degree of emission reductions from all off-road mobile sources to attain the CAAQS. Off-road mobile sources include heavy construction equipment. Tier 1, Tier 2, and Tier 3 standards for large compression-ignition engines used in off-road mobile sources went into effect in California for most engine classes in 1996, 2001, and 2006, respectively. Tier 4 or Tier 4 Interim (4i) standards apply to all off-road diesel engines model year 2012 or newer. In addition, equipment can be retrofitted to achieve lower emissions using retrofit



technologies verified by the CARB. The engine standards and ongoing rulemaking jointly address the products of diesel combustion, including emissions and toxic diesel particulate matter (DPM). The California Emission Standards for Off-Road Compression-Ignition Engines are as specified in CCR Title 13, Division 3, Chapter 9, Article 4, Section 2423.

4.2.6 CALIFORNIA BUILDING CODE

California Code of Regulations (CCR), Title 24, is known as the California Building Code (CBC), which establishes the regulations for building construction and system design and installation to achieve energy efficiency and preserve outdoor and indoor environmental quality. The CBC includes the following subparts which are most applicable to the Project.

CCR, Title 24, Part 6 comprises the California Energy Code that was first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to increase the baseline energy efficiency requirements. The Title 24 standards were updated in 2021 and became effective on January 1, 2023. The updated standards apply to all buildings for which an applicable building permit application is submitted on or after January 1, 2023, and established new standards for electric-ready requirements, expanded solar PV and battery storage, and strengthened ventilation standards for improved air quality. The Title 24 standards also include efficiency improvements to the residential standards for attics, walls, water heating, and lighting; and efficiency improvements to the non-residential standards are in alignment with the American Society of Heating and Air-Conditioning Engineers (ASHRAE) 90.1-2013 National Standards. Although it was not originally intended to reduce criteria pollutant or TAC emissions, electricity production by fossil fuels results in ozone precursor emissions and energy-efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased criteria pollutant and TAC emissions from residential and non-residential buildings.

CCR, Title 24, Part 11 comprises CALGreen, or the mandatory green building code requirements as well as voluntary measures (Tier 1 and Tier 2) for new buildings in California. The mandatory provisions in CALGreen will reduce the use of VOC-emitting materials, strengthen water efficiency conservation, increase construction waste recycling, and increase energy efficiency. Tier 1 and Tier 2 are intended to further encourage building practices that minimize the building's impact on the environment and promote a more sustainable design.

4.2.7 CALIFORNIA LEGISLATION ON CLIMATE CHANGE

Recent California legislation related to GHG emissions and climate change includes the following:

- Assembly Bill (AB) 1493 – Requires CARB to define standards for cars and light trucks manufactured after 2009.
- Executive Order (EO) S-3-05 – Announced GHG emission reduction targets.
- AB 32 (Global Warming Solutions Act of 2006) – Requires CARB to adopt regulations to evaluate statewide GHG emissions and then create a program and emission caps to limit statewide emissions to 1990 levels.
- EO S-01-07 – Requires a statewide goal to be established to reduce the carbon intensity of California's transportation fuels.
- EO B-16-12 – Requires state agencies to increase the number of zero-emission vehicles (ZEV) within the state fleet through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles are ZEV by 2015 and 20 percent by 2025.
- Senate Bill (SB) 97 – Acknowledges that climate change analysis is to occur in conjunction with the CEQA process and that the Governor's Office of Land Use and Climate Innovation (LCI) is responsible for developing CEQA Guidelines.
- SB 375 – Creates a process whereby local governments and other stakeholders work together within their region to achieve the reduction of GHG emissions.



- EO B-30-15 – Established a new interim statewide GHG emission reduction target.
- Climate Change Scoping Plan – Designed to reduce overall carbon emissions in California.
- CARB GHG Emission Inventory – Creates GHG emissions limits and requires an emissions inventory for the industries determined to be significant sources of GHG emissions.
- SB 32 – Extension of AB 32 requiring the state to further reduce GHGs to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged).
- SB 100 and 350 – Supports the reduction of GHG emissions from the electricity sector by accelerating California’s Renewables Portfolio Standard (RPS) Program, which was last updated by SB 350 in 2015.
- SB 1383 – Requires CARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants.
- EO B-55-18 – Established a new statewide goal of achieving carbon neutrality by 2045 and maintaining net negative emissions thereafter.
- EO N-79-20 – Established a new statewide goal of achieving 100 percent of in-state sales of new passenger cars and trucks will be ZEV by 2035, 100 percent of in-state sales of new medium and heavy-duty vehicles will be ZEV by 2045, and transition to 100 percent zero-emission off-road vehicles and equipment by 2035 where feasible.
- AB 1279 (California Climate Crisis Act) - Declares the policy of the state both to achieve net zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter, and to ensure that by 2045, statewide anthropogenic GHG emissions are reduced to at least 85 percent below the 1990 levels. AB 1279 also requires the state to ensure that updates to the Scoping Plan identify and recommend measures to achieve these policy goals and to identify and implement a variety of policies and strategies that enable CO₂ removal solutions and carbon capture, utilization, and storage technologies in California.

4.3 REGIONAL REGULATIONS

4.3.1 SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

The SCAQMD has jurisdiction over a total area of 10,743 square miles, consisting of the SCAB – which comprises 6,745 square miles, including Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties—and the Riverside County portion of the Salton Sea and Mojave Desert Air Basins.

The SCAQMD is required to produce plans to show how air quality will be improved in the region. The CCAA requires that these plans be updated triennially to incorporate the most recent available technical information. A multi-level partnership of governmental agencies at the federal, state, regional, and local levels implement the programs contained in these plans. Agencies involved include the USEPA, CARB, local governments, Southern California Association of Governments (SCAG), and SCAQMD. The SCAQMD and the SCAG are responsible for formulating and implementing the Air Quality Management Plan (AQMP) for the Basin.

The SCAQMD updates its AQMP every three years. The most recent of these is the 2022 AQMP, which was adopted by the Governing Board of SCAQMD on December 2, 2022. The 2022 AQMP was prepared to comply with the CAA and CCAA, to accommodate growth, to reduce air pollutant levels in the SCAB, to meet Federal and State air quality standards, and to minimize the fiscal impact that pollution control measures have on the local economy.

The 2022 AQMP focuses on attaining the 2015 8-hour ozone standard, which is the most stringent standard to date. 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 CAA measures to achieve the 2015 8-hour ozone standard. Specifically, the AQMP projects that to meet this standard, NO_x emissions must be reduced by 67 percent by 2037.

The SCAQMD has also established various rules to manage and improve air quality in the SCAB. The Project proponent must comply with all applicable SCAQMD Rules and Regulations pertaining to construction activities, including, but not limited to:

- Rule 401 (Visible Emissions) prohibits discharges of any pollutant into the atmosphere from any single source of emissions that is as dark or darker in shade as that designated No. 1 on the Ringelmann chart (opacity equal to or greater than 20 percent) for up to or more than three minutes in any one hour.
- Rule 402 (Nuisance) states that a person should not emit air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
- Rule 403 (Fugitive Dust) controls fugitive dust through various requirements including, but not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site, limiting vehicle speeds on unpaved roads to 15 miles per hour, and maintaining effective cover over exposed areas. Rule 403 also prohibits the release of fugitive dust emissions from any active operation, open storage piles, or disturbed surface area beyond the property line of the emission source and prohibits particulate matter deposits on public roadways.
- Rule 1113 (Architectural Coatings) establishes limits on the VOC content of specific architectural coating applications. Non-residential building envelope coatings are required to have VOC content less than 50 grams per liter.
- Rule 1470 (Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines) specifies requirements for stationary diesel engines, including emergency standby generators. This rule requires owners or operators of emergency standby generators to keep monthly logs of usage, limits maintenance and testing to 20 hours per day, and requires emission rates to not exceed certain levels. For new emergency standby diesel-fueled engines (>50hp) located 100 meters or less from a school, DPM emission rates shall be less than or equal to 0.01 grams per brake horsepower hour (g/bhp-hr).
- Regulation XIII (New Source Review) authorizes the SCAQMD to deny any Permit to Construct for any new or modified source which results in an emission increase of any nonattainment air contaminant, any ozone depleting compound, or ammonia, unless Best Available Control Technology is employed (Rule 1303) and it can be demonstrated through emissions modeling that the source would not cause or contribute to air quality violations.

4.3.2 SCAQMD CEQA AIR QUALITY HANDBOOK

Although the SCAQMD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate the air quality issues associated with plans and new development projects within its jurisdiction. In 1993, the SCAQMD prepared its CEQA Air Quality Handbook to assist local government agencies and consultants in preparing environmental compliance documents pursuant to CEQA. The SCAQMD is in the process of developing its Air Quality Analysis Guidance Handbook (Guidance Handbook) to replace the CEQA Air Quality Handbook. The CEQA Air Quality Handbook and the Guidance Handbook describe the criteria that SCAQMD uses when reviewing and commenting on the adequacy of environmental compliance documents pursuant to CEQA. The Guidance Handbook provides the recommended thresholds of significance to determine if a project will have a significant adverse environmental impact. Other important subjects covered in the CEQA Air Quality Handbook and the pending Guidance Handbook include methodologies for estimating project emissions and mitigation measures that can be implemented to avoid or reduce air quality impacts. Although the Governing Board of the SCAQMD has adopted the CEQA Air Quality Handbook, and is



in the process of developing the Guidance Handbook, the SCAQMD does not, nor intends to, supersede a local jurisdiction's CEQA procedures.

While the Guidance Handbook is being developed, supplemental information has been adopted by the SCAQMD. These include revisions to the air quality significance thresholds and a procedure referred to as "localized significance thresholds," which has been added as a significance threshold under the Final Localized Significance Threshold (LST) Methodology (2003). LSTs represent the maximum emissions from a development project that would not cause or contribute to an exceedance of the most stringent applicable Federal or State air quality standard, based on the ambient concentrations of that pollutant for each source receptor area. The Final LST Methodology provides thresholds of significance for NO_x, CO, PM₁₀, and PM_{2.5} to evaluate localized air quality impacts at sensitive receptors near a development project. The Final LST Methodology and associated mass rates are not designed to evaluate localized impacts from mobile sources traveling over the roadways. Further, LSTs are applicable at the project-specific level and are not applicable to regional projects such as General Plans or other long-term planning documents.

In addition, the SCAQMD has recommended that lead agencies not use the screening tables in Chapter 6 of the CEQA Air Quality Handbook because the tables were derived using an obsolete version of CARB's mobile source emission factor inventory and are also based on outdated trip generation rates from a prior edition of the Institute of Transportation Engineer's Trip Generation Handbook. The SCAQMD has also recommended that lead agencies not use the on-road mobile source emission factors in Table A9-5-J1 through A9-5-L as they are obsolete and instead recommends using on-road mobile source emission factors approved by CARB. The outdated and obsolete information were not used in this analysis. The applicable portions of the CEQA Air Quality Handbook, the LST Methodology, and other revised methodologies were used in preparing the air quality analysis in this section.

4.3.3 REGIONAL TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY (RTP/SCS)

The Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) is a long-range vision plan of transportation planning and programming activities in the Southern California Association of Governments (SCAG) region. SCAG is a Joint Powers Agency established pursuant to California Government Code Section 6502 et seq., which primarily focuses on funding regional transportation projects. Through the implementation of transportation and land use strategies, Connect SoCal, the latest version of the RTP/SCS, outlines how the region can achieve the state's GHG reduction goals and federal CAA requirements. Connect SoCal provides transportation strategies and technologies to improve the regional transportation network by (among other strategies) prioritizing the use of streets and curb space for pedestrian access and alternative transportation modes rather than vehicles. When implementing transportation projects, the RTP/SCS encourages coordination with land use planning to develop housing and employment opportunities closer to each other and to public transit. The RTP/SCS also includes a financial analysis considering costs for operations and maintenance of the existing transportation system's reliability, longevity, resilience, and cost effectiveness.

4.4 CITY OF SANTA MONICA

The City has the authority to reduce air pollution through land use planning, policy, and regulation consistent with Federal, State, and regional standards. Specifically, the City is responsible for the assessment and mitigation of air emissions generated by development permitted within the City. In accordance with the requirements of CEQA, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces mitigation measure implementation. The City has also adopted standard construction mitigation measure requirements for all development and monitors compliance with these standards. Further, the City is responsible for the implementation of traffic reduction and



Transportation Demand Management (TDM) measures set forth in the AQMP, such as advanced ramp metering, and expansion and integration of the traffic signal synchronization network to alleviate timing bottlenecks.

4.4.1 SANTA MONICA GENERAL PLAN LAND USE AND CIRCULATION ELEMENT (LUCE)

The LUCE, adopted in 2010 and revised in 2017, provides a set of goals, policies, and standards to guide land use and transportation decisions in the City through 2030. An important principle of the LUCE is to create a more sustainable Santa Monica by providing the framework to achieve the GHG reduction goals of the Sustainable City Plan. The LUCE addresses GHG emissions through its land use and transportation decisions such as focusing new land uses near transit, creating complete neighborhoods, supporting infill mixed-use projects, and affordable and diverse housing near jobs and transit. In addition, the LUCE supports a complete network of walking and bicycling, transit improvements, carpooling, car-sharing, and Transportation Demand Management (TDM) strategies to reduce vehicle trips. The LUCE includes the following applicable policies for air quality management and GHG emissions.

Goal LU2: *Integrate Land Use and Transportation for GHG Reduction. Integrate land use and transportation, carefully focusing new development on transit-rich boulevards and in the districts, to create sustainable active pedestrian-friendly centers that decrease reliance on the automobile, increase walking, bicycling, and transit use and improving community quality of life.*

- Policy LU2.1 *Redirect Growth. Redirect growth away from residential neighborhoods onto transit corridors, where new uses are served by convenient transportation networks.*
- Policy LU2.2 *Transit Villages. Capitalize on the Expo Light Rail stations to create vital new complete sustainable communities with transit as a focal element, green connections and pathways, a variety of housing types and jobs, enhanced creative arts and institutions, and local-serving retail and services.*
- Policy LU2.5. *Vehicle Trip Reduction. Achieve vehicle trip reduction through comprehensive strategies that designate land uses, establish development and street design standards, implement sidewalk, bicycle and roadway improvements, expand transit service, manage parking, and strengthen TDM programs that support accessibility by transit, bicycle and foot, and discourage vehicle trips at a district-wide level. Monitor progress using tools that integrate land use and transportation factors. Increase bicycle and pedestrian connectivity in transit districts and adjust bus and shuttle services to ensure success of the transit system.*
- Policy LU2.6 *Active Spaces. Focus new development in defined districts to enable active places that can support diverse local-serving retail and services, walkability, arts and culture. Require, whenever possible, new development to provide convenient and direct pedestrian and bicycle connections.*

Goal LU3: *Transition from Regional-Serving Commercial Uses to Local-Serving Uses in Areas Served by Transit. Redirect regional-serving commercial and office development potential into new housing opportunities with access to neighborhood-serving uses in transit-accessible areas as part of a citywide trip reduction strategy.*

- Policy LU3.2 *Focus on Housing in Transit-Accessible Corridors and Districts. Focus additional housing opportunities on the transit-rich commercial boulevards.*
- Policy LU3.3 *Focus on Local-Serving Uses. Emphasize uses which address local-serving needs and daily resources necessary to reduce vehicle trips and VMT.*

Goal LU4: *Complete Sustainable Neighborhoods. Create complete neighborhoods that exemplify sustainable living practices with open spaces, green connections, diverse housing, local employment, and local-serving businesses that meet the daily needs of residents and reduce vehicle trips and GHG emissions.*

- Policy LU4.2 *Uses to Meet Daily Needs. Encourage uses that meet daily needs such as grocery stores, local-serving restaurants and other businesses and activities within walking distance of residences to reduce the frequency and length of vehicle trips.*
- Policy LU4.3 *Mixed-Use Associated with Transit. Encourage mixed-use development close to transit to provide housing opportunities for the community, support local businesses, and reduce reliance on automobiles.*
- Policy LU4.4 *Pedestrian-Oriented Design. Engage pedestrians with ground floor uses, building design, site planning, massing and signage that promote vibrant street life and emphasize transit and bicycle access.*

Goal LU8: *Reduction of Vehicle Trips/Management of Congestion – Establish a complete transportation network that supports integrated land use. Ensure that transportation supports human activity and access to land uses through a diverse multimodal transportation system that incentivizes walking, biking and transit and reduces the need for vehicle trips.*

- Policy LU8.1 *Transportation Demand Management. Require participation in TDM programs for projects above the base to encourage walking, biking, and transit, and to reduce vehicle trips. Engage existing development in TDM Districts and programs to encourage reduction of existing vehicle trips.*

Goal LU12: *Encourage Historic Preservation Citywide – Preserve buildings and features which characterize and represent the City’s rich heritage.*

- Policy LU12.4 *Sustainability. Recognize adaptive reuse as a sustainable policy, and encourage sustainable technologies, such as solar panel installation and energy retrofitting, that respect character-defining features.*

Goal T18: *Encourage a more sustainable transportation system.*

- Policy T18.1 *Strive toward carbon neutrality by encouraging reduced VMT per capita.*
- Policy T18.2 *Develop programs and strategies to meet CO₂ or VMT reduction standards established by regional, state or federal agencies.*

Goal S2: *Reduce GHG emissions from land use and transportation decisions.*

- Policy S2.1 *Implement the VMT reducing policies of the LUCE including, but not limited to: focusing new growth in higher density, mixed-use, transit-oriented districts; focusing new growth along existing corridors and nodes; creating complete, walkable neighborhoods with goods and services within walking distance of most homes; and, implementing and supporting a wide range of pedestrian, bicycle and transit improvements in the City.*
- Policy S2.2 *In cooperation with the state and SCAG, proactively promote the implementation of SB 375, in particular utilizing its incentives for transit-oriented development. The City will also ensure that its local plans are consistent with the SCS Plan requirement of SB 375.*
- Policy S2.9 *Consider incorporating the “no net new P.M. peak hour vehicle trips” policy into the City’s CEQA environmental analysis and require mitigation of significant impacts for projects that will generate new net vehicle trips.*

Goal S3: *Reduce overall energy use in the City.*

- Policy S3.1 *Actively strive to implement the City’s “zero net” electricity consumption goal by 2020 through a wide variety of programs and measures, including the generation of renewable energy in the City and energy efficiency measures.*
- Policy S3.2 *Consider a requirement for all new residential buildings to use net zero energy by 2020 and all new commercial buildings by 2030.*



Goal S4: Increase the use of renewable energy in the City.

Goal S5: Improve the environmental performance of buildings.

Policy S5.1	Continue to maintain a Building Code and prescriptive compliance options that meet or exceed state requirements for energy, water and other sustainability standards. Specifically, pursue California Energy Commission goals to achieve net zero energy buildings by 2020 for low-rise residential buildings and 2030 for commercial buildings and achieve a Leadership in Energy and Environmental Design (LEED) equivalent local building code by 2020.
Policy S5.5	Encourage shade trees on south- and west-facing sides of all new buildings to reduce building energy loads.
Policy S5.6	Encourage cool roofs or green roofs on new buildings
Policy S5.8	Encourage installation of electrical outlets in loading zones and on the exterior of new buildings to reduce emissions from gas-powered landscape maintenance and operating refrigeration for delivery trucks.

4.4.2 SANTA MONICA GENERAL PLAN CONSERVATION ELEMENT

The Conservation Element sets forth goals and objectives to ensure proper management and conservation of the City's natural resources, including air resources, and includes the following, relevant goal and corresponding objectives:

Goal: An atmosphere free of pollution.

- Objectives:**
1. Eliminate all detrimental sources of air pollution.
 2. Encourage lowest feasible emissions from stationary and moving sources.
 3. Cooperate with and support Federal, State, and regional efforts to reduce smog and pollution.
 4. Reduce the total volume of vehicular traffic.

4.4.3 SUSTAINABLE CITY PLAN

The Santa Monica Sustainable City Plan, updated in 2022, sets GHG emissions reduction targets for the City to address climate change impacts. If achieved, these targets would result in greater GHG emissions reductions than those set by the state, at least in the short-term. The Sustainable City Plan includes targets of reducing GHG emissions by at least 80 percent below 1990 levels by 2030 Citywide, reducing community emissions below 277,328 MT CO₂e, reducing per capita emissions below 1.9 MT CO₂e, and achieving an annual decrease in municipal GHG emissions.

The Sustainable City Plan anticipated most reductions would come from reducing energy use, increasing renewable energy, improving mobility and active transportation, and reducing waste. The following City programs and policies support or were developed to support the achievement of targeted reductions in GHG emissions listed in the Sustainable City Plan.

Resource Conservation Goal 1: Significantly decrease overall community consumption, specifically the consumption of non-local, non-renewable, non-recyclable, and non-recycled materials, water, and energy and fuels.

Resource Conservation Goal 2: The City should take a leadership role in encouraging sustainable procurement, extended producer responsibility and should model innovative strategies to become a zero waste city.

Resource Conservation Goal 3: Within renewable limits, encourage the use of local, non-polluting, renewable and recycled resources (water, energy, and material resources).



Environment and Public Health Goal 1: Protect and enhance environmental health and public health by minimizing and where possible eliminating:

- The use of hazardous or toxic materials by residents, businesses and city operations;
- The levels of pollutants entering the air, soil and water; and
- The risks that environmental problems pose to human and ecological health.

Transportation Goal 1: Create a multi-modal transportation system that minimizes and, where possible, eliminates pollution and motor vehicle congestion while ensuring safe mobility and access for all without compromising our ability to protect public health and safety.

Transportation Goal 2: Facilitate a reduction in automobile dependency in favor of affordable alternative, sustainable modes of travel.

Sustainable Local Economy Goal 2: Businesses, organizations and local government agencies within Santa Monica continue to increase the efficiency of their use of resources through the adoption of sustainable business practices.

Open Space and Land Use Goal 2: Implement land use and transportation planning and policies to create compact, mixed-use projects, forming urban villages designed to maximize affordable housing and encourage walking, bicycling, and the use of existing and future public transit systems.

4.4.4 CITY OF SANTA MONICA CLIMATE ACTION AND ADAPTATION PLAN

In May 2019, the City adopted the Climate Action & Adaptation Plan (CAAP) to help the City meet its goal of carbon neutrality by 2050 and its interim goal of reducing GHG emissions to 80 percent below 1990 levels by 2030. The 2019 CAAP identifies eight objectives that, if completed by the end of 2030, would achieve the City's interim GHG emissions reduction goal. These objectives are grouped in the following three categories: Zero Net Carbon Buildings, Zero Waste, and Sustainable Mobility. Objectives relevant to the Project include:

- Objective 1:** Achieve 100 percent renewable grid electricity.
- Objective 2:** Install 100 megawatts of local solar energy.
- Objective 3:** Reduce fossil fuel use by 20 percent in existing buildings.
- Objective 4:** Discourage fossil fuels in new buildings.
- Objective 6:** Convert 50 percent of local trips to foot, bike, scooter & skateboard.
- Objective 7:** Convert 25 percent of commuter trips to transit.
- Objective 8:** Convert 50 percent of vehicles to electric or zero emission.

The intent of the CAAP is to provide overarching policy direction with respect to climate change through Citywide objectives and broad strategies to reduce GHG emissions. The CAAP is not a regulatory plan to be applied on a project by project basis. Rather, the City recognizes that GHG reduction goals cannot be achieved by individual projects alone, but instead requires a comprehensive Citywide approach that would include the enactment of future plans, changes to existing ordinances, and an integrated and sustainable approach to land use/transportation planning.

The following City programs and policies support or were developed to support the achievement of targeted reductions in GHG emissions listed in the CAAP.

- Policy ZNC1** Implement a Community Choice Energy (CCE) Program. Implement CCE in Santa Monica, offering the highest amount of cost-competitive renewable energy. Develop programs to incentivize new local renewable-energy projects. Adopt rates to achieve 100% renewable energy by 2025.
- Policy ZNC5** Adopt a Carbon Reduction Ordinance for Existing Buildings. Adopt a Carbon Reduction Ordinance to require energy benchmarking and carbon performance of existing buildings over 20,000 square feet (sf),



including multifamily buildings. Require a reduction of fossil fuel use of covered buildings by 15% in five years and elimination of fossil fuel use by 2050.

- Policy ZNC8** Adopt Carbon Neutral Construction Codes. Require New Construction for commercial, mixed-use and multi-family properties to achieve zero net carbon onsite or pay in-lieu carbon impact fee to offset fossil fuel use. Require electric-ready construction for future electrification of appliances and buildings systems. Ensure that affordable housing developers have additional financing or compliance alternatives available.
- Policy ZNC11** Create Equitable Access to Clean Energy Programs. Partner with utilities and the Clean Power Alliance to provide free home-energy audits and upgrade incentives for low-income households and affordable housing developers and property owners.
- Policy ZW1** Implement Citywide Organics Recycling. Require waste diversion stations (trash, recycling, composting) in all businesses. Develop outreach and enforcement programs to ensure commercial and residential organics recycling citywide.
- Policy ZW5** Increase Construction and Demolition Debris Diversion Requirements. Explore fees and fines to create more incentives for recycling, composting and salvage, while discouraging landfill waste. Provide educational resources to promote responsible demolition and deconstruction.
- Policy SM6** Complete Streets Network. Increase the extent and quality of the complete street network and greenways to ensure residents and visitors alike have safe, convenient, and affordable transportation options. Create designated bike lanes that are protected to provide greater safety and assurance for all riders. Emphasize the movement of people with greater space dedicated to space efficient and low emission modes of transportation. Lower speed limits to improve safety. Expand publicly owned spaces and work with property owners to facilitate public access.
- Policy SM8** Prioritize Transit-Oriented Affordable Housing. Increase the housing-to-jobs ratio by prioritizing the expansion and investment in affordable housing located near dense transit hubs with limited parking, through local zoning and incentives.
- Policy SM12** Increase Charging Infrastructure for Electric Vehicles and Electric Mobility Devices. Expand network of off- and on-street public charging stations to 1,000 ports by 2025. Provide charging stations that will accommodate a wide range of vehicle types including bicycles, scooters and other mobility devices. Provide outreach and additional incentives for renters, lower-income individuals and non-profit property owners. Implement emerging best practices in EV technology, including mobile charging, wireless charging, energy storage, and web/smartphone applications.

4.4.5 SANTA MONICA MUNICIPAL CODE: CHAPTER 8.36 ENERGY CODE

The City recently updated its Energy Code to provide local amendments to Title 24 Part 6 of the California Energy Code and Title 24, Part 11 of the California Green Building Standards Code. The local amendments are part of the City's efforts to achieve carbon neutrality. The revised Energy Code, which was effective on January 1, 2020, requires new buildings in Santa Monica to achieve one of two design pathways for complying with the City's Energy Code: all-electric design or mixed-fuel design. As an incentive to design all-electric buildings, a higher level of energy efficiency would be required for mixed-fuel buildings. All-electric buildings would not be subject to higher levels of energy efficiency and may be built to the State's standard design requirements. All-electric buildings powered by a combination of onsite solar and 100 percent Green Power from CPA are effectively Zero-Emission Buildings. The energy requirements for new building types are as follows:

For new single-family, duplex, and multi-family residential buildings up to three stories:

All-Electric Building shall be designed to code established by the 2019 California Energy Code (CEC).



- Mixed-Fuel Buildings shall be designed to CalGreen Tier 1 established by the 2019 CEC. CalGreen Tier 1 buildings have additional integrated efficiency and onsite renewable energy sufficient to achieve a Total Energy Design Rating of 10 or less.

For new multi-family buildings, four stories and greater, and new hotels and motels:

- All new buildings shall have a solar photovoltaic (PV) system with a minimum rating of 2 watts per square foot of the building's footprint.
- All-Electric Buildings shall be designed to code established by the 2019 CEC.
- Mixed-Fuel Buildings shall be designed to be 5 percent more efficient than the code established by the 2019 CEC. (A change from the current Energy Reach Code, which requires these buildings to be 10 percent more efficient is the result of the cost-effectiveness study.)

For all other new non-residential buildings:

- All new buildings shall have a solar PV system with a minimum rating of 2 watts per square foot of the building's footprint.
- All-Electric Buildings shall be designed to code established by the 2019 CEC.
- Mixed-Fuel Buildings shall be designed to be 10 percent more efficient than the code established by the 2019 CEC.

5 PROJECT IMPACT ANALYSIS

5.1 CEQA IMPACT REVIEW CRITERIA

In accordance with *State CEQA Guidelines* Appendix G, implementation of the Project will result in a potentially significant impact to air quality if it were to:

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

Implementation of the Project will result in a potentially significant impact regarding GHG emissions if it were to:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Where available, the significance criteria established by the applicable air quality management district (AQMD) or air pollution control district (APCD) may be relied upon to make the significance determinations. As discussed in the next sections, the SCAQMD has developed their *CEQA and Federal Conformity Guidelines* to provide a protocol for air quality analyses that are prepared under the requirements of CEQA. The SCAQMD is also in the process of developing an "Air Quality Analysis Guidance Handbook" (Handbook) to replace the *CEQA Air Quality Handbook* approved by the South Coast AQMD Governing Board in 1993.

5.1.1 EMISSION THRESHOLDS FOR REGIONAL AIR QUALITY IMPACTS

The SCAQMD has developed criteria for determining whether emissions from a project are regionally significant. They are useful for estimating whether a project is likely to result in a violation of the NAAQS and/or whether the project is in conformity with plans to achieve attainment. The SCAQMD no longer has "indirect source" rules, e.g., rules that place restrictions on housing or commercial development, or require reductions in trip generation and/or VMT to developed commercial or industrial sites.¹ Instead, the District has published guidance on conducting air quality analyses under CEQA (SCAQMD 1993).² SCAQMD's significance thresholds are summarized in Table 5.1-1 for criteria pollutant emissions during construction activities and Project operation. A project is considered to have a regional air quality impact if emissions from its construction and/or operational activities exceed the corresponding SCAQMD significance thresholds.

Table 5.1-1. SCAQMD Emissions Thresholds for Significant Regional Impacts

Pollutant	Mass Daily Thresholds (lbs/day)	
	Construction	Operation
Nitrogen Oxides (NO _x)	100	55
Volatile Organic Compounds (VOC)	75	55

¹ Two indirect source rules (1501 - Work Trip Reduction Plans and 1501.1 - Alternatives to Work Trip Reduction Plans) were repealed in 1995.

² Partially updated in 2006.

Pollutant	Mass Daily Thresholds (lbs/day)	
	Construction	Operation
Respirable Particulate Matter (PM₁₀)	150	150
Fine Particulate Matter (PM_{2.5})	55	55
Sulfur Oxides (SO_x)	150	150
Carbon Monoxide (CO)	550	550
Lead	3	3

Source: SCAQMD 2018.

5.1.2 EMISSION THRESHOLDS FOR LOCALIZED AIR QUALITY IMPACTS

As part of its environmental justice program to address localized air quality impacts of development projects, SCAQMD developed localized significance thresholds (LSTs) in 2003 (Chico and Koizumi 2003). LSTs represent the maximum NO_x, CO, PM₁₀, and PM_{2.5} 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 standard. NO_x and CO LSTs are based on the ambient concentrations of that pollutant for each SRA and distance to the nearest off-site receptor. For PM₁₀, LSTs were derived based on requirements in SCAQMD Rule 403. The LST analysis does not apply to reactive organic gas emissions, since there is no ambient air quality standard for reactive organic gasses.

For the purposes of a CEQA analysis, SCAQMD considers a sensitive receptor to be a receptor such as a residence, hospital, or convalescent facility where it is possible that an individual could remain for 24 hours or longer. SCAQMD does not consider parks and recreational facilities such as the Project site as sensitive receptors because employees and visitors typically are present for shorter periods of time.

The SCAQMD has developed mass rate look-up tables that can be used to determine whether a project may generate significant localized air quality impacts to offsite receptors (including sensitive receptors). The use of LSTs is voluntary, to be implemented at the discretion of the lead agency pursuant to CEQA.

5.1.3 IMPACTS OF CARBON MONOXIDE HOTSPOTS

With respect to the formation of CO hotspots, a project's localized air quality impact is considered significant if CO emissions create a hotspot where either the California 1-hour standard of 20 ppm or the Federal and State 8-hour standard of 9.0 ppm is exceeded. In general, this only occurs at severely congested intersections (i.e., LOS E or worse).

SCAQMD conducted CO modeling for the attainment demonstration in the Federal Attainment Plan for Carbon Monoxide (*CO Plan* for the SCAQMD's 2003 *Air Quality Management Plan*). SCAQMD modeled the four most congested intersections in the Basin, including: (1) Wilshire Boulevard and Veteran Avenue; (2) Sunset Boulevard and Highland Avenue; (3) La Cienega Boulevard and Century Boulevard; and (4) Long Beach Boulevard and Imperial Highway. In the 2003 AQMP, SCAQMD states that the intersection of Wilshire Boulevard and Veteran Avenue is the most congested intersection in Los Angeles County, with an average daily traffic volume of approximately 100,000 vehicles per day (SCAQMD 2003). This intersection is located near the on- and off-ramps to I-405 in West Los Angeles. The evidence provided in Table 4-10 of Appendix V of the 2003 AQMP shows that the peak modeled CO concentration due to vehicle emissions at these four intersections was 4.6 ppm (maximum 1-hour concentration) and 3.2 (maximum 8-hour concentration) at Wilshire Boulevard and Veteran Avenue, exclusive of ambient background CO concentrations, which is well below the Federal and State CO standards. This indicates that even these highly congested intersections would not cause a CO hotspot to result.

5.1.4 EMISSION THRESHOLDS FOR GHGS

According to the California Air Pollution Control Officers Association (CAPCOA), “GHG impacts are exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective” (CAPCOA 2008). Section 15064.4(b) of the CEQA Guidelines states, “In determining the significance of a project’s greenhouse gas emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project’s emissions to the effects of climate change. A project’s incremental contribution may be cumulatively considerable even if it appears relatively small compared to statewide, national or global emissions.” Due to the global context of climate change, GHG analysis is based on the cumulative impact of emissions.

Generally, the evaluation of an impact under CEQA involves comparing the project’s effects against a threshold of significance. The CEQA Guidelines (Section 15064.7(c)) state, “When adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence.” For GHG emissions and global warming, currently there is not an established, universally agreed-upon quantitative threshold of significance for GHG impacts (e.g., in the CEQA Guidelines or elsewhere). The CEQA Guidelines do not establish a quantified threshold of significance for GHG impacts. Instead, lead agencies have the discretion to establish significance thresholds for their respective jurisdictions. A lead agency may look to thresholds developed by other public agencies or other expert entities, so long as the threshold chosen is supported by substantial evidence.

5.2 METHODOLOGY

Estimated regional air emissions from the Project’s onsite and offsite construction activities were calculated using the California Emissions Estimator Model (CalEEMod), Version 2022.1. CalEEMod is a planning tool for estimating emissions related to land use projects. The model incorporates EMFAC2021 emission factors to estimate on-road vehicle emissions; and emission factors and assumptions from the ARB’s OFFROAD 2007 and OFFROAD2011 model to estimate off-road construction equipment emissions. Model-predicted Project emissions are compared against SCAQMD’s significance thresholds to assess regional air quality impacts. All modeling output files are provided in Appendix A to this report.

CalEEMod uses many default assumptions based upon surveys of various types of construction projects. However, the user may override the default values where project-specific data are available. For the Project, detailed information regarding construction phasing, durations, and equipment was not provided or readily available for use in this report. As such, default assumptions from CalEEMod were relied upon where Project-specific information was not available.

5.3 AIR QUALITY IMPACTS

5.3.1 REGIONAL IMPACTS

CONSTRUCTION

For the purpose of this analysis, it was estimated that the construction of the Project will begin in Summer 2026 and finish in Spring 2029. For the purposes of this analysis and estimating construction emissions, two separate construction phasing schedules were developed and modeled. The first construction phasing schedule that was developed and modeled assumes a more simplistic “single-phased” construction approach, where it was assumed that construction activities would result in closure of the entire park. The second construction phasing schedule assumes a



more detailed “phased” construction approach, where certain park facilities would be temporarily closed in order to accommodate construction, demolition, and staging activities, and unaffected Park facilities would remain open and operational during such time. The first construction phasing schedule assumes all funding, entitlements, and approvals for the entirety of the proposed improvements are received up front, whereas the second construction phasing schedule assumes funding, entitlements, and approvals for the various improvements would be received in phases. The second construction phasing schedule (“detailed phase construction schedule”) more accurately represents the construction phasing assumptions described above in Section 2.2.

For each construction phasing schedule, CalEEMod default construction duration assumptions were utilized to estimate the number of days to execute the following construction activities:

- Demolition
- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

CalEEMod default construction assumptions for the types and numbers of construction equipment and worker trips by activity were utilized for each construction phasing scenario. It was also assumed that the construction contractor would comply with all pertinent provisions of SCAQMD Rule 403 and Rule 1113 for controlling fugitive dust emissions from site preparation, grading, and demolition, and VOC emissions from application of architectural coating. Equipment exhaust emissions were determined using CalEEMod default values for horsepower and load factors. Tables 5.3-1 and 5.3-2 shows the model’s estimates of maximum daily construction emissions for the Project under each of the two modeled construction phasing scenarios.

Table 5.3-1. Maximum Daily Unmitigated Regional Construction Emissions (Single Phase Construction)

Construction Activity	Construction	Maximum Emissions (lbs/day) ¹					
	Year	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Demolition	2026	2.4	21.8	22.0	<0.1	2.3	1.1
Site Preparation	2026	3.3	29.3	31.4	<0.1	9.4	5.2
Grading	2026	3.2	28.6	30.6	<0.1	5.5	2.7
Building Construction	2026	1.2	10.2	15.3	<0.1	0.9	0.5
Building Construction	2027	1.2	9.7	15.4	<0.1	0.9	0.4
Building Construction	2028	1.1	9.3	15.3	<0.1	0.9	0.4
Building Construction	2029	1.1	8.9	14.8	<0.1	0.8	0.4
Paving	2029	1.0	6.6	11.7	<0.1	0.0	0.0
Architectural Coating	2029	12.9	0.9	3.2	<0.1	0.5	0.1
Streetscape Improvements (Grading)	2029	2.8	21.1	30.5	0.1	2.6	1.0
Streetscape Improvements (Paving)	2029	0.8	6.8	11.8	<0.1	0.5	0.3
Maximum Daily Emissions		12.9	29.3	31.4	0.1	9.4	5.2
SCAQMD Significance Thresholds		75	100	550	150	150	55
Exceeds Threshold?		No	No	No	No	No	No

¹ Maximum daily emissions during summer or winter.



Table 5.3-2. Maximum Daily Unmitigated Regional Construction Emissions (Detailed Phase Construction)

Phase	Construction Activity	Construction Year	Maximum Emissions (lbs/day) ¹					
			ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
1	Lumber Site, Field, and Parking Demolition	2026	2.7	39.0	28.7	0.1	18.0	4.1
	Site Preparation/Grading	2026	3.2	28.0	30.4	0.1	5.4	2.6
	Building Construction	2026	0.8	6.9	10.9	<0.1	0.8	0.4
	Building Construction	2027	0.8	3.3	10.3	<0.1	0.8	0.3
2	Youth Field Demolition	2027	2.5	29.2	24.2	0.1	9.6	2.4
	Site Preparation/Grading	2027	3.1	26.3	29.5	0.1	5.3	2.5
	Site Preparation/Grading	2028	3.0	25.0	29.3	0.1	5.2	2.5
	Combo Field, Community Hub, and Playground Construction	2028	0.8	6.6	12.6	<0.1	0.8	0.3
	Community Hub Finishing	2028	25.6	0.9	3.4	<0.1	0.5	0.1
3	Youth Field and Skatepark Demolition	2028	2.5	29.3	24.7	0.1	10.7	2.6
	Site Preparation/Grading	2028	3.0	25.2	29.7	0.1	5.3	2.5
	Youth Field and Skatepark Construction	2028	0.7	5.4	11.0	<0.1	0.7	0.3
	Youth Field and Skatepark Construction	2029	0.7	5.2	10.5	<0.1	0.7	0.3
4	Community Rec Center Demolition	2028	2.4	27.0	23.4	0.1	8.2	2.2
	Community Rec Center Construction	2028	1.1	9.3	14.9	<0.1	0.9	0.4
	Community Rec Center Construction	2029	1.1	8.9	14.8	<0.1	0.8	0.4
	Community Rec Center Finishing	2029	25.6	0.9	3.2	0.1	2.6	1.0
--	Streetscape Improvements (Grading)	2029	2.8	21.1	30.5	0.1	2.6	1.0
	Streetscape Improvements (Paving)	2029	0.8	6.8	11.7	<0.1	0.5	0.3
Maximum Daily Emissions			25.6	39.0	30.5	0.1	18.0	4.1
SCAQMD Significance Thresholds			75	100	550	150	150	55
Exceeds Threshold?			No	No	No	No	No	No

¹ Maximum daily emissions during summer or winter.

For each criteria pollutant, construction emissions would be below the pollutant's SCAQMD significance threshold for both construction phasing scenarios. Therefore, the Project will not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Construction emissions will be less than significant without mitigation.

OPERATION

The Project will not generate substantial new operational-related criteria pollutant emissions compared to existing conditions. Implementation of the Project will involve the renovation and reconfiguration of existing Park facilities that would not substantially increase daily visitation or use of the Park. The Project includes features that support multimodal transportation and reduce reliance on single-rider automobile use. The Project is centrally located within the Pico Neighborhood with vehicle, bicycle, and pedestrian connectivity to surrounding communities and businesses. In addition, the Project will expand the City's bike network via the construction of a new Class I shared bike path on Colorado Avenue, connecting to the Exposition Corridor Bike Path. As such, the Project is not anticipated to substantially increase vehicle trips and associated mobile emissions over existing conditions. Further, the Project will comply with the requirements of the City's Green Building Code, the City's Energy Reach Code, replacing existing aging infrastructure with more efficient facilities that would generate less area and energy emissions when compared to existing conditions.

Therefore, the Project will not result in significant new operational criteria air pollutant emissions and impacts are less than significant without mitigation.

5.3.2 LOCALIZED AIR QUALITY IMPACTS

CONSTRUCTION

Following SCAQMD guidance (Chico and Koizumi 2003), only onsite construction emissions of NO_x, CO, PM₁₀, and PM_{2.5} should be considered in the localized construction emissions significance analysis. According to the CalEEMod analysis, the highest onsite emissions for NO_x and CO would occur during the site preparation and grading phases from off-road equipment, while the highest onsite emissions for PM₁₀ and PM_{2.5} would occur during demolition activities. It was estimated that, as a worst case, the maximum daily disturbance for Project construction would be 4.77 acres, which has been rounded up to 5 acres for the purposes of providing a conservative worst-case analysis.

As described in Section 3.4, the nearest sensitive receptors to the Project site are residential uses located as close as 500 feet to the north of the Project site. Though recreational uses may sometimes be considered sensitive to poor air quality, particularly in the context of siting land uses or development generating long-term operational emissions, users and employees of the Park are not considered in this analysis given they are only present for very limited durations every couple days of the week, and their exposure to temporary, short-term construction emissions would be highly limited. Visitation and use of the Park is anticipated to be even lower through the duration of construction activities due to the temporary discontinuance in use of areas that are under construction. Further, exposure of Park guests and employees to construction-related emissions would only occur under the scenario in which construction and renovation activities occur in phases, by which only portions of the Park are closed for construction while other facilities remain accessible to the public. Under a single phase construction schedule, it is assumed that the entire Park would be closed, meaning that no Park guests or employees would be present or exposed to construction-related pollutant emissions.

Therefore, for the purposes of this analysis and pursuant to SCAQMD’s *Final Localized Significance Threshold Methodology*, the LSTs for sensitive receptors are based up a distance of 500 feet (approximately 150 meters).

Table 5.3-3 shows the results of the localized significance analysis for the Project. As shown, criteria pollutant emissions would not exceed their threshold for significance. Therefore, localized construction air pollution impacts are less than significant without mitigation.

Table 5.3-3. Localized Significance Threshold Analysis for Construction of Memorial Park (Detailed “Phased” Construction)

	NO _x	CO	PM ₁₀	PM _{2.5}
Maximum On-site Emissions (lbs/day)	27.2	28.7	12.4	1.9
Localized Significance Threshold (lbs/day)	238.5	3,604.9	70.1	21.8
Significant?	No	No	No	No

OPERATION

As discussed in Section 5.3.1 above, the Project will not generate substantial new operational emissions of NO_x, CO, PM₁₀, and PM_{2.5} compared to existing conditions. The Project will not result in significant localized operational criteria air pollutant emissions and impacts are less than significant without mitigation.

5.3.3 CARBON MONOXIDE HOTSPOTS

As described above, SCAQMD conducted CO modeling for the attainment demonstration in the Federal Attainment Plan for Carbon Monoxide. Based on modeling of the most congested intersection in the SCAB which exceeds 100,000 average daily trips, SCAQMD concluded that CO hotspots are not anticipated to occur. Given the limited number of daily



construction worker trips, the limited number of operational trips anticipated for operation of the renovated and expanded Park, and SCAQMD's conclusions regarding the probability of CO hotspots occurring, the Project is not considered to result in potential creation of a CO hotspot. Impacts are considered less than significant without mitigation.

5.3.4 ODORS

According to the SCAQMD *CEQA Air Quality Handbook*, objectionable odors are typically associated with industrial uses such as agricultural facilities (e.g., farms and dairies), refineries, wastewater treatment facilities, and landfills. The Project will involve redevelopment of an existing city park, the operation of which does not typically generate nuisance odors perceptible to sensitive receptors. During construction, short-term, temporary odors would be expected from construction equipment and paving activities. Any odors that may be generated would be localized and temporary and would not affect a substantial number of people or result in a "nuisance" as defined in SCAQMD Rule 402. Therefore, odor impacts associated with the Project will be less than significant without mitigation.

5.3.5 CONSISTENCY WITH APPLICABLE AIR QUALITY PLANS

Consistency with applicable air quality plans, or other regional air quality planning documents, is required under CEQA. The SCAQMD's 2022 AQMP is the applicable air quality plan for the Project area. In the City, consistency with the 2022 AQMP means that projects are consistent with SCAG's regional population, housing, and employment forecasts. Additionally, because SCAG's regional growth forecasts are based upon, among other things, land uses designated in general plans, a project that is consistent with the land use designated in a general plan would be consistent with the SCAG's regional forecast projections and, consequently, AQMP growth projections.

The Project site has a Parks and Open Space land use/zoning designation pursuant to the City's LUCE. The Parks and Open Space land use designation allows for parks and green open space and supporting recreational and community-related development/uses. The Project site also is subject to the Memorial Park Activity Center Low Overlay. The area subject to this Overlay includes Memorial Park and the Expo Light Rail Station at 17th Street. The Memorial Park Activity Center Low Overlay capitalizes on the attributes of these two key resources to create an active mixed-use neighborhood.

The Project involves the renovation, modernization, and expansion of the existing Park to meet an increasing demand for recreational activities. The Project is consistent with the Parks and Open Space land use designation of the site, and given the Project predominately involves the renovation and modernization of existing Park facilities, as well as improving accessibility to amenities and enhanced community gathering spaces, the Project will not result in substantial additional growth in regional population. The Project is consistent with growth projections and, therefore, is consistent with the 2022 AQMP. In addition, as described above, the Project will not exceed adopted SCAQMD thresholds that are based on the AQMP and designed to bring the SCAB into attainment for criteria air pollutant concentrations for which the SCAB is designated nonattainment. Impacts are therefore considered less than significant without mitigation.

5.4 GHG IMPACTS

5.4.1 PROJECT GHG EMISSIONS

CONSTRUCTION

Total annual GHG emissions for construction of the Project were estimated using CalEEMod and are presented in Table 5.4-1 and Table 5.4-2 for the two modeled construction scenarios. The GHG emissions shown are based on a general assumption that construction equipment would operate continuously throughout the workday. In reality, construction equipment operates periodically or cyclically throughout the workday. Therefore, the GHG emissions shown reflect a conservative, worst-case estimate.

Table 5.4-1. GHG Emissions from Construction (Single Phase Construction)

Year	GHGs (MT CO ₂ e/yr)
2026	801
2027	365
2028	365
2029	342
Total	1,873
Amortized over 30 years	62.4

Table 5.4-2. GHG Emissions from Construction (Detailed Phase Construction)

Year	GHGs (MT CO ₂ e/yr)
2026	422
2027	169
2028	656
2029	374
Total	1,621
Amortized over 30 years	54.0

As indicated in Table 5.4-1 and Table 5.4-2 above, construction activities for the Project will result in temporary generation of GHG emissions totaling 1,873 MT CO₂e when assuming construction would occur over a single phase, or a total of 1,621 MT CO₂e when construction activities are phased. As described above, SCAQMD recommends that construction-related GHG emissions be amortized over a project's lifetime (typically 30 years) to include these emissions as part of a project's annualized lifetime total emissions. In accordance with SCAQMD methodology, the estimated construction GHG emissions have been amortized over a 30-year lifetime period. Per current SCAQMD methodology, the total amortized construction GHG emissions total approximately 62.4 MT CO₂e/year, or 54.0 MT CO₂e/year, depending on the construction scenario. Neither construction scenario would generate construction GHG emissions that would exceed the screening level threshold of 3,000 MTCO₂e/year. Therefore, the Project will not generate GHG emissions that exceed the significance threshold, and impacts will be less than significant without mitigation.



OPERATION

Long-term operation of the Project will generate air pollutant emissions that would be similar to existing conditions. As previously discussed in Section 5.3 above and in Section 5.4.2 below, the Project involves the replacement and optimization of existing recreational facilities and sports fields at Memorial Park, along with the installation of features and improvements that would support multimodal transportation, reducing vehicle-related GHG emissions. Replacement facilities also would comply with the City's Green Building Code and Energy Reach Code, which is likely to reduce operational GHG emissions when compared to existing facilities.

Therefore, the Project will not generate substantial new operational GHG emissions and impacts will be less than significant without mitigation.

5.4.2 CONSISTENCY WITH GHG REDUCTION PLANS AND POLICIES

The City's adopted GHG reduction plans and policies include those established as part of the LUCE, Sustainable City Plan, the CAAP, and the SMMC. The Project will be consistent with these goals and policies related to GHG emissions. The Project includes features that support multimodal transportation and reduce reliance on single-rider automobile use. The Project is centrally located within the Pico Neighborhood with vehicle, bicycle, and pedestrian connectivity to surrounding communities and businesses. In addition, the Project will expand the City's bike network via the construction of a new Class I shared bike path on Colorado Avenue, connecting to the Exposition Corridor Bike Path. In addition, pursuant to the City's EV Charger Reach Code, the Project will include parking spaces equipped with Level 2 EV chargers and parking spaces installed as Level 2 EV Capable.

The Project will comply with the requirements of the City's Green Building Code that aims to reduce the use of VOC emitting materials, strengthen water efficiency conservation, increase construction waste recycling, and increase energy efficiency. Furthermore, the Project will comply with the City's Energy Reach Code. Other sustainable design features that will be finalized during the design process include the installation of energy efficient heating, ventilation, and air conditioning (HVAC) systems, operable windows to increase air flow, a high-performance building envelope to maximize insulation, lighting systems with occupancy sensors and dimmers, energy efficient building materials and appliances, cool roof or green roofs (consistent with LUCE Policy S5.6), and landscaping to reduce building energy loads (consistent with LUCE Policy S5.5).

Therefore, the Project will be consistent with applicable local plans and policies. Impacts will be less than significant without mitigation.



6 EMISSION REDUCTION MEASURES

As discussed in Section 5, both the short-term and long-term air pollution and GHG impacts of the Project will be less than significant. Therefore, air quality and GHG mitigation measures are not necessary for the Project.



7 IMPACTS AFTER MITIGATION

No air quality or GHG mitigation measures are necessary for this Project.



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A CALEEMOD OUTPUTS

Memorial Park Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Memorial Park
Construction Start Date	6/1/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	18.4
Location	34.02125141336542, -118.48032720357784
County	Los Angeles-South Coast
City	Santa Monica
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4416
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
City Park	13.2	Acre	13.2	0.00	0.00	0.00	—	—

Unenclosed Parking with Elevator	32.0	1000sqft	0.73	32,000	0.00	0.00	—	—
Road Construction	0.54	Mile	2.60	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.0	12.9	29.3	31.4	0.07	1.24	8.19	9.43	1.14	4.06	5.21	—	8,099	8,099	0.34	0.23	3.98	8,179
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.86	3.20	28.6	30.2	0.07	1.13	4.38	5.51	1.04	1.62	2.66	—	8,071	8,071	0.34	0.23	0.10	8,147
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.37	2.23	10.0	10.8	0.02	0.40	1.44	1.84	0.37	0.55	0.92	—	2,542	2,542	0.11	0.07	0.64	2,566
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.43	0.41	1.83	1.98	< 0.005	0.07	0.26	0.34	0.07	0.10	0.17	—	421	421	0.02	0.01	0.11	425

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.91	3.29	29.3	31.4	0.07	1.24	8.19	9.43	1.14	4.06	5.21	—	8,099	8,099	0.34	0.23	3.98	8,179
2027	1.40	1.18	9.70	15.4	0.02	0.34	0.57	0.91	0.31	0.13	0.45	—	3,089	3,089	0.13	0.06	2.07	3,112
2028	1.35	1.13	9.23	15.3	0.02	0.30	0.57	0.87	0.28	0.13	0.41	—	3,076	3,076	0.11	0.06	1.88	3,099
2029	13.0	12.9	21.1	30.5	0.06	0.82	1.74	2.56	0.76	0.25	1.01	—	7,163	7,163	0.28	0.11	1.58	7,203
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.86	3.20	28.6	30.2	0.07	1.13	4.38	5.51	1.04	1.62	2.66	—	8,071	8,071	0.34	0.23	0.10	8,147
2027	1.40	1.17	9.74	15.1	0.02	0.34	0.57	0.91	0.31	0.13	0.45	—	3,061	3,061	0.11	0.06	0.05	3,082
2028	1.35	1.13	9.25	14.9	0.02	0.30	0.57	0.87	0.28	0.13	0.41	—	3,049	3,049	0.11	0.06	0.05	3,070
2029	1.30	1.10	8.88	14.8	0.02	0.28	0.57	0.84	0.25	0.13	0.39	—	3,036	3,036	0.11	0.06	0.04	3,057
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.36	1.13	10.0	10.7	0.02	0.40	1.44	1.84	0.37	0.55	0.92	—	2,542	2,542	0.11	0.07	0.61	2,566
2027	1.00	0.84	6.96	10.8	0.02	0.24	0.40	0.64	0.22	0.10	0.32	—	2,192	2,192	0.08	0.04	0.64	2,208
2028	0.97	0.81	6.63	10.8	0.02	0.22	0.40	0.62	0.20	0.10	0.29	—	2,189	2,189	0.08	0.04	0.58	2,205
2029	2.37	2.23	6.33	10.1	0.02	0.23	0.49	0.72	0.21	0.09	0.30	—	2,055	2,055	0.08	0.03	0.35	2,066
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.25	0.21	1.83	1.96	< 0.005	0.07	0.26	0.34	0.07	0.10	0.17	—	421	421	0.02	0.01	0.10	425
2027	0.18	0.15	1.27	1.98	< 0.005	0.04	0.07	0.12	0.04	0.02	0.06	—	363	363	0.01	0.01	0.11	365
2028	0.18	0.15	1.21	1.96	< 0.005	0.04	0.07	0.11	0.04	0.02	0.05	—	362	362	0.01	0.01	0.10	365
2029	0.43	0.41	1.16	1.84	< 0.005	0.04	0.09	0.13	0.04	0.02	0.06	—	340	340	0.01	0.01	0.06	342

3. Construction Emissions Details

3.1. Streetscape Improvements: Grading (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.14	2.64	20.7	28.7	0.06	0.82	—	0.82	0.75	—	0.75	—	6,494	6,494	0.26	0.05	—	6,516
Dust From Material Movement	—	—	—	—	—	—	1.24	1.24	—	0.13	0.13	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.52	0.43	3.40	4.71	0.01	0.13	—	0.13	0.12	—	0.12	—	1,068	1,068	0.04	0.01	—	1,071
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.62	0.86	< 0.005	0.02	—	0.02	0.02	—	0.02	—	177	177	0.01	< 0.005	—	177

Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.10	1.71	0.00	0.00	0.42	0.42	0.00	0.10	0.10	—	417	417	< 0.005	0.02	1.08	423
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	29.1	29.1	< 0.005	< 0.005	0.07	30.4
Hauling	0.02	< 0.005	0.26	0.11	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	223	223	0.01	0.03	0.43	234
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.25	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	65.9	65.9	< 0.005	< 0.005	0.08	66.8
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.78	4.78	< 0.005	< 0.005	0.01	5.00
Hauling	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.6	36.6	< 0.005	0.01	0.03	38.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.9	10.9	< 0.005	< 0.005	0.01	11.1
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.79	0.79	< 0.005	< 0.005	< 0.005	0.83
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.06	6.06	< 0.005	< 0.005	0.01	6.36

3.3. Streetscape Improvements: Paving (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.90	0.76	6.78	10.8	0.01	0.23	—	0.23	0.21	—	0.21	—	1,619	1,619	0.07	0.01	—	1,624
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.90	0.76	6.78	10.8	0.01	0.23	—	0.23	0.21	—	0.21	—	1,619	1,619	0.07	0.01	—	1,624
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.20	0.17	1.49	2.36	< 0.005	0.05	—	0.05	0.05	—	0.05	—	355	355	0.01	< 0.005	—	356
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.04	0.03	0.27	0.43	< 0.005	0.01	—	0.01	0.01	—	0.01	—	58.7	58.7	< 0.005	< 0.005	—	58.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.08	0.07	0.06	1.05	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	257	257	< 0.005	0.01	0.67	260
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.89	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	243	243	< 0.005	0.01	0.02	246
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.21	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	54.1	54.1	< 0.005	< 0.005	0.06	54.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.96	8.96	< 0.005	< 0.005	0.01	9.07
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Demolition (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.72	2.29	20.7	19.0	0.03	0.84	—	0.84	0.78	—	0.78	—	3,427	3,427	0.14	0.03	—	3,438

Demolition	—	—	—	—	—	—	0.69	0.69	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.28	2.55	2.34	< 0.005	0.10	—	0.10	0.10	—	0.10	—	422	422	0.02	< 0.005	—	424
Demolition	—	—	—	—	—	—	0.09	0.09	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.46	0.43	< 0.005	0.02	—	0.02	0.02	—	0.02	—	69.9	69.9	< 0.005	< 0.005	—	70.2
Demolition	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.16	2.58	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	542	542	0.02	0.02	1.83	550
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.06	0.01	1.02	0.40	0.01	0.01	0.23	0.24	0.01	0.06	0.07	—	848	848	0.05	0.14	1.90	891

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.28	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	64.3	64.3	< 0.005	< 0.005	0.10	65.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.13	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	105	105	0.01	0.02	0.10	110
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.6	10.6	< 0.005	< 0.005	0.02	10.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	17.3	17.3	< 0.005	< 0.005	0.02	18.2

3.7. Site Preparation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.74	3.14	29.2	28.8	0.05	1.24	—	1.24	1.14	—	1.14	—	5,298	5,298	0.21	0.04	—	5,316
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.60	1.58	< 0.005	0.07	—	0.07	0.06	—	0.06	—	290	290	0.01	< 0.005	—	291
Dust From Material Movement	—	—	—	—	—	—	0.42	0.42	—	0.22	0.22	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.29	0.29	< 0.005	0.01	—	0.01	0.01	—	0.01	—	48.1	48.1	< 0.005	< 0.005	—	48.2
Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.16	2.58	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	542	542	0.02	0.02	1.83	550
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.6	28.6	< 0.005	< 0.005	0.04	29.0

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.73	4.73	< 0.005	< 0.005	0.01	4.79
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Grading (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.62	3.04	27.2	27.6	0.06	1.12	—	1.12	1.03	—	1.03	—	6,599	6,599	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.62	3.04	27.2	27.6	0.06	1.12	—	1.12	1.03	—	1.03	—	6,599	6,599	0.27	0.05	—	6,621

Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	0.54	4.85	4.91	0.01	0.20	—	0.20	0.18	—	0.18	—	1,175	1,175	0.05	0.01	—	1,179
Dust From Material Movement	—	—	—	—	—	—	0.64	0.64	—	0.25	0.25	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.88	0.90	< 0.005	0.04	—	0.04	0.03	—	0.03	—	195	195	0.01	< 0.005	—	195
Dust From Material Movement	—	—	—	—	—	—	0.12	0.12	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.16	2.58	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	542	542	0.02	0.02	1.83	550
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.07	0.02	1.15	0.45	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	959	959	0.05	0.15	2.15	1,008

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.17	2.20	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	514	514	0.02	0.02	0.05	520
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.07	0.01	1.20	0.46	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	959	959	0.05	0.15	0.06	1,006
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.41	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	92.8	92.8	< 0.005	< 0.005	0.14	94.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.22	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	171	171	0.01	0.03	0.16	179
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.4	15.4	< 0.005	< 0.005	0.02	15.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.3	28.3	< 0.005	< 0.005	0.03	29.7

3.11. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.62	0.81	< 0.005	0.02	—	0.02	0.02	—	0.02	—	150	150	0.01	< 0.005	—	151
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	24.9	24.9	< 0.005	< 0.005	—	24.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.17	2.20	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	514	514	0.02	0.02	0.05	520
Vendor	0.01	< 0.005	0.19	0.09	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	164	164	0.01	0.02	0.01	171
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.14	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	32.6	32.6	< 0.005	< 0.005	0.05	33.1
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.2	10.2	< 0.005	< 0.005	0.01	10.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.41	5.41	< 0.005	< 0.005	0.01	5.48
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.70	1.70	< 0.005	< 0.005	< 0.005	1.77
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.74	6.71	9.24	0.02	0.24	—	0.24	0.22	—	0.22	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.22	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	283	283	0.01	< 0.005	—	284

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.14	2.40	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	532	532	0.02	0.02	1.66	539
Vendor	0.01	< 0.005	0.17	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	160	160	0.01	0.02	0.42	168
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.17	2.04	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	504	504	0.01	0.02	0.04	510
Vendor	0.01	< 0.005	0.18	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	160	160	0.01	0.02	0.01	167
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.12	1.53	0.00	0.00	0.37	0.37	0.00	0.09	0.09	—	365	365	0.01	0.01	0.51	370
Vendor	0.01	< 0.005	0.13	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	115	115	< 0.005	0.02	0.13	120
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.28	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	60.5	60.5	< 0.005	< 0.005	0.08	61.3
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	19.0	19.0	< 0.005	< 0.005	0.02	19.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Building Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.85	0.71	6.39	9.26	0.02	0.22	—	0.22	0.20	—	0.20	—	1,717	1,717	0.07	0.01	—	1,723
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.15	0.13	1.17	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	284	284	0.01	< 0.005	—	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.16	0.14	0.14	2.26	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	522	522	0.01	0.02	1.49	529
Vendor	0.01	< 0.005	0.16	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	157	157	0.01	0.02	0.40	164
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.14	0.16	1.92	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	495	495	0.01	0.02	0.04	501
Vendor	0.01	< 0.005	0.17	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	157	157	0.01	0.02	0.01	163
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.11	1.44	0.00	0.00	0.37	0.37	0.00	0.09	0.09	—	360	360	< 0.005	0.01	0.46	364
Vendor	0.01	< 0.005	0.12	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	112	112	< 0.005	0.02	0.12	117
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.26	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	59.6	59.6	< 0.005	< 0.005	0.08	60.3
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	18.6	18.6	< 0.005	< 0.005	0.02	19.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Building Construction (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	1.15	0.97	8.58	12.9	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.44	0.66	< 0.005	0.01	—	0.01	0.01	—	0.01	—	122	122	< 0.005	< 0.005	—	122
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.2	20.2	< 0.005	< 0.005	—	20.3
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.13	0.14	1.79	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	487	487	0.01	0.02	0.03	492
Vendor	0.01	< 0.005	0.16	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	153	153	0.01	0.02	0.01	159
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	25.1	25.1	< 0.005	< 0.005	0.03	25.4
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.76	7.76	< 0.005	< 0.005	0.01	8.11
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.16	4.16	< 0.005	< 0.005	< 0.005	4.21
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.28	1.28	< 0.005	< 0.005	< 0.005	1.34
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Paving (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	0.67	6.46	9.92	0.01	0.24	—	0.24	0.22	—	0.22	—	1,511	1,511	0.06	0.01	—	1,516
Paving	0.19	0.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.80	1.22	< 0.005	0.03	—	0.03	0.03	—	0.03	—	186	186	0.01	< 0.005	—	187
Paving	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.02	0.02	0.15	0.22	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	30.8	30.8	< 0.005	< 0.005	—	30.9
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.13	0.14	1.79	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	487	487	0.01	0.02	0.03	492
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.23	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	60.9	60.9	< 0.005	< 0.005	0.07	61.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.1	10.1	< 0.005	< 0.005	0.01	10.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.21. Architectural Coating (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.79	1.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	12.7	12.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.6	14.6	< 0.005	< 0.005	—	14.7
Architectural Coatings	1.39	1.39	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.42	2.42	< 0.005	< 0.005	—	2.43
Architectural Coatings	0.25	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.13	0.12	2.11	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	513	513	0.01	0.02	1.33	520
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.21	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	54.1	54.1	< 0.005	< 0.005	0.06	54.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.96	8.96	< 0.005	< 0.005	0.01	9.07
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Streetscape Improvements: Grading	Linear, Grading & Excavation	5/28/2029	8/17/2029	5.00	60.0	—
Streetscape Improvements: Paving	Linear, Paving	8/20/2029	12/7/2029	5.00	80.0	—
Demolition	Demolition	6/1/2026	7/31/2026	5.00	45.0	—
Site Preparation	Site Preparation	8/3/2026	8/28/2026	5.00	20.0	—
Grading	Grading	8/31/2026	11/27/2026	5.00	65.0	—
Building Construction	Building Construction	11/30/2026	1/26/2029	5.00	565	—
Paving	Paving	1/29/2029	3/30/2029	5.00	45.0	—
Architectural Coating	Architectural Coating	4/2/2029	5/25/2029	5.00	40.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Streetscape Improvements: Grading	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Streetscape Improvements: Grading	Signal Boards	Electric	Average	1.00	8.00	6.00	0.82
Streetscape Improvements: Grading	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Streetscape Improvements: Grading	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43

Streetscape Improvements: Grading	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Streetscape Improvements: Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Streetscape Improvements: Grading	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36
Streetscape Improvements: Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Streetscape Improvements: Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Streetscape Improvements: Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Streetscape Improvements: Paving	Rollers	Diesel	Average	3.00	8.00	36.0	0.38
Streetscape Improvements: Paving	Signal Boards	Electric	Average	1.00	8.00	6.00	0.82
Streetscape Improvements: Paving	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48

Grading	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Back hoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	40.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	12.5	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	40.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	40.0	18.5	LDA,LDT1,LDT2

Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	14.1	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	40.0	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	5.24	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	40.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	40.0	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Streetscape Improvements: Grading	—	—	—	—
Streetscape Improvements: Grading	Worker	32.5	18.5	LDA,LDT1,LDT2
Streetscape Improvements: Grading	Vendor	1.00	10.2	HHDT,MHDT
Streetscape Improvements: Grading	Hauling	3.50	20.0	HHDT
Streetscape Improvements: Grading	Onsite truck	—	—	HHDT
Streetscape Improvements: Paving	—	—	—	—
Streetscape Improvements: Paving	Worker	20.0	18.5	LDA,LDT1,LDT2
Streetscape Improvements: Paving	Vendor	0.00	10.2	HHDT,MHDT
Streetscape Improvements: Paving	Hauling	0.00	20.0	HHDT
Streetscape Improvements: Paving	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	80,940	26,660	1,920

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Streetscape Improvements: Grading	1,678	0.00	2.60	0.00	—
Demolition	0.00	0.00	0.00	48,712	—
Site Preparation	0.00	0.00	26.0	0.00	—
Grading	7,326	0.00	66.0	0.00	—
Paving	0.00	0.00	0.00	0.00	7,703

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt

City Park	7,700	0%
Unenclosed Parking with Elevator	0.73	100%
Road Construction	2.60	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	532	0.03	< 0.005
2027	0.00	532	0.03	< 0.005
2028	0.00	532	0.03	< 0.005
2029	58.7	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	7.85	annual days of extreme heat
Extreme Precipitation	4.85	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about $\frac{3}{4}$ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores 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	50.5

AQ-PM	66.7
AQ-DPM	90.7
Drinking Water	48.2
Lead Risk Housing	45.7
Pesticides	0.00
Toxic Releases	74.5
Traffic	81.0
Effect Indicators	—
CleanUp Sites	83.5
Groundwater	85.6
Haz Waste Facilities/Generators	89.3
Impaired Water Bodies	51.2
Solid Waste	67.0
Sensitive Population	—
Asthma	57.3
Cardio-vascular	30.4
Low Birth Weights	65.2
Socioeconomic Factor Indicators	—
Education	53.6
Housing	64.0
Linguistic	47.1
Poverty	58.5
Unemployment	72.5

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—

Above Poverty	37.59784422
Employed	34.62081355
Median HI	46.16963942
Education	—
Bachelor's or higher	76.63287566
High school enrollment	100
Preschool enrollment	64.08315155
Transportation	—
Auto Access	17.51571924
Active commuting	90.81226742
Social	—
2-parent households	14.97497754
Voting	10.26562299
Neighborhood	—
Alcohol availability	16.12986013
Park access	81.35506224
Retail density	99.43539074
Supermarket access	60.81098422
Tree canopy	7.930193764
Housing	—
Homeownership	6.069549596
Housing habitability	32.73450533
Low-inc homeowner severe housing cost burden	28.94905685
Low-inc renter severe housing cost burden	60.09239061
Uncrowded housing	40.60053895
Health Outcomes	—
Insured adults	67.56063134
Arthritis	67.1

Asthma ER Admissions	62.6
High Blood Pressure	54.9
Cancer (excluding skin)	55.0
Asthma	49.0
Coronary Heart Disease	63.8
Chronic Obstructive Pulmonary Disease	56.7
Diagnosed Diabetes	54.0
Life Expectancy at Birth	22.1
Cognitively Disabled	24.2
Physically Disabled	52.4
Heart Attack ER Admissions	91.1
Mental Health Not Good	47.3
Chronic Kidney Disease	64.9
Obesity	41.1
Pedestrian Injuries	81.7
Physical Health Not Good	50.9
Stroke	51.7
Health Risk Behaviors	—
Binge Drinking	26.9
Current Smoker	46.7
No Leisure Time for Physical Activity	63.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	90.9
Elderly	50.2
English Speaking	37.6
Foreign-born	53.4

Outdoor Workers	68.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	10.7
Traffic Density	74.1
Traffic Access	87.4
Other Indices	—
Hardship	53.7
Other Decision Support	—
2016 Voting	21.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	81.0
Healthy Places Index Score for Project Location (b)	49.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Default % construction phase durations for single phase project
Operations: Vehicle Data	Assuming no change in park trip assumptions
Operations: Energy Use	Assuming no increase in energy use as a result of redevelopment of existing facilities and compliance with more stringent energy standards than existing conditions.
Operations: Solid Waste	Assuming no increase in existing solid waste generation.
Construction: Dust From Material Movement	Assumes 2 passes by equipment during Site Prep, and 5 passes by equipment during Grading
Construction: Trips and VMT	Assumes maximum 40 workers per day
Construction: Paving	Paved area for new 7,700 sf Cove Skatepark

Memorial Park (Phased Construction) Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Memorial Park (Phased Construction)
Construction Start Date	6/1/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	18.4
Location	34.021262733098695, -118.48061516913708
County	Los Angeles-South Coast
City	Santa Monica
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4416
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
City Park	13.2	Acre	13.2	0.00	258,671	258,671	—	—

Unenclosed Parking with Elevator	32.0	1000sqft	0.73	32,000	0.00	0.00	—	—
Road Construction	0.54	Mile	2.60	0.00	—	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	25.7	25.6	39.0	30.5	0.14	1.13	17.0	18.0	1.04	3.12	4.09	—	19,066	19,066	1.00	2.46	35.7	19,859
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	25.6	25.6	32.4	34.1	0.09	1.05	8.73	9.62	0.96	1.62	2.54	—	11,884	11,884	0.51	1.25	0.45	12,212
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.28	1.99	11.5	15.1	0.03	0.39	2.02	2.42	0.36	0.53	0.89	—	3,899	3,899	0.15	0.19	1.43	3,960
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.42	0.36	2.10	2.75	0.01	0.07	0.37	0.44	0.07	0.10	0.16	—	646	646	0.03	0.03	0.24	656

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.98	3.20	39.0	30.4	0.14	1.13	17.0	18.0	1.04	3.12	4.09	—	19,066	19,066	1.00	2.46	35.7	19,859
2027	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
2028	25.7	25.6	29.3	29.7	0.09	0.99	9.80	10.7	0.91	1.81	2.63	—	12,101	12,101	0.56	1.35	18.0	12,534
2029	25.7	25.6	21.1	30.5	0.06	0.82	1.74	2.56	0.76	0.25	1.01	—	7,163	7,163	0.28	0.11	1.58	7,203
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.00	0.84	6.88	10.5	0.02	0.25	0.57	0.82	0.23	0.13	0.36	—	2,410	2,410	0.10	0.06	0.06	2,429
2027	3.69	3.09	29.2	29.5	0.08	1.05	8.73	9.62	0.96	1.62	2.54	—	11,311	11,311	0.51	1.25	0.45	11,697
2028	3.97	3.09	32.4	34.1	0.09	1.03	7.90	8.92	0.95	1.58	2.49	—	11,884	11,884	0.51	1.05	0.40	12,212
2029	25.6	25.6	14.1	25.3	0.04	0.43	1.14	1.57	0.40	0.27	0.67	—	4,998	4,998	0.17	0.11	0.09	5,036
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.89	0.71	7.01	7.54	0.02	0.24	1.54	1.78	0.22	0.38	0.60	—	2,493	2,493	0.12	0.17	1.23	2,547
2027	0.36	0.29	2.88	2.83	0.01	0.10	0.67	0.77	0.09	0.16	0.25	—	995	995	0.04	0.08	0.48	1,019
2028	2.28	1.99	11.5	15.1	0.03	0.39	2.02	2.42	0.36	0.53	0.89	—	3,899	3,899	0.15	0.19	1.43	3,960
2029	1.72	1.56	6.82	10.9	0.02	0.24	0.49	0.73	0.22	0.09	0.31	—	2,243	2,243	0.08	0.04	0.37	2,256
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.16	0.13	1.28	1.38	< 0.005	0.04	0.28	0.32	0.04	0.07	0.11	—	413	413	0.02	0.03	0.20	422
2027	0.07	0.05	0.53	0.52	< 0.005	0.02	0.12	0.14	0.02	0.03	0.05	—	165	165	0.01	0.01	0.08	169
2028	0.42	0.36	2.10	2.75	0.01	0.07	0.37	0.44	0.07	0.10	0.16	—	646	646	0.03	0.03	0.24	656
2029	0.31	0.28	1.24	1.98	< 0.005	0.04	0.09	0.13	0.04	0.02	0.06	—	371	371	0.01	0.01	0.06	374

3. Construction Emissions Details

3.1. Streetscape Improvements: Grading (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.14	2.64	20.7	28.7	0.06	0.82	—	0.82	0.75	—	0.75	—	6,494	6,494	0.26	0.05	—	6,516
Dust From Material Movement	—	—	—	—	—	—	1.24	1.24	—	0.13	0.13	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.52	0.43	3.40	4.71	0.01	0.13	—	0.13	0.12	—	0.12	—	1,068	1,068	0.04	0.01	—	1,071
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.62	0.86	< 0.005	0.02	—	0.02	0.02	—	0.02	—	177	177	0.01	< 0.005	—	177

Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.10	1.71	0.00	0.00	0.42	0.42	0.00	0.10	0.10	—	417	417	< 0.005	0.02	1.08	423
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	29.1	29.1	< 0.005	< 0.005	0.07	30.4
Hauling	0.02	< 0.005	0.26	0.11	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	223	223	0.01	0.03	0.43	234
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.25	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	65.9	65.9	< 0.005	< 0.005	0.08	66.8
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.78	4.78	< 0.005	< 0.005	0.01	5.00
Hauling	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.6	36.6	< 0.005	0.01	0.03	38.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.9	10.9	< 0.005	< 0.005	0.01	11.1
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.79	0.79	< 0.005	< 0.005	< 0.005	0.83
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.06	6.06	< 0.005	< 0.005	0.01	6.36

3.3. Streetscape Improvements: Paving (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.90	0.76	6.78	10.8	0.01	0.23	—	0.23	0.21	—	0.21	—	1,619	1,619	0.07	0.01	—	1,624
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.90	0.76	6.78	10.8	0.01	0.23	—	0.23	0.21	—	0.21	—	1,619	1,619	0.07	0.01	—	1,624
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.20	0.17	1.49	2.36	< 0.005	0.05	—	0.05	0.05	—	0.05	—	355	355	0.01	< 0.005	—	356
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.04	0.03	0.27	0.43	< 0.005	0.01	—	0.01	0.01	—	0.01	—	58.7	58.7	< 0.005	< 0.005	—	58.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.08	0.07	0.06	1.05	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	257	257	< 0.005	0.01	0.67	260
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.89	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	243	243	< 0.005	0.01	0.02	246
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.21	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	54.1	54.1	< 0.005	< 0.005	0.06	54.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.96	8.96	< 0.005	< 0.005	0.01	9.07
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Phase 1: Lumber Site, Field, and Parking Demo (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.72	2.29	20.7	19.0	0.03	0.84	—	0.84	0.78	—	0.78	—	3,427	3,427	0.14	0.03	—	3,438

Demolition	—	—	—	—	—	—	12.3	12.3	—	1.87	1.87	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.13	1.04	< 0.005	0.05	—	0.05	0.04	—	0.04	—	188	188	0.01	< 0.005	—	188
Demolition	—	—	—	—	—	—	0.68	0.68	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.21	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.1	31.1	< 0.005	< 0.005	—	31.2
Demolition	—	—	—	—	—	—	0.12	0.12	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.16	2.58	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	542	542	0.02	0.02	1.83	550
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	1.09	0.24	18.2	7.15	0.10	0.20	4.11	4.31	0.20	1.13	1.32	—	15,097	15,097	0.84	2.41	33.9	15,871

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.6	28.6	< 0.005	< 0.005	0.04	29.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.06	0.01	1.05	0.39	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	827	827	0.05	0.13	0.80	869
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.73	4.73	< 0.005	< 0.005	0.01	4.79
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.19	0.07	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	137	137	0.01	0.02	0.13	144

3.7. Phase 2: Youth Field Demolition (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.64	2.21	19.9	18.6	0.03	0.80	—	0.80	0.73	—	0.73	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	6.15	6.15	—	0.93	0.93	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.14	0.12	1.09	1.02	< 0.005	0.04	—	0.04	0.04	—	0.04	—	188	188	0.01	< 0.005	—	188
Demolition	—	—	—	—	—	—	0.34	0.34	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.20	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.1	31.1	< 0.005	< 0.005	—	31.2
Demolition	—	—	—	—	—	—	0.06	0.06	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.17	2.04	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	504	504	0.01	0.02	0.04	510
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.53	0.11	9.11	3.51	0.05	0.10	2.05	2.15	0.10	0.56	0.66	—	7,381	7,381	0.37	1.20	0.41	7,748
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.0	28.0	< 0.005	< 0.005	0.04	28.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	0.01	0.50	0.19	< 0.005	0.01	0.11	0.12	0.01	0.03	0.04	—	404	404	0.02	0.07	0.37	425
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.64	4.64	< 0.005	< 0.005	0.01	4.70
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.01	< 0.005	0.09	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	66.9	66.9	< 0.005	0.01	0.06	70.3

3.9. Phase 3: Youth Field and Skatepark Demolition (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.61	2.19	19.6	18.7	0.03	0.78	—	0.78	0.71	—	0.71	—	3,429	3,429	0.14	0.03	—	3,440
Demolition	—	—	—	—	—	—	6.96	6.96	—	1.05	1.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.07	1.02	< 0.005	0.04	—	0.04	0.04	—	0.04	—	188	188	0.01	< 0.005	—	189
Demolition	—	—	—	—	—	—	0.38	0.38	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.20	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.1	31.1	< 0.005	< 0.005	—	31.2

Demoliti	—	—	—	—	—	—	0.07	0.07	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.14	2.26	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	522	522	0.01	0.02	1.49	529
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.56	0.14	9.58	3.81	0.06	0.11	2.32	2.43	0.11	0.63	0.75	—	8,150	8,150	0.41	1.30	16.5	8,565
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.5	27.5	< 0.005	< 0.005	0.04	27.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	0.01	0.55	0.21	< 0.005	0.01	0.13	0.13	0.01	0.03	0.04	—	447	447	0.02	0.07	0.39	469
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.56	4.56	< 0.005	< 0.005	0.01	4.62
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	74.0	74.0	< 0.005	0.01	0.06	77.6

3.11. Phase 4: Community Rec Center Demolition (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.61	2.19	19.6	18.7	0.03	0.78	—	0.78	0.71	—	0.71	—	3,429	3,429	0.14	0.03	—	3,440
Demolition	—	—	—	—	—	—	5.10	5.10	—	0.77	0.77	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.07	1.02	< 0.005	0.04	—	0.04	0.04	—	0.04	—	188	188	0.01	< 0.005	—	189
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.20	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.1	31.1	< 0.005	< 0.005	—	31.2
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.15	0.14	0.16	1.92	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	495	495	0.01	0.02	0.04	501
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.40	0.09	7.30	2.83	0.04	0.08	1.70	1.78	0.08	0.47	0.55	—	5,986	5,986	0.30	0.96	0.31	6,278
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.5	27.5	< 0.005	< 0.005	0.04	27.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.01	0.40	0.15	< 0.005	< 0.005	0.09	0.10	< 0.005	0.03	0.03	—	328	328	0.02	0.05	0.29	344
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.56	4.56	< 0.005	< 0.005	0.01	4.62
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	54.3	54.3	< 0.005	0.01	0.05	57.0

3.13. Phase 1: Site Preparation/Grading (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.62	3.04	27.2	27.6	0.06	1.12	—	1.12	1.03	—	1.03	—	6,599	6,599	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.40	0.33	2.98	3.02	0.01	0.12	—	0.12	0.11	—	0.11	—	723	723	0.03	0.01	—	726
Dust From Material Movement	—	—	—	—	—	—	0.39	0.39	—	0.16	0.16	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.54	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	120	120	< 0.005	< 0.005	—	120
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.16	2.58	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	542	542	0.02	0.02	1.83	550
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	0.01	0.65	0.26	< 0.005	0.01	0.15	0.15	0.01	0.04	0.05	—	539	539	0.03	0.09	1.21	567
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.25	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	57.1	57.1	< 0.005	< 0.005	0.09	57.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	59.1	59.1	< 0.005	0.01	0.06	62.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.46	9.46	< 0.005	< 0.005	0.01	9.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.78	9.78	< 0.005	< 0.005	0.01	10.3

3.15. Phase 2: Site Preparation/Grading (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.51	2.95	25.6	27.3	0.06	1.04	—	1.04	0.96	—	0.96	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.15	0.13	1.10	1.17	< 0.005	0.04	—	0.04	0.04	—	0.04	—	284	284	0.01	< 0.005	—	285
Dust From Material Movement	—	—	—	—	—	—	0.15	0.15	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.20	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	47.0	47.0	< 0.005	< 0.005	—	47.2
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.17	2.04	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	504	504	0.01	0.02	0.04	510
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	0.01	0.50	0.19	< 0.005	0.01	0.11	0.12	0.01	0.03	0.04	—	404	404	0.02	0.07	0.02	424
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	22.0	22.0	< 0.005	< 0.005	0.03	22.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	17.4	17.4	< 0.005	< 0.005	0.02	18.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.65	3.65	< 0.005	< 0.005	0.01	3.69
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.88	2.88	< 0.005	< 0.005	< 0.005	3.02

3.17. Phase 2: Site Preparation/Grading (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.43	2.88	24.3	27.2	0.06	0.99	—	0.99	0.91	—	0.91	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.19	1.62	1.81	< 0.005	0.07	—	0.07	0.06	—	0.06	—	439	439	0.02	< 0.005	—	441
Dust From Material Movement	—	—	—	—	—	—	0.24	0.24	—	0.09	0.09	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.30	0.33	< 0.005	0.01	—	0.01	0.01	—	0.01	—	72.7	72.7	< 0.005	< 0.005	—	72.9
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.14	0.16	1.92	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	495	495	0.01	0.02	0.04	501
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	0.01	0.48	0.19	< 0.005	0.01	0.11	0.12	0.01	0.03	0.04	—	394	394	0.02	0.06	0.02	414
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	33.4	33.4	< 0.005	< 0.005	0.04	33.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	26.2	26.2	< 0.005	< 0.005	0.02	27.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.53	5.53	< 0.005	< 0.005	0.01	5.60
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.34	4.34	< 0.005	< 0.005	< 0.005	4.56

3.19. Phase 3: Site Preparation/Grading (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.43	2.88	24.3	27.2	0.06	0.99	—	0.99	0.91	—	0.91	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.38	0.32	2.67	2.98	0.01	0.11	—	0.11	0.10	—	0.10	—	723	723	0.03	0.01	—	726
Dust From Material Movement	—	—	—	—	—	—	0.39	0.39	—	0.16	0.16	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.07	0.06	0.49	0.54	< 0.005	0.02	—	0.02	0.02	—	0.02	—	120	120	< 0.005	< 0.005	—	120
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.14	2.26	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	522	522	0.01	0.02	1.49	529
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	0.01	0.69	0.27	< 0.005	0.01	0.17	0.17	0.01	0.05	0.05	—	583	583	0.03	0.09	1.18	613
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.22	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	55.0	55.0	< 0.005	< 0.005	0.07	55.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	63.9	63.9	< 0.005	0.01	0.06	67.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.11	9.11	< 0.005	< 0.005	0.01	9.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.6	10.6	< 0.005	< 0.005	0.01	11.1

3.21. Phase 1 Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	0.69	6.52	8.22	0.02	0.25	—	0.25	0.23	—	0.23	—	1,732	1,732	0.07	0.01	—	1,738
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	0.69	6.52	8.22	0.02	0.25	—	0.25	0.23	—	0.23	—	1,732	1,732	0.07	0.01	—	1,738
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.65	2.08	< 0.005	0.06	—	0.06	0.06	—	0.06	—	437	437	0.02	< 0.005	—	439
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.30	0.38	< 0.005	0.01	—	0.01	0.01	—	0.01	—	72.4	72.4	< 0.005	< 0.005	—	72.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.16	2.58	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	542	542	0.02	0.02	1.83	550
Vendor	0.01	< 0.005	0.18	0.09	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	164	164	0.01	0.02	0.44	171
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.17	2.20	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	514	514	0.02	0.02	0.05	520
Vendor	0.01	< 0.005	0.19	0.09	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	164	164	0.01	0.02	0.01	171
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.05	0.58	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	132	132	0.01	< 0.005	0.20	133
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	41.3	41.3	< 0.005	0.01	0.05	43.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	21.8	21.8	< 0.005	< 0.005	0.03	22.1
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.84	6.84	< 0.005	< 0.005	0.01	7.14
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.23. Phase 1 Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	0.67	6.26	8.21	0.02	0.23	—	0.23	0.21	—	0.21	—	1,732	1,732	0.07	0.01	—	1,738
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.13	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	37.3	37.3	< 0.005	< 0.005	—	37.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.17	6.17	< 0.005	< 0.005	—	6.19
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.17	2.04	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	504	504	0.01	0.02	0.04	510
Vendor	0.01	< 0.005	0.18	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	160	160	0.01	0.02	0.01	167
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.0	11.0	< 0.005	< 0.005	0.02	11.1
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.45	3.45	< 0.005	< 0.005	< 0.005	3.60
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.82	1.82	< 0.005	< 0.005	< 0.005	1.85
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.57	0.57	< 0.005	< 0.005	< 0.005	0.60
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.25. Phase 2: Combo Field, Community Hub, and Playground Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	0.68	6.29	10.3	0.02	0.19	—	0.19	0.18	—	0.18	—	1,531	1,531	0.06	0.01	—	1,536
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	0.68	6.29	10.3	0.02	0.19	—	0.19	0.18	—	0.18	—	1,531	1,531	0.06	0.01	—	1,536
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.22	0.19	1.72	2.81	< 0.005	0.05	—	0.05	0.05	—	0.05	—	419	419	0.02	< 0.005	—	421
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.31	0.51	< 0.005	0.01	—	0.01	0.01	—	0.01	—	69.4	69.4	< 0.005	< 0.005	—	69.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.14	2.26	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	522	522	0.01	0.02	1.49	529
Vendor	0.01	< 0.005	0.16	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	157	157	0.01	0.02	0.40	164
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.14	0.16	1.92	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	495	495	0.01	0.02	0.04	501
Vendor	0.01	< 0.005	0.17	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	157	157	0.01	0.02	0.01	163
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.55	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	138	138	< 0.005	0.01	0.18	139
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	42.9	42.9	< 0.005	0.01	0.05	44.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	22.8	22.8	< 0.005	< 0.005	0.03	23.1
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.11	7.11	< 0.005	< 0.005	0.01	7.42

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.27. Phase 3: Youth Fields and Skatepark Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.64	0.53	5.06	8.64	0.01	0.17	—	0.17	0.15	—	0.15	—	1,323	1,323	0.05	0.01	—	1,328
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.64	0.53	5.06	8.64	0.01	0.17	—	0.17	0.15	—	0.15	—	1,323	1,323	0.05	0.01	—	1,328
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.93	1.59	< 0.005	0.03	—	0.03	0.03	—	0.03	—	243	243	0.01	< 0.005	—	244
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.02	0.02	0.17	0.29	< 0.005	0.01	—	0.01	0.01	—	0.01	—	40.3	40.3	< 0.005	< 0.005	—	40.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.14	2.26	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	522	522	0.01	0.02	1.49	529
Vendor	0.01	< 0.005	0.16	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	157	157	0.01	0.02	0.40	164
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.14	0.16	1.92	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	495	495	0.01	0.02	0.04	501
Vendor	0.01	< 0.005	0.17	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	157	157	0.01	0.02	0.01	163
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.37	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	92.4	92.4	< 0.005	< 0.005	0.12	93.6
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.8	28.8	< 0.005	< 0.005	0.03	30.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.3	15.3	< 0.005	< 0.005	0.02	15.5
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.77	4.77	< 0.005	< 0.005	0.01	4.98
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.29. Phase 3: Youth Fields and Skatepark Construction (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.63	0.52	4.94	8.66	0.01	0.15	—	0.15	0.14	—	0.14	—	1,323	1,323	0.05	0.01	—	1,327
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.44	0.78	< 0.005	0.01	—	0.01	0.01	—	0.01	—	119	119	< 0.005	< 0.005	—	119
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	19.7	19.7	< 0.005	< 0.005	—	19.8
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.13	0.14	1.79	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	487	487	0.01	0.02	0.03	492

Vendor	0.01	< 0.005	0.16	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	153	153	0.01	0.02	0.01	159
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.17	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	44.4	44.4	< 0.005	< 0.005	0.05	45.0
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.7	13.7	< 0.005	< 0.005	0.01	14.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.36	7.36	< 0.005	< 0.005	0.01	7.45
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.27	2.27	< 0.005	< 0.005	< 0.005	2.38
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.31. Phase 4: Community Rec Center Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.14	0.12	1.08	1.57	< 0.005	0.04	—	0.04	0.03	—	0.03	—	291	291	0.01	< 0.005	—	292
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.20	0.29	< 0.005	0.01	—	0.01	0.01	—	0.01	—	48.2	48.2	< 0.005	< 0.005	—	48.3
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.14	0.16	1.92	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	495	495	0.01	0.02	0.04	501
Vendor	0.01	< 0.005	0.17	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	157	157	0.01	0.02	0.01	163
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.24	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	60.9	60.9	< 0.005	< 0.005	0.08	61.7
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	19.0	19.0	< 0.005	< 0.005	0.02	19.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.1	10.1	< 0.005	< 0.005	0.01	10.2
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.15	3.15	< 0.005	< 0.005	< 0.005	3.29
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.33. Phase 4: Community Rec Center Construction (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.15	0.97	8.58	12.9	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.31	1.97	< 0.005	0.04	—	0.04	0.04	—	0.04	—	366	366	0.01	< 0.005	—	367
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.24	0.36	< 0.005	0.01	—	0.01	0.01	—	0.01	—	60.6	60.6	< 0.005	< 0.005	—	60.8
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.13	0.14	1.79	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	487	487	0.01	0.02	0.03	492
Vendor	0.01	< 0.005	0.16	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	153	153	0.01	0.02	0.01	159
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.29	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	75.4	75.4	< 0.005	< 0.005	0.09	76.3
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.3	23.3	< 0.005	< 0.005	0.02	24.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.5	12.5	< 0.005	< 0.005	0.01	12.6
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.85	3.85	< 0.005	< 0.005	< 0.005	4.03
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.35. Phase 2: Community Hub Finishing (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.81	1.12	< 0.005	0.02	—	0.02	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	25.4	25.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.66	3.66	< 0.005	< 0.005	—	3.67
Architectural Coatings	0.70	0.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.61	0.61	< 0.005	< 0.005	—	0.61
Architectural Coatings	0.13	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.14	2.26	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	522	522	0.01	0.02	1.49	529
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.8	13.8	< 0.005	< 0.005	0.02	13.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.28	2.28	< 0.005	< 0.005	< 0.005	2.31
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.37. Phase 4: Community Rec Center Finishing (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.79	1.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	25.4	25.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.12	0.10	0.79	1.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	25.4	25.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.66	3.66	< 0.005	< 0.005	—	3.67
Architectural Coatings	0.70	0.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.61	0.61	< 0.005	< 0.005	—	0.61
Architectural Coatings	0.13	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.13	0.12	2.11	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	513	513	0.01	0.02	1.33	520
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.13	0.14	1.79	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	487	487	0.01	0.02	0.03	492
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.5	13.5	< 0.005	< 0.005	0.02	13.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.24	2.24	< 0.005	< 0.005	< 0.005	2.27
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Streetscape Improvements: Grading	Linear, Grading & Excavation	4/3/2029	6/25/2029	5.00	60.0	—
Streetscape Improvements: Paving	Linear, Paving	6/26/2029	10/15/2029	5.00	80.0	—
Phase 1: Lumber Site, Field, and Parking Demo	Demolition	6/1/2026	6/29/2026	5.00	20.0	—
Phase 2: Youth Field Demolition	Demolition	11/12/2027	12/9/2027	5.00	20.0	—
Phase 3: Youth Field and Skatepark Demolition	Demolition	7/7/2028	8/3/2028	5.00	20.0	—
Phase 4: Community Rec Center Demolition	Demolition	10/3/2028	10/30/2028	5.00	20.0	—
Phase 1: Site Preparation/Grading	Grading	6/30/2026	8/24/2026	5.00	40.0	—
Phase 2: Site Preparation/Grading	Grading	12/10/2027	2/3/2028	5.00	40.0	—
Phase 3: Site Preparation/Grading	Grading	8/4/2028	9/28/2028	5.00	40.0	—
Phase 1 Building Construction	Building Construction	8/25/2026	1/11/2027	5.00	100	—
Phase 2: Combo Field, Community Hub, and Playground Construction	Building Construction	2/4/2028	6/22/2028	5.00	100	—
Phase 3: Youth Fields and Skatepark Construction	Building Construction	9/29/2028	2/15/2029	5.00	100	—
Phase 4: Community Rec Center Construction	Building Construction	10/31/2028	3/19/2029	5.00	100	—
Phase 2: Community Hub Finishing	Architectural Coating	6/23/2028	7/6/2028	5.00	10.0	—
Phase 4: Community Rec Center Finishing	Architectural Coating	3/20/2029	4/2/2029	5.00	10.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Streetscape Improvements: Grading	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Streetscape Improvements: Grading	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Streetscape Improvements: Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Streetscape Improvements: Grading	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Streetscape Improvements: Grading	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36
Streetscape Improvements: Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Streetscape Improvements: Grading	Signal Boards	Electric	Average	1.00	8.00	6.00	0.82
Streetscape Improvements: Grading	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Streetscape Improvements: Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Streetscape Improvements: Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Streetscape Improvements: Paving	Rollers	Diesel	Average	3.00	8.00	36.0	0.38

Streetscape Improvements: Paving	Signal Boards	Electric	Average	1.00	8.00	6.00	0.82
Streetscape Improvements: Paving	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Phase 1: Lumber Site, Field, and Parking Demo	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Phase 1: Lumber Site, Field, and Parking Demo	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Phase 1: Lumber Site, Field, and Parking Demo	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Phase 2: Youth Field Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Phase 2: Youth Field Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Phase 2: Youth Field Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Phase 3: Youth Field and Skatepark Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Phase 3: Youth Field and Skatepark Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Phase 3: Youth Field and Skatepark Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Phase 4: Community Rec Center Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Phase 4: Community Rec Center Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Phase 4: Community Rec Center Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Phase 1: Site Preparation/Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38

Phase 1: Site Preparation/Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Phase 1: Site Preparation/Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Phase 1: Site Preparation/Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Phase 1: Site Preparation/Grading	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Phase 2: Site Preparation/Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Phase 2: Site Preparation/Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Phase 2: Site Preparation/Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Phase 2: Site Preparation/Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Phase 2: Site Preparation/Grading	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Phase 3: Site Preparation/Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Phase 3: Site Preparation/Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Phase 3: Site Preparation/Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Phase 3: Site Preparation/Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Phase 3: Site Preparation/Grading	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Phase 1 Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Phase 1 Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Phase 1 Building Construction	Tractors/Loaders/Back hoes	Diesel	Average	3.00	7.00	84.0	0.37

Phase 2: Combo Field, Community Hub, and Playground Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Phase 2: Combo Field, Community Hub, and Playground Construction	Tractors/Loaders/Back hoes	Diesel	Average	3.00	7.00	84.0	0.37
Phase 2: Combo Field, Community Hub, and Playground Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Phase 2: Combo Field, Community Hub, and Playground Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Phase 3: Youth Fields and Skatepark Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Phase 3: Youth Fields and Skatepark Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Phase 3: Youth Fields and Skatepark Construction	Tractors/Loaders/Back hoes	Diesel	Average	3.00	7.00	84.0	0.37
Phase 4: Community Rec Center Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Phase 4: Community Rec Center Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Phase 4: Community Rec Center Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Phase 4: Community Rec Center Construction	Tractors/Loaders/Back hoes	Diesel	Average	3.00	7.00	84.0	0.37

Phase 4: Community Rec Center Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Phase 2: Community Hub Finishing	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Phase 4: Community Rec Center Finishing	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Phase 1: Lumber Site, Field, and Parking Demo	—	—	—	—
Phase 1: Lumber Site, Field, and Parking Demo	Worker	40.0	18.5	LDA,LDT1,LDT2
Phase 1: Lumber Site, Field, and Parking Demo	Vendor	—	10.2	HHDT,MHDT
Phase 1: Lumber Site, Field, and Parking Demo	Hauling	222	20.0	HHDT
Phase 1: Lumber Site, Field, and Parking Demo	Onsite truck	—	—	HHDT
Phase 1: Site Preparation/Grading	—	—	—	—
Phase 1: Site Preparation/Grading	Worker	40.0	18.5	LDA,LDT1,LDT2
Phase 1: Site Preparation/Grading	Vendor	—	10.2	HHDT,MHDT
Phase 1: Site Preparation/Grading	Hauling	7.92	20.0	HHDT
Phase 1: Site Preparation/Grading	Onsite truck	—	—	HHDT
Phase 1 Building Construction	—	—	—	—
Phase 1 Building Construction	Worker	40.0	18.5	LDA,LDT1,LDT2
Phase 1 Building Construction	Vendor	5.24	10.2	HHDT,MHDT
Phase 1 Building Construction	Hauling	0.00	20.0	HHDT
Phase 1 Building Construction	Onsite truck	—	—	HHDT

Streetscape Improvements: Grading	—	—	—	—
Streetscape Improvements: Grading	Worker	32.5	18.5	LDA,LDT1,LDT2
Streetscape Improvements: Grading	Vendor	1.00	10.2	HHDT,MHDT
Streetscape Improvements: Grading	Hauling	3.50	20.0	HHDT
Streetscape Improvements: Grading	Onsite truck	—	—	HHDT
Streetscape Improvements: Paving	—	—	—	—
Streetscape Improvements: Paving	Worker	20.0	18.5	LDA,LDT1,LDT2
Streetscape Improvements: Paving	Vendor	0.00	10.2	HHDT,MHDT
Streetscape Improvements: Paving	Hauling	0.00	20.0	HHDT
Streetscape Improvements: Paving	Onsite truck	—	—	HHDT
Phase 2: Youth Field Demolition	—	—	—	—
Phase 2: Youth Field Demolition	Worker	40.0	18.5	LDA,LDT1,LDT2
Phase 2: Youth Field Demolition	Vendor	—	10.2	HHDT,MHDT
Phase 2: Youth Field Demolition	Hauling	111	20.0	HHDT
Phase 2: Youth Field Demolition	Onsite truck	—	—	HHDT
Phase 3: Youth Field and Skatepark Demolition	—	—	—	—
Phase 3: Youth Field and Skatepark Demolition	Worker	40.0	18.5	LDA,LDT1,LDT2
Phase 3: Youth Field and Skatepark Demolition	Vendor	—	10.2	HHDT,MHDT
Phase 3: Youth Field and Skatepark Demolition	Hauling	125	20.0	HHDT
Phase 3: Youth Field and Skatepark Demolition	Onsite truck	—	—	HHDT
Phase 4: Community Rec Center Demolition	—	—	—	—
Phase 4: Community Rec Center Demolition	Worker	40.0	18.5	LDA,LDT1,LDT2
Phase 4: Community Rec Center Demolition	Vendor	—	10.2	HHDT,MHDT

Phase 4: Community Rec Center Demolition	Hauling	91.8	20.0	HHDT
Phase 4: Community Rec Center Demolition	Onsite truck	—	—	HHDT
Phase 2: Site Preparation/Grading	—	—	—	—
Phase 2: Site Preparation/Grading	Worker	40.0	18.5	LDA,LDT1,LDT2
Phase 2: Site Preparation/Grading	Vendor	—	10.2	HHDT,MHDT
Phase 2: Site Preparation/Grading	Hauling	6.05	20.0	HHDT
Phase 2: Site Preparation/Grading	Onsite truck	—	—	HHDT
Phase 3: Site Preparation/Grading	—	—	—	—
Phase 3: Site Preparation/Grading	Worker	40.0	18.5	LDA,LDT1,LDT2
Phase 3: Site Preparation/Grading	Vendor	—	10.2	HHDT,MHDT
Phase 3: Site Preparation/Grading	Hauling	8.95	20.0	HHDT
Phase 3: Site Preparation/Grading	Onsite truck	—	—	HHDT
Phase 2: Combo Field, Community Hub, and Playground Construction	—	—	—	—
Phase 2: Combo Field, Community Hub, and Playground Construction	Worker	40.0	18.5	LDA,LDT1,LDT2
Phase 2: Combo Field, Community Hub, and Playground Construction	Vendor	5.24	10.2	HHDT,MHDT
Phase 2: Combo Field, Community Hub, and Playground Construction	Hauling	0.00	20.0	HHDT
Phase 2: Combo Field, Community Hub, and Playground Construction	Onsite truck	—	—	HHDT
Phase 3: Youth Fields and Skatepark Construction	—	—	—	—
Phase 3: Youth Fields and Skatepark Construction	Worker	40.0	18.5	LDA,LDT1,LDT2
Phase 3: Youth Fields and Skatepark Construction	Vendor	5.24	10.2	HHDT,MHDT
Phase 3: Youth Fields and Skatepark Construction	Hauling	0.00	20.0	HHDT

Phase 3: Youth Fields and Skatepark Construction	Onsite truck	—	—	HHDT
Phase 4: Community Rec Center Construction	—	—	—	—
Phase 4: Community Rec Center Construction	Worker	40.0	18.5	LDA,LDT1,LDT2
Phase 4: Community Rec Center Construction	Vendor	5.24	10.2	HHDT,MHDT
Phase 4: Community Rec Center Construction	Hauling	0.00	20.0	HHDT
Phase 4: Community Rec Center Construction	Onsite truck	—	—	HHDT
Phase 2: Community Hub Finishing	—	—	—	—
Phase 2: Community Hub Finishing	Worker	40.0	18.5	LDA,LDT1,LDT2
Phase 2: Community Hub Finishing	Vendor	—	10.2	HHDT,MHDT
Phase 2: Community Hub Finishing	Hauling	0.00	20.0	HHDT
Phase 2: Community Hub Finishing	Onsite truck	—	—	HHDT
Phase 4: Community Rec Center Finishing	—	—	—	—
Phase 4: Community Rec Center Finishing	Worker	40.0	18.5	LDA,LDT1,LDT2
Phase 4: Community Rec Center Finishing	Vendor	—	10.2	HHDT,MHDT
Phase 4: Community Rec Center Finishing	Hauling	0.00	20.0	HHDT
Phase 4: Community Rec Center Finishing	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Phase 2: Community Hub Finishing	0.00	0.00	40,470	13,330	960
Phase 4: Community Rec Center Finishing	0.00	0.00	40,470	13,330	960

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Streetscape Improvements: Grading	1,678	0.00	13.0	0.00	—
Phase 1: Lumber Site, Field, and Parking Demo	0.00	0.00	0.00	17,755	—
Phase 2: Youth Field Demolition	0.00	0.00	0.00	8,849	—
Phase 3: Youth Field and Skatepark Demolition	0.00	0.00	0.00	10,003	—
Phase 4: Community Rec Center Demolition	0.00	0.00	0.00	7,341	—
Phase 1: Site Preparation/Grading	2,536	0.00	20.0	0.00	—
Phase 2: Site Preparation/Grading	1,931	0.00	15.0	0.00	—
Phase 3: Site Preparation/Grading	2,859	0.00	18.0	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
City Park	7,700	0%
Unenclosed Parking with Elevator	0.73	100%
Road Construction	2.60	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	532	0.03	< 0.005
2027	0.00	532	0.03	< 0.005
2028	0.00	532	0.03	< 0.005
2029	58.7	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	7.85	annual days of extreme heat
Extreme Precipitation	4.85	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about $\frac{3}{4}$ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A

Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	50.5
AQ-PM	66.7
AQ-DPM	90.7
Drinking Water	48.2
Lead Risk Housing	45.7
Pesticides	0.00
Toxic Releases	74.5
Traffic	81.0
Effect Indicators	—
CleanUp Sites	83.5
Groundwater	85.6
Haz Waste Facilities/Generators	89.3
Impaired Water Bodies	51.2
Solid Waste	67.0
Sensitive Population	—
Asthma	57.3
Cardio-vascular	30.4
Low Birth Weights	65.2
Socioeconomic Factor Indicators	—
Education	53.6
Housing	64.0
Linguistic	47.1

Poverty	58.5
Unemployment	72.5

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	37.59784422
Employed	34.62081355
Median HI	46.16963942
Education	—
Bachelor's or higher	76.63287566
High school enrollment	100
Preschool enrollment	64.08315155
Transportation	—
Auto Access	17.51571924
Active commuting	90.81226742
Social	—
2-parent households	14.97497754
Voting	10.26562299
Neighborhood	—
Alcohol availability	16.12986013
Park access	81.35506224
Retail density	99.43539074
Supermarket access	60.81098422
Tree canopy	7.930193764
Housing	—
Homeownership	6.069549596

Housing habitability	32.73450533
Low-inc homeowner severe housing cost burden	28.94905685
Low-inc renter severe housing cost burden	60.09239061
Uncrowded housing	40.60053895
Health Outcomes	—
Insured adults	67.56063134
Arthritis	67.1
Asthma ER Admissions	62.6
High Blood Pressure	54.9
Cancer (excluding skin)	55.0
Asthma	49.0
Coronary Heart Disease	63.8
Chronic Obstructive Pulmonary Disease	56.7
Diagnosed Diabetes	54.0
Life Expectancy at Birth	22.1
Cognitively Disabled	24.2
Physically Disabled	52.4
Heart Attack ER Admissions	91.1
Mental Health Not Good	47.3
Chronic Kidney Disease	64.9
Obesity	41.1
Pedestrian Injuries	81.7
Physical Health Not Good	50.9
Stroke	51.7
Health Risk Behaviors	—
Binge Drinking	26.9
Current Smoker	46.7
No Leisure Time for Physical Activity	63.5

Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	90.9
Elderly	50.2
English Speaking	37.6
Foreign-born	53.4
Outdoor Workers	68.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	10.7
Traffic Density	74.1
Traffic Access	87.4
Other Indices	—
Hardship	53.7
Other Decision Support	—
2016 Voting	21.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	81.0
Healthy Places Index Score for Project Location (b)	49.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	—
Construction: Construction Phases	Detailed phasing construction schedule assumptions based on Project Description details and default phase durations. Assumes sequential construction activities, and all streetscape improvements completed at end of construction
Construction: Off-Road Equipment	Assumed default construction equipment based on Project Description. Select pieces of equipment removed where equipment is not necessary based on proposed construction activities.
Construction: Dust From Material Movement	Project calculated import/export distributed by construction phase based on total construction area of activity for each phase. Total acres graded adjusted based on total construction area of activity and assuming 5 total passes by equipment.
Construction: Trips and VMT	Assume maximum 40 workers per day during typical construction phases.
Construction: Paving	Added 7,700 sf of paved area of new Cove Skatepark

Memorial Park Detailed Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Memorial Park
Construction Start Date	6/1/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	18.4
Location	34.02125141336542, -118.48032720357784
County	Los Angeles-South Coast
City	Santa Monica
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4416
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
City Park	13.2	Acre	13.2	0.00	0.00	0.00	—	—

Unenclosed Parking with Elevator	32.0	1000sqft	0.73	32,000	0.00	0.00	—	—
Road Construction	0.54	Mile	2.60	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.0	12.9	29.3	31.4	0.07	1.24	8.19	9.43	1.14	4.06	5.21	—	8,099	8,099	0.34	0.23	3.98	8,179
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.86	3.20	28.6	30.2	0.07	1.13	4.38	5.51	1.04	1.62	2.66	—	8,071	8,071	0.34	0.23	0.10	8,147
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.37	2.23	10.0	10.8	0.02	0.40	1.44	1.84	0.37	0.55	0.92	—	2,542	2,542	0.11	0.07	0.64	2,566
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.43	0.41	1.83	1.98	< 0.005	0.07	0.26	0.34	0.07	0.10	0.17	—	421	421	0.02	0.01	0.11	425

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.91	3.29	29.3	31.4	0.07	1.24	8.19	9.43	1.14	4.06	5.21	—	8,099	8,099	0.34	0.23	3.98	8,179
2027	1.40	1.18	9.70	15.4	0.02	0.34	0.57	0.91	0.31	0.13	0.45	—	3,089	3,089	0.13	0.06	2.07	3,112
2028	1.35	1.13	9.23	15.3	0.02	0.30	0.57	0.87	0.28	0.13	0.41	—	3,076	3,076	0.11	0.06	1.88	3,099
2029	13.0	12.9	21.1	30.5	0.06	0.82	1.74	2.56	0.76	0.25	1.01	—	7,163	7,163	0.28	0.11	1.58	7,203
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.86	3.20	28.6	30.2	0.07	1.13	4.38	5.51	1.04	1.62	2.66	—	8,071	8,071	0.34	0.23	0.10	8,147
2027	1.40	1.17	9.74	15.1	0.02	0.34	0.57	0.91	0.31	0.13	0.45	—	3,061	3,061	0.11	0.06	0.05	3,082
2028	1.35	1.13	9.25	14.9	0.02	0.30	0.57	0.87	0.28	0.13	0.41	—	3,049	3,049	0.11	0.06	0.05	3,070
2029	1.30	1.10	8.88	14.8	0.02	0.28	0.57	0.84	0.25	0.13	0.39	—	3,036	3,036	0.11	0.06	0.04	3,057
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.36	1.13	10.0	10.7	0.02	0.40	1.44	1.84	0.37	0.55	0.92	—	2,542	2,542	0.11	0.07	0.61	2,566
2027	1.00	0.84	6.96	10.8	0.02	0.24	0.40	0.64	0.22	0.10	0.32	—	2,192	2,192	0.08	0.04	0.64	2,208
2028	0.97	0.81	6.63	10.8	0.02	0.22	0.40	0.62	0.20	0.10	0.29	—	2,189	2,189	0.08	0.04	0.58	2,205
2029	2.37	2.23	6.33	10.1	0.02	0.23	0.49	0.72	0.21	0.09	0.30	—	2,055	2,055	0.08	0.03	0.35	2,066
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.25	0.21	1.83	1.96	< 0.005	0.07	0.26	0.34	0.07	0.10	0.17	—	421	421	0.02	0.01	0.10	425
2027	0.18	0.15	1.27	1.98	< 0.005	0.04	0.07	0.12	0.04	0.02	0.06	—	363	363	0.01	0.01	0.11	365
2028	0.18	0.15	1.21	1.96	< 0.005	0.04	0.07	0.11	0.04	0.02	0.05	—	362	362	0.01	0.01	0.10	365
2029	0.43	0.41	1.16	1.84	< 0.005	0.04	0.09	0.13	0.04	0.02	0.06	—	340	340	0.01	0.01	0.06	342

3. Construction Emissions Details

3.1. Streetscape Improvements: Grading (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.14	2.64	20.7	28.7	0.06	0.82	—	0.82	0.75	—	0.75	—	6,494	6,494	0.26	0.05	—	6,516
Dust From Material Movement	—	—	—	—	—	—	1.24	1.24	—	0.13	0.13	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.52	0.43	3.40	4.71	0.01	0.13	—	0.13	0.12	—	0.12	—	1,068	1,068	0.04	0.01	—	1,071
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.62	0.86	< 0.005	0.02	—	0.02	0.02	—	0.02	—	177	177	0.01	< 0.005	—	177

Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.10	1.71	0.00	0.00	0.42	0.42	0.00	0.10	0.10	—	417	417	< 0.005	0.02	1.08	423
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	29.1	29.1	< 0.005	< 0.005	0.07	30.4
Hauling	0.02	< 0.005	0.26	0.11	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	223	223	0.01	0.03	0.43	234
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.25	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	65.9	65.9	< 0.005	< 0.005	0.08	66.8
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.78	4.78	< 0.005	< 0.005	0.01	5.00
Hauling	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.6	36.6	< 0.005	0.01	0.03	38.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.9	10.9	< 0.005	< 0.005	0.01	11.1
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.79	0.79	< 0.005	< 0.005	< 0.005	0.83
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.06	6.06	< 0.005	< 0.005	0.01	6.36

3.3. Streetscape Improvements: Paving (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.90	0.76	6.78	10.8	0.01	0.23	—	0.23	0.21	—	0.21	—	1,619	1,619	0.07	0.01	—	1,624
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.90	0.76	6.78	10.8	0.01	0.23	—	0.23	0.21	—	0.21	—	1,619	1,619	0.07	0.01	—	1,624
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.20	0.17	1.49	2.36	< 0.005	0.05	—	0.05	0.05	—	0.05	—	355	355	0.01	< 0.005	—	356
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.04	0.03	0.27	0.43	< 0.005	0.01	—	0.01	0.01	—	0.01	—	58.7	58.7	< 0.005	< 0.005	—	58.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.08	0.07	0.06	1.05	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	257	257	< 0.005	0.01	0.67	260
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.89	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	243	243	< 0.005	0.01	0.02	246
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.21	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	54.1	54.1	< 0.005	< 0.005	0.06	54.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.96	8.96	< 0.005	< 0.005	0.01	9.07
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Demolition (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.72	2.29	20.7	19.0	0.03	0.84	—	0.84	0.78	—	0.78	—	3,427	3,427	0.14	0.03	—	3,438

Demolition	—	—	—	—	—	—	0.69	0.69	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.28	2.55	2.34	< 0.005	0.10	—	0.10	0.10	—	0.10	—	422	422	0.02	< 0.005	—	424
Demolition	—	—	—	—	—	—	0.09	0.09	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.46	0.43	< 0.005	0.02	—	0.02	0.02	—	0.02	—	69.9	69.9	< 0.005	< 0.005	—	70.2
Demolition	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.16	2.58	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	542	542	0.02	0.02	1.83	550
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.06	0.01	1.02	0.40	0.01	0.01	0.23	0.24	0.01	0.06	0.07	—	848	848	0.05	0.14	1.90	891

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.28	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	64.3	64.3	< 0.005	< 0.005	0.10	65.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.13	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	105	105	0.01	0.02	0.10	110
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.6	10.6	< 0.005	< 0.005	0.02	10.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	17.3	17.3	< 0.005	< 0.005	0.02	18.2

3.7. Site Preparation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.74	3.14	29.2	28.8	0.05	1.24	—	1.24	1.14	—	1.14	—	5,298	5,298	0.21	0.04	—	5,316
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.60	1.58	< 0.005	0.07	—	0.07	0.06	—	0.06	—	290	290	0.01	< 0.005	—	291
Dust From Material Movement	—	—	—	—	—	—	0.42	0.42	—	0.22	0.22	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.29	0.29	< 0.005	0.01	—	0.01	0.01	—	0.01	—	48.1	48.1	< 0.005	< 0.005	—	48.2
Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.16	2.58	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	542	542	0.02	0.02	1.83	550
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.6	28.6	< 0.005	< 0.005	0.04	29.0

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.73	4.73	< 0.005	< 0.005	0.01	4.79
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Grading (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.62	3.04	27.2	27.6	0.06	1.12	—	1.12	1.03	—	1.03	—	6,599	6,599	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.62	3.04	27.2	27.6	0.06	1.12	—	1.12	1.03	—	1.03	—	6,599	6,599	0.27	0.05	—	6,621

Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	0.54	4.85	4.91	0.01	0.20	—	0.20	0.18	—	0.18	—	1,175	1,175	0.05	0.01	—	1,179
Dust From Material Movement	—	—	—	—	—	—	0.64	0.64	—	0.25	0.25	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.88	0.90	< 0.005	0.04	—	0.04	0.03	—	0.03	—	195	195	0.01	< 0.005	—	195
Dust From Material Movement	—	—	—	—	—	—	0.12	0.12	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.16	2.58	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	542	542	0.02	0.02	1.83	550
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.07	0.02	1.15	0.45	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	959	959	0.05	0.15	2.15	1,008

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.17	2.20	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	514	514	0.02	0.02	0.05	520
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.07	0.01	1.20	0.46	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	959	959	0.05	0.15	0.06	1,006
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.41	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	92.8	92.8	< 0.005	< 0.005	0.14	94.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.22	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	171	171	0.01	0.03	0.16	179
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.4	15.4	< 0.005	< 0.005	0.02	15.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.3	28.3	< 0.005	< 0.005	0.03	29.7

3.11. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.62	0.81	< 0.005	0.02	—	0.02	0.02	—	0.02	—	150	150	0.01	< 0.005	—	151
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	24.9	24.9	< 0.005	< 0.005	—	24.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.17	2.20	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	514	514	0.02	0.02	0.05	520
Vendor	0.01	< 0.005	0.19	0.09	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	164	164	0.01	0.02	0.01	171
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.14	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	32.6	32.6	< 0.005	< 0.005	0.05	33.1
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.2	10.2	< 0.005	< 0.005	0.01	10.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.41	5.41	< 0.005	< 0.005	0.01	5.48
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.70	1.70	< 0.005	< 0.005	< 0.005	1.77
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.74	6.71	9.24	0.02	0.24	—	0.24	0.22	—	0.22	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.22	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	283	283	0.01	< 0.005	—	284

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.14	2.40	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	532	532	0.02	0.02	1.66	539
Vendor	0.01	< 0.005	0.17	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	160	160	0.01	0.02	0.42	168
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.17	2.04	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	504	504	0.01	0.02	0.04	510
Vendor	0.01	< 0.005	0.18	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	160	160	0.01	0.02	0.01	167
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.12	1.53	0.00	0.00	0.37	0.37	0.00	0.09	0.09	—	365	365	0.01	0.01	0.51	370
Vendor	0.01	< 0.005	0.13	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	115	115	< 0.005	0.02	0.13	120
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.28	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	60.5	60.5	< 0.005	< 0.005	0.08	61.3
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	19.0	19.0	< 0.005	< 0.005	0.02	19.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Building Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.85	0.71	6.39	9.26	0.02	0.22	—	0.22	0.20	—	0.20	—	1,717	1,717	0.07	0.01	—	1,723
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.15	0.13	1.17	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	284	284	0.01	< 0.005	—	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.16	0.14	0.14	2.26	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	522	522	0.01	0.02	1.49	529
Vendor	0.01	< 0.005	0.16	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	157	157	0.01	0.02	0.40	164
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.14	0.16	1.92	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	495	495	0.01	0.02	0.04	501
Vendor	0.01	< 0.005	0.17	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	157	157	0.01	0.02	0.01	163
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.11	1.44	0.00	0.00	0.37	0.37	0.00	0.09	0.09	—	360	360	< 0.005	0.01	0.46	364
Vendor	0.01	< 0.005	0.12	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	112	112	< 0.005	0.02	0.12	117
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.26	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	59.6	59.6	< 0.005	< 0.005	0.08	60.3
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	18.6	18.6	< 0.005	< 0.005	0.02	19.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Building Construction (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	1.15	0.97	8.58	12.9	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.44	0.66	< 0.005	0.01	—	0.01	0.01	—	0.01	—	122	122	< 0.005	< 0.005	—	122
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.2	20.2	< 0.005	< 0.005	—	20.3
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.13	0.14	1.79	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	487	487	0.01	0.02	0.03	492
Vendor	0.01	< 0.005	0.16	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	153	153	0.01	0.02	0.01	159
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	25.1	25.1	< 0.005	< 0.005	0.03	25.4
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.76	7.76	< 0.005	< 0.005	0.01	8.11
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.16	4.16	< 0.005	< 0.005	< 0.005	4.21
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.28	1.28	< 0.005	< 0.005	< 0.005	1.34
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Paving (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	0.67	6.46	9.92	0.01	0.24	—	0.24	0.22	—	0.22	—	1,511	1,511	0.06	0.01	—	1,516
Paving	0.19	0.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.80	1.22	< 0.005	0.03	—	0.03	0.03	—	0.03	—	186	186	0.01	< 0.005	—	187
Paving	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.02	0.02	0.15	0.22	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	30.8	30.8	< 0.005	< 0.005	—	30.9
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.13	0.14	1.79	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	487	487	0.01	0.02	0.03	492
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.23	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	60.9	60.9	< 0.005	< 0.005	0.07	61.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.1	10.1	< 0.005	< 0.005	0.01	10.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.21. Architectural Coating (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.79	1.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	12.7	12.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.6	14.6	< 0.005	< 0.005	—	14.7
Architectural Coatings	1.39	1.39	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.42	2.42	< 0.005	< 0.005	—	2.43
Architectural Coatings	0.25	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.13	0.12	2.11	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	513	513	0.01	0.02	1.33	520
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.21	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	54.1	54.1	< 0.005	< 0.005	0.06	54.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.96	8.96	< 0.005	< 0.005	0.01	9.07
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Streetscape Improvements: Grading	Linear, Grading & Excavation	5/28/2029	8/17/2029	5.00	60.0	—
Streetscape Improvements: Paving	Linear, Paving	8/20/2029	12/7/2029	5.00	80.0	—
Demolition	Demolition	6/1/2026	7/31/2026	5.00	45.0	—
Site Preparation	Site Preparation	8/3/2026	8/28/2026	5.00	20.0	—
Grading	Grading	8/31/2026	11/27/2026	5.00	65.0	—
Building Construction	Building Construction	11/30/2026	1/26/2029	5.00	565	—
Paving	Paving	1/29/2029	3/30/2029	5.00	45.0	—
Architectural Coating	Architectural Coating	4/2/2029	5/25/2029	5.00	40.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Streetscape Improvements: Grading	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Streetscape Improvements: Grading	Signal Boards	Electric	Average	1.00	8.00	6.00	0.82
Streetscape Improvements: Grading	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Streetscape Improvements: Grading	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43

Streetscape Improvements: Grading	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Streetscape Improvements: Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Streetscape Improvements: Grading	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36
Streetscape Improvements: Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Streetscape Improvements: Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Streetscape Improvements: Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Streetscape Improvements: Paving	Rollers	Diesel	Average	3.00	8.00	36.0	0.38
Streetscape Improvements: Paving	Signal Boards	Electric	Average	1.00	8.00	6.00	0.82
Streetscape Improvements: Paving	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48

Grading	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Back hoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	40.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	12.5	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	40.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	40.0	18.5	LDA,LDT1,LDT2

Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	14.1	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	40.0	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	5.24	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	40.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	40.0	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Streetscape Improvements: Grading	—	—	—	—
Streetscape Improvements: Grading	Worker	32.5	18.5	LDA,LDT1,LDT2
Streetscape Improvements: Grading	Vendor	1.00	10.2	HHDT,MHDT
Streetscape Improvements: Grading	Hauling	3.50	20.0	HHDT
Streetscape Improvements: Grading	Onsite truck	—	—	HHDT
Streetscape Improvements: Paving	—	—	—	—
Streetscape Improvements: Paving	Worker	20.0	18.5	LDA,LDT1,LDT2
Streetscape Improvements: Paving	Vendor	0.00	10.2	HHDT,MHDT
Streetscape Improvements: Paving	Hauling	0.00	20.0	HHDT
Streetscape Improvements: Paving	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	80,940	26,660	1,920

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Streetscape Improvements: Grading	1,678	0.00	2.60	0.00	—
Demolition	0.00	0.00	0.00	48,712	—
Site Preparation	0.00	0.00	26.0	0.00	—
Grading	7,326	0.00	66.0	0.00	—
Paving	0.00	0.00	0.00	0.00	7,703

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt

City Park	7,700	0%
Unenclosed Parking with Elevator	0.73	100%
Road Construction	2.60	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	532	0.03	< 0.005
2027	0.00	532	0.03	< 0.005
2028	0.00	532	0.03	< 0.005
2029	58.7	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	7.85	annual days of extreme heat
Extreme Precipitation	4.85	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about $\frac{3}{4}$ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores 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	50.5

AQ-PM	66.7
AQ-DPM	90.7
Drinking Water	48.2
Lead Risk Housing	45.7
Pesticides	0.00
Toxic Releases	74.5
Traffic	81.0
Effect Indicators	—
CleanUp Sites	83.5
Groundwater	85.6
Haz Waste Facilities/Generators	89.3
Impaired Water Bodies	51.2
Solid Waste	67.0
Sensitive Population	—
Asthma	57.3
Cardio-vascular	30.4
Low Birth Weights	65.2
Socioeconomic Factor Indicators	—
Education	53.6
Housing	64.0
Linguistic	47.1
Poverty	58.5
Unemployment	72.5

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—

Above Poverty	37.59784422
Employed	34.62081355
Median HI	46.16963942
Education	—
Bachelor's or higher	76.63287566
High school enrollment	100
Preschool enrollment	64.08315155
Transportation	—
Auto Access	17.51571924
Active commuting	90.81226742
Social	—
2-parent households	14.97497754
Voting	10.26562299
Neighborhood	—
Alcohol availability	16.12986013
Park access	81.35506224
Retail density	99.43539074
Supermarket access	60.81098422
Tree canopy	7.930193764
Housing	—
Homeownership	6.069549596
Housing habitability	32.73450533
Low-inc homeowner severe housing cost burden	28.94905685
Low-inc renter severe housing cost burden	60.09239061
Uncrowded housing	40.60053895
Health Outcomes	—
Insured adults	67.56063134
Arthritis	67.1

Asthma ER Admissions	62.6
High Blood Pressure	54.9
Cancer (excluding skin)	55.0
Asthma	49.0
Coronary Heart Disease	63.8
Chronic Obstructive Pulmonary Disease	56.7
Diagnosed Diabetes	54.0
Life Expectancy at Birth	22.1
Cognitively Disabled	24.2
Physically Disabled	52.4
Heart Attack ER Admissions	91.1
Mental Health Not Good	47.3
Chronic Kidney Disease	64.9
Obesity	41.1
Pedestrian Injuries	81.7
Physical Health Not Good	50.9
Stroke	51.7
Health Risk Behaviors	—
Binge Drinking	26.9
Current Smoker	46.7
No Leisure Time for Physical Activity	63.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	90.9
Elderly	50.2
English Speaking	37.6
Foreign-born	53.4

Outdoor Workers	68.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	10.7
Traffic Density	74.1
Traffic Access	87.4
Other Indices	—
Hardship	53.7
Other Decision Support	—
2016 Voting	21.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	81.0
Healthy Places Index Score for Project Location (b)	49.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Default % construction phase durations for single phase project
Operations: Vehicle Data	Assuming no change in park trip assumptions
Operations: Energy Use	Assuming no increase in energy use as a result of redevelopment of existing facilities and compliance with more stringent energy standards than existing conditions.
Operations: Solid Waste	Assuming no increase in existing solid waste generation.
Construction: Dust From Material Movement	Assumes 2 passes by equipment during Site Prep, and 5 passes by equipment during Grading
Construction: Trips and VMT	Assumes maximum 40 workers per day
Construction: Paving	Paved area for new 7,700 sf Cove Skatepark

Memorial Park (Phased Construction) Detailed Report

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 - 3.5. Phase 1: Lumber Site, Field, and Parking Demo (2026) - Unmitigated
 - 3.7. Phase 2: Youth Field Demolition (2027) - Unmitigated
 - 3.9. Phase 3: Youth Field and Skatepark Demolition (2028) - Unmitigated
 - 3.11. Phase 4: Community Rec Center Demolition (2028) - Unmitigated
 - 3.13. Phase 1: Site Preparation/Grading (2026) - Unmitigated

3.15. Phase 2: Site Preparation/Grading (2027) - Unmitigated

3.17. Phase 2: Site Preparation/Grading (2028) - Unmitigated

3.19. Phase 3: Site Preparation/Grading (2028) - Unmitigated

3.21. Phase 1 Building Construction (2026) - Unmitigated

3.23. Phase 1 Building Construction (2027) - Unmitigated

3.25. Phase 2: Combo Field, Community Hub, and Playground Construction (2028) - Unmitigated

3.27. Phase 3: Youth Fields and Skatepark Construction (2028) - Unmitigated

3.29. Phase 3: Youth Fields and Skatepark Construction (2029) - Unmitigated

3.31. Phase 4: Community Rec Center Construction (2028) - Unmitigated

3.33. Phase 4: Community Rec Center Construction (2029) - Unmitigated

3.35. Phase 2: Community Hub Finishing (2028) - Unmitigated

3.37. Phase 4: Community Rec Center Finishing (2029) - Unmitigated

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Memorial Park (Phased Construction)
Construction Start Date	6/1/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	18.4
Location	34.021262733098695, -118.48061516913708
County	Los Angeles-South Coast
City	Santa Monica
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4416
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
City Park	13.2	Acre	13.2	0.00	258,671	258,671	—	—

Unenclosed Parking with Elevator	32.0	1000sqft	0.73	32,000	0.00	0.00	—	—
Road Construction	0.54	Mile	2.60	0.00	—	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	25.7	25.6	39.0	30.5	0.14	1.13	17.0	18.0	1.04	3.12	4.09	—	19,066	19,066	1.00	2.46	35.7	19,859
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	25.6	25.6	32.4	34.1	0.09	1.05	8.73	9.62	0.96	1.62	2.54	—	11,884	11,884	0.51	1.25	0.45	12,212
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.28	1.99	11.5	15.1	0.03	0.39	2.02	2.42	0.36	0.53	0.89	—	3,899	3,899	0.15	0.19	1.43	3,960
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.42	0.36	2.10	2.75	0.01	0.07	0.37	0.44	0.07	0.10	0.16	—	646	646	0.03	0.03	0.24	656

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.98	3.20	39.0	30.4	0.14	1.13	17.0	18.0	1.04	3.12	4.09	—	19,066	19,066	1.00	2.46	35.7	19,859
2027	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
2028	25.7	25.6	29.3	29.7	0.09	0.99	9.80	10.7	0.91	1.81	2.63	—	12,101	12,101	0.56	1.35	18.0	12,534
2029	25.7	25.6	21.1	30.5	0.06	0.82	1.74	2.56	0.76	0.25	1.01	—	7,163	7,163	0.28	0.11	1.58	7,203
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.00	0.84	6.88	10.5	0.02	0.25	0.57	0.82	0.23	0.13	0.36	—	2,410	2,410	0.10	0.06	0.06	2,429
2027	3.69	3.09	29.2	29.5	0.08	1.05	8.73	9.62	0.96	1.62	2.54	—	11,311	11,311	0.51	1.25	0.45	11,697
2028	3.97	3.09	32.4	34.1	0.09	1.03	7.90	8.92	0.95	1.58	2.49	—	11,884	11,884	0.51	1.05	0.40	12,212
2029	25.6	25.6	14.1	25.3	0.04	0.43	1.14	1.57	0.40	0.27	0.67	—	4,998	4,998	0.17	0.11	0.09	5,036
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.89	0.71	7.01	7.54	0.02	0.24	1.54	1.78	0.22	0.38	0.60	—	2,493	2,493	0.12	0.17	1.23	2,547
2027	0.36	0.29	2.88	2.83	0.01	0.10	0.67	0.77	0.09	0.16	0.25	—	995	995	0.04	0.08	0.48	1,019
2028	2.28	1.99	11.5	15.1	0.03	0.39	2.02	2.42	0.36	0.53	0.89	—	3,899	3,899	0.15	0.19	1.43	3,960
2029	1.72	1.56	6.82	10.9	0.02	0.24	0.49	0.73	0.22	0.09	0.31	—	2,243	2,243	0.08	0.04	0.37	2,256
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.16	0.13	1.28	1.38	< 0.005	0.04	0.28	0.32	0.04	0.07	0.11	—	413	413	0.02	0.03	0.20	422
2027	0.07	0.05	0.53	0.52	< 0.005	0.02	0.12	0.14	0.02	0.03	0.05	—	165	165	0.01	0.01	0.08	169
2028	0.42	0.36	2.10	2.75	0.01	0.07	0.37	0.44	0.07	0.10	0.16	—	646	646	0.03	0.03	0.24	656
2029	0.31	0.28	1.24	1.98	< 0.005	0.04	0.09	0.13	0.04	0.02	0.06	—	371	371	0.01	0.01	0.06	374

3. Construction Emissions Details

3.1. Streetscape Improvements: Grading (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.14	2.64	20.7	28.7	0.06	0.82	—	0.82	0.75	—	0.75	—	6,494	6,494	0.26	0.05	—	6,516
Dust From Material Movement	—	—	—	—	—	—	1.24	1.24	—	0.13	0.13	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.52	0.43	3.40	4.71	0.01	0.13	—	0.13	0.12	—	0.12	—	1,068	1,068	0.04	0.01	—	1,071
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.62	0.86	< 0.005	0.02	—	0.02	0.02	—	0.02	—	177	177	0.01	< 0.005	—	177

Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.10	1.71	0.00	0.00	0.42	0.42	0.00	0.10	0.10	—	417	417	< 0.005	0.02	1.08	423
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	29.1	29.1	< 0.005	< 0.005	0.07	30.4
Hauling	0.02	< 0.005	0.26	0.11	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	223	223	0.01	0.03	0.43	234
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.25	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	65.9	65.9	< 0.005	< 0.005	0.08	66.8
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.78	4.78	< 0.005	< 0.005	0.01	5.00
Hauling	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.6	36.6	< 0.005	0.01	0.03	38.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.9	10.9	< 0.005	< 0.005	0.01	11.1
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.79	0.79	< 0.005	< 0.005	< 0.005	0.83
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.06	6.06	< 0.005	< 0.005	0.01	6.36

3.3. Streetscape Improvements: Paving (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.90	0.76	6.78	10.8	0.01	0.23	—	0.23	0.21	—	0.21	—	1,619	1,619	0.07	0.01	—	1,624
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.90	0.76	6.78	10.8	0.01	0.23	—	0.23	0.21	—	0.21	—	1,619	1,619	0.07	0.01	—	1,624
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.20	0.17	1.49	2.36	< 0.005	0.05	—	0.05	0.05	—	0.05	—	355	355	0.01	< 0.005	—	356
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	0.04	0.03	0.27	0.43	< 0.005	0.01	—	0.01	0.01	—	0.01	—	58.7	58.7	< 0.005	< 0.005	—	58.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.08	0.07	0.06	1.05	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	257	257	< 0.005	0.01	0.67	260
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.89	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	243	243	< 0.005	0.01	0.02	246
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.21	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	54.1	54.1	< 0.005	< 0.005	0.06	54.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.96	8.96	< 0.005	< 0.005	0.01	9.07
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Phase 1: Lumber Site, Field, and Parking Demo (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.72	2.29	20.7	19.0	0.03	0.84	—	0.84	0.78	—	0.78	—	3,427	3,427	0.14	0.03	—	3,438

Demolition	—	—	—	—	—	—	12.3	12.3	—	1.87	1.87	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.13	1.04	< 0.005	0.05	—	0.05	0.04	—	0.04	—	188	188	0.01	< 0.005	—	188
Demolition	—	—	—	—	—	—	0.68	0.68	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.21	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.1	31.1	< 0.005	< 0.005	—	31.2
Demolition	—	—	—	—	—	—	0.12	0.12	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.16	2.58	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	542	542	0.02	0.02	1.83	550
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	1.09	0.24	18.2	7.15	0.10	0.20	4.11	4.31	0.20	1.13	1.32	—	15,097	15,097	0.84	2.41	33.9	15,871

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.6	28.6	< 0.005	< 0.005	0.04	29.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.06	0.01	1.05	0.39	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	827	827	0.05	0.13	0.80	869
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.73	4.73	< 0.005	< 0.005	0.01	4.79
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.19	0.07	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	137	137	0.01	0.02	0.13	144

3.7. Phase 2: Youth Field Demolition (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.64	2.21	19.9	18.6	0.03	0.80	—	0.80	0.73	—	0.73	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	6.15	6.15	—	0.93	0.93	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.14	0.12	1.09	1.02	< 0.005	0.04	—	0.04	0.04	—	0.04	—	188	188	0.01	< 0.005	—	188
Demolition	—	—	—	—	—	—	0.34	0.34	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.20	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.1	31.1	< 0.005	< 0.005	—	31.2
Demolition	—	—	—	—	—	—	0.06	0.06	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.17	2.04	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	504	504	0.01	0.02	0.04	510
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.53	0.11	9.11	3.51	0.05	0.10	2.05	2.15	0.10	0.56	0.66	—	7,381	7,381	0.37	1.20	0.41	7,748
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.0	28.0	< 0.005	< 0.005	0.04	28.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	0.01	0.50	0.19	< 0.005	0.01	0.11	0.12	0.01	0.03	0.04	—	404	404	0.02	0.07	0.37	425
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.64	4.64	< 0.005	< 0.005	0.01	4.70
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.01	< 0.005	0.09	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	66.9	66.9	< 0.005	0.01	0.06	70.3

3.9. Phase 3: Youth Field and Skatepark Demolition (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.61	2.19	19.6	18.7	0.03	0.78	—	0.78	0.71	—	0.71	—	3,429	3,429	0.14	0.03	—	3,440
Demolition	—	—	—	—	—	—	6.96	6.96	—	1.05	1.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.07	1.02	< 0.005	0.04	—	0.04	0.04	—	0.04	—	188	188	0.01	< 0.005	—	189
Demolition	—	—	—	—	—	—	0.38	0.38	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.20	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.1	31.1	< 0.005	< 0.005	—	31.2

Demoliti	—	—	—	—	—	—	0.07	0.07	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.14	2.26	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	522	522	0.01	0.02	1.49	529
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.56	0.14	9.58	3.81	0.06	0.11	2.32	2.43	0.11	0.63	0.75	—	8,150	8,150	0.41	1.30	16.5	8,565
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.5	27.5	< 0.005	< 0.005	0.04	27.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	0.01	0.55	0.21	< 0.005	0.01	0.13	0.13	0.01	0.03	0.04	—	447	447	0.02	0.07	0.39	469
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.56	4.56	< 0.005	< 0.005	0.01	4.62
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	74.0	74.0	< 0.005	0.01	0.06	77.6

3.11. Phase 4: Community Rec Center Demolition (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.61	2.19	19.6	18.7	0.03	0.78	—	0.78	0.71	—	0.71	—	3,429	3,429	0.14	0.03	—	3,440
Demolition	—	—	—	—	—	—	5.10	5.10	—	0.77	0.77	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.07	1.02	< 0.005	0.04	—	0.04	0.04	—	0.04	—	188	188	0.01	< 0.005	—	189
Demolition	—	—	—	—	—	—	0.28	0.28	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.20	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.1	31.1	< 0.005	< 0.005	—	31.2
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.15	0.14	0.16	1.92	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	495	495	0.01	0.02	0.04	501
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.40	0.09	7.30	2.83	0.04	0.08	1.70	1.78	0.08	0.47	0.55	—	5,986	5,986	0.30	0.96	0.31	6,278
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.5	27.5	< 0.005	< 0.005	0.04	27.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.01	0.40	0.15	< 0.005	< 0.005	0.09	0.10	< 0.005	0.03	0.03	—	328	328	0.02	0.05	0.29	344
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.56	4.56	< 0.005	< 0.005	0.01	4.62
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	54.3	54.3	< 0.005	0.01	0.05	57.0

3.13. Phase 1: Site Preparation/Grading (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.62	3.04	27.2	27.6	0.06	1.12	—	1.12	1.03	—	1.03	—	6,599	6,599	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.40	0.33	2.98	3.02	0.01	0.12	—	0.12	0.11	—	0.11	—	723	723	0.03	0.01	—	726
Dust From Material Movement	—	—	—	—	—	—	0.39	0.39	—	0.16	0.16	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.54	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	120	120	< 0.005	< 0.005	—	120
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.16	2.58	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	542	542	0.02	0.02	1.83	550
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	0.01	0.65	0.26	< 0.005	0.01	0.15	0.15	0.01	0.04	0.05	—	539	539	0.03	0.09	1.21	567
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.25	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	57.1	57.1	< 0.005	< 0.005	0.09	57.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	59.1	59.1	< 0.005	0.01	0.06	62.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.46	9.46	< 0.005	< 0.005	0.01	9.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.78	9.78	< 0.005	< 0.005	0.01	10.3

3.15. Phase 2: Site Preparation/Grading (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.51	2.95	25.6	27.3	0.06	1.04	—	1.04	0.96	—	0.96	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.15	0.13	1.10	1.17	< 0.005	0.04	—	0.04	0.04	—	0.04	—	284	284	0.01	< 0.005	—	285
Dust From Material Movement	—	—	—	—	—	—	0.15	0.15	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.20	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	47.0	47.0	< 0.005	< 0.005	—	47.2
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.17	2.04	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	504	504	0.01	0.02	0.04	510
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	0.01	0.50	0.19	< 0.005	0.01	0.11	0.12	0.01	0.03	0.04	—	404	404	0.02	0.07	0.02	424
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	22.0	22.0	< 0.005	< 0.005	0.03	22.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	17.4	17.4	< 0.005	< 0.005	0.02	18.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.65	3.65	< 0.005	< 0.005	0.01	3.69
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.88	2.88	< 0.005	< 0.005	< 0.005	3.02

3.17. Phase 2: Site Preparation/Grading (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.43	2.88	24.3	27.2	0.06	0.99	—	0.99	0.91	—	0.91	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.19	1.62	1.81	< 0.005	0.07	—	0.07	0.06	—	0.06	—	439	439	0.02	< 0.005	—	441
Dust From Material Movement	—	—	—	—	—	—	0.24	0.24	—	0.09	0.09	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.30	0.33	< 0.005	0.01	—	0.01	0.01	—	0.01	—	72.7	72.7	< 0.005	< 0.005	—	72.9
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.14	0.16	1.92	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	495	495	0.01	0.02	0.04	501
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	0.01	0.48	0.19	< 0.005	0.01	0.11	0.12	0.01	0.03	0.04	—	394	394	0.02	0.06	0.02	414
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	33.4	33.4	< 0.005	< 0.005	0.04	33.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	26.2	26.2	< 0.005	< 0.005	0.02	27.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.53	5.53	< 0.005	< 0.005	0.01	5.60
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.34	4.34	< 0.005	< 0.005	< 0.005	4.56

3.19. Phase 3: Site Preparation/Grading (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.43	2.88	24.3	27.2	0.06	0.99	—	0.99	0.91	—	0.91	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.38	0.32	2.67	2.98	0.01	0.11	—	0.11	0.10	—	0.10	—	723	723	0.03	0.01	—	726
Dust From Material Movement	—	—	—	—	—	—	0.39	0.39	—	0.16	0.16	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.07	0.06	0.49	0.54	< 0.005	0.02	—	0.02	0.02	—	0.02	—	120	120	< 0.005	< 0.005	—	120
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.14	2.26	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	522	522	0.01	0.02	1.49	529
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	0.01	0.69	0.27	< 0.005	0.01	0.17	0.17	0.01	0.05	0.05	—	583	583	0.03	0.09	1.18	613
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.22	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	55.0	55.0	< 0.005	< 0.005	0.07	55.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	63.9	63.9	< 0.005	0.01	0.06	67.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.11	9.11	< 0.005	< 0.005	0.01	9.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.6	10.6	< 0.005	< 0.005	0.01	11.1

3.21. Phase 1 Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	0.69	6.52	8.22	0.02	0.25	—	0.25	0.23	—	0.23	—	1,732	1,732	0.07	0.01	—	1,738
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	0.69	6.52	8.22	0.02	0.25	—	0.25	0.23	—	0.23	—	1,732	1,732	0.07	0.01	—	1,738
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.65	2.08	< 0.005	0.06	—	0.06	0.06	—	0.06	—	437	437	0.02	< 0.005	—	439
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.30	0.38	< 0.005	0.01	—	0.01	0.01	—	0.01	—	72.4	72.4	< 0.005	< 0.005	—	72.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.16	2.58	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	542	542	0.02	0.02	1.83	550
Vendor	0.01	< 0.005	0.18	0.09	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	164	164	0.01	0.02	0.44	171
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.17	2.20	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	514	514	0.02	0.02	0.05	520
Vendor	0.01	< 0.005	0.19	0.09	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	164	164	0.01	0.02	0.01	171
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.05	0.58	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	132	132	0.01	< 0.005	0.20	133
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	41.3	41.3	< 0.005	0.01	0.05	43.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	21.8	21.8	< 0.005	< 0.005	0.03	22.1
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.84	6.84	< 0.005	< 0.005	0.01	7.14
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.23. Phase 1 Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	0.67	6.26	8.21	0.02	0.23	—	0.23	0.21	—	0.21	—	1,732	1,732	0.07	0.01	—	1,738
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.13	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	37.3	37.3	< 0.005	< 0.005	—	37.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.17	6.17	< 0.005	< 0.005	—	6.19
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.17	2.04	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	504	504	0.01	0.02	0.04	510
Vendor	0.01	< 0.005	0.18	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	160	160	0.01	0.02	0.01	167
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.0	11.0	< 0.005	< 0.005	0.02	11.1
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.45	3.45	< 0.005	< 0.005	< 0.005	3.60
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.82	1.82	< 0.005	< 0.005	< 0.005	1.85
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.57	0.57	< 0.005	< 0.005	< 0.005	0.60
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.25. Phase 2: Combo Field, Community Hub, and Playground Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	0.68	6.29	10.3	0.02	0.19	—	0.19	0.18	—	0.18	—	1,531	1,531	0.06	0.01	—	1,536
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	0.68	6.29	10.3	0.02	0.19	—	0.19	0.18	—	0.18	—	1,531	1,531	0.06	0.01	—	1,536
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Memorial Park (Phased Construction) Detailed Report, 6/10/2025

Off-Road	0.22	0.19	1.72	2.81	< 0.005	0.05	—	0.05	0.05	—	0.05	—	419	419	0.02	< 0.005	—	421
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.31	0.51	< 0.005	0.01	—	0.01	0.01	—	0.01	—	69.4	69.4	< 0.005	< 0.005	—	69.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.14	2.26	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	522	522	0.01	0.02	1.49	529
Vendor	0.01	< 0.005	0.16	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	157	157	0.01	0.02	0.40	164
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.14	0.16	1.92	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	495	495	0.01	0.02	0.04	501
Vendor	0.01	< 0.005	0.17	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	157	157	0.01	0.02	0.01	163
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.55	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	138	138	< 0.005	0.01	0.18	139
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	42.9	42.9	< 0.005	0.01	0.05	44.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	22.8	22.8	< 0.005	< 0.005	0.03	23.1
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.11	7.11	< 0.005	< 0.005	0.01	7.42

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.27. Phase 3: Youth Fields and Skatepark Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.64	0.53	5.06	8.64	0.01	0.17	—	0.17	0.15	—	0.15	—	1,323	1,323	0.05	0.01	—	1,328
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.64	0.53	5.06	8.64	0.01	0.17	—	0.17	0.15	—	0.15	—	1,323	1,323	0.05	0.01	—	1,328
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.93	1.59	< 0.005	0.03	—	0.03	0.03	—	0.03	—	243	243	0.01	< 0.005	—	244
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.02	0.02	0.17	0.29	< 0.005	0.01	—	0.01	0.01	—	0.01	—	40.3	40.3	< 0.005	< 0.005	—	40.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.14	2.26	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	522	522	0.01	0.02	1.49	529
Vendor	0.01	< 0.005	0.16	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	157	157	0.01	0.02	0.40	164
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.14	0.16	1.92	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	495	495	0.01	0.02	0.04	501
Vendor	0.01	< 0.005	0.17	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	157	157	0.01	0.02	0.01	163
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.37	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	92.4	92.4	< 0.005	< 0.005	0.12	93.6
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.8	28.8	< 0.005	< 0.005	0.03	30.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.3	15.3	< 0.005	< 0.005	0.02	15.5
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.77	4.77	< 0.005	< 0.005	0.01	4.98
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.29. Phase 3: Youth Fields and Skatepark Construction (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.63	0.52	4.94	8.66	0.01	0.15	—	0.15	0.14	—	0.14	—	1,323	1,323	0.05	0.01	—	1,327
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.44	0.78	< 0.005	0.01	—	0.01	0.01	—	0.01	—	119	119	< 0.005	< 0.005	—	119
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	19.7	19.7	< 0.005	< 0.005	—	19.8
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.13	0.14	1.79	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	487	487	0.01	0.02	0.03	492

Vendor	0.01	< 0.005	0.16	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	153	153	0.01	0.02	0.01	159
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.17	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	44.4	44.4	< 0.005	< 0.005	0.05	45.0
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.7	13.7	< 0.005	< 0.005	0.01	14.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.36	7.36	< 0.005	< 0.005	0.01	7.45
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.27	2.27	< 0.005	< 0.005	< 0.005	2.38
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.31. Phase 4: Community Rec Center Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.14	0.12	1.08	1.57	< 0.005	0.04	—	0.04	0.03	—	0.03	—	291	291	0.01	< 0.005	—	292
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.20	0.29	< 0.005	0.01	—	0.01	0.01	—	0.01	—	48.2	48.2	< 0.005	< 0.005	—	48.3
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.14	0.16	1.92	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	495	495	0.01	0.02	0.04	501
Vendor	0.01	< 0.005	0.17	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	157	157	0.01	0.02	0.01	163
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.24	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	60.9	60.9	< 0.005	< 0.005	0.08	61.7
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	19.0	19.0	< 0.005	< 0.005	0.02	19.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.1	10.1	< 0.005	< 0.005	0.01	10.2
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.15	3.15	< 0.005	< 0.005	< 0.005	3.29
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.33. Phase 4: Community Rec Center Construction (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.15	0.97	8.58	12.9	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.31	1.97	< 0.005	0.04	—	0.04	0.04	—	0.04	—	366	366	0.01	< 0.005	—	367
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.24	0.36	< 0.005	0.01	—	0.01	0.01	—	0.01	—	60.6	60.6	< 0.005	< 0.005	—	60.8
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.13	0.14	1.79	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	487	487	0.01	0.02	0.03	492
Vendor	0.01	< 0.005	0.16	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	153	153	0.01	0.02	0.01	159
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.29	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	75.4	75.4	< 0.005	< 0.005	0.09	76.3
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.3	23.3	< 0.005	< 0.005	0.02	24.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.5	12.5	< 0.005	< 0.005	0.01	12.6
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.85	3.85	< 0.005	< 0.005	< 0.005	4.03
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.35. Phase 2: Community Hub Finishing (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.81	1.12	< 0.005	0.02	—	0.02	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	25.4	25.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.66	3.66	< 0.005	< 0.005	—	3.67
Architectural Coatings	0.70	0.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.61	0.61	< 0.005	< 0.005	—	0.61
Architectural Coatings	0.13	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.14	2.26	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	522	522	0.01	0.02	1.49	529
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.8	13.8	< 0.005	< 0.005	0.02	13.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.28	2.28	< 0.005	< 0.005	< 0.005	2.31
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.37. Phase 4: Community Rec Center Finishing (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.79	1.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	25.4	25.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.12	0.10	0.79	1.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	25.4	25.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.66	3.66	< 0.005	< 0.005	—	3.67
Architectural Coatings	0.70	0.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.61	0.61	< 0.005	< 0.005	—	0.61
Architectural Coatings	0.13	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.13	0.12	2.11	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	513	513	0.01	0.02	1.33	520
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.13	0.14	1.79	0.00	0.00	0.52	0.52	0.00	0.12	0.12	—	487	487	0.01	0.02	0.03	492
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.5	13.5	< 0.005	< 0.005	0.02	13.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.24	2.24	< 0.005	< 0.005	< 0.005	2.27
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Streetscape Improvements: Grading	Linear, Grading & Excavation	4/3/2029	6/25/2029	5.00	60.0	—
Streetscape Improvements: Paving	Linear, Paving	6/26/2029	10/15/2029	5.00	80.0	—
Phase 1: Lumber Site, Field, and Parking Demo	Demolition	6/1/2026	6/29/2026	5.00	20.0	—
Phase 2: Youth Field Demolition	Demolition	11/12/2027	12/9/2027	5.00	20.0	—
Phase 3: Youth Field and Skatepark Demolition	Demolition	7/7/2028	8/3/2028	5.00	20.0	—
Phase 4: Community Rec Center Demolition	Demolition	10/3/2028	10/30/2028	5.00	20.0	—
Phase 1: Site Preparation/Grading	Grading	6/30/2026	8/24/2026	5.00	40.0	—
Phase 2: Site Preparation/Grading	Grading	12/10/2027	2/3/2028	5.00	40.0	—
Phase 3: Site Preparation/Grading	Grading	8/4/2028	9/28/2028	5.00	40.0	—
Phase 1 Building Construction	Building Construction	8/25/2026	1/11/2027	5.00	100	—
Phase 2: Combo Field, Community Hub, and Playground Construction	Building Construction	2/4/2028	6/22/2028	5.00	100	—
Phase 3: Youth Fields and Skatepark Construction	Building Construction	9/29/2028	2/15/2029	5.00	100	—
Phase 4: Community Rec Center Construction	Building Construction	10/31/2028	3/19/2029	5.00	100	—
Phase 2: Community Hub Finishing	Architectural Coating	6/23/2028	7/6/2028	5.00	10.0	—
Phase 4: Community Rec Center Finishing	Architectural Coating	3/20/2029	4/2/2029	5.00	10.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Streetscape Improvements: Grading	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Streetscape Improvements: Grading	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Streetscape Improvements: Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Streetscape Improvements: Grading	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Streetscape Improvements: Grading	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36
Streetscape Improvements: Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Streetscape Improvements: Grading	Signal Boards	Electric	Average	1.00	8.00	6.00	0.82
Streetscape Improvements: Grading	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Streetscape Improvements: Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Streetscape Improvements: Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Streetscape Improvements: Paving	Rollers	Diesel	Average	3.00	8.00	36.0	0.38

Streetscape Improvements: Paving	Signal Boards	Electric	Average	1.00	8.00	6.00	0.82
Streetscape Improvements: Paving	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Phase 1: Lumber Site, Field, and Parking Demo	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Phase 1: Lumber Site, Field, and Parking Demo	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Phase 1: Lumber Site, Field, and Parking Demo	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Phase 2: Youth Field Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Phase 2: Youth Field Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Phase 2: Youth Field Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Phase 3: Youth Field and Skatepark Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Phase 3: Youth Field and Skatepark Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Phase 3: Youth Field and Skatepark Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Phase 4: Community Rec Center Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Phase 4: Community Rec Center Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Phase 4: Community Rec Center Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Phase 1: Site Preparation/Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38

Phase 1: Site Preparation/Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Phase 1: Site Preparation/Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Phase 1: Site Preparation/Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Phase 1: Site Preparation/Grading	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Phase 2: Site Preparation/Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Phase 2: Site Preparation/Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Phase 2: Site Preparation/Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Phase 2: Site Preparation/Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Phase 2: Site Preparation/Grading	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Phase 3: Site Preparation/Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Phase 3: Site Preparation/Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Phase 3: Site Preparation/Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Phase 3: Site Preparation/Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Phase 3: Site Preparation/Grading	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Phase 1 Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Phase 1 Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Phase 1 Building Construction	Tractors/Loaders/Back hoes	Diesel	Average	3.00	7.00	84.0	0.37

Phase 2: Combo Field, Community Hub, and Playground Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Phase 2: Combo Field, Community Hub, and Playground Construction	Tractors/Loaders/Back hoes	Diesel	Average	3.00	7.00	84.0	0.37
Phase 2: Combo Field, Community Hub, and Playground Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Phase 2: Combo Field, Community Hub, and Playground Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Phase 3: Youth Fields and Skatepark Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Phase 3: Youth Fields and Skatepark Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Phase 3: Youth Fields and Skatepark Construction	Tractors/Loaders/Back hoes	Diesel	Average	3.00	7.00	84.0	0.37
Phase 4: Community Rec Center Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Phase 4: Community Rec Center Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Phase 4: Community Rec Center Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Phase 4: Community Rec Center Construction	Tractors/Loaders/Back hoes	Diesel	Average	3.00	7.00	84.0	0.37

Phase 4: Community Rec Center Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Phase 2: Community Hub Finishing	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Phase 4: Community Rec Center Finishing	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Phase 1: Lumber Site, Field, and Parking Demo	—	—	—	—
Phase 1: Lumber Site, Field, and Parking Demo	Worker	40.0	18.5	LDA,LDT1,LDT2
Phase 1: Lumber Site, Field, and Parking Demo	Vendor	—	10.2	HHDT,MHDT
Phase 1: Lumber Site, Field, and Parking Demo	Hauling	222	20.0	HHDT
Phase 1: Lumber Site, Field, and Parking Demo	Onsite truck	—	—	HHDT
Phase 1: Site Preparation/Grading	—	—	—	—
Phase 1: Site Preparation/Grading	Worker	40.0	18.5	LDA,LDT1,LDT2
Phase 1: Site Preparation/Grading	Vendor	—	10.2	HHDT,MHDT
Phase 1: Site Preparation/Grading	Hauling	7.92	20.0	HHDT
Phase 1: Site Preparation/Grading	Onsite truck	—	—	HHDT
Phase 1 Building Construction	—	—	—	—
Phase 1 Building Construction	Worker	40.0	18.5	LDA,LDT1,LDT2
Phase 1 Building Construction	Vendor	5.24	10.2	HHDT,MHDT
Phase 1 Building Construction	Hauling	0.00	20.0	HHDT
Phase 1 Building Construction	Onsite truck	—	—	HHDT

Streetscape Improvements: Grading	—	—	—	—
Streetscape Improvements: Grading	Worker	32.5	18.5	LDA,LDT1,LDT2
Streetscape Improvements: Grading	Vendor	1.00	10.2	HHDT,MHDT
Streetscape Improvements: Grading	Hauling	3.50	20.0	HHDT
Streetscape Improvements: Grading	Onsite truck	—	—	HHDT
Streetscape Improvements: Paving	—	—	—	—
Streetscape Improvements: Paving	Worker	20.0	18.5	LDA,LDT1,LDT2
Streetscape Improvements: Paving	Vendor	0.00	10.2	HHDT,MHDT
Streetscape Improvements: Paving	Hauling	0.00	20.0	HHDT
Streetscape Improvements: Paving	Onsite truck	—	—	HHDT
Phase 2: Youth Field Demolition	—	—	—	—
Phase 2: Youth Field Demolition	Worker	40.0	18.5	LDA,LDT1,LDT2
Phase 2: Youth Field Demolition	Vendor	—	10.2	HHDT,MHDT
Phase 2: Youth Field Demolition	Hauling	111	20.0	HHDT
Phase 2: Youth Field Demolition	Onsite truck	—	—	HHDT
Phase 3: Youth Field and Skatepark Demolition	—	—	—	—
Phase 3: Youth Field and Skatepark Demolition	Worker	40.0	18.5	LDA,LDT1,LDT2
Phase 3: Youth Field and Skatepark Demolition	Vendor	—	10.2	HHDT,MHDT
Phase 3: Youth Field and Skatepark Demolition	Hauling	125	20.0	HHDT
Phase 3: Youth Field and Skatepark Demolition	Onsite truck	—	—	HHDT
Phase 4: Community Rec Center Demolition	—	—	—	—
Phase 4: Community Rec Center Demolition	Worker	40.0	18.5	LDA,LDT1,LDT2
Phase 4: Community Rec Center Demolition	Vendor	—	10.2	HHDT,MHDT

Phase 4: Community Rec Center Demolition	Hauling	91.8	20.0	HHDT
Phase 4: Community Rec Center Demolition	Onsite truck	—	—	HHDT
Phase 2: Site Preparation/Grading	—	—	—	—
Phase 2: Site Preparation/Grading	Worker	40.0	18.5	LDA,LDT1,LDT2
Phase 2: Site Preparation/Grading	Vendor	—	10.2	HHDT,MHDT
Phase 2: Site Preparation/Grading	Hauling	6.05	20.0	HHDT
Phase 2: Site Preparation/Grading	Onsite truck	—	—	HHDT
Phase 3: Site Preparation/Grading	—	—	—	—
Phase 3: Site Preparation/Grading	Worker	40.0	18.5	LDA,LDT1,LDT2
Phase 3: Site Preparation/Grading	Vendor	—	10.2	HHDT,MHDT
Phase 3: Site Preparation/Grading	Hauling	8.95	20.0	HHDT
Phase 3: Site Preparation/Grading	Onsite truck	—	—	HHDT
Phase 2: Combo Field, Community Hub, and Playground Construction	—	—	—	—
Phase 2: Combo Field, Community Hub, and Playground Construction	Worker	40.0	18.5	LDA,LDT1,LDT2
Phase 2: Combo Field, Community Hub, and Playground Construction	Vendor	5.24	10.2	HHDT,MHDT
Phase 2: Combo Field, Community Hub, and Playground Construction	Hauling	0.00	20.0	HHDT
Phase 2: Combo Field, Community Hub, and Playground Construction	Onsite truck	—	—	HHDT
Phase 3: Youth Fields and Skatepark Construction	—	—	—	—
Phase 3: Youth Fields and Skatepark Construction	Worker	40.0	18.5	LDA,LDT1,LDT2
Phase 3: Youth Fields and Skatepark Construction	Vendor	5.24	10.2	HHDT,MHDT
Phase 3: Youth Fields and Skatepark Construction	Hauling	0.00	20.0	HHDT

Phase 3: Youth Fields and Skatepark Construction	Onsite truck	—	—	HHDT
Phase 4: Community Rec Center Construction	—	—	—	—
Phase 4: Community Rec Center Construction	Worker	40.0	18.5	LDA,LDT1,LDT2
Phase 4: Community Rec Center Construction	Vendor	5.24	10.2	HHDT,MHDT
Phase 4: Community Rec Center Construction	Hauling	0.00	20.0	HHDT
Phase 4: Community Rec Center Construction	Onsite truck	—	—	HHDT
Phase 2: Community Hub Finishing	—	—	—	—
Phase 2: Community Hub Finishing	Worker	40.0	18.5	LDA,LDT1,LDT2
Phase 2: Community Hub Finishing	Vendor	—	10.2	HHDT,MHDT
Phase 2: Community Hub Finishing	Hauling	0.00	20.0	HHDT
Phase 2: Community Hub Finishing	Onsite truck	—	—	HHDT
Phase 4: Community Rec Center Finishing	—	—	—	—
Phase 4: Community Rec Center Finishing	Worker	40.0	18.5	LDA,LDT1,LDT2
Phase 4: Community Rec Center Finishing	Vendor	—	10.2	HHDT,MHDT
Phase 4: Community Rec Center Finishing	Hauling	0.00	20.0	HHDT
Phase 4: Community Rec Center Finishing	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Phase 2: Community Hub Finishing	0.00	0.00	40,470	13,330	960
Phase 4: Community Rec Center Finishing	0.00	0.00	40,470	13,330	960

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Streetscape Improvements: Grading	1,678	0.00	13.0	0.00	—
Phase 1: Lumber Site, Field, and Parking Demo	0.00	0.00	0.00	17,755	—
Phase 2: Youth Field Demolition	0.00	0.00	0.00	8,849	—
Phase 3: Youth Field and Skatepark Demolition	0.00	0.00	0.00	10,003	—
Phase 4: Community Rec Center Demolition	0.00	0.00	0.00	7,341	—
Phase 1: Site Preparation/Grading	2,536	0.00	20.0	0.00	—
Phase 2: Site Preparation/Grading	1,931	0.00	15.0	0.00	—
Phase 3: Site Preparation/Grading	2,859	0.00	18.0	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
City Park	7,700	0%
Unenclosed Parking with Elevator	0.73	100%
Road Construction	2.60	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	532	0.03	< 0.005
2027	0.00	532	0.03	< 0.005
2028	0.00	532	0.03	< 0.005
2029	58.7	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	7.85	annual days of extreme heat
Extreme Precipitation	4.85	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A

Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	50.5
AQ-PM	66.7
AQ-DPM	90.7
Drinking Water	48.2
Lead Risk Housing	45.7
Pesticides	0.00
Toxic Releases	74.5
Traffic	81.0
Effect Indicators	—
CleanUp Sites	83.5
Groundwater	85.6
Haz Waste Facilities/Generators	89.3
Impaired Water Bodies	51.2
Solid Waste	67.0
Sensitive Population	—
Asthma	57.3
Cardio-vascular	30.4
Low Birth Weights	65.2
Socioeconomic Factor Indicators	—
Education	53.6
Housing	64.0
Linguistic	47.1

Poverty	58.5
Unemployment	72.5

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	37.59784422
Employed	34.62081355
Median HI	46.16963942
Education	—
Bachelor's or higher	76.63287566
High school enrollment	100
Preschool enrollment	64.08315155
Transportation	—
Auto Access	17.51571924
Active commuting	90.81226742
Social	—
2-parent households	14.97497754
Voting	10.26562299
Neighborhood	—
Alcohol availability	16.12986013
Park access	81.35506224
Retail density	99.43539074
Supermarket access	60.81098422
Tree canopy	7.930193764
Housing	—
Homeownership	6.069549596

Housing habitability	32.73450533
Low-inc homeowner severe housing cost burden	28.94905685
Low-inc renter severe housing cost burden	60.09239061
Uncrowded housing	40.60053895
Health Outcomes	—
Insured adults	67.56063134
Arthritis	67.1
Asthma ER Admissions	62.6
High Blood Pressure	54.9
Cancer (excluding skin)	55.0
Asthma	49.0
Coronary Heart Disease	63.8
Chronic Obstructive Pulmonary Disease	56.7
Diagnosed Diabetes	54.0
Life Expectancy at Birth	22.1
Cognitively Disabled	24.2
Physically Disabled	52.4
Heart Attack ER Admissions	91.1
Mental Health Not Good	47.3
Chronic Kidney Disease	64.9
Obesity	41.1
Pedestrian Injuries	81.7
Physical Health Not Good	50.9
Stroke	51.7
Health Risk Behaviors	—
Binge Drinking	26.9
Current Smoker	46.7
No Leisure Time for Physical Activity	63.5

Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	90.9
Elderly	50.2
English Speaking	37.6
Foreign-born	53.4
Outdoor Workers	68.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	10.7
Traffic Density	74.1
Traffic Access	87.4
Other Indices	—
Hardship	53.7
Other Decision Support	—
2016 Voting	21.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	81.0
Healthy Places Index Score for Project Location (b)	49.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	—
Construction: Construction Phases	Detailed phasing construction schedule assumptions based on Project Description details and default phase durations. Assumes sequential construction activities, and all streetscape improvements completed at end of construction
Construction: Off-Road Equipment	Assumed default construction equipment based on Project Description. Select pieces of equipment removed where equipment is not necessary based on proposed construction activities.
Construction: Dust From Material Movement	Project calculated import/export distributed by construction phase based on total construction area of activity for each phase. Total acres graded adjusted based on total construction area of activity and assuming 5 total passes by equipment.
Construction: Trips and VMT	Assume maximum 40 workers per day during typical construction phases.
Construction: Paving	Added 7,700 sf of paved area of new Cove Skatepark