Harris & Associates

AIR QUALITY TECHNICAL MEMORANDUM

To: Megan Hamilton, Senior Planner, San Diego Unified Port District
From: Sharon Toland, Senior Technical Specialist, Harris & Associates
RE: **Analysis of Air Quality Impacts for the East Harbor Island Redevelopment/Topgolf and Waterfront Park Project**
Date: April 29, 2026
CC: Ryan Binns, Vice President, Kelsey Hawkins, Project Manager, Harris & Associates
Att: 1, California Emissions Estimator Model Results; 2, Waterside Improvements Modeling

Introduction

This memorandum provides the results of Harris & Associates' analysis of the potential air quality impacts from implementation of the East Harbor Island Redevelopment/Topgolf and Waterfront Park Project (Project). The Project would redevelop portions of East Harbor Island. The Project area is approximately 38 acres of land generally bounded to the north by North Harbor Drive, to the west by Harbor Island Drive, to the south by Liberator Way and the Harbor Island East Basin portion of San Diego Bay, and to the east by the Convair Lagoon portion of San Diego Bay. A portion of the Project area is planned for redevelopment (East Harbor Island redevelopment area). The Project area is currently occupied by the San Diego Harbor Police headquarters; The Hertz Corporation, Enterprise Mobility (operated by National Car Rental), and Avis Rent A Car System, LLC, rental car facilities; and San Diego International Airport temporary construction staging facilities. Existing structures on site include several one- and two-story buildings, various small structures, surface parking lots, fencing, and limited ornamental vegetation. Much of the Project area shoreline is covered with a combination of riprap and concrete and asphalt sloped pavement. Topographically, the East Harbor Island redevelopment area is relatively level with a gentle gradient down to San Diego Bay.

Project components include demolition and removal of existing structures and improvements, realignment of Liberator Way, redevelopment of approximately 9.8 acres for the Topgolf visitor-serving attraction, and development of a new waterfront park and promenade. The existing San Diego Harbor Police headquarters on the western side of East Harbor Island would remain in place. A Port Master Plan Amendment would be required to add the Project to the Port Master Plan's (PMP) Project List for Planning District 2 per Section 30711 of the California Coastal Act and to change the land use designation of the Project area from Industrial Business Park, Open Space, and Harbor Services to Commercial Recreation, Park/Plaza, Street, and Specialized Berthing.

This analysis focuses on the potential net increase in criteria pollutant emissions from construction and operation of the Project.

Air Quality Analysis Background

Air quality laws and regulations have historically divided air pollutants into two broad categories: criteria air pollutants and non-criteria pollutants, or toxic air contaminants. The purpose of this memorandum is to evaluate the potential criteria air pollutant impacts of the Project. Criteria air pollutants are a group of common air pollutants regulated by federal and state governments through ambient air quality standards based on criteria regarding the health and environmental effects of pollution. Land uses in the Project area include hotels, restaurants, yacht- or marine-related businesses, airport parking, auto repair facilities, rental car facilities, and the Harbor Police District headquarters. Existing emissions from these uses include nitrogen oxide (NO_x), volatile organic compound (VOC), and particulate matter emissions from vehicles, building utilities (natural gas), recreational vessels, and District-owned vessels and equipment (District 2024a).

The criteria air pollutants pertinent to the analysis in this memorandum are carbon monoxide (CO), NO_x, ozone (O_3), particulate matter (particulate matter measuring no more than 10 microns in diameter [PM_{10}] and particulate matter measuring no more than 2.5 microns in diameter [$PM_{2.5}$]), and sulfur dioxide (SO_2). These pollutants typically result from new development projects, including vehicle exhaust emissions and the use of natural gas, consumer products, architectural coatings, and landscape equipment. The following describes the health effects of these criteria air pollutants. The remaining criteria pollutants, including hydrogen sulfide, lead, and vinyl chloride, typically result from industrial processes or waste processing (CARB 2025). These sources are not proposed as part of the Project; therefore, emissions of these pollutants are not included in this analysis.

Carbon Monoxide

CO is a colorless, odorless, poisonous gas produced by combustion processes, primarily mobile sources. When CO gets into the body, it combines with chemicals in the blood and prevents blood from providing oxygen to cells, tissues, and organs. Because the body requires oxygen for energy, high-level exposure to CO can cause serious health effects, including death (USEPA 2025a).

Nitrogen Oxides

NO_x is a general term pertaining to compounds including nitric oxide (NO), nitrogen dioxide (NO_2), and other nitrogen oxides. NO_x is produced from burning fuels, including gasoline, diesel, and coal. NO_x reacts with VOCs to form ground-level O_3 (smog). NO_x is linked to a number of adverse respiratory system effects (USEPA 2025b).

Ozone

Ground-level O_3 is not emitted directly into the air but is formed by chemical reactions of “precursor” pollutants (NO_x and VOCs) in the presence of sunlight. Major emissions sources include NO_x and VOC emissions from industrial facilities and electric utilities, motor vehicle exhaust, gasoline vapors, and chemical solvents. O_3 can trigger a variety of health problems, particularly for sensitive receptors, including children, older adults, and people of all ages who have lung diseases, such as asthma (USEPA 2025c). National and state standards for O_3 are expressed in terms of 1-hour and 8-hour concentrations to account for short-term and prolonged exposure.

Particulate Matter

Particulate matter includes dust, metals, organic compounds, and other tiny particles of solid materials that are released into and move around in the air. Particulates are produced by many sources, including the burning of diesel fuel by trucks and buses, industrial processes, and fires. Particulate matter is measured in microns, which are 1 millionth of 1 meter in length (or 1 thousandth of 1 millimeter). PM_{10} is small particulate matter measuring no more than 10 microns in diameter, while $PM_{2.5}$ is fine particulate matter measuring no more than 2.5 microns in diameter. Both $PM_{2.5}$ and PM_{10} can be inhaled and deposited throughout the airways. Locations of particle deposition in the lung depend on particle size. $PM_{2.5}$ is more likely to travel into and deposit on the surface of the deeper parts of the lung, while PM_{10} is more likely to deposit on the surfaces of the larger airways of the upper region of the lung. Inhalation of particulate matter can cause nose and throat irritation and heart and lung problems (CARB 2024a).

Sulfur Dioxide

SO_2 is formed primarily by the combustion of sulfur-containing fossil fuels, especially at power plants and industrial facilities. SO_2 is linked to a number of adverse effects on the respiratory system (USEPA 2025d).

Existing Ambient Air Quality

The Project is within the San Diego Air Basin (SDAB). The San Diego County Air Pollution Control District (SDAPCD) manages air quality in the SDAB. The SDAPCD operates a network of ambient air monitoring stations throughout the SDAB. The purpose of the monitoring stations is to measure ambient concentrations of pollutants and determine whether ambient air quality meets the California Ambient Air Quality Standards (CAAQS) and the National Ambient Air Quality Standards (NAAQS). The closest monitoring station to the Project area is the Sherman Elementary School monitoring station, approximately 3 miles southeast of the site, which measures O_3, NO_2, and $PM_{2.5}$ concentrations on 24th Street in the City of San Diego. This monitoring station is considered representative of conditions at the Project area.

Concentrations of pollutants are presented in Table 1, Monitored Ambient Air Quality at the Sherman Elementary School Monitoring Station. However, data is not available past 2019 for PM_{10}. Therefore, concentrations of pollutants from the next closest monitoring station, the Chula Vista monitoring station, are presented in Table 2, Monitored Ambient PM_{10} at the Chula Vista Monitoring Station, which is also considered representative of the Project area.

Concentrations of 1-hour O_3 did not exceed CAAQS in 2020, 2021, or 2022. The 8-hour O_3 exceeded the CAAQS and NAAQS in 2020. The monitored 24-hour $PM_{2.5}$ values were exceeded in 2020, and PM_{10} exceed the CAAQS once in 2019. The U.S. Environmental Protection Agency (USEPA) also monitors PM_{10} at its Chula Vista monitoring station (84 E. J Street). No NAAQS exceedances were recorded in the period from 2020 to 2022 (USEPA 2025e). The monitored 24-hour $PM_{2.5}$ exceeded the NAAQS in 2020. The 1-hour and annual NAAQS and CAAQS for NO_2 were not exceeded during the 2020 to 2022 period.

No CO data is available from monitoring sites in the SDAB after 2012, and no data is available for SO_2 after 2013. However, with one exception for CO during the October 2003 firestorms, the SDAB has not violated the NAAQS and CAAQS for CO or SO_2 in the last 20 years (SDAPCD 2018). The USEPA monitors CO at two San Diego County locations (11403 Rancho Carmel Drive and 533 First Street). SO_2 is also monitored at the 533 First Street location. No violations of the NAAQS were recorded during the 2020 to 2022 period for CO or SO_2. The maximum recorded 1-hour concentration over the 3-year period was 3.3 parts per million (ppm) in 2020 for CO, and the maximum 1-hour SO_2 concentration was 1.7 parts per billion in 2020 (USEPA 2025e).

Table 1. Monitored Ambient Air Quality at the Sherman Elementary School Monitoring Station

Pollutant	Standard	Monitoring Station	2020	2021	2022
O_3					
Maximum 1-hour concentration (ppm)		Sherman Elementary School	0.115	0.076	0.087
Number of days exceeded	State: > 0.12 ppm		0	0	0
Maximum 8-hour concentration (ppm)			0.087	0.063	0.063
Number of days exceeded	State: > 0.07 ppm		3	0	0
	Federal: > 0.07 ppm		3	0	0
$PM_{2.5}$					
Maximum 24-hour concentration (µg/m^3)		Sherman Elementary School	54.4	26.3	20.8
Number of days exceeded	Federal: > 35 µg/m^3		2	0	0
Annual arithmetic average concentration (µg/m^3)			11	11	11
Exceeded for the year	State: > 12 µg/m^3		No	No	No
	Federal: > 15 µg/m^3		No	No	No

Table 1. Monitored Ambient Air Quality at the Sherman Elementary School Monitoring Station

Pollutant	Standard	Monitoring Station	2020	2021	2022
NO_2					
Maximum 1-hour concentration (ppm)		Sherman Elementary School	53	54	53
Number of days exceeded	State: > 0.18 ppm		0	0	0
Annual arithmetic average concentration (ppm)			10	10	10
Exceeded for the year	State: > 0.030 ppm		No	No	No
	Federal: > 0.053 ppm		No	No	No

Source: CARB 2024b.
Notes: µg/m^3 = micrograms per cubic meter; NO_2 = nitrogen dioxide; O_3 = ozone; $PM_{2.5}$ = particulate matter smaller than or equal to 2.5 microns in diameter; PM_{10} = particulate matter smaller than or equal to 10 microns in diameter; ppm = parts per million

Table 2. Monitored Ambient PM_{10} at the Chula Vista Monitoring Station

Pollutant	Standard	Monitoring Station	2019
PM_{10}			
Maximum 24-hour concentration (µg/m^3)		Chula Vista	61
Number of days exceeded	State: > 50 µg/m^3		1
	Federal: > 150 µg/m^3		0

Source: CARB 2024b.
Notes: µg/m^3 = micrograms per cubic meter; PM_{10} = particulate matter smaller than or equal to 10 microns in diameter

Existing On-Site Emissions

As previously mentioned, the Project area is currently occupied by The Hertz Corporation; Enterprise Mobility; and Avis Rent A Car System, LLC, rental car facilities. A temporary construction staging office is currently operating on the site related to the SDIA construction. Operation of the office is not included in the existing emissions inventory because operation of the office would not cease as a result of the Project. The office would be relocated and continue to operate independently of the Project. Existing emissions attributable to the rental car facilities were estimated using California Emissions Estimator Model (CalEEMod), Version 2022.1.1.26. Current electricity, natural gas, and water use were provided for each facility by the San Diego Unified Port District (District) based on recent utility bills. Additionally, total average daily trips were provided by Chen Ryan Associates (CRA) in the Vehicle Miles Traveled Assessment (CRA 2024). The default CalEEMod trip length of approximately 10 miles is assumed. Table 3, Existing Site Estimated Maximum Daily Existing Emissions (pounds/day), shows the emissions generated by existing on-site rental car facilities. Some emissions sources vary seasonally, such as landscaping, utility use, and fuel mix. As such, maximum summer and winter emissions are both provided in Table 3.

Table 3. Existing Site Estimated Maximum Daily Existing Emissions (pounds/day)

Source	Air Pollutant Emissions (pounds/day)					
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Summer Maximum						
Area	1	<0.1	1	<0.005	<0.005	<0.005
Energy	<0.1	1	1	<0.1	<0.1	<0.1
Mobile	4	1	8	<0.005	<0.1	<0.1
Total Daily Summer Emissions	**5**	**2**	**10**	**<0.1**	**<0.1**	**<0.1**

Table 3. Existing Site Estimated Maximum Daily Existing Emissions (pounds/day)

Source	Air Pollutant Emissions (pounds/day)					
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Winter Maximum						
Area	1	0	0	0	0	0
Energy	<0.1	1	1	<0.1	<0.1	<0.1
Mobile	4	1	10	<0.005	<0.1	<0.1
Total Daily Winter Emissions	**5**	**2**	**11**	**<0.1**	**<0.1**	**<0.1**

Source: CAPCOA 2022. Refer to Attachment 1 for model output.
Notes: VOC =volatile organic compound; NO_x = nitrogen oxides; CO = carbon monoxide; SO_x = sulfur dioxides; PM_{10} = particulate matter measuring no more than 10 microns in diameter; $PM_{2.5}$ = particulate matter measuring no more than 2.5 microns in diameter

Sensitive Receptors

Sensitive receptors typically include schools (preschool–12th grade), hospitals, resident care facilities, daycare centers, or other facilities that may house individuals with health conditions who would be adversely affected by changes in air quality. The closest land use within the vicinity of the Project area that has substantial public/human use is the Sheraton San Diego Hotel & Marina, approximately 1,660 feet west of the proposed Topgolf visitor-serving attraction site. Hotels are not typically considered sensitive receptors related to air quality because of the short duration of occupancy. The nearest residences are located more than 1 mile from the site, east of Pacific Highway.

Regulatory Setting

Federal and State

The Clean Air Act (CAA) of 1970 required the USEPA to establish the NAAQS while retaining the option for states to adopt more stringent standards or to include other specific pollutants. The NAAQS were developed for six criteria pollutants: O_3, NO_2, CO, SO_2, particulate matter, and lead. The 1990 CAA Amendments require each state to have an Air Pollution Control Plan called a State Implementation Plan. A State Implementation Plan includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The 1990 CAA Amendments dictate that states containing areas violating the NAAQS revise their State Implementation Plans to include extra control measures to reduce air pollution. The USEPA reviews the State Implementation Plans to determine whether the plans conform to the 1990 CAA Amendments and achieve the established air quality goals.

The USEPA has classified air basins (or portions thereof) as being in “attainment,” in “non-attainment,” or “unclassified” for each criteria air pollutant based on whether the NAAQS have been achieved. If an area is designated unclassified, it is because inadequate air quality data was available as a basis for a non-attainment or attainment designation. Table 4, San Diego Air Basin Attainment Status, lists the attainment status of the SDAB for the criteria pollutants. The USEPA classifies the SDAB as in non-attainment for O_3 (8-hour) with respect to federal air quality standards. The State of California, under the California CAA, established standards for criteria pollutants that are generally stricter than federal standards. As shown in Table 4, the SDAB is currently in state non-attainment status for PM_{10}, $PM_{2.5}$, and O_3 (1-hour and 8-hour).

Table 4. San Diego Air Basin Attainment Status

Pollutant	California Standards	Federal Standards
O_3 (1-Hour)	**Non-Attainment**	Attainment
O_3 (8-Hour)	**Non-Attainment**	**Non-Attainment**
PM_{10}	**Non-Attainment**	Unclassified[a]
$PM_{2.5}$	**Non-Attainment**	Attainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment
Lead	Attainment	Attainment
SO_2	Attainment	Attainment

Source: SDAPCD 2022.
Notes: CO = carbon monoxide; NO_2 = nitrogen dioxide; O_3 = ozone; PM_{10} = particulate matter smaller than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter smaller than or equal to 2.5 microns in diameter; SO_2 = sulfur dioxide
[a] Unclassified; data is not sufficient for determining attainment or non-attainment.

Local

Port of San Diego Climate Action Plan

The District adopted a Climate Action Plan in 2013 (District 2013). The Climate Action Plan represents a roadmap by which the District can reduce its contributions of GHG emissions, including a targeted set of GHG emissions reduction policies and measures in support of the state's climate change efforts. On-road transportation represents the largest single source of emissions in the District at approximately 38 percent of the 2006 inventory. The Climate Action Plan establishes a goal of reducing emissions to 25 percent less than the 2006 baseline levels by 2035. Reductions in GHG emissions, particularly from mobile sources, would have a co-benefit of reducing criteria pollutant emissions.

San Diego County Air Pollution Control District

The SDAPCD has jurisdiction over air quality programs in the County of San Diego. State and local government projects, as well as projects proposed by the private sector, are subject to SDAPCD requirements if the sources are regulated by the SDAPCD.

The SDAPCD is also responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and state air quality laws. Development projects in the City are typically subject to the following SDAPCD rules; other rules may apply depending on the proposed specific operations:

- **Rule 20.2, New Source Review:** Establishes rules and procedures for the permitting of new and modified sources of air pollution.
- **Rule 51, Nuisance:** Prohibits emissions that cause injury, detriment, nuisance, or annoyance to any considerable number of people or to the public; endanger the comfort, repose, health, or safety of any such people or the public; or cause injury or damage to business or property.
- **Rule 52, Particulate Matter:** Establishes limits to the discharge of any particulate matter from non-stationary sources.
- **Rule 54, Dust and Fumes:** Establishes limits to the amount of dust or fume discharged into the atmosphere in any 1 hour.
- **Rule 55, Fugitive Dust Control:** Sets restrictions on visible fugitive dust from construction and demolition projects.
- **Rule 67, Architectural Coatings:** Establishes limits to the VOC content for coatings applied in the SDAPCD.
- **Rule 67.7, Cutback and Emulsified Asphalts:** Establishes general provisions and limits to the VOC content for asphalt materials applied within the SDAPCD.

The SDAPCD has published Environmental Review Guidelines Procedures for Implementing the California Environmental Quality Act (2024) that outlines how the SDAPCD implements CEQA requirements on projects for which the SDACPD is the lead agency. The guidelines outline CEQA requirements, delegates responsibilities for implementation within SDAPCD, outlines procedures for implementation, and provides guidelines for content.

Port Master Plan Update

The Port Master Plan Update (PMPU) is a comprehensive update to the PMP. The PMPU EIR was certified in February 2024; however, the PMPU has not yet been formally certified by the Coastal Commission. The PMP therefore remains the governing land use document of the District at the time this report was drafted. Similar to the PMP, the PMPU provides the official goals and planning policies, as well as water and land uses, for development and conservation of the District lands, tidelands, and submerged lands that compose the PMPU area. With buildout expected to occur by 2050, the proposed PMPU would implement the approximately 30-year planning vision by identifying allowable water and land uses and providing policies to address six PMPU elements: Water and Land Uses, Ecology, Environmental Justice, Mobility, Safety and Resiliency, and Economics (District 2024b).

The following planning goal and policies listed in the PMPU aim to reduce air pollution impacts within the District (District 2024b):

- **Ecology Goal 3:** Clean air for a healthy environment and healthy communities
  - **ECO Objective 3.1:** Reduce levels of toxic air contaminants and criteria pollutants
    - **ECO Policy 3.1.5:** The District shall explore financing programs in coordination with regional, State, and Federal partners to implement recommended clean air measures
- **Environmental Justice Goal 3:** Healthy, thriving communities in and around Tidelands
  - **EJ Objective 3.1:** Minimize land use conflicts between industrial, working waterfront uses and historical, adjacent residential uses
  - **EJ Objective 3.2:** Advance clean air and water programs and strategies

Significance Thresholds

Appendix G of the California Environmental Quality Act (CEQA) Guidelines states that significance criteria established by the applicable air quality management or air pollution control district may be relied on to make impact determinations. The purpose of this memorandum is to compare modeled project emissions to applicable quantitative criteria pollutant thresholds, discussed below. The remaining Appendix G issues related to air quality will be addressed in the Project Environmental Impact Report.

In lieu of any set quantitative air quality significance thresholds, the Air Quality Impact Analysis trigger levels in the SDAPCD's Regulation II, Rule 20.2, Table 20.2-1, Air Quality Impact Analysis (AQIA) Trigger Levels, are used to determine the potential significance of air quality impacts. These AQIA trigger levels generally apply to new or modified stationary sources of air pollutants, which include only one source of air pollutant emissions (County of San Diego 2007). The County of San Diego has incorporated the AQIA Trigger Levels for PM_{10}, NO_X, SO_X, and CO into screening level thresholds to assist lead agencies in determining the significance of project-level air quality impacts within the County. Although the SDAPCD does not have an AQIA Trigger Level for VOC, the County establishes a VOC screening level threshold based on the threshold of significance for VOCs from the SCAQMD for the Coachella Valley (County of San Diego 2007). The County has also adopted a more conservative $PM_{2.5}$ screening level threshold based on USEPA's "Proposed Rule to Implement the Fine Particle National Ambient Air Quality Standards" published on September 8, 2005, which is also consistent with the SCAQMD's Air Quality Significance Thresholds (County of San Diego 2007). For CEQA purposes, the thresholds can be used to demonstrate that a project's total emissions from all sources do not result in an individually or cumulatively significant impact to air quality (County of San Diego 2007). For VOCs, the threshold established by the County of San Diego is used as the significance threshold. The thresholds are listed in Table 5, Screening Level Criteria Thresholds for Air Quality Impacts.

Table 5. Screening Level Criteria Thresholds for Air Quality Impacts

Pollutant	Emission Rate (pounds/day)
PM_{10}	100
$PM_{2.5}$	55[a]
NO_X	250
SO_X	250
CO	550
VOC	75

Sources: CAPCOA 2022; County of San Diego 2007.
Notes: CO = carbon monoxide; NO_X = nitrogen oxides; PM_{10} = particulate matter less than 10 microns; $PM_{2.5}$ = particulate matter less than 2.5 microns; SO_X = oxides of sulfur oxides; VOC = volatile organic compounds
[a] Based on South Coast Air Quality Management District's Air Quality Significance Thresholds (SCAQMD 2015). Rule 20.2 was amended in 2018 to include $PM_{2.5}$ AQIA of 67 pounds per day. However, because 55 pounds per day is lower (and more restrictive), 55 pounds per day, as recommended by the County of San Diego and used elsewhere throughout the region, is used here.

The thresholds listed in Table 5 represent screening level thresholds that can be used to evaluate whether Project-related emissions cause a significant impact on air quality. The thresholds are intended to screen for projects that would have the potential to significantly contribute to regional criteria pollutant emissions. As such, air quality impacts are cumulative in nature, and emissions below the screening level thresholds would not cause a significant direct or cumulative impact (County of San Diego 2007). Non-attainment pollutants (O_3, with O_3 precursors NO_X and VOCs, and PM_{10}) are the primary pollutant of concern. However, for the purposes of this analysis, if emissions exceed the thresholds in Table 5 for any criteria air pollutants, the Project would result in a cumulatively considerable net increase in these pollutants and, thus, would have a significant impact on ambient air quality.

Construction Impact Analysis

Construction of the Project would result in temporary air pollutants associated with soil disturbance, dust emissions, employee and material delivery vehicle exhaust, off-gassing from paving and coating activities, and combustion pollutants from off-road construction equipment. Construction-related air pollution emissions can vary from day to day, depending on the level of activity, type of activity, and prevailing weather conditions. The primary air pollutants of concern from construction activities are particulate matter (including both PM_{10} and $PM_{2.5}$), CO, and O_3 precursors (including NO_x and VOCs).

Maximum daily construction emissions were estimated using CalEEMod, Version 2022.1.1.26. The District and Topgolf provided details for proposed construction activities, including demolition of structures and improvements; construction of the Topgolf visitor-serving attraction; realignment of Liberator Way; and development of a waterfront park and promenade, including shoreline improvements. Detailed construction plans included construction schedules, construction equipment, construction-related vehicle trips (employee, haul, and delivery trips), and construction material movement volumes (imports and exports). Total Project construction days and import and export volumes were calculated for each construction activity (demolition, site preparation, grading, building construction, coating, and paving) using these construction plans. It is assumed that future construction would include site watering twice per day in compliance with SDAPCD Rule 55, Fugitive Dust Rule.

Construction last approximately 28 months. Modeling is conservatively based on the Project's preliminary schedule, which included a start date of January 2025, and an operational year of 2027. The start date would be adjusted based on receipt of necessary project approvals; however, the earlier start date is conservative because emissions would decrease over time due to increasingly stringent emissions standards and retirement of older equipment.

Demolition would occur separately from all other phases and is assumed to last 184 days. Implementation of the Project would include demolition of the existing rental car facilities (The Hertz Corporation, Enterprise Mobility [operated by National Car Rental], and Avis Rent A Car System, LLC) and Liberator Way totaling 1,218,016 square feet. All other construction phases (site preparation, grading, building

construction, architectural coating, and paving) are expected to overlap between Project components. Total import and export material from all Project components are assumed to be approximately 205,005 cubic yards during grading phases. It is assumed that haul trips during the grading phase would transport material to the Otay Mesa Landfill, approximately 20 miles from the site. However, up to 30,000 cubic yards (15 percent of total export material) of exported material is anticipated to include hazardous materials that would require specialized disposal. To account for potential removal of hazardous materials from the existing car rental facilities, 15 percent of haul trips are assumed for transport of hazardous materials. Hazardous materials would be disposed of at Copper Mountain Landfill in Wellton, Arizona (213 miles) for hazardous waste disposal. As such, an average of 49 miles was used for haul trips during the grading phase.

Shoreline repairs may be completed entirely with land-based construction equipment. However, construction would potentially require use of a barge to operate a derrick on the water side of the construction area. If a barge would be required, the use of a tugboat to position a barge at the beginning of construction and to remove it at the end of construction. It is assumed that approximately 3 hours of tugboat operation would be required. Emissions from the tugboat operation were estimated based on the data, formulas, and emissions factors provided through the Port of San Diego 2016 Maritime Air Emissions Inventory (District 2018). Detailed assumptions and modeling datasheets are provided in Attachment 1, California Emissions Estimator Model Results, and Attachment 2, Waterside Improvements Modeling. Estimated maximum daily construction emissions are provided in Table 6, Estimated Maximum Daily Construction Emissions (pounds/day).

Table 6. Estimated Maximum Daily Construction Emissions (pounds/day)

Construction Phase	VOC	NO_x	CO	SOx	PM_{10}	$PM_{2.5}$
Demolition	3	34	28	0.1	8	2
Site Preparation	4	35	35	<0.1	21	12
Grading	6	61	56	<1	16	7
Building Construction	39	41	95	<1	6	3
Architectural Coating	5	1	1	0	<0.1	<0.1
Paving	4	27	32	<0.1	2	1
Tugboat Operation	2	22	11	<0.1	1	1
Worst-Case Simultaneous Emissions[a]	45	122	151	1	42	24
SDAPCD Threshold	*75*	*250*	*550*	*250*	*100*	*55*
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CAPCOA 2022. Refer to Attachment 1 for model output. Refer to Attachment 2 for waterside improvements modeling.
Notes: CO = carbon monoxide; NOx = oxides of nitrogen; PM_{10} = particulate matter less than 10 microns in diameter; $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter; SO_x = sulfur oxides; VOC = volatile organic compounds

[a] Worst-case scenario assumes that the most emissions-intensive phase for each pollutant is occurring simultaneously at two Project components. The worst-case VOC and CO emissions would occur during simultaneous building construction at Topgolf and grading at another component, or grading or site preparation of two components simultaneously. Minimal building construction required for installation of a restroom facility as part of park improvements would not require the same size construction fleet estimated for Topgolf building construction, and a doubling of building construction emissions would not occur.

As shown in Table 6, the construction emissions estimate indicates that the Project would not exceed the SDAPCD threshold, and thus would not result in significant air emissions during construction. Construction of the Project would not result in significant criteria pollutant emissions during construction, and impacts would be less than significant.

Operational Impact Analysis

Long-term air pollutant emissions impacts are those associated with stationary sources and mobile sources involving any project-related changes. Stationary sources of emissions include the use of architectural coatings, consumer products, landscape equipment, and energy use. Area sources of air pollutant emissions associated with future operation of the Project include fuel combustion emissions

from landscape maintenance equipment, VOC emissions from periodic repainting of interior and exterior surfaces, and natural gas use for commercial kitchen use. The Topgolf visitor-serving attraction aims to be all-electric and may include infrastructure for all-electric ready kitchens. However, modeling for the Project assumes that natural gas would still be relied on for Topgolf's kitchen operations. As such, modeling outputs for energy source emissions are conservative. Increased traffic volumes would also contribute to regional emissions of criteria pollutants.

The increase in estimated operational emissions from implementation of the Project was calculated using CalEEMod, Version 2022.1.1.26. Electricity, natural gas, and water usage rates from existing Topgolf facilities were assumed for the Project's proposed Topgolf visitor-serving attraction, which were provided by Topgolf. Typical summer and winter natural gas usage was provided for existing facilities, including kitchen and space heater use. The proposed project would use natural gas for commercial kitchen use only; therefore, the typical summer use at existing facilities was assumed because the Project space heaters would use electricity. The Project would include installation of a solar canopy over the Topgolf visitor-server attraction's surface parking lot. However, the energy capacity of the system is currently unknown. As such, energy modeling conservatively does not include the on-site solar system. Average daily trips and vehicle miles traveled for the Topgolf visitor-serving attraction and the waterfront park and promenade were provided by CRA in the Vehicle Miles Traveled Assessment (CRA 2024). Defaults for recreational and parking lot energy usage were assumed for the proposed waterfront park and promenade and Topgolf visitor-serving attraction parking lot. Table 7, Project Operational Emissions, provides calculated operational emissions for the Project.

Table 7. Project Operational Emissions

Source	Air Pollutant Emissions (pounds/day)					
	VOC	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Summer Maximum						
Area	2	<0.1	3	<0.005	<0.1	<0.005
Energy	<1	2	2	<0.1	<1	<1
Mobile	11	9	93	<1	22	6
Winter Maximum						
Area	2	0	0	0	0	0
Energy	<1	2	2	<0.1	<1	<1
Mobile	10	9	86	<1	22	6
Worst-case Total Daily Emissions[1]	**13**	**11**	**98**	**<1**	**22**	**6**
SDAPCD Thresholds	*75*	*250*	*550*	*250*	*100*	*55*
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CAPCOA 2022. Refer to Attachment 1 for model output.
Notes: CO = carbon monoxide; NO_x = nitrogen oxides; $PM_{2.5}$ = particulate matter measuring no more than 2.5 microns in diameter; PM_{10} = particulate matter measuring no more than 10 microns in diameter; SDAPCD = San Diego County Air Pollution Control District; SO_x = sulfur oxides; VOC = volatile organic compound
[1] Given that emission amounts are generally higher in the summer, total daily emissions for Summer are compared to existing emissions to be conservative.

As shown in Table 7, operational emissions for the Project would not exceed the SDAPCD thresholds any pollutant. Development under the Project would not contribute to a cumulatively considerable net increase in criteria pollutant emissions for which the SDAB is in nonattainment under an applicable NAAQS or CAAQS. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Summary

Construction and operation of the Project would not exceed the SDAPCD significance thresholds for criteria air pollutants. The Project would be required to comply with the California Air Resources Board motor vehicle standards, the SDAPCD regulations from stationary sources and architectural coatings, and the District's goals and policies (as stated in the Regulatory Setting). Therefore, impacts from construction and operation of the Project would be less than significant.

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Attachment 1. California Emissions Estimator Model Results

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(Existing) East Harbor Island Redevlopment/Topgolf Project Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	(Existing) East Harbor Island Redevlopment/Topgolf Project
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.00
Precipitation (days)	1.00
Location	32.72821136197312, -117.19150081833791
County	San Diego
City	San Diego
Air District	San Diego County APCD
Air Basin	San Diego
TAZ	6403
EDFZ	12
Electric Utility	San Diego Gas & Electric
Gas Utility	San Diego Gas & Electric
App Version	2022.1.1.26

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
General Office Building	11.8	1000sqft	0.27	11,830	0.00	—	—	Hertz

General Office Building	9.38	1000sqft	0.22	9,379	0.00	—	—	Enterprise
General Office Building	12.1	1000sqft	0.28	12,090	0.00	—	—	Avis

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.54	5.38	2.04	10.2	0.01	0.09	0.00	0.09	0.09	0.00	0.09	18.2	2,434	2,453	2.18	0.11	0.08	2,539
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.18	5.02	2.13	11.0	0.01	0.09	0.00	0.09	0.09	0.00	0.09	18.2	2,433	2,451	2.21	0.12	0.08	2,541
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.54	5.06	4.51	33.4	0.09	0.15	7.65	7.80	0.14	1.94	2.08	18.2	10,613	10,631	2.38	0.35	11.6	10,805
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.01	0.92	0.82	6.10	0.02	0.03	1.40	1.42	0.03	0.35	0.38	3.02	1,757	1,760	0.39	0.06	1.92	1,789

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.41	4.32	0.96	7.85	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	—	245	245	0.19	0.09	0.00	278
Area	1.01	0.99	0.01	1.45	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.96	5.96	< 0.005	< 0.005	—	5.98
Energy	0.12	0.06	1.07	0.90	0.01	0.08	—	0.08	0.08	—	0.08	—	2,175	2,175	0.16	0.01	—	2,181
Water	—	—	—	—	—	—	—	—	—	—	—	1.56	8.94	10.5	0.16	< 0.005	—	15.7
Waste	—	—	—	—	—	—	—	—	—	—	—	16.7	0.00	16.7	1.67	0.00	—	58.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Total	5.54	5.38	2.04	10.2	0.01	0.09	0.00	0.09	0.09	0.00	0.09	18.2	2,434	2,453	2.18	0.11	0.08	2,539
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.31	4.21	1.06	10.1	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	—	249	249	0.22	0.10	0.00	285
Area	0.75	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.12	0.06	1.07	0.90	0.01	0.08	—	0.08	0.08	—	0.08	—	2,175	2,175	0.16	0.01	—	2,181
Water	—	—	—	—	—	—	—	—	—	—	—	1.56	8.94	10.5	0.16	< 0.005	—	15.7
Waste	—	—	—	—	—	—	—	—	—	—	—	16.7	0.00	16.7	1.67	0.00	—	58.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Total	5.18	5.02	2.13	11.0	0.01	0.09	0.00	0.09	0.09	0.00	0.09	18.2	2,433	2,451	2.21	0.12	0.08	2,541
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.54	4.13	3.44	31.8	0.08	0.06	7.65	7.71	0.06	1.94	2.00	—	8,426	8,426	0.39	0.33	11.5	8,547
Area	0.88	0.87	0.01	0.71	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.94	2.94	< 0.005	< 0.005	—	2.95
Energy	0.12	0.06	1.07	0.90	0.01	0.08	—	0.08	0.08	—	0.08	—	2,175	2,175	0.16	0.01	—	2,181
Water	—	—	—	—	—	—	—	—	—	—	—	1.56	8.94	10.5	0.16	< 0.005	—	15.7
Waste	—	—	—	—	—	—	—	—	—	—	—	16.7	0.00	16.7	1.67	0.00	—	58.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Total	5.54	5.06	4.51	33.4	0.09	0.15	7.65	7.80	0.14	1.94	2.08	18.2	10,613	10,631	2.38	0.35	11.6	10,805
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	0.83	0.75	0.63	5.81	0.02	0.01	1.40	1.41	0.01	0.35	0.36	—	1,395	1,395	0.06	0.06	1.91	1,415
Area	0.16	0.16	< 0.005	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.49	0.49	< 0.005	< 0.005	—	0.49
Energy	0.02	0.01	0.20	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	360	360	0.03	< 0.005	—	361
Water	—	—	—	—	—	—	—	—	—	—	—	0.26	1.48	1.74	0.03	< 0.005	—	2.59
Waste	—	—	—	—	—	—	—	—	—	—	—	2.76	0.00	2.76	0.28	0.00	—	9.67
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	1.01	0.92	0.82	6.10	0.02	0.03	1.40	1.42	0.03	0.35	0.38	3.02	1,757	1,760	0.39	0.06	1.92	1,789

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	900	900	0.05	0.01	—	903
Total	—	—	—	—	—	—	—	—	—	—	—	—	900	900	0.05	0.01	—	903
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	900	900	0.05	0.01	—	903
Total	—	—	—	—	—	—	—	—	—	—	—	—	900	900	0.05	0.01	—	903
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	149	149	0.01	< 0.005	—	149
Total	—	—	—	—	—	—	—	—	—	—	—	—	149	149	0.01	< 0.005	—	149

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.12	0.06	1.07	0.90	0.01	0.08	—	0.08	0.08	—	0.08	—	1,275	1,275	0.11	< 0.005	—	1,279
Total	0.12	0.06	1.07	0.90	0.01	0.08	—	0.08	0.08	—	0.08	—	1,275	1,275	0.11	< 0.005	—	1,279
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.12	0.06	1.07	0.90	0.01	0.08	—	0.08	0.08	—	0.08	—	1,275	1,275	0.11	< 0.005	—	1,279
Total	0.12	0.06	1.07	0.90	0.01	0.08	—	0.08	0.08	—	0.08	—	1,275	1,275	0.11	< 0.005	—	1,279
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.02	0.01	0.20	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	211	211	0.02	< 0.005	—	212
Total	0.02	0.01	0.20	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	211	211	0.02	< 0.005	—	212

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.71	0.71	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.26	0.24	0.01	1.45	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.96	5.96	< 0.005	< 0.005	—	5.98
Total	1.01	0.99	0.01	1.45	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.96	5.96	< 0.005	< 0.005	—	5.98
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.71	0.71	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.75	0.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consumer Product	0.13	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.02	0.02	< 0.005	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.49	0.49	< 0.005	< 0.005	—	0.49
Total	0.16	0.16	< 0.005	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.49	0.49	< 0.005	< 0.005	—	0.49

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.56	8.94	10.5	0.16	< 0.005	—	15.7
Total	—	—	—	—	—	—	—	—	—	—	—	1.56	8.94	10.5	0.16	< 0.005	—	15.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.56	8.94	10.5	0.16	< 0.005	—	15.7
Total	—	—	—	—	—	—	—	—	—	—	—	1.56	8.94	10.5	0.16	< 0.005	—	15.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.26	1.48	1.74	0.03	< 0.005	—	2.59
Total	—	—	—	—	—	—	—	—	—	—	—	0.26	1.48	1.74	0.03	< 0.005	—	2.59

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	16.7	0.00	16.7	1.67	0.00	—	58.4
Total	—	—	—	—	—	—	—	—	—	—	—	16.7	0.00	16.7	1.67	0.00	—	58.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	16.7	0.00	16.7	1.67	0.00	—	58.4
Total	—	—	—	—	—	—	—	—	—	—	—	16.7	0.00	16.7	1.67	0.00	—	58.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	2.76	0.00	2.76	0.28	0.00	—	9.67
Total	—	—	—	—	—	—	—	—	—	—	—	2.76	0.00	2.76	0.28	0.00	—	9.67

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	1,473	1,473	1,473	384,032	—	0.00	0.00	3,955,557

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	49,949	16,650	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Office Building	299,218	589	0.0330	0.0040	2,832,000
General Office Building	122,755	589	0.0330	0.0040	430,000
General Office Building	135,559	589	0.0330	0.0040	716,579

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)

General Office Building	762,212	0.00
General Office Building	51,612	0.00
General Office Building	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	11.0	—
General Office Building	8.72	—
General Office Building	11.2	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	7.46	annual days of extreme heat
Extreme Precipitation	2.35	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	1.26	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	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A

Wildfire	1	0	0	N/A
Flooding	0	0	0	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	1	1	1	2
Wildfire	1	1	1	2
Flooding	1	1	1	2
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	29.9
AQ-PM	51.3
AQ-DPM	89.9
Drinking Water	29.0
Lead Risk Housing	—
Pesticides	0.00
Toxic Releases	43.0
Traffic	75.0
Effect Indicators	—
CleanUp Sites	97.5
Groundwater	99.0
Haz Waste Facilities/Generators	93.5
Impaired Water Bodies	66.7
Solid Waste	52.9
Sensitive Population	—
Asthma	78.7
Cardio-vascular	31.8
Low Birth Weights	—
Socioeconomic Factor Indicators	—
Education	—
Housing	—
Linguistic	—
Poverty	—
Unemployment	—

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	—
Employed	—
Median HI	—
Education	—
Bachelor's or higher	—
High school enrollment	—
Preschool enrollment	—
Transportation	—
Auto Access	—
Active commuting	—
Social	—
2-parent households	—
Voting	—
Neighborhood	—
Alcohol availability	—
Park access	—
Retail density	—
Supermarket access	—
Tree canopy	—
Housing	—
Homeownership	—
Housing habitability	—
Low-inc homeowner severe housing cost burden	—
Low-inc renter severe housing cost burden	—

Uncrowded housing	—
Health Outcomes	—
Insured adults	—
Arthritis	1.8
Asthma ER Admissions	17.6
High Blood Pressure	5.4
Cancer (excluding skin)	5.1
Asthma	61.7
Coronary Heart Disease	1.3
Chronic Obstructive Pulmonary Disease	2.1
Diagnosed Diabetes	16.2
Life Expectancy at Birth	0.0
Cognitively Disabled	0.0
Physically Disabled	0.0
Heart Attack ER Admissions	35.6
Mental Health Not Good	43.4
Chronic Kidney Disease	14.8
Obesity	45.5
Pedestrian Injuries	0.0
Physical Health Not Good	32.1
Stroke	7.6
Health Risk Behaviors	—
Binge Drinking	24.0
Current Smoker	21.4
No Leisure Time for Physical Activity	36.8
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	28.1

Children	99.4
Elderly	99.8
English Speaking	0.0
Foreign-born	0.0
Outdoor Workers	0.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	16.4
Traffic Density	0.0
Traffic Access	87.4
Other Indices	—
Hardship	0.0
Other Decision Support	—
2016 Voting	0.0

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	—
Healthy Places Index Score for Project Location (b)	—
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	existing run
Operations: Energy Use	calculated yearly usage based on utility statements
Operations: Water and Waste Water	calculated total yearly from utility bills provided. Hertz and Avis are grouped under one row since payments for water are split
Land Use	Calculated square footage of operating buildings per Demolition plans. This does not account for canopies and storage areas.
Operations: Vehicle Data	revised per LMA

Attachment 2. Waterside Improvements Modeling

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East Harbor Island Redevelopment/Topgolf Project v5 Detailed Report

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2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

2.4. Operations Emissions Compared Against Thresholds

2.5. Operations Emissions by Sector, Unmitigated

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

3.3. Site Prep (2025) - Unmitigated

3.5. Grading (2025) - Unmitigated

3.7. Grading (2026) - Unmitigated

3.9. Building Construction (2025) - Unmitigated

3.11. Building Construction (2026) - Unmitigated

3.13. Building Construction (2027) - Unmitigated

3.15. Paving (2025) - Unmitigated

3.17. Architectural Coating (2025) - Unmitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.3. Area Emissions by Source

4.3.1. Unmitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

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	East Harbor Island Redevelopment/Topgolf Project v5
Construction Start Date	1/1/2025
Operational Year	2027
Lead Agency	Port of San Diego
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	20.0
Location	32.72822266045955, -117.1914293433764
County	San Diego
City	San Diego
Air District	San Diego County APCD
Air Basin	San Diego
TAZ	6403
EDFZ	12
Electric Utility	San Diego Gas & Electric
Gas Utility	San Diego Gas & Electric
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
High Turnover (Sit Down Restaurant)	67.0	1000sqft	1.54	67,030	80,621	—	—	—

Parking Lot	289	Space	2.60	0.00	0.00	—	—	—
City Park	10.8	Acre	10.8	0.00	401,506	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.	62.2	57.5	165	219	0.46	6.85	38.1	44.9	6.24	16.0	22.2	—	57,436	57,436	2.62	3.76	58.2	58,682
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	52.0	48.1	130	182	0.39	5.33	18.1	23.5	4.84	5.83	10.7	—	50,154	50,154	2.34	3.70	1.48	51,318
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	41.6	39.8	81.9	108	0.24	3.22	13.3	16.5	2.94	4.07	7.01	—	31,298	31,298	1.47	2.43	15.9	32,075
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.59	7.26	15.0	19.7	0.04	0.59	2.42	3.01	0.54	0.74	1.28	—	5,182	5,182	0.24	0.40	2.63	5,310

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	62.2	57.5	165	219	0.46	6.85	38.1	44.9	6.24	16.0	22.2	—	57,436	57,436	2.62	3.76	58.2	58,682
2026	46.9	43.9	95.4	149	0.31	3.91	17.4	21.4	3.41	5.65	9.06	—	40,685	40,685	1.81	3.36	48.8	41,780
2027	39.5	38.2	37.3	93.1	0.12	1.76	3.61	5.37	1.49	0.92	2.42	—	15,545	15,545	0.71	1.24	20.0	15,952
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	52.0	48.1	130	182	0.39	5.33	18.1	23.5	4.84	5.83	10.7	—	50,154	50,154	2.34	3.70	1.48	51,318
2026	46.8	43.9	96.4	148	0.31	3.91	17.4	21.4	3.41	5.65	9.06	—	40,571	40,571	1.81	3.37	1.27	41,620
2027	39.4	38.1	37.8	92.1	0.12	1.76	3.61	5.37	1.49	0.92	2.42	—	15,446	15,446	0.72	1.24	0.52	15,836
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	28.7	26.3	81.9	104	0.24	3.22	13.3	16.5	2.94	4.07	7.01	—	31,298	31,298	1.47	2.43	15.9	32,075
2026	41.6	39.8	54.8	108	0.17	2.42	7.31	9.73	2.08	2.19	4.27	—	22,421	22,421	1.02	1.85	12.6	23,011
2027	14.5	14.0	13.9	33.8	0.04	0.65	1.31	1.96	0.55	0.33	0.88	—	5,676	5,676	0.26	0.45	3.18	5,821
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	5.23	4.80	15.0	19.0	0.04	0.59	2.42	3.01	0.54	0.74	1.28	—	5,182	5,182	0.24	0.40	2.63	5,310
2026	7.59	7.26	10.00	19.7	0.03	0.44	1.33	1.78	0.38	0.40	0.78	—	3,712	3,712	0.17	0.31	2.09	3,810
2027	2.64	2.56	2.53	6.18	0.01	0.12	0.24	0.36	0.10	0.06	0.16	—	940	940	0.04	0.08	0.53	964

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	14.1	12.8	10.5	97.2	0.25	0.33	21.4	21.7	0.32	5.43	5.75	437	27,028	27,465	45.1	0.91	180	29,043

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.4	12.2	11.3	87.1	0.24	0.32	21.4	21.7	0.31	5.43	5.74	437	25,922	26,359	45.2	0.96	107	27,880
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.5	12.3	11.2	88.9	0.24	0.33	21.1	21.5	0.31	5.36	5.68	437	26,093	26,531	45.2	0.95	137	28,079
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.47	2.24	2.05	16.2	0.04	0.06	3.86	3.92	0.06	0.98	1.04	72.4	4,320	4,392	7.48	0.16	22.7	4,649

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	11.6	10.5	8.55	92.7	0.24	0.18	21.4	21.6	0.17	5.43	5.60	—	24,418	24,418	0.99	0.86	74.7	24,774
Area	2.31	2.27	0.02	2.92	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	12.0	12.0	< 0.005	< 0.005	—	12.0
Energy	0.21	0.11	1.93	1.62	0.01	0.15	—	0.15	0.15	—	0.15	—	2,590	2,590	0.41	0.03	—	2,609
Water	—	—	—	—	—	—	—	—	—	—	—	6.90	7.75	14.7	0.71	0.02	—	37.7
Waste	—	—	—	—	—	—	—	—	—	—	—	430	0.00	430	43.0	0.00	—	1,506
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	105	105
Total	14.1	12.8	10.5	97.2	0.25	0.33	21.4	21.7	0.32	5.43	5.75	437	27,028	27,465	45.1	0.91	180	29,043
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	11.4	10.3	9.38	85.5	0.23	0.18	21.4	21.6	0.17	5.43	5.60	—	23,324	23,324	1.03	0.91	1.94	23,623
Area	1.79	1.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.21	0.11	1.93	1.62	0.01	0.15	—	0.15	0.15	—	0.15	—	2,590	2,590	0.41	0.03	—	2,609

Water	—	—	—	—	—	—	—	—	—	—	—	6.90	7.75	14.7	0.71	0.02	—	37.7
Waste	—	—	—	—	—	—	—	—	—	—	—	430	0.00	430	43.0	0.00	—	1,506
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	105	105
Total	13.4	12.2	11.3	87.1	0.24	0.32	21.4	21.7	0.31	5.43	5.74	437	25,922	26,359	45.2	0.96	107	27,880
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	11.3	10.2	9.27	85.8	0.23	0.18	21.1	21.3	0.17	5.36	5.53	—	23,490	23,490	1.02	0.90	32.3	23,816
Area	2.04	2.02	0.01	1.44	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.91	5.91	< 0.005	< 0.005	—	5.93
Energy	0.21	0.11	1.93	1.62	0.01	0.15	—	0.15	0.15	—	0.15	—	2,590	2,590	0.41	0.03	—	2,609
Water	—	—	—	—	—	—	—	—	—	—	—	6.90	7.75	14.7	0.71	0.02	—	37.7
Waste	—	—	—	—	—	—	—	—	—	—	—	430	0.00	430	43.0	0.00	—	1,506
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	105	105
Total	13.5	12.3	11.2	88.9	0.24	0.33	21.1	21.5	0.31	5.36	5.68	437	26,093	26,531	45.2	0.95	137	28,079
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.06	1.85	1.69	15.7	0.04	0.03	3.86	3.89	0.03	0.98	1.01	—	3,889	3,889	0.17	0.15	5.34	3,943
Area	0.37	0.37	< 0.005	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.98	0.98	< 0.005	< 0.005	—	0.98
Energy	0.04	0.02	0.35	0.30	< 0.005	0.03	—	0.03	0.03	—	0.03	—	429	429	0.07	< 0.005	—	432
Water	—	—	—	—	—	—	—	—	—	—	—	1.14	1.28	2.43	0.12	< 0.005	—	6.24
Waste	—	—	—	—	—	—	—	—	—	—	—	71.3	0.00	71.3	7.12	0.00	—	249
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.3	17.3
Total	2.47	2.24	2.05	16.2	0.04	0.06	3.86	3.92	0.06	0.98	1.04	72.4	4,320	4,392	7.48	0.16	22.7	4,649

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.24	2.72	24.1	23.1	0.05	0.99	—	0.99	0.91	—	0.91	—	5,533	5,533	0.22	0.04	—	5,551
Demolition	—	—	—	—	—	—	4.24	4.24	—	0.64	0.64	—	—	—	—	—	—	—
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	3.24	2.72	24.1	23.1	0.05	0.99	—	0.99	0.91	—	0.91	—	5,533	5,533	0.22	0.04	—	5,551
Demolition	—	—	—	—	—	—	4.24	4.24	—	0.64	0.64	—	—	—	—	—	—	—
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	1.63	1.37	12.2	11.6	0.03	0.50	—	0.50	0.46	—	0.46	—	2,789	2,789	0.11	0.02	—	2,799
Demolition	—	—	—	—	—	—	2.13	2.13	—	0.32	0.32	—	—	—	—	—	—	—
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	0.30	0.25	2.22	2.12	< 0.005	0.09	—	0.09	0.08	—	0.08	—	462	462	0.02	< 0.005	—	463

Demoliti	—	—	—	—	—	—	0.39	0.39	—	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.09	1.39	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	285	285	0.01	0.01	1.07	289
Vendor	0.01	0.01	0.20	0.09	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	150	150	0.01	0.02	0.39	157
Hauling	0.57	0.16	9.52	3.56	0.05	0.13	1.87	2.01	0.13	0.51	0.65	—	7,257	7,257	0.40	1.14	15.8	7,623
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.10	1.22	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	269	269	0.01	0.01	0.03	272
Vendor	0.01	0.01	0.21	0.10	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	150	150	0.01	0.02	0.01	157
Hauling	0.56	0.15	9.86	3.59	0.05	0.13	1.87	2.01	0.13	0.51	0.65	—	7,260	7,260	0.40	1.14	0.41	7,610
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	0.62	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	137	137	0.01	0.01	0.23	139
Vendor	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	75.7	75.7	< 0.005	0.01	0.09	79.1
Hauling	0.28	0.08	4.97	1.80	0.02	0.07	0.93	1.00	0.07	0.26	0.32	—	3,659	3,659	0.20	0.58	3.44	3,839
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	22.6	22.6	< 0.005	< 0.005	0.04	23.0
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.5	12.5	< 0.005	< 0.005	0.01	13.1
Hauling	0.05	0.01	0.91	0.33	< 0.005	0.01	0.17	0.18	0.01	0.05	0.06	—	606	606	0.03	0.10	0.57	636

3.3. Site Prep (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.59	3.85	35.1	33.7	0.06	1.49	—	1.49	1.37	—	1.37	—	6,726	6,726	0.27	0.05	—	6,749
Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.22	2.02	1.94	< 0.005	0.09	—	0.09	0.08	—	0.08	—	387	387	0.02	< 0.005	—	388
Dust From Material Movement	—	—	—	—	—	—	1.13	1.13	—	0.58	0.58	—	—	—	—	—	—	—
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	0.05	0.04	0.37	0.35	< 0.005	0.02	—	0.02	0.01	—	0.01	—	64.1	64.1	< 0.005	< 0.005	—	64.3
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.11	0.11	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.08	1.16	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	237	237	0.01	0.01	0.89	241
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	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.0	13.0	< 0.005	< 0.005	0.02	13.2
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.15	2.15	< 0.005	< 0.005	< 0.005	2.18
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	6.64	5.58	45.6	49.8	0.12	2.05	—	2.05	1.89	—	1.89	—	12,402	12,402	0.50	0.10	—	12,444
Dust From Material Movement	—	—	—	—	—	—	10.3	10.3	—	3.77	3.77	—	—	—	—	—	—	—
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	6.64	5.58	45.6	49.8	0.12	2.05	—	2.05	1.89	—	1.89	—	12,402	12,402	0.50	0.10	—	12,444
Dust From Material Movement	—	—	—	—	—	—	10.3	10.3	—	3.77	3.77	—	—	—	—	—	—	—
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	3.29	2.77	22.6	24.7	0.06	1.02	—	1.02	0.94	—	0.94	—	6,150	6,150	0.25	0.05	—	6,171
Dust From Material Movement	—	—	—	—	—	—	5.11	5.11	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.60	0.50	4.12	4.51	0.01	0.19	—	0.19	0.17	—	0.17	—	1,018	1,018	0.04	0.01	—	1,022
Dust From Material Movement	—	—	—	—	—	—	0.93	0.93	—	0.34	0.34	—	—	—	—	—	—	—
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	0.13	0.12	0.09	1.39	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	285	285	0.01	0.01	1.07	289
Vendor	0.03	0.01	0.40	0.19	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.03	—	300	300	0.01	0.04	0.78	314
Hauling	0.84	0.20	14.7	4.98	0.08	0.23	3.20	3.43	0.23	0.88	1.10	—	12,216	12,216	0.64	1.92	27.0	12,832
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.10	1.22	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	269	269	0.01	0.01	0.03	272
Vendor	0.03	0.01	0.41	0.19	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.03	—	300	300	0.01	0.04	0.02	313
Hauling	0.84	0.19	15.2	5.01	0.08	0.23	3.20	3.43	0.23	0.88	1.10	—	12,218	12,218	0.64	1.92	0.70	12,807
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	0.61	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	134	134	0.01	0.01	0.23	136
Vendor	0.01	0.01	0.20	0.09	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	149	149	0.01	0.02	0.17	156
Hauling	0.42	0.10	7.57	2.48	0.04	0.11	1.57	1.68	0.11	0.43	0.54	—	6,058	6,058	0.32	0.95	5.77	6,356
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	22.3	22.3	< 0.005	< 0.005	0.04	22.6
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	24.7	24.7	< 0.005	< 0.005	0.03	25.8
Hauling	0.08	0.02	1.38	0.45	0.01	0.02	0.29	0.31	0.02	0.08	0.10	—	1,003	1,003	0.05	0.16	0.96	1,052

3.7. 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	6.29	5.28	41.9	49.4	0.12	1.81	—	1.81	1.67	—	1.67	—	12,407	12,407	0.50	0.10	—	12,449
Dust From Material Movement	—	—	—	—	—	—	10.3	10.3	—	3.77	3.77	—	—	—	—	—	—	—
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	6.29	5.28	41.9	49.4	0.12	1.81	—	1.81	1.67	—	1.67	—	12,407	12,407	0.50	0.10	—	12,449
Dust From Material Movement	—	—	—	—	—	—	10.3	10.3	—	3.77	3.77	—	—	—	—	—	—	—
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	1.71	1.43	11.4	13.4	0.03	0.49	—	0.49	0.45	—	0.45	—	3,365	3,365	0.14	0.03	—	3,377

Dust From Material Movement	—	—	—	—	—	—	2.80	2.80	—	1.02	1.02	—	—	—	—	—	—	—
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	0.31	0.26	2.07	2.45	0.01	0.09	—	0.09	0.08	—	0.08	—	557	557	0.02	< 0.005	—	559
Dust From Material Movement	—	—	—	—	—	—	0.51	0.51	—	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.11	0.08	1.30	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	279	279	0.01	0.01	0.98	283
Vendor	0.02	0.01	0.38	0.18	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.03	—	295	295	0.01	0.04	0.72	308
Hauling	0.77	0.20	14.1	4.91	0.08	0.23	3.20	3.43	0.15	0.88	1.03	—	11,958	11,958	0.56	1.92	25.3	12,569
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.09	1.14	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	263	263	0.01	0.01	0.03	267
Vendor	0.02	0.01	0.40	0.18	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.03	—	295	295	0.01	0.04	0.02	308
Hauling	0.76	0.19	14.6	4.93	0.08	0.23	3.20	3.43	0.15	0.88	1.03	—	11,959	11,959	0.56	1.92	0.66	12,547
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.31	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	72.1	72.1	< 0.005	< 0.005	0.11	73.1
Vendor	0.01	< 0.005	0.11	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	80.0	80.0	< 0.005	0.01	0.08	83.6

Hauling	0.21	0.05	3.95	1.33	0.02	0.06	0.86	0.92	0.04	0.24	0.28	—	3,243	3,243	0.15	0.52	2.98	3,406
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.9	11.9	< 0.005	< 0.005	0.02	12.1
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.2	13.2	< 0.005	< 0.005	0.01	13.8
Hauling	0.04	0.01	0.72	0.24	< 0.005	0.01	0.16	0.17	0.01	0.04	0.05	—	537	537	0.03	0.09	0.49	564

3.9. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	38.5	37.6	30.5	81.6	0.07	1.85	—	1.85	1.60	—	1.60	—	6,608	6,608	0.27	0.05	—	6,631
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	38.5	37.6	30.5	81.6	0.07	1.85	—	1.85	1.60	—	1.60	—	6,608	6,608	0.27	0.05	—	6,631
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	19.1	18.6	15.1	40.5	0.03	0.92	—	0.92	0.79	—	0.79	—	3,277	3,277	0.13	0.03	—	3,288

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	3.48	3.40	2.76	7.38	0.01	0.17	—	0.17	0.14	—	0.14	—	543	543	0.02	< 0.005	—	544
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	0.88	0.81	0.61	9.26	0.00	0.00	1.69	1.69	0.00	0.40	0.40	—	1,898	1,898	0.09	0.07	7.12	1,927
Vendor	0.02	0.01	0.33	0.15	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	250	250	0.01	0.04	0.65	262
Hauling	0.56	0.16	9.43	3.52	0.05	0.13	1.85	1.99	0.13	0.51	0.64	—	7,185	7,185	0.40	1.13	15.6	7,548
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.86	0.79	0.68	8.11	0.00	0.00	1.69	1.69	0.00	0.40	0.40	—	1,792	1,792	0.10	0.07	0.18	1,815
Vendor	0.02	0.01	0.35	0.16	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	250	250	0.01	0.04	0.02	261
Hauling	0.55	0.15	9.76	3.56	0.05	0.13	1.85	1.99	0.13	0.51	0.64	—	7,188	7,188	0.40	1.13	0.40	7,535
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.42	0.39	0.34	4.08	0.00	0.00	0.83	0.83	0.00	0.19	0.19	—	897	897	0.05	0.03	1.52	910
Vendor	0.01	< 0.005	0.17	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	124	124	0.01	0.02	0.14	130
Hauling	0.28	0.08	4.84	1.75	0.02	0.07	0.91	0.98	0.07	0.25	0.32	—	3,564	3,564	0.20	0.56	3.35	3,739
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.75	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	148	148	0.01	0.01	0.25	151
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	20.6	20.6	< 0.005	< 0.005	0.02	21.5
Hauling	0.05	0.01	0.88	0.32	< 0.005	0.01	0.17	0.18	0.01	0.05	0.06	—	590	590	0.03	0.09	0.55	619

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	38.3	37.4	29.0	81.4	0.07	1.73	—	1.73	1.50	—	1.50	—	6,609	6,609	0.27	0.05	—	6,631
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	38.3	37.4	29.0	81.4	0.07	1.73	—	1.73	1.50	—	1.50	—	6,609	6,609	0.27	0.05	—	6,631
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	38.3	37.4	29.0	81.4	0.07	1.73	—	1.73	1.50	—	1.50	—	6,609	6,609	0.27	0.05	—	6,631
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	6.99	6.83	5.30	14.9	0.01	0.32	—	0.32	0.27	—	0.27	—	1,094	1,094	0.04	0.01	—	1,098

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	0.84	0.72	0.55	8.65	0.00	0.00	1.69	1.69	0.00	0.40	0.40	—	1,859	1,859	0.09	0.07	6.51	1,887
Vendor	0.02	0.01	0.32	0.15	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	246	246	0.01	0.04	0.60	257
Hauling	0.51	0.16	9.06	3.48	0.05	0.13	1.85	1.99	0.09	0.51	0.60	—	7,034	7,034	0.35	1.13	14.7	7,394
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.78	0.71	0.62	7.63	0.00	0.00	1.69	1.69	0.00	0.40	0.40	—	1,756	1,756	0.09	0.07	0.17	1,779
Vendor	0.02	0.01	0.33	0.15	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	246	246	0.01	0.04	0.02	257
Hauling	0.50	0.15	9.40	3.51	0.05	0.13	1.85	1.99	0.09	0.51	0.60	—	7,036	7,036	0.35	1.13	0.38	7,383
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.78	0.71	0.62	7.70	0.00	0.00	1.67	1.67	0.00	0.39	0.39	—	1,771	1,771	0.09	0.07	2.81	1,797
Vendor	0.02	0.01	0.33	0.15	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	246	246	0.01	0.04	0.26	257
Hauling	0.51	0.15	9.35	3.49	0.05	0.13	1.84	1.97	0.09	0.50	0.59	—	7,035	7,035	0.35	1.13	6.37	7,387
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14	0.13	0.11	1.41	0.00	0.00	0.30	0.30	0.00	0.07	0.07	—	293	293	0.02	0.01	0.46	298
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	40.7	40.7	< 0.005	0.01	0.04	42.5
Hauling	0.09	0.03	1.71	0.64	0.01	0.02	0.34	0.36	0.02	0.09	0.11	—	1,165	1,165	0.06	0.19	1.05	1,223

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	38.2	37.3	27.8	81.3	0.07	1.63	—	1.63	1.40	—	1.40	—	6,609	6,609	0.27	0.05	—	6,632
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	38.2	37.3	27.8	81.3	0.07	1.63	—	1.63	1.40	—	1.40	—	6,609	6,609	0.27	0.05	—	6,632
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	14.0	13.7	10.2	29.9	0.03	0.60	—	0.60	0.51	—	0.51	—	2,426	2,426	0.10	0.02	—	2,435
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	2.56	2.50	1.86	5.45	< 0.005	0.11	—	0.11	0.09	—	0.09	—	402	402	0.02	< 0.005	—	403
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	0.77	0.71	0.49	8.20	0.00	0.00	1.69	1.69	0.00	0.40	0.40	—	1,828	1,828	0.08	0.07	5.92	1,855
Vendor	0.02	0.01	0.30	0.14	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	240	240	0.01	0.03	0.54	251
Hauling	0.51	0.16	8.73	3.39	0.05	0.13	1.85	1.99	0.09	0.51	0.60	—	6,867	6,867	0.35	1.08	13.6	7,213
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.76	0.69	0.62	7.20	0.00	0.00	1.69	1.69	0.00	0.40	0.40	—	1,726	1,726	0.09	0.07	0.15	1,749
Vendor	0.02	0.01	0.31	0.15	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	241	241	0.01	0.03	0.01	251
Hauling	0.50	0.15	9.03	3.43	0.05	0.13	1.85	1.99	0.09	0.51	0.60	—	6,870	6,870	0.35	1.09	0.35	7,203
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.28	0.25	0.22	2.68	0.00	0.00	0.61	0.61	0.00	0.14	0.14	—	639	639	0.03	0.02	0.94	648
Vendor	0.01	< 0.005	0.11	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	88.3	88.3	< 0.005	0.01	0.09	92.2
Hauling	0.19	0.06	3.32	1.25	0.02	0.05	0.67	0.72	0.03	0.18	0.22	—	2,522	2,522	0.13	0.40	2.15	2,646
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.49	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	106	106	0.01	< 0.005	0.16	107
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.6	14.6	< 0.005	< 0.005	0.01	15.3
Hauling	0.03	0.01	0.61	0.23	< 0.005	0.01	0.12	0.13	0.01	0.03	0.04	—	417	417	0.02	0.07	0.36	438

3.15. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.07	3.41	24.9	29.8	0.07	1.04	—	1.04	0.95	—	0.95	—	7,127	7,127	0.29	0.06	—	7,151
Paving	0.08	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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	4.07	3.41	24.9	29.8	0.07	1.04	—	1.04	0.95	—	0.95	—	7,127	7,127	0.29	0.06	—	7,151
Paving	0.08	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	1.72	1.44	10.5	12.6	0.03	0.44	—	0.44	0.40	—	0.40	—	3,007	3,007	0.12	0.02	—	3,017
Paving	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31	0.26	1.92	2.29	0.01	0.08	—	0.08	0.07	—	0.07	—	498	498	0.02	< 0.005	—	500
Paving	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	0.13	0.12	0.09	1.39	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	285	285	0.01	0.01	1.07	289
Vendor	0.01	0.01	0.20	0.09	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	150	150	0.01	0.02	0.39	157

Hauling	0.12	0.03	2.07	0.77	0.01	0.03	0.41	0.44	0.03	0.11	0.14	—	1,581	1,581	0.09	0.25	3.44	1,661
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.10	1.22	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	269	269	0.01	0.01	0.03	272
Vendor	0.01	0.01	0.21	0.10	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	150	150	0.01	0.02	0.01	157
Hauling	0.12	0.03	2.15	0.78	0.01	0.03	0.41	0.44	0.03	0.11	0.14	—	1,581	1,581	0.09	0.25	0.09	1,658
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.52	0.00	0.00	0.11	0.11	0.00	0.02	0.02	—	114	114	0.01	< 0.005	0.19	116
Vendor	0.01	< 0.005	0.09	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	63.4	63.4	< 0.005	0.01	0.07	66.2
Hauling	0.05	0.01	0.91	0.33	< 0.005	0.01	0.17	0.18	0.01	0.05	0.06	—	667	667	0.04	0.10	0.63	700
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	18.9	18.9	< 0.005	< 0.005	0.03	19.2
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.5	10.5	< 0.005	< 0.005	0.01	11.0
Hauling	0.01	< 0.005	0.17	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	110	110	0.01	0.02	0.10	116

3.17. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	5.34	5.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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	0.03	0.02	0.16	0.20	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	23.8	23.8	< 0.005	< 0.005	—	23.9
Architectural Coatings	0.95	0.95	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.94	3.94	< 0.005	< 0.005	—	3.95
Architectural Coatings	0.17	0.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.02	0.02	0.02	0.26	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	53.4	53.4	< 0.005	< 0.005	0.20	54.2
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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.06	9.06	< 0.005	< 0.005	0.02	9.20
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	—	1.50	1.50	< 0.005	< 0.005	< 0.005	1.52
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	270	270	0.20	0.02	—	282
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	12.3	12.3	0.01	< 0.005	—	12.8
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	282	282	0.21	0.03	—	295
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	270	270	0.20	0.02	—	282
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	12.3	12.3	0.01	< 0.005	—	12.8
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	282	282	0.21	0.03	—	295
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	44.7	44.7	0.03	< 0.005	—	46.7
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	2.03	2.03	< 0.005	< 0.005	—	2.12
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	46.7	46.7	0.03	< 0.005	—	48.8

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	0.21	0.11	1.93	1.62	0.01	0.15	—	0.15	0.15	—	0.15	—	2,307	2,307	0.20	< 0.005	—	2,314
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.21	0.11	1.93	1.62	0.01	0.15	—	0.15	0.15	—	0.15	—	2,307	2,307	0.20	< 0.005	—	2,314
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	0.21	0.11	1.93	1.62	0.01	0.15	—	0.15	0.15	—	0.15	—	2,307	2,307	0.20	< 0.005	—	2,314
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.21	0.11	1.93	1.62	0.01	0.15	—	0.15	0.15	—	0.15	—	2,307	2,307	0.20	< 0.005	—	2,314
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	0.04	0.02	0.35	0.30	< 0.005	0.03	—	0.03	0.03	—	0.03	—	382	382	0.03	< 0.005	—	383

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.04	0.02	0.35	0.30	< 0.005	0.03	—	0.03	0.03	—	0.03	—	382	382	0.03	< 0.005	—	383

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	1.69	1.69	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.10	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.52	0.48	0.02	2.92	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	12.0	12.0	< 0.005	< 0.005	—	12.0
Total	2.31	2.27	0.02	2.92	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	12.0	12.0	< 0.005	< 0.005	—	12.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	1.69	1.69	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	0.10	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	1.79	1.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.31	0.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.05	0.04	< 0.005	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.98	0.98	< 0.005	< 0.005	—	0.98
Total	0.37	0.37	< 0.005	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.98	0.98	< 0.005	< 0.005	—	0.98

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	6.90	3.82	10.7	0.71	0.02	—	33.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	3.93	3.93	< 0.005	< 0.005	—	4.11
Total	—	—	—	—	—	—	—	—	—	—	—	6.90	7.75	14.7	0.71	0.02	—	37.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	6.90	3.82	10.7	0.71	0.02	—	33.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	3.93	3.93	< 0.005	< 0.005	—	4.11
Total	—	—	—	—	—	—	—	—	—	—	—	6.90	7.75	14.7	0.71	0.02	—	37.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1.14	0.63	1.77	0.12	< 0.005	—	5.56
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.65	0.65	< 0.005	< 0.005	—	0.68
Total	—	—	—	—	—	—	—	—	—	—	—	1.14	1.28	2.43	0.12	< 0.005	—	6.24

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	430	0.00	430	43.0	0.00	—	1,504
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	—	0.50	0.00	0.50	0.05	0.00	—	1.75
Total	—	—	—	—	—	—	—	—	—	—	—	430	0.00	430	43.0	0.00	—	1,506
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	430	0.00	430	43.0	0.00	—	1,504
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	—	0.50	0.00	0.50	0.05	0.00	—	1.75
Total	—	—	—	—	—	—	—	—	—	—	—	430	0.00	430	43.0	0.00	—	1,506
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	71.2	0.00	71.2	7.11	0.00	—	249
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	—	0.08	0.00	0.08	0.01	0.00	—	0.29
Total	—	—	—	—	—	—	—	—	—	—	—	71.3	0.00	71.3	7.12	0.00	—	249

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	105	105
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	105	105
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	105	105
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	105	105
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.3	17.3
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.3	17.3

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Demolition	Demolition	1/1/2025	7/3/2025	7.00	184	—
Site Prep	Site Preparation	7/4/2025	7/24/2025	7.00	21.0	—
Grading	Grading	7/4/2025	4/9/2026	7.00	280	—
Building Construction	Building Construction	7/4/2025	5/14/2027	7.00	680	—
Paving	Paving	7/4/2025	12/4/2025	7.00	154	—
Architectural Coating	Architectural Coating	7/4/2025	9/6/2025	7.00	65.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Skid Steer Loaders	Diesel	Average	1.00	8.00	367	0.40
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Demolition	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36
Demolition	Off-Highway Trucks	Diesel	Average	1.00	8.00	376	0.38
Demolition	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Demolition	Signal Boards	Diesel	Average	2.00	8.00	6.00	0.82
Demolition	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Site Prep	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Prep	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37

Site Prep	Off-Highway Trucks	Diesel	Average	1.00	8.00	376	0.38
Site Prep	Signal Boards	Diesel	Average	2.00	8.00	6.00	0.82
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Grading	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Grading	Graders	Diesel	Average	2.00	8.00	148	0.41
Grading	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Grading	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Grading	Bore/Drill Rigs	Diesel	Average	1.00	8.00	83.0	0.50
Grading	Rollers	Diesel	Average	3.00	8.00	36.0	0.38
Grading	Off-Highway Trucks	Diesel	Average	1.00	8.00	376	0.38
Grading	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	150	0.36
Grading	Off-Highway Trucks	Diesel	Average	1.00	8.00	376	0.38
Grading	Plate Compactors	Diesel	Average	2.00	8.00	8.00	0.43
Grading	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Signal Boards	Diesel	Average	2.00	8.00	6.00	0.82
Grading	Trenchers	Diesel	Average	1.00	8.00	40.0	0.50
Building Construction	Trenchers	Diesel	Average	1.00	8.00	40.0	0.50
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Building Construction	Skid Steer Loaders	Diesel	Average	2.00	8.00	71.0	0.37
Building Construction	Graders	Diesel	Average	1.00	8.00	148	0.41
Building Construction	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Building Construction	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73

Building Construction	Crushing/Proc. Equipment	Gasoline	Average	1.00	8.00	12.0	0.85
Building Construction	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Building Construction	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36
Building Construction	Aerial Lifts	Electric	Average	1.00	8.00	46.0	0.31
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Building Construction	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Building Construction	Off-Highway Trucks	Diesel	Average	1.00	8.00	376	0.38
Building Construction	Dumpers/Tenders	Diesel	Average	1.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Building Construction	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Building Construction	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Signal Boards	Diesel	Average	2.00	8.00	6.00	0.82
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Paving	Graders	Diesel	Average	1.00	8.00	148	0.41
Paving	Rollers	Diesel	Average	3.00	8.00	36.0	0.38
Paving	Plate Compactors	Diesel	Average	2.00	8.00	8.00	0.43
Paving	Off-Highway Trucks	Diesel	Average	1.00	8.00	376	0.38
Paving	Rollers	Diesel	Average	3.00	8.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
Paving	Off-Highway Trucks	Diesel	Average	1.00	8.00	376	0.38
Paving	Off-Highway Trucks	Diesel	Average	1.00	8.00	376	0.38
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42

Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Signal Boards	Diesel	Average	2.00	8.00	6.00	0.82
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	82.0	0.20
Paving	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
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	30.0	12.0	LDA,LDT1,LDT2
Demolition	Vendor	6.00	7.63	HHDT,MHDT
Demolition	Hauling	101	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	30.0	12.0	LDA,LDT1,LDT2
Grading	Vendor	12.0	7.63	HHDT,MHDT
Grading	Hauling	69.0	50.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	200	12.0	LDA,LDT1,LDT2
Building Construction	Vendor	10.0	7.63	HHDT,MHDT
Building Construction	Hauling	100	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	30.0	12.0	LDA,LDT1,LDT2

Paving	Vendor	6.00	7.63	HHDT,MHDT
Paving	Hauling	22.0	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	5.63	12.0	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	7.63	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Site Prep	—	—	—	—
Site Prep	Worker	25.0	12.0	LDA,LDT1,LDT2
Site Prep	Vendor	0.00	7.63	HHDT,MHDT
Site Prep	Hauling	0.00	20.0	HHDT
Site Prep	Onsite truck	0.00	—	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	102,045	34,015	6,798

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)

Demolition	0.00	0.00	0.00	1,218,016	—
Site Prep	0.00	0.00	31.5	0.00	—
Grading	101,992	103,013	290	0.00	—
Paving	0.00	0.00	0.00	0.00	7.11

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
High Turnover (Sit Down Restaurant)	2.53	86%
Parking Lot	1.58	50%
City Park	3.00	50%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	85.1	45.1	0.03	< 0.005
2027	85.1	45.1	0.03	< 0.005
2025	85.1	540	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	2,449	2,449	2,449	893,885	30,318	30,318	30,318	11,066,070

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	102,045	34,015	6,798

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
High Turnover (Sit Down Restaurant)	2,185,421	45.1	0.0330	0.0040	7,200,000
Parking Lot	99,250	45.1	0.0330	0.0040	0.00
City Park	0.00	45.1	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
High Turnover (Sit Down Restaurant)	3,600,000	1,204,813
Parking Lot	0.00	0.00
City Park	0.00	6,000,171

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
High Turnover (Sit Down Restaurant)	798	—
Parking Lot	0.00	—
City Park	0.93	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	7.46	annual days of extreme heat
Extreme Precipitation	2.35	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	1.26	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	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A

Wildfire	1	0	0	N/A
Flooding	0	0	0	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	1	1	1	2
Wildfire	1	1	1	2
Flooding	1	1	1	2
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	29.9
AQ-PM	51.3
AQ-DPM	89.9
Drinking Water	29.0
Lead Risk Housing	—
Pesticides	0.00
Toxic Releases	43.0
Traffic	75.0
Effect Indicators	—
CleanUp Sites	97.5
Groundwater	99.0
Haz Waste Facilities/Generators	93.5
Impaired Water Bodies	66.7
Solid Waste	52.9
Sensitive Population	—
Asthma	78.7
Cardio-vascular	31.8
Low Birth Weights	—
Socioeconomic Factor Indicators	—
Education	—
Housing	—
Linguistic	—
Poverty	—
Unemployment	—

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	—
Employed	—
Median HI	—
Education	—
Bachelor's or higher	—
High school enrollment	—
Preschool enrollment	—
Transportation	—
Auto Access	—
Active commuting	—
Social	—
2-parent households	—
Voting	—
Neighborhood	—
Alcohol availability	—
Park access	—
Retail density	—
Supermarket access	—
Tree canopy	—
Housing	—
Homeownership	—
Housing habitability	—
Low-inc homeowner severe housing cost burden	—
Low-inc renter severe housing cost burden	—

Uncrowded housing	—
Health Outcomes	—
Insured adults	—
Arthritis	1.8
Asthma ER Admissions	17.6
High Blood Pressure	5.4
Cancer (excluding skin)	5.1
Asthma	61.7
Coronary Heart Disease	1.3
Chronic Obstructive Pulmonary Disease	2.1
Diagnosed Diabetes	16.2
Life Expectancy at Birth	0.0
Cognitively Disabled	0.0
Physically Disabled	0.0
Heart Attack ER Admissions	35.6
Mental Health Not Good	43.4
Chronic Kidney Disease	14.8
Obesity	45.5
Pedestrian Injuries	0.0
Physical Health Not Good	32.1
Stroke	7.6
Health Risk Behaviors	—
Binge Drinking	24.0
Current Smoker	21.4
No Leisure Time for Physical Activity	36.8
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	28.1

Children	99.4
Elderly	99.8
English Speaking	0.0
Foreign-born	0.0
Outdoor Workers	0.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	16.4
Traffic Density	0.0
Traffic Access	87.4
Other Indices	—
Hardship	0.0
Other Decision Support	—
2016 Voting	0.0

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	—
Healthy Places Index Score for Project Location (b)	—
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
Characteristics: Project Details	Based on project specific information
Construction: Construction Phases	Calculated using construction schedules provided for each component
Construction: Off-Road Equipment	cumulative list of equipment per phase from construction plans
Construction: Dust From Material Movement	Calculated based on construction plans provided.
Land Use	based on planning sheets and other data provided
Construction: Paving	per construction assumptions
Construction: Trips and VMT	Calculated trips per assumption sheets provided for each project component.
Operations: Water and Waste Water	Based on utility statements of other Topgolf facilities
Operations: Energy Use	Calculated from provided monthly utility usage of other Topgolf facilities