Los Angeles County
Metropolitan Transportation Authority

West Santa Ana Branch Transit Corridor

Draft EIS/EIR Appendix U
Final Energy Impact Analysis Report

Metro

WEST SANTA ANA BRANCH TRANSIT CORRIDOR PROJECT

Draft EIS/EIR Appendix U
Final Energy Impact Analysis Report

Prepared for:

Metro

Los Angeles County
Metropolitan Transportation Authority

Prepared by:

WSP
444 South Flower Street
Suite 800
Los Angeles, California 90071

June 2021

AUTHOR(S)

Terry A. Hayes, TAHA

Sam Silverman, TAHA

Anders Sutherland, TAHA

Allyson Dong, TAHA

Kieran Bartholow, TAHA

TABLE OF CONTENTS

Appendices

List of Tables

Figures

ACRONYMS AND ABBREVIATIONS

AA	Alternatives Analysis
AB	Assembly Bill
BNSF	Burlington Northern Santa Fe
BRT	Bus Rapid Transit
BTU	British Thermal Units
CAISO	California Independent System Operator
Cal/EPA	California Environmental Protection Agency
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards Code
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CAT	Climate Action Team
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CMAQ	Congestion Mitigation and Air Quality Improvement
CNG	Compressed Natural Gas
COG	Council of Governments
CPUC	California Public Utilities Commission
ECMP	Energy Conservation and Management Plan
EIA	United States Energy Information Administration
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMAP	Energy Management Action Plan
EO	Executive Order
EPA	Environmental Protection Agency
FTA	Federal Transit Administration
GCCOG	Gateway Cities Council of Governments
GGE	Gasoline Gallon Equivalent
GHG	Greenhouse Gas
ISTEA	Intermodal Surface Transportation Efficiency Act
kBtu	Thousand British Thermal Units
kWh	Kilowatt Hour
LA	Los Angeles County

LADWP	Los Angeles Department of Water and Power
LAUS	Los Angeles Union Station
LEED	Leadership in Energy and Environmental Design
LID	Low Impact Design
LRT	Light Rail Transit
LRTP	Long-Range Transportation Plan
Metro	Los Angeles County Metropolitan Transportation Authority
MJ	megajoules
MMBTU	Million British Thermal Units
MPG	Miles Per Gallon
MRDC	Metro Rail Design Criteria
MSF	Maintenance and Storage Facility
$MTCO_2e$	Metric Tons of Carbon Dioxide Equivalent
MWD	Metropolitan Water District of Southern California
OCTA	Orange County Transportation Authority
OLDA	Orangeline Development Authority
PEROW	Pacific Electric Right-of-Way
ROD	Record of Decision
ROW	Right-of-Way
RTP	Regional Transportation Plan
SAFE	Safer Affordable Fuel-Efficient Vehicles
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCS	Sustainable Communities Strategy
TOD	Transit-Oriented Development
TPSS	Traction Power Substation
TRS	Technical Refinement Study
UPRR	Union Pacific Railroad
VMT	Vehicle Miles Traveled
WSAB	West Santa Ana Branch
ZEV	Zero-Emission Vehicle

1 INTRODUCTION

1.1 Study Background

The West Santa Ana Branch (WSAB) Transit Corridor (Project) is a proposed light rail transit (LRT) line that would extend up to 19.3 miles through southeast Los Angeles (LA) County, traversing densely populated, low-income, and heavily transit-dependent communities. The Project would provide reliable, fixed guideway transit service that would increase mobility and connectivity for historically underserved, transit-dependent, and environmental justice communities; reduce travel times on local and regional transportation networks; and accommodate substantial future employment and population growth.

1.2 Alternatives Evaluation, Screening, and Selection Process

A wide range of potential alternatives have been considered and screened through the alternatives analysis processes. In March 2010, the Southern California Association of Governments (SCAG) initiated the Pacific Electric Right-of-Way (PEROW)/WSAB Alternatives Analysis (AA) Study in coordination with the relevant cities, Orangeline Development Authority (now known as Eco-Rapid Transit), the Gateway Cities Council of Governments, the Los Angeles County Metropolitan Transportation Authority (Metro), the Orange County Transportation Authority, and the owners of the right-of-way (ROW)—Union Pacific Railroad (UPRR), BNSF Railway, and the Ports of Los Angeles and Long Beach. The AA Study evaluated a wide variety of transit connections and modes for a broader 34-mile corridor from Union Station in downtown Los Angeles to the City of Santa Ana in Orange County. In February 2013, SCAG completed the PEROW/WSAB Corridor Alternatives Analysis Report[1] and recommended two LRT alternatives for further study: West Bank 3 and the East Bank.

Following completion of the AA, Metro completed the WSAB Technical Refinement Study in 2015 focusing on the design and feasibility of five key issue areas along the 19-mile portion of the WSAB Transit Corridor within LA County:

- Access to Union Station in downtown Los Angeles
- Northern Section Options
- Huntington Park Alignment and Stations
- New Green Line Station
- Southern Terminus at Pioneer Station in Artesia

In September 2016, Metro initiated the WSAB Transit Corridor Environmental Study (Environmental Study) with the goal of environmentally clearing the project under the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA).

[1] Initial concepts evaluated in the SCAG report included transit connections and modes for the 34-mile corridor from Union Station in downtown Los Angeles to the City of Santa Ana. Modes included low speed magnetic levitation (maglev) heavy rail, light rail, and bus rapid transit (BRT).

Metro issued a Notice of Preparation (NOP) on May 25, 2017, with a revised NOP issued on June 14, 2017, extending the comment period. In June 2017, Metro held public scoping meetings in the Cities of Bellflower, Los Angeles, South Gate, and Huntington Park. Metro provided Project updates and information to stakeholders with the intent to receive comments and questions through a comment period that ended in August 2017. A total of 1,122 comments were received during the public scoping period from May through August 2017. The comments focused on concerns regarding the Northern Alignment options, with specific concerns related to potential impacts to Alameda Street with an aerial alignment. Given potential visual and construction issues raised through public scoping, additional Northern Alignment concepts were evaluated.

In February 2018, the Metro Board of Directors approved further study of the alignment in the Northern Section due to community input during the 2017 scoping meetings. A second alternatives screening process was initiated to evaluate the original four Northern Alignment options and four new Northern Alignment concepts. The final Northern Alignment Alternatives and Concepts Updated Screening Report was completed in May 2018 (Metro 2018a). The alternatives were further refined and, based on the findings of the second screening analysis and the input gathered from the public outreach meetings, the Metro Board of Directors approved Build Alternatives E and G for further evaluation.

On July 11, 2018, Metro issued a revised and recirculated CEQA Notice of Preparation, thereby initiating a scoping comment period. The purpose of the revised Notice of Preparation was to inform the public of the Metro Board's decision to carry forward Alternatives E and G into the Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR). During the scoping period, one agency and three public scoping meetings were held in the Cities of Los Angeles, Cudahy, and Bellflower. The meetings provided Project updates and information to stakeholders with the intent to receive comments and questions to support the environmental process. The comment period for scoping ended in August 24, 2018; over 250 comments were received.

Following the July 2018 scoping period, a number of Project refinements were made to address comments received, including additional grade separations, removing certain stations with low ridership, and removing the Bloomfield extension option. The Metro Board adopted these Project refinements at their November 2018 meeting.

1.3 Report Purpose and Structure

This Impact Analysis Report examines the environmental effects of the Project as it relates to energy use. The report is organized into nine sections:

- Section 1 – Introduction
- Section 2 – Project Description
- Section 3 – Regulatory Framework
- Section 4 – Affected Environment / Existing Conditions
- Section 5 – Environmental Consequences / Environmental Impacts
- Section 6 – California Environmental Quality Act Determination
- Section 7 – Construction Impacts
- Section 8 – Project Measures and Mitigation Measures
- Section 9 – References

1.4 General Background

Energy powers cars, lights, and heats homes, and is consumed either directly or indirectly through various means. An example of direct energy consumption is the gasoline consumed when a person drives a car, in which the energy consumption is directly associated with the use of the vehicle. An example of indirect energy use is the energy used to manufacture the vehicle. Keeping a vehicle in a garage does not directly consume energy, but because it was manufactured in a factory that used energy to produce it, the owner of the vehicle has indirectly consumed energy. In regard to the LRT systems, direct energy consumption includes energy that is required for propulsion, vehicle heating, cooling and ventilation systems, and the electricity consumed to power station facilities. Indirect energy consumption includes energy required for maintenance, changes in energy use resulting from land use changes, and changes in energy use resulting from shifts in the way people prefer to travel.

1.5 Methodology

The operational analysis considers direct energy consumption from electricity used to power the transit system and operations at the MSF, as well as indirect energy consumption resulting from changes in overall regional on-road traffic vehicle miles traveled (VMT). The operational energy analysis is primarily based on revenue service of LRT car miles and regional VMT data presented in Table 1.1. The revenue service of LRT miles refers to hours of operation that the LRT system would be transporting passengers, including the frequency of trips (i.e., headways), the number of cars per train, and the distance traveled by each car. It does not include travel to and from the maintenance and storage facility. As noted in the bottom of the table, a 5 percent buffer adjustment has been applied to account for miles traveled when trains are out of service.

Energy intensity factors obtained from the *Metro Energy and Resource Report* were used to estimate LRT and station energy consumption for the No Build, Build Alternatives, and Design Options. Energy intensity factors relate energy inputs (such as British thermal units (BTUs) consumed) to resulting output (such as a mile traveled). Metro estimates that for every mile of LRT travel, approximately 6,635 BTUs (7 megajoules) of electricity is consumed. This energy intensity factor was applied to the LRT miles presented in Table 1.1 to estimate annual LRT propulsion energy consumption.

Table 1.1. Countywide Vehicle Miles Traveled and WSAB Project Revenue Light Rail Transit Car Miles

Condition/Alternative	Regional Roadway VMT (annual, millions)	LRT Car Miles (annual)
CEQA Baseline Year 2017		
Existing	160,746	N/A
Existing + Alternative 1	160,671	2,109,180
Existing + Alternative 2	160,672	2,120,399
Existing + Alternative 3	160,734	1,604,323
Existing + Alternative 4	160,721	706,800
Existing + Design Option 1	160,664	2,109,180
Existing + Design Option 2	160,670	2,109,180

Condition/Alternative	Regional Roadway VMT (annual, millions)	LRT Car Miles (annual)
NEPA/CEQA Baseline Year 2042[1]		
No Build Alternative	210,396	N/A
Alternative 1	210,261	2,109,180
Alternative 2	210,266	2,120,399
Alternative 3	210,372	1,604,323
Alternative 4	210,351	706,800
Design Option 1	210,245	2,109,180
Design Option 2	210,258	2,109,180

Source: TAHA 2020
Notes: [1] *Neighbors for Smart Rail v. Exposition Metro Line Construction Authority* (2013) 57 Cal.4th 439 held that use of dual baselines is appropriate under CEQA provided that one is the existing baseline. The CEQA analysis utilizes the Existing Baseline Year 2017 and a Future Baseline Year 2042.
A 5 percent buffer was added to revenue LRT car mile estimates to account for out-of-service miles.
CEQA = California Environmental Quality Act; LRT = light rail transit; N/A = Not Applicable; NEPA = National Environmental Policy Act; VMT = vehicle miles traveled

For the purposes of this analysis, energy intensity related to on-road vehicle travel is defined as the ratio of energy inputs to a process to the useful outputs from that process (e.g., gallons of fuel per passenger-mile). The California Air Resources Board (CARB) EMFAC2017 mobile source emissions model provides estimates of gallons of gasoline or diesel fuel burned per mile traveled for a given year, vehicle fleet mix, and speed. Generally, traffic in the Affected Area is assumed to be approximately 7 percent trucks based on the Metro regional model. Annual roadway fuel consumption was estimated using the annual VMT data organized by speed bins of five mile-per-hour increments and the corresponding EMFAC2017 fuel consumption factors for the on-road vehicle fleet traveling at the designated speeds. The annual roadway network VMT energy consumption was estimated using the annual fuel consumption and fuel energy content factors derived by the Alternative Fuels Data Center (United States Department of Energy 2014): approximately 118,223 BTU per gallon gasoline and approximately 133,489 BTU per gallon diesel. Energy consumption is assessed on a regional scale for the entirety of the Project. All energy and fuel consumption calculations are shown in Appendix A.

In addition to direct electricity associated with project corridor rail propulsion and facility operations and indirect changes to regional on-road transportation fuels consumption, the assessment of potential impacts related to energy consumption analyzed direct and indirect energy associated with operation of the MSF. The California Emissions Estimator Model (CalEEMod, version 2016.3.2) is the preferred land use development emissions model for use in California. CalEEMod was used to estimate direct electricity and natural gas consumption associated with MSF operations, direct transportation fuels consumption associated with MSF vehicle trips, and indirect electricity consumption associated with water conveyance to and from the MSF.

To satisfy NEPA requirements, significance of a potential effect is determined by considering the "context" (i.e., geographic, biophysical, and social context the effects would occur) and "intensity" (i.e., the severity of the impact, including beneficial and adverse) of the impacts to the environment. Potential adverse effects would occur if Project implementation would result in a wasteful or inefficient consumption of energy resources or place an undue burden

on the regional energy infrastructure capacity. Potential energy effects of the Project are evaluated by examining the Project's forecasted energy demand relative to the No Build Alternative in the context of available fuel, electricity, and natural gas resources, as well as the Project's conformance with Metro's initiatives to improve energy efficiency and provide alternative modes of transit that reduce reliance on fossil fuels. To satisfy CEQA requirements, energy impacts are analyzed in accordance with Appendix G of the *CEQA Guidelines* and considered significant if the Project has the potential to:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

2 PROJECT DESCRIPTION

This section describes the No Build Alternative and the four Build Alternatives studied in the WSAB Transit Corridor Draft EIS/EIR, including design options, station locations, and maintenance and storage facility (MSF) site options. The Build Alternatives were developed through a comprehensive alternatives analysis process and meet the purpose and need of the Project.

The No Build Alternative and four Build Alternatives are generally defined as follows:

- **No Build Alternative -** Reflects the transportation network in the 2042 future baseline year without the proposed Build Alternatives. The No Build Alternative includes the existing transportation network along with planned transportation improvements that have been committed to and identified in the constrained *Metro 2009 Long-Range Transportation Plan* (2009 LRTP) (Metro 2009) and SCAG's *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS) (SCAG 2016), as well as additional projects funded by Measure M that would be completed by 2042.
- **Build Alternatives -** The Build Alternatives consist of a new LRT line that would extend from different termini in the north to the same terminus in the City of Artesia in the south. The Build Alternatives are referred to as:
  - Alternative 1: Los Angeles Union Station to Pioneer Station; the northern terminus would be located underground at Los Angeles Union Station (LAUS) Forecourt
  - Alternative 2: 7th Street/Metro Center to Pioneer Station; the northern terminus would be located underground at 8th Street between Figueroa Street and Flower Street near 7th Street/Metro Center Station
  - Alternative 3: Slauson/A (Blue) Line to Pioneer Station; the northern terminus would be located just north of the intersection of Long Beach Avenue and Slauson Avenue in the City of Los Angeles, connecting to the current A (Blue) Line Slauson Station
  - Alternative 4: I-105/C (Green) Line to Pioneer Station; the northern terminus would be located at I-105 in the city of South Gate, connecting to the C (Green) Line along the I-105

Two design options are under consideration for Alternative 1. Design Option 1 would locate the northern terminus station box at the LAUS Metropolitan Water District (MWD) east of LAUS and the MWD building, below the baggage area parking facility. Design Option 2 would add a Little Tokyo Station along the WSAB alignment. The design options are further discussed in Section 2.1.4.5.

Figure 2-1 illustrates the four Build Alternatives and the design options. In the north, Alternative 1 would terminate at LAUS and primarily follow Alameda Street south underground to the proposed Arts/Industrial District Station. Alternative 2 would terminate near the existing 7th Street/Metro Center Station in the Downtown Transit Core and would primarily follow 8th Street east underground to the proposed Arts/Industrial District Station.

Figure 2-1. Project Alternatives

Source: Metro, 2020

From the Arts/Industrial District Station to the southern terminus at Pioneer Station, Build Alternatives 1 and 2 share a common alignment. South of Olympic Boulevard, the Build Alternatives would transition from an underground configuration to an aerial configuration, cross over the Interstate (I-) 10 freeway and then parallel the existing Metro A (Blue) Line along the Wilmington Branch ROW as it proceeds south. At Slauson Avenue, Alternatives 1, 2, and 3 would turn east and transition to an at-grade configuration to follow the La Habra Branch ROW along Randolph Street. At the San Pedro Subdivision ROW, the Build Alternatives would turn southeast to follow the San Pedro Subdivision ROW and then transition to the Pacific Electric Right-of-Way (PEROW), south of I-105 freeway. Build Alternatives 1, 2, 3, and 4 would then follow the PEROW to the southern terminus at the proposed Pioneer Station in Artesia. The Build Alternatives would be grade-separated where warranted, as indicated on Figure 2-2.

Figure 2-2. Project Alignment by Grade

Source: Metro, 2020

2.1 Geographic Sections

The approximately 19-mile corridor is divided into two geographic sections—the Northern and Southern Sections. The boundary between the Northern and Southern Sections occurs at Florence Avenue in the City of Huntington Park.

2.1.1 Northern Section

The Northern Section of the Project Corridor includes approximately 8 miles of Build Alternatives 1 and 2 and 3.8 miles for Alternative 3. Alternative 4 is not within the Northern Section. The Northern Section covers the geographic area from downtown Los Angeles to Florence Avenue in the City of Huntington Park and would generally traverse the Cities of Los Angeles, Vernon, Huntington Park, and Bell, and the unincorporated Florence-Firestone community of LA County (Figure 2-3). Build Alternatives 1 and 2 would traverse portions of the Wilmington Branch (between approximately Martin Luther King Jr Boulevard along Long Beach Avenue to Slauson Avenue). Build Alternatives 1, 2, and 3 would traverse portions of the La Habra Branch ROW (between Slauson Avenue along Randolph Street to Salt Lake Avenue), and San Pedro Subdivision ROW (between Randolph Street to approximately Paramount Boulevard) along the Northern Section.

Figure 2-3. Northern Section

Source: Metro, 2020

2.1.2 Southern Section

The Southern Section includes approximately 11 miles of Build Alternatives 1, 2, and 3 and includes all 6.6 miles of Alternative 4. The Southern Section covers the geographic area from south of Florence Avenue in the City of Huntington Park to the City of Artesia and traverses the Cities of Huntington Park, Cudahy, South Gate, Downey, Paramount, Bellflower, Cerritos, and Artesia (Figure 2-4). In the Southern Section, all four Build Alternatives would utilize portions of the San Pedro Subdivision and the Metro-owned PEROW (between approximately Paramount Boulevard to South Street).

Figure 2-4. Southern Section

Source: Metro, 2020

2.1.3 No Build Alternative

For the NEPA evaluation, the No Build Alternative is evaluated in the context of the existing transportation facilities in the Project Corridor (the corridor extends approximately 2 miles from either side of the proposed alignment) and other capital transportation improvements and/or transit and highway operational enhancements that are reasonably foreseeable. Because the No Build Alternative provides the background transportation network, against which the Build Alternatives' impacts are identified and evaluated, the No Build Alternative does not include the Project.

The No Build Alternative reflects the transportation network in 2042 and includes the existing transportation network along with planned transportation improvements that have been committed to and identified in the constrained Metro 2009 LRTP and the SCAG 2016 RTP/SCS, as well as additional projects funded by Measure M, a sales tax initiative approved by voters in November 2016. The No Build Alternative includes Measure M projects that are scheduled to be completed by 2042.

Table 2.1 lists the existing transportation network and planned improvements included as part of the No Build Alternative.

Table 2.1. No Build Alternative – Existing Transportation Network and Planned Improvements

Project	To / From	Location Relative to Study Area
Rail (Existing)		
Metro Rail System (LRT and Heavy Rail Transit)	Various locations	Within Study Area
Metrolink (Southern California Regional Rail Authority) System	Various locations	Within Study Area
Rail (Under Construction/Planned)[1]		
Metro Westside D (Purple) Line Extension	Wilshire/Western to Westwood/VA Hospital	Outside Study Area
Metro C (Green) Line Extension[2] to Torrance	96th Street Station to Torrance	Outside Study Area
Metro C (Green) Line Extension	Norwalk to Expo/Crenshaw[3]	Outside Study Area
Metro East-West Line/Regional Connector/Eastside Phase 2	Santa Monica to Lambert Santa Monica to Peck Road	Within Study Area
Metro North-South Line/Regional Connector/Foothill Extension to Claremont Phase 2B	Long Beach to Claremont	Within Study Area
Metro Sepulveda Transit Corridor	Metro G (Orange) Line to Metro E (Expo) Line	Outside Study Area
Metro East San Fernando Valley Transit Corridor	Sylmar to Metro G (Orange) Line	Outside Study Area
Los Angeles World Airport Automated People Mover	96th Street Station to LAX Terminals	Outside Study Area
Metrolink Capital Improvement Projects	Various projects	Within Study Area

Project	To / From	Location Relative to Study Area
California High-Speed Rail	Burbank to LA LA to Anaheim	Within Study Area
Link US[4]	LAUS	Within Study Area
Bus (Existing)		
Metro Bus System (including BRT, Express, and local)	Various locations	Within Study Area
Municipality Bus System[5]	Various locations	Within Study Area
Bus (Under Construction/Planned)		
Metro G (Orange) Line (BRT)	Del Mar (Pasadena) to Chatsworth Del Mar (Pasadena) to Canoga Canoga to Chatsworth	Outside Study Area
Vermont Transit Corridor (BRT)	120th Street to Sunset Boulevard	Outside Study Area
North San Fernando Valley BRT	Chatsworth to North Hollywood	Outside Study Area
North Hollywood to Pasadena	North Hollywood to Pasadena	Outside Study Area
Highway (Existing)		
Highway System	Various locations	Within Study Area
Highway (Under Construction/Planned)		
High Desert Multi-Purpose Corridor	SR-14 to SR-18	Outside Study Area
I-5 North Capacity Enhancements	SR-14 to Lake Hughes Rd	Outside Study Area
SR-71 Gap Closure	I-10 to Rio Rancho Rd	Outside Study Area
Sepulveda Pass Express Lane	I-10 to US-101	Outside Study Area
SR-57/SR-60 Interchange Improvements	SR-70/SR-60	Outside Study Area
I-710 South Corridor Project (Phases 1 and 2)	Ports of Long Beach and LA to SR-60	Within Study Area
I-105 Express Lane	I-405 to I-605	Within Study Area
I-5 Corridor Improvements	I-605 to I-710	Outside Study Area

Source: Metro 2018, WSP 2019
Notes: [1] Where extensions are proposed for existing Metro rail lines, the origin/destination is defined for the operating scheme of the entire rail line following completion of the proposed extensions and not just the extension itself.
[2] Metro C (Green) Line extension to Torrance includes new construction from Redondo Beach to Torrance; however, the line will operate from Torrance to 96th Street.
[3] The currently under construction Metro Crenshaw/LAX Line will operate as the Metro C (Green) Line.
[4] Link US rail walk times included only.
[5] The municipality bus network system is based on service patterns for Bellflower Bus, Cerritos on Wheels, Cudahy Area Rapid Transit, Get Around Town Express, Huntington Park Express, La Campana, Long Beach Transit, Los Angeles Department of Transportation, Norwalk Transit System, and the Orange County Transportation Authority.
BRT = Bus Rapid Transit; LAUS = Los Angeles Union Station; LAX = Los Angeles International Airport; SR = State Route; VA = Veterans Affairs

2.1.4 Proposed Alignment Configuration for the Build Alternatives

This section summarizes the alignment for each of the Build Alternatives. The general characteristics of four Build Alternatives are summarized in Table 2.2. Figure 2-5 illustrates the freeway crossings along the alignment. Additionally, the Build Alternatives would require relocation of existing freight rail tracks within the ROW to maintain existing operations where there would be overlap with the proposed light rail tracks. Figure 2-6 depicts the alignment sections that would require freight track relocation.

Table 2.2. Summary of Build Alternative Components

Component	Quantity			
Alternatives	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Alternative 4**
Alignment Length	19.3 miles	19.3 miles	14.8 miles	6.6 miles
Stations Configurations	11 3 aerial; 6 at-grade; 2 underground[3]	12 3 aerial; 6 at-grade; 3 underground	9 3 aerial; 6 at-grade	4 1 aerial; 3 at-grade
Parking Facilities	5 (approximately 2,780 spaces)	5 (approximately 2,780 spaces)	5 (approximately 2,780 spaces)	4 (approximately 2,180 spaces)
Length of underground, at-grade, and aerial	2.3 miles underground; 12.3 miles at-grade; 4.7 miles aerial[1]	2.3 miles underground; 12.3 miles at-grade; 4.7 miles aerial[1]	12.2 miles at-grade; 2.6 miles aerial[1]	5.6 miles at-grade; 1.0 miles aerial[1]
At-grade crossings	31	31	31	11
Freight crossings	10	10	9	2
Freeway Crossings	6 (3 freeway undercrossings[2] at I-710; I-605, SR-91)	6 (3 freeway undercrossings[2] at I-710; I-605, SR-91)	4 (3 freeway undercrossings[2] at I-710; I-605, SR 91)	3 (2 freeway undercrossings[2] at I-605, SR-91)
Elevated Street Crossings	25	25	15	7
River Crossings	3	3	3	1
TPSS Facilities	22[3]	23	17	7
Maintenance and Storage Facility site options	2	2	2	2

Source: WSP 2020

Notes: [1] Alignment configuration measurements count retained fill embankments as at-grade.

[2] The light rail tracks crossing beneath freeway structures.

[3] Under Design Option 2 – Add Little Tokyo Station, an additional underground station and TPSS site would be added under Alternative 1

Figure 2-5. Freeway Crossings

Source: WSP, 2020

Figure 2-6. Existing Rail Right-of-Way Ownership

Source: WSP, 2020

2.1.4.1 Alternative 1

The total alignment length of Alternative 1 would be approximately 19.3 miles, consisting of approximately 2.3 miles of underground, 12.3 miles of at-grade, and 4.7 miles of aerial alignment. Alternative 1 would include 11 new LRT stations (note: under Design Option 2 Little Tokyo Station would be an additional underground station), 2 of which would be underground, 6 would be at-grade, and 3 would be aerial. Five of the stations would include parking facilities, providing a total of approximately 2,780 new parking spaces. The alignment would include 32 at-grade crossings, 3 freeway undercrossings, 2 aerial freeway crossings, 1 underground freeway crossing, 3 river crossings, 25 aerial road crossings, and 10 freight crossings.

In the north, Alternative 1 would begin at a proposed underground station at/near LAUS either beneath the LAUS Forecourt or behind the MWD building (Design Option 1) beneath the baggage area parking facility. Crossovers would be located on the north and south ends of the station box with tail tracks extending approximately 1,200 feet north of the station box. A tunnel extraction portal would be located within the tail tracks for both Alternative 1 terminus station options.

From LAUS, the alignment would continue underground crossing under the US-101 freeway and the existing Metro L (Gold) Line aerial structure and continue south beneath Alameda Street to the optional Little Tokyo Station between 1st Street and 2nd Street (note: under Design Option 2, Little Tokyo Station would be constructed). From the optional Little Tokyo Station, the alignment would continue underground beneath Alameda Street to the proposed Arts/Industrial District Station under Alameda Street between 6th Street and Industrial Street. (Note, Alternative 2 would have the same alignment as Alternative 1 from this point south. Refer to Section 2.1.4.2 for additional information on Alternative 2.)

The underground alignment would continue south under Alameda Street to 8th Street, where the alignment would curve to the west and transition to an aerial alignment south of Olympic Boulevard. The alignment would cross over the I-10 freeway in an aerial viaduct structure and continue south, parallel to the existing Metro A (Blue) Line at Washington Boulevard. The alignment would continue in an aerial configuration along the eastern half of Long Beach Avenue within the UPRR owned Wilmington Branch ROW, east of the existing Metro A (Blue) Line and continue south to the proposed Slauson/A Line Station. The aerial alignment would pass over the existing pedestrian bridge at E. 53rd Street. The Slauson/A Line Station would serve as a transfer point to the Metro A (Blue) Line via a pedestrian bridge. The vertical circulation would be connected at street level on the north side of the station via stairs, escalators, and elevators. (The Slauson/A Line Station would serve as the northern terminus for Alternative 3; refer to Section 2.1.4.3 for additional information on Alternative 3.)

South of the Slauson/A Line Station, the alignment would turn east along the existing La Habra Branch ROW (also owned by UPRR) in the median of Randolph Street. The alignment would be on the north side of the La Habra Branch ROW and would require the relocation of existing freight tracks to the southern portion of the ROW. The alignment would transition to an at-grade configuration at Alameda Street and would proceed east along the Randolph Street median. Wilmington Avenue, Regent Street, Albany Street, and Rugby Avenue would be closed to traffic crossing the ROW, altering the intersection design to a right-in, right-out configuration. The proposed Pacific/Randolph Station would be located just east of Pacific Boulevard.

From the Pacific/Randolph Station, the alignment would continue east at-grade. Rita Avenue would be closed to traffic crossing the ROW, altering the intersection design to a right-in, right-out configuration. At the San Pedro Subdivision ROW, the alignment would transition to an aerial configuration and turn south to cross over Randolph Street and the freight tracks, returning to an at-grade configuration north of Gage Avenue. The alignment would be located on the east side of the existing San Pedro Subdivision ROW freight tracks and the existing track(s) would be relocated to the west side of the ROW. The alignment would continue at-grade within the San Pedro Subdivision ROW to the proposed at-grade Florence/Salt Lake Station south of the Salt Lake Avenue/Florence Avenue intersection.

South of Florence Avenue, the alignment would extend from the proposed Florence/Salt Lake Station in the City of Huntington Park to the proposed Pioneer Station in the City of Artesia, as shown in Figure 2-4. The alignment would continue southeast from the proposed at-grade Florence/Salt Lake Station within the San Pedro Subdivision ROW, crossing Otis Avenue, Santa Ana Street, and Ardine Street at-grade. The alignment would be located on the east side of the existing San Pedro Subdivision freight tracks, and the existing tracks would be relocated to the west side of the ROW. South of Ardine Street, the alignment would transition to an aerial structure to cross over the existing UPRR tracks and Atlantic Avenue. The proposed Firestone Station would be located on an aerial structure between Atlantic Avenue and Florence Boulevard.

The alignment would then cross over Firestone Boulevard and transition back to an at-grade configuration prior to crossing Rayo Avenue at-grade. The alignment would continue south along the San Pedro Subdivision ROW, crossing Southern Avenue at-grade and continuing at-grade until it transitions to an aerial configuration to cross over the LA River. The proposed LRT bridge would be constructed next to the existing freight bridge. South of the LA River, the alignment would transition to an at-grade configuration crossing Frontage Road at-grade, then passing under the I-710 freeway through the existing box tunnel structure and then crossing Miller Way. The alignment would then return to an aerial structure to cross over the Rio Hondo Channel. South of the Rio Hondo Channel, the alignment would briefly transition back to an at-grade configuration and then return to an aerial structure to cross over Imperial Highway and Garfield Avenue. South of Garfield Avenue, the alignment would transition to an at-grade configuration and serve the proposed Gardendale Station north of Gardendale Street.

From the Gardendale Station, the alignment would continue south in an at-grade configuration, crossing Gardendale Street and Main Street to connect to the proposed I-105/C Line Station, which would be located at-grade north of Century Boulevard. This station would be connected to the new infill C (Green) Line Station in the middle of the freeway via a pedestrian walkway on the new LRT bridge. The alignment would continue at-grade, crossing Century Boulevard and then over the I-105 freeway in an aerial configuration within the existing San Pedro Subdivision ROW bridge footprint. A new Metro C (Green) Line Station would be constructed in the median of the I-105 freeway. Vertical pedestrian access would be provided from the LRT bridge to the proposed I-105/C Line Station platform via stairs and elevators. To accommodate the construction of the new station platform, the existing Metro C (Green) Line tracks would be widened and, as part of the I-105 Express Lanes Project, and the I-105 lanes would be reconfigured. (The I-105/C Line Station would serve as the northern terminus for Alternative 4; refer to Section 2.1.4.4 for additional information on this alternative.)

South of the I-105 freeway, the alignment would continue at-grade within the San Pedro Subdivision ROW. In order to maintain freight operations and allow for freight train crossings, the alignment would transition to an aerial configuration as it turns southeast and enter the PEROW. The existing freight track would cross beneath the aerial alignment and align on the north side of the PEROW east of the San Pedro Subdivision ROW. The proposed Paramount/Rosecrans Station would be located in an aerial configuration west of Paramount Boulevard and north of Rosecrans Avenue. The existing freight track would be relocated to the east side of the alignment beneath the station viaduct.

The alignment would continue southeast in an aerial configuration over the Paramount Boulevard/Rosecrans Avenue intersection and descend to an at-grade configuration. The alignment would return to an aerial configuration to cross over Downey Avenue descending back to an at-grade configuration north of Somerset Boulevard. One of the adjacent freight storage tracks at the World Energy facility would be relocated to accommodate the new LRT tracks and maintain storage capacity. There are no active freight tracks south of the World Energy facility.

The alignment would cross Somerset Boulevard at-grade. South of Somerset Boulevard, the at-grade alignment would parallel the existing Bellflower Bike Trail that is currently aligned on the south side of the PEROW. The alignment would continue at-grade crossing Lakewood Boulevard, Clark Avenue, and Alondra Boulevard. The proposed at-grade Bellflower Station would be located west of Bellflower Boulevard.

East of Bellflower Boulevard, the Bellflower Bike Trail would be realigned to the north side of the PEROW to accommodate an existing historic building located near the southeast corner of Bellflower Boulevard and the PEROW. It would then cross back over the LRT tracks at-grade to the south side of the ROW. The LRT alignment would continue southeast within the PEROW and transition to an aerial configuration at Cornuta Avenue, crossing over Flower Street and Woodruff Avenue. The alignment would return to an at-grade configuration at Walnut Street. South of Woodruff Avenue, the Bellflower Bike Trail would be relocated to the north side of the PEROW. Continuing southeast, the LRT alignment would cross under the SR-91 freeway in an existing underpass. The alignment would cross over the San Gabriel River on a new bridge, replacing the existing abandoned freight bridge. South of the San Gabriel River, the alignment would transition back to an at-grade configuration before crossing Artesia Boulevard at-grade.

East of Artesia Boulevard the alignment would cross beneath the I-605 freeway in an existing underpass. Southeast of the underpass, the alignment would continue at-grade, crossing Studebaker Road. North of Gridley Road, the alignment would transition to an aerial configuration to cross over 183rd Street and Gridley Road. The alignment would return to an at-grade configuration at 185th Street, crossing 186th Street and 187th Street at-grade. The alignment would then pass through the proposed Pioneer Station on the north side of Pioneer Boulevard at-grade. Tail tracks accommodating layover storage for a three-car train would extend approximately 1,000 feet south from the station, crossing Pioneer Boulevard and terminating west of South Street.

2.1.4.2 Alternative 2

The total alignment length of Alternative 2 would be approximately 19.3 miles, consisting of approximately 2.3 miles of underground, 12.3 miles of at-grade, and 4.7 miles of aerial alignment. Alternative 2 would include 12 new LRT stations, 3 of which would be underground, 6 would be at-grade, and 3 would be aerial. Five of the stations would include parking facilities, providing a total of approximately 2,780 new parking spaces. The alignment would include 32 at-grade crossings, 3 freeway undercrossings, 2 aerial freeway crossings, 1 underground freeway crossing, 3 river crossings, 25 aerial road crossings, and 10 freight crossings.

In the north, Alternative 2 would begin at the proposed WSAB 7th Street/Metro Center Station, which would be located underground beneath 8th Street between Figueroa Street and Flower Street. A pedestrian tunnel would provide connection to the existing 7th Street/Metro Center Station. Tail tracks, including a double crossover, would extend approximately 900 feet beyond the station, ending east of the I-110 freeway. From the 7th Street/Metro Center Station, the underground alignment would proceed southeast beneath 8th Street to the South Park/Fashion District Station, which would be located west of Main Street beneath 8th Street.

From the South Park/Fashion District Station, the underground alignment would continue under 8th Street to San Pedro Street, where the alignment would turn east toward 7th Street, crossing under privately owned properties. The tunnel alignment would cross under 7th Street and then turn south at Alameda Street. The alignment would continue south beneath Alameda Street to the Arts/Industrial District Station located under Alameda Street between 7th Street and Center Street. A double crossover would be located south of the station box, south of Center Street. From this point, the alignment of Alternative 2 would follow the same alignment as Alternative 1, which is described further in Section 2.1.4.

2.1.4.3 Alternative 3

The total alignment length of Alternative 3 would be approximately 14.8 miles, consisting of approximately 12.2 miles of at-grade, and 2.6 miles of aerial alignment. Alternative 3 would include 9 new LRT stations, 6 would be at-grade and 3 would be aerial. Five of the stations would include parking facilities, providing a total of approximately 2,780 new parking spaces. The alignment would include 32 at-grade crossings, 3 freeway undercrossings, 1 aerial freeway crossing, 3 river crossings, 15 aerial road crossings, and 9 freight crossings. In the north, Alternative 3 would begin at the Slauson/A Line Station and follow the same alignment as Alternatives 1 and 2, described in Section 2.1.4.

2.1.4.4 Alternative 4

The total alignment length of Alternative 4 would be approximately 6.6 miles, consisting of approximately 5.6 miles of at-grade and 1.0 mile of aerial alignment. Alternative 3 would include 4 new LRT stations, 3 would be at-grade, and 1 would be aerial. Four of the stations would include parking facilities, providing a total of approximately 2,180 new parking spaces. The alignment would include 12 at-grade crossings, 2 freeway undercrossings, 1 aerial freeway crossing, 1 river crossing, 7 aerial road crossings, and 2 freight crossings. In the north, Alternative 4 would begin at the I-105/C Line Station and follow the same alignment as Alternatives 1, 2, and 3, described in Section 2.1.4.

2.1.4.5 Design Options

Alternative 1 includes two design options:

- **Design Option 1:** LAUS at the Metropolitan Water District (MWD) – The LAUS station box would be located east of LAUS and the MWD building, below the baggage area parking facility. Crossovers would be located on the north and south ends of the station box with tail tracks extending approximately 1,200 feet north of the station box. From LAUS, the underground alignment would cross under the US-101 freeway and the existing Metro L (Gold) Line aerial structure and continue south beneath Alameda Street to the optional Little Tokyo Station between Traction Avenue and 1st Street. The underground alignment between LAUS and the Little Tokyo Station would be located to the east of the base alignment.
- **Design Option 2:** Add the Little Tokyo Station – Under this design option, the Little Tokyo Station would be constructed as an underground station and there would be a direct connection to the Regional Connector Station in the Little Tokyo community. The alignment would proceed underground directly from LAUS to the Arts/Industrial District Station primarily beneath Alameda Street.

2.2 Maintenance and Storage Facility

MSFs accommodate daily servicing and cleaning, inspection and repairs, and storage of light rail vehicles (LRVs). Activities may take place in the MSF throughout the day and night depending upon train schedules, workload, and the maintenance requirements.

Two MSF options are evaluated; however, only one MSF would be constructed as part of the Project. The MSF would have storage tracks, each with sufficient length to store three-car train sets and a maintenance-of-way vehicle storage. The facility would include a main shop building with administrative offices, a cleaning platform, a traction power substation (TPSS), employee parking, a vehicle wash facility, a paint and body shop, and other facilities as needed. The east and west yard leads (i.e., the tracks leading from the mainline to the facility) would have sufficient length for a three-car train set. In total, the MSF would need to accommodate approximately 80 LRVs to serve the Project's operations plan.

Two potential locations for the MSF have been identified—one in the City of Bellflower and one in the City of Paramount. These options are described further in the following sections.

2.2.1 Bellflower MSF Site Option

The Bellflower MSF site option is bounded by industrial facilities to the west, Somerset Boulevard and apartment complexes to the north, residential homes to the east, and the PEROW and Bellflower Bike Trail to the south. The site is approximately 21 acres in area and can accommodate up to 80 vehicles (Figure 2-7).

2.2.2 Paramount MSF Site Option

The Paramount MSF site option is bounded by the San Pedro Subdivision ROW on the west, Somerset Boulevard to the south, industrial and commercial uses on the east, and All-American City Way to the north. The site is 22 acres and could accommodate up to 80 vehicles (Figure 2-7).

Figure 2-7. Maintenance and Storage Facility Options

Source: WSP, 2020

3 REGULATORY FRAMEWORK

This section identifies applicable plans and regulations related to energy.

Federal

- The Energy Policy and Conservation Act of 1975
- Alternative Motor Fuels Act of 1988
- Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and Congestion Mitigation and Air Quality Improvement Program
- Transportation Equity Act for the 21st Century (TEA-21)
- Moving Ahead for Progress in the 21st Century Act (MAP-21)
- Energy Policy Act of 1992
- Energy Policy Act of 2005
- Energy Independence and Security Act of 2007
- Executive Order (EO) 13123
- Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One (2019)

State

- California Energy Commission (CEC)
- California Public Utilities Commission (CPUC)
- Alternative and Renewable Fuel and Vehicle Technology Program
- California Transportation Plan (CTP)
- California Code of Regulations (CCR), Title 13
- California Code of Regulations (CCR), Energy Efficiency Standards
- Executive Order S-3-05
- Executive Order B-30-15
- Assembly Bill 2076
- Assembly Bill 1493
- Senate Bill 1389, Chapter 568, Statutes of 2002
- Senate Bill 100
- Senate Bill 743
- Senate Bill 350
- Senate Bill 375
- Senate Bill X1-2 and Senate Bill 250

Regional

- Southern California Association of Governments (SCAG) 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy
- Metro Energy Conservation and Management Plan (ECMP)
- Transportation Electrification Partnership Leadership Group

Local

- City of Los Angeles General Plan
- City of Vernon General Plan
- City of Huntington Park General Plan

- Los Angeles County General Plan 2035
- City of Bell General Plan
- City of Cudahy General Plan
- City of South Gate General Plan
- City of Downey General Plan
- City of Paramount General Plan
- City of Artesia General Plan
- City of Cerritos General Plan

3.1 Federal

3.1.1 The Energy Policy and Conservation Act of 1975

The Energy Policy and Conservation Act was enacted for the purpose of serving the nation's energy demands and promoting conservation methods when feasibly obtainable. This Act mandated vehicle economy standards, extended oil price controls to 1979, and directed the creation of a strategic petroleum reserve.

3.1.2 Alternative Motor Fuels Act of 1988

The Alternative Motor Fuels Act amended a portion of the Energy Policy and Conservation Act to encourage the use of alternative fuels, including electricity. This Act directed the Secretary of Energy to ensure that the maximum practicable number of federal passenger automobiles and light duty trucks be alcohol-powered vehicles, dual energy vehicles, natural gas-powered vehicles or natural gas dual energy vehicles. This Act also directed the Secretary of Energy to conduct a study regarding such vehicles' performance, fuel economy, safety, and maintenance costs and report to Congress the results of a feasibility study concerning the disposal of such alternative-fueled federal vehicles.

3.1.3 Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and Congestion Mitigation and Air Quality Improvement (CMAQ) Program

The ISTEA was the first federal legislation regarding transportation planning and policy. This Act presented an intermodal approach to highway and transit funding with collaborative planning requirements, giving additional powers to state and local transportation decision-makers and metropolitan planning organizations. This Act also provided funds for non-motorized commuter trails, defined a number of High Priority Corridors to be part of the National Highway System, and called for the designation of up to five high-speed rail corridors.

The CMAQ Program was created under ISTEA. The program was reauthorized under the Transportation Equity Act for the 21st Century (TEA-21) in 1998 and again as part of the Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users (SAFETEA-LU) in 2005. The purpose of the CMAQ Program is to fund transportation projects or programs and related efforts that contribute to air quality improvements and provide congestion relief.

3.1.4 Transportation Equity Act for the 21st Century (TEA-21)

The TEA-21 was enacted in 1998 as the successor legislation to ISTEA and builds on its established initiatives. This Act reauthorized the CMAQ Program and authorized federal highway, highway safety, transit and other surface transportation programs over the next six

years. It combined the continuation and improvement of current programs with new initiatives to meet the challenges of improving traffic safety, protecting and enhancing communities and the natural environment as transportation is provided, and advancing economic growth and competitiveness domestically and internationally through efficient and flexible transportation.

3.1.5 Moving Ahead for Progress in the 21st Century Act (MAP-21)

Signed by President Obama in July 2012, MAP-21 represented the first multi-year transportation authorization enacted since 2005, funding surface transportation programs with more than $105 billion for fiscal years 2013 and 2014. Among the provisions within MAP-21 that relate to energy is the scope of the state and metropolitan planning processes, which aim to "protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns." MAP-21 also authorized $70 million for a public transportation research program that focuses on energy efficiency and system capacity, among other items. With the exception of the provisions of MAP-21, there is no federal legislation related specifically to the subject of energy efficiency in public transportation project development and operation.

3.1.6 Energy Policy Act of 1992

The Energy Policy Act reduces dependence on imported petroleum and improves air quality by addressing all aspects of energy supply and demand, including alternative fuels, renewable energy and energy efficiency. This Act encourages the use of alternative fuels through both regulatory and voluntary activities and through the approaches carried out by the U.S. Department of Energy. It requires federal, state, and alternative fuel provider fleets to acquire alternative fuel vehicles. The Department of Energy's Clean Cities Initiative was established in response to the Energy Policy Act of 1992 to implement voluntary alternative fuel vehicle deployment activities.

3.1.7 Energy Policy Act of 2005

The Energy Policy Act necessitates the development of grant programs, demonstration and testing initiatives, and tax incentives that promote alternative fuels and advanced vehicles production and use. This Act also amends existing regulations, including fuel economy testing procedures and Energy Policy Act of 1992 requirements for federal, state, and alternative fuel provider fleets.

3.1.8 Energy Independence and Security Act of 2007

The Energy Independence and Security Act consists of provisions designed to increase energy efficiency and the availability of renewable energy. Key provisions of this Act include:

- The Corporate Average Fuel Economy (CAFE), which sets a target of 54.5 miles per gallon for the combined fleet of cars and light trucks by model year 2025.
- The Renewable Fuels Standard, which sets a modified standard that starts at 9.0 billion gallons in 2008 and rises to 36 billion gallons by 2022.
- The Energy Efficiency Equipment Standards, which includes a variety of new standards for lighting and for residential and commercial appliance equipment.
- The Repeal of Oil and Gas Tax Incentives, which includes repeal of two tax subsidies in order to offset the estimated cost to implement the CAFE provision.

3.1.9 Executive Order (EO) 13834

Established goals for energy efficiency improvements.

3.1.10 Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program

On September 27, 2019, the United States Environmental Protection Agency and the National Highway Traffic Safety Administration published the "Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program" (84 Code of Federal Regulations (CFR) Vol. 84, No. 188 p. 51310). The Part One Rule revokes California's authority to set its own greenhouse gas emissions standards and set zero-emission vehicle (ZEV) mandates in California. As a result of a loss of the ZEV sales requirements, there may be fewer ZEVs sold and thus additional gasoline-fueled vehicles sold in future years. The change in market share of gasoline vehicles sold in future years would likely increase average vehicle gasoline consumption. It is anticipated that the Part Two Rule will be enacted in 2020 and may include new fuel efficiency standards for gasoline-fueled vehicles.

3.2 State

3.2.1 California Energy Commission (CEC)

The CEC is the state's primary energy policy and planning agency. Created by legislature in 1974, the CEC has five major responsibilities: (1) forecasting future energy needs and keeping historical energy data, (2) licensing thermal power plants 50 megawatts or larger, (3) promoting energy efficiency through appliance and building standards, (4) developing energy technologies and supporting renewable energy, and (5) planning for and directing the state's response to energy emergencies. Senate Bill 1389 (Chapter 568, Statutes of 2002) requires the CEC to prepare a biennial integrated energy policy report assessing major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors. The report also provides policy recommendations to conserve resources, protect the environment, and ensure reliable, secure and diverse energy supplies.

3.2.2 California Public Utilities Commission (CPUC)

The CPUC regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies. It regulates investor-owned electric and natural gas utilities operating in California, including Pacific Gas and Electric Company, Southern California Edison (SCE), San Diego Gas and Electric Company, and Southern California Gas Company. The CPUC also promotes programs to help consumers improve their energy efficiency and lower their energy bills.

3.2.3 Alternative and Renewable Fuel and Vehicle Technology Program

In 2007, Assembly Bill (AB) 118 created the Alternative and Renewable Fuel and Vehicle Technology Program, to be administered by the CEC. This Program authorizes the CEC to award grants, revolving loans, loan guarantees and other appropriate measures to qualified entities to develop and deploy innovative fuel and vehicle technologies that will help achieve California's petroleum reduction, air quality and climate change goals, without adopting or advocating any one preferred fuel or technology. In addition to funding alternative fuel and vehicle projects, this Program also funds workforce training to prepare the workforce required to design, construct, install, operate, produce, service and maintain new fuel vehicles. The statue was amended in 2008 and 2013, which authorized the Energy

Commission to develop and deploy alternative and renewable fuels and advanced transportation technologies to help attain the state's climate change policies.

3.2.1 California Transportation Plan (CTP)

The CTP is a statewide, long-range transportation plan to meet future mobility needs. The Plan defines performance-based goals, policies, and strategies to comply with MAP-21 and to achieve an integrated, multimodal transportation system. The Plan is prepared in response to federal and state requirements and is updated every five years. The Plan addresses how the state will achieve maximum feasible emissions reductions, taking into consideration the use of alternative fuels, new vehicle technology and tailpipe emissions reductions. California Department of Transportation (Caltrans) must consult and coordinate with related state agencies, air quality management districts, public transit operators and regional transportation planning agencies. Caltrans must also provide an opportunity for general public input and submit a final draft of the CTP to the legislature and governor.

3.2.2 California Code of Regulations (CCR), Title 13

The CCR includes vehicle requirements for public transit agencies. Sections 1956.1, 2020, 2023, 2023.1, and 2023.4 of Title 13 of the CCR. The Fleet Rule for Transit Agencies includes stringent exhaust emission standards for new Urban Bus engines and vehicles. The regulation also promotes advanced technologies by providing for zero-emission bus demonstration projects and requiring zero emission bus acquisitions applicable to larger transit agencies.

3.2.3 California Code of Regulations (CCR), Energy Efficiency Standards

Energy consumption of new buildings in California is regulated by State Building Energy Efficiency Standards contained in the CCR, Title 24, Part 2, Chapter 2-53. Title 24 applies to all new construction of both residential and nonresidential buildings, and regulates energy consumed for heating, cooling, ventilation, water heating, and lighting.

3.2.4 Executive Order S-3-05

EO S-3-05 established state GHG emission targets of 1990 levels by 2020 (the same as AB 32, enacted later and discussed below) and 80 percent below 1990 levels by 2050. It calls for the Secretary of the California Environmental Protection Agency (Cal/EPA) to be responsible for the coordination of state agencies and progress reporting. In response to the EO, the Secretary of the Cal/EPA created the Climate Action Team (CAT). California's CAT originated as a coordinating council organized by the Secretary of the Cal/EPA.

3.2.5 Executive Order B-30-15

EO B-30-15 established state GHG emission targets of to reduce GHG emissions 40 percent below their 1990 levels by 2030. The EO establishes GHG emissions reduction targets to reduce emissions to 80 percent below 1990 levels by 2050 and sets an interim target of emissions reductions for 2030 as being necessary to guide regulatory policy and investments in California and put California on the most cost-effective path for long-term emissions reductions.

3.2.1 Assembly Bill 2076

The CEC and the CARB are directed by AB 2076, Reducing Dependence on Petroleum (passed in 2000) to develop and adopt recommendations for reducing dependence on petroleum. A performance-based goal is to reduce petroleum demand to 15 percent less than 2003 demand by 2020.

3.2.2 Assembly Bill 1493

AB 1493 amended the Clean Car Standards (Chapter 200, Statutes of 2002) that require reductions in GHG emissions in new passenger vehicles from 2009 through 2016. The Advanced Clean Cars program extends AB 1493 for model years 2017 to 2025. This program promotes clean fuel technologies (i.e., plug-in hybrids, battery electric vehicles, compressed natural gas vehicles, hydrogen powered vehicles), reduces smog, and provides fuel saving costs.

3.2.3 Senate Bill 1389, Chapter 568, Statutes of 2002

The CEC is responsible for forecasting future energy needs for the state and developing renewable energy resources and alternative renewable energy technologies for buildings, industry, and transportation. Senate Bill 1389 requires the CEC to prepare a biennial integrated energy policy report assessing major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors. The report is also intended to provide policy recommendations to conserve resources, protect the environment, and ensure reliable, secure, and diverse energy supplies. The *2015 Integrated Energy Policy Report*, the most recent report required under Senate Bill 1389, was released to the public in February 2016.

3.2.4 Senate Bill 100

SB 100, California Renewables Portfolio Standard Program: Emissions of Greenhouse Gases, also known as the 100 Percent Clean Energy Act, calls for the State Energy Resources Conservation and Development Commission, and State Air Resources Board to plan for 100 percent of total retail sales of electricity in California to come from eligible renewable energy resources and zero-carbon resources by December 31, 2045.

3.2.5 Senate Bill 743

SB 743 encourages land use and transportation planning decisions and investments to reduce VM) that contribute to GHG emissions, as required by AB 32. SB 743 requires the Office of Planning Research to develop revisions to the *CEQA Guidelines* and establish criteria to determine the significance of transportation impacts of projects within transit priority areas.

3.2.6 Senate Bill 350

SB 350 established a 2030 GHG reduction target of 40 percent below 1990 levels and sets targets for energy efficiency and renewable electricity, among other actions aimed at reducing GHG emissions across the energy and transportation sectors.

3.2.7 Senate Bill 375

SB 375 addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 required the CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035, and task regional metropolitan planning organizations with the preparation of sustainable communities

strategies (SCS) within their regional transportation plans (RTP). The Southern California Association of Governments (SCAG) *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS) (SCAG 2016a) includes a commitment to reduce emissions from transportation sources to comply with SB 375. The *2016-2040 RTP/SCS* states that the region will meet or exceed the SB 375 per capita targets, lowering regional per capita GHG emissions by 8 percent by 2020, 18 percent by 2035, and 22 percent by 2040.

3.2.8 Senate Bill X1-2 and Senate Bill 250

SB X-1 requires all California utilities to generate 33 percent of their electricity from renewables by 2020. SB 250 requires retail seller and publicly owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030.

3.3 Regional

3.3.1 Southern California Association of Governments (SCAG) 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)

With more than 18 million people as of 2010, the SCAG region is the second-most populated metropolitan area in the United States. Growth in population is expected to result in greater demands on the region's transportation system. State and federal mandates require SCAG to prepare a regional transportation plan every four years. The 2016-2040 RTP/SCS provides a long-range vision for regional transportation goals and policies and predicts transportation challenges and the region's future transportation strategy. The 2016-2040 RTP/SCS establishes the following goals relevant to the Project:

- Preserve and ensure a sustainable transportation system.
- Actively encourage and create incentives for energy efficiency, where possible.

SCAG adopted mitigation measures associated with the 2016-2040 RTP/SCS to reduce regional energy use and consumption. These measures include, but are not limited to, working with local jurisdictions and energy providers, through its Energy and Environment Committee, and administration of the Clean Cities program, Sustainability Planning grants program, and other SCAG energy-related planning activities, to encourage energy efficient building development. Additional measures include, pursuing partnerships with SCE, municipal utilities, and the CPUC to promote energy efficient development in the SCAG region, through coordinated planning, data and information sharing activities (SCAG 2016a).

3.3.2 Metro Energy Conservation and Management Plan (ECMP)

In recent years, Metro has implemented several policies and plans to enhance energy efficiency throughout its system. In 2011, Metro published its ECMP (Metro 2011a) to serve as a strategic blueprint for proactively guiding energy use in a sustainable, cost-effective, and efficient manner. The ECMP complements Metro's 2007 *Energy and Sustainability Policy* (Metro 2007), focusing on electricity for rail vehicle propulsion, electricity for rail and bus facility purposes, natural gas for rail and bus facility purposes, and the application of renewable energy. The ECMP addresses current and projected energy needs based on 2010 utility data and existing agency plans to meet increasing ridership through system expansion and new facility construction incorporating Measure R initiatives.

The ECMP examines both supply and demand aspects of energy consumption and analyzes energy use profiles and the various procurement options in terms of rate structures and supply contracts available to the agency. It also identifies opportunities to reduce energy consumption and realize cost savings through the implementation of low-cost operational initiatives and cost-effective capital retrofits. The ECMP includes an evaluation of an optimal organizational structure for its implementation and provides recommended strategies for achieving the objectives set forth. The ECMP strategies follow a process of Plan-Do-Check-Act by establishing the Energy Management Action Plan (EMAP), implementing the EMAP, conducting annual reviews, and adjusting or modifying the EMAP based on gathered feedback and documented performance. In the short term, the ECMP called for expansion of utility data collection and sub-metering of buildings and propulsion injection points to enhance the accuracy of system analyses and identify primary opportunities for improvements.

Following publication of the ECMP, Metro began preparing annual Energy and Resource Reports to provide evaluations on the effectiveness of ECMP strategies. The most recent iteration is the *2018 Energy and Resource Report* (Metro 2019), which analyzes the sustainability and environmental performance of Metro operational activities during the 2017 calendar year. Relative to 2016, Metro operations in 2017 reduced GHG emissions by 29.1 percent (a decrease of over 40,000 metric tons of carbon dioxide equivalent [$MTCO_2e$]), reduced energy use by 0.6 percent (per vehicle revenue mile). These achievements are testaments to the effectiveness of the ECMP. Key accomplishments highlighted in the *2018 Energy and Resource Report* (Metro 2019) include the improvement of air quality by 114 percent in areas of the City with higher population densities, the expansion of electric vehicle charging station availability and Metro's electric vehicle fleet, improvement of Metro's sustainability goals and implementation, implementation of Metro Rail Design Criteria that utilizes sustainable features in project design and encourages the use of third-party certifications such as Leadership in Energy and Environmental Design (LEED) (Metro 2019). Metro's *2017 Energy and Resource Report* (Metro 2017) analyzes the 2016 calendar year and is also relevant for information on systemwide energy usage.

3.3.3 Transportation Electrification Partnership Leadership Group

The Transportation Electrification Partnership Leadership Group is a multi-year partnership among local, regional, and state stakeholders to accelerate progress towards transportation electrification and zero emissions goods movement in the Greater Los Angeles region in advance of the 2028 Olympic and Paralympic Games. Through a series of stakeholder meetings, workshops and interviews, the partnership developed the Zero Emission 2028 Roadmap, which aims to achieve zero emissions from the transportation sector through electrification (TEP 2018).

3.4 Local

3.4.1 City of Los Angeles

The City of Los Angeles has implemented numerous regulations, plans, programs, and policies aimed at reducing citywide energy demands and enhancing energy efficiency. The energy conservation efforts are interrelated with strategies to improve sustainability and regional air quality, as well as transportation and traffic congestion. All projects within the City of Los Angeles are subject to the requirements of the Los Angeles Green Building Code, and implementation of proposed projects is considered in the context of the *Sustainable City pLAn* (City of Los Angeles 2015) which serves as the City's guide for addressing the

challenges presented by climate change. In addition to the Green Building Code and *Sustainable City pLAn*, The Los Angeles City Council has directed the Los Angeles Department of Water and Power (LADWP) to set building electrification targets for 2028 and 2038 in order to align with the city's greenhouse gas targets of 45 percent below 1990 levels by 2025 and 60 percent by 2035 (LA City Council 2018). Collectively, the City of Los Angeles strives to reduce energy demand and enhance energy efficiency by promoting green buildings, encouraging transit-oriented development (TOD), and by approving projects that will reduce VMT and provide alternative modes of transportation.

3.4.2 City of Vernon

The *City of Vernon General Plan* (City of Vernon 2013) was adopted in 2007 and most recently amended in 2015. The Resources Element of the General Plan acknowledges that the City of Vernon recently completed construction of the Malburg Generating Station, which supplies natural-gas-generated electricity to many businesses within the City, reducing the regional energy demand. Table 3.1 summarizes the applicable energy resource goals and policies of the *City of Vernon General Plan*.

Table 3.1. City of Vernon General Plan – Relevant Energy Resources Goals and Policies

Goal/Policy	Description
Goal R-1	Conserve and protect the region's water and energy resources.
Policy R-1.1	Encourage water conservation and the use of recycled water in new developments and by all industries.
Policy R-1.2	Support the use of energy-saving designs and equipment in all new development and reconstruction projects.

Source: City of Vernon, April 2015

3.4.3 City of Huntington Park

The City of Huntington Park published a General Plan in 1992, which contained an Open Space and Conservation Element that addressed energy resources conservation issues and considerations. Table 3.2 summarizes the applicable energy conservation goals and policies of the General Plan.

Table 3.2. City of Huntington Park General Plan – Relevant Energy Conservation Goals and Policies

Goal /Objective/Policy	Description
Goal 3.0	Conserve energy resources through the use of available technology and conservation practices.
Policy 3.1	Encourage innovative site planning and building designs which minimize energy consumption by taking advantage of sun/shade patterns, prevailing winds, landscaping, and building materials.
Policy 3.2	Maintain local legislation to establish, update, and implement energy performance building code requirements in accordance with state and local energy efficiency standards.

Source: City of Huntington Park, 1991

3.4.4 County of Los Angeles

The *Los Angeles County General Plan 2035* (County of Los Angeles 2015), adopted in October 2015, provides the policy framework and establishes the long-range vision for how and where the unincorporated areas of the county will grow. The *Los Angeles County General Plan 2035* includes the Mobility, Land Use Element, and Conservation and Natural Resources Element that relate to energy use. The Mobility Element promotes rail, bus, carpool, bicycle, and pedestrian modes of transportation as alternatives to the single-occupant automobile, and the Land Use Element promotes efficient development and use of land to reduce consumptive land use patterns. Collectively with the Conservation and Natural Resources Element, these three topics address objectives of Los Angeles County in reducing energy consumption through the expansion of public transit use. Table 3.3 summarizes the applicable energy resources goals and policies of the *Los Angeles County General Plan 2035*.

Table 3.3. County of Los Angeles General Plan – Relevant Energy Conservation Goals and Policies

Goal/Policy	Description
Goal C/NR 12	Sustainable management of renewable and non-renewable energy resources.
Policy C/NR 12.1	Encourage the production and use of renewable energy resources.
Policy C/NR 12.2	Encourage the effective management of energy resources, such as ensuring adequate reserves to meet peak demands.
Policy C/NR 12.3	Encourage distributed systems that use existing infrastructure and reduce environmental impacts.

Source: County of Los Angeles, 2015

3.4.5 City of Bell

The City of Bell published an updated General Plan in 2010; however, no updates to the energy resources discussion were made since its original publication in 1996. The document discusses that the City of Bell is largely residential, and that the City supports programs designed to utilize alternative energy sources to conserve limited resources. The City of Bell encourages energy conservation programs and acknowledges that initial high capital outlays could be offset by the cost of energy savings in the long term.

3.4.6 City of Cudahy

The City of Cudahy adopted its General Plan in 2010. The Cudahy General Plan contains a section dedicated to the Conservation Element, which addresses natural resource conservation including energy. Table 3.4 summarizes the applicable energy resources goals and policies of the *Cudahy General Plan* (City of Cudahy 2018).

Table 3.4. City of Cudahy General Plan – Relevant Energy Conservation Goals and Policies

Goal/Policy	Description
Conservation Element Goal 3	The City of Cudahy will reduce energy consumption in public and private developments.
Conservation Element Policy 3.1	The City of Cudahy will reduce City facilities energy demand and equipment that utilizes energy shall incorporate the most economically feasible energy-efficient design standards.
Conservation Element Policy 3.2	The City of Cudahy will encourage the incorporation of energy conservation features in the design of all new development.
Conservation Element Policy 3.3	The City of Cudahy will promote the use of passive design concepts, such as building orientation and landscaping that make use of the natural climate.
Conservation Element Policy 3.4	The City of Cudahy will encourage the use of cost-effective solar energy systems on new construction and consider enactment of a comprehensive solar access ordinance.
Conservation Element Policy 3.5	The City of Cudahy will encourage the efficient use of all energy resources through innovative, modern, and rational physical planning and architecture design.
Air Quality Element Goal 7	The City of Cudahy will reduce emissions associated with energy consumption.
Air Quality Element Policy 7.1	The City of Cudahy will support the use of energy-efficient equipment and design in City facilities and infrastructure.
Air Quality Element Policy 7.2	The City of Cudahy will encourage incorporation of energy conservation features, including passive solar, in new construction and rehabilitation of existing structures.
Air Quality Element Policy 7.3	The City of Cudahy will support recycling programs which reduce emissions associated with manufacturing and waste disposal.
Air Quality Element Policy 7.4	The City of Cudahy will utilize drought resistant vegetation in city landscaping to reduce energy needed to pump water.

Source: City of Cudahy, 2010.

3.4.7 City of South Gate

The City of South Gate published its General Plan 2035 in 2009 to serve as a roadmap for guiding development within the city over the ensuing 25 years. The General Plan 2035 includes a Green City Element that addresses citywide efforts to enhance energy efficiency and improve sustainability. The approaches incorporate policies that are evaluated in the other elements of the General Plan as well. Table 3.5 summarizes the applicable energy resource goals, objectives, and policies of the *South Gate General Plan 2035* (County of South Gate 2009).

Table 3.5. City of South Gate General Plan – Relevant Energy Resources Goals, Objectives, and Policies

Goal/Objective/Policy	Description
Goal Green City 6	Implement a robust green building program.
Objective GC 6.1	Increase the use of green techniques in new buildings, new building sites, and building remodels and retrofits.
Policy.1	All new municipal buildings should meet or exceed silver in the appropriate LEED Rating System, or a comparable green building standard.
Policy.2	The City should encourage green building techniques efforts in single-family homes as well as new municipal, commercial, mixed-use or multifamily residential projects.
Policy.4	The City should emphasize design for water conservation in its green building efforts.
Policy.5	New buildings should meet or exceed California Title 24 energy efficiency requirements.
Policy.6	When feasible or required by law, new development should utilize Low Impact Design (LID) features, including infiltration of stormwater, but LID should not interfere with the City's goals of infill development and appropriate densities as defined in the Community Design Element.

Source: City of South Gate, 2009.

3.4.8 City of Downey

The City of Downey prepared its *Vision 2025 General Plan* (City of Downey 2005) in 2005. The Conservation Chapter of the General Plan contains a subsection dedicated to energy conservation issues and challenges faced by the City. Table 3.6 summarizes the applicable energy resource goals, policies, and programs of the *Downey Vision 2025 General Plan*.

Table 3.6. City of Downey General Plan – Relevant Energy Conservation Goals, Policies, and Programs

Goal/Policy/Program	Description
Goal 4.6	Conserve energy resources.
Policy 4.6.1	Promote conservation of energy by residents and businesses.
Program 4.6.1.1	Provide incentives for people to use renewable energy sources such as solar energy.
Program 4.6.1.2	Implement a program to mitigate potential negative impacts on residents and businesses during energy "blackouts".

Source: City of Downey, 2005.

3.4.9 City of Paramount

The City of Paramount adopted its General Plan in 2007. The portion of the General Plan dedicated to energy conservation is brief, but topically identifies that the City of Paramount will continue to enforce the building energy efficiency standards promulgated by the state, the Uniform Building Code, and other state laws on energy conservation design and insulation. The City committed to encouraging measures that would reduce energy consumption during construction and subsequent operation of new development.

3.4.10 City of Bellflower

No specific energy conservation plans or regulations have been published or adopted by the City of Bellflower.

3.4.11 City of Artesia

The City of Artesia updated its General Plan in 2014, and a theme prevalent throughout the document is an emphasis on green building practices and energy conservation. The General Plan evaluates opportunities for energy savings across several community topics. Table 3.7 summarizes the applicable energy resource topics within the *City of Artesia General Plan* (City of Artesia 2010).

Table 3.7. City of Artesia General Plan – Energy Conservation and Green Building Practices

Topic	Description of Plan Features
Housing Sub-Element – Energy Conservation	City of Artesia requires compliance with the County of Los Angeles Building Code for all new construction.
	Southern California Edison provides incentives for building energy efficient homes and installing Energy-star appliances.
	City of Artesia will explore opportunities for implementing LEED certification into multi-family residential structures.
Community Facilities and Infrastructure Sub-Element	The City of Artesia will support green and sustainable standards and practices through outreach activities that promote water and energy conservation.
Sustainability Element	Reducing municipal, commercial, and residential dependence on fossil fuels and supporting the development of renewable energy.
	Maximum energy efficiency and conservation in City operations, including cost effective renewable sources of energy and fuel efficiency for City fleet.
	Adopt standards to require energy efficient technology and conservation measures for major renovations and new construction.

Source: City of Artesia, 2010

3.4.12 City of Cerritos

The City of Cerritos prepared a General Plan in 2004 that contains a Conservation Element, which addresses Energy Resources. The Energy Resources subsection discusses Electricity and Power as well as Natural Gas. The discussion identifies that SCE serves the community of Cerritos and acknowledges that the City represents a small share of the total energy market. The discussion generally asserts that the City of Cerritos will continue to promote methods of conservation and investigate ways to ensure an adequate and reliable energy source for its residents. Table 3.8 summarizes the applicable energy resource goals and policies of the *Cerritos General Plan* (City of Cerritos 2004).

Table 3.8. City of Cerritos General Plan – Relevant Energy Conservation Goals and Policies

Goal/Policy	Description
Goal CON-2	Conserve and generate energy resources through the use of available technology and conservation practices.
Policy CON-2.1	Pursue new opportunities to enhance the provision of safe, reliable and affordable energy to Cerritos residents, businesses, public facilities, institutional uses, and educational facilities.
Policy CON-2.2	Implement applicable government energy standards to all new development.
Policy CON-2.3	Establish a standardized menu of incentives for future development activity, so that conservation methods are an integral part of new development.
Policy CON-2.4	Strive to incorporate energy conservation methods into all city facilities to set an example for the community.
Goal AQ-4	Reduce air pollutant emissions through reduced energy consumption.
Policy AQ-4.1	Promote energy conservation in all sectors of the City including residential, commercial, and industrial.
Policy AQ-4.2	Promote local recycling of wastes and the use of recycled materials.

Source: City of Cerritos, 2004.

4 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

4.1 State Energy Use

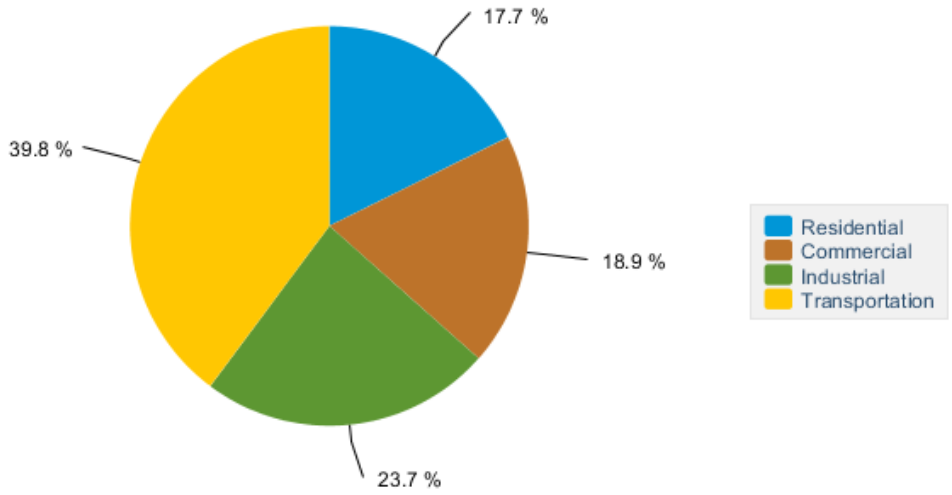
California contains abundant sources of renewable and nonrenewable energy sources. Non-renewable resources include large crude oil and natural gas deposits located within six geological basins in the Central Valley and along the coast of California. A majority of these reserves are concentrated in the southern San Joaquin Basin. Approximately 17 percent of the country's 100 largest oil fields are located in California, including the third largest oil field in the contiguous United States, the Belridge South Oil Field located approximately 40 miles west of Bakersfield in the San Joaquin Valley. Studies have also indicated that large undiscovered deposits of recoverable oil and gas lie offshore in the Outer Continental Shelf, although federal law currently prohibits new leases on oil and gas extraction in that area.

According to the U.S Energy Information Administration (EIA) State Energy Profile, California is among the top states in the nation in net electricity generation from renewable resources. The state leads the nation in net electricity generation from solar, geothermal, and biomass. California is also a leading producer of electricity from conventional hydroelectric power and wind, ranking fourth in the nation in both. California has considerable solar potential, especially in the state's southeastern deserts and several of the world's largest solar thermal plants are located in California's Mojave Desert. Substantial geothermal resources are also found in California's coastal mountain ranges and in the volcanic areas of northern California, as well as along the state's border with Nevada and near the Salton Sea.

Although California's wind power potential is widespread, especially along the state's eastern and southern mountain ranges, much of the state is excluded from development of this resource because of its wilderness areas, parks, or urban areas. California has one of the lowest per capita energy consumption rates in the country, partially attributable to energy-efficiency programs that have resulted in less energy consumption (EIA 2016). As part of the overall economy, the transportation sector is responsible for the most energy consumption of any sector within the state. More motor vehicles are registered in California than any other state, and commute times rank as some of the longest in the country.

California consumes more energy than any other state except Texas but ranks 49th among the 50 states and the District of Columbia for energy consumption per person (SCAG 2016). Current annual energy consumption in California (including transportation) is approximately 7,830 trillion BTUs, or approximately 8.0 percent of the nation's energy consumption. As shown in Figure 4-1, California's energy consumption accounts for 17.7 percent residential sector uses, 18.9 percent commercial sector uses, 23.7 percent industrial sector uses, and 39.8 percent transportation sector uses.

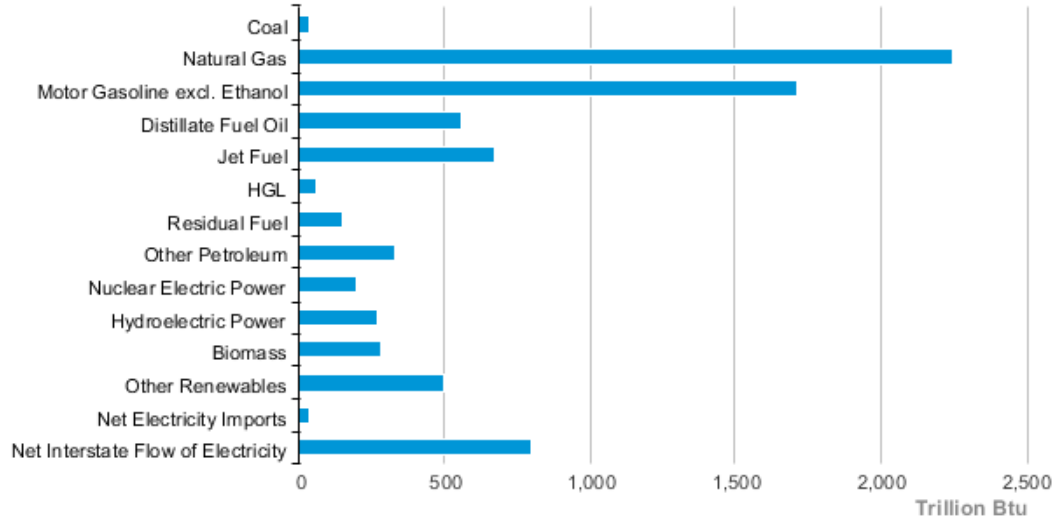
Figure 4-1. California Energy Consumption by End-Use Sector (2016)



Source: EIA 2016

California's consumption by source is shown in Figure 4-2. Natural gas and gasoline are the most consumed resources and account for 28.7 percent and 21.9 percent of all energy consumption, respectively, followed by jet fuel at 8.6 percent. Other renewables (solar, wind etc.) accounts for approximately 6.4 percent of all energy consumption (EIA 2016). Other renewables (solar, wind etc.) accounts for approximately 6.4 percent of all energy consumption. A reduction in VMT due to the implementation of alternative modes of transportation could reduce energy use within the region.

Figure 4-2. California Energy Consumption by Source 2016



Source: EIA 2016.

Transporting water into California is another major consumer of energy. The California State Water Project is the single largest user of energy in the state. The State Water Project uses approximately five billion kWh of electricity annually, which is equal to two to three percent of the total electricity consumed in California. Water-related energy consumes approximately 20 percent of the total electricity in California.

4.1 Regional Energy Use

Southern California's energy consumption differs from the state as a whole in that a greater proportion of the energy consumed in the region is for the purposes of transportation, in relation to the high density of population that relies on freeways and local roads for mobility, two major ports that serve as a hub for the movement of goods, and three large airports. As shown in Figure 4-1, transportation accounts for approximately 39 percent of all energy use in the South Coast Air Quality Management District (SCAQMD) region followed by residential energy consumption at 17 percent (SCAQMD 2017).

Transportation energy use is related to the number of VMT within the region. According to the 2016-2040 RTP/SCS, approximately 417.7 million miles are traveled per day under baseline conditions and approximately 453.8 million miles per day are expected to be traveled under the 2040 plan conditions (SCAG 2016). This would result in an overall increase in transportation energy use within the SCAG region. A reduction in VMT due to the implementation of alternative modes of transportation could reduce VMT and therefore energy use within the region.

Metro's contribution to regional energy consumption includes on-road vehicle fuel use (primarily compressed natural gas) and electricity for rail vehicle propulsion and maintenance and administrative facility operation. The *2017 Energy and Resource Report* (Metro 2017) examined Metro energy use for the 2016 calendar year. Table 4.1 presents the Metro system energy consumption by end use between 2012 and 2016. In total, rail propulsion resulted in the consumption of approximately 207,921,473 kilowatt hours (kWh) of energy in the year 2016.

Table 4.1. Metro Energy Consumption

End Use	2012	2013	2014	2015	2016
Vehicle Fuel (GGE)	42,490,623	43,930,100	44,710,242	43,995,037	42,995,037
Rail Propulsion (kWh)	199,093,552	229,866,746	210,937,940	198,921,473	207,921,473
Facility Energy (kWh)	97,500,044	90,099,301	94,144,097	116,146,856	119,148,856

Source: Metro 2017c
Note: GGE = gasoline gallon equivalent; kWh = kilowatt hours

As of 2017, the Metro system comprises 129 million revenue miles consuming approximately 55.6 megajoules (MJ) of energy per revenue mile, for a total of 7,172 million megajoules. On-road vehicle fuel consumption accounts for approximately 80 percent of the systemwide energy use, and electricity for rail propulsion represents approximately 12 percent. Metro has prioritized generating system energy from alternative fuels in recent years. Approximately 33 percent of Metro's electricity is generated by renewable sources.

4.2 Local Energy Use

4.2.1 Los Angeles Department of Water and Power (LADWP)

LADWP serves an area covering 465 square miles that includes over 4 million residents and 1.4 million power customers. As of 2016, energy sources consisted of 29 percent natural gas, 29 percent renewable sources, 19 percent coal, 9 percent nuclear, 6 percent unspecified sources, and 3 percent hydroelectric resources. Total daily generation capacity is over 7,880 megawatts (LADWP 2016). According to California Energy Commission (CEC) data, LADWP customers consumed a total of approximately 25,135,339 megawatt hours of electricity in 2016. Metro's 2016 systemwide electricity consumption was equivalent to approximately 1.3 percent of total annual LADWP consumption.

4.2.2 Southern California Edison (SCE)

SCE serves an area of 50,000 square miles, including 15 million people, 180 incorporated cities, and 15 counties. In 2015, SCE delivered more than 87 billion kWh of electricity to its service area (SCE 2018). In 2016, SCE energy sources consisted of 41 percent unspecified sources, 28 percent renewable sources, 19 percent natural gas, 6 percent hydroelectric, and 6 percent nuclear (California Energy Commission 2017). According to CEC data, SCE customers consumed approximately 102,319,743 megawatt hours of electricity in 2016. Metro's 2016 systemwide electricity consumption was equivalent to approximately 0.3 percent of total annual SCE consumption.

4.2.3 California Independent System Operator (CAISO).

Electricity is supplied via a network of distribution and transmission lines that are routinely upgraded by power companies to accommodate increases in electrical demand. The transmission capabilities of the electrical grid are occasionally inadequate to transmit electricity at a rate that satisfies the quantities of electricity demand known as a transmission bottleneck and can result in power blackouts. CAISO operates the transmission system to minimize bottlenecks via a congestion charge mechanism and is also responsible for taking remedial actions to avoid blackouts or other operational problems, as well as to identify any grid upgrades that need to be made for reliability purposes.

4.2.4 Southern California Gas Company (SoCalGas)

SoCalGas is the primary provider of natural gas to the Southern California region. In 2016, SoCalGas customers consumed approximately 7,258,720,922 Therms of natural gas energy according to the CEC database. Metro 2016 operations consumed approximately 1,005,242 Therms of natural gas through facilities and approximately 48,281,943 Therms of natural gas through the bus fleet. Total annual Metro natural gas consumption represents less than 1 percent of SoCalGas customers.

5 ENVIRONMENTAL CONSEQUENCES /ENVIRONMENTAL IMPACTS

5.1 No Build Alternative

The No Build Alternative includes regional projects identified in the SCAG 2016-2040 RTP/SCS, Metro's 2009 *Long-Range Transportation Plan* (Metro 2009), and Measure M. These projects include the Metro East-West Line/Regional Connector/Eastside Phase 2, California High-Speed Rail, Metro North-South Line/Regional Connector, I-710 South Corridor, I-105 Express Lane, I-605 Corridor "Hot Spot" improvements, and improvements to the Metro bus system and local municipality bus systems. The No Build Alternative also includes local transportation-related projects, including Link Union Station, Active Transportation Rail to Rail/River Corridor, Los Angeles Union Station (LAUS) Forecourt and Esplanade Improvement, I-710 Corridor Bike Path, and Cesar Chavez Bus Stop Improvements projects. Under the No Build Alternative, projects identified in the SCAG 2016-2040 RTP/SCS, Metro's 2009 LRTP, and Measure M, as well as local projects, would continue to be built. The No Build Alternative excludes the facilities and infrastructure of the Build Alternatives that would increase energy consumption or require energy infrastructure to meet project demands.

Energy use for the No Build Alternative is best represented in terms of transportation energy and regional VMT. The No Build Alternative includes general population growth that would lead to increased vehicle use and energy consumption. The No Build Alternative VMT also accounts for the existing transit system and related future projects, including projects affecting the regional transportation system (e.g., highway widening). Annual VMT in the region would increase from approximately 463 million VMT (2018) to approximately 606 million VMT (2042) (Metro 2019j). However, as alternative-fueled passenger vehicles (e.g., electric and natural gas) are added to the fleet and fuel efficiency improves, energy intensity for cars would decline.

CARB EMFAC2017 mobile source emissions model provides fuel consumption factors based on vehicle type, year, and speed. Table 5.1 shows energy use for the existing condition and the No Build Alternative based on regional on-road VMT.

Table 5.1. No Build Alternative Operational Energy Consumption based on VMT

Existing (2017) (annual MMBTU)	No Build Alternative (2042) (annual MMBTU)	Percent Change
907,145,388	807,680,340	(11%)

Source: TAHA 2020
Note: MMBTU = million British thermal units; VMT = vehicle miles traveled; ( )= decrease/reduction

The No Build Alternative would result in 11 percent less transportation energy use than the existing condition and would not introduce additional energy consumption in 2042. Therefore, the No Build Alternative would not result in adverse effects related to operational energy consumption.

5.2 Alternative 1

Alternative 1 would directly result in the consumption of energy related to the LRT propulsion systems, lighting and accessory equipment at station platforms, and operation of the MSF (i.e., electricity and natural gas). Alternative 1 consists of 19.3 miles of alignment and includes 11 stations. Electricity would be provided to the LRT line by traction power substation (TPSS) units and to stations by traditional distribution connection facilities (e.g., power poles, underground wires, and transmission lines). Alternative 1 would indirectly change regional energy consumption through changes in regional VMT. As shown in Table 5.2, Alternative 1 would reduce annual regional energy consumption from the No Build Alternative by 626,621 million BTU (MMBTU) (0.08 percent net reduction). The reduction is consistent with objectives of regional planning strategies to reduce reliance on fossil fuels and non-renewable resources.

Although implementation of Alternative 1 would involve construction of power poles, transmission lines, and connections to the existing grid, it would not require the expansion of existing generation facilities and would not interfere with LADWP and SCE efforts to augment renewable energy supply. Alternative 1 would not constitute a wasteful, inefficient, or unnecessary consumption of energy. Alternative 1 would be designed per the MRDC or equivalent, constructed in compliance with Metro's *Green Construction Policy* (Metro 2011b) and implement mandatory Title 24 and the California Green Building Standards Code (CALGreen) requirements as specified in the ECMP. Therefore, Alternative 1 would not result in an adverse effect related to operational energy consumption.

5.3 Alternative 2

The direct and indirect consumption of energy for Alternative 2 would be the same as Alternative 1. Alternative 2 consists of 19.3 miles of alignment and includes 12 stations. Alternative 2 would directly result in the consumption of energy related to the LRT propulsion systems, lighting and accessory equipment at station platforms, and operation of the MSF (i.e., electricity and natural gas). Alternative 2 consists of 19.3 miles of alignment and includes 12 stations. Electricity would be provided to the LRT line by TPSS units and to stations by traditional distribution connection facilities (e.g., power poles, underground wires, transmission lines). As shown in Table 5.2, Alternative 2 would reduce regional energy consumption from the No Build Alternative by 515,569 MMBTU (0.06 percent net reduction). The reduction is consistent with objectives of regional planning strategies to reduce reliance on fossil fuels and non-renewable resources.

Although implementation of Alternative 2 would involve construction of power poles, transmission lines, and connections to the existing grid, it would not require the expansion of existing generation facilities and would not interfere with LADWP and SCE efforts to augment renewable energy supply. Alternative 2 would be designed per the MRDC or equivalent, constructed in compliance with Metro's *Green Construction Policy* and implement mandatory Title 24 and CALGreen requirements as specified in the ECMP. Alternative 2 would not constitute a wasteful, inefficient, or unnecessary consumption of energy and no new energy infrastructure would be required. Therefore, Alternative 2 would not result in an adverse effect related to operational energy consumption.

5.4 Alternative 3

The direct and indirect consumption of energy for Alternative 3 would be the same as the other Build Alternatives. Alternative 3 would follow the same general alignment as Alternatives 1 and 2, with termini located at the Slauson/A Line in the City of Los Angeles and Pioneer Station in the City of Artesia. Alternative 3 consists of 14.8 miles of alignment and includes nine stations. The shorter alignment would result in less VMT reduction from the No Build Alternative and would also require less energy to operate the LRT and stations. Electricity would be provided to the LRT line by TPSS units and to stations by traditional distribution connection facilities (e.g., power poles, underground wires, and transmission lines). As shown in Table 5.2, Alternative 3 would reduce annual regional energy consumption from the No Build Alternative by 123,011 MMBTU (0.02 percent net reduction).

The reduction is consistent with objectives of regional planning strategies to reduce reliance on fossil fuels and non-renewable resources. Although implementation of Alternative 3 would involve construction of power poles, transmission lines, and connections to the existing grid, it would not require the expansion of existing generation facilities and would not interfere with LADWP and SCE efforts to augment renewable energy supply. Alternative 3 would be designed per the MRDC or equivalent, constructed in compliance with Metro's *Green Construction Policy* and implement mandatory Title 24 and CALGreen requirements as specified in the ECMP. Alternative 3 would not constitute a wasteful, inefficient, or unnecessary consumption of energy and no new energy infrastructure would be required. Therefore, Alternative 3 would not result in an adverse effect related to operational energy consumption.

5.5 Alternative 4

The direct and indirect consumption of energy for Alternative 4 would be the same as the other Build Alternatives. Alternative 4 would follow the same general alignment as Alternatives 1 and 2, with termini located at the I-105/C Line Station in the City of South Gate and Pioneer Station in the City of Artesia. Alternative 4 consists of 6.6 miles of alignment and includes four stations. Similar to Alternative 3, the shorter alignment would result in less VMT reduction from the No Build Alternative and would also require less energy to operate the LRT and stations. Electricity would be provided to the LRT line by TPSS units and to stations by traditional distribution connection facilities (e.g., power poles, underground wires, and transmission lines). As shown in Table 5.2, Alternative 4 would reduce annual regional energy consumption from the No Build Alternative by 119,630 MMBTU (0.01 percent net reduction).

The reduction is consistent with objectives of regional planning strategies to reduce reliance on fossil fuels and non-renewable resources. Although implementation of Alternative 4 would involve construction of power poles, transmission lines, and connections to the existing grid, it would not require the expansion of existing generation facilities and would not interfere with LADWP and SCE efforts to augment renewable energy supply. Alternative 4 would be designed per the MRDC or equivalent, constructed in compliance with Metro's *Green Construction Policy* and implement mandatory Title 24 and CALGreen requirements as specified in the ECMP. Alternative 4 would not constitute a wasteful, inefficient, or unnecessary consumption of energy and no new energy infrastructure would be required. Therefore, Alternative 4 would not result in an adverse effect related to operational energy consumption.

Table 5.2. Operational Energy Consumption under the Build Alternatives (2042)

Component	Annual MMBTU						
	No Build Alternative	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Design Option 1	Design Option 2
Roadway VMT	807,680,340	807,032,073	807,143,051	807,539,033	807,548,369	806,997,571	807,040,451
LRT/Station energy	-	13,994	14,068	10,644	4,689	13,994	13,994
MSF[1]	-	7,652	7,652	7,652	7,652	7,652	7,652
Total Energy	**807,680,340**	**807,053,719**	**807,164,771**	**807,557,329**	**807,560,710**	**807,019,217**	**807,062,097**
Change from No Build Alternative		**(626,621)**	**(515,569)**	**(123,011)**	**(119,630)**	**(661,123)**	**(618,243)**
Percent Change from No Build		**(0.08%)**	**(0.06%)**	**(0.02%)**	**(0.01%)**	**(0.08%)**	**(0.08%)**

Source: Metro 2019j

Notes: [1] The Paramount MSF site option would consume approximately 7,652 MMBTU annually, and the Bellflower MSF site option would consume approximately 6,912 MMBTU annually. For simplicity, the higher MSF energy consumption associated with the Paramount MSF site option is shown.

LRT = light rail transit; MMBTU = million British thermal units; MSF = maintenance and storage facility; VMT = vehicle miles traveled; ( ) = decrease/reduction

5.6 Design Options

5.6.1 Design Option 1

Design Option 1 would relocate the underground LAUS Station to just east of the existing Metropolitan Water District of Southern California (MWD) building for Alternative 1. As shown in Table 5.2, compared to the No Build Alternative, Design Option 1 would reduce regional energy consumption by 661,123 MMBTU (0.08 percent net reduction). Although implementation of the Design Option 1 would involve construction of power poles, transmission lines, and connections to the existing grid, it would not require the expansion of existing generation facilities and would not interfere with LADWP and SCE efforts to augment renewable energy supply. Design Option 1 would be designed per the MRDC or equivalent, constructed in compliance with Metro's *Green Construction Policy* and implement mandatory Title 24 and CALGreen requirements as specified in the ECMP. Design Option 1 would not constitute a wasteful, inefficient, or unnecessary consumption of energy. Therefore, Design Option 1 would not result in an adverse effect related to operational energy consumption.

5.6.2 Design Option 2

Design Option 2 would add the optional Little Tokyo Station to Alternative 1. As shown in Table 5.2, Design Option 2 would reduce regional energy consumption from the No Build Alternative by 618,243 MMBTU (0.08 percent net reduction). Although implementation of the Design Option 2 would involve construction of power poles, transmission lines, and connections to the existing grid, it would not require the expansion of existing generation facilities and would not interfere with LADWP and SCE efforts to augment renewable energy supply. Design Option 2 would be designed per the MRDC or equivalent, constructed in compliance with Metro's *Green Construction Policy* and implement mandatory Title 24 and CALGreen requirements as specified in the ECMP. Design Option 2 would not constitute a wasteful, inefficient, or unnecessary consumption of energy. Therefore, Design Option 2 would not result in an adverse effect related to operational energy consumption.

5.7 Maintenance and Storage Facility

5.7.1 Paramount MSF Site Option

The Paramount MSF site option would result in the consumption of fuels and electricity from the operation of facility equipment and vehicle trips to and from the site. As the MSF site option is a component of the Build Alternatives, energy consumption is accounted for in the overall analysis of the Build Alternatives. As shown in Table 5.2, it is estimated that the Paramount MSF site option, would use approximately 7,652 MMBTU per year. The MSF site option would contribute to a net energy reduction by contributing to implementation of the LRT and the associated VMT reductions. The Paramount MSF site option would not constitute a wasteful, inefficient, or unnecessary consumption of energy. The MSF site option would be designed per the MRDC or equivalent, constructed in compliance with mandatory Title 24 and CALGreen requirements, and would achieve a minimum Silver rating under the LEED certification, as specified in the ECMP. Therefore, the Paramount MSF site option would not result in an adverse effect related to operational energy consumption.

5.7.2 Bellflower MSF Site Option

Similar to the Paramount MSF site option, the Bellflower MSF site option would result in the consumption of fuels and electricity and is a component of the Build Alternatives in which energy consumption is accounted for in the overall analysis of the Build Alternatives. As described in the footnote for Table 5.2, it is estimated that the Bellflower MSF site option would use approximately 6,912 MMBTU per year. The MSF would contribute to a net energy reduction by contributing to implementation of the LRT and the associated VMT reductions. The Bellflower MSF site option would comply with the same applicable plans and policies as the Paramount MSF site option and would not constitute a wasteful, inefficient, or unnecessary consumption of energy. Therefore, the Bellflower MSF site option would not result in an adverse effect related to operational energy consumption.

6 CALIFORNIA ENVIRONMENTAL QUALITY ACT DETERMINATION

To satisfy CEQA requirements, energy-related impacts would also be analyzed in accordance with Appendix G of the *CEQA Guidelines*.

6.1 Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?

6.1.1 No Project Alternative

The No Project Alternative would not include the operation of any project-related facilities or infrastructure. Existing energy consumption of Metro facilities would remain unchanged. As of 2017, the Metro system comprised 129 million revenue miles consuming approximately 55.6 megajoules of energy per revenue mile, for a total of 7,172 million megajoules. On-road vehicle fuel consumption accounts for approximately 80 percent of the systemwide energy use, and electricity for rail propulsion represents approximately 12 percent. Approximately 30 percent of Metro's electricity is generated by renewable sources. The No Project Alternative would not interfere with Metro's commitments to improving energy efficiency or expanding its alternative energy infrastructure, and would not create a wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, a significant impact would not occur.

6.1.1.1 Mitigation Measures

No mitigation measures are required.

6.1.1.2 Impacts Remaining After Mitigation

No Impact.

6.1.2 Alternative 1

Table 5.2 shows that Alternative 1 would reduce regional energy consumption from the No Build Alternative by 626,621 MMBTU in 2042 (a 0.08 percent net reduction). An additional analysis of the Existing + Alternative 1 scenario was completed to satisfy CEQA requirements. As shown in Table 6.1, Existing + Alternative 1 conditions would result in 156,597 MMBTU more energy (a 0.02 percent increase) than Existing conditions. This increase would be negligible in the context of Metro systemwide annual energy consumption. Alternative 1 would not constitute a wasteful, inefficient, or unnecessary consumption of energy during project operation. Therefore, impacts would be less than significant.

6.1.2.1 Mitigation Measures

No mitigation measures are required.

6.1.2.2 Impacts Remaining After Mitigation

Less than significant impact.

6.1.3 Alternative 2

As described in Section 5.3, Alternative 2 would result in less energy use than the No Build Alternative as a result of decreased regional VMT and associated fuel use. Table 5.2 shows that Alternative 2 would reduce regional energy consumption from the No Build Alternative by 515,569 MMBTU in 2042 (0.06 percent net reduction). An additional analysis of the Existing + Alternative 2 scenario was completed to satisfy CEQA requirements. As shown in Table 6.1, Existing + Alternative 2 conditions would result in 487,042 less MMBTU (an approximately 0.05 percent net reduction) than Existing conditions. Alternative 2 would not constitute a wasteful, inefficient, or unnecessary consumption of energy during project operation. Therefore, impacts would be less than significant.

6.1.3.1 Mitigation Measures

No mitigation measures are required.

6.1.3.2 Impacts Remaining After Mitigation

Less than significant impact.

6.1.4 Alternative 3

As described in Section 5.4, Alternative 3 would result in less energy use than the No Build Alternative as a result of decreased regional VMT and associated fuel use. Table 5.2 shows that Alternative 3 would reduce regional energy consumption from the No Build Alternative by 123,011 MMBTU in 2042 (a 0.02 percent net reduction). An additional analysis of the Existing + Alternative 3 scenario was completed to satisfy CEQA requirements. As shown in Table 6.1, Existing + Alternative 3 conditions would result in 147,833 less MMBTU (a 0.02 percent net reduction) than Existing conditions. Alternative 3 would not constitute a wasteful, inefficient, or unnecessary consumption of energy during project operation. Therefore, impacts would be less than significant.

6.1.4.1 Mitigation Measures

No mitigation measures are required.

6.1.4.2 Impacts Remaining After Mitigation

Less than significant impact.

6.1.5 Alternative 4

As described in Section 5.5, Alternative 4 would result in less energy use than the No Build Alternative as a result of decreased regional VMT and associated fuel use. Table 5.2 shows that Alternative 4 would reduce regional energy consumption from the No Build Alternative by 119,630 MMBTU in 2042 (a 0.01 percent net reduction). An additional analysis of the Existing + Alternative 4 scenario was completed to satisfy CEQA requirements. As shown in Table 6.1, Existing + Alternative 4 conditions would result in 98,425 less MMBTU (a 0.01 percent net reduction) than Existing conditions. Thus, Alternative 4 would not constitute a wasteful, inefficient, or unnecessary consumption of energy during project operation. Therefore, impacts would be less than significant.

Table 6.1. Operational Energy Consumption under Existing + Project Scenario

Component	Annual MMBTU						
	Existing	Existing + Alternative 1	Existing + Alternative 2	Existing + Alternative 3	Existing + Alternative 4	Existing + Design Option 1	Existing + Design Option 2
Regional VMT	907,145,388	907,280,339	906,636,626	906,979,259	907,034,622	906,441,037	906,723,046
LRT System	-	13,994	14,068	10,644	4,689	13,994	13,994
MSF [1]	-	7,652	7,652	7,652	7,652	7,652	7,652
Total Energy	**907,145,388**	**907,301,985**	**906,658,346**	**906,997,555**	**907,046,963**	**906,462,683**	**906,744,692**
Change Relative to Existing		**156,597**	**(487,042)**	**(147,833)**	**(98,425)**	**(682,705)**	**(400,696)**
Percent Change Relative to Existing		**0.02%**	**(0.05%)**	**(0.02%)**	**(0.01%)**	**(0.08%)**	**(0.04%)**

Source: Metro 2019j

Notes: [1] The Paramount MSF site option would consume approximately 7,652 MMBTU annually and the Bellflower MSF site option would consume approximately 6,912 MMBTU annually. For simplicity, the higher MSF site option estimate is shown.

LRT = light rail transit; MMBTU = million British thermal units; MSF = maintenance and storage facility; VMT = vehicle miles traveled; ( ) = a decrease

6.1.5.1 Mitigation Measures

No mitigation measures are required.

6.1.5.2 Impacts Remaining After Mitigation

Less than significant impact.

6.1.6 Design Options

6.1.6.1 Design Option 1

As described in 5.6.1, Design Option 1 would result in less energy use than the No Build Alternative as a result of decreased regional VMT and associated fuel use. Table 5.2 shows that Design Option 1 would reduce regional energy consumption from the No Build Alternative by 661,123 MMBTU in 2042 (a 0.08 percent net reduction). An additional analysis of the Existing + Design Option 1 scenario was completed to satisfy CEQA requirements. As shown in Table 6.1, Existing + Design Option 1 conditions would result in 682,705 less MMBTU (a 0.08 percent net reduction) than Existing conditions. Design Option 1 would not constitute a wasteful, inefficient, or unnecessary consumption of energy during project operation. Therefore, impacts would be less than significant.

6.1.6.2 Design Option 2

As described in Section 5.6.2, Design Option 2 would result in less energy use than the No Build Alternative as a result of decreased regional VMT and associated fuel use. Table 5.2 shows that Design Option 2 would reduce regional energy consumption from the No Build Alternative by 618,243 MMBTU in 2042 (a 0.08 percent net reduction). An additional analysis of the Existing + Design Option 2 scenario was completed to satisfy CEQA requirements. As shown in Table 6.1, Existing + Design Option 2 conditions would result in 400,696 less MMBTU (0.04 percent net reduction) than Existing conditions. Design Option 2 would not constitute a wasteful, inefficient, or unnecessary consumption of energy during project operation. Therefore, impacts would be less than significant.

6.1.6.3 Mitigation Measures

No mitigation measures are required.

6.1.6.4 Impacts Remaining After Mitigation

Less than significant impact.

6.1.7 Maintenance and Storage Facility

6.1.7.1 Paramount MSF Site Option

Operation of the Paramount MSF site option would result in the consumption of fuels and electricity from operation and vehicle trips and is a component of the Build Alternatives in which energy consumption is accounted for in the overall analysis of the Build Alternatives. As shown in Table 6.1, the Paramount MSF site option would use approximately 7,652 MMBTU per year. The MSF would contribute to a net energy reduction by contributing to implementation of the LRT and the associated VMT reductions. The Paramount MSF site option would not constitute a wasteful, inefficient, or unnecessary consumption of energy. Therefore, impacts would be less than significant.

6.1.7.2 Bellflower MSF Site Option

Similar to the Paramount MSF site option, operation of the Bellflower MSF site option would result in the consumption of fuels and electricity and is a component of the Build Alternatives. As shown in Table 6.1, the Bellflower MSF site option would use approximately 6,912 MMBTU per year. The MSF would contribute to a net energy reduction by contributing to implementation of the LRT and the associated VMT reductions. The Bellflower MSF site option would not constitute a wasteful, inefficient, or unnecessary consumption of energy. Therefore, impacts would be less than significant.

6.1.7.3 Mitigation Measures

No mitigation measures are required.

6.1.7.4 Impacts Remaining After Mitigation

Less than significant impact.

6.2 Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

6.2.1 No Project Alternative

The No Project Alternative would not include operation of any project-related facilities or infrastructure. As of 2017, approximately 30 percent of Metro's electricity is generated by renewable sources, and the seven Metro-owned solar installations around the greater Los Angeles area generated a total of 2,670 megawatt-hours. Metro is using approximately 33 percent renewable energy, with a goal of 50 percent renewable energy use by 2030. Additionally, Metro operates 11 LEED-certified buildings representing nearly 2 million square feet of floor area. The No Project Alternative would not interfere with Metro's commitments to improving energy efficiency or expanding its alternative energy infrastructure; however, it would do the least of all the alternatives to support regional and local conservation plans in reducing VMT. Impacts would be less than significant.

6.2.1.1 Mitigation Measures

No mitigation measures are required.

6.2.1.2 Impacts Remaining After Mitigation

Less than significant impact.

6.2.2 Alternative 1

No state, regional, or local energy conservation plans promote increased passenger vehicles on the roadway network in place of mass transit. Alternative 1 would be designed per the MRDC or equivalent, constructed in compliance with Metro's *Green Construction Policy* and implement mandatory Title 24 and CALGreen requirements as specified in the ECMP. Alternative 1 would be consistent with the applicable regional and local conservation plans. Energy used for Alternative 1 operations would not be considered a wasteful or inefficient use of energy as mass transit and reduced VMT are key components of relevant energy conservation plans. Therefore, impacts would be less than significant.

6.2.2.1 Mitigation Measures

No mitigation measures are required.

6.2.2.2 Impacts Remaining After Mitigation

Less than significant impact.

6.2.3 Alternative 2

Similar to the other Build Alternatives, Alternative 2 would be designed per the MRDC or equivalent, constructed in compliance with Metro's *Green Construction Policy* and implement mandatory Title 24 and CALGreen requirements as specified in the ECMP. Alternative 2 would be consistent with applicable regional and local conservation plans, and energy used for operation would not be considered a wasteful or inefficient use of energy. Therefore, impacts would be less than significant.

6.2.3.1 Mitigation Measures

No mitigation measures are required.

6.2.3.2 Impacts Remaining After Mitigation

Less than significant impact.

6.2.4 Alternative 3

Similar to the other Build Alternatives, Alternative 3 would be designed per the MRDC or equivalent, constructed in compliance with Metro's *Green Construction Policy* and implement mandatory Title 24 and CALGreen requirements as specified in the ECMP. Alternative 3 would be consistent with applicable regional and local conservation plans, and energy used for operation would not be considered a wasteful or inefficient use of energy. Therefore, impacts would be less than significant.

6.2.4.1 Mitigation Measures

No mitigation measures are required.

6.2.4.2 Impacts Remaining After Mitigation

Less than significant impact.

6.2.5 Alternative 4

Similar to the other Build Alternatives, Alternative 4 would be designed per the MRDC or equivalent, constructed in compliance with Metro's *Green Construction Policy* and implement mandatory Title 24 and CALGreen requirements as specified in the ECMP. Alternative 4 would be consistent with applicable regional and local conservation plans, and energy used for operation would not be considered a wasteful or inefficient use of energy. Therefore, impacts would be less than significant.

6.2.5.1 Mitigation Measures

No mitigation measures are required.

6.2.5.2 Impacts Remaining After Mitigation

Less than significant impact.

6.2.6 Design Options

Design Option 1 and Design Option 2. Design Options 1 and 2 would be designed per the MRDC or equivalent, constructed in compliance with Metro's *Green Construction Policy* and implement mandatory Title 24 and CALGreen requirements as specified in the ECMP. Energy use for operation of Design Options 1 and 2 would not be considered a wasteful or inefficient use of energy as mass transit and reduced VMT are key components of relevant energy conservation plans. Therefore, impacts would be less than significant.

6.2.6.1 Mitigation Measures

No mitigation measures are required.

6.2.6.2 Impacts Remaining After Mitigation

Less than significant impact.

6.2.7 Maintenance and Storage Facility

Paramount MSF Site Option and Bellflower MSF Site Option. The Paramount MSF site option and Bellflower MSF site option are components of the Build Alternatives and would be consistent with the applicable regional and local conservation plans by contributing to implementation of a Build Alternative. The MSF site options would be designed per the MRDC or equivalent, constructed in compliance with Metro's *Green Construction Policy* and implement mandatory Title 24 and CALGreen requirements as specified in the ECMP. Therefore, impacts would be less than significant.

6.2.7.1 Mitigation Measures

No mitigation measures are required.

6.2.7.2 Impacts Remaining After Mitigation

Less than significant impact.

7 CONSTRUCTION IMPACTS

7.1 Construction Activities

Construction activities associated with the Project are detailed in the *West Santa Ana Branch Transit Corridor Project Construction Methods Report* (Metro 2020g).

7.2 Regulatory Background and Methodology

7.2.1 Regulatory Background

All federal, state, regional, and local regulations and guidelines pertinent to the construction the WSAB Project would be followed. For additional regulatory information, refer to the *West Santa Ana Branch Transit Corridor Project Construction Impacts Technical Report* (Metro 2020a).

7.2.2 Methodology

The analysis of construction effects considered the anticipated construction activities and phasing and identifies where construction staging could occur. This assessment compares energy consumption between the No Build and Build Alternatives and describes potential impacts to existing energy facilities. The assessment involves disclosing the one-time expenditure of fuel to construct the transit line, related infrastructure, and the MSF. The estimate of construction-related energy use (i.e., fuel consumption) was calculated by applying the fuel combustion factors related to greenhouse gases (U.S. Environmental Protection Agency 2018). Energy consumption associated with construction activities was estimated for the No Build Alternative and for each of the Build Alternatives.

7.3 Construction Impacts

Table 7.1 provides an overview of the fuel consumption end uses that would be involved in construction activities for the Build Alternatives and Design Options.

7.3.1 No Build Alternative

The No Build Alternative would not include construction of any project-related facilities or infrastructure. Therefore, the No Build Alternative would not result in an adverse effect related to energy use and conservation during construction activities.

7.3.2 Alternative 1

Diesel fuel for construction vehicles and equipment would be the primary source of energy use during the construction period. Construction activities would comply with Metro*'s Green Construction Policy* (Metro 2011b) and construction equipment would be maintained in accordance with manufacturers' specifications. As shown in Table 7.1, a one-time expenditure of approximately 10,287,344 gallons of diesel fuel and 836,237 gallons of gasoline would be needed to construct Alternative 1 over the six-year duration. Given that energy would be used to construct an energy-efficient mass transit system, the extensive network of fueling stations throughout the project vicinity, and the temporary nature of the construction activities, Alternative 1 would not require new or expanded sources of energy or infrastructure to meet energy demands and would not result in the wasteful or inefficient use

of energy. Therefore, Alternative 1 would not result in adverse effects related to energy during construction.

7.3.3 Alternative 2

Alternative 2 construction activities would be similar to Alternative 1, would comply with Metro*'s Green Construction Policy* (Metro 2011b), and construction equipment would be maintained in accordance with manufacturers' specifications. As shown in Table 7.1, Alternative 2 would require a one-time expenditure of approximately 10,507,855 gallons of diesel fuel and 836,237 gallons of gasoline. Given that energy would be used to construct an energy-efficient mass transit system, the extensive network of fueling stations throughout the project vicinity, and the temporary nature of the construction activities, Alternative 2 would not require new or expanded sources of energy or infrastructure to meet energy demands and would not result in the wasteful or inefficient use of energy. Therefore, Alternative 2 would not result in adverse effects related to energy during construction.

7.3.4 Alternative 3

Alternative 3 would result in similar construction activities as Alternatives 1 and 2 with the exception of underground construction. Alternative 3 construction activities would comply with Metro*'s Green Construction Policy* (Metro 2011b) and construction equipment would be maintained in accordance with manufacturers' specifications. As shown in Table 7.1, Alternative 3 would require a one-time expenditure of approximately 7,300,229 gallons of diesel fuel and 596,447 gallons of gasoline. Given that energy would be used to construct an energy-efficient mass transit system, the extensive network of fueling stations throughout the project vicinity, and the temporary nature of the construction activities, Alternative 3 would not require new or expanded sources of energy or infrastructure to meet energy demands and would not result in the wasteful or inefficient use of energy. Therefore, Alternative 3 would not result in adverse effects related to energy during construction.

7.3.5 Alternative 4

Alternative 4 would result in similar construction activities as Alternatives 1 and 2 with the exception of underground construction. Alternative 4 construction activities would comply with Metro*'s Green Construction Policy* (Metro 2011b) and construction equipment would be maintained in accordance with manufacturers' specifications. As shown in Table 7.1, Alternative 4 would require a one-time expenditure of approximately 6,046,132 gallons of diesel fuel and 468,414 gallons of gasoline. Given that energy would be used to construct an energy-efficient mass transit system, the extensive network of fueling stations throughout the project vicinity, and the temporary nature of the construction activities, Alternative 4 would not require new or expanded sources of energy or infrastructure to meet energy demands and would not result in the wasteful or inefficient use of energy. Therefore, Alternative 4 would not result in adverse effects related to energy during construction.

Table 7.1. Construction Energy Consumption

End Use	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Design Option 1	Design Option 2
Diesel Fuel						
Off-Road Construction Equipment – LRT (gallons)	7,426,266	7,426,266	5,183,928	4,130,596	7,426,266	7,426,266
Off-Road Construction Equipment – MSF (gallons)	1,162,580	1,162,580	1,162,580	1,162,580	1,162,580	1,162,580
Disposal Haul Trucks – LRT (gallons)	1,337,146	1,557,657	628,032	478,749	1,574,661	1,606,589
Disposal Haul Trucks – MSF (gallons)	98,578	98,578	98,578	98,578	98,578	98,578
Vendor Material Deliveries – LRT (gallons)	218,327	218,327	182,664	131,182	218,327	218,327
Vendor Material Deliveries – MSF (gallons)	44,447	44,447	44,447	44,447	44,447	44,447
Total fuel consumption (in gallons)	***10,287,344***	***10,507,855***	***7,300,229***	***6,046,132***	***10,524,859***	***10,556,787***
Conversion factor (kBtu/gallons-diesel)	133.5	133.5	133.5	133.5	133.5	133.5
Total diesel combustion energy consumption (MMBTU)	**1,373,247**	**1,402,683**	**974,500**	**807,092**	**1,404,953**	**1,409,215**
Gasoline Fuel						
Total worker fuel consumption – LRT (gallons)	685,586	685,586	445,796	317,763	685,586	685,586
Total worker fuel consumption – MSF (gallons)	150,651	150,651	150,651	150,651	150,651	150,651
Total fuel consumption (gallons)	***836,237***	***836,237***	***596,447***	***468,414***	***836,237***	***836,237***
Conversion factor (kBtu/gallons-gasoline)	118.2	118.2	118.2	118.2	118.2	118.2
Total gasoline combustion energy consumption (MMBTU)	**98,862**	**98,862**	**70,514**	**55,377**	**98,862**	**98,862**
Total construction energy consumption (MMBTU)	**1,472,110**	**1,501,546**	**1,045,014**	**862,469**	**1,503,815**	**1,508,077**

Source: Metro 2019j
Notes: kBtu = thousand British thermal units; LRT = light rail transit; MMBTU = million British thermal units; MSF = maintenance and storage facility
Construction energy was estimated for both MSF site options. As the Paramount and Bellflower facilities would be similar in size, it was assumed that construction would employ the same equipment and vehicle inventory and follow the same schedule regardless of the site option selected. The data presented apply to construction of either the Paramount or Bellflower site.

7.3.6 Design Options

7.3.6.1 Design Option 1

As shown in Table 7.1, Design Option 1 would require a one-time expenditure of approximately 10,524,859 gallons of diesel fuel and 836,237 gallons of gasoline. Design Option 1 construction activities would comply with Metro*'s Green Construction Policy* (Metro 2011b) and construction equipment would be maintained in accordance with manufacturers' specifications. Given that energy would be used to construct an energy-efficient mass transit system, the extensive network of fueling stations throughout the project vicinity, and the temporary nature of the construction activities, Design Option 1 would not require new or expanded sources of energy or infrastructure to meet energy demands and would not result in the wasteful or inefficient use of energy. Therefore, Design Option 1 would not result in adverse effects related to energy during construction.

7.3.6.2 Design Option 2

As shown in Table 7.1, Design Option 2 would require a one-time expenditure of approximately 10,556,787 gallons of diesel fuel and 836,237 gallons of gasoline. Design Option 2 construction activities would comply with Metro*'s Green Construction Policy* (Metro 2011b) and construction equipment would be maintained in accordance with manufacturers' specifications. Given that energy would be used to construct an energy-efficient mass transit system, the extensive network of fueling stations throughout the project vicinity, and the temporary nature of the construction activities, Design Option 2 would not require new or expanded sources of energy or infrastructure to meet energy demands and would not result in the wasteful or inefficient use of energy. Therefore, Design Option 2would not result in adverse effects related to energy during construction.

7.3.7 Maintenance and Storage Facility

7.3.7.1 Paramount MSF Site Option

Diesel fuel for construction vehicles and equipment would be the primary source of energy used during construction of the Paramount MSF site option. As shown in Table 7.1, a one-time expenditure of approximately 1,231,975 gallons of diesel fuel and 150,651 gallons of gasoline would be needed to construct the Paramount MSF site option. As the MSF is a component of the Build Alternatives, energy consumption is accounted for in the overall analysis of the Build Alternatives. The MSF would contribute to a net energy reduction by contributing to implementation of the LRT and the associated VMT reductions. The Paramount MSF site option would not constitute a wasteful, inefficient, or unnecessary consumption of energy. Therefore, the Paramount MSF site option would not result in adverse effects related to energy during construction.

7.3.7.2 Bellflower MSF Site Option

As shown in Table 7.1, a one-time expenditure of approximately 1,231,975 gallons of diesel fuel and 150,651 gallons of gasoline would be needed to construct the Bellflower MSF site option. As the MSF is a component of the Build Alternatives, energy consumption is accounted for in the overall analysis of the Build Alternatives. The MSF would contribute to a net energy reduction by contributing to implementation of the LRT and the associated VMT reductions. The Bellflower MSF site option would not constitute a wasteful, inefficient, or unnecessary consumption of energy. Therefore, the Bellflower MSF site option would not result in adverse effects related to energy during construction.

7.4 California Environmental Quality Act Determination

To satisfy CEQA requirements, energy-related impacts would also be analyzed in accordance with Appendix G of the *CEQA Guidelines*.

7.4.1 Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Table 7.1 provides an overview of the fuel consumption end uses that would be involved in construction activities for the Build Alternatives, Design Options, and MSF site options.

7.4.1.1 No Project Alternative

Under the No Project Alternative, the Build Alternatives would not be constructed, and the existing regional and Metro system energy consumption would remain unchanged. The No Project Alternative would not include construction of any project-related facilities or infrastructure; therefore, no diesel or gasoline fuel for equipment or vehicles would be expended. There would be no energy resource consumption related to construction of the No Project Alternative. The Metro Green Construction policy and other energy-related initiatives outlined in the regulatory setting portion of this topical analysis would remain in place and apply to any other ongoing Metro construction projects. Therefore, no significant impact would occur.

Mitigation Measures

No mitigation measures are required.

Impacts Remaining After Mitigation

Less than significant impact.

7.4.1.2 Alternative 1

Diesel fuel for construction vehicles and equipment would be the primary source of energy use during the construction period. A one-time expenditure of approximately 10,287,344 gallons of diesel fuel and 836,237 gallons of gasoline would be needed to construct Alternative 1 over the six-year duration. Construction activities would comply with Metro's *Green Construction Policy* (Metro 2011b) and construction equipment would be maintained in accordance with manufacturers' specifications. Given that energy would be used to construct an energy-efficient mass transit system, the extensive network of fueling stations throughout the project vicinity, and the temporary nature of the construction activities, Alternative 1 would not require new or expanded sources of energy or infrastructure to meet energy demands and would not result in the wasteful or inefficient use of energy. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Impacts Remaining After Mitigation

Less than significant impact.

7.4.1.3 Alternative 2

Alternative 2 construction activities would be similar to Alternative 1, would comply with Metro*'s Green Construction Policy* (Metro 2011b), and construction equipment would be maintained in accordance with manufacturers' specifications. Alternative 2 would require a one-time expenditure of approximately 10,507,855 gallons of diesel fuel and 836,237 gallons of gasoline. Given that energy would be used to construct an energy-efficient mass transit system, the extensive network of fueling stations throughout the project vicinity, and the temporary nature of the construction activities, Alternative 2 would not require new or expanded sources of energy or infrastructure to meet energy demands and would not result in the wasteful or inefficient use of energy. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Impacts Remaining After Mitigation

Less than significant impact.

7.4.1.4 Alternative 3

Alternative 3 would result in similar construction activities as Alternatives 1 and 2 with the exception of underground construction. Alternative 3 construction activities would comply with Metro*'s Green Construction Policy* (Metro 2011b) and construction equipment would be maintained in accordance with manufacturers' specifications. Alternative 3 would require a one-time expenditure of approximately 7,300,229 gallons of diesel fuel and 596,447 gallons of gasoline. Given that energy would be used to construct an energy-efficient mass transit system, the extensive network of fueling stations throughout the project vicinity, and the temporary nature of the construction activities, Alternative 3 would not require new or expanded sources of energy or infrastructure to meet energy demands and would not result in the wasteful or inefficient use of energy. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Impacts Remaining After Mitigation

Less than significant impact.

7.4.1.5 Alternative 4

Alternative 4 would result in similar construction activities as Alternatives 1 and 2 with the exception of underground construction. Alternative 4 construction activities would comply with Metro*'s Green Construction Policy* (Metro 2011b) and construction equipment would be maintained in accordance with manufacturers' specifications. Alternative 4 would require a one-time expenditure of approximately 6,046,132 gallons of diesel fuel and 468,414 gallons of gasoline. Given that energy would be used to construct an energy-efficient mass transit system, the extensive network of fueling stations throughout the project vicinity, and the temporary nature of the construction activities, Alternative 4 would not require new or expanded sources of energy or infrastructure to meet energy demands and would not result in the wasteful or inefficient use of energy. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Impacts Remaining After Mitigation

Less than significant impact.

7.4.1.6 Design Options

Design Option 1

Construction of Design Option 1 would require a one-time expenditure of approximately 10,524,859 gallons of diesel fuel and 836,237 gallons of gasoline. Design Option 1 construction activities would comply with Metro*'s Green Construction Policy* (Metro 2011b) and construction equipment would be maintained in accordance with manufacturers' specifications. Given that energy would be used to construct an energy-efficient mass transit system, the extensive network of fueling stations throughout the project vicinity, and the temporary nature of the construction activities, Design Option 1 would not require new or expanded sources of energy or infrastructure to meet energy demands and would not result in the wasteful or inefficient use of energy. Therefore, impacts would be less than significant.

Design Option 2

Construction of Design Option 2 would require a one-time expenditure of approximately 10,556,787 gallons of diesel fuel and 836,237 gallons of gasoline. Design Option 2 construction activities would comply with Metro*'s Green Construction Policy* (Metro 2011b) and construction equipment would be maintained in accordance with manufacturers' specifications. Given that energy would be used to construct an energy-efficient mass transit system, the extensive network of fueling stations throughout the project vicinity, and the temporary nature of the construction activities, Design Option 2 would not require new or expanded sources of energy or infrastructure to meet energy demands and would not result in the wasteful or inefficient use of energy. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Impacts Remaining After Mitigation

Less than significant impact.

7.4.1.7 Maintenance and Storage Facility

Paramount MSF Site Option

Diesel fuel for construction vehicles and equipment would be the primary source of energy use during construction of the MSF site option. A one-time expenditure of approximately 1,231,975 gallons of diesel fuel and 150,651 gallons of gasoline would be needed to construct the Paramount MSF site option. As the MSF is a component of the Build Alternatives, energy consumption is accounted for in the overall analysis of the Build Alternatives. The MSF would contribute to a net energy reduction by contributing to implementation of the LRT and the associated VMT reductions. The Paramount MSF site option would not constitute a wasteful, inefficient, or unnecessary consumption of energy. Therefore, impacts would be less than significant.

Bellflower MSF Site Option

Diesel fuel for construction vehicles and equipment would be the primary source of energy use during construction of the MSF site option. A one-time expenditure of approximately 1,231,975 gallons of diesel fuel and 150,651 gallons of gasoline would be needed to construct the Bellflower MSF site option. As the MSF is a component of the Build Alternatives, energy consumption is accounted for in the overall analysis of the Build Alternatives. The MSF would contribute to a net energy reduction by contributing to implementation of the LRT and the associated VMT reductions. The Bellflower MSF site option would not constitute a wasteful, inefficient, or unnecessary consumption of energy. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Impacts Remaining After Mitigation

Less than significant impact.

7.4.2 Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

7.4.2.1 No Project Alternative

The No Project Alternative would not include construction of any project-related facilities or infrastructure. Therefore, no significant impact would occur.

Mitigation Measures

No mitigation measures are required.

Impacts Remaining After Mitigation

No impact.

7.4.2.2 Alternative 1

Implementation of Metro's *Green Construction Policy* (Metro 2011b), CALGreen Code, and Title 24 would ensure that Alternative 1 would be consistent with state and local energy plans and policies to reduce energy consumption. The *Green Construction Policy* commits Metro contractors to using less-polluting construction equipment and vehicles and implementing best practices to reduce harmful diesel emissions on all Metro construction projects performed on Metro properties and rights-of-way. Best practices include Tier 4 emission standards for off-road diesel-powered construction equipment with greater than 50 horsepower and restricting idling to a maximum of five minutes. The CALGreen Code requires reduction, disposal, and recycling of at least 50 percent of nonhazardous construction materials and requires demolition debris to be recycled and/or salvaged. Alternative 1 would implement ENE PM-1 and would comply with state and local plans for energy efficiency in construction activities. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Impacts Remaining After Mitigation

Less than significant impact.

7.4.2.3 Alternative 2

Similar to the other Build Alternatives, Alternative 2 would comply with applicable Metro's *Green Construction Policy* policies and mandatory Title 24 and CALGreen requirements that would ensure consistency with state and local energy plans and policies to reduce energy consumption. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Impacts Remaining After Mitigation

Less than significant impact.

7.4.2.4 Alternative 3

Similar to the other Build Alternatives, Alternative 3 would comply with applicable Metro's *Green Construction Policy* policies and mandatory Title 24 and CALGreen requirements that would ensure consistency with state and local energy plans and policies to reduce energy consumption. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Impacts Remaining After Mitigation

Less than significant impact.

7.4.2.5 Alternative 4

Similar to the other Build Alternatives, Alternative 4 would comply with applicable Metro's *Green Construction Policy* policies and mandatory Title 24 and CALGreen requirements that would ensure consistency with state and local energy plans and policies to reduce energy consumption. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Impacts Remaining After Mitigation

Less than significant impact.

7.4.2.6 Design Options

Design Option 1 and Design Option 2. Similar to the Build Alternatives, Design Options 1 and 2 would comply with applicable Metro's *Green Construction Policy* policies and mandatory Title 24 and CALGreen requirements that would ensure consistency with state and local energy plans and policies to reduce energy consumption. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Impacts Remaining After Mitigation

Less than significant impact.

7.4.2.7 Maintenance and Storage Facility

Paramount MSF Site Option and Bellflower MSF Site Option. Construction activities for the Paramount MSF site option and Bellflower MSF site option would comply with applicable Metro's *Green Construction Policy* policies and mandatory Title 24 and CALGreen requirements that would ensure consistency with state and local energy plans and policies to reduce energy consumption. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Impacts Remaining After Mitigation

Less than significant impact.

8 PROJECT MEASURES AND MITIGATION MEASURES

8.1 Project Measures

No project measures are required.

8.2 Mitigation Measures

8.2.1 Operation

No mitigation measures are required.

8.2.2 Construction

No mitigation measures are required.

9 REFERENCES

California Code of Regulations (CCR), *Section 1956.1.*

California Code of Regulations (CCR), *Section 2020.*

California Code of Regulations (CCR), *Section 2023.*

California Code of Regulations (CCR), *Section 2023.1.*

California Code of Regulations (CCR), *Section 2023.4.*

California Code of Regulations (CCR), Title 24, Part 2, Chapter 2-53

California Department of Transportation (Caltrans). 2016. *California Transportation Plan 2040.*

California Energy Commission (CEC). 2017. *2016 Power Content Label Southern California Edison.*

California Public Utilities Commission (CPUC). 2018. *Rulemaking 16-02-007 Order Instituting Rulemaking to Develop an Electricity Integrated Resource Planning Framework and to Coordinate and Refine Long-Term Procurement Planning Requirements.*

City of Artesia. 2010. *City of Artesia General Plan 2030.* Updated 2014.

City of Bell. 2018. *City of Bell 2030 General Plan*. Adopted May 9, 2018.

City of Bellflower. 1994. *City of Bellflower General Plan: 1995-2010.*

City of Cerritos. 2004. *City of Cerritos General Plan*. Adopted January 2004.

City of Cudahy. 2010. *General Plan – Air Quality Element; Conservation Element.*

City of Cudahy. 2018. *City of Cudahy 2040 General Plan.*

City of Downey. 2005. *Downey Vision 2025 – Conservation Chapter*. Adopted January 25, 2005.

City of Huntington Park. 1991. *City of Huntington Park General Plan*. Adopted February 19, 1991.

City of Los Angeles City Council. 2018. *Resolution G-3536*, February 6, 2018.

City of Los Angeles. 2015. *Sustainable City pLAn*.

City of Los Angeles. 2017. *Los Angeles Green Building Code.*

City of Paramount. 2007. *Paramount General Plan*.

City of South Gate. 2009. *South Gate General Plan 2035 – Green City Element.*

City of Vernon. 2013. *City of Vernon General Plan*.

Los Angeles County Metropolitan Transportation Authority (Metro). 2007. *Energy & Sustainability Policy*.

Los Angeles County Metropolitan Transportation Authority (Metro). 2009. *2009 Long-Range Transportation Plan*.

Los Angeles County Metropolitan Transportation Authority (Metro). 2011a. *Energy Conservation and Management Plan*.

Los Angeles County Metropolitan Transportation Authority (Metro). 2011b. *Green Construction Policy*.

Los Angeles County Metropolitan Transportation Authority (Metro). 2017. *2017 Energy and Resource Report*.

Los Angeles County Metropolitan Transportation Authority (Metro). 2019. *2018 Energy and Resource Report*.

Los Angeles County Metropolitan Transportation Authority (Metro). 2020. *West Santa Ana Branch Transit Project Climate Change Impact Analysis Report*.

Los Angeles County Metropolitan Transportation Authority (Metro). 2020g. *West Santa Ana Branch Transit Corridor Project Construction Methods Report*.

Los Angeles County. 2015. *Los Angeles County General Plan*. Adopted October 6, 2015.

Los Angeles County. 2017. *Florence-Firestone Community Plan*.

Los Angeles Department of Water and Power (LADWP). 2016. *Facts and Figure 2016*. Website accessed September 20, 2018.

Oak Ridge National Laboratory. 2019. *Transportation Energy Data Book*.

South Coast Air Quality Management District (SCAQMD). 2017. *Final 2016 Air Quality Management Plan, Chapter 10 Climate and Energy*, March 2017.

Southern California Association of Governments (SCAG). 2016. *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)*. Adopted April 2016.

Southern California Edison. 2018. *2017 Financial & Statistical Report*.

Southern California Edison. 2018. *Who We Are*. Website accessed September 25, 2018.

Southern California Gas Company. 2018. *2018 California Gas Report*.

State of California. 2000. *Assembly Bill 2076, Reducing Dependence on Petroleum*.

State of California. 2002. *Assembly Bill* 1493.

State of California. 2002. *Senate Bill 1389, Chapter 568, Statutes of 2002*.

State of California. 2005. *Executive Order S-03-05*.

State of California. 2008. *Senate Bill 375, Sustainable Communities and Climate Protection Act of 2008*.

State of California. 2011. *Senate Bill 250*.

State of California. 2011. *Senate Bill X1-2*.

State of California. 2013. *Assembly Bill 118 Alternative and Renewable Fuel and Vehicle Technology Program*.

State of California. 2013. *Senate Bill 743*.

State of California. 2015. *Senate Bill 350*.

State of California. 2015. *Executive Order B-30-15*.

State of California. 2018. *Senate Bill 100, California Renewables Portfolio Standard Program: Emissions of Greenhouse Gases.*

Transportation Electrification Partnership (TEP). 2018. *2028 Zero Emissions Roadmap.*

United States Department of Energy. 1975. *Energy Policy and Conservation Act of 1975.*

United States Department of Energy. 1988. *Alternative Fuels Motor Act of 1988*, October 14, 1988.

United States Department of Energy. 1991. *Intermodal Surface Transportation Efficiency Act of 1991 and Congestion Mitigation and Air Quality Improvement Program.*

United States Department of Energy. 1992. *Energy Policy Act of 1992.*

United States Department of Energy. 2005. *Energy Policy Act of 2005.*

United States Department of Energy. 2007. E*nergy Independence and Security Act of 2007.*

United States Department of Energy. 2014. *Alternative Fuels Data Center – Fuel Properties Comparison.*

United States Department of Transportation. 1991. *Transportation Equity Act for the 21st Century* (TEA-21).

United States Department of Transportation. 2012. *Moving Ahead for Progress in the 21st Century Act* (MAP-21).

United States Energy Information Administration (EIA). 2016. *State Energy Data System, California Energy Consumption by Sector.*

United States Environmental Protection Agency. 2018. *Emission Factors for Greenhouse Gas Inventories.*

United States Environmental Protection Agency and National Highway Traffic Safety Administration. 2019. *Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program (84 CFR Vol. 84, No. 188, p. 53,310).*

APPENDIX A – ENERGY CALCULATION WORKSHEETS

- Operational Energy
    - Operational Energy Summary Table
    - Light Rail Vehicle Miles Energy Consumption Calculations
    - Regional Vehicle Miles Traveled (VMT) Fuel Consumption Calculations
    - Maintenance and Storage Facility (MSF) Operational Energy Consumption
    - Maintenance and Storage Facility (MSF) Annual CalEEMod Output File
- Construction Energy
    - Construction Energy Summary
    - Light Rail Corridor Construction Energy Calculations
    - Maintenance and Storage Facility (MSF) Construction Energy Calculations
    - Light Rail Corridor Construction Annual CalEEMod Output Files
    - Maintenance and Storage Facility (MSF) Annual CalEEMod Output File

Operational Energy Summary Table

Operational Energy Summary Tables

Annual Energy Consumption in Million British Thermal Units (MMBTU)

2042	No Build Alternative	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Design Option 1	Design Option 2
Regional On-Road VMT	807,680,340	807,032,073	807,143,051	807,539,033	807,548,369	806,997,571	807,040,451
LRT/Station Energy		13,994	14,068	10,644	4,689	13,994	13,994
Maintenance & Storage Facility		7,652	7,652	7,652	7,652	7,652	7,652
Total (MMBTU)	**807,680,340**	**807,053,718**	**807,164,771**	**807,557,329**	**807,560,710**	**807,019,217**	**807,062,096**
Change From No Build Alternative		(626,621)	(515,568)	(123,011)	(119,629)	(661,123)	(618,243)
Percent Change from No Build		-0.08%	-0.06%	-0.02%	-0.01%	-0.08%	-0.08%

Annual Energy Consumption in Million British Thermal Units (MMBTU)

2017	Existing Conditions	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Design Option 1	Design Option 2
Regional On-Road VMT	907,145,388	907,280,339	906,636,626	906,979,259	907,034,622	906,441,037	906,723,046
LRT/Station Energy		13,994	14,068	10,644	4,689	13,994	13,994
Maintenance & Storage Facility		7,652	7,652	7,652	7,652	7,652	7,652
Total (MMBTU)	**907,145,388**	**907,301,985**	**906,658,346**	**906,997,555**	**907,046,963**	**906,462,682**	**906,744,691**
Change From Existing Condtions		156,597	(487,042)	(147,833)	(98,425)	(682,706)	(400,697)
Percent Change from Existing Cond.		0.02%	-0.05%	-0.02%	-0.01%	-0.08%	-0.04%

Light Rail Vehicle Miles
Energy Consumption Calculations

Annual Rail Corridor Energy Consumption in Million British Thermal Units (MMBTU)

Alternative/Option	Annual Light Rail Revenue Service Miles	2017 Metro Energy Consumption Factor (kBTU/LRTmile)	Annual Rail Corridor Energy Cosnumption (MMBTU)
Aternative 1	2,109,180	6.635	13,994
Alternative 2	2,120,399	6.635	14,068
Alternative 3	1,604,323	6.635	10,644
Alternative 4	706,800	6.635	4,689
Design Option 1	2,109,180	6.635	13,994
Design Option 2	2,109,180	6.635	13,994

Regional Vehicle Miles Traveled (VMT)
Fuel Consumption Calculations

Annual On-Road Transportation Fuels Combustion Energy

2017 Fuel Consumption Energy Conversion

	Existing Conditions	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Design Option 1	Design Option 2
Gasoline Fuel Consumption (MMGAL/year)	6,605.24	6,606.53	6,601.54	6,604.00	6,604.45	6,600.14	6,602.12
Conversion Factor (BTU/GAL)	118,223	118,223	118,223	118,223	118,223	118,223	118,223
Annual Gasoline Combustion Energy (MMBTU/year)	**780,891,219**	**781,043,613**	**780,453,400**	**780,744,130**	**780,798,463**	**780,288,005**	**780,522,820**
Diesel Fuel Consumption (MMGAL/year)	945.80	945.67	945.27	945.66	945.67	945.04	945.40
Conversion Factor (BTU/GAL)	133,489	133,489	133,489	133,489	133,489	133,489	133,489
Annual Diesel Combustion Energy (MMBTU/year)	**126,254,168.60**	**126,236,725.76**	**126,183,226.34**	**126,235,129.79**	**126,236,158.57**	**126,153,032.03**	**126,200,225.31**
Annuel On-Road Fuel Combustion Energy (MMBTU/yeai	**907,145,387.90**	**907,280,339.07**	**906,636,625.87**	**906,979,259.34**	**907,034,621.92**	**906,441,036.62**	**906,723,045.52**

2042 Fuel Consumption Energy Conversion

	Existing Conditions	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Design Option 1	Design Option 2
Gasoline Fuel Consumption (MMGAL/YEAR)	5,405.53	5,401.18	5,401.90	5,404.42	5,404.47	5,400.84	5,401.05
Conversion Factor (BTU/GAL)	118,223	118,223	118,223	118,223	118,223	118,223	118,223
Annual Gasoline Combustion Energy (MMBTU)	**639,057,703**	**638,544,057**	**638,628,928**	**638,927,108**	**638,933,205**	**638,503,542**	**638,527,897**
Diesel Fuel Consumption (MMGAL/YEAR)	1,263.19	1,262.15	1,262.30	1,262.99	1,262.98	1,262.03	1,262.13
Conversion Factor (BTU/GAL)	133,489	133,489	133,489	133,489	133,489	133,489	133,489
Annual Diesel Combustion Energy (MMBTU)	**168,622,636.63**	**168,482,614.90**	**168,503,319.87**	**168,595,711.79**	**168,593,546.60**	**168,467,024.76**	**168,480,147.25**
Annuel On-Road Fuel Combustion Energy (MMBTU/yeai	**807,680,339.52**	**807,026,671.51**	**807,132,247.44**	**807,522,819.60**	**807,526,751.25**	**806,970,567.21**	**807,008,044.43**

Regional Vehicle Miles Traveled Fuel Consumption Calculations

2017 Annual Regional On-Road Vehicle Miles Traveled (Millions)

Speed Range	Existing Conditions	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Design Option 1	Design Option 2
≤5	1,014.98	1,033.73	1,011.89	1,005.85	1,011.28	1,009.28	992.74
5-10	1,822.77	1,750.05	1,822.94	1,822.10	1,824.67	1,801.77	1,833.02
10-15	4,774.55	4,743.98	4,767.62	4,752.78	4,753.89	4,736.69	4,797.26
15-20	10,203.68	10,366.18	10,168.97	10,200.63	10,254.35	10,203.03	10,215.33
20-25	21,579.90	21,321.38	21,586.50	21,591.33	21,546.08	21,550.14	21,603.07
25-30	23,327.70	24,441.60	23,274.69	23,432.81	23,403.44	23,374.86	23,151.11
30-35	20,551.72	20,413.79	20,624.57	20,423.03	20,434.64	20,521.88	20,753.70
35-40	12,828.98	11,364.04	12,788.07	12,901.90	12,843.31	12,810.52	12,795.36
40-45	7,916.25	6,884.22	7,905.93	7,921.68	7,887.83	7,878.81	7,913.37
45-50	5,877.35	7,724.59	5,868.58	5,832.31	5,873.31	5,865.67	5,727.43
50-55	5,853.35	5,172.30	5,928.39	5,824.91	5,899.94	5,980.13	5,887.76
55-60	5,604.84	6,101.27	5,543.77	5,605.06	5,598.43	5,535.92	5,653.20
60-65	7,629.73	7,558.49	7,588.21	7,682.53	7,654.93	7,561.84	7,547.02
65-70	12,384.79	12,906.08	12,381.54	12,335.88	12,296.13	12,410.90	12,374.24
70-75	19,310.45	18,823.60	19,344.80	19,335.69	19,373.90	19,357.66	19,360.73
75-80	65.26	65.98	65.21	65.21	65.24	65.20	65.15
Total	**160,746.30**	**160,671.29**	**160,671.68**	**160,733.69**	**160,721.37**	**160,664.31**	**160,670.50**

Regional Vehicle Miles Traveled Fuel Consumption Calculations

2017 Annual Regional Gasoline Consumption (Million Gallons)

Speed Range	EMFAC2017 Regional Fleet Gasoline Consumption Factor (gal/mi)	Existing Conditions	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Design Option 1	Design Option 2
≤5	0.0931	94.48	96.22	94.19	93.63	94.13	93.95	92.41
5-10	0.0756	137.82	132.33	137.84	137.77	137.97	136.24	138.60
10-15	0.0619	295.33	293.43	294.90	293.98	294.05	292.98	296.73
15-20	0.0514	524.91	533.27	523.12	524.75	527.51	524.87	525.51
20-25	0.0440	949.13	937.76	949.42	949.63	947.64	947.82	950.15
25-30	0.0390	909.83	953.27	907.76	913.93	912.78	911.67	902.94
30-35	0.0361	742.10	737.12	744.73	737.46	737.87	741.02	749.40
35-40	0.0350	449.32	398.01	447.89	451.88	449.82	448.68	448.14
40-45	0.0352	278.72	242.39	278.36	278.91	277.72	277.40	278.62
45-50	0.0362	212.90	279.82	212.58	211.27	212.75	212.48	207.47
50-55	0.0375	219.75	194.18	222.56	218.68	221.50	224.51	221.04
55-60	0.0387	216.81	236.02	214.45	216.82	216.56	214.15	218.68
60-65	0.0398	303.37	300.54	301.72	305.47	304.38	300.67	300.08
65-70	0.0400	495.53	516.39	495.40	493.57	491.98	496.57	495.11
70-75	0.0400	772.63	753.15	774.00	773.64	775.17	774.52	774.64
75-80	0.0400	2.61	2.64	2.61	2.61	2.61	2.61	2.61
Total		**6,605.24**	**6,606.53**	**6,601.54**	**6,604.00**	**6,604.45**	**6,600.14**	**6,602.12**

Regional Vehicle Miles Traveled Fuel Consumption Calculations

2017 Annual Regional Diesel Consumption (Million Gallons)

Speed Range	EMFAC2017 Regional Fleet Diesel Consumption Factor (gal/mi)	Existing Conditions	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Design Option 1	Design Option 2
≤5	0.0129	13.11	13.35	13.07	12.99	13.06	13.04	12.82
5-10	0.0111	20.15	19.35	20.15	20.14	20.17	19.92	20.26
10-15	0.0088	41.89	41.62	41.83	41.70	41.71	41.56	42.09
15-20	0.0075	76.63	77.85	76.37	76.61	77.01	76.62	76.72
20-25	0.0066	143.42	141.70	143.46	143.50	143.20	143.22	143.57
25-30	0.0060	139.62	146.28	139.30	140.25	140.07	139.90	138.56
30-35	0.0055	113.20	112.44	113.60	112.49	112.55	113.03	114.31
35-40	0.0051	66.03	58.49	65.82	66.41	66.10	65.94	65.86
40-45	0.0049	38.87	33.80	38.82	38.90	38.73	38.68	38.85
45-50	0.0048	28.35	37.26	28.30	28.13	28.33	28.29	27.62
50-55	0.0049	28.49	25.18	28.86	28.36	28.72	29.11	28.66
55-60	0.0050	28.15	30.64	27.84	28.15	28.12	27.80	28.39
60-65	0.0053	40.21	39.83	39.99	40.49	40.34	39.85	39.77
65-70	0.0053	65.39	68.14	65.37	65.13	64.92	65.53	65.34
70-75	0.0053	101.96	99.39	102.14	102.09	102.29	102.21	102.22
75-80	0.0053	0.34	0.35	0.34	0.34	0.34	0.34	0.34
Total		**945.80**	**945.67**	**945.27**	**945.66**	**945.67**	**945.04**	**945.40**

Regional Vehicle Miles Traveled Fuel Consumption Calculations

2042 Annual Regional On-Road Vehicle Miles Traveled (Millions)

Speed Range	No Build Alternative	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Design Option 1	Design Option 2
≤5	2,831.97	2,801.89	2,833.88	2,794.56	2,817.67	2,776.34	2,826.22
5-10	7,700.91	7,671.18	7,681.53	7,713.68	7,719.25	7,668.69	7,681.91
10-15	13,036.81	13,063.78	13,089.05	13,016.10	13,032.91	13,144.51	13,017.52
15-20	20,126.82	20,120.17	20,026.15	20,179.85	20,104.03	20,029.77	20,073.04
20-25	29,775.98	29,745.33	29,748.17	30,016.62	29,855.72	30,124.18	29,832.34
25-30	30,470.95	30,541.18	30,400.36	30,059.83	30,449.67	29,886.63	30,280.69
30-35	23,956.59	23,829.50	23,955.42	24,014.95	23,867.83	23,961.30	24,062.29
35-40	15,655.20	15,621.43	15,740.24	15,996.67	15,723.28	15,952.48	15,677.37
40-45	6,941.48	6,986.10	6,898.75	6,860.13	6,917.91	6,741.18	6,948.67
45-50	5,860.46	5,942.75	5,902.39	5,693.89	5,918.04	6,102.35	5,859.88
50-55	5,256.73	5,171.44	5,245.07	5,225.11	5,166.29	5,094.69	5,237.12
55-60	7,230.02	7,201.67	7,194.42	7,306.32	7,236.42	7,175.42	7,218.61
60-65	9,967.82	9,997.40	9,964.18	9,839.74	9,914.61	10,083.72	9,964.53
65-70	16,993.40	17,009.07	16,994.41	17,122.65	17,069.34	16,776.27	16,961.49
70-75	14,543.24	14,509.74	14,543.44	14,483.82	14,510.04	14,675.03	14,568.49
75-80	48.09	47.99	48.05	47.96	48.05	52.00	48.08
Total	**210,396.48**	**210,260.63**	**210,265.52**	**210,371.90**	**210,351.07**	**210,244.56**	**210,258.23**

Regional Vehicle Miles Traveled Fuel Consumption Calculations

2042 Annual Regional Gasoline Consumption (Million Gallons)

Speed Range	EMFAC2017 Regional Fleet Gasoline Consumption Factor (gal/mi)	Existing Conditions	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Design Option 1	Design Option 2
≤5	0.0547	154.97	153.33	155.08	152.93	154.19	151.93	154.66
5-10	0.0444	342.27	340.95	341.41	342.84	343.09	340.84	341.43
10-15	0.0364	474.04	475.03	475.94	473.29	473.90	477.96	473.34
15-20	0.0302	608.47	608.27	605.43	610.08	607.79	605.54	606.85
20-25	0.0258	769.50	768.71	768.78	775.72	771.56	778.50	770.96
25-30	0.0229	698.36	699.97	696.75	688.94	697.88	684.97	694.00
30-35	0.0212	508.41	505.71	508.38	509.65	506.52	508.51	510.65
35-40	0.0206	322.29	321.60	324.04	329.32	323.70	328.41	322.75
40-45	0.0207	143.58	144.51	142.70	141.90	143.10	139.44	143.73
45-50	0.0213	124.81	126.56	125.70	121.26	126.04	129.96	124.80
50-55	0.0221	115.92	114.04	115.66	115.22	113.92	112.34	115.48
55-60	0.0228	164.50	163.85	163.69	166.23	164.64	163.26	164.24
60-65	0.0234	232.99	233.68	232.90	229.99	231.74	235.70	232.91
65-70	0.0236	401.04	401.41	401.07	404.09	402.84	395.92	400.29
70-75	0.0236	343.22	342.43	343.23	341.82	342.44	346.33	343.82
75-80	0.0236	1.13	1.13	1.13	1.13	1.13	1.23	1.13
Total		**5,405.53**	**5,401.18**	**5,401.90**	**5,404.42**	**5,404.47**	**5,400.84**	**5,401.05**

Regional Vehicle Miles Traveled Fuel Consumption Calculations

2042 Annual Regional Diesel Consumption (Million Gallons)

Speed Range	EMFAC2017 Regional Fleet Diesel Consumption Factor (gal/mi)	Existing Conditions	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Design Option 1	Design Option 2
≤5	0.0131	37.23	36.83	37.25	36.74	37.04	36.50	37.15
5-10	0.0109	84.22	83.89	84.01	84.36	84.42	83.86	84.01
10-15	0.0084	109.80	110.02	110.24	109.62	109.76	110.70	109.63
15-20	0.0072	145.40	145.35	144.67	145.78	145.23	144.70	145.01
20-25	0.0063	188.04	187.84	187.86	189.55	188.54	190.23	188.39
25-30	0.0056	169.85	170.24	169.45	167.55	169.73	166.59	168.78
30-35	0.0051	121.41	120.77	121.41	121.71	120.96	121.44	121.95
35-40	0.0047	73.49	73.33	73.88	75.09	73.81	74.88	73.59
40-45	0.0045	31.06	31.26	30.87	30.70	30.96	30.17	31.10
45-50	0.0045	26.13	26.50	26.32	25.39	26.39	27.21	26.13
50-55	0.0046	24.17	23.77	24.11	24.02	23.75	23.42	24.08
55-60	0.0049	35.17	35.03	34.99	35.54	35.20	34.90	35.11
60-65	0.0052	52.03	52.19	52.01	51.36	51.75	52.64	52.01
65-70	0.0052	88.89	88.97	88.90	89.57	89.29	87.76	88.73
70-75	0.0052	76.08	75.90	76.08	75.76	75.90	76.77	76.21
75-80	0.0052	0.25	0.25	0.25	0.25	0.25	0.27	0.25
Total		**1,263.19**	**1,262.15**	**1,262.30**	**1,262.99**	**1,262.98**	**1,262.03**	**1,262.13**

Maintenance and Storage Facility (MSF)
Operational Energy Consumption

Annual MSF Operational Energy

Maintenance & Storage Facility Site Option	Electricity Use (kWh/year)	Conversion Factor (KBTU/kWh)	Electricity Energy (MMBTU)	Natural Gas Energy (MMBTU)	Total Energy (MMBTU)
Bellflower MSF Option	1,618,450	3.41214	5,522.38	1,389.43	6,911.81
Paramount MSF Option	1,743,952	3.41214	5,950.61	1,701.06	7,651.67

Maintenance and Storage Facility (MSF)
Annual CalEEMod Output File

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	83260	4.5000e-004	4.0800e-003	3.4300e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	4.4431	4.4431	9.0000e-005	8.0000e-005	4.4695
General Light Industry	219010	1.1800e-003	0.0107	9.0200e-003	6.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	11.6872	11.6872	2.2000e-004	2.1000e-004	11.7567
Industrial Park	1.07681e+006	5.8100e-003	0.0528	0.0443	3.2000e-004		4.0100e-003	4.0100e-003		4.0100e-003	4.0100e-003	0.0000	57.4627	57.4627	1.1000e-003	1.0500e-003	57.8042
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-Rail	10353	6.0000e-005	5.1000e-004	4.3000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.5525	0.5525	1.0000e-005	1.0000e-005	0.5558
Total		**7.5000e-003**	**0.0681**	**0.0572**	**4.0000e-004**		**5.1800e-003**	**5.1800e-003**		**5.1800e-003**	**5.1800e-003**	**0.0000**	**74.1455**	**74.1455**	**1.4200e-003**	**1.3500e-003**	**74.5861**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	134310	74.8055	1.7700e-003	3.7000e-004	74.9586
General Light Industry	51060	28.4385	6.7000e-004	1.4000e-004	28.4967
Industrial Park	1.34369e+006	748.3812	0.0177	3.6600e-003	749.9128
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	42980	23.9382	5.7000e-004	1.2000e-004	23.9872
Unrefrigerated Warehouse-Rail	46410	25.8486	6.1000e-004	1.3000e-004	25.9015
Total		**901.4119**	**0.0213**	**4.4200e-003**	**903.2568**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Cleaning Supplies

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	121994	6.6000e-004	5.9800e-003	5.0200e-003	4.0000e-005		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004	0.0000	6.5101	6.5101	1.2000e-004	1.2000e-004	6.5488
General Light Industry	146067	7.9000e-004	7.1600e-003	6.0100e-003	4.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004	0.0000	7.7947	7.7947	1.5000e-004	1.4000e-004	7.8410
General Light Industry	442907	2.3900e-003	0.0217	0.0182	1.3000e-004		1.6500e-003	1.6500e-003		1.6500e-003	1.6500e-003	0.0000	23.6352	23.6352	4.5000e-004	4.3000e-004	23.7757
Industrial Park	990095	5.3400e-003	0.0485	0.0408	2.9000e-004		3.6900e-003	3.6900e-003		3.6900e-003	3.6900e-003	0.0000	52.8353	52.8353	1.0100e-003	9.7000e-004	53.1492
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-Rail	6577.2	4.0000e-005	3.2000e-004	2.7000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.3510	0.3510	1.0000e-005	1.0000e-005	0.3531
Total		**9.2200e-003**	**0.0837**	**0.0703**	**5.0000e-004**		**6.3500e-003**	**6.3500e-003**		**6.3500e-003**	**6.3500e-003**	**0.0000**	**91.1262**	**91.1262**	**1.7400e-003**	**1.6700e-003**	**91.6677**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	271617	151.2802	3.5700e-003	7.4000e-004	151.5898
General Light Industry	74814	41.6685	9.8000e-004	2.0000e-004	41.7538
General Light Industry	89577	49.8909	1.1800e-003	2.4000e-004	49.9931
Industrial Park	1.23548e+006	688.1142	0.0163	3.3600e-003	689.5225
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	42980	23.9382	5.7000e-004	1.2000e-004	23.9872
Unrefrigerated Warehouse-Rail	29484	16.4215	3.9000e-004	8.0000e-005	16.4551
Total		**971.3136**	**0.0229**	**4.7400e-003**	**973.3015**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Cleaning Supplies

Construction Energy Summary

Construction Energy Consumption

End Use	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Design Option 1	Design Option 2
Diesel Fuel						
Off-Road Construction Equipment – LRT (gallons)	7,426,266	7,426,266	5,183,928	4,130,596	7,426,266	7,426,266
Off-Road Construction Equipment – MSF (gallons)	1,162,580	1,162,580	1,162,580	1,162,580	1,162,580	1,162,580
Disposal Haul Trucks – LRT (gallons)	1,337,146	1,557,657	628,032	478,749	1,574,661	1,606,589
Disposal Haul Trucks – MSF (gallons)	98,578	98,578	98,578	98,578	98,578	98,578
Vendor Material Deliveries – LRT (gallons)	218,327	218,327	182,664	131,182	218,327	218,327
Vendor Material Deliveries – MSF (gallons)	44,447	44,447	44,447	44,447	44,447	44,447
Total fuel consumption (in gallons)	***10,287,344***	***10,507,855***	***7,300,229***	***6,046,132***	***10,524,859***	***10,556,787***
Conversion factor (kBtu/gallons-diesel)	133.5	133.5	133.5	133.5	133.5	133.5
Total diesel combustion energy consumption (MMBTU)	**1,373,247**	**1,402,683**	**974,500**	**807,092**	**1,404,953**	**1,409,215**
Gasoline Fuel						
Total worker fuel consumption – LRT (gallons)	685,586	685,586	445,796	317,763	685,586	685,586
Total worker fuel consumption – MSF (gallons)	150,651	150,651	150,651	150,651	150,651	150,651
Total fuel consumption (gallons)	***836,237***	***836,237***	***596,447***	***468,414***	***836,237***	***836,237***
Conversion factor (kBtu/gallons-gasoline)	118.2	118.2	118.2	118.2	118.2	118.2
Total gasoline combustion energy consumption (MMBTU)	**98,862**	**98,862**	**70,514**	**55,377**	**98,862**	**98,862**
Total construction energy consumption (MMBTU)	**1,472,110**	**1,501,546**	**1,045,014**	**862,469**	**1,503,815**	**1,508,077**

Notes: kBtu = thousand British thermal units; LRT = light rail transit; MMBTU = million British thermal units; MSF = maintenance and storage facility
Construction energy was estimated for both MSF site options. As the Paramount and Bellflower facilities would be similar in size, it was assumed that construction would employ the same equipment and vehicle inventory and follow the same schedule regardless of the site option selected. The data presented apply to construction of either the Paramount or Bellflower site.

Light Rail Corridor Construction
Energy Calculations

LRT Corridor Construction Energy Calculations

Vehicle	Conversion Factor	Value	Unit	Value
Construction Equipment	gCH4/gal	0.57	lbCH4/gal	0.001256636
Diesel Trucks	kgCO2/gal	10.21	lbCO2/gal	22.5091702
Gas PV	kgCO2/gal	8.78	lbCO2/gal	19.3565636

Component	Activity	Phase	Year	Source	MTCO2/yr	MTCH4/yr	Equipment Diesel Gal (gal/year)	Haul Diesel Gal	Vendor Diesel Gal	Worker Gas Gal
Demo&Relo	Freight Line Relocation	FLR	2022	Equipment	544.2102	0.1556	272,981.9			
Demo&Relo	Freight Line Relocation	FLR	2022	Hauling				-		
Demo&Relo	Freight Line Relocation	FLR	2022	Vendor					-	
Demo&Relo	Freight Line Relocation	FLR	2022	Worker	26.9072	0.00074				3,064.6
Demo&Relo	Freight Line Relocation	FLR	2023	Equipment	382.0752	0.109	191,227.7			
Demo&Relo	Freight Line Relocation	FLR	2023	Hauling				-		
Demo&Relo	Freight Line Relocation	FLR	2023	Vendor					-	
Demo&Relo	Freight Line Relocation	FLR	2023	Worker	18.2009	0.00047				2,073.0
Demo&Relo	Utility Relocation	UR	2022	Equipment	533.6639	0.1522	267,017.0			
Demo&Relo	Utility Relocation	UR	2022	Hauling				-		
Demo&Relo	Utility Relocation	UR	2022	Vendor					-	
Demo&Relo	Utility Relocation	UR	2022	Worker	26.9072	0.00074				3,064.6
Demo&Relo	Utility Relocation	UR	2023	Equipment	590.4481	0.168	294,736.3			
Demo&Relo	Utility Relocation	UR	2023	Hauling				-		
Demo&Relo	Utility Relocation	UR	2023	Vendor					-	
Demo&Relo	Utility Relocation	UR	2023	Worker	28.6803	0.00074				3,266.5
Demo&Relo	Utility Relocation	UR	2024	Equipment	594.2637	0.1689	296,315.2			
Demo&Relo	Utility Relocation	UR	2024	Hauling				-		
Demo&Relo	Utility Relocation	UR	2024	Vendor					-	
Demo&Relo	Utility Relocation	UR	2024	Worker	27.9692	0.00068				3,185.6
Demo&Relo	Utility Relocation	UR	2025	Equipment	257.3973		-			
Demo&Relo	Utility Relocation	UR	2025	Hauling				-		
Demo&Relo	Utility Relocation	UR	2025	Vendor					-	
Demo&Relo	Utility Relocation	UR	2025	Worker	11.645	0.00027				1,326.3
Demo&Relo	Demolition	Demolition	2022	Equipment	302.2224	0.0761	133,508.5			
Demo&Relo	Demolition	Demolition	2022	Hauling	338.9541	0.0234		33,198.2		
Demo&Relo	Demolition	Demolition	2022	Vendor					-	
Demo&Relo	Demolition	Demolition	2022	Worker	14.3123	0.00039				1,630.1
At-Grade LRT	Guideway/Parking	Demolition	2022	Equipment	412.377	0.1074	188,420.7			
At-Grade LRT	Guideway/Parking	Demolition	2022	Hauling	813.4897	0.0563		79,675.8		
At-Grade LRT	Guideway/Parking	Demolition	2022	Vendor					-	
At-Grade LRT	Guideway/Parking	Demolition	2022	Worker	257.6218	0.0079				29,341.9
At-Grade LRT	Guideway	Track Bed Prep	2022	Equipment	261.6919	0.0846	148,420.8			
At-Grade LRT	Guideway	Track Bed Prep	2022	Hauling				-		
At-Grade LRT	Guideway	Track Bed Prep	2022	Vendor	49.8436	0.00298			4,881.8	
At-Grade LRT	Guideway	Track Bed Prep	2022	Worker	48.6619	0.00134				5,542.4
At-Grade LRT	Guideway	Track Bed Prep	2023	Equipment	507.9063	0.1643	288,245.0			
At-Grade LRT	Guideway	Track Bed Prep	2023	Hauling				-		
At-Grade LRT	Guideway	Track Bed Prep	2023	Vendor	93.7263	0.00511			9,179.9	
At-Grade LRT	Guideway	Track Bed Prep	2023	Worker	91.0047	0.00234				10,365.0
At-Grade LRT	Guideway	Track Slab Con	2023	Equipment	213.4726	0.0464	81,403.3			
At-Grade LRT	Guideway	Track Slab Con	2023	Hauling				-		
At-Grade LRT	Guideway	Track Slab Con	2023	Vendor	53.9636	0.00294			5,285.4	
At-Grade LRT	Guideway	Track Slab Con	2023	Worker	52.3967	0.00135				5,967.7
At-Grade LRT	Guideway	Track Slab Con	2024	Equipment	348.3153	0.0752	131,929.6			
At-Grade LRT	Guideway	Track Slab Con	2024	Hauling				-		
At-Grade LRT	Guideway	Track Slab Con	2024	Vendor	87.6951	0.00473			8,589.1	
At-Grade LRT	Guideway	Track Slab Con	2024	Worker	82.8386	0.00202				9,434.9
At-Grade LRT	Stations	Construction	2022	Equipment	187.3174	0.0408	71,578.8			
At-Grade LRT	Stations	Construction	2022	Hauling				-		
At-Grade LRT	Stations	Construction	2022	Vendor	99.6873	0.00595			9,763.7	
At-Grade LRT	Stations	Construction	2022	Worker	145.9857	0.00402				16,627.1
At-Grade LRT	Stations	Construction	2023	Equipment	573.077	0.1235	216,666.2			
At-Grade LRT	Stations	Construction	2023	Hauling				-		
At-Grade LRT	Stations	Construction	2023	Vendor	295.3797	0.0161			28,930.4	
At-Grade LRT	Stations	Construction	2023	Worker	430.2041	0.0111				48,998.2
At-Grade LRT	Stations	Construction	2024	Equipment	341.6608	0.073	128,069.9			
At-Grade LRT	Stations	Construction	2024	Hauling				-		

LRT Corridor Construction Energy Calculations

Component	Activity	Phase	Year	Source	MTCO2/yr	MTCH4/yr	Equipment Diesel Gal (gal/year)	Haul Diesel Gal	Vendor Diesel Gal	Worker Gas Gal
At-Grade LRT	Stations	Construction	2024	Vendor	175.3902	0.00945			17,178.3	
At-Grade LRT	Stations	Construction	2024	Worker	248.5158	0.00605				28,304.8
At-Grade LRT	Parking Lots	Paving	2024	Equipment	166.454	0.0457	80,175.3			
At-Grade LRT	Parking Lots	Paving	2024	Hauling				-		
At-Grade LRT	Parking Lots	Paving	2024	Vendor					-	
At-Grade LRT	Parking Lots	Paving	2024	Worker	40.0832	0.00098				4,565.3
Aerial LRT	Guideway	Foundation Prep	2022	Equipment	361.7502	0.117	205,262.7			
Aerial LRT	Guideway	Foundation Prep	2022	Hauling				-		
Aerial LRT	Guideway	Foundation Prep	2022	Vendor					-	
Aerial LRT	Guideway	Foundation Prep	2022	Worker	201.8037	0.00556				22,984.5
Aerial LRT	Guideway	Foundation Prep	2023	Equipment	138.5197	0.0448	78,596.3			
Aerial LRT	Guideway	Foundation Prep	2023	Hauling				-		
Aerial LRT	Guideway	Foundation Prep	2023	Vendor					-	
Aerial LRT	Guideway	Foundation Prep	2023	Worker	74.4584	0.00192				8,480.5
Aerial LRT	Stations	Foundation Prep	2022	Equipment	361.7502	0.117	205,262.7			
Aerial LRT	Stations	Foundation Prep	2022	Hauling				-		
Aerial LRT	Stations	Foundation Prep	2022	Vendor					-	
Aerial LRT	Stations	Foundation Prep	2022	Worker	201.8037	0.00556				22,984.5
Aerial LRT	Stations	Foundation Prep	2023	Equipment	138.5197	0.0448	78,596.3			
Aerial LRT	Stations	Foundation Prep	2023	Hauling				-		
Aerial LRT	Stations	Foundation Prep	2023	Vendor					-	
Aerial LRT	Stations	Foundation Prep	2023	Worker	74.4584	0.00192				8,480.5
Aerial LRT	Guideway	Column Con	2023	Equipment	255.5982	0.082	143,859.4			
Aerial LRT	Guideway	Column Con	2023	Hauling				-		
Aerial LRT	Guideway	Column Con	2023	Vendor	48.2832	0.00263			4,729.0	
Aerial LRT	Guideway	Column Con	2023	Worker	140.6436	0.00362				16,018.6
Aerial LRT	Guideway	Column Con	2024	Equipment	231.3278	0.0748	131,227.8			
Aerial LRT	Guideway	Column Con	2024	Hauling				-		
Aerial LRT	Guideway	Column Con	2024	Vendor	43.8476	0.00236			4,294.6	
Aerial LRT	Guideway	Column Con	2024	Worker	124.2579	0.00303				14,152.4
Aerial LRT	Stations	Platform Con	2023	Equipment	121.4093	0.0324	56,842.0			
Aerial LRT	Stations	Platform Con	2023	Hauling				-		
Aerial LRT	Stations	Platform Con	2023	Vendor	40.236	0.00219			3,940.8	
Aerial LRT	Stations	Platform Con	2023	Worker	117.203	0.00302				13,348.9
Aerial LRT	Stations	Platform Con	2024	Equipment	157.1546	0.0417	73,157.7			
Aerial LRT	Stations	Platform Con	2024	Hauling				-		
Aerial LRT	Stations	Platform Con	2024	Vendor	51.8627	0.0028			5,079.6	
Aerial LRT	Stations	Platform Con	2024	Worker	146.9717	0.00358				16,739.4
Underground LRT	Guideway	Excavation/Tunnel	2022	Equipment	514.0561	0.1663	291,753.8			
Underground LRT	Guideway	Excavation/Tunnel	2022	Hauling				-		
Underground LRT	Guideway	Excavation/Tunnel	2022	Vendor					-	
Underground LRT	Guideway	Excavation/Tunnel	2022	Worker	201.8037	0.00556				22,984.5
Underground LRT	Guideway	Excavation/Tunnel	2023	Equipment	568.6364	0.1839	322,630.9			
Underground LRT	Guideway	Excavation/Tunnel	2023	Hauling				-		
Underground LRT	Guideway	Excavation/Tunnel	2023	Vendor					-	
Underground LRT	Guideway	Excavation/Tunnel	2023	Worker	215.102	0.00554				24,499.1
Underground LRT	Guideway	Excavation/Tunnel	2024	Equipment	10.937	0.00354	6,210.5			
Underground LRT	Guideway	Excavation/Tunnel	2024	Hauling				-		
Underground LRT	Guideway	Excavation/Tunnel	2024	Vendor					-	
Underground LRT	Guideway	Excavation/Tunnel	2024	Worker	4.0083	0.0001				456.5
Underground LRT	Stations	Excavation/Grading	2022	Equipment	514.0561	0.1663	291,753.8			
Underground LRT	Stations	Excavation/Grading	2022	Hauling				-		
Underground LRT	Stations	Excavation/Grading	2022	Vendor					-	
Underground LRT	Stations	Excavation/Grading	2022	Worker	201.8037	0.00556				22,984.5
Underground LRT	Stations	Excavation/Grading	2023	Equipment	568.6364	0.1839	322,630.9			
Underground LRT	Stations	Excavation/Grading	2023	Hauling				-		
Underground LRT	Stations	Excavation/Grading	2023	Vendor					-	
Underground LRT	Stations	Excavation/Grading	2023	Worker	215.102	0.00554				24,499.1
Underground LRT	Stations	Excavation/Grading	2024	Equipment	10.937	0.00354	6,210.5			
Underground LRT	Stations	Excavation/Grading	2024	Hauling				-		
Underground LRT	Stations	Excavation/Grading	2024	Vendor					-	
Underground LRT	Stations	Excavation/Grading	2024	Worker	4.0083	0.0001				456.5
Underground LRT	Guideway/Stations	Construction	2024	Equipment	589.3665	0.1388	243,508.3			
Underground LRT	Guideway/Stations	Construction	2024	Hauling				-		

LRT Corridor Construction Energy Calculations

Component	Activity	Phase	Year	Source	MTCO2/yr	MTCH4/yr	Equipment Diesel Gal (gal/year)	Haul Diesel Gal	Vendor Diesel Gal	Worker Gas Gal
Underground LRT	Guideway/Stations	Construction	2024	Vendor	121.1701	0.00653			11,867.8	
Underground LRT	Guideway/Stations	Construction	2024	Worker	343.3793	0.00836				39,109.3
Underground LRT	Guideway/Stations	Construction	2025	Equipment	598.5083	0.1401	245,789.0			
Underground LRT	Guideway/Stations	Construction	2025	Hauling				-		
Underground LRT	Guideway/Stations	Construction	2025	Vendor	122.3855	0.00654			11,986.8	
Underground LRT	Guideway/Stations	Construction	2025	Worker	335.2208	0.00774				38,180.0
Underground LRT	Guideway/Stations	Construction	2026	Equipment	188.0371	0.044	77,192.8			
Underground LRT	Guideway/Stations	Construction	2026	Hauling				-		
Underground LRT	Guideway/Stations	Construction	2026	Vendor	38.2484	0.00202			3,746.2	
Underground LRT	Guideway/Stations	Construction	2026	Worker	101.6603	0.00223				11,578.6
Systems&TPSS	Signals	Construction	2022	Equipment	542.1216	0.1753	307,543.2			
Systems&TPSS	Signals	Construction	2022	Hauling				-		
Systems&TPSS	Signals	Construction	2022	Vendor	137.803	0.00823			13,496.9	
Systems&TPSS	Signals	Construction	2022	Worker	269.0717	0.00741				30,646.0
Systems&TPSS	Signals	Construction	2023	Equipment	599.9515	0.194	340,350.2			
Systems&TPSS	Signals	Construction	2023	Hauling				-		
Systems&TPSS	Signals	Construction	2023	Vendor	147.6898	0.00805			14,465.2	
Systems&TPSS	Signals	Construction	2023	Worker	286.8027	0.00738				32,665.5
Systems&TPSS	Signals	Construction	2024	Equipment	69.227	0.0224	39,298.2			
Systems&TPSS	Signals	Construction	2024	Hauling				-		
Systems&TPSS	Signals	Construction	2024	Vendor	16.9733	0.00091			1,662.4	
Systems&TPSS	Signals	Construction	2024	Worker	32.0666	0.00078				3,652.2
Systems&TPSS	OCS	Construction	2022	Equipment	546.1216	0.1753	307,543.2			
Systems&TPSS	OCS	Construction	2022	Hauling				-		
Systems&TPSS	OCS	Construction	2022	Vendor	137.803	0.00823			13,496.9	
Systems&TPSS	OCS	Construction	2022	Worker	269.0717	0.00741				30,646.0
Systems&TPSS	OCS	Construction	2023	Equipment	599.9515	0.194	340,350.2			
Systems&TPSS	OCS	Construction	2023	Hauling				-		
Systems&TPSS	OCS	Construction	2023	Vendor	147.6898	0.00805			14,465.2	
Systems&TPSS	OCS	Construction	2023	Worker	286.8027	0.00738				32,665.5
Systems&TPSS	OCS	Construction	2024	Equipment	69.227	0.0224	39,298.2			
Systems&TPSS	OCS	Construction	2024	Hauling				-		
Systems&TPSS	OCS	Construction	2024	Vendor	16.9733	0.00091			1,662.4	
Systems&TPSS	OCS	Construction	2024	Worker	32.0666	0.00078				3,652.2
Systems&TPSS	TPSS	Construction	2022	Equipment	516.1319	0.123	215,789.0			
Systems&TPSS	TPSS	Construction	2022	Hauling				-		
Systems&TPSS	TPSS	Construction	2022	Vendor	137.803	0.00823			13,496.9	
Systems&TPSS	TPSS	Construction	2022	Worker	269.0717	0.00741				30,646.0
Systems&TPSS	TPSS	Construction	2023	Equipment	571.114	0.1354	237,543.4			
Systems&TPSS	TPSS	Construction	2023	Hauling				-		
Systems&TPSS	TPSS	Construction	2023	Vendor	147.6898	0.00805			14,465.2	
Systems&TPSS	TPSS	Construction	2023	Worker	286.8027	0.00738				32,665.5
Systems&TPSS	TPSS	Construction	2024	Equipment	65.9032	0.0156	27,368.4			
Systems&TPSS	TPSS	Construction	2024	Hauling				-		
Systems&TPSS	TPSS	Construction	2024	Vendor	16.9733	0.00091			1,662.4	
Systems&TPSS	TPSS	Construction	2024	Worker	32.0666	0.00078				3,652.2
Alternative 1	Import/Export	Truck Hauling	2022	Hauling	2813.5635	0.1946		275,569.4		
Alternative 1	Import/Export	Truck Hauling	2023	Hauling	2983.2353	0.1999		292,187.6		
Alternative 1	Import/Export	Truck Hauling	2024	Hauling	3254.4506	0.219		318,751.3		
Alternative 1	Import/Export	Truck Hauling	2025	Hauling	3116.14	0.2106		305,204.7		
Alternative 1	Import/Export	Truck Hauling	2026	Hauling	332.4246	0.0225		32,558.7		

	Total Equipment Diesel (Gal)	Total Haul Diesel (Gal)	Total Vendor Diesel (Gal)	Total Worker Gas (Gal)
Alt 1	7,426,266	1,337,146	218,327	685,586
Alt 2	7,426,266	1,557,657	218,327	685,586
Alt 3	5,183,928	628,032	182,664	445,796
Alt 4	4,130,596	478,749	131,182	317,763
DO 1	7,426,266	1,574,661	218,327	685,586
DO 2	7,426,266	1,606,589	218,327	685,586

Maintenance and Storage Facility (MSF) Construction Energy Calculations

MSF Construction Energy Consumption

Vehicle	Conversion Factor	Value		
Construction Equipment	gCH4/gal	0.57	lbCH4/gal	0.001256636
Diesel Trucks	kgCO2/gal	10.21	lbCO2/gal	22.5091702
Gas PV	kgCO2/gal	8.78	lbCO2/gal	19.3565636

Phase	Duration (Days)	Source	Fuel	lbCH4/day	lbCO2/day	Gallons/Day	Total Gallons
Demo	90	Equipment	Diesel	1.5307	-	1,218.09	109,628.41
Demo	90	Trucks	Diesel	-	5990.7815	266.15	23,953.36
Demo	90	PV	Gas	-	3103.7084	160.34	14,430.96
Grading	360	Equipment	Diesel	2.1891	-	1,742.03	627,131.52
Grading	360	Trucks	Diesel	-	5990.7815	266.15	95,813.45
Grading	360	PV	Gas	-	3103.7084	160.34	57,723.83
BC	450	Equipment	Diesel	0.8699	-	692.25	311,510.27
BC	450	Trucks	Diesel	-	1026.9652	45.62	20,530.94
BC	450	PV	Gas	-	2990.1617	154.48	69,515.06
AC	60	Equipment	Diesel	0.0423		33.66	2,019.68
AC	60	Trucks	Diesel			-	-
AC	60	PV	Gas		965.8038	49.90	2,993.72
Paving	60	Equipment	Diesel	0.8097	-	644.34	38,660.36
Paving	60	Trucks	Diesel	-	1,022.98	45.45	2,726.84
Paving	60	PV	Gas	-	1,931.61	99.79	5,987.45

	Total Equipment (D)	1,162,580
	Total Trucks (D)	143,025
	Total Hauling (D)	98,578
	Total Vendor (D)	44,447
	Total PV (G)	150,651
	Total Diesel	1,305,605
	Total Gasoline	150,651
Conversion	BTU/gal-D	133,489
	BTU/gal-G	118,223
	Total MMBTU	192,094

Light Rail Corridor Construction
Annual CalEEMod Output Files

LACMTA West Santa Ana Branch Construction - Demolition & Relocations

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	57.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2028
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

LACMTA West Santa Ana Branch Construction - Demolition & Relocations - Los Angeles-South Coast County, Annual

Project Characteristics -

Land Use - 9.4-miles of freight relocations x 50 feet width ≈ 46 acres.

Construction Phase - Freight Rail Line Relocation ~ 12 months
Utility Relocation ~ 40 months
Conservatively assume earliest possible completion

Off-road Equipment - LACMTA Construction Methods Report

Trips and VMT - Material Delivery to Site(s)

Grading -

Consumer Products - Construction Only

Area Coating - Construction Only

Landscape Equipment - Construction Only

Construction Off-road Equipment Mitigation - LACMTA Green Construction Policy

Off-road Equipment - Construction Methods Report

Off-road Equipment - Construction Methods Report

Off-road Equipment - Construction Methods Report

Demolition -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	40.00	480.00
tblConstructionPhase	NumDays	40.00	1,044.00
tblConstructionPhase	NumDays	70.00	150.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	PhaseEndDate	4/1/2022	8/19/2023
tblConstructionPhase	PhaseEndDate	5/27/2022	6/7/2025
tblConstructionPhase	PhaseStartDate	4/2/2022	2/7/2022
tblLandUse	LotAcreage	0.00	57.00
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts

tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Utility Relocation
tblOffRoadEquipment	PhaseName		Utility Relocation
tblOffRoadEquipment	PhaseName		Utility Relocation
tblOffRoadEquipment	PhaseName		Utility Relocation
tblOffRoadEquipment	PhaseName		Utility Relocation
tblOffRoadEquipment	PhaseName		Utility Relocation
tblTripsAndVMT	HaulingTripNumber	0.00	9,000.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	1.0220	10.7954	8.4378	0.0200	2.4626	0.4432	2.9058	1.0622	0.4131	1.4752	0.0000	1,787.1772	1,787.1772	0.4092	0.0000	1,797.4076
2023	0.6032	5.7804	5.4439	0.0116	1.7188	0.2501	1.9689	0.8727	0.2328	1.1054	0.0000	1,019.4057	1,019.4057	0.2782	0.0000	1,026.3595
2024	0.3570	3.3134	3.3469	7.1000e-003	0.9799	0.1440	1.1239	0.5288	0.1339	0.6627	0.0000	622.2329	622.2329	0.1696	0.0000	626.4726
2025	0.1442	1.3018	1.4318	3.0700e-003	0.4244	0.0551	0.4795	0.2291	0.0512	0.2802	0.0000	269.0423	269.0423	0.0733	0.0000	270.8748
Maximum	**1.0220**	**10.7954**	**8.4378**	**0.0200**	**2.4626**	**0.4432**	**2.9058**	**1.0622**	**0.4131**	**1.4752**	**0.0000**	**1,787.1772**	**1,787.1772**	**0.4092**	**0.0000**	**1,797.4076**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2524	1.9903	9.8890	0.0200	1.0553	0.0289	1.0842	0.4399	0.0287	0.4686	0.0000	1,787.1755	1,787.1755	0.4092	0.0000	1,797.4059
2023	0.1522	0.5896	6.7177	0.0116	0.7044	0.0181	0.7226	0.3494	0.0181	0.3675	0.0000	1,019.4045	1,019.4045	0.2782	0.0000	1,026.3584
2024	0.0924	0.3595	4.1062	7.1000e-003	0.4031	0.0111	0.4142	0.2118	0.0111	0.2229	0.0000	622.2322	622.2322	0.1696	0.0000	626.4719
2025	0.0398	0.1554	1.7756	3.0700e-003	0.1746	4.8000e-003	0.1794	0.0918	4.7900e-003	0.0965	0.0000	269.0420	269.0420	0.0733	0.0000	270.8745
Maximum	**0.2524**	**1.9903**	**9.8890**	**0.0200**	**1.0553**	**0.0289**	**1.0842**	**0.4399**	**0.0287**	**0.4686**	**0.0000**	**1,787.1755**	**1,787.1755**	**0.4092**	**0.0000**	**1,797.4059**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**74.76**	**85.40**	**-20.51**	**0.00**	**58.15**	**92.95**	**62.95**	**59.42**	**92.46**	**67.21**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	2-7-2022	5-6-2022	4.0626	0.9306
2	5-7-2022	8-6-2022	4.0479	0.9013
3	8-7-2022	11-6-2022	2.2714	0.2306
4	11-7-2022	2-6-2023	2.1555	0.2309
5	2-7-2023	5-6-2023	1.9172	0.2225
6	5-7-2023	8-6-2023	1.9812	0.2293
7	8-7-2023	11-6-2023	1.1161	0.1301
8	11-7-2023	2-6-2024	0.9531	0.1140

9	**2-7-2024**	**5-6-2024**	0.9018	0.1111
10	**5-7-2024**	**8-6-2024**	0.9215	0.1132
11	**8-7-2024**	**11-6-2024**	0.9217	0.1135
12	**11-7-2024**	**2-6-2025**	0.8885	0.1136
13	**2-7-2025**	**5-6-2025**	0.8111	0.1096
14	**5-7-2025**	**8-6-2025**	0.2915	0.0393
		Highest	4.0626	0.9306

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Freight Rail Line Relocation	Site Preparation	2/7/2022	8/19/2023	6	480	Relocate existing at-grade freight tracks.
2	Utility Relocation	Site Preparation	2/7/2022	6/7/2025	6	1044	Relocate or temporarily reroute utilities.
3	Demolition	Demolition	2/7/2022	7/30/2022	6	150	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

LACMTA West Santa Ana Branch Construction - Demolition & Relocations - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Utility Relocation	Rubber Tired Dozers	1	8.00	247	0.40
Utility Relocation	Excavators	2	8.00	158	0.38
Utility Relocation	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Freight Rail Line Relocation	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Excavators	2	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Freight Rail Line Relocation	Excavators	2	8.00	158	0.38
Freight Rail Line Relocation	Rubber Tired Loaders	1	8.00	203	0.36
Freight Rail Line Relocation	Rough Terrain Forklifts	1	8.00	100	0.40
Freight Rail Line Relocation	Concrete/Industrial Saws	1	8.00	81	0.73
Freight Rail Line Relocation	Rollers	1	8.00	80	0.38
Utility Relocation	Rough Terrain Forklifts	1	8.00	100	0.40
Utility Relocation	Rollers	1	8.00	80	0.38
Utility Relocation	Rubber Tired Loaders	1	8.00	203	0.36
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Freight Rail Line Relocation	Graders	1	8.00	187	0.41
Utility Relocation	Cranes	1	8.00	231	0.29

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Freight Rail Line Relocation	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Utility Relocation	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	8	20.00	0.00	9,000.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Freight Rail Line Relocation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9764	0.0000	0.9764	0.4805	0.0000	0.4805	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3644	3.7559	2.9834	6.2100e-003		0.1634	0.1634		0.1521	0.1521	0.0000	544.2102	544.2102	0.1556	0.0000	548.1008
Total	**0.3644**	**3.7559**	**2.9834**	**6.2100e-003**	**0.9764**	**0.1634**	**1.1398**	**0.4805**	**0.1521**	**0.6325**	**0.0000**	**544.2102**	**544.2102**	**0.1556**	**0.0000**	**548.1008**

3.2 Freight Rail Line Relocation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0114	8.5300e-003	0.0983	3.0000e-004	0.0309	2.5000e-004	0.0312	8.2100e-003	2.3000e-004	8.4300e-003	0.0000	26.9072	26.9072	7.4000e-004	0.0000	26.9257
Total	**0.0114**	**8.5300e-003**	**0.0983**	**3.0000e-004**	**0.0309**	**2.5000e-004**	**0.0312**	**8.2100e-003**	**2.3000e-004**	**8.4300e-003**	**0.0000**	**26.9072**	**26.9072**	**7.4000e-004**	**0.0000**	**26.9257**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3808	0.0000	0.3808	0.1874	0.0000	0.1874	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0743	0.3221	3.6565	6.2100e-003		9.9100e-003	9.9100e-003		9.9100e-003	9.9100e-003	0.0000	544.2095	544.2095	0.1556	0.0000	548.1002
Total	**0.0743**	**0.3221**	**3.6565**	**6.2100e-003**	**0.3808**	**9.9100e-003**	**0.3907**	**0.1874**	**9.9100e-003**	**0.1973**	**0.0000**	**544.2095**	**544.2095**	**0.1556**	**0.0000**	**548.1002**

3.2 Freight Rail Line Relocation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0114	8.5300e-003	0.0983	3.0000e-004	0.0309	2.5000e-004	0.0312	8.2100e-003	2.3000e-004	8.4300e-003	0.0000	26.9072	26.9072	7.4000e-004	0.0000	26.9257
Total	**0.0114**	**8.5300e-003**	**0.0983**	**3.0000e-004**	**0.0309**	**2.5000e-004**	**0.0312**	**8.2100e-003**	**2.3000e-004**	**8.4300e-003**	**0.0000**	**26.9072**	**26.9072**	**7.4000e-004**	**0.0000**	**26.9257**

3.2 Freight Rail Line Relocation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.7235	0.0000	0.7235	0.3415	0.0000	0.3415	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2286	2.2895	2.0415	4.3600e-003		0.0964	0.0964		0.0897	0.0897	0.0000	382.0756	382.0756	0.1090	0.0000	384.8001
Total	**0.2286**	**2.2895**	**2.0415**	**4.3600e-003**	**0.7235**	**0.0964**	**0.8199**	**0.3415**	**0.0897**	**0.4312**	**0.0000**	**382.0756**	**382.0756**	**0.1090**	**0.0000**	**384.8001**

3.2 Freight Rail Line Relocation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.5100e-003	5.4200e-003	0.0634	2.0000e-004	0.0217	1.7000e-004	0.0219	5.7600e-003	1.5000e-004	5.9200e-003	0.0000	18.2009	18.2009	4.7000e-004	0.0000	18.2127
Total	**7.5100e-003**	**5.4200e-003**	**0.0634**	**2.0000e-004**	**0.0217**	**1.7000e-004**	**0.0219**	**5.7600e-003**	**1.5000e-004**	**5.9200e-003**	**0.0000**	**18.2009**	**18.2009**	**4.7000e-004**	**0.0000**	**18.2127**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2821	0.0000	0.2821	0.1332	0.0000	0.1332	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0522	0.2262	2.5674	4.3600e-003		6.9600e-003	6.9600e-003		6.9600e-003	6.9600e-003	0.0000	382.0752	382.0752	0.1090	0.0000	384.7997
Total	**0.0522**	**0.2262**	**2.5674**	**4.3600e-003**	**0.2821**	**6.9600e-003**	**0.2891**	**0.1332**	**6.9600e-003**	**0.1401**	**0.0000**	**382.0752**	**382.0752**	**0.1090**	**0.0000**	**384.7997**

3.2 Freight Rail Line Relocation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.5100e-003	5.4200e-003	0.0634	2.0000e-004	0.0217	1.7000e-004	0.0219	5.7600e-003	1.5000e-004	5.9200e-003	0.0000	18.2009	18.2009	4.7000e-004	0.0000	18.2127
Total	**7.5100e-003**	**5.4200e-003**	**0.0634**	**2.0000e-004**	**0.0217**	**1.7000e-004**	**0.0219**	**5.7600e-003**	**1.5000e-004**	**5.9200e-003**	**0.0000**	**18.2009**	**18.2009**	**4.7000e-004**	**0.0000**	**18.2127**

3.3 Utility Relocation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.8491	0.0000	0.8491	0.4667	0.0000	0.4667	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3584	3.6046	3.0074	6.0900e-003		0.1644	0.1644		0.1529	0.1529	0.0000	533.6639	533.6639	0.1522	0.0000	537.4693
Total	**0.3584**	**3.6046**	**3.0074**	**6.0900e-003**	**0.8491**	**0.1644**	**1.0135**	**0.4667**	**0.1529**	**0.6196**	**0.0000**	**533.6639**	**533.6639**	**0.1522**	**0.0000**	**537.4693**

3.3 Utility Relocation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0114	8.5300e-003	0.0983	3.0000e-004	0.0309	2.5000e-004	0.0312	8.2100e-003	2.3000e-004	8.4300e-003	0.0000	26.9072	26.9072	7.4000e-004	0.0000	26.9257
Total	**0.0114**	**8.5300e-003**	**0.0983**	**3.0000e-004**	**0.0309**	**2.5000e-004**	**0.0312**	**8.2100e-003**	**2.3000e-004**	**8.4300e-003**	**0.0000**	**26.9072**	**26.9072**	**7.4000e-004**	**0.0000**	**26.9257**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3312	0.0000	0.3312	0.1820	0.0000	0.1820	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0729	0.3158	3.6036	6.0900e-003		9.7200e-003	9.7200e-003		9.7200e-003	9.7200e-003	0.0000	533.6633	533.6633	0.1522	0.0000	537.4687
Total	**0.0729**	**0.3158**	**3.6036**	**6.0900e-003**	**0.3312**	**9.7200e-003**	**0.3409**	**0.1820**	**9.7200e-003**	**0.1918**	**0.0000**	**533.6633**	**533.6633**	**0.1522**	**0.0000**	**537.4687**

3.3 Utility Relocation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0114	8.5300e-003	0.0983	3.0000e-004	0.0309	2.5000e-004	0.0312	8.2100e-003	2.3000e-004	8.4300e-003	0.0000	26.9072	26.9072	7.4000e-004	0.0000	26.9257
Total	**0.0114**	**8.5300e-003**	**0.0983**	**3.0000e-004**	**0.0309**	**2.5000e-004**	**0.0312**	**8.2100e-003**	**2.3000e-004**	**8.4300e-003**	**0.0000**	**26.9072**	**26.9072**	**7.4000e-004**	**0.0000**	**26.9257**

3.3 Utility Relocation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9395	0.0000	0.9395	0.5164	0.0000	0.5164	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3552	3.4770	3.2390	6.7400e-003		0.1533	0.1533		0.1426	0.1426	0.0000	590.4488	590.4488	0.1680	0.0000	594.6480
Total	**0.3552**	**3.4770**	**3.2390**	**6.7400e-003**	**0.9395**	**0.1533**	**1.0927**	**0.5164**	**0.1426**	**0.6590**	**0.0000**	**590.4488**	**590.4488**	**0.1680**	**0.0000**	**594.6480**

3.3 Utility Relocation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0118	8.5400e-003	0.1000	3.2000e-004	0.0342	2.7000e-004	0.0345	9.0800e-003	2.4000e-004	9.3200e-003	0.0000	28.6803	28.6803	7.4000e-004	0.0000	28.6987
Total	**0.0118**	**8.5400e-003**	**0.1000**	**3.2000e-004**	**0.0342**	**2.7000e-004**	**0.0345**	**9.0800e-003**	**2.4000e-004**	**9.3200e-003**	**0.0000**	**28.6803**	**28.6803**	**7.4000e-004**	**0.0000**	**28.6987**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3664	0.0000	0.3664	0.2014	0.0000	0.2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0806	0.3494	3.9869	6.7400e-003		0.0108	0.0108		0.0108	0.0108	0.0000	590.4481	590.4481	0.1680	0.0000	594.6473
Total	**0.0806**	**0.3494**	**3.9869**	**6.7400e-003**	**0.3664**	**0.0108**	**0.3771**	**0.2014**	**0.0108**	**0.2121**	**0.0000**	**590.4481**	**590.4481**	**0.1680**	**0.0000**	**594.6473**

3.3 Utility Relocation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0118	8.5400e-003	0.1000	3.2000e-004	0.0342	2.7000e-004	0.0345	9.0800e-003	2.4000e-004	9.3200e-003	0.0000	28.6803	28.6803	7.4000e-004	0.0000	28.6987
Total	**0.0118**	**8.5400e-003**	**0.1000**	**3.2000e-004**	**0.0342**	**2.7000e-004**	**0.0345**	**9.0800e-003**	**2.4000e-004**	**9.3200e-003**	**0.0000**	**28.6803**	**28.6803**	**7.4000e-004**	**0.0000**	**28.6987**

3.3 Utility Relocation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9455	0.0000	0.9455	0.5197	0.0000	0.5197	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3458	3.3055	3.2532	6.7900e-003		0.1437	0.1437		0.1336	0.1336	0.0000	594.2637	594.2637	0.1689	0.0000	598.4864
Total	**0.3458**	**3.3055**	**3.2532**	**6.7900e-003**	**0.9455**	**0.1437**	**1.0892**	**0.5197**	**0.1336**	**0.6533**	**0.0000**	**594.2637**	**594.2637**	**0.1689**	**0.0000**	**598.4864**

3.3 Utility Relocation - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0113	7.8400e-003	0.0937	3.1000e-004	0.0344	2.6000e-004	0.0347	9.1400e-003	2.4000e-004	9.3800e-003	0.0000	27.9692	27.9692	6.8000e-004	0.0000	27.9862
Total	**0.0113**	**7.8400e-003**	**0.0937**	**3.1000e-004**	**0.0344**	**2.6000e-004**	**0.0347**	**9.1400e-003**	**2.4000e-004**	**9.3800e-003**	**0.0000**	**27.9692**	**27.9692**	**6.8000e-004**	**0.0000**	**27.9862**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3687	0.0000	0.3687	0.2027	0.0000	0.2027	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0812	0.3517	4.0125	6.7900e-003		0.0108	0.0108		0.0108	0.0108	0.0000	594.2630	594.2630	0.1689	0.0000	598.4857
Total	**0.0812**	**0.3517**	**4.0125**	**6.7900e-003**	**0.3687**	**0.0108**	**0.3796**	**0.2027**	**0.0108**	**0.2135**	**0.0000**	**594.2630**	**594.2630**	**0.1689**	**0.0000**	**598.4857**

3.3 Utility Relocation - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0113	7.8400e-003	0.0937	3.1000e-004	0.0344	2.6000e-004	0.0347	9.1400e-003	2.4000e-004	9.3800e-003	0.0000	27.9692	27.9692	6.8000e-004	0.0000	27.9862
Total	**0.0113**	**7.8400e-003**	**0.0937**	**3.1000e-004**	**0.0344**	**2.6000e-004**	**0.0347**	**9.1400e-003**	**2.4000e-004**	**9.3800e-003**	**0.0000**	**27.9692**	**27.9692**	**6.8000e-004**	**0.0000**	**27.9862**

3.3 Utility Relocation - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4095	0.0000	0.4095	0.2251	0.0000	0.2251	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1396	1.2987	1.3941	2.9400e-003		0.0550	0.0550		0.0511	0.0511	0.0000	257.3973	257.3973	0.0730	0.0000	259.2231
Total	**0.1396**	**1.2987**	**1.3941**	**2.9400e-003**	**0.4095**	**0.0550**	**0.4645**	**0.2251**	**0.0511**	**0.2762**	**0.0000**	**257.3973**	**257.3973**	**0.0730**	**0.0000**	**259.2231**

3.3 Utility Relocation - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6500e-003	3.1100e-003	0.0377	1.3000e-004	0.0149	1.1000e-004	0.0150	3.9600e-003	1.0000e-004	4.0600e-003	0.0000	11.6450	11.6450	2.7000e-004	0.0000	11.6517
Total	**4.6500e-003**	**3.1100e-003**	**0.0377**	**1.3000e-004**	**0.0149**	**1.1000e-004**	**0.0150**	**3.9600e-003**	**1.0000e-004**	**4.0600e-003**	**0.0000**	**11.6450**	**11.6450**	**2.7000e-004**	**0.0000**	**11.6517**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1597	0.0000	0.1597	0.0878	0.0000	0.0878	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0352	0.1523	1.7379	2.9400e-003		4.6900e-003	4.6900e-003		4.6900e-003	4.6900e-003	0.0000	257.3970	257.3970	0.0730	0.0000	259.2228
Total	**0.0352**	**0.1523**	**1.7379**	**2.9400e-003**	**0.1597**	**4.6900e-003**	**0.1644**	**0.0878**	**4.6900e-003**	**0.0925**	**0.0000**	**257.3970**	**257.3970**	**0.0730**	**0.0000**	**259.2228**

3.3 Utility Relocation - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6500e-003	3.1100e-003	0.0377	1.3000e-004	0.0149	1.1000e-004	0.0150	3.9600e-003	1.0000e-004	4.0600e-003	0.0000	11.6450	11.6450	2.7000e-004	0.0000	11.6517
Total	**4.6500e-003**	**3.1100e-003**	**0.0377**	**1.3000e-004**	**0.0149**	**1.1000e-004**	**0.0150**	**3.9600e-003**	**1.0000e-004**	**4.0600e-003**	**0.0000**	**11.6450**	**11.6450**	**2.7000e-004**	**0.0000**	**11.6517**

3.4 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4815	0.0000	0.4815	0.0729	0.0000	0.0729	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2343	2.2571	1.9110	3.4600e-003		0.1115	0.1115		0.1044	0.1044	0.0000	302.2224	302.2224	0.0761	0.0000	304.1239
Total	**0.2343**	**2.2571**	**1.9110**	**3.4600e-003**	**0.4815**	**0.1115**	**0.5930**	**0.0729**	**0.1044**	**0.1773**	**0.0000**	**302.2224**	**302.2224**	**0.0761**	**0.0000**	**304.1239**

3.4 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0361	1.1562	0.2872	3.4400e-003	0.0773	3.2400e-003	0.0806	0.0212	3.1000e-003	0.0243	0.0000	338.9541	338.9541	0.0234	0.0000	339.5401
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0500e-003	4.5400e-003	0.0523	1.6000e-004	0.0164	1.3000e-004	0.0166	4.3700e-003	1.2000e-004	4.4900e-003	0.0000	14.3123	14.3123	3.9000e-004	0.0000	14.3222
Total	**0.0421**	**1.1607**	**0.3395**	**3.6000e-003**	**0.0938**	**3.3700e-003**	**0.0972**	**0.0256**	**3.2200e-003**	**0.0288**	**0.0000**	**353.2664**	**353.2664**	**0.0238**	**0.0000**	**353.8622**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1878	0.0000	0.1878	0.0284	0.0000	0.0284	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0403	0.1746	2.0928	3.4600e-003		5.3700e-003	5.3700e-003		5.3700e-003	5.3700e-003	0.0000	302.2220	302.2220	0.0761	0.0000	304.1235
Total	**0.0403**	**0.1746**	**2.0928**	**3.4600e-003**	**0.1878**	**5.3700e-003**	**0.1932**	**0.0284**	**5.3700e-003**	**0.0338**	**0.0000**	**302.2220**	**302.2220**	**0.0761**	**0.0000**	**304.1235**

3.4 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0361	1.1562	0.2872	3.4400e-003	0.0773	3.2400e-003	0.0806	0.0212	3.1000e-003	0.0243	0.0000	338.9541	338.9541	0.0234	0.0000	339.5401
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0500e-003	4.5400e-003	0.0523	1.6000e-004	0.0164	1.3000e-004	0.0166	4.3700e-003	1.2000e-004	4.4900e-003	0.0000	14.3123	14.3123	3.9000e-004	0.0000	14.3222
Total	**0.0421**	**1.1607**	**0.3395**	**3.6000e-003**	**0.0938**	**3.3700e-003**	**0.0972**	**0.0256**	**3.2200e-003**	**0.0288**	**0.0000**	**353.2664**	**353.2664**	**0.0238**	**0.0000**	**353.8622**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

LACMTA WSAB Construction GHG - Hauling (Alt 1)

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	153.50	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2028
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

LACMTA WSAB Construction GHG - Hauling (Alt 1) - Los Angeles-South Coast County, Annual

Project Characteristics -

Land Use - LRT Corridor + Parking + MSF

Construction Phase - All Cut/Fill Material Hauling

Off-road Equipment - No Equipment

Off-road Equipment - No Equipment

Off-road Equipment - No Equipment

Off-road Equipment - No Equipment

Off-road Equipment - No Equipment

Trips and VMT - All Hauling

Grading -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	310.00	600.00
tblConstructionPhase	NumDays	310.00	1,200.00
tblConstructionPhase	NumDays	310.00	1,200.00
tblConstructionPhase	NumDays	310.00	600.00
tblConstructionPhase	NumDays	310.00	90.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblGrading	MaterialExported	0.00	335,760.00
tblGrading	MaterialExported	0.00	332,950.00
tblGrading	MaterialExported	0.00	14,000.00
tblGrading	MaterialExported	0.00	289,270.00
tblGrading	MaterialExported	0.00	20,665.00

tblGrading	MaterialImported	0.00	54,295.00
tblGrading	MaterialImported	0.00	118,725.00
tblGrading	MaterialImported	0.00	515,970.00
tblGrading	MaterialImported	0.00	40,320.00
tblLandUse	LotAcreage	0.00	153.50
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripNumber	41,970.00	67,200.00
tblTripsAndVMT	HaulingTripNumber	48,405.00	77,500.00
tblTripsAndVMT	HaulingTripNumber	16,591.00	106,000.00
tblTripsAndVMT	HaulingTripNumber	100,655.00	81,600.00
tblTripsAndVMT	HaulingTripNumber	7,623.00	12,200.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2994	9.5971	2.3843	0.0286	1.8275	0.0269	1.8544	0.4628	0.0257	0.4885	0.0000	2,813.5635	2,813.5635	0.1946	0.0000	2,818.4277
2023	0.2174	6.9665	2.3931	0.0302	1.8445	0.0125	1.8570	0.4689	0.0119	0.4808	0.0000	2,983.2353	2,983.2353	0.1999	0.0000	2,988.2328
2024	0.2388	7.5815	2.6501	0.0329	2.4342	0.0135	2.4477	0.6114	0.0129	0.6243	0.0000	3,254.4506	3,254.4506	0.2190	0.0000	3,259.9248
2025	0.2287	7.1965	2.5696	0.0315	2.0562	0.0128	2.0690	0.5192	0.0123	0.5315	0.0000	3,116.1400	3,116.1400	0.2106	0.0000	3,121.4047
2026	0.0244	0.7599	0.2771	3.3500e-003	0.1022	1.3500e-003	0.1036	0.0271	1.2900e-003	0.0284	0.0000	332.4246	332.4246	0.0225	0.0000	332.9872
Maximum	**0.2994**	**9.5971**	**2.6501**	**0.0329**	**2.4342**	**0.0269**	**2.4477**	**0.6114**	**0.0257**	**0.6243**	**0.0000**	**3,254.4506**	**3,254.4506**	**0.2190**	**0.0000**	**3,259.9248**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2994	9.5971	2.3843	0.0286	1.8275	0.0269	1.8544	0.4628	0.0257	0.4885	0.0000	2,813.5635	2,813.5635	0.1946	0.0000	2,818.4277
2023	0.2174	6.9665	2.3931	0.0302	1.8445	0.0125	1.8570	0.4689	0.0119	0.4808	0.0000	2,983.2353	2,983.2353	0.1999	0.0000	2,988.2328
2024	0.2388	7.5815	2.6501	0.0329	2.4342	0.0135	2.4477	0.6114	0.0129	0.6243	0.0000	3,254.4506	3,254.4506	0.2190	0.0000	3,259.9248
2025	0.2287	7.1965	2.5696	0.0315	2.0562	0.0128	2.0690	0.5192	0.0123	0.5315	0.0000	3,116.1400	3,116.1400	0.2106	0.0000	3,121.4047
2026	0.0244	0.7599	0.2771	3.3500e-003	0.1022	1.3500e-003	0.1036	0.0271	1.2900e-003	0.0284	0.0000	332.4246	332.4246	0.0225	0.0000	332.9872
Maximum	**0.2994**	**9.5971**	**2.6501**	**0.0329**	**2.4342**	**0.0269**	**2.4477**	**0.6114**	**0.0257**	**0.6243**	**0.0000**	**3,254.4506**	**3,254.4506**	**0.2190**	**0.0000**	**3,259.9248**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**2-7-2022**	**5-6-2022**	2.6164	2.6164
2	**5-7-2022**	**8-6-2022**	2.6857	2.6857
3	**8-7-2022**	**11-6-2022**	2.6985	2.6985
4	**11-7-2022**	**2-6-2023**	2.3424	2.3424
5	**2-7-2023**	**5-6-2023**	1.7214	1.7214
6	**5-7-2023**	**8-6-2023**	1.7715	1.7715

7	**8-7-2023**	**11-6-2023**	1.7769	1.7769
8	**11-7-2023**	**2-6-2024**	1.8244	1.8244
9	**2-7-2024**	**5-6-2024**	1.8860	1.8860
10	**5-7-2024**	**8-6-2024**	1.9189	1.9189
11	**8-7-2024**	**11-6-2024**	1.9249	1.9249
12	**11-7-2024**	**2-6-2025**	1.9232	1.9232
13	**2-7-2025**	**5-6-2025**	1.8392	1.8392
14	**5-7-2025**	**8-6-2025**	1.8924	1.8924
15	**8-7-2025**	**11-6-2025**	1.8983	1.8983
16	**11-7-2025**	**2-6-2026**	1.2098	1.2098
17	**2-7-2026**	**5-6-2026**	0.4119	0.4119
		Highest	2.6985	2.6985

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

LACMTA WSAB Construction GHG - Hauling (Alt 1) - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Northern Section Tunnel	Grading	2/7/2022	1/6/2024	6	600	
2	Northern Section Stations	Grading	2/7/2022	12/6/2025	6	1200	
3	Southern Section Cut/Fill	Grading	2/7/2022	12/6/2025	6	1200	
4	Northern Section Cross-Overs	Grading	1/8/2024	12/6/2025	6	600	
5	Northern Section Other Cut/Fill	Grading	12/8/2025	3/21/2026	6	90	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Northern Section Tunnel	Rubber Tired Dozers	1	0.00	247	0.40
Northern Section Stations	Rubber Tired Dozers	1	0.00	247	0.40
Northern Section Cross-Overs	Rubber Tired Dozers	1	0.00	247	0.40
Southern Section Cut/Fill	Rubber Tired Dozers	1	0.00	247	0.40
Northern Section Other Cut/Fill	Rubber Tired Dozers	1	0.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Northern Section Tunnel	1	0.00	0.00	67,200.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Northern Section Stations	1	0.00	0.00	77,500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Northern Section Cross-Overs	1	0.00	0.00	81,600.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Southern Section Cut/Fill	1	0.00	0.00	106,000.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Northern Section Other Cut/Fill	1	0.00	0.00	12,200.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Northern Section Tunnel - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0190	0.0000	0.0190	2.8700e-003	0.0000	2.8700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0190**	**0.0000**	**0.0190**	**2.8700e-003**	**0.0000**	**2.8700e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Northern Section Tunnel - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1266	4.0574	1.0080	0.0121	0.5015	0.0114	0.5129	0.1310	0.0109	0.1419	0.0000	1,189.5028	1,189.5028	0.0823	0.0000	1,191.5592
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1266**	**4.0574**	**1.0080**	**0.0121**	**0.5015**	**0.0114**	**0.5129**	**0.1310**	**0.0109**	**0.1419**	**0.0000**	**1,189.5028**	**1,189.5028**	**0.0823**	**0.0000**	**1,191.5592**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0190	0.0000	0.0190	2.8700e-003	0.0000	2.8700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0190**	**0.0000**	**0.0190**	**2.8700e-003**	**0.0000**	**2.8700e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Northern Section Tunnel - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1266	4.0574	1.0080	0.0121	0.5015	0.0114	0.5129	0.1310	0.0109	0.1419	0.0000	1,189.5028	1,189.5028	0.0823	0.0000	1,191.5592
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1266**	**4.0574**	**1.0080**	**0.0121**	**0.5015**	**0.0114**	**0.5129**	**0.1310**	**0.0109**	**0.1419**	**0.0000**	**1,189.5028**	**1,189.5028**	**0.0823**	**0.0000**	**1,191.5592**

3.2 Northern Section Tunnel - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0190	0.0000	0.0190	2.8700e-003	0.0000	2.8700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0190**	**0.0000**	**0.0190**	**2.8700e-003**	**0.0000**	**2.8700e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Northern Section Tunnel - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0919	2.9453	1.0117	0.0128	0.5087	5.2600e-003	0.5140	0.1336	5.0400e-003	0.1387	0.0000	1,261.2357	1,261.2357	0.0845	0.0000	1,263.3485
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0919**	**2.9453**	**1.0117**	**0.0128**	**0.5087**	**5.2600e-003**	**0.5140**	**0.1336**	**5.0400e-003**	**0.1387**	**0.0000**	**1,261.2357**	**1,261.2357**	**0.0845**	**0.0000**	**1,263.3485**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0190	0.0000	0.0190	2.8700e-003	0.0000	2.8700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0190**	**0.0000**	**0.0190**	**2.8700e-003**	**0.0000**	**2.8700e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Northern Section Tunnel - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0919	2.9453	1.0117	0.0128	0.5087	5.2600e-003	0.5140	0.1336	5.0400e-003	0.1387	0.0000	1,261.2357	1,261.2357	0.0845	0.0000	1,263.3485
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0919**	**2.9453**	**1.0117**	**0.0128**	**0.5087**	**5.2600e-003**	**0.5140**	**0.1336**	**5.0400e-003**	**0.1387**	**0.0000**	**1,261.2357**	**1,261.2357**	**0.0845**	**0.0000**	**1,263.3485**

3.2 Northern Section Tunnel - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0190	0.0000	0.0190	2.8700e-003	0.0000	2.8700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0190**	**0.0000**	**0.0190**	**2.8700e-003**	**0.0000**	**2.8700e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Northern Section Tunnel - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.7700e-003	0.0563	0.0197	2.4000e-004	0.4356	1.0000e-004	0.4357	0.1071	1.0000e-004	0.1072	0.0000	24.1454	24.1454	1.6200e-003	0.0000	24.1860
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.7700e-003**	**0.0563**	**0.0197**	**2.4000e-004**	**0.4356**	**1.0000e-004**	**0.4357**	**0.1071**	**1.0000e-004**	**0.1072**	**0.0000**	**24.1454**	**24.1454**	**1.6200e-003**	**0.0000**	**24.1860**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0190	0.0000	0.0190	2.8700e-003	0.0000	2.8700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0190**	**0.0000**	**0.0190**	**2.8700e-003**	**0.0000**	**2.8700e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Northern Section Tunnel - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.7700e-003	0.0563	0.0197	2.4000e-004	0.4356	1.0000e-004	0.4357	0.1071	1.0000e-004	0.1072	0.0000	24.1454	24.1454	1.6200e-003	0.0000	24.1860
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.7700e-003**	**0.0563**	**0.0197**	**2.4000e-004**	**0.4356**	**1.0000e-004**	**0.4357**	**0.1071**	**1.0000e-004**	**0.1072**	**0.0000**	**24.1454**	**24.1454**	**1.6200e-003**	**0.0000**	**24.1860**

3.3 Northern Section Stations - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0219	0.0000	0.0219	3.3200e-003	0.0000	3.3200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0219**	**0.0000**	**0.0219**	**3.3200e-003**	**0.0000**	**3.3200e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0730	2.3397	0.5813	6.9600e-003	0.5396	6.5600e-003	0.5461	0.1370	6.2700e-003	0.1433	0.0000	685.9112	685.9112	0.0474	0.0000	687.0970
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0730**	**2.3397**	**0.5813**	**6.9600e-003**	**0.5396**	**6.5600e-003**	**0.5461**	**0.1370**	**6.2700e-003**	**0.1433**	**0.0000**	**685.9112**	**685.9112**	**0.0474**	**0.0000**	**687.0970**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0219	0.0000	0.0219	3.3200e-003	0.0000	3.3200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0219**	**0.0000**	**0.0219**	**3.3200e-003**	**0.0000**	**3.3200e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0730	2.3397	0.5813	6.9600e-003	0.5396	6.5600e-003	0.5461	0.1370	6.2700e-003	0.1433	0.0000	685.9112	685.9112	0.0474	0.0000	687.0970
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0730**	**2.3397**	**0.5813**	**6.9600e-003**	**0.5396**	**6.5600e-003**	**0.5461**	**0.1370**	**6.2700e-003**	**0.1433**	**0.0000**	**685.9112**	**685.9112**	**0.0474**	**0.0000**	**687.0970**

3.3 Northern Section Stations - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0219	0.0000	0.0219	3.3200e-003	0.0000	3.3200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0219**	**0.0000**	**0.0219**	**3.3200e-003**	**0.0000**	**3.3200e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0530	1.6984	0.5834	7.3600e-003	0.5437	3.0400e-003	0.5468	0.1385	2.9000e-003	0.1414	0.0000	727.2751	727.2751	0.0487	0.0000	728.4934
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0530**	**1.6984**	**0.5834**	**7.3600e-003**	**0.5437**	**3.0400e-003**	**0.5468**	**0.1385**	**2.9000e-003**	**0.1414**	**0.0000**	**727.2751**	**727.2751**	**0.0487**	**0.0000**	**728.4934**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0219	0.0000	0.0219	3.3200e-003	0.0000	3.3200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0219**	**0.0000**	**0.0219**	**3.3200e-003**	**0.0000**	**3.3200e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0530	1.6984	0.5834	7.3600e-003	0.5437	3.0400e-003	0.5468	0.1385	2.9000e-003	0.1414	0.0000	727.2751	727.2751	0.0487	0.0000	728.4934
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0530**	**1.6984**	**0.5834**	**7.3600e-003**	**0.5437**	**3.0400e-003**	**0.5468**	**0.1385**	**2.9000e-003**	**0.1414**	**0.0000**	**727.2751**	**727.2751**	**0.0487**	**0.0000**	**728.4934**

3.3 Northern Section Stations - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0219	0.0000	0.0219	3.3200e-003	0.0000	3.3200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0219**	**0.0000**	**0.0219**	**3.3200e-003**	**0.0000**	**3.3200e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0535	1.6974	0.5933	7.3700e-003	0.5440	3.0200e-003	0.5470	0.1386	2.8900e-003	0.1415	0.0000	728.6441	728.6441	0.0490	0.0000	729.8697
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0535**	**1.6974**	**0.5933**	**7.3700e-003**	**0.5440**	**3.0200e-003**	**0.5470**	**0.1386**	**2.8900e-003**	**0.1415**	**0.0000**	**728.6441**	**728.6441**	**0.0490**	**0.0000**	**729.8697**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0219	0.0000	0.0219	3.3200e-003	0.0000	3.3200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0219**	**0.0000**	**0.0219**	**3.3200e-003**	**0.0000**	**3.3200e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0535	1.6974	0.5933	7.3700e-003	0.5440	3.0200e-003	0.5470	0.1386	2.8900e-003	0.1415	0.0000	728.6441	728.6441	0.0490	0.0000	729.8697
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0535**	**1.6974**	**0.5933**	**7.3700e-003**	**0.5440**	**3.0200e-003**	**0.5470**	**0.1386**	**2.8900e-003**	**0.1415**	**0.0000**	**728.6441**	**728.6441**	**0.0490**	**0.0000**	**729.8697**

3.3 Northern Section Stations - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0219	0.0000	0.0219	3.3200e-003	0.0000	3.3200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0219**	**0.0000**	**0.0219**	**3.3200e-003**	**0.0000**	**3.3200e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0495	1.5562	0.5556	6.8100e-003	0.5410	2.7700e-003	0.5438	0.1375	2.6500e-003	0.1402	0.0000	673.8331	673.8331	0.0455	0.0000	674.9715
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0495**	**1.5562**	**0.5556**	**6.8100e-003**	**0.5410**	**2.7700e-003**	**0.5438**	**0.1375**	**2.6500e-003**	**0.1402**	**0.0000**	**673.8331**	**673.8331**	**0.0455**	**0.0000**	**674.9715**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0219	0.0000	0.0219	3.3200e-003	0.0000	3.3200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0219**	**0.0000**	**0.0219**	**3.3200e-003**	**0.0000**	**3.3200e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0495	1.5562	0.5556	6.8100e-003	0.5410	2.7700e-003	0.5438	0.1375	2.6500e-003	0.1402	0.0000	673.8331	673.8331	0.0455	0.0000	674.9715
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0495**	**1.5562**	**0.5556**	**6.8100e-003**	**0.5410**	**2.7700e-003**	**0.5438**	**0.1375**	**2.6500e-003**	**0.1402**	**0.0000**	**673.8331**	**673.8331**	**0.0455**	**0.0000**	**674.9715**

3.4 Southern Section Cut/Fill - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-003	0.0000	7.5000e-003	1.1400e-003	0.0000	1.1400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.5000e-003**	**0.0000**	**7.5000e-003**	**1.1400e-003**	**0.0000**	**1.1400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0998	3.2001	0.7950	9.5200e-003	0.7380	8.9700e-003	0.7470	0.1874	8.5800e-003	0.1960	0.0000	938.1495	938.1495	0.0649	0.0000	939.7714
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0998**	**3.2001**	**0.7950**	**9.5200e-003**	**0.7380**	**8.9700e-003**	**0.7470**	**0.1874**	**8.5800e-003**	**0.1960**	**0.0000**	**938.1495**	**938.1495**	**0.0649**	**0.0000**	**939.7714**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-003	0.0000	7.5000e-003	1.1400e-003	0.0000	1.1400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.5000e-003**	**0.0000**	**7.5000e-003**	**1.1400e-003**	**0.0000**	**1.1400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0998	3.2001	0.7950	9.5200e-003	0.7380	8.9700e-003	0.7470	0.1874	8.5800e-003	0.1960	0.0000	938.1495	938.1495	0.0649	0.0000	939.7714
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0998**	**3.2001**	**0.7950**	**9.5200e-003**	**0.7380**	**8.9700e-003**	**0.7470**	**0.1874**	**8.5800e-003**	**0.1960**	**0.0000**	**938.1495**	**938.1495**	**0.0649**	**0.0000**	**939.7714**

3.4 Southern Section Cut/Fill - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-003	0.0000	7.5000e-003	1.1400e-003	0.0000	1.1400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.5000e-003**	**0.0000**	**7.5000e-003**	**1.1400e-003**	**0.0000**	**1.1400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0725	2.3229	0.7980	0.0101	0.7437	4.1500e-003	0.7478	0.1895	3.9700e-003	0.1934	0.0000	994.7246	994.7246	0.0667	0.0000	996.3909
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0725**	**2.3229**	**0.7980**	**0.0101**	**0.7437**	**4.1500e-003**	**0.7478**	**0.1895**	**3.9700e-003**	**0.1934**	**0.0000**	**994.7246**	**994.7246**	**0.0667**	**0.0000**	**996.3909**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-003	0.0000	7.5000e-003	1.1400e-003	0.0000	1.1400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.5000e-003**	**0.0000**	**7.5000e-003**	**1.1400e-003**	**0.0000**	**1.1400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0725	2.3229	0.7980	0.0101	0.7437	4.1500e-003	0.7478	0.1895	3.9700e-003	0.1934	0.0000	994.7246	994.7246	0.0667	0.0000	996.3909
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0725**	**2.3229**	**0.7980**	**0.0101**	**0.7437**	**4.1500e-003**	**0.7478**	**0.1895**	**3.9700e-003**	**0.1934**	**0.0000**	**994.7246**	**994.7246**	**0.0667**	**0.0000**	**996.3909**

3.4 Southern Section Cut/Fill - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-003	0.0000	7.5000e-003	1.1400e-003	0.0000	1.1400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.5000e-003**	**0.0000**	**7.5000e-003**	**1.1400e-003**	**0.0000**	**1.1400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0731	2.3217	0.8115	0.0101	0.7441	4.1300e-003	0.7482	0.1896	3.9500e-003	0.1935	0.0000	996.5971	996.5971	0.0671	0.0000	998.2734
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0731**	**2.3217**	**0.8115**	**0.0101**	**0.7441**	**4.1300e-003**	**0.7482**	**0.1896**	**3.9500e-003**	**0.1935**	**0.0000**	**996.5971**	**996.5971**	**0.0671**	**0.0000**	**998.2734**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-003	0.0000	7.5000e-003	1.1400e-003	0.0000	1.1400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.5000e-003**	**0.0000**	**7.5000e-003**	**1.1400e-003**	**0.0000**	**1.1400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0731	2.3217	0.8115	0.0101	0.7441	4.1300e-003	0.7482	0.1896	3.9500e-003	0.1935	0.0000	996.5971	996.5971	0.0671	0.0000	998.2734
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0731**	**2.3217**	**0.8115**	**0.0101**	**0.7441**	**4.1300e-003**	**0.7482**	**0.1896**	**3.9500e-003**	**0.1935**	**0.0000**	**996.5971**	**996.5971**	**0.0671**	**0.0000**	**998.2734**

3.4 Southern Section Cut/Fill - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-003	0.0000	7.5000e-003	1.1400e-003	0.0000	1.1400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.5000e-003**	**0.0000**	**7.5000e-003**	**1.1400e-003**	**0.0000**	**1.1400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0676	2.1284	0.7600	9.3100e-003	0.7399	3.7900e-003	0.7437	0.1881	3.6300e-003	0.1917	0.0000	921.6298	921.6298	0.0623	0.0000	923.1868
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0676**	**2.1284**	**0.7600**	**9.3100e-003**	**0.7399**	**3.7900e-003**	**0.7437**	**0.1881**	**3.6300e-003**	**0.1917**	**0.0000**	**921.6298**	**921.6298**	**0.0623**	**0.0000**	**923.1868**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-003	0.0000	7.5000e-003	1.1400e-003	0.0000	1.1400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.5000e-003**	**0.0000**	**7.5000e-003**	**1.1400e-003**	**0.0000**	**1.1400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0676	2.1284	0.7600	9.3100e-003	0.7399	3.7900e-003	0.7437	0.1881	3.6300e-003	0.1917	0.0000	921.6298	921.6298	0.0623	0.0000	923.1868
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0676**	**2.1284**	**0.7600**	**9.3100e-003**	**0.7399**	**3.7900e-003**	**0.7437**	**0.1881**	**3.6300e-003**	**0.1917**	**0.0000**	**921.6298**	**921.6298**	**0.0623**	**0.0000**	**923.1868**

3.5 Northern Section Cross-Overs - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0455	0.0000	0.0455	6.8900e-003	0.0000	6.8900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0455**	**0.0000**	**0.0455**	**6.8900e-003**	**0.0000**	**6.8900e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Northern Section Cross-Overs - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1104	3.5062	1.2256	0.0152	0.6166	6.2400e-003	0.6228	0.1619	5.9700e-003	0.1678	0.0000	1,505.0640	1,505.0640	0.1013	0.0000	1,507.5956
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1104**	**3.5062**	**1.2256**	**0.0152**	**0.6166**	**6.2400e-003**	**0.6228**	**0.1619**	**5.9700e-003**	**0.1678**	**0.0000**	**1,505.0640**	**1,505.0640**	**0.1013**	**0.0000**	**1,507.5956**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0455	0.0000	0.0455	6.8900e-003	0.0000	6.8900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0455**	**0.0000**	**0.0455**	**6.8900e-003**	**0.0000**	**6.8900e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Northern Section Cross-Overs - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1104	3.5062	1.2256	0.0152	0.6166	6.2400e-003	0.6228	0.1619	5.9700e-003	0.1678	0.0000	1,505.0640	1,505.0640	0.1013	0.0000	1,507.5956
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1104**	**3.5062**	**1.2256**	**0.0152**	**0.6166**	**6.2400e-003**	**0.6228**	**0.1619**	**5.9700e-003**	**0.1678**	**0.0000**	**1,505.0640**	**1,505.0640**	**0.1013**	**0.0000**	**1,507.5956**

3.5 Northern Section Cross-Overs - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0455	0.0000	0.0455	6.8900e-003	0.0000	6.8900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0455**	**0.0000**	**0.0455**	**6.8900e-003**	**0.0000**	**6.8900e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Northern Section Cross-Overs - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1042	3.2770	1.1701	0.0143	0.6120	5.8300e-003	0.6178	0.1602	5.5800e-003	0.1658	0.0000	1,418.9620	1,418.9620	0.0959	0.0000	1,421.3593
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1042**	**3.2770**	**1.1701**	**0.0143**	**0.6120**	**5.8300e-003**	**0.6178**	**0.1602**	**5.5800e-003**	**0.1658**	**0.0000**	**1,418.9620**	**1,418.9620**	**0.0959**	**0.0000**	**1,421.3593**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0455	0.0000	0.0455	6.8900e-003	0.0000	6.8900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0455**	**0.0000**	**0.0455**	**6.8900e-003**	**0.0000**	**6.8900e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Northern Section Cross-Overs - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1042	3.2770	1.1701	0.0143	0.6120	5.8300e-003	0.6178	0.1602	5.5800e-003	0.1658	0.0000	1,418.9620	1,418.9620	0.0959	0.0000	1,421.3593
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1042**	**3.2770**	**1.1701**	**0.0143**	**0.6120**	**5.8300e-003**	**0.6178**	**0.1602**	**5.5800e-003**	**0.1658**	**0.0000**	**1,418.9620**	**1,418.9620**	**0.0959**	**0.0000**	**1,421.3593**

3.6 Northern Section Other Cut/Fill - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4500e-003	0.0000	3.4500e-003	5.2000e-004	0.0000	5.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.4500e-003**	**0.0000**	**3.4500e-003**	**5.2000e-004**	**0.0000**	**5.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Northern Section Other Cut/Fill - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.4700e-003	0.2349	0.0839	1.0300e-003	0.0849	4.2000e-004	0.0853	0.0216	4.0000e-004	0.0220	0.0000	101.7152	101.7152	6.8700e-003	0.0000	101.8870
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.4700e-003**	**0.2349**	**0.0839**	**1.0300e-003**	**0.0849**	**4.2000e-004**	**0.0853**	**0.0216**	**4.0000e-004**	**0.0220**	**0.0000**	**101.7152**	**101.7152**	**6.8700e-003**	**0.0000**	**101.8870**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4500e-003	0.0000	3.4500e-003	5.2000e-004	0.0000	5.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.4500e-003**	**0.0000**	**3.4500e-003**	**5.2000e-004**	**0.0000**	**5.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Northern Section Other Cut/Fill - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.4700e-003	0.2349	0.0839	1.0300e-003	0.0849	4.2000e-004	0.0853	0.0216	4.0000e-004	0.0220	0.0000	101.7152	101.7152	6.8700e-003	0.0000	101.8870
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.4700e-003**	**0.2349**	**0.0839**	**1.0300e-003**	**0.0849**	**4.2000e-004**	**0.0853**	**0.0216**	**4.0000e-004**	**0.0220**	**0.0000**	**101.7152**	**101.7152**	**6.8700e-003**	**0.0000**	**101.8870**

3.6 Northern Section Other Cut/Fill - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4500e-003	0.0000	3.4500e-003	5.2000e-004	0.0000	5.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.4500e-003**	**0.0000**	**3.4500e-003**	**5.2000e-004**	**0.0000**	**5.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Northern Section Other Cut/Fill - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0244	0.7599	0.2771	3.3500e-003	0.0988	1.3500e-003	0.1001	0.0266	1.2900e-003	0.0279	0.0000	332.4246	332.4246	0.0225	0.0000	332.9872
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0244**	**0.7599**	**0.2771**	**3.3500e-003**	**0.0988**	**1.3500e-003**	**0.1001**	**0.0266**	**1.2900e-003**	**0.0279**	**0.0000**	**332.4246**	**332.4246**	**0.0225**	**0.0000**	**332.9872**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4500e-003	0.0000	3.4500e-003	5.2000e-004	0.0000	5.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.4500e-003**	**0.0000**	**3.4500e-003**	**5.2000e-004**	**0.0000**	**5.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Northern Section Other Cut/Fill - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0244	0.7599	0.2771	3.3500e-003	0.0988	1.3500e-003	0.1001	0.0266	1.2900e-003	0.0279	0.0000	332.4246	332.4246	0.0225	0.0000	332.9872
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0244**	**0.7599**	**0.2771**	**3.3500e-003**	**0.0988**	**1.3500e-003**	**0.1001**	**0.0266**	**1.2900e-003**	**0.0279**	**0.0000**	**332.4246**	**332.4246**	**0.0225**	**0.0000**	**332.9872**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

LACMTA WSAB Construction GHG - Hauling (Alt 2)

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	153.50	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2028
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

LACMTA WSAB Construction GHG - Hauling (Alt 2) - Los Angeles-South Coast County, Annual

Project Characteristics -

Land Use - LRT Corridor + Parking + MSF

Construction Phase - All Cut/Fill Material Hauling

Off-road Equipment - No Equipment

Off-road Equipment - No Equipment

Off-road Equipment - No Equipment

Off-road Equipment - No Equipment

Off-road Equipment - No Equipment

Trips and VMT - All Hauling

Grading -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	310.00	600.00
tblConstructionPhase	NumDays	310.00	1,200.00
tblConstructionPhase	NumDays	310.00	1,200.00
tblConstructionPhase	NumDays	310.00	600.00
tblConstructionPhase	NumDays	310.00	90.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblGrading	MaterialExported	0.00	403,990.00
tblGrading	MaterialExported	0.00	576,200.00
tblGrading	MaterialExported	0.00	14,000.00
tblGrading	MaterialExported	0.00	163,610.00
tblGrading	MaterialExported	0.00	20,665.00

tblGrading	MaterialImported	0.00	96,120.00
tblGrading	MaterialImported	0.00	515,970.00
tblGrading	MaterialImported	0.00	38,880.00
tblGrading	MaterialImported	0.00	40,320.00
tblLandUse	LotAcreage	0.00	153.50
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripNumber	50,499.00	80,800.00
tblTripsAndVMT	HaulingTripNumber	84,040.00	134,500.00
tblTripsAndVMT	HaulingTripNumber	66,246.00	106,000.00
tblTripsAndVMT	HaulingTripNumber	25,311.00	40,500.00
tblTripsAndVMT	HaulingTripNumber	7,623.00	12,200.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.3787	12.1391	3.0158	0.0361	2.3683	0.0340	2.4023	0.5965	0.0326	0.6290	0.0000	3,558.7728	3,558.7728	0.2461	0.0000	3,564.9254
2023	0.2750	8.8117	3.0269	0.0382	2.3898	0.0158	2.4055	0.6043	0.0151	0.6193	0.0000	3,773.3845	3,773.3845	0.2528	0.0000	3,779.7056
2024	0.2229	7.0754	2.4732	0.0307	2.6203	0.0126	2.6329	0.6547	0.0121	0.6668	0.0000	3,037.1778	3,037.1778	0.2044	0.0000	3,042.2865
2025	0.2126	6.6905	2.3889	0.0293	2.1503	0.0119	2.1622	0.5403	0.0114	0.5517	0.0000	2,897.0356	2,897.0356	0.1958	0.0000	2,901.9301
2026	0.0244	0.7599	0.2771	3.3500e-003	0.1022	1.3500e-003	0.1036	0.0271	1.2900e-003	0.0284	0.0000	332.4246	332.4246	0.0225	0.0000	332.9872
Maximum	**0.3787**	**12.1391**	**3.0269**	**0.0382**	**2.6203**	**0.0340**	**2.6329**	**0.6547**	**0.0326**	**0.6668**	**0.0000**	**3,773.3845**	**3,773.3845**	**0.2528**	**0.0000**	**3,779.7056**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.3787	12.1391	3.0158	0.0361	2.3683	0.0340	2.4023	0.5965	0.0326	0.6290	0.0000	3,558.7728	3,558.7728	0.2461	0.0000	3,564.9254
2023	0.2750	8.8117	3.0269	0.0382	2.3898	0.0158	2.4055	0.6043	0.0151	0.6193	0.0000	3,773.3845	3,773.3845	0.2528	0.0000	3,779.7056
2024	0.2229	7.0754	2.4732	0.0307	2.6203	0.0126	2.6329	0.6547	0.0121	0.6668	0.0000	3,037.1778	3,037.1778	0.2044	0.0000	3,042.2865
2025	0.2126	6.6905	2.3889	0.0293	2.1503	0.0119	2.1622	0.5403	0.0114	0.5517	0.0000	2,897.0356	2,897.0356	0.1958	0.0000	2,901.9301
2026	0.0244	0.7599	0.2771	3.3500e-003	0.1022	1.3500e-003	0.1036	0.0271	1.2900e-003	0.0284	0.0000	332.4246	332.4246	0.0225	0.0000	332.9872
Maximum	**0.3787**	**12.1391**	**3.0269**	**0.0382**	**2.6203**	**0.0340**	**2.6329**	**0.6547**	**0.0326**	**0.6668**	**0.0000**	**3,773.3845**	**3,773.3845**	**0.2528**	**0.0000**	**3,779.7056**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**2-7-2022**	**5-6-2022**	3.3094	3.3094
2	**5-7-2022**	**8-6-2022**	3.3970	3.3970
3	**8-7-2022**	**11-6-2022**	3.4132	3.4132
4	**11-7-2022**	**2-6-2023**	2.9628	2.9628
5	**2-7-2023**	**5-6-2023**	2.1774	2.1774
6	**5-7-2023**	**8-6-2023**	2.2407	2.2407

LACMTA WSAB Construction GHG - Hauling (Alt 2) - Los Angeles-South Coast County, Annual

7	**8-7-2023**	**11-6-2023**	2.2475	2.2475
8	**11-7-2023**	**2-6-2024**	2.0953	2.0953
9	**2-7-2024**	**5-6-2024**	1.7489	1.7489
10	**5-7-2024**	**8-6-2024**	1.7794	1.7794
11	**8-7-2024**	**11-6-2024**	1.7850	1.7850
12	**11-7-2024**	**2-6-2025**	1.7834	1.7834
13	**2-7-2025**	**5-6-2025**	1.7055	1.7055
14	**5-7-2025**	**8-6-2025**	1.7548	1.7548
15	**8-7-2025**	**11-6-2025**	1.7604	1.7604
16	**11-7-2025**	**2-6-2026**	1.1646	1.1646
17	**2-7-2026**	**5-6-2026**	0.4119	0.4119
		Highest	3.4132	3.4132

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

LACMTA WSAB Construction GHG - Hauling (Alt 2) - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Northern Section Tunnel	Grading	2/7/2022	1/6/2024	6	600	
2	Northern Section Stations	Grading	2/7/2022	12/6/2025	6	1200	
3	Southern Section Cut/Fill	Grading	2/7/2022	12/6/2025	6	1200	
4	Northern Section Cross-Overs	Grading	1/8/2024	12/6/2025	6	600	
5	Northern Section Other Cut/Fill	Grading	12/8/2025	3/21/2026	6	90	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Northern Section Tunnel	Rubber Tired Dozers	1	0.00	247	0.40
Northern Section Stations	Rubber Tired Dozers	1	0.00	247	0.40
Southern Section Cut/Fill	Rubber Tired Dozers	1	0.00	247	0.40
Northern Section Cross-Overs	Rubber Tired Dozers	1	0.00	247	0.40
Northern Section Other Cut/Fill	Rubber Tired Dozers	1	0.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Northern Section Tunnel	1	0.00	0.00	80,800.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Northern Section Stations	1	0.00	0.00	134,500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Southern Section Cut/Fill	1	0.00	0.00	106,000.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Northern Section Cross-Overs	1	0.00	0.00	40,500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Northern Section Other Cut/Fill	1	0.00	0.00	12,200.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Northern Section Tunnel - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0228	0.0000	0.0228	3.4600e-003	0.0000	3.4600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0228**	**0.0000**	**0.0228**	**3.4600e-003**	**0.0000**	**3.4600e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Northern Section Tunnel - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1522	4.8786	1.2120	0.0145	0.6031	0.0137	0.6167	0.1575	0.0131	0.1706	0.0000	1,430.2355	1,430.2355	0.0989	0.0000	1,432.7081
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1522**	**4.8786**	**1.2120**	**0.0145**	**0.6031**	**0.0137**	**0.6167**	**0.1575**	**0.0131**	**0.1706**	**0.0000**	**1,430.2355**	**1,430.2355**	**0.0989**	**0.0000**	**1,432.7081**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0228	0.0000	0.0228	3.4600e-003	0.0000	3.4600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0228**	**0.0000**	**0.0228**	**3.4600e-003**	**0.0000**	**3.4600e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Northern Section Tunnel - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1522	4.8786	1.2120	0.0145	0.6031	0.0137	0.6167	0.1575	0.0131	0.1706	0.0000	1,430.2355	1,430.2355	0.0989	0.0000	1,432.7081
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1522**	**4.8786**	**1.2120**	**0.0145**	**0.6031**	**0.0137**	**0.6167**	**0.1575**	**0.0131**	**0.1706**	**0.0000**	**1,430.2355**	**1,430.2355**	**0.0989**	**0.0000**	**1,432.7081**

3.2 Northern Section Tunnel - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0228	0.0000	0.0228	3.4600e-003	0.0000	3.4600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0228**	**0.0000**	**0.0228**	**3.4600e-003**	**0.0000**	**3.4600e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Northern Section Tunnel - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1105	3.5413	1.2165	0.0154	0.6117	6.3300e-003	0.6180	0.1607	6.0600e-003	0.1667	0.0000	1,516.4858	1,516.4858	0.1016	0.0000	1,519.0262
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1105**	**3.5413**	**1.2165**	**0.0154**	**0.6117**	**6.3300e-003**	**0.6180**	**0.1607**	**6.0600e-003**	**0.1667**	**0.0000**	**1,516.4858**	**1,516.4858**	**0.1016**	**0.0000**	**1,519.0262**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0228	0.0000	0.0228	3.4600e-003	0.0000	3.4600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0228**	**0.0000**	**0.0228**	**3.4600e-003**	**0.0000**	**3.4600e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Northern Section Tunnel - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1105	3.5413	1.2165	0.0154	0.6117	6.3300e-003	0.6180	0.1607	6.0600e-003	0.1667	0.0000	1,516.4858	1,516.4858	0.1016	0.0000	1,519.0262
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1105**	**3.5413**	**1.2165**	**0.0154**	**0.6117**	**6.3300e-003**	**0.6180**	**0.1607**	**6.0600e-003**	**0.1667**	**0.0000**	**1,516.4858**	**1,516.4858**	**0.1016**	**0.0000**	**1,519.0262**

3.2 Northern Section Tunnel - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0228	0.0000	0.0228	3.4600e-003	0.0000	3.4600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0228**	**0.0000**	**0.0228**	**3.4600e-003**	**0.0000**	**3.4600e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Northern Section Tunnel - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1300e-003	0.0676	0.0236	2.9000e-004	0.5238	1.2000e-004	0.5239	0.1288	1.2000e-004	0.1289	0.0000	29.0320	29.0320	1.9500e-003	0.0000	29.0808
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.1300e-003**	**0.0676**	**0.0236**	**2.9000e-004**	**0.5238**	**1.2000e-004**	**0.5239**	**0.1288**	**1.2000e-004**	**0.1289**	**0.0000**	**29.0320**	**29.0320**	**1.9500e-003**	**0.0000**	**29.0808**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0228	0.0000	0.0228	3.4600e-003	0.0000	3.4600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0228**	**0.0000**	**0.0228**	**3.4600e-003**	**0.0000**	**3.4600e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Northern Section Tunnel - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1300e-003	0.0676	0.0236	2.9000e-004	0.5238	1.2000e-004	0.5239	0.1288	1.2000e-004	0.1289	0.0000	29.0320	29.0320	1.9500e-003	0.0000	29.0808
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.1300e-003**	**0.0676**	**0.0236**	**2.9000e-004**	**0.5238**	**1.2000e-004**	**0.5239**	**0.1288**	**1.2000e-004**	**0.1289**	**0.0000**	**29.0320**	**29.0320**	**1.9500e-003**	**0.0000**	**29.0808**

3.3 Northern Section Stations - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0380	0.0000	0.0380	5.7600e-003	0.0000	5.7600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0380**	**0.0000**	**0.0380**	**5.7600e-003**	**0.0000**	**5.7600e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1267	4.0604	1.0088	0.0121	0.9364	0.0114	0.9478	0.2378	0.0109	0.2487	0.0000	1,190.3878	1,190.3878	0.0823	0.0000	1,192.4458
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1267**	**4.0604**	**1.0088**	**0.0121**	**0.9364**	**0.0114**	**0.9478**	**0.2378**	**0.0109**	**0.2487**	**0.0000**	**1,190.3878**	**1,190.3878**	**0.0823**	**0.0000**	**1,192.4458**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0380	0.0000	0.0380	5.7600e-003	0.0000	5.7600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0380**	**0.0000**	**0.0380**	**5.7600e-003**	**0.0000**	**5.7600e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1267	4.0604	1.0088	0.0121	0.9364	0.0114	0.9478	0.2378	0.0109	0.2487	0.0000	1,190.3878	1,190.3878	0.0823	0.0000	1,192.4458
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1267**	**4.0604**	**1.0088**	**0.0121**	**0.9364**	**0.0114**	**0.9478**	**0.2378**	**0.0109**	**0.2487**	**0.0000**	**1,190.3878**	**1,190.3878**	**0.0823**	**0.0000**	**1,192.4458**

3.3 Northern Section Stations - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0380	0.0000	0.0380	5.7600e-003	0.0000	5.7600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0380**	**0.0000**	**0.0380**	**5.7600e-003**	**0.0000**	**5.7600e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0920	2.9475	1.0125	0.0128	0.9436	5.2700e-003	0.9489	0.2404	5.0400e-003	0.2454	0.0000	1,262.1741	1,262.1741	0.0846	0.0000	1,264.2885
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0920**	**2.9475**	**1.0125**	**0.0128**	**0.9436**	**5.2700e-003**	**0.9489**	**0.2404**	**5.0400e-003**	**0.2454**	**0.0000**	**1,262.1741**	**1,262.1741**	**0.0846**	**0.0000**	**1,264.2885**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0380	0.0000	0.0380	5.7600e-003	0.0000	5.7600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0380**	**0.0000**	**0.0380**	**5.7600e-003**	**0.0000**	**5.7600e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0920	2.9475	1.0125	0.0128	0.9436	5.2700e-003	0.9489	0.2404	5.0400e-003	0.2454	0.0000	1,262.1741	1,262.1741	0.0846	0.0000	1,264.2885
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0920**	**2.9475**	**1.0125**	**0.0128**	**0.9436**	**5.2700e-003**	**0.9489**	**0.2404**	**5.0400e-003**	**0.2454**	**0.0000**	**1,262.1741**	**1,262.1741**	**0.0846**	**0.0000**	**1,264.2885**

3.3 Northern Section Stations - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0380	0.0000	0.0380	5.7600e-003	0.0000	5.7600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0380**	**0.0000**	**0.0380**	**5.7600e-003**	**0.0000**	**5.7600e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0928	2.9459	1.0297	0.0128	0.9441	5.2500e-003	0.9494	0.2406	5.0200e-003	0.2456	0.0000	1,264.5501	1,264.5501	0.0851	0.0000	1,266.6771
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0928**	**2.9459**	**1.0297**	**0.0128**	**0.9441**	**5.2500e-003**	**0.9494**	**0.2406**	**5.0200e-003**	**0.2456**	**0.0000**	**1,264.5501**	**1,264.5501**	**0.0851**	**0.0000**	**1,266.6771**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0380	0.0000	0.0380	5.7600e-003	0.0000	5.7600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0380**	**0.0000**	**0.0380**	**5.7600e-003**	**0.0000**	**5.7600e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0928	2.9459	1.0297	0.0128	0.9441	5.2500e-003	0.9494	0.2406	5.0200e-003	0.2456	0.0000	1,264.5501	1,264.5501	0.0851	0.0000	1,266.6771
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0928**	**2.9459**	**1.0297**	**0.0128**	**0.9441**	**5.2500e-003**	**0.9494**	**0.2406**	**5.0200e-003**	**0.2456**	**0.0000**	**1,264.5501**	**1,264.5501**	**0.0851**	**0.0000**	**1,266.6771**

3.3 Northern Section Stations - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0380	0.0000	0.0380	5.7600e-003	0.0000	5.7600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0380**	**0.0000**	**0.0380**	**5.7600e-003**	**0.0000**	**5.7600e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0858	2.7007	0.9643	0.0118	0.9389	4.8100e-003	0.9437	0.2387	4.6000e-003	0.2433	0.0000	1,169.4264	1,169.4264	0.0790	0.0000	1,171.4022
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0858**	**2.7007**	**0.9643**	**0.0118**	**0.9389**	**4.8100e-003**	**0.9437**	**0.2387**	**4.6000e-003**	**0.2433**	**0.0000**	**1,169.4264**	**1,169.4264**	**0.0790**	**0.0000**	**1,171.4022**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0380	0.0000	0.0380	5.7600e-003	0.0000	5.7600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0380**	**0.0000**	**0.0380**	**5.7600e-003**	**0.0000**	**5.7600e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0858	2.7007	0.9643	0.0118	0.9389	4.8100e-003	0.9437	0.2387	4.6000e-003	0.2433	0.0000	1,169.4264	1,169.4264	0.0790	0.0000	1,171.4022
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0858**	**2.7007**	**0.9643**	**0.0118**	**0.9389**	**4.8100e-003**	**0.9437**	**0.2387**	**4.6000e-003**	**0.2433**	**0.0000**	**1,169.4264**	**1,169.4264**	**0.0790**	**0.0000**	**1,171.4022**

3.4 Southern Section Cut/Fill - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0300**	**0.0000**	**0.0300**	**4.5400e-003**	**0.0000**	**4.5400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0998	3.2001	0.7950	9.5200e-003	0.7380	8.9700e-003	0.7470	0.1874	8.5800e-003	0.1960	0.0000	938.1495	938.1495	0.0649	0.0000	939.7714
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0998**	**3.2001**	**0.7950**	**9.5200e-003**	**0.7380**	**8.9700e-003**	**0.7470**	**0.1874**	**8.5800e-003**	**0.1960**	**0.0000**	**938.1495**	**938.1495**	**0.0649**	**0.0000**	**939.7714**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0300**	**0.0000**	**0.0300**	**4.5400e-003**	**0.0000**	**4.5400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0998	3.2001	0.7950	9.5200e-003	0.7380	8.9700e-003	0.7470	0.1874	8.5800e-003	0.1960	0.0000	938.1495	938.1495	0.0649	0.0000	939.7714
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0998**	**3.2001**	**0.7950**	**9.5200e-003**	**0.7380**	**8.9700e-003**	**0.7470**	**0.1874**	**8.5800e-003**	**0.1960**	**0.0000**	**938.1495**	**938.1495**	**0.0649**	**0.0000**	**939.7714**

3.4 Southern Section Cut/Fill - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0300**	**0.0000**	**0.0300**	**4.5400e-003**	**0.0000**	**4.5400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0725	2.3229	0.7980	0.0101	0.7437	4.1500e-003	0.7478	0.1895	3.9700e-003	0.1934	0.0000	994.7246	994.7246	0.0667	0.0000	996.3909
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0725**	**2.3229**	**0.7980**	**0.0101**	**0.7437**	**4.1500e-003**	**0.7478**	**0.1895**	**3.9700e-003**	**0.1934**	**0.0000**	**994.7246**	**994.7246**	**0.0667**	**0.0000**	**996.3909**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0300**	**0.0000**	**0.0300**	**4.5400e-003**	**0.0000**	**4.5400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0725	2.3229	0.7980	0.0101	0.7437	4.1500e-003	0.7478	0.1895	3.9700e-003	0.1934	0.0000	994.7246	994.7246	0.0667	0.0000	996.3909
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0725**	**2.3229**	**0.7980**	**0.0101**	**0.7437**	**4.1500e-003**	**0.7478**	**0.1895**	**3.9700e-003**	**0.1934**	**0.0000**	**994.7246**	**994.7246**	**0.0667**	**0.0000**	**996.3909**

3.4 Southern Section Cut/Fill - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0300**	**0.0000**	**0.0300**	**4.5400e-003**	**0.0000**	**4.5400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0731	2.3217	0.8115	0.0101	0.7441	4.1300e-003	0.7482	0.1896	3.9500e-003	0.1935	0.0000	996.5971	996.5971	0.0671	0.0000	998.2734
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0731**	**2.3217**	**0.8115**	**0.0101**	**0.7441**	**4.1300e-003**	**0.7482**	**0.1896**	**3.9500e-003**	**0.1935**	**0.0000**	**996.5971**	**996.5971**	**0.0671**	**0.0000**	**998.2734**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0300**	**0.0000**	**0.0300**	**4.5400e-003**	**0.0000**	**4.5400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0731	2.3217	0.8115	0.0101	0.7441	4.1300e-003	0.7482	0.1896	3.9500e-003	0.1935	0.0000	996.5971	996.5971	0.0671	0.0000	998.2734
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0731**	**2.3217**	**0.8115**	**0.0101**	**0.7441**	**4.1300e-003**	**0.7482**	**0.1896**	**3.9500e-003**	**0.1935**	**0.0000**	**996.5971**	**996.5971**	**0.0671**	**0.0000**	**998.2734**

3.4 Southern Section Cut/Fill - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0300**	**0.0000**	**0.0300**	**4.5400e-003**	**0.0000**	**4.5400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0676	2.1284	0.7600	9.3100e-003	0.7399	3.7900e-003	0.7437	0.1881	3.6300e-003	0.1917	0.0000	921.6298	921.6298	0.0623	0.0000	923.1868
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0676**	**2.1284**	**0.7600**	**9.3100e-003**	**0.7399**	**3.7900e-003**	**0.7437**	**0.1881**	**3.6300e-003**	**0.1917**	**0.0000**	**921.6298**	**921.6298**	**0.0623**	**0.0000**	**923.1868**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0300**	**0.0000**	**0.0300**	**4.5400e-003**	**0.0000**	**4.5400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0676	2.1284	0.7600	9.3100e-003	0.7399	3.7900e-003	0.7437	0.1881	3.6300e-003	0.1917	0.0000	921.6298	921.6298	0.0623	0.0000	923.1868
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0676**	**2.1284**	**0.7600**	**9.3100e-003**	**0.7399**	**3.7900e-003**	**0.7437**	**0.1881**	**3.6300e-003**	**0.1917**	**0.0000**	**921.6298**	**921.6298**	**0.0623**	**0.0000**	**923.1868**

3.5 Northern Section Cross-Overs - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0115	0.0000	0.0115	1.7300e-003	0.0000	1.7300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0115**	**0.0000**	**0.0115**	**1.7300e-003**	**0.0000**	**1.7300e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Northern Section Cross-Overs - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0548	1.7402	0.6083	7.5500e-003	0.3060	3.1000e-003	0.3091	0.0803	2.9600e-003	0.0833	0.0000	746.9987	746.9987	0.0503	0.0000	748.2552
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0548**	**1.7402**	**0.6083**	**7.5500e-003**	**0.3060**	**3.1000e-003**	**0.3091**	**0.0803**	**2.9600e-003**	**0.0833**	**0.0000**	**746.9987**	**746.9987**	**0.0503**	**0.0000**	**748.2552**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0115	0.0000	0.0115	1.7300e-003	0.0000	1.7300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0115**	**0.0000**	**0.0115**	**1.7300e-003**	**0.0000**	**1.7300e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Northern Section Cross-Overs - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0548	1.7402	0.6083	7.5500e-003	0.3060	3.1000e-003	0.3091	0.0803	2.9600e-003	0.0833	0.0000	746.9987	746.9987	0.0503	0.0000	748.2552
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0548**	**1.7402**	**0.6083**	**7.5500e-003**	**0.3060**	**3.1000e-003**	**0.3091**	**0.0803**	**2.9600e-003**	**0.0833**	**0.0000**	**746.9987**	**746.9987**	**0.0503**	**0.0000**	**748.2552**

3.5 Northern Section Cross-Overs - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0115	0.0000	0.0115	1.7300e-003	0.0000	1.7300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0115**	**0.0000**	**0.0115**	**1.7300e-003**	**0.0000**	**1.7300e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Northern Section Cross-Overs - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0517	1.6265	0.5807	7.1100e-003	0.3037	2.9000e-003	0.3066	0.0795	2.7700e-003	0.0823	0.0000	704.2642	704.2642	0.0476	0.0000	705.4541
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0517**	**1.6265**	**0.5807**	**7.1100e-003**	**0.3037**	**2.9000e-003**	**0.3066**	**0.0795**	**2.7700e-003**	**0.0823**	**0.0000**	**704.2642**	**704.2642**	**0.0476**	**0.0000**	**705.4541**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0115	0.0000	0.0115	1.7300e-003	0.0000	1.7300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0115**	**0.0000**	**0.0115**	**1.7300e-003**	**0.0000**	**1.7300e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Northern Section Cross-Overs - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0517	1.6265	0.5807	7.1100e-003	0.3037	2.9000e-003	0.3066	0.0795	2.7700e-003	0.0823	0.0000	704.2642	704.2642	0.0476	0.0000	705.4541
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0517**	**1.6265**	**0.5807**	**7.1100e-003**	**0.3037**	**2.9000e-003**	**0.3066**	**0.0795**	**2.7700e-003**	**0.0823**	**0.0000**	**704.2642**	**704.2642**	**0.0476**	**0.0000**	**705.4541**

3.6 Northern Section Other Cut/Fill - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4500e-003	0.0000	3.4500e-003	5.2000e-004	0.0000	5.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.4500e-003**	**0.0000**	**3.4500e-003**	**5.2000e-004**	**0.0000**	**5.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Northern Section Other Cut/Fill - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.4700e-003	0.2349	0.0839	1.0300e-003	0.0849	4.2000e-004	0.0853	0.0216	4.0000e-004	0.0220	0.0000	101.7152	101.7152	6.8700e-003	0.0000	101.8870
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.4700e-003**	**0.2349**	**0.0839**	**1.0300e-003**	**0.0849**	**4.2000e-004**	**0.0853**	**0.0216**	**4.0000e-004**	**0.0220**	**0.0000**	**101.7152**	**101.7152**	**6.8700e-003**	**0.0000**	**101.8870**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4500e-003	0.0000	3.4500e-003	5.2000e-004	0.0000	5.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.4500e-003**	**0.0000**	**3.4500e-003**	**5.2000e-004**	**0.0000**	**5.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Northern Section Other Cut/Fill - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.4700e-003	0.2349	0.0839	1.0300e-003	0.0849	4.2000e-004	0.0853	0.0216	4.0000e-004	0.0220	0.0000	101.7152	101.7152	6.8700e-003	0.0000	101.8870
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.4700e-003**	**0.2349**	**0.0839**	**1.0300e-003**	**0.0849**	**4.2000e-004**	**0.0853**	**0.0216**	**4.0000e-004**	**0.0220**	**0.0000**	**101.7152**	**101.7152**	**6.8700e-003**	**0.0000**	**101.8870**

3.6 Northern Section Other Cut/Fill - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4500e-003	0.0000	3.4500e-003	5.2000e-004	0.0000	5.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.4500e-003**	**0.0000**	**3.4500e-003**	**5.2000e-004**	**0.0000**	**5.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Northern Section Other Cut/Fill - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0244	0.7599	0.2771	3.3500e-003	0.0988	1.3500e-003	0.1001	0.0266	1.2900e-003	0.0279	0.0000	332.4246	332.4246	0.0225	0.0000	332.9872
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0244**	**0.7599**	**0.2771**	**3.3500e-003**	**0.0988**	**1.3500e-003**	**0.1001**	**0.0266**	**1.2900e-003**	**0.0279**	**0.0000**	**332.4246**	**332.4246**	**0.0225**	**0.0000**	**332.9872**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4500e-003	0.0000	3.4500e-003	5.2000e-004	0.0000	5.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.4500e-003**	**0.0000**	**3.4500e-003**	**5.2000e-004**	**0.0000**	**5.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Northern Section Other Cut/Fill - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0244	0.7599	0.2771	3.3500e-003	0.0988	1.3500e-003	0.1001	0.0266	1.2900e-003	0.0279	0.0000	332.4246	332.4246	0.0225	0.0000	332.9872
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0244**	**0.7599**	**0.2771**	**3.3500e-003**	**0.0988**	**1.3500e-003**	**0.1001**	**0.0266**	**1.2900e-003**	**0.0279**	**0.0000**	**332.4246**	**332.4246**	**0.0225**	**0.0000**	**332.9872**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

LACMTA WSAB Construction GHG - Hauling (Alt 3)

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	122.60	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2028
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 14.2-mile LRT Corridor (Slauson/A-Line to Pioneer) + Parking + MSF

Construction Phase - All Cut/Fill Material Hauling

Off-road Equipment - No Equipment

Off-road Equipment - No Equipment

Off-road Equipment - No Equipment

Trips and VMT - All Hauling

Grading -

LACMTA WSAB Construction GHG - Hauling (Alt 3) - Los Angeles-South Coast County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	310.00	1,200.00
tblConstructionPhase	NumDays	310.00	90.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblGrading	MaterialExported	0.00	14,000.00
tblGrading	MaterialExported	0.00	20,665.00
tblGrading	MaterialImported	0.00	118,725.00
tblGrading	MaterialImported	0.00	35,510.00
tblLandUse	LotAcreage	0.00	122.60
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripNumber	16,591.00	106,000.00
tblTripsAndVMT	HaulingTripNumber	7,022.00	7,200.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0998	3.2001	0.7950	9.5200e-003	0.7455	8.9700e-003	0.7545	0.1885	8.5800e-003	0.1971	0.0000	938.1495	938.1495	0.0649	0.0000	939.7714
2023	0.0725	2.3229	0.7980	0.0101	0.7512	4.1500e-003	0.7553	0.1906	3.9700e-003	0.1946	0.0000	994.7246	994.7246	0.0667	0.0000	996.3909
2024	0.0731	2.3217	0.8115	0.0101	0.7516	4.1300e-003	0.7557	0.1907	3.9500e-003	0.1947	0.0000	996.5971	996.5971	0.0671	0.0000	998.2734
2025	0.0721	2.2671	0.8095	9.9200e-003	0.8007	4.0400e-003	0.8047	0.2024	3.8600e-003	0.2063	0.0000	981.6584	981.6584	0.0663	0.0000	983.3169
2026	0.0144	0.4484	0.1635	1.9800e-003	0.0615	8.0000e-004	0.0623	0.0162	7.6000e-004	0.0169	0.0000	196.1850	196.1850	0.0133	0.0000	196.5171
Maximum	**0.0998**	**3.2001**	**0.8115**	**0.0101**	**0.8007**	**8.9700e-003**	**0.8047**	**0.2024**	**8.5800e-003**	**0.2063**	**0.0000**	**996.5971**	**996.5971**	**0.0671**	**0.0000**	**998.2734**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0998	3.2001	0.7950	9.5200e-003	0.7455	8.9700e-003	0.7545	0.1885	8.5800e-003	0.1971	0.0000	938.1495	938.1495	0.0649	0.0000	939.7714
2023	0.0725	2.3229	0.7980	0.0101	0.7512	4.1500e-003	0.7553	0.1906	3.9700e-003	0.1946	0.0000	994.7246	994.7246	0.0667	0.0000	996.3909
2024	0.0731	2.3217	0.8115	0.0101	0.7516	4.1300e-003	0.7557	0.1907	3.9500e-003	0.1947	0.0000	996.5971	996.5971	0.0671	0.0000	998.2734
2025	0.0721	2.2671	0.8095	9.9200e-003	0.8007	4.0400e-003	0.8047	0.2024	3.8600e-003	0.2063	0.0000	981.6584	981.6584	0.0663	0.0000	983.3169
2026	0.0144	0.4484	0.1635	1.9800e-003	0.0615	8.0000e-004	0.0623	0.0162	7.6000e-004	0.0169	0.0000	196.1850	196.1850	0.0133	0.0000	196.5171
Maximum	**0.0998**	**3.2001**	**0.8115**	**0.0101**	**0.8007**	**8.9700e-003**	**0.8047**	**0.2024**	**8.5800e-003**	**0.2063**	**0.0000**	**996.5971**	**996.5971**	**0.0671**	**0.0000**	**998.2734**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**2-7-2022**	**5-6-2022**	0.8724	0.8724
2	**5-7-2022**	**8-6-2022**	0.8955	0.8955
3	**8-7-2022**	**11-6-2022**	0.8998	0.8998
4	**11-7-2022**	**2-6-2023**	0.7810	0.7810
5	**2-7-2023**	**5-6-2023**	0.5740	0.5740
6	**5-7-2023**	**8-6-2023**	0.5907	0.5907

7	**8-7-2023**	**11-6-2023**	0.5925	0.5925
8	**11-7-2023**	**2-6-2024**	0.5936	0.5936
9	**2-7-2024**	**5-6-2024**	0.5766	0.5766
10	**5-7-2024**	**8-6-2024**	0.5867	0.5867
11	**8-7-2024**	**11-6-2024**	0.5885	0.5885
12	**11-7-2024**	**2-6-2025**	0.5880	0.5880
13	**2-7-2025**	**5-6-2025**	0.5623	0.5623
14	**5-7-2025**	**8-6-2025**	0.5786	0.5786
15	**8-7-2025**	**11-6-2025**	0.5804	0.5804
16	**11-7-2025**	**2-6-2026**	0.5371	0.5371
17	**2-7-2026**	**5-6-2026**	0.2431	0.2431
		Highest	0.8998	0.8998

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Southern Section Cut/Fill	Grading	2/7/2022	12/6/2025	6	1200	
2	Northern Section Other Cut/Fill	Grading	12/8/2025	3/21/2026	6	90	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Southern Section Cut/Fill	Rubber Tired Dozers	1	0.00	247	0.40
Northern Section Other Cut/Fill	Rubber Tired Dozers	1	0.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Southern Section Cut/Fill	1	0.00	0.00	106,000.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Northern Section Other Cut/Fill	1	0.00	0.00	7,200.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Southern Section Cut/Fill - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-003	0.0000	7.5000e-003	1.1400e-003	0.0000	1.1400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.5000e-003**	**0.0000**	**7.5000e-003**	**1.1400e-003**	**0.0000**	**1.1400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0998	3.2001	0.7950	9.5200e-003	0.7380	8.9700e-003	0.7470	0.1874	8.5800e-003	0.1960	0.0000	938.1495	938.1495	0.0649	0.0000	939.7714
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0998**	**3.2001**	**0.7950**	**9.5200e-003**	**0.7380**	**8.9700e-003**	**0.7470**	**0.1874**	**8.5800e-003**	**0.1960**	**0.0000**	**938.1495**	**938.1495**	**0.0649**	**0.0000**	**939.7714**

3.2 Southern Section Cut/Fill - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-003	0.0000	7.5000e-003	1.1400e-003	0.0000	1.1400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.5000e-003**	**0.0000**	**7.5000e-003**	**1.1400e-003**	**0.0000**	**1.1400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0998	3.2001	0.7950	9.5200e-003	0.7380	8.9700e-003	0.7470	0.1874	8.5800e-003	0.1960	0.0000	938.1495	938.1495	0.0649	0.0000	939.7714
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0998**	**3.2001**	**0.7950**	**9.5200e-003**	**0.7380**	**8.9700e-003**	**0.7470**	**0.1874**	**8.5800e-003**	**0.1960**	**0.0000**	**938.1495**	**938.1495**	**0.0649**	**0.0000**	**939.7714**

3.2 Southern Section Cut/Fill - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-003	0.0000	7.5000e-003	1.1400e-003	0.0000	1.1400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.5000e-003**	**0.0000**	**7.5000e-003**	**1.1400e-003**	**0.0000**	**1.1400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0725	2.3229	0.7980	0.0101	0.7437	4.1500e-003	0.7478	0.1895	3.9700e-003	0.1934	0.0000	994.7246	994.7246	0.0667	0.0000	996.3909
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0725**	**2.3229**	**0.7980**	**0.0101**	**0.7437**	**4.1500e-003**	**0.7478**	**0.1895**	**3.9700e-003**	**0.1934**	**0.0000**	**994.7246**	**994.7246**	**0.0667**	**0.0000**	**996.3909**

3.2 Southern Section Cut/Fill - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-003	0.0000	7.5000e-003	1.1400e-003	0.0000	1.1400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.5000e-003**	**0.0000**	**7.5000e-003**	**1.1400e-003**	**0.0000**	**1.1400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0725	2.3229	0.7980	0.0101	0.7437	4.1500e-003	0.7478	0.1895	3.9700e-003	0.1934	0.0000	994.7246	994.7246	0.0667	0.0000	996.3909
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0725**	**2.3229**	**0.7980**	**0.0101**	**0.7437**	**4.1500e-003**	**0.7478**	**0.1895**	**3.9700e-003**	**0.1934**	**0.0000**	**994.7246**	**994.7246**	**0.0667**	**0.0000**	**996.3909**

3.2 Southern Section Cut/Fill - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-003	0.0000	7.5000e-003	1.1400e-003	0.0000	1.1400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.5000e-003**	**0.0000**	**7.5000e-003**	**1.1400e-003**	**0.0000**	**1.1400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0731	2.3217	0.8115	0.0101	0.7441	4.1300e-003	0.7482	0.1896	3.9500e-003	0.1935	0.0000	996.5971	996.5971	0.0671	0.0000	998.2734
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0731**	**2.3217**	**0.8115**	**0.0101**	**0.7441**	**4.1300e-003**	**0.7482**	**0.1896**	**3.9500e-003**	**0.1935**	**0.0000**	**996.5971**	**996.5971**	**0.0671**	**0.0000**	**998.2734**

3.2 Southern Section Cut/Fill - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-003	0.0000	7.5000e-003	1.1400e-003	0.0000	1.1400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.5000e-003**	**0.0000**	**7.5000e-003**	**1.1400e-003**	**0.0000**	**1.1400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0731	2.3217	0.8115	0.0101	0.7441	4.1300e-003	0.7482	0.1896	3.9500e-003	0.1935	0.0000	996.5971	996.5971	0.0671	0.0000	998.2734
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0731**	**2.3217**	**0.8115**	**0.0101**	**0.7441**	**4.1300e-003**	**0.7482**	**0.1896**	**3.9500e-003**	**0.1935**	**0.0000**	**996.5971**	**996.5971**	**0.0671**	**0.0000**	**998.2734**

3.2 Southern Section Cut/Fill - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-003	0.0000	7.5000e-003	1.1400e-003	0.0000	1.1400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.5000e-003**	**0.0000**	**7.5000e-003**	**1.1400e-003**	**0.0000**	**1.1400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0676	2.1284	0.7600	9.3100e-003	0.7399	3.7900e-003	0.7437	0.1881	3.6300e-003	0.1917	0.0000	921.6298	921.6298	0.0623	0.0000	923.1868
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0676**	**2.1284**	**0.7600**	**9.3100e-003**	**0.7399**	**3.7900e-003**	**0.7437**	**0.1881**	**3.6300e-003**	**0.1917**	**0.0000**	**921.6298**	**921.6298**	**0.0623**	**0.0000**	**923.1868**

3.2 Southern Section Cut/Fill - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-003	0.0000	7.5000e-003	1.1400e-003	0.0000	1.1400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**7.5000e-003**	**0.0000**	**7.5000e-003**	**1.1400e-003**	**0.0000**	**1.1400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0676	2.1284	0.7600	9.3100e-003	0.7399	3.7900e-003	0.7437	0.1881	3.6300e-003	0.1917	0.0000	921.6298	921.6298	0.0623	0.0000	923.1868
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0676**	**2.1284**	**0.7600**	**9.3100e-003**	**0.7399**	**3.7900e-003**	**0.7437**	**0.1881**	**3.6300e-003**	**0.1917**	**0.0000**	**921.6298**	**921.6298**	**0.0623**	**0.0000**	**923.1868**

3.3 Northern Section Other Cut/Fill - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.1800e-003	0.0000	3.1800e-003	4.8000e-004	0.0000	4.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.1800e-003**	**0.0000**	**3.1800e-003**	**4.8000e-004**	**0.0000**	**4.8000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.4100e-003	0.1386	0.0495	6.1000e-004	0.0501	2.5000e-004	0.0504	0.0127	2.4000e-004	0.0130	0.0000	60.0286	60.0286	4.0600e-003	0.0000	60.1300
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.4100e-003**	**0.1386**	**0.0495**	**6.1000e-004**	**0.0501**	**2.5000e-004**	**0.0504**	**0.0127**	**2.4000e-004**	**0.0130**	**0.0000**	**60.0286**	**60.0286**	**4.0600e-003**	**0.0000**	**60.1300**

3.3 Northern Section Other Cut/Fill - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.1800e-003	0.0000	3.1800e-003	4.8000e-004	0.0000	4.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.1800e-003**	**0.0000**	**3.1800e-003**	**4.8000e-004**	**0.0000**	**4.8000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.4100e-003	0.1386	0.0495	6.1000e-004	0.0501	2.5000e-004	0.0504	0.0127	2.4000e-004	0.0130	0.0000	60.0286	60.0286	4.0600e-003	0.0000	60.1300
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.4100e-003**	**0.1386**	**0.0495**	**6.1000e-004**	**0.0501**	**2.5000e-004**	**0.0504**	**0.0127**	**2.4000e-004**	**0.0130**	**0.0000**	**60.0286**	**60.0286**	**4.0600e-003**	**0.0000**	**60.1300**

3.3 Northern Section Other Cut/Fill - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.1800e-003	0.0000	3.1800e-003	4.8000e-004	0.0000	4.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.1800e-003**	**0.0000**	**3.1800e-003**	**4.8000e-004**	**0.0000**	**4.8000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0144	0.4484	0.1635	1.9800e-003	0.0583	8.0000e-004	0.0591	0.0157	7.6000e-004	0.0165	0.0000	196.1850	196.1850	0.0133	0.0000	196.5171
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0144**	**0.4484**	**0.1635**	**1.9800e-003**	**0.0583**	**8.0000e-004**	**0.0591**	**0.0157**	**7.6000e-004**	**0.0165**	**0.0000**	**196.1850**	**196.1850**	**0.0133**	**0.0000**	**196.5171**

3.3 Northern Section Other Cut/Fill - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.1800e-003	0.0000	3.1800e-003	4.8000e-004	0.0000	4.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.1800e-003**	**0.0000**	**3.1800e-003**	**4.8000e-004**	**0.0000**	**4.8000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0144	0.4484	0.1635	1.9800e-003	0.0583	8.0000e-004	0.0591	0.0157	7.6000e-004	0.0165	0.0000	196.1850	196.1850	0.0133	0.0000	196.5171
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0144**	**0.4484**	**0.1635**	**1.9800e-003**	**0.0583**	**8.0000e-004**	**0.0591**	**0.0157**	**7.6000e-004**	**0.0165**	**0.0000**	**196.1850**	**196.1850**	**0.0133**	**0.0000**	**196.5171**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

LACMTA WSAB Construction GHG - Hauling (Alt 4)

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	71.90	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2028
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 14.2-mile LRT Corridor (Slauson/A-Line to Pioneer) + Parking + MSF

Construction Phase - All Cut/Fill Material Hauling

Off-road Equipment - No Equipment

Off-road Equipment - No Equipment

Trips and VMT - All Hauling

Grading -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	310.00	1,200.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblGrading	MaterialImported	0.00	355,290.00
tblLandUse	LotAcreage	0.00	71.90
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripNumber	16,591.00	71,100.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0670	2.1465	0.5333	6.3900e-003	0.5151	6.0200e-003	0.5211	0.1287	5.7600e-003	0.1345	0.0000	629.2682	629.2682	0.0435	0.0000	630.3561
2023	0.0486	1.5581	0.5352	6.7500e-003	0.5189	2.7900e-003	0.5217	0.1301	2.6600e-003	0.1328	0.0000	667.2162	667.2162	0.0447	0.0000	668.3339
2024	0.0491	1.5573	0.5443	6.7600e-003	0.5192	2.7700e-003	0.5219	0.1302	2.6500e-003	0.1329	0.0000	668.4722	668.4722	0.0450	0.0000	669.5966
2025	0.0454	1.4277	0.5098	6.2400e-003	0.5164	2.5400e-003	0.5189	0.1292	2.4300e-003	0.1316	0.0000	618.1875	618.1875	0.0418	0.0000	619.2319
Maximum	**0.0670**	**2.1465**	**0.5443**	**6.7600e-003**	**0.5192**	**6.0200e-003**	**0.5219**	**0.1302**	**5.7600e-003**	**0.1345**	**0.0000**	**668.4722**	**668.4722**	**0.0450**	**0.0000**	**669.5966**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0670	2.1465	0.5333	6.3900e-003	0.5151	6.0200e-003	0.5211	0.1287	5.7600e-003	0.1345	0.0000	629.2682	629.2682	0.0435	0.0000	630.3561
2023	0.0486	1.5581	0.5352	6.7500e-003	0.5189	2.7900e-003	0.5217	0.1301	2.6600e-003	0.1328	0.0000	667.2162	667.2162	0.0447	0.0000	668.3339
2024	0.0491	1.5573	0.5443	6.7600e-003	0.5192	2.7700e-003	0.5219	0.1302	2.6500e-003	0.1329	0.0000	668.4722	668.4722	0.0450	0.0000	669.5966
2025	0.0454	1.4277	0.5098	6.2400e-003	0.5164	2.5400e-003	0.5189	0.1292	2.4300e-003	0.1316	0.0000	618.1875	618.1875	0.0418	0.0000	619.2319
Maximum	**0.0670**	**2.1465**	**0.5443**	**6.7600e-003**	**0.5192**	**6.0200e-003**	**0.5219**	**0.1302**	**5.7600e-003**	**0.1345**	**0.0000**	**668.4722**	**668.4722**	**0.0450**	**0.0000**	**669.5966**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**2-7-2022**	**5-6-2022**	0.5852	0.5852
2	**5-7-2022**	**8-6-2022**	0.6007	0.6007
3	**8-7-2022**	**11-6-2022**	0.6035	0.6035
4	**11-7-2022**	**2-6-2023**	0.5239	0.5239
5	**2-7-2023**	**5-6-2023**	0.3850	0.3850
6	**5-7-2023**	**8-6-2023**	0.3962	0.3962
7	**8-7-2023**	**11-6-2023**	0.3974	0.3974
8	**11-7-2023**	**2-6-2024**	0.3982	0.3982

9	**2-7-2024**	**5-6-2024**	0.3868	0.3868
10	**5-7-2024**	**8-6-2024**	0.3935	0.3935
11	**8-7-2024**	**11-6-2024**	0.3948	0.3948
12	**11-7-2024**	**2-6-2025**	0.3944	0.3944
13	**2-7-2025**	**5-6-2025**	0.3772	0.3772
14	**5-7-2025**	**8-6-2025**	0.3881	0.3881
15	**8-7-2025**	**9-30-2025**	0.2320	0.2320
		Highest	0.6035	0.6035

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Southern Section Cut/Fill	Grading	2/7/2022	12/6/2025	6	1200	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Southern Section Cut/Fill	Rubber Tired Dozers	1	0.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Southern Section Cut/Fill	1	0.00	0.00	71,100.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Southern Section Cut/Fill - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0201	0.0000	0.0201	3.0400e-003	0.0000	3.0400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0201**	**0.0000**	**0.0201**	**3.0400e-003**	**0.0000**	**3.0400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0670	2.1465	0.5333	6.3900e-003	0.4950	6.0200e-003	0.5010	0.1257	5.7600e-003	0.1315	0.0000	629.2682	629.2682	0.0435	0.0000	630.3561
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0670**	**2.1465**	**0.5333**	**6.3900e-003**	**0.4950**	**6.0200e-003**	**0.5010**	**0.1257**	**5.7600e-003**	**0.1315**	**0.0000**	**629.2682**	**629.2682**	**0.0435**	**0.0000**	**630.3561**

3.2 Southern Section Cut/Fill - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0201	0.0000	0.0201	3.0400e-003	0.0000	3.0400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0201**	**0.0000**	**0.0201**	**3.0400e-003**	**0.0000**	**3.0400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0670	2.1465	0.5333	6.3900e-003	0.4950	6.0200e-003	0.5010	0.1257	5.7600e-003	0.1315	0.0000	629.2682	629.2682	0.0435	0.0000	630.3561
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0670**	**2.1465**	**0.5333**	**6.3900e-003**	**0.4950**	**6.0200e-003**	**0.5010**	**0.1257**	**5.7600e-003**	**0.1315**	**0.0000**	**629.2682**	**629.2682**	**0.0435**	**0.0000**	**630.3561**

3.2 Southern Section Cut/Fill - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0201	0.0000	0.0201	3.0400e-003	0.0000	3.0400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0201**	**0.0000**	**0.0201**	**3.0400e-003**	**0.0000**	**3.0400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0486	1.5581	0.5352	6.7500e-003	0.4988	2.7900e-003	0.5016	0.1271	2.6600e-003	0.1297	0.0000	667.2162	667.2162	0.0447	0.0000	668.3339
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0486**	**1.5581**	**0.5352**	**6.7500e-003**	**0.4988**	**2.7900e-003**	**0.5016**	**0.1271**	**2.6600e-003**	**0.1297**	**0.0000**	**667.2162**	**667.2162**	**0.0447**	**0.0000**	**668.3339**

3.2 Southern Section Cut/Fill - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0201	0.0000	0.0201	3.0400e-003	0.0000	3.0400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0201**	**0.0000**	**0.0201**	**3.0400e-003**	**0.0000**	**3.0400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0486	1.5581	0.5352	6.7500e-003	0.4988	2.7900e-003	0.5016	0.1271	2.6600e-003	0.1297	0.0000	667.2162	667.2162	0.0447	0.0000	668.3339
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0486**	**1.5581**	**0.5352**	**6.7500e-003**	**0.4988**	**2.7900e-003**	**0.5016**	**0.1271**	**2.6600e-003**	**0.1297**	**0.0000**	**667.2162**	**667.2162**	**0.0447**	**0.0000**	**668.3339**

3.2 Southern Section Cut/Fill - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0201	0.0000	0.0201	3.0400e-003	0.0000	3.0400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0201**	**0.0000**	**0.0201**	**3.0400e-003**	**0.0000**	**3.0400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0491	1.5573	0.5443	6.7600e-003	0.4991	2.7700e-003	0.5019	0.1272	2.6500e-003	0.1298	0.0000	668.4722	668.4722	0.0450	0.0000	669.5966
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0491**	**1.5573**	**0.5443**	**6.7600e-003**	**0.4991**	**2.7700e-003**	**0.5019**	**0.1272**	**2.6500e-003**	**0.1298**	**0.0000**	**668.4722**	**668.4722**	**0.0450**	**0.0000**	**669.5966**

3.2 Southern Section Cut/Fill - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0201	0.0000	0.0201	3.0400e-003	0.0000	3.0400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0201**	**0.0000**	**0.0201**	**3.0400e-003**	**0.0000**	**3.0400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0491	1.5573	0.5443	6.7600e-003	0.4991	2.7700e-003	0.5019	0.1272	2.6500e-003	0.1298	0.0000	668.4722	668.4722	0.0450	0.0000	669.5966
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0491**	**1.5573**	**0.5443**	**6.7600e-003**	**0.4991**	**2.7700e-003**	**0.5019**	**0.1272**	**2.6500e-003**	**0.1298**	**0.0000**	**668.4722**	**668.4722**	**0.0450**	**0.0000**	**669.5966**

3.2 Southern Section Cut/Fill - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0201	0.0000	0.0201	3.0400e-003	0.0000	3.0400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0201**	**0.0000**	**0.0201**	**3.0400e-003**	**0.0000**	**3.0400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0454	1.4277	0.5098	6.2400e-003	0.4963	2.5400e-003	0.4989	0.1262	2.4300e-003	0.1286	0.0000	618.1875	618.1875	0.0418	0.0000	619.2319
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0454**	**1.4277**	**0.5098**	**6.2400e-003**	**0.4963**	**2.5400e-003**	**0.4989**	**0.1262**	**2.4300e-003**	**0.1286**	**0.0000**	**618.1875**	**618.1875**	**0.0418**	**0.0000**	**619.2319**

3.2 Southern Section Cut/Fill - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0201	0.0000	0.0201	3.0400e-003	0.0000	3.0400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0201**	**0.0000**	**0.0201**	**3.0400e-003**	**0.0000**	**3.0400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0454	1.4277	0.5098	6.2400e-003	0.4963	2.5400e-003	0.4989	0.1262	2.4300e-003	0.1286	0.0000	618.1875	618.1875	0.0418	0.0000	619.2319
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0454**	**1.4277**	**0.5098**	**6.2400e-003**	**0.4963**	**2.5400e-003**	**0.4989**	**0.1262**	**2.4300e-003**	**0.1286**	**0.0000**	**618.1875**	**618.1875**	**0.0418**	**0.0000**	**619.2319**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

LACMTA WSAB Construction GHG - Hauling (Design Option 1)

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	153.50	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2028
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

LACMTA WSAB Construction GHG - Hauling (Design Option 1) - Los Angeles-South Coast County, Annual

Project Characteristics -

Land Use - LRT Corridor + Parking + MSF

Construction Phase - All Cut/Fill Material Hauling

Off-road Equipment - No Equipment

Off-road Equipment - No Equipment

Off-road Equipment - No Equipment

Off-road Equipment - No Equipment

Off-road Equipment - No Equipment

Trips and VMT - All Hauling

Grading -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	310.00	600.00
tblConstructionPhase	NumDays	310.00	1,200.00
tblConstructionPhase	NumDays	310.00	1,200.00
tblConstructionPhase	NumDays	310.00	600.00
tblConstructionPhase	NumDays	310.00	90.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblGrading	MaterialExported	0.00	365,520.00
tblGrading	MaterialExported	0.00	416,565.00
tblGrading	MaterialExported	0.00	14,000.00
tblGrading	MaterialExported	0.00	300,055.00
tblGrading	MaterialExported	0.00	20,665.00

tblGrading	MaterialImported	0.00	95,450.00
tblGrading	MaterialImported	0.00	515,970.00
tblGrading	MaterialImported	0.00	127,495.00
tblGrading	MaterialImported	0.00	40,320.00
tblLandUse	LotAcreage	0.00	153.50
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripNumber	45,690.00	73,200.00
tblTripsAndVMT	HaulingTripNumber	64,002.00	102,500.00
tblTripsAndVMT	HaulingTripNumber	66,246.00	106,000.00
tblTripsAndVMT	HaulingTripNumber	53,444.00	85,600.00
tblTripsAndVMT	HaulingTripNumber	7,623.00	12,200.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.3343	10.7141	2.6618	0.0319	2.0776	0.0300	2.1076	0.5234	0.0287	0.5521	0.0000	3,141.0307	3,141.0307	0.2172	0.0000	3,146.4611
2023	0.2427	7.7773	2.6716	0.0337	2.0965	0.0139	2.1104	0.5303	0.0133	0.5436	0.0000	3,330.4505	3,330.4505	0.2232	0.0000	3,336.0296
2024	0.2616	8.3060	2.9033	0.0361	2.6886	0.0148	2.7034	0.6751	0.0142	0.6892	0.0000	3,565.4305	3,565.4305	0.2399	0.0000	3,571.4278
2025	0.2498	7.8591	2.8062	0.0344	2.2688	0.0140	2.2828	0.5726	0.0134	0.5860	0.0000	3,403.0625	3,403.0625	0.2300	0.0000	3,408.8119
2026	0.0244	0.7599	0.2771	3.3500e-003	0.1022	1.3500e-003	0.1036	0.0271	1.2900e-003	0.0284	0.0000	332.4246	332.4246	0.0225	0.0000	332.9872
Maximum	**0.3343**	**10.7141**	**2.9033**	**0.0361**	**2.6886**	**0.0300**	**2.7034**	**0.6751**	**0.0287**	**0.6892**	**0.0000**	**3,565.4305**	**3,565.4305**	**0.2399**	**0.0000**	**3,571.4278**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.3343	10.7141	2.6618	0.0319	2.0776	0.0300	2.1076	0.5234	0.0287	0.5521	0.0000	3,141.0307	3,141.0307	0.2172	0.0000	3,146.4611
2023	0.2427	7.7773	2.6716	0.0337	2.0965	0.0139	2.1104	0.5303	0.0133	0.5436	0.0000	3,330.4505	3,330.4505	0.2232	0.0000	3,336.0296
2024	0.2616	8.3060	2.9033	0.0361	2.6886	0.0148	2.7034	0.6751	0.0142	0.6892	0.0000	3,565.4305	3,565.4305	0.2399	0.0000	3,571.4278
2025	0.2498	7.8591	2.8062	0.0344	2.2688	0.0140	2.2828	0.5726	0.0134	0.5860	0.0000	3,403.0625	3,403.0625	0.2300	0.0000	3,408.8119
2026	0.0244	0.7599	0.2771	3.3500e-003	0.1022	1.3500e-003	0.1036	0.0271	1.2900e-003	0.0284	0.0000	332.4246	332.4246	0.0225	0.0000	332.9872
Maximum	**0.3343**	**10.7141**	**2.9033**	**0.0361**	**2.6886**	**0.0300**	**2.7034**	**0.6751**	**0.0287**	**0.6892**	**0.0000**	**3,565.4305**	**3,565.4305**	**0.2399**	**0.0000**	**3,571.4278**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**2-7-2022**	**5-6-2022**	2.9209	2.9209
2	**5-7-2022**	**8-6-2022**	2.9983	2.9983
3	**8-7-2022**	**11-6-2022**	3.0125	3.0125
4	**11-7-2022**	**2-6-2023**	2.6150	2.6150
5	**2-7-2023**	**5-6-2023**	1.9218	1.9218
6	**5-7-2023**	**8-6-2023**	1.9776	1.9776

LACMTA WSAB Construction GHG - Hauling (Design Option 1) - Los Angeles-South Coast County, Annual

7	**8-7-2023**	**11-6-2023**	1.9837	1.9837
8	**11-7-2023**	**2-6-2024**	2.0236	2.0236
9	**2-7-2024**	**5-6-2024**	2.0655	2.0655
10	**5-7-2024**	**8-6-2024**	2.1015	2.1015
11	**8-7-2024**	**11-6-2024**	2.1081	2.1081
12	**11-7-2024**	**2-6-2025**	2.1062	2.1062
13	**2-7-2025**	**5-6-2025**	2.0143	2.0143
14	**5-7-2025**	**8-6-2025**	2.0725	2.0725
15	**8-7-2025**	**11-6-2025**	2.0790	2.0790
16	**11-7-2025**	**2-6-2026**	1.2690	1.2690
17	**2-7-2026**	**5-6-2026**	0.4119	0.4119
		Highest	3.0125	3.0125

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

LACMTA WSAB Construction GHG - Hauling (Design Option 1) - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Northern Section Tunnel	Grading	2/7/2022	1/6/2024	6	600	
2	Northern Section Stations	Grading	2/7/2022	12/6/2025	6	1200	
3	Southern Section Cut/Fill	Grading	2/7/2022	12/6/2025	6	1200	
4	Northern Section Cross-Overs	Grading	1/8/2024	12/6/2025	6	600	
5	Northern Section Other Cut/Fill	Grading	12/8/2025	3/21/2026	6	90	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Northern Section Tunnel	Rubber Tired Dozers	1	0.00	247	0.40
Northern Section Stations	Rubber Tired Dozers	1	0.00	247	0.40
Northern Section Cross-Overs	Rubber Tired Dozers	1	0.00	247	0.40
Southern Section Cut/Fill	Rubber Tired Dozers	1	0.00	247	0.40
Northern Section Other Cut/Fill	Rubber Tired Dozers	1	0.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Northern Section Tunnel	1	0.00	0.00	73,200.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Northern Section Stations	1	0.00	0.00	102,500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Northern Section Cross-Overs	1	0.00	0.00	85,600.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Southern Section Cut/Fill	1	0.00	0.00	106,000.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Northern Section Other Cut/Fill	1	0.00	0.00	12,200.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Northern Section Tunnel - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0207	0.0000	0.0207	3.1300e-003	0.0000	3.1300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0207**	**0.0000**	**0.0207**	**3.1300e-003**	**0.0000**	**3.1300e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Northern Section Tunnel - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1379	4.4197	1.0980	0.0132	0.5463	0.0124	0.5587	0.1427	0.0119	0.1546	0.0000	1,295.7084	1,295.7084	0.0896	0.0000	1,297.9485
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1379**	**4.4197**	**1.0980**	**0.0132**	**0.5463**	**0.0124**	**0.5587**	**0.1427**	**0.0119**	**0.1546**	**0.0000**	**1,295.7084**	**1,295.7084**	**0.0896**	**0.0000**	**1,297.9485**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0207	0.0000	0.0207	3.1300e-003	0.0000	3.1300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0207**	**0.0000**	**0.0207**	**3.1300e-003**	**0.0000**	**3.1300e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Northern Section Tunnel - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1379	4.4197	1.0980	0.0132	0.5463	0.0124	0.5587	0.1427	0.0119	0.1546	0.0000	1,295.7084	1,295.7084	0.0896	0.0000	1,297.9485
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1379**	**4.4197**	**1.0980**	**0.0132**	**0.5463**	**0.0124**	**0.5587**	**0.1427**	**0.0119**	**0.1546**	**0.0000**	**1,295.7084**	**1,295.7084**	**0.0896**	**0.0000**	**1,297.9485**

3.2 Northern Section Tunnel - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0207	0.0000	0.0207	3.1300e-003	0.0000	3.1300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0207**	**0.0000**	**0.0207**	**3.1300e-003**	**0.0000**	**3.1300e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Northern Section Tunnel - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1001	3.2082	1.1021	0.0139	0.5542	5.7300e-003	0.5599	0.1456	5.4900e-003	0.1511	0.0000	1,373.8460	1,373.8460	0.0921	0.0000	1,376.1475
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1001**	**3.2082**	**1.1021**	**0.0139**	**0.5542**	**5.7300e-003**	**0.5599**	**0.1456**	**5.4900e-003**	**0.1511**	**0.0000**	**1,373.8460**	**1,373.8460**	**0.0921**	**0.0000**	**1,376.1475**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0207	0.0000	0.0207	3.1300e-003	0.0000	3.1300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0207**	**0.0000**	**0.0207**	**3.1300e-003**	**0.0000**	**3.1300e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Northern Section Tunnel - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1001	3.2082	1.1021	0.0139	0.5542	5.7300e-003	0.5599	0.1456	5.4900e-003	0.1511	0.0000	1,373.8460	1,373.8460	0.0921	0.0000	1,376.1475
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1001**	**3.2082**	**1.1021**	**0.0139**	**0.5542**	**5.7300e-003**	**0.5599**	**0.1456**	**5.4900e-003**	**0.1511**	**0.0000**	**1,373.8460**	**1,373.8460**	**0.0921**	**0.0000**	**1,376.1475**

3.2 Northern Section Tunnel - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0207	0.0000	0.0207	3.1300e-003	0.0000	3.1300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0207**	**0.0000**	**0.0207**	**3.1300e-003**	**0.0000**	**3.1300e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Northern Section Tunnel - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9300e-003	0.0613	0.0214	2.7000e-004	0.4745	1.1000e-004	0.4746	0.1167	1.0000e-004	0.1168	0.0000	26.3013	26.3013	1.7700e-003	0.0000	26.3455
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.9300e-003**	**0.0613**	**0.0214**	**2.7000e-004**	**0.4745**	**1.1000e-004**	**0.4746**	**0.1167**	**1.0000e-004**	**0.1168**	**0.0000**	**26.3013**	**26.3013**	**1.7700e-003**	**0.0000**	**26.3455**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0207	0.0000	0.0207	3.1300e-003	0.0000	3.1300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0207**	**0.0000**	**0.0207**	**3.1300e-003**	**0.0000**	**3.1300e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Northern Section Tunnel - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9300e-003	0.0613	0.0214	2.7000e-004	0.4745	1.1000e-004	0.4746	0.1167	1.0000e-004	0.1168	0.0000	26.3013	26.3013	1.7700e-003	0.0000	26.3455
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.9300e-003**	**0.0613**	**0.0214**	**2.7000e-004**	**0.4745**	**1.1000e-004**	**0.4746**	**0.1167**	**1.0000e-004**	**0.1168**	**0.0000**	**26.3013**	**26.3013**	**1.7700e-003**	**0.0000**	**26.3455**

3.3 Northern Section Stations - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0290	0.0000	0.0290	4.3800e-003	0.0000	4.3800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0290**	**0.0000**	**0.0290**	**4.3800e-003**	**0.0000**	**4.3800e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0965	3.0944	0.7688	9.2100e-003	0.7136	8.6700e-003	0.7223	0.1812	8.3000e-003	0.1895	0.0000	907.1729	907.1729	0.0627	0.0000	908.7412
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0965**	**3.0944**	**0.7688**	**9.2100e-003**	**0.7136**	**8.6700e-003**	**0.7223**	**0.1812**	**8.3000e-003**	**0.1895**	**0.0000**	**907.1729**	**907.1729**	**0.0627**	**0.0000**	**908.7412**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0290	0.0000	0.0290	4.3800e-003	0.0000	4.3800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0290**	**0.0000**	**0.0290**	**4.3800e-003**	**0.0000**	**4.3800e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0965	3.0944	0.7688	9.2100e-003	0.7136	8.6700e-003	0.7223	0.1812	8.3000e-003	0.1895	0.0000	907.1729	907.1729	0.0627	0.0000	908.7412
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0965**	**3.0944**	**0.7688**	**9.2100e-003**	**0.7136**	**8.6700e-003**	**0.7223**	**0.1812**	**8.3000e-003**	**0.1895**	**0.0000**	**907.1729**	**907.1729**	**0.0627**	**0.0000**	**908.7412**

3.3 Northern Section Stations - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0290	0.0000	0.0290	4.3800e-003	0.0000	4.3800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0290**	**0.0000**	**0.0290**	**4.3800e-003**	**0.0000**	**4.3800e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0701	2.2462	0.7716	9.7400e-003	0.7191	4.0200e-003	0.7231	0.1832	3.8400e-003	0.1870	0.0000	961.8799	961.8799	0.0645	0.0000	963.4912
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0701**	**2.2462**	**0.7716**	**9.7400e-003**	**0.7191**	**4.0200e-003**	**0.7231**	**0.1832**	**3.8400e-003**	**0.1870**	**0.0000**	**961.8799**	**961.8799**	**0.0645**	**0.0000**	**963.4912**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0290	0.0000	0.0290	4.3800e-003	0.0000	4.3800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0290**	**0.0000**	**0.0290**	**4.3800e-003**	**0.0000**	**4.3800e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0701	2.2462	0.7716	9.7400e-003	0.7191	4.0200e-003	0.7231	0.1832	3.8400e-003	0.1870	0.0000	961.8799	961.8799	0.0645	0.0000	963.4912
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0701**	**2.2462**	**0.7716**	**9.7400e-003**	**0.7191**	**4.0200e-003**	**0.7231**	**0.1832**	**3.8400e-003**	**0.1870**	**0.0000**	**961.8799**	**961.8799**	**0.0645**	**0.0000**	**963.4912**

3.3 Northern Section Stations - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0290	0.0000	0.0290	4.3800e-003	0.0000	4.3800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0290**	**0.0000**	**0.0290**	**4.3800e-003**	**0.0000**	**4.3800e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0707	2.2450	0.7847	9.7400e-003	0.7195	4.0000e-003	0.7235	0.1833	3.8200e-003	0.1872	0.0000	963.6906	963.6906	0.0648	0.0000	965.3116
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0707**	**2.2450**	**0.7847**	**9.7400e-003**	**0.7195**	**4.0000e-003**	**0.7235**	**0.1833**	**3.8200e-003**	**0.1872**	**0.0000**	**963.6906**	**963.6906**	**0.0648**	**0.0000**	**965.3116**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0290	0.0000	0.0290	4.3800e-003	0.0000	4.3800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0290**	**0.0000**	**0.0290**	**4.3800e-003**	**0.0000**	**4.3800e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0707	2.2450	0.7847	9.7400e-003	0.7195	4.0000e-003	0.7235	0.1833	3.8200e-003	0.1872	0.0000	963.6906	963.6906	0.0648	0.0000	965.3116
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0707**	**2.2450**	**0.7847**	**9.7400e-003**	**0.7195**	**4.0000e-003**	**0.7235**	**0.1833**	**3.8200e-003**	**0.1872**	**0.0000**	**963.6906**	**963.6906**	**0.0648**	**0.0000**	**965.3116**

3.3 Northern Section Stations - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0290	0.0000	0.0290	4.3800e-003	0.0000	4.3800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0290**	**0.0000**	**0.0290**	**4.3800e-003**	**0.0000**	**4.3800e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0654	2.0582	0.7349	9.0000e-003	0.7155	3.6600e-003	0.7192	0.1819	3.5100e-003	0.1854	0.0000	891.1986	891.1986	0.0602	0.0000	892.7042
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0654**	**2.0582**	**0.7349**	**9.0000e-003**	**0.7155**	**3.6600e-003**	**0.7192**	**0.1819**	**3.5100e-003**	**0.1854**	**0.0000**	**891.1986**	**891.1986**	**0.0602**	**0.0000**	**892.7042**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0290	0.0000	0.0290	4.3800e-003	0.0000	4.3800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0290**	**0.0000**	**0.0290**	**4.3800e-003**	**0.0000**	**4.3800e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0654	2.0582	0.7349	9.0000e-003	0.7155	3.6600e-003	0.7192	0.1819	3.5100e-003	0.1854	0.0000	891.1986	891.1986	0.0602	0.0000	892.7042
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0654**	**2.0582**	**0.7349**	**9.0000e-003**	**0.7155**	**3.6600e-003**	**0.7192**	**0.1819**	**3.5100e-003**	**0.1854**	**0.0000**	**891.1986**	**891.1986**	**0.0602**	**0.0000**	**892.7042**

3.4 Southern Section Cut/Fill - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0300**	**0.0000**	**0.0300**	**4.5400e-003**	**0.0000**	**4.5400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0998	3.2001	0.7950	9.5200e-003	0.7380	8.9700e-003	0.7470	0.1874	8.5800e-003	0.1960	0.0000	938.1495	938.1495	0.0649	0.0000	939.7714
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0998**	**3.2001**	**0.7950**	**9.5200e-003**	**0.7380**	**8.9700e-003**	**0.7470**	**0.1874**	**8.5800e-003**	**0.1960**	**0.0000**	**938.1495**	**938.1495**	**0.0649**	**0.0000**	**939.7714**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0300**	**0.0000**	**0.0300**	**4.5400e-003**	**0.0000**	**4.5400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0998	3.2001	0.7950	9.5200e-003	0.7380	8.9700e-003	0.7470	0.1874	8.5800e-003	0.1960	0.0000	938.1495	938.1495	0.0649	0.0000	939.7714
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0998**	**3.2001**	**0.7950**	**9.5200e-003**	**0.7380**	**8.9700e-003**	**0.7470**	**0.1874**	**8.5800e-003**	**0.1960**	**0.0000**	**938.1495**	**938.1495**	**0.0649**	**0.0000**	**939.7714**

3.4 Southern Section Cut/Fill - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0300**	**0.0000**	**0.0300**	**4.5400e-003**	**0.0000**	**4.5400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0725	2.3229	0.7980	0.0101	0.7437	4.1500e-003	0.7478	0.1895	3.9700e-003	0.1934	0.0000	994.7246	994.7246	0.0667	0.0000	996.3909
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0725**	**2.3229**	**0.7980**	**0.0101**	**0.7437**	**4.1500e-003**	**0.7478**	**0.1895**	**3.9700e-003**	**0.1934**	**0.0000**	**994.7246**	**994.7246**	**0.0667**	**0.0000**	**996.3909**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0300**	**0.0000**	**0.0300**	**4.5400e-003**	**0.0000**	**4.5400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0725	2.3229	0.7980	0.0101	0.7437	4.1500e-003	0.7478	0.1895	3.9700e-003	0.1934	0.0000	994.7246	994.7246	0.0667	0.0000	996.3909
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0725**	**2.3229**	**0.7980**	**0.0101**	**0.7437**	**4.1500e-003**	**0.7478**	**0.1895**	**3.9700e-003**	**0.1934**	**0.0000**	**994.7246**	**994.7246**	**0.0667**	**0.0000**	**996.3909**

3.4 Southern Section Cut/Fill - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0300**	**0.0000**	**0.0300**	**4.5400e-003**	**0.0000**	**4.5400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0731	2.3217	0.8115	0.0101	0.7441	4.1300e-003	0.7482	0.1896	3.9500e-003	0.1935	0.0000	996.5971	996.5971	0.0671	0.0000	998.2734
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0731**	**2.3217**	**0.8115**	**0.0101**	**0.7441**	**4.1300e-003**	**0.7482**	**0.1896**	**3.9500e-003**	**0.1935**	**0.0000**	**996.5971**	**996.5971**	**0.0671**	**0.0000**	**998.2734**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0300**	**0.0000**	**0.0300**	**4.5400e-003**	**0.0000**	**4.5400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0731	2.3217	0.8115	0.0101	0.7441	4.1300e-003	0.7482	0.1896	3.9500e-003	0.1935	0.0000	996.5971	996.5971	0.0671	0.0000	998.2734
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0731**	**2.3217**	**0.8115**	**0.0101**	**0.7441**	**4.1300e-003**	**0.7482**	**0.1896**	**3.9500e-003**	**0.1935**	**0.0000**	**996.5971**	**996.5971**	**0.0671**	**0.0000**	**998.2734**

3.4 Southern Section Cut/Fill - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0300**	**0.0000**	**0.0300**	**4.5400e-003**	**0.0000**	**4.5400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0676	2.1284	0.7600	9.3100e-003	0.7399	3.7900e-003	0.7437	0.1881	3.6300e-003	0.1917	0.0000	921.6298	921.6298	0.0623	0.0000	923.1868
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0676**	**2.1284**	**0.7600**	**9.3100e-003**	**0.7399**	**3.7900e-003**	**0.7437**	**0.1881**	**3.6300e-003**	**0.1917**	**0.0000**	**921.6298**	**921.6298**	**0.0623**	**0.0000**	**923.1868**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0300**	**0.0000**	**0.0300**	**4.5400e-003**	**0.0000**	**4.5400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0676	2.1284	0.7600	9.3100e-003	0.7399	3.7900e-003	0.7437	0.1881	3.6300e-003	0.1917	0.0000	921.6298	921.6298	0.0623	0.0000	923.1868
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0676**	**2.1284**	**0.7600**	**9.3100e-003**	**0.7399**	**3.7900e-003**	**0.7437**	**0.1881**	**3.6300e-003**	**0.1917**	**0.0000**	**921.6298**	**921.6298**	**0.0623**	**0.0000**	**923.1868**

3.5 Northern Section Cross-Overs - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0242	0.0000	0.0242	3.6600e-003	0.0000	3.6600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0242**	**0.0000**	**0.0242**	**3.6600e-003**	**0.0000**	**3.6600e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Northern Section Cross-Overs - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1159	3.6781	1.2857	0.0160	0.6468	6.5500e-003	0.6534	0.1698	6.2700e-003	0.1761	0.0000	1,578.8416	1,578.8416	0.1062	0.0000	1,581.4974
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1159**	**3.6781**	**1.2857**	**0.0160**	**0.6468**	**6.5500e-003**	**0.6534**	**0.1698**	**6.2700e-003**	**0.1761**	**0.0000**	**1,578.8416**	**1,578.8416**	**0.1062**	**0.0000**	**1,581.4974**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0242	0.0000	0.0242	3.6600e-003	0.0000	3.6600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0242**	**0.0000**	**0.0242**	**3.6600e-003**	**0.0000**	**3.6600e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Northern Section Cross-Overs - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1159	3.6781	1.2857	0.0160	0.6468	6.5500e-003	0.6534	0.1698	6.2700e-003	0.1761	0.0000	1,578.8416	1,578.8416	0.1062	0.0000	1,581.4974
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1159**	**3.6781**	**1.2857**	**0.0160**	**0.6468**	**6.5500e-003**	**0.6534**	**0.1698**	**6.2700e-003**	**0.1761**	**0.0000**	**1,578.8416**	**1,578.8416**	**0.1062**	**0.0000**	**1,581.4974**

3.5 Northern Section Cross-Overs - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0242	0.0000	0.0242	3.6600e-003	0.0000	3.6600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0242**	**0.0000**	**0.0242**	**3.6600e-003**	**0.0000**	**3.6600e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Northern Section Cross-Overs - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1093	3.4376	1.2274	0.0150	0.6420	6.1200e-003	0.6481	0.1680	5.8500e-003	0.1739	0.0000	1,488.5190	1,488.5190	0.1006	0.0000	1,491.0338
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1093**	**3.4376**	**1.2274**	**0.0150**	**0.6420**	**6.1200e-003**	**0.6481**	**0.1680**	**5.8500e-003**	**0.1739**	**0.0000**	**1,488.5190**	**1,488.5190**	**0.1006**	**0.0000**	**1,491.0338**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0242	0.0000	0.0242	3.6600e-003	0.0000	3.6600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0242**	**0.0000**	**0.0242**	**3.6600e-003**	**0.0000**	**3.6600e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Northern Section Cross-Overs - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1093	3.4376	1.2274	0.0150	0.6420	6.1200e-003	0.6481	0.1680	5.8500e-003	0.1739	0.0000	1,488.5190	1,488.5190	0.1006	0.0000	1,491.0338
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1093**	**3.4376**	**1.2274**	**0.0150**	**0.6420**	**6.1200e-003**	**0.6481**	**0.1680**	**5.8500e-003**	**0.1739**	**0.0000**	**1,488.5190**	**1,488.5190**	**0.1006**	**0.0000**	**1,491.0338**

3.6 Northern Section Other Cut/Fill - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4500e-003	0.0000	3.4500e-003	5.2000e-004	0.0000	5.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.4500e-003**	**0.0000**	**3.4500e-003**	**5.2000e-004**	**0.0000**	**5.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Northern Section Other Cut/Fill - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.4700e-003	0.2349	0.0839	1.0300e-003	0.0849	4.2000e-004	0.0853	0.0216	4.0000e-004	0.0220	0.0000	101.7152	101.7152	6.8700e-003	0.0000	101.8870
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.4700e-003**	**0.2349**	**0.0839**	**1.0300e-003**	**0.0849**	**4.2000e-004**	**0.0853**	**0.0216**	**4.0000e-004**	**0.0220**	**0.0000**	**101.7152**	**101.7152**	**6.8700e-003**	**0.0000**	**101.8870**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4500e-003	0.0000	3.4500e-003	5.2000e-004	0.0000	5.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.4500e-003**	**0.0000**	**3.4500e-003**	**5.2000e-004**	**0.0000**	**5.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Northern Section Other Cut/Fill - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.4700e-003	0.2349	0.0839	1.0300e-003	0.0849	4.2000e-004	0.0853	0.0216	4.0000e-004	0.0220	0.0000	101.7152	101.7152	6.8700e-003	0.0000	101.8870
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.4700e-003**	**0.2349**	**0.0839**	**1.0300e-003**	**0.0849**	**4.2000e-004**	**0.0853**	**0.0216**	**4.0000e-004**	**0.0220**	**0.0000**	**101.7152**	**101.7152**	**6.8700e-003**	**0.0000**	**101.8870**

3.6 Northern Section Other Cut/Fill - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4500e-003	0.0000	3.4500e-003	5.2000e-004	0.0000	5.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.4500e-003**	**0.0000**	**3.4500e-003**	**5.2000e-004**	**0.0000**	**5.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Northern Section Other Cut/Fill - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0244	0.7599	0.2771	3.3500e-003	0.0988	1.3500e-003	0.1001	0.0266	1.2900e-003	0.0279	0.0000	332.4246	332.4246	0.0225	0.0000	332.9872
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0244**	**0.7599**	**0.2771**	**3.3500e-003**	**0.0988**	**1.3500e-003**	**0.1001**	**0.0266**	**1.2900e-003**	**0.0279**	**0.0000**	**332.4246**	**332.4246**	**0.0225**	**0.0000**	**332.9872**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4500e-003	0.0000	3.4500e-003	5.2000e-004	0.0000	5.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.4500e-003**	**0.0000**	**3.4500e-003**	**5.2000e-004**	**0.0000**	**5.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Northern Section Other Cut/Fill - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0244	0.7599	0.2771	3.3500e-003	0.0988	1.3500e-003	0.1001	0.0266	1.2900e-003	0.0279	0.0000	332.4246	332.4246	0.0225	0.0000	332.9872
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0244**	**0.7599**	**0.2771**	**3.3500e-003**	**0.0988**	**1.3500e-003**	**0.1001**	**0.0266**	**1.2900e-003**	**0.0279**	**0.0000**	**332.4246**	**332.4246**	**0.0225**	**0.0000**	**332.9872**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

LACMTA WSAB Construction GHG - Hauling (DO 2)

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	153.50	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2028
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

LACMTA WSAB Construction GHG - Hauling (DO 2) - Los Angeles-South Coast County, Annual

Project Characteristics -

Land Use - LRT Corridor + Parking + MSF

Construction Phase - All Cut/Fill Material Hauling

Off-road Equipment - No Equipment

Off-road Equipment - No Equipment

Off-road Equipment - No Equipment

Off-road Equipment - No Equipment

Off-road Equipment - No Equipment

Trips and VMT - All Hauling

Grading -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	310.00	600.00
tblConstructionPhase	NumDays	310.00	1,200.00
tblConstructionPhase	NumDays	310.00	1,200.00
tblConstructionPhase	NumDays	310.00	600.00
tblConstructionPhase	NumDays	310.00	90.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblGrading	MaterialExported	0.00	335,760.00
tblGrading	MaterialExported	0.00	553,180.00
tblGrading	MaterialExported	0.00	14,000.00
tblGrading	MaterialExported	0.00	289,270.00
tblGrading	MaterialExported	0.00	20,665.00

tblGrading	MaterialImported	0.00	74,180.00
tblGrading	MaterialImported	0.00	515,970.00
tblGrading	MaterialImported	0.00	118,725.00
tblGrading	MaterialImported	0.00	40,320.00
tblLandUse	LotAcreage	0.00	153.50
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripNumber	41,970.00	67,200.00
tblTripsAndVMT	HaulingTripNumber	78,420.00	121,500.00
tblTripsAndVMT	HaulingTripNumber	66,246.00	106,000.00
tblTripsAndVMT	HaulingTripNumber	50,999.00	81,600.00
tblTripsAndVMT	HaulingTripNumber	7,623.00	12,200.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.3409	10.9255	2.7143	0.0325	2.1699	0.0306	2.2005	0.5460	0.0293	0.5753	0.0000	3,202.9840	3,202.9840	0.2215	0.0000	3,208.5215
2023	0.2475	7.9307	2.7243	0.0344	2.1892	0.0142	2.2034	0.5530	0.0136	0.5666	0.0000	3,396.1399	3,396.1399	0.2276	0.0000	3,401.8290
2024	0.2692	8.5453	2.9870	0.0371	2.7566	0.0152	2.7718	0.6921	0.0146	0.7067	0.0000	3,668.1324	3,668.1324	0.2468	0.0000	3,674.3024
2025	0.2568	8.0800	2.8850	0.0353	2.3769	0.0144	2.3913	0.5993	0.0138	0.6131	0.0000	3,498.7033	3,498.7033	0.2364	0.0000	3,504.6143
2026	0.0244	0.7599	0.2771	3.3500e-003	0.1022	1.3500e-003	0.1036	0.0271	1.2900e-003	0.0284	0.0000	332.4246	332.4246	0.0225	0.0000	332.9872
Maximum	**0.3409**	**10.9255**	**2.9870**	**0.0371**	**2.7566**	**0.0306**	**2.7718**	**0.6921**	**0.0293**	**0.7067**	**0.0000**	**3,668.1324**	**3,668.1324**	**0.2468**	**0.0000**	**3,674.3024**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.3409	10.9255	2.7143	0.0325	2.1699	0.0306	2.2005	0.5460	0.0293	0.5753	0.0000	3,202.9840	3,202.9840	0.2215	0.0000	3,208.5215
2023	0.2475	7.9307	2.7243	0.0344	2.1892	0.0142	2.2034	0.5530	0.0136	0.5666	0.0000	3,396.1399	3,396.1399	0.2276	0.0000	3,401.8290
2024	0.2692	8.5453	2.9870	0.0371	2.7566	0.0152	2.7718	0.6921	0.0146	0.7067	0.0000	3,668.1324	3,668.1324	0.2468	0.0000	3,674.3024
2025	0.2568	8.0800	2.8850	0.0353	2.3769	0.0144	2.3913	0.5993	0.0138	0.6131	0.0000	3,498.7033	3,498.7033	0.2364	0.0000	3,504.6143
2026	0.0244	0.7599	0.2771	3.3500e-003	0.1022	1.3500e-003	0.1036	0.0271	1.2900e-003	0.0284	0.0000	332.4246	332.4246	0.0225	0.0000	332.9872
Maximum	**0.3409**	**10.9255**	**2.9870**	**0.0371**	**2.7566**	**0.0306**	**2.7718**	**0.6921**	**0.0293**	**0.7067**	**0.0000**	**3,668.1324**	**3,668.1324**	**0.2468**	**0.0000**	**3,674.3024**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	2-7-2022	5-6-2022	2.9785	2.9785
2	5-7-2022	8-6-2022	3.0574	3.0574
3	8-7-2022	11-6-2022	3.0720	3.0720
4	11-7-2022	2-6-2023	2.6666	2.6666
5	2-7-2023	5-6-2023	1.9597	1.9597
6	5-7-2023	8-6-2023	2.0166	2.0166

7	**8-7-2023**	**11-6-2023**	2.0228	2.0228
8	**11-7-2023**	**2-6-2024**	2.0708	2.0708
9	**2-7-2024**	**5-6-2024**	2.1253	2.1253
10	**5-7-2024**	**8-6-2024**	2.1624	2.1624
11	**8-7-2024**	**11-6-2024**	2.1692	2.1692
12	**11-7-2024**	**2-6-2025**	2.1672	2.1672
13	**2-7-2025**	**5-6-2025**	2.0726	2.0726
14	**5-7-2025**	**8-6-2025**	2.1325	2.1325
15	**8-7-2025**	**11-6-2025**	2.1393	2.1393
16	**11-7-2025**	**2-6-2026**	1.2887	1.2887
17	**2-7-2026**	**5-6-2026**	0.4119	0.4119
		Highest	3.0720	3.0720

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

LACMTA WSAB Construction GHG - Hauling (DO 2) - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Northern Section Tunnel	Grading	2/7/2022	1/6/2024	6	600	
2	Northern Section Stations	Grading	2/7/2022	12/6/2025	6	1200	
3	Southern Section Cut/Fill	Grading	2/7/2022	12/6/2025	6	1200	
4	Northern Section Cross-Overs	Grading	1/8/2024	12/6/2025	6	600	
5	Northern Section Other Cut/Fill	Grading	12/8/2025	3/21/2026	6	90	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Northern Section Tunnel	Rubber Tired Dozers	1	0.00	247	0.40
Northern Section Stations	Rubber Tired Dozers	1	0.00	247	0.40
Southern Section Cut/Fill	Rubber Tired Dozers	1	0.00	247	0.40
Northern Section Cross-Overs	Rubber Tired Dozers	1	0.00	247	0.40
Northern Section Other Cut/Fill	Rubber Tired Dozers	1	0.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Northern Section Tunnel	1	0.00	0.00	67,200.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Northern Section Stations	1	0.00	0.00	121,500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Southern Section Cut/Fill	1	0.00	0.00	106,000.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Northern Section Cross-Overs	1	0.00	0.00	81,600.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Northern Section Other Cut/Fill	1	0.00	0.00	12,200.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Northern Section Tunnel - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0190	0.0000	0.0190	2.8700e-003	0.0000	2.8700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0190**	**0.0000**	**0.0190**	**2.8700e-003**	**0.0000**	**2.8700e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Northern Section Tunnel - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1266	4.0574	1.0080	0.0121	0.5015	0.0114	0.5129	0.1310	0.0109	0.1419	0.0000	1,189.5028	1,189.5028	0.0823	0.0000	1,191.5592
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1266**	**4.0574**	**1.0080**	**0.0121**	**0.5015**	**0.0114**	**0.5129**	**0.1310**	**0.0109**	**0.1419**	**0.0000**	**1,189.5028**	**1,189.5028**	**0.0823**	**0.0000**	**1,191.5592**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0190	0.0000	0.0190	2.8700e-003	0.0000	2.8700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0190**	**0.0000**	**0.0190**	**2.8700e-003**	**0.0000**	**2.8700e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Northern Section Tunnel - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1266	4.0574	1.0080	0.0121	0.5015	0.0114	0.5129	0.1310	0.0109	0.1419	0.0000	1,189.5028	1,189.5028	0.0823	0.0000	1,191.5592
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1266**	**4.0574**	**1.0080**	**0.0121**	**0.5015**	**0.0114**	**0.5129**	**0.1310**	**0.0109**	**0.1419**	**0.0000**	**1,189.5028**	**1,189.5028**	**0.0823**	**0.0000**	**1,191.5592**

3.2 Northern Section Tunnel - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0190	0.0000	0.0190	2.8700e-003	0.0000	2.8700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0190**	**0.0000**	**0.0190**	**2.8700e-003**	**0.0000**	**2.8700e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Northern Section Tunnel - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0919	2.9453	1.0117	0.0128	0.5087	5.2600e-003	0.5140	0.1336	5.0400e-003	0.1387	0.0000	1,261.2357	1,261.2357	0.0845	0.0000	1,263.3485
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0919**	**2.9453**	**1.0117**	**0.0128**	**0.5087**	**5.2600e-003**	**0.5140**	**0.1336**	**5.0400e-003**	**0.1387**	**0.0000**	**1,261.2357**	**1,261.2357**	**0.0845**	**0.0000**	**1,263.3485**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0190	0.0000	0.0190	2.8700e-003	0.0000	2.8700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0190**	**0.0000**	**0.0190**	**2.8700e-003**	**0.0000**	**2.8700e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Northern Section Tunnel - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0919	2.9453	1.0117	0.0128	0.5087	5.2600e-003	0.5140	0.1336	5.0400e-003	0.1387	0.0000	1,261.2357	1,261.2357	0.0845	0.0000	1,263.3485
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0919**	**2.9453**	**1.0117**	**0.0128**	**0.5087**	**5.2600e-003**	**0.5140**	**0.1336**	**5.0400e-003**	**0.1387**	**0.0000**	**1,261.2357**	**1,261.2357**	**0.0845**	**0.0000**	**1,263.3485**

3.2 Northern Section Tunnel - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0190	0.0000	0.0190	2.8700e-003	0.0000	2.8700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0190**	**0.0000**	**0.0190**	**2.8700e-003**	**0.0000**	**2.8700e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Northern Section Tunnel - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.7700e-003	0.0563	0.0197	2.4000e-004	0.4356	1.0000e-004	0.4357	0.1071	1.0000e-004	0.1072	0.0000	24.1454	24.1454	1.6200e-003	0.0000	24.1860
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.7700e-003**	**0.0563**	**0.0197**	**2.4000e-004**	**0.4356**	**1.0000e-004**	**0.4357**	**0.1071**	**1.0000e-004**	**0.1072**	**0.0000**	**24.1454**	**24.1454**	**1.6200e-003**	**0.0000**	**24.1860**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0190	0.0000	0.0190	2.8700e-003	0.0000	2.8700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0190**	**0.0000**	**0.0190**	**2.8700e-003**	**0.0000**	**2.8700e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Northern Section Tunnel - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.7700e-003	0.0563	0.0197	2.4000e-004	0.4356	1.0000e-004	0.4357	0.1071	1.0000e-004	0.1072	0.0000	24.1454	24.1454	1.6200e-003	0.0000	24.1860
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.7700e-003**	**0.0563**	**0.0197**	**2.4000e-004**	**0.4356**	**1.0000e-004**	**0.4357**	**0.1071**	**1.0000e-004**	**0.1072**	**0.0000**	**24.1454**	**24.1454**	**1.6200e-003**	**0.0000**	**24.1860**

3.3 Northern Section Stations - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0355	0.0000	0.0355	5.3700e-003	0.0000	5.3700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0355**	**0.0000**	**0.0355**	**5.3700e-003**	**0.0000**	**5.3700e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1144	3.6680	0.9113	0.0109	0.8459	0.0103	0.8562	0.2148	9.8300e-003	0.2246	0.0000	1,075.3317	1,075.3317	0.0744	0.0000	1,077.1908
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1144**	**3.6680**	**0.9113**	**0.0109**	**0.8459**	**0.0103**	**0.8562**	**0.2148**	**9.8300e-003**	**0.2246**	**0.0000**	**1,075.3317**	**1,075.3317**	**0.0744**	**0.0000**	**1,077.1908**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0355	0.0000	0.0355	5.3700e-003	0.0000	5.3700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0355**	**0.0000**	**0.0355**	**5.3700e-003**	**0.0000**	**5.3700e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1144	3.6680	0.9113	0.0109	0.8459	0.0103	0.8562	0.2148	9.8300e-003	0.2246	0.0000	1,075.3317	1,075.3317	0.0744	0.0000	1,077.1908
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1144**	**3.6680**	**0.9113**	**0.0109**	**0.8459**	**0.0103**	**0.8562**	**0.2148**	**9.8300e-003**	**0.2246**	**0.0000**	**1,075.3317**	**1,075.3317**	**0.0744**	**0.0000**	**1,077.1908**

3.3 Northern Section Stations - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0355	0.0000	0.0355	5.3700e-003	0.0000	5.3700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0355**	**0.0000**	**0.0355**	**5.3700e-003**	**0.0000**	**5.3700e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0831	2.6626	0.9146	0.0115	0.8524	4.7600e-003	0.8572	0.2172	4.5500e-003	0.2217	0.0000	1,140.1796	1,140.1796	0.0764	0.0000	1,142.0896
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0831**	**2.6626**	**0.9146**	**0.0115**	**0.8524**	**4.7600e-003**	**0.8572**	**0.2172**	**4.5500e-003**	**0.2217**	**0.0000**	**1,140.1796**	**1,140.1796**	**0.0764**	**0.0000**	**1,142.0896**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0355	0.0000	0.0355	5.3700e-003	0.0000	5.3700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0355**	**0.0000**	**0.0355**	**5.3700e-003**	**0.0000**	**5.3700e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0831	2.6626	0.9146	0.0115	0.8524	4.7600e-003	0.8572	0.2172	4.5500e-003	0.2217	0.0000	1,140.1796	1,140.1796	0.0764	0.0000	1,142.0896
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0831**	**2.6626**	**0.9146**	**0.0115**	**0.8524**	**4.7600e-003**	**0.8572**	**0.2172**	**4.5500e-003**	**0.2217**	**0.0000**	**1,140.1796**	**1,140.1796**	**0.0764**	**0.0000**	**1,142.0896**

3.3 Northern Section Stations - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0355	0.0000	0.0355	5.3700e-003	0.0000	5.3700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0355**	**0.0000**	**0.0355**	**5.3700e-003**	**0.0000**	**5.3700e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0838	2.6612	0.9302	0.0116	0.8529	4.7400e-003	0.8576	0.2173	4.5300e-003	0.2218	0.0000	1,142.3259	1,142.3259	0.0769	0.0000	1,144.2474
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0838**	**2.6612**	**0.9302**	**0.0116**	**0.8529**	**4.7400e-003**	**0.8576**	**0.2173**	**4.5300e-003**	**0.2218**	**0.0000**	**1,142.3259**	**1,142.3259**	**0.0769**	**0.0000**	**1,144.2474**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0355	0.0000	0.0355	5.3700e-003	0.0000	5.3700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0355**	**0.0000**	**0.0355**	**5.3700e-003**	**0.0000**	**5.3700e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0838	2.6612	0.9302	0.0116	0.8529	4.7400e-003	0.8576	0.2173	4.5300e-003	0.2218	0.0000	1,142.3259	1,142.3259	0.0769	0.0000	1,144.2474
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0838**	**2.6612**	**0.9302**	**0.0116**	**0.8529**	**4.7400e-003**	**0.8576**	**0.2173**	**4.5300e-003**	**0.2218**	**0.0000**	**1,142.3259**	**1,142.3259**	**0.0769**	**0.0000**	**1,144.2474**

3.3 Northern Section Stations - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0355	0.0000	0.0355	5.3700e-003	0.0000	5.3700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0355**	**0.0000**	**0.0355**	**5.3700e-003**	**0.0000**	**5.3700e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0775	2.4397	0.8711	0.0107	0.8481	4.3400e-003	0.8525	0.2156	4.1600e-003	0.2197	0.0000	1,056.3964	1,056.3964	0.0714	0.0000	1,058.1811
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0775**	**2.4397**	**0.8711**	**0.0107**	**0.8481**	**4.3400e-003**	**0.8525**	**0.2156**	**4.1600e-003**	**0.2197**	**0.0000**	**1,056.3964**	**1,056.3964**	**0.0714**	**0.0000**	**1,058.1811**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0355	0.0000	0.0355	5.3700e-003	0.0000	5.3700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0355**	**0.0000**	**0.0355**	**5.3700e-003**	**0.0000**	**5.3700e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Northern Section Stations - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0775	2.4397	0.8711	0.0107	0.8481	4.3400e-003	0.8525	0.2156	4.1600e-003	0.2197	0.0000	1,056.3964	1,056.3964	0.0714	0.0000	1,058.1811
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0775**	**2.4397**	**0.8711**	**0.0107**	**0.8481**	**4.3400e-003**	**0.8525**	**0.2156**	**4.1600e-003**	**0.2197**	**0.0000**	**1,056.3964**	**1,056.3964**	**0.0714**	**0.0000**	**1,058.1811**

3.4 Southern Section Cut/Fill - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0300**	**0.0000**	**0.0300**	**4.5400e-003**	**0.0000**	**4.5400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0998	3.2001	0.7950	9.5200e-003	0.7380	8.9700e-003	0.7470	0.1874	8.5800e-003	0.1960	0.0000	938.1495	938.1495	0.0649	0.0000	939.7714
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0998**	**3.2001**	**0.7950**	**9.5200e-003**	**0.7380**	**8.9700e-003**	**0.7470**	**0.1874**	**8.5800e-003**	**0.1960**	**0.0000**	**938.1495**	**938.1495**	**0.0649**	**0.0000**	**939.7714**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0300**	**0.0000**	**0.0300**	**4.5400e-003**	**0.0000**	**4.5400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0998	3.2001	0.7950	9.5200e-003	0.7380	8.9700e-003	0.7470	0.1874	8.5800e-003	0.1960	0.0000	938.1495	938.1495	0.0649	0.0000	939.7714
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0998**	**3.2001**	**0.7950**	**9.5200e-003**	**0.7380**	**8.9700e-003**	**0.7470**	**0.1874**	**8.5800e-003**	**0.1960**	**0.0000**	**938.1495**	**938.1495**	**0.0649**	**0.0000**	**939.7714**

3.4 Southern Section Cut/Fill - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0300**	**0.0000**	**0.0300**	**4.5400e-003**	**0.0000**	**4.5400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0725	2.3229	0.7980	0.0101	0.7437	4.1500e-003	0.7478	0.1895	3.9700e-003	0.1934	0.0000	994.7246	994.7246	0.0667	0.0000	996.3909
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0725**	**2.3229**	**0.7980**	**0.0101**	**0.7437**	**4.1500e-003**	**0.7478**	**0.1895**	**3.9700e-003**	**0.1934**	**0.0000**	**994.7246**	**994.7246**	**0.0667**	**0.0000**	**996.3909**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0300**	**0.0000**	**0.0300**	**4.5400e-003**	**0.0000**	**4.5400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0725	2.3229	0.7980	0.0101	0.7437	4.1500e-003	0.7478	0.1895	3.9700e-003	0.1934	0.0000	994.7246	994.7246	0.0667	0.0000	996.3909
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0725**	**2.3229**	**0.7980**	**0.0101**	**0.7437**	**4.1500e-003**	**0.7478**	**0.1895**	**3.9700e-003**	**0.1934**	**0.0000**	**994.7246**	**994.7246**	**0.0667**	**0.0000**	**996.3909**

3.4 Southern Section Cut/Fill - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0300**	**0.0000**	**0.0300**	**4.5400e-003**	**0.0000**	**4.5400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0731	2.3217	0.8115	0.0101	0.7441	4.1300e-003	0.7482	0.1896	3.9500e-003	0.1935	0.0000	996.5971	996.5971	0.0671	0.0000	998.2734
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0731**	**2.3217**	**0.8115**	**0.0101**	**0.7441**	**4.1300e-003**	**0.7482**	**0.1896**	**3.9500e-003**	**0.1935**	**0.0000**	**996.5971**	**996.5971**	**0.0671**	**0.0000**	**998.2734**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0300**	**0.0000**	**0.0300**	**4.5400e-003**	**0.0000**	**4.5400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0731	2.3217	0.8115	0.0101	0.7441	4.1300e-003	0.7482	0.1896	3.9500e-003	0.1935	0.0000	996.5971	996.5971	0.0671	0.0000	998.2734
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0731**	**2.3217**	**0.8115**	**0.0101**	**0.7441**	**4.1300e-003**	**0.7482**	**0.1896**	**3.9500e-003**	**0.1935**	**0.0000**	**996.5971**	**996.5971**	**0.0671**	**0.0000**	**998.2734**

3.4 Southern Section Cut/Fill - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0300**	**0.0000**	**0.0300**	**4.5400e-003**	**0.0000**	**4.5400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0676	2.1284	0.7600	9.3100e-003	0.7399	3.7900e-003	0.7437	0.1881	3.6300e-003	0.1917	0.0000	921.6298	921.6298	0.0623	0.0000	923.1868
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0676**	**2.1284**	**0.7600**	**9.3100e-003**	**0.7399**	**3.7900e-003**	**0.7437**	**0.1881**	**3.6300e-003**	**0.1917**	**0.0000**	**921.6298**	**921.6298**	**0.0623**	**0.0000**	**923.1868**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0300	0.0000	0.0300	4.5400e-003	0.0000	4.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0300**	**0.0000**	**0.0300**	**4.5400e-003**	**0.0000**	**4.5400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Southern Section Cut/Fill - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0676	2.1284	0.7600	9.3100e-003	0.7399	3.7900e-003	0.7437	0.1881	3.6300e-003	0.1917	0.0000	921.6298	921.6298	0.0623	0.0000	923.1868
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0676**	**2.1284**	**0.7600**	**9.3100e-003**	**0.7399**	**3.7900e-003**	**0.7437**	**0.1881**	**3.6300e-003**	**0.1917**	**0.0000**	**921.6298**	**921.6298**	**0.0623**	**0.0000**	**923.1868**

3.5 Northern Section Cross-Overs - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0231	0.0000	0.0231	3.4900e-003	0.0000	3.4900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0231**	**0.0000**	**0.0231**	**3.4900e-003**	**0.0000**	**3.4900e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Northern Section Cross-Overs - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1104	3.5062	1.2256	0.0152	0.6166	6.2400e-003	0.6228	0.1619	5.9700e-003	0.1678	0.0000	1,505.0640	1,505.0640	0.1013	0.0000	1,507.5956
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1104**	**3.5062**	**1.2256**	**0.0152**	**0.6166**	**6.2400e-003**	**0.6228**	**0.1619**	**5.9700e-003**	**0.1678**	**0.0000**	**1,505.0640**	**1,505.0640**	**0.1013**	**0.0000**	**1,507.5956**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0231	0.0000	0.0231	3.4900e-003	0.0000	3.4900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0231**	**0.0000**	**0.0231**	**3.4900e-003**	**0.0000**	**3.4900e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Northern Section Cross-Overs - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1104	3.5062	1.2256	0.0152	0.6166	6.2400e-003	0.6228	0.1619	5.9700e-003	0.1678	0.0000	1,505.0640	1,505.0640	0.1013	0.0000	1,507.5956
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1104**	**3.5062**	**1.2256**	**0.0152**	**0.6166**	**6.2400e-003**	**0.6228**	**0.1619**	**5.9700e-003**	**0.1678**	**0.0000**	**1,505.0640**	**1,505.0640**	**0.1013**	**0.0000**	**1,507.5956**

3.5 Northern Section Cross-Overs - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0231	0.0000	0.0231	3.4900e-003	0.0000	3.4900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0231**	**0.0000**	**0.0231**	**3.4900e-003**	**0.0000**	**3.4900e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Northern Section Cross-Overs - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1042	3.2770	1.1701	0.0143	0.6120	5.8300e-003	0.6178	0.1602	5.5800e-003	0.1658	0.0000	1,418.9620	1,418.9620	0.0959	0.0000	1,421.3593
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1042**	**3.2770**	**1.1701**	**0.0143**	**0.6120**	**5.8300e-003**	**0.6178**	**0.1602**	**5.5800e-003**	**0.1658**	**0.0000**	**1,418.9620**	**1,418.9620**	**0.0959**	**0.0000**	**1,421.3593**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0231	0.0000	0.0231	3.4900e-003	0.0000	3.4900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0231**	**0.0000**	**0.0231**	**3.4900e-003**	**0.0000**	**3.4900e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Northern Section Cross-Overs - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1042	3.2770	1.1701	0.0143	0.6120	5.8300e-003	0.6178	0.1602	5.5800e-003	0.1658	0.0000	1,418.9620	1,418.9620	0.0959	0.0000	1,421.3593
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1042**	**3.2770**	**1.1701**	**0.0143**	**0.6120**	**5.8300e-003**	**0.6178**	**0.1602**	**5.5800e-003**	**0.1658**	**0.0000**	**1,418.9620**	**1,418.9620**	**0.0959**	**0.0000**	**1,421.3593**

3.6 Northern Section Other Cut/Fill - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4500e-003	0.0000	3.4500e-003	5.2000e-004	0.0000	5.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.4500e-003**	**0.0000**	**3.4500e-003**	**5.2000e-004**	**0.0000**	**5.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Northern Section Other Cut/Fill - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.4700e-003	0.2349	0.0839	1.0300e-003	0.0849	4.2000e-004	0.0853	0.0216	4.0000e-004	0.0220	0.0000	101.7152	101.7152	6.8700e-003	0.0000	101.8870
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.4700e-003**	**0.2349**	**0.0839**	**1.0300e-003**	**0.0849**	**4.2000e-004**	**0.0853**	**0.0216**	**4.0000e-004**	**0.0220**	**0.0000**	**101.7152**	**101.7152**	**6.8700e-003**	**0.0000**	**101.8870**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4500e-003	0.0000	3.4500e-003	5.2000e-004	0.0000	5.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.4500e-003**	**0.0000**	**3.4500e-003**	**5.2000e-004**	**0.0000**	**5.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Northern Section Other Cut/Fill - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.4700e-003	0.2349	0.0839	1.0300e-003	0.0849	4.2000e-004	0.0853	0.0216	4.0000e-004	0.0220	0.0000	101.7152	101.7152	6.8700e-003	0.0000	101.8870
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.4700e-003**	**0.2349**	**0.0839**	**1.0300e-003**	**0.0849**	**4.2000e-004**	**0.0853**	**0.0216**	**4.0000e-004**	**0.0220**	**0.0000**	**101.7152**	**101.7152**	**6.8700e-003**	**0.0000**	**101.8870**

3.6 Northern Section Other Cut/Fill - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4500e-003	0.0000	3.4500e-003	5.2000e-004	0.0000	5.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.4500e-003**	**0.0000**	**3.4500e-003**	**5.2000e-004**	**0.0000**	**5.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Northern Section Other Cut/Fill - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0244	0.7599	0.2771	3.3500e-003	0.0988	1.3500e-003	0.1001	0.0266	1.2900e-003	0.0279	0.0000	332.4246	332.4246	0.0225	0.0000	332.9872
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0244**	**0.7599**	**0.2771**	**3.3500e-003**	**0.0988**	**1.3500e-003**	**0.1001**	**0.0266**	**1.2900e-003**	**0.0279**	**0.0000**	**332.4246**	**332.4246**	**0.0225**	**0.0000**	**332.9872**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4500e-003	0.0000	3.4500e-003	5.2000e-004	0.0000	5.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.4500e-003**	**0.0000**	**3.4500e-003**	**5.2000e-004**	**0.0000**	**5.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Northern Section Other Cut/Fill - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0244	0.7599	0.2771	3.3500e-003	0.0988	1.3500e-003	0.1001	0.0266	1.2900e-003	0.0279	0.0000	332.4246	332.4246	0.0225	0.0000	332.9872
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0244**	**0.7599**	**0.2771**	**3.3500e-003**	**0.0988**	**1.3500e-003**	**0.1001**	**0.0266**	**1.2900e-003**	**0.0279**	**0.0000**	**332.4246**	**332.4246**	**0.0225**	**0.0000**	**332.9872**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

LACMTA West Santa Ana Branch Construction - Underground LRT

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	13.95	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2028
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

LACMTA West Santa Ana Branch Construction - Underground LRT - Los Angeles-South Coast County, Annual

Project Characteristics -

Land Use - 2.3 miles underground LRT corridor

Construction Phase - Construction Methods Report - 50 months max duration

Off-road Equipment - Construction Methods Report

Off-road Equipment - Construction Methods Report

Off-road Equipment - Construction Methods Report

Grading -

Trips and VMT - Concrete Truck and Material Deliveries
Excavation accounted for in separate moeling file

Fleet Mix -

Area Coating -

Construction Off-road Equipment Mitigation - LACMTA Green Construction Policy

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	30.00	600.00
tblConstructionPhase	NumDays	30.00	600.00
tblConstructionPhase	NumDays	300.00	600.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblLandUse	LotAcreage	0.00	13.95
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType	Tractors/Loaders/Backhoes	Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	40.00
tblTripsAndVMT	WorkerTripNumber	15.00	150.00
tblTripsAndVMT	WorkerTripNumber	15.00	150.00
tblTripsAndVMT	WorkerTripNumber	0.00	300.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.9779	8.6371	6.4146	0.0162	4.1781	0.3801	4.5582	2.0244	0.3497	2.3741	0.0000	1,431.7209	1,431.7209	0.3436	0.0000	1,440.3116
2023	0.9455	7.9689	6.6418	0.0177	4.5888	0.3413	4.9300	2.2361	0.3140	2.5501	0.0000	1,567.4783	1,567.4783	0.3789	0.0000	1,576.9506
2024	0.4373	3.0742	4.3927	0.0122	0.8551	0.1013	0.9564	0.1982	0.0965	0.2947	0.0000	1,083.8072	1,083.8072	0.1610	0.0000	1,087.8314
2025	0.4048	2.8332	4.2352	0.0119	0.4619	0.0869	0.5488	0.1234	0.0828	0.2062	0.0000	1,056.1153	1,056.1153	0.1544	0.0000	1,059.9745
2026	0.1252	0.8868	1.3075	3.7000e-003	0.1451	0.0273	0.1724	0.0388	0.0260	0.0648	0.0000	327.9460	327.9460	0.0483	0.0000	329.1527
Maximum	**0.9779**	**8.6371**	**6.6418**	**0.0177**	**4.5888**	**0.3801**	**4.9300**	**2.2361**	**0.3497**	**2.5501**	**0.0000**	**1,567.4783**	**1,567.4783**	**0.3789**	**0.0000**	**1,576.9506**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.3145	0.7512	7.6429	0.0162	1.9122	0.0229	1.9351	0.8646	0.0226	0.8872	0.0000	1,431.7196	1,431.7196	0.3436	0.0000	1,440.3103
2023	0.3367	0.8176	8.3248	0.0177	2.1025	0.0252	2.1276	0.9552	0.0249	0.9801	0.0000	1,567.4769	1,567.4769	0.3789	0.0000	1,576.9492
2024	0.2393	1.0462	5.2909	0.0122	0.6169	0.0145	0.6315	0.1531	0.0143	0.1673	0.0000	1,083.8065	1,083.8065	0.1610	0.0000	1,087.8307
2025	0.2295	1.0352	5.1256	0.0119	0.4619	0.0142	0.4761	0.1234	0.0139	0.1374	0.0000	1,056.1146	1,056.1146	0.1544	0.0000	1,059.9738
2026	0.0702	0.3219	1.5873	3.7000e-003	0.1451	4.4200e-003	0.1495	0.0388	4.3400e-003	0.0431	0.0000	327.9458	327.9458	0.0483	0.0000	329.1525
Maximum	**0.3367**	**1.0462**	**8.3248**	**0.0177**	**2.1025**	**0.0252**	**2.1276**	**0.9552**	**0.0249**	**0.9801**	**0.0000**	**1,567.4769**	**1,567.4769**	**0.3789**	**0.0000**	**1,576.9492**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**58.83**	**83.03**	**-21.66**	**0.00**	**48.79**	**91.33**	**52.36**	**53.80**	**90.80**	**59.65**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	2-7-2022	5-6-2022	2.6017	0.2890
2	5-7-2022	8-6-2022	2.6841	0.2935
3	8-7-2022	11-6-2022	2.6877	0.2970
4	11-7-2022	2-6-2023	2.5177	0.2997
5	2-7-2023	5-6-2023	2.1804	0.2830
6	5-7-2023	8-6-2023	2.2489	0.2876

7	**8-7-2023**	**11-6-2023**	2.2523	0.2909
8	**11-7-2023**	**2-6-2024**	1.7707	0.3019
9	**2-7-2024**	**5-6-2024**	0.8366	0.3156
10	**5-7-2024**	**8-6-2024**	0.8514	0.3188
11	**8-7-2024**	**11-6-2024**	0.8540	0.3214
12	**11-7-2024**	**2-6-2025**	0.8415	0.3232
13	**2-7-2025**	**5-6-2025**	0.7882	0.3076
14	**5-7-2025**	**8-6-2025**	0.8112	0.3143
15	**8-7-2025**	**11-6-2025**	0.8136	0.3168
16	**11-7-2025**	**2-6-2026**	0.8155	0.3187
17	**2-7-2026**	**5-6-2026**	0.6789	0.2631
		Highest	2.6877	0.3232

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

LACMTA West Santa Ana Branch Construction - Underground LRT - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Excavation & Tunneling - LRT Guideway	Grading	2/7/2022	1/6/2024	6	600	
2	Excavation & Grading - LRT Stations	Grading	2/7/2022	1/6/2024	6	600	
3	Construction - LRT Guideway & Stations	Building Construction	1/8/2024	4/24/2026	5	600	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Construction - LRT Guideway & Stations	Cranes	1	8.00	231	0.29
Excavation & Tunneling - LRT Guideway	Excavators	2	8.00	158	0.38
Excavation & Grading - LRT Stations	Excavators	2	8.00	158	0.38
Excavation & Grading - LRT Stations	Crawler Tractors	1	8.00	212	0.43
Construction - LRT Guideway & Stations	Bore/Drill Rigs	2	8.00	221	0.50
Excavation & Tunneling - LRT Guideway	Rubber Tired Dozers	2	8.00	247	0.40
Excavation & Grading - LRT Stations	Rubber Tired Dozers	2	8.00	247	0.40
Excavation & Grading - LRT Stations	Rubber Tired Loaders	1	8.00	203	0.36
Excavation & Tunneling - LRT Guideway	Crawler Tractors	1	8.00	212	0.43
Excavation & Tunneling - LRT Guideway	Rubber Tired Loaders	1	8.00	203	0.36
Construction - LRT Guideway & Stations	Generator Sets	2	8.00	84	0.74
Construction - LRT Guideway & Stations	Welders	2	8.00	46	0.45
Construction - LRT Guideway & Stations	Rough Terrain Forklifts	3	8.00	100	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Excavation & Tunneling - LRT Guid	6	150.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Excavation & Grading - LRT Stations	6	150.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Construction - LRT Guideway & Stations	10	300.00	40.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Excavation & Tunneling - LRT Guideway - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.8573	0.0000	1.8573	0.9507	0.0000	0.9507	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4036	4.2546	2.4704	5.8500e-003		0.1882	0.1882		0.1731	0.1731	0.0000	514.0567	514.0567	0.1663	0.0000	518.2131
Total	**0.4036**	**4.2546**	**2.4704**	**5.8500e-003**	**1.8573**	**0.1882**	**2.0455**	**0.9507**	**0.1731**	**1.1238**	**0.0000**	**514.0567**	**514.0567**	**0.1663**	**0.0000**	**518.2131**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0853	0.0640	0.7369	2.2300e-003	0.2318	1.8500e-003	0.2336	0.0616	1.7000e-003	0.0633	0.0000	201.8037	201.8037	5.5600e-003	0.0000	201.9427
Total	**0.0853**	**0.0640**	**0.7369**	**2.2300e-003**	**0.2318**	**1.8500e-003**	**0.2336**	**0.0616**	**1.7000e-003**	**0.0633**	**0.0000**	**201.8037**	**201.8037**	**5.5600e-003**	**0.0000**	**201.9427**

3.2 Excavation & Tunneling - LRT Guideway - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.7244	0.0000	0.7244	0.3708	0.0000	0.3708	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0719	0.3116	3.0845	5.8500e-003		9.5900e-003	9.5900e-003		9.5900e-003	9.5900e-003	0.0000	514.0561	514.0561	0.1663	0.0000	518.2125
Total	**0.0719**	**0.3116**	**3.0845**	**5.8500e-003**	**0.7244**	**9.5900e-003**	**0.7339**	**0.3708**	**9.5900e-003**	**0.3804**	**0.0000**	**514.0561**	**514.0561**	**0.1663**	**0.0000**	**518.2125**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0853	0.0640	0.7369	2.2300e-003	0.2318	1.8500e-003	0.2336	0.0616	1.7000e-003	0.0633	0.0000	201.8037	201.8037	5.5600e-003	0.0000	201.9427
Total	**0.0853**	**0.0640**	**0.7369**	**2.2300e-003**	**0.2318**	**1.8500e-003**	**0.2336**	**0.0616**	**1.7000e-003**	**0.0633**	**0.0000**	**201.8037**	**201.8037**	**5.5600e-003**	**0.0000**	**201.9427**

3.2 Excavation & Tunneling - LRT Guideway - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.0380	0.0000	2.0380	1.0500	0.0000	1.0500	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3840	3.9204	2.5711	6.4700e-003		0.1687	0.1687		0.1552	0.1552	0.0000	568.6371	568.6371	0.1839	0.0000	573.2348
Total	**0.3840**	**3.9204**	**2.5711**	**6.4700e-003**	**2.0380**	**0.1687**	**2.2066**	**1.0500**	**0.1552**	**1.2051**	**0.0000**	**568.6371**	**568.6371**	**0.1839**	**0.0000**	**573.2348**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0888	0.0640	0.7497	2.3800e-003	0.2564	1.9900e-003	0.2584	0.0681	1.8300e-003	0.0699	0.0000	215.1020	215.1020	5.5400e-003	0.0000	215.2405
Total	**0.0888**	**0.0640**	**0.7497**	**2.3800e-003**	**0.2564**	**1.9900e-003**	**0.2584**	**0.0681**	**1.8300e-003**	**0.0699**	**0.0000**	**215.1020**	**215.1020**	**5.5400e-003**	**0.0000**	**215.2405**

3.2 Excavation & Tunneling - LRT Guideway - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.7948	0.0000	0.7948	0.4095	0.0000	0.4095	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0796	0.3447	3.4126	6.4700e-003		0.0106	0.0106		0.0106	0.0106	0.0000	568.6364	568.6364	0.1839	0.0000	573.2341
Total	**0.0796**	**0.3447**	**3.4126**	**6.4700e-003**	**0.7948**	**0.0106**	**0.8054**	**0.4095**	**0.0106**	**0.4201**	**0.0000**	**568.6364**	**568.6364**	**0.1839**	**0.0000**	**573.2341**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0888	0.0640	0.7497	2.3800e-003	0.2564	1.9900e-003	0.2584	0.0681	1.8300e-003	0.0699	0.0000	215.1020	215.1020	5.5400e-003	0.0000	215.2405
Total	**0.0888**	**0.0640**	**0.7497**	**2.3800e-003**	**0.2564**	**1.9900e-003**	**0.2584**	**0.0681**	**1.8300e-003**	**0.0699**	**0.0000**	**215.1020**	**215.1020**	**5.5400e-003**	**0.0000**	**215.2405**

3.2 Excavation & Tunneling - LRT Guideway - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1952	0.0000	0.1952	0.0370	0.0000	0.0370	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2900e-003	0.0724	0.0495	1.2000e-004		3.1300e-003	3.1300e-003		2.8800e-003	2.8800e-003	0.0000	10.9370	10.9370	3.5400e-003	0.0000	11.0254
Total	**7.2900e-003**	**0.0724**	**0.0495**	**1.2000e-004**	**0.1952**	**3.1300e-003**	**0.1983**	**0.0370**	**2.8800e-003**	**0.0399**	**0.0000**	**10.9370**	**10.9370**	**3.5400e-003**	**0.0000**	**11.0254**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6200e-003	1.1200e-003	0.0134	4.0000e-005	4.9300e-003	4.0000e-005	4.9700e-003	1.3100e-003	3.0000e-005	1.3400e-003	0.0000	4.0083	4.0083	1.0000e-004	0.0000	4.0108
Total	**1.6200e-003**	**1.1200e-003**	**0.0134**	**4.0000e-005**	**4.9300e-003**	**4.0000e-005**	**4.9700e-003**	**1.3100e-003**	**3.0000e-005**	**1.3400e-003**	**0.0000**	**4.0083**	**4.0083**	**1.0000e-004**	**0.0000**	**4.0108**

3.2 Excavation & Tunneling - LRT Guideway - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0761	0.0000	0.0761	0.0144	0.0000	0.0144	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5300e-003	6.6300e-003	0.0656	1.2000e-004		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	10.9370	10.9370	3.5400e-003	0.0000	11.0254
Total	**1.5300e-003**	**6.6300e-003**	**0.0656**	**1.2000e-004**	**0.0761**	**2.0000e-004**	**0.0763**	**0.0144**	**2.0000e-004**	**0.0146**	**0.0000**	**10.9370**	**10.9370**	**3.5400e-003**	**0.0000**	**11.0254**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6200e-003	1.1200e-003	0.0134	4.0000e-005	4.9300e-003	4.0000e-005	4.9700e-003	1.3100e-003	3.0000e-005	1.3400e-003	0.0000	4.0083	4.0083	1.0000e-004	0.0000	4.0108
Total	**1.6200e-003**	**1.1200e-003**	**0.0134**	**4.0000e-005**	**4.9300e-003**	**4.0000e-005**	**4.9700e-003**	**1.3100e-003**	**3.0000e-005**	**1.3400e-003**	**0.0000**	**4.0083**	**4.0083**	**1.0000e-004**	**0.0000**	**4.0108**

3.3 Excavation & Grading - LRT Stations - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.8573	0.0000	1.8573	0.9507	0.0000	0.9507	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4036	4.2546	2.4704	5.8500e-003		0.1882	0.1882		0.1731	0.1731	0.0000	514.0567	514.0567	0.1663	0.0000	518.2131
Total	**0.4036**	**4.2546**	**2.4704**	**5.8500e-003**	**1.8573**	**0.1882**	**2.0455**	**0.9507**	**0.1731**	**1.1238**	**0.0000**	**514.0567**	**514.0567**	**0.1663**	**0.0000**	**518.2131**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0853	0.0640	0.7369	2.2300e-003	0.2318	1.8500e-003	0.2336	0.0616	1.7000e-003	0.0633	0.0000	201.8037	201.8037	5.5600e-003	0.0000	201.9427
Total	**0.0853**	**0.0640**	**0.7369**	**2.2300e-003**	**0.2318**	**1.8500e-003**	**0.2336**	**0.0616**	**1.7000e-003**	**0.0633**	**0.0000**	**201.8037**	**201.8037**	**5.5600e-003**	**0.0000**	**201.9427**

3.3 Excavation & Grading - LRT Stations - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.7244	0.0000	0.7244	0.3708	0.0000	0.3708	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0719	0.3116	3.0845	5.8500e-003		9.5900e-003	9.5900e-003		9.5900e-003	9.5900e-003	0.0000	514.0561	514.0561	0.1663	0.0000	518.2125
Total	**0.0719**	**0.3116**	**3.0845**	**5.8500e-003**	**0.7244**	**9.5900e-003**	**0.7339**	**0.3708**	**9.5900e-003**	**0.3804**	**0.0000**	**514.0561**	**514.0561**	**0.1663**	**0.0000**	**518.2125**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0853	0.0640	0.7369	2.2300e-003	0.2318	1.8500e-003	0.2336	0.0616	1.7000e-003	0.0633	0.0000	201.8037	201.8037	5.5600e-003	0.0000	201.9427
Total	**0.0853**	**0.0640**	**0.7369**	**2.2300e-003**	**0.2318**	**1.8500e-003**	**0.2336**	**0.0616**	**1.7000e-003**	**0.0633**	**0.0000**	**201.8037**	**201.8037**	**5.5600e-003**	**0.0000**	**201.9427**

3.3 Excavation & Grading - LRT Stations - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.0380	0.0000	2.0380	1.0500	0.0000	1.0500	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3840	3.9204	2.5711	6.4700e-003		0.1687	0.1687		0.1552	0.1552	0.0000	568.6371	568.6371	0.1839	0.0000	573.2348
Total	**0.3840**	**3.9204**	**2.5711**	**6.4700e-003**	**2.0380**	**0.1687**	**2.2066**	**1.0500**	**0.1552**	**1.2051**	**0.0000**	**568.6371**	**568.6371**	**0.1839**	**0.0000**	**573.2348**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0888	0.0640	0.7497	2.3800e-003	0.2564	1.9900e-003	0.2584	0.0681	1.8300e-003	0.0699	0.0000	215.1020	215.1020	5.5400e-003	0.0000	215.2405
Total	**0.0888**	**0.0640**	**0.7497**	**2.3800e-003**	**0.2564**	**1.9900e-003**	**0.2584**	**0.0681**	**1.8300e-003**	**0.0699**	**0.0000**	**215.1020**	**215.1020**	**5.5400e-003**	**0.0000**	**215.2405**

3.3 Excavation & Grading - LRT Stations - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.7948	0.0000	0.7948	0.4095	0.0000	0.4095	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0796	0.3447	3.4126	6.4700e-003		0.0106	0.0106		0.0106	0.0106	0.0000	568.6364	568.6364	0.1839	0.0000	573.2341
Total	**0.0796**	**0.3447**	**3.4126**	**6.4700e-003**	**0.7948**	**0.0106**	**0.8054**	**0.4095**	**0.0106**	**0.4201**	**0.0000**	**568.6364**	**568.6364**	**0.1839**	**0.0000**	**573.2341**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0888	0.0640	0.7497	2.3800e-003	0.2564	1.9900e-003	0.2584	0.0681	1.8300e-003	0.0699	0.0000	215.1020	215.1020	5.5400e-003	0.0000	215.2405
Total	**0.0888**	**0.0640**	**0.7497**	**2.3800e-003**	**0.2564**	**1.9900e-003**	**0.2584**	**0.0681**	**1.8300e-003**	**0.0699**	**0.0000**	**215.1020**	**215.1020**	**5.5400e-003**	**0.0000**	**215.2405**

3.3 Excavation & Grading - LRT Stations - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1952	0.0000	0.1952	0.0370	0.0000	0.0370	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2900e-003	0.0724	0.0495	1.2000e-004		3.1300e-003	3.1300e-003		2.8800e-003	2.8800e-003	0.0000	10.9370	10.9370	3.5400e-003	0.0000	11.0254
Total	**7.2900e-003**	**0.0724**	**0.0495**	**1.2000e-004**	**0.1952**	**3.1300e-003**	**0.1983**	**0.0370**	**2.8800e-003**	**0.0399**	**0.0000**	**10.9370**	**10.9370**	**3.5400e-003**	**0.0000**	**11.0254**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6200e-003	1.1200e-003	0.0134	4.0000e-005	4.9300e-003	4.0000e-005	4.9700e-003	1.3100e-003	3.0000e-005	1.3400e-003	0.0000	4.0083	4.0083	1.0000e-004	0.0000	4.0108
Total	**1.6200e-003**	**1.1200e-003**	**0.0134**	**4.0000e-005**	**4.9300e-003**	**4.0000e-005**	**4.9700e-003**	**1.3100e-003**	**3.0000e-005**	**1.3400e-003**	**0.0000**	**4.0083**	**4.0083**	**1.0000e-004**	**0.0000**	**4.0108**

3.3 Excavation & Grading - LRT Stations - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0761	0.0000	0.0761	0.0144	0.0000	0.0144	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5300e-003	6.6300e-003	0.0656	1.2000e-004		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	10.9370	10.9370	3.5400e-003	0.0000	11.0254
Total	**1.5300e-003**	**6.6300e-003**	**0.0656**	**1.2000e-004**	**0.0761**	**2.0000e-004**	**0.0763**	**0.0144**	**2.0000e-004**	**0.0146**	**0.0000**	**10.9370**	**10.9370**	**3.5400e-003**	**0.0000**	**11.0254**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6200e-003	1.1200e-003	0.0134	4.0000e-005	4.9300e-003	4.0000e-005	4.9700e-003	1.3100e-003	3.0000e-005	1.3400e-003	0.0000	4.0083	4.0083	1.0000e-004	0.0000	4.0108
Total	**1.6200e-003**	**1.1200e-003**	**0.0134**	**4.0000e-005**	**4.9300e-003**	**4.0000e-005**	**4.9700e-003**	**1.3100e-003**	**3.0000e-005**	**1.3400e-003**	**0.0000**	**4.0083**	**4.0083**	**1.0000e-004**	**0.0000**	**4.0108**

3.4 Construction - LRT Guideway & Stations - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2701	2.4682	3.0035	6.8600e-003		0.0913	0.0913		0.0873	0.0873	0.0000	589.3672	589.3672	0.1388	0.0000	592.8373
Total	**0.2701**	**2.4682**	**3.0035**	**6.8600e-003**		**0.0913**	**0.0913**		**0.0873**	**0.0873**	**0.0000**	**589.3672**	**589.3672**	**0.1388**	**0.0000**	**592.8373**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0109	0.3628	0.1132	1.2500e-003	0.0324	4.2000e-004	0.0328	9.3500e-003	4.0000e-004	9.7500e-003	0.0000	121.1701	121.1701	6.5300e-003	0.0000	121.3334
Worker	0.1385	0.0962	1.1502	3.8000e-003	0.4224	3.2300e-003	0.4257	0.1122	2.9700e-003	0.1152	0.0000	343.3793	343.3793	8.3600e-003	0.0000	343.5883
Total	**0.1494**	**0.4590**	**1.2634**	**5.0500e-003**	**0.4548**	**3.6500e-003**	**0.4585**	**0.1216**	**3.3700e-003**	**0.1249**	**0.0000**	**464.5494**	**464.5494**	**0.0149**	**0.0000**	**464.9217**

3.4 Construction - LRT Guideway & Stations - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0836	0.5717	3.8693	6.8600e-003		0.0104	0.0104		0.0104	0.0104	0.0000	589.3665	589.3665	0.1388	0.0000	592.8366
Total	**0.0836**	**0.5717**	**3.8693**	**6.8600e-003**		**0.0104**	**0.0104**		**0.0104**	**0.0104**	**0.0000**	**589.3665**	**589.3665**	**0.1388**	**0.0000**	**592.8366**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0109	0.3628	0.1132	1.2500e-003	0.0324	4.2000e-004	0.0328	9.3500e-003	4.0000e-004	9.7500e-003	0.0000	121.1701	121.1701	6.5300e-003	0.0000	121.3334
Worker	0.1385	0.0962	1.1502	3.8000e-003	0.4224	3.2300e-003	0.4257	0.1122	2.9700e-003	0.1152	0.0000	343.3793	343.3793	8.3600e-003	0.0000	343.5883
Total	**0.1494**	**0.4590**	**1.2634**	**5.0500e-003**	**0.4548**	**3.6500e-003**	**0.4585**	**0.1216**	**3.3700e-003**	**0.1249**	**0.0000**	**464.5494**	**464.5494**	**0.0149**	**0.0000**	**464.9217**

3.4 Construction - LRT Guideway & Stations - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2603	2.3786	3.0391	6.9600e-003		0.0832	0.0832		0.0794	0.0794	0.0000	598.5090	598.5090	0.1401	0.0000	602.0113
Total	**0.2603**	**2.3786**	**3.0391**	**6.9600e-003**		**0.0832**	**0.0832**		**0.0794**	**0.0794**	**0.0000**	**598.5090**	**598.5090**	**0.1401**	**0.0000**	**602.0113**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0107	0.3652	0.1120	1.2600e-003	0.0329	4.2000e-004	0.0333	9.4900e-003	4.0000e-004	9.8900e-003	0.0000	122.3855	122.3855	6.5400e-003	0.0000	122.5489
Worker	0.1338	0.0894	1.0841	3.7100e-003	0.4290	3.2100e-003	0.4322	0.1139	2.9600e-003	0.1169	0.0000	335.2208	335.2208	7.7400e-003	0.0000	335.4143
Total	**0.1445**	**0.4546**	**1.1961**	**4.9700e-003**	**0.4619**	**3.6300e-003**	**0.4655**	**0.1234**	**3.3600e-003**	**0.1268**	**0.0000**	**457.6063**	**457.6063**	**0.0143**	**0.0000**	**457.9632**

3.4 Construction - LRT Guideway & Stations - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0850	0.5806	3.9296	6.9600e-003		0.0106	0.0106		0.0106	0.0106	0.0000	598.5083	598.5083	0.1401	0.0000	602.0105
Total	**0.0850**	**0.5806**	**3.9296**	**6.9600e-003**		**0.0106**	**0.0106**		**0.0106**	**0.0106**	**0.0000**	**598.5083**	**598.5083**	**0.1401**	**0.0000**	**602.0105**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0107	0.3652	0.1120	1.2600e-003	0.0329	4.2000e-004	0.0333	9.4900e-003	4.0000e-004	9.8900e-003	0.0000	122.3855	122.3855	6.5400e-003	0.0000	122.5489
Worker	0.1338	0.0894	1.0841	3.7100e-003	0.4290	3.2100e-003	0.4322	0.1139	2.9600e-003	0.1169	0.0000	335.2208	335.2208	7.7400e-003	0.0000	335.4143
Total	**0.1445**	**0.4546**	**1.1961**	**4.9700e-003**	**0.4619**	**3.6300e-003**	**0.4655**	**0.1234**	**3.3600e-003**	**0.1268**	**0.0000**	**457.6063**	**457.6063**	**0.0143**	**0.0000**	**457.9632**

3.4 Construction - LRT Guideway & Stations - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0818	0.7473	0.9548	2.1900e-003		0.0262	0.0262		0.0250	0.0250	0.0000	188.0373	188.0373	0.0440	0.0000	189.1376
Total	**0.0818**	**0.7473**	**0.9548**	**2.1900e-003**		**0.0262**	**0.0262**		**0.0250**	**0.0250**	**0.0000**	**188.0373**	**188.0373**	**0.0440**	**0.0000**	**189.1376**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3000e-003	0.1137	0.0345	3.9000e-004	0.0103	1.3000e-004	0.0105	2.9800e-003	1.2000e-004	3.1000e-003	0.0000	38.2484	38.2484	2.0200e-003	0.0000	38.2990
Worker	0.0402	0.0259	0.3183	1.1200e-003	0.1348	9.7000e-004	0.1358	0.0358	9.0000e-004	0.0367	0.0000	101.6603	101.6603	2.2300e-003	0.0000	101.7160
Total	**0.0435**	**0.1395**	**0.3527**	**1.5100e-003**	**0.1451**	**1.1000e-003**	**0.1462**	**0.0388**	**1.0200e-003**	**0.0398**	**0.0000**	**139.9087**	**139.9087**	**4.2500e-003**	**0.0000**	**140.0150**

3.4 Construction - LRT Guideway & Stations - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0267	0.1824	1.2346	2.1900e-003		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003	0.0000	188.0371	188.0371	0.0440	0.0000	189.1374
Total	**0.0267**	**0.1824**	**1.2346**	**2.1900e-003**		**3.3200e-003**	**3.3200e-003**		**3.3200e-003**	**3.3200e-003**	**0.0000**	**188.0371**	**188.0371**	**0.0440**	**0.0000**	**189.1374**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3000e-003	0.1137	0.0345	3.9000e-004	0.0103	1.3000e-004	0.0105	2.9800e-003	1.2000e-004	3.1000e-003	0.0000	38.2484	38.2484	2.0200e-003	0.0000	38.2990
Worker	0.0402	0.0259	0.3183	1.1200e-003	0.1348	9.7000e-004	0.1358	0.0358	9.0000e-004	0.0367	0.0000	101.6603	101.6603	2.2300e-003	0.0000	101.7160
Total	**0.0435**	**0.1395**	**0.3527**	**1.5100e-003**	**0.1451**	**1.1000e-003**	**0.1462**	**0.0388**	**1.0200e-003**	**0.0398**	**0.0000**	**139.9087**	**139.9087**	**4.2500e-003**	**0.0000**	**140.0150**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

LACMTA West Santa Ana Branch Construction - At-Grade LRT

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	78.20	0.00	0
Enclosed Parking with Elevator	350.00	Space	1.90	140,000.00	0
Enclosed Parking with Elevator	500.00	Space	3.80	200,000.00	0
Enclosed Parking with Elevator	440.00	Space	4.70	176,000.00	0
Parking Lot	170.00	Space	1.60	68,000.00	0
Parking Lot	260.00	Space	2.50	104,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2028
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

LACMTA West Santa Ana Branch Construction - At-Grade LRT - Los Angeles-South Coast County, Annual

Project Characteristics -

Land Use - Total at-grade = 12.9 miles x 50 foot width = approximately 78.2 acres.
Firestone = 170 spaces; I-105/Green Line = 350 spaces; Paramount/Rosecrans = 500 spaces; Bellflower =

Construction Phase - LACMTA Construction Methods Report

Off-road Equipment - LACMTA Construction Methods Report (October 2018)

Off-road Equipment - LACMTA Construction Methods Report

Off-road Equipment - LACMTA Construction Methods Report

Off-road Equipment - Construction Methods Report

Off-road Equipment - LACMTA Construction Methods Report (October 2018)

Off-road Equipment - LACMTA Construction Methods Report

Trips and VMT - LACMTA Construction Methods Report

Demolition -

Grading -

Construction Off-road Equipment Mitigation - LACTMA Green Construction Policy (2011) Compliance

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	100.00	180.00
tblConstructionPhase	NumDays	60.00	300.00
tblConstructionPhase	NumDays	1,550.00	600.00
tblConstructionPhase	NumDays	1,550.00	300.00
tblConstructionPhase	NumDays	110.00	90.00
tblConstructionPhase	NumDaysWeek	5.00	6.00

tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblLandUse	LotAcreage	0.00	78.20
tblLandUse	LotAcreage	3.15	1.90
tblLandUse	LotAcreage	3.96	4.70
tblLandUse	LotAcreage	4.50	3.80
tblLandUse	LotAcreage	1.53	1.60
tblLandUse	LotAcreage	2.34	2.50
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	HaulingTripNumber	12,854.00	21,600.00
tblTripsAndVMT	VendorTripNumber	0.00	40.00
tblTripsAndVMT	VendorTripNumber	113.00	80.00
tblTripsAndVMT	VendorTripNumber	113.00	40.00

tblTripsAndVMT	WorkerTripNumber	20.00	300.00
tblTripsAndVMT	WorkerTripNumber	25.00	100.00
tblTripsAndVMT	WorkerTripNumber	289.00	300.00
tblTripsAndVMT	WorkerTripNumber	289.00	100.00
tblTripsAndVMT	WorkerTripNumber	25.00	100.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.9228	9.7392	7.0834	0.0247	2.9079	0.2915	3.1993	0.7655	0.2724	1.0378	0.0000	2,276.6769	2,276.6769	0.3104	0.0000	2,284.4368
2023	1.1077	9.5751	9.9169	0.0259	2.1532	0.3501	2.5032	0.8883	0.3284	1.2166	0.0000	2,311.1317	2,311.1317	0.3731	0.0000	2,320.4592
2024	0.6760	5.3916	7.4461	0.0168	0.5273	0.1990	0.7262	0.1417	0.1884	0.3301	0.0000	1,490.9539	1,490.9539	0.2170	0.0000	1,496.3798
Maximum	**1.1077**	**9.7392**	**9.9169**	**0.0259**	**2.9079**	**0.3501**	**3.1993**	**0.8883**	**0.3284**	**1.2166**	**0.0000**	**2,311.1317**	**2,311.1317**	**0.3731**	**0.0000**	**2,320.4592**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.4143	4.0892	8.0185	0.0247	1.5877	0.0285	1.6162	0.4206	0.0278	0.4484	0.0000	2,276.6759	2,276.6759	0.3104	0.0000	2,284.4358
2023	0.4600	2.6357	11.3264	0.0259	1.3288	0.0300	1.3587	0.4780	0.0295	0.5075	0.0000	2,311.1302	2,311.1302	0.3731	0.0000	2,320.4576
2024	0.2994	1.7173	8.1512	0.0168	0.5273	0.0194	0.5467	0.1417	0.0191	0.1607	0.0000	1,490.9529	1,490.9529	0.2170	0.0000	1,496.3788
Maximum	**0.4600**	**4.0892**	**11.3264**	**0.0259**	**1.5877**	**0.0300**	**1.6162**	**0.4780**	**0.0295**	**0.5075**	**0.0000**	**2,311.1302**	**2,311.1302**	**0.3731**	**0.0000**	**2,320.4576**

LACMTA West Santa Ana Branch Construction - At-Grade LRT - Los Angeles-South Coast County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**56.63**	**65.83**	**-12.47**	**0.00**	**38.38**	**90.73**	**45.22**	**42.06**	**90.32**	**56.80**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**2-7-2022**	**5-6-2022**	2.6463	1.3920
2	**5-7-2022**	**8-6-2022**	2.7217	1.4251
3	**8-7-2022**	**11-6-2022**	3.1292	1.0411
4	**11-7-2022**	**2-6-2023**	3.1857	0.8443
5	**2-7-2023**	**5-6-2023**	2.8205	0.7446
6	**5-7-2023**	**8-6-2023**	2.9095	0.7637
7	**8-7-2023**	**11-6-2023**	2.3875	0.7861
8	**11-7-2023**	**2-6-2024**	2.2735	0.7957
9	**2-7-2024**	**5-6-2024**	2.2763	0.7913
10	**5-7-2024**	**8-6-2024**	2.8595	0.8841
		Highest	3.1857	1.4251

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0561	2.0000e-004	0.0219	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0427	0.0427	1.1000e-004	0.0000	0.0455
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1,717.6471	1,717.6471	0.0406	8.3900e-003	1,721.1624
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0561**	**2.0000e-004**	**0.0219**	**0.0000**	**0.0000**	**8.0000e-005**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**8.0000e-005**	**0.0000**	**1,717.6898**	**1,717.6898**	**0.0407**	**8.3900e-003**	**1,721.2079**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0561	2.0000e-004	0.0219	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0427	0.0427	1.1000e-004	0.0000	0.0455
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1,717.6471	1,717.6471	0.0406	8.3900e-003	1,721.1624
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0561**	**2.0000e-004**	**0.0219**	**0.0000**	**0.0000**	**8.0000e-005**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**8.0000e-005**	**0.0000**	**1,717.6898**	**1,717.6898**	**0.0407**	**8.3900e-003**	**1,721.2079**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

LACMTA West Santa Ana Branch Construction - At-Grade LRT - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Guideway/Parking - Demolition	Demolition	2/7/2022	9/3/2022	6	180	
2	Guideway - Track bed preparation	Site Preparation	9/5/2022	8/19/2023	6	300	
3	Stations - Building Construction	Building Construction	9/5/2022	8/3/2024	6	600	
4	Guideway - Track slab construction	Building Construction	8/21/2023	8/3/2024	6	300	
5	Paving - Parking Lots	Paving	4/22/2024	8/3/2024	6	90	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 14.5

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

OffRoad Equipment

LACMTA West Santa Ana Branch Construction - At-Grade LRT - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Guideway/Parking - Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Guideway/Parking - Demolition	Excavators	2	8.00	158	0.38
Guideway/Parking - Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Guideway/Parking - Demolition	Rubber Tired Loaders	2	8.00	203	0.36
Guideway - Track bed preparation	Excavators	2	8.00	158	0.38
Guideway - Track bed preparation	Graders	2	8.00	187	0.41
Guideway - Track bed preparation	Rollers	2	8.00	80	0.38
Guideway - Track bed preparation	Rubber Tired Dozers	2	8.00	247	0.40
Guideway - Track bed preparation	Rubber Tired Loaders	2	8.00	203	0.36
Stations - Building Construction	Cranes	2	8.00	231	0.29
Stations - Building Construction	Generator Sets	2	8.00	84	0.74
Stations - Building Construction	Rough Terrain Forklifts	2	8.00	100	0.40
Stations - Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Stations - Building Construction	Welders	2	8.00	46	0.45
Guideway - Track slab construction	Generator Sets	2	8.00	84	0.74
Guideway - Track slab construction	Other Construction Equipment	2	8.00	172	0.42
Guideway - Track slab construction	Rough Terrain Forklifts	2	8.00	100	0.40
Guideway - Track slab construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Guideway - Track slab construction	Welders	2	8.00	46	0.45
Paving - Parking Lots	Air Compressors	2	8.00	78	0.48
Paving - Parking Lots	Other Material Handling Equipment	2	8.00	168	0.40
Paving - Parking Lots	Pavers	2	8.00	130	0.42
Paving - Parking Lots	Paving Equipment	2	8.00	132	0.36
Paving - Parking Lots	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Guideway/Parking - Demolition	8	300.00	0.00	21,600.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Guideway - Track bed preparation	10	100.00	40.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Stations - Building Construction	10	300.00	80.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Guideway - Track slab construction	10	100.00	40.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving - Parking Lots	10	100.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Guideway/Parking - Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.3909	0.0000	1.3909	0.2106	0.0000	0.2106	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3040	2.9514	2.1659	4.7200e-003		0.1359	0.1359		0.1272	0.1272	0.0000	412.3775	412.3775	0.1074	0.0000	415.0612
Total	**0.3040**	**2.9514**	**2.1659**	**4.7200e-003**	**1.3909**	**0.1359**	**1.5268**	**0.2106**	**0.1272**	**0.3378**	**0.0000**	**412.3775**	**412.3775**	**0.1074**	**0.0000**	**415.0612**

3.2 Guideway/Parking - Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0866	2.7748	0.6894	8.2500e-003	0.1856	7.7800e-003	0.1934	0.0510	7.4400e-003	0.0584	0.0000	813.4897	813.4897	0.0563	0.0000	814.8961
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1089	0.0817	0.9408	2.8500e-003	0.2959	2.3600e-003	0.2982	0.0786	2.1800e-003	0.0808	0.0000	257.6218	257.6218	7.0900e-003	0.0000	257.7992
Total	**0.1955**	**2.8565**	**1.6301**	**0.0111**	**0.4815**	**0.0101**	**0.4916**	**0.1296**	**9.6200e-003**	**0.1392**	**0.0000**	**1,071.1115**	**1,071.1115**	**0.0634**	**0.0000**	**1,072.6953**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5425	0.0000	0.5425	0.0821	0.0000	0.0821	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0554	0.2402	2.6003	4.7200e-003		7.3900e-003	7.3900e-003		7.3900e-003	7.3900e-003	0.0000	412.3770	412.3770	0.1074	0.0000	415.0607
Total	**0.0554**	**0.2402**	**2.6003**	**4.7200e-003**	**0.5425**	**7.3900e-003**	**0.5499**	**0.0821**	**7.3900e-003**	**0.0895**	**0.0000**	**412.3770**	**412.3770**	**0.1074**	**0.0000**	**415.0607**

3.2 Guideway/Parking - Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0866	2.7748	0.6894	8.2500e-003	0.1856	7.7800e-003	0.1934	0.0510	7.4400e-003	0.0584	0.0000	813.4897	813.4897	0.0563	0.0000	814.8961
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1089	0.0817	0.9408	2.8500e-003	0.2959	2.3600e-003	0.2982	0.0786	2.1800e-003	0.0808	0.0000	257.6218	257.6218	7.0900e-003	0.0000	257.7992
Total	**0.1955**	**2.8565**	**1.6301**	**0.0111**	**0.4815**	**0.0101**	**0.4916**	**0.1296**	**9.6200e-003**	**0.1392**	**0.0000**	**1,071.1115**	**1,071.1115**	**0.0634**	**0.0000**	**1,072.6953**

3.3 Guideway - Track bed preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.7733	0.0000	0.7733	0.3548	0.0000	0.3548	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1950	2.0991	1.2190	2.9800e-003		0.0889	0.0889		0.0818	0.0818	0.0000	261.6919	261.6919	0.0846	0.0000	263.8078
Total	**0.1950**	**2.0991**	**1.2190**	**2.9800e-003**	**0.7733**	**0.0889**	**0.8622**	**0.3548**	**0.0818**	**0.4366**	**0.0000**	**261.6919**	**261.6919**	**0.0846**	**0.0000**	**263.8078**

3.3 Guideway - Track bed preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.9500e-003	0.1913	0.0517	5.1000e-004	0.0129	3.6000e-004	0.0132	3.7100e-003	3.4000e-004	4.0500e-003	0.0000	49.8436	49.8436	2.9800e-003	0.0000	49.9181
Worker	0.0206	0.0154	0.1777	5.4000e-004	0.0559	4.5000e-004	0.0563	0.0148	4.1000e-004	0.0153	0.0000	48.6619	48.6619	1.3400e-003	0.0000	48.6954
Total	**0.0265**	**0.2067**	**0.2294**	**1.0500e-003**	**0.0687**	**8.1000e-004**	**0.0695**	**0.0186**	**7.5000e-004**	**0.0193**	**0.0000**	**98.5055**	**98.5055**	**4.3200e-003**	**0.0000**	**98.6135**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3016	0.0000	0.3016	0.1384	0.0000	0.1384	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0366	0.1586	1.5857	2.9800e-003		4.8800e-003	4.8800e-003		4.8800e-003	4.8800e-003	0.0000	261.6916	261.6916	0.0846	0.0000	263.8075
Total	**0.0366**	**0.1586**	**1.5857**	**2.9800e-003**	**0.3016**	**4.8800e-003**	**0.3065**	**0.1384**	**4.8800e-003**	**0.1433**	**0.0000**	**261.6916**	**261.6916**	**0.0846**	**0.0000**	**263.8075**

3.3 Guideway - Track bed preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.9500e-003	0.1913	0.0517	5.1000e-004	0.0129	3.6000e-004	0.0132	3.7100e-003	3.4000e-004	4.0500e-003	0.0000	49.8436	49.8436	2.9800e-003	0.0000	49.9181
Worker	0.0206	0.0154	0.1777	5.4000e-004	0.0559	4.5000e-004	0.0563	0.0148	4.1000e-004	0.0153	0.0000	48.6619	48.6619	1.3400e-003	0.0000	48.6954
Total	**0.0265**	**0.2067**	**0.2294**	**1.0500e-003**	**0.0687**	**8.1000e-004**	**0.0695**	**0.0186**	**7.5000e-004**	**0.0193**	**0.0000**	**98.5055**	**98.5055**	**4.3200e-003**	**0.0000**	**98.6135**

3.3 Guideway - Track bed preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.3515	0.0000	1.3515	0.6726	0.0000	0.6726	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3328	3.4835	2.2609	5.7800e-003		0.1435	0.1435		0.1321	0.1321	0.0000	507.9063	507.9063	0.1643	0.0000	512.0129
Total	**0.3328**	**3.4835**	**2.2609**	**5.7800e-003**	**1.3515**	**0.1435**	**1.4950**	**0.6726**	**0.1321**	**0.8047**	**0.0000**	**507.9063**	**507.9063**	**0.1643**	**0.0000**	**512.0129**

3.3 Guideway - Track bed preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.5700e-003	0.2805	0.0899	9.6000e-004	0.0250	3.3000e-004	0.0253	7.2000e-003	3.1000e-004	7.5100e-003	0.0000	93.7263	93.7263	5.1100e-003	0.0000	93.8539
Worker	0.0376	0.0271	0.3172	1.0100e-003	0.1085	8.4000e-004	0.1093	0.0288	7.7000e-004	0.0296	0.0000	91.0047	91.0047	2.3400e-003	0.0000	91.0633
Total	**0.0461**	**0.3076**	**0.4071**	**1.9700e-003**	**0.1334**	**1.1700e-003**	**0.1346**	**0.0360**	**1.0800e-003**	**0.0371**	**0.0000**	**184.7310**	**184.7310**	**7.4500e-003**	**0.0000**	**184.9172**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5271	0.0000	0.5271	0.2623	0.0000	0.2623	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0710	0.3078	3.0781	5.7800e-003		9.4700e-003	9.4700e-003		9.4700e-003	9.4700e-003	0.0000	507.9056	507.9056	0.1643	0.0000	512.0123
Total	**0.0710**	**0.3078**	**3.0781**	**5.7800e-003**	**0.5271**	**9.4700e-003**	**0.5365**	**0.2623**	**9.4700e-003**	**0.2718**	**0.0000**	**507.9056**	**507.9056**	**0.1643**	**0.0000**	**512.0123**

3.3 Guideway - Track bed preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.5700e-003	0.2805	0.0899	9.6000e-004	0.0250	3.3000e-004	0.0253	7.2000e-003	3.1000e-004	7.5100e-003	0.0000	93.7263	93.7263	5.1100e-003	0.0000	93.8539
Worker	0.0376	0.0271	0.3172	1.0100e-003	0.1085	8.4000e-004	0.1093	0.0288	7.7000e-004	0.0296	0.0000	91.0047	91.0047	2.3400e-003	0.0000	91.0633
Total	**0.0461**	**0.3076**	**0.4071**	**1.9700e-003**	**0.1334**	**1.1700e-003**	**0.1346**	**0.0360**	**1.0800e-003**	**0.0371**	**0.0000**	**184.7310**	**184.7310**	**7.4500e-003**	**0.0000**	**184.9172**

3.4 Stations - Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1281	1.1966	1.2026	2.1900e-003		0.0537	0.0537		0.0511	0.0511	0.0000	187.3176	187.3176	0.0408	0.0000	188.3367
Total	**0.1281**	**1.1966**	**1.2026**	**2.1900e-003**		**0.0537**	**0.0537**		**0.0511**	**0.0511**	**0.0000**	**187.3176**	**187.3176**	**0.0408**	**0.0000**	**188.3367**

3.4 Stations - Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0119	0.3826	0.1033	1.0300e-003	0.0257	7.2000e-004	0.0264	7.4200e-003	6.9000e-004	8.1000e-003	0.0000	99.6873	99.6873	5.9500e-003	0.0000	99.8361
Worker	0.0617	0.0463	0.5331	1.6100e-003	0.1677	1.3400e-003	0.1690	0.0445	1.2300e-003	0.0458	0.0000	145.9857	145.9857	4.0200e-003	0.0000	146.0862
Total	**0.0736**	**0.4288**	**0.6364**	**2.6400e-003**	**0.1934**	**2.0600e-003**	**0.1954**	**0.0520**	**1.9200e-003**	**0.0539**	**0.0000**	**245.6729**	**245.6729**	**9.9700e-003**	**0.0000**	**245.9223**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0266	0.1983	1.3367	2.1900e-003		3.2500e-003	3.2500e-003		3.2500e-003	3.2500e-003	0.0000	187.3174	187.3174	0.0408	0.0000	188.3364
Total	**0.0266**	**0.1983**	**1.3367**	**2.1900e-003**		**3.2500e-003**	**3.2500e-003**		**3.2500e-003**	**3.2500e-003**	**0.0000**	**187.3174**	**187.3174**	**0.0408**	**0.0000**	**188.3364**

3.4 Stations - Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0119	0.3826	0.1033	1.0300e-003	0.0257	7.2000e-004	0.0264	7.4200e-003	6.9000e-004	8.1000e-003	0.0000	99.6873	99.6873	5.9500e-003	0.0000	99.8361
Worker	0.0617	0.0463	0.5331	1.6100e-003	0.1677	1.3400e-003	0.1690	0.0445	1.2300e-003	0.0458	0.0000	145.9857	145.9857	4.0200e-003	0.0000	146.0862
Total	**0.0736**	**0.4288**	**0.6364**	**2.6400e-003**	**0.1934**	**2.0600e-003**	**0.1954**	**0.0520**	**1.9200e-003**	**0.0539**	**0.0000**	**245.6729**	**245.6729**	**9.9700e-003**	**0.0000**	**245.9223**

3.4 Stations - Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3647	3.3967	3.6505	6.7000e-003		0.1446	0.1446		0.1376	0.1376	0.0000	573.0777	573.0777	0.1235	0.0000	576.1647
Total	**0.3647**	**3.3967**	**3.6505**	**6.7000e-003**		**0.1446**	**0.1446**		**0.1376**	**0.1376**	**0.0000**	**573.0777**	**573.0777**	**0.1235**	**0.0000**	**576.1647**

3.4 Stations - Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0270	0.8841	0.2835	3.0400e-003	0.0786	1.0300e-003	0.0797	0.0227	9.9000e-004	0.0237	0.0000	295.3797	295.3797	0.0161	0.0000	295.7821
Worker	0.1776	0.1281	1.4995	4.7600e-003	0.5128	3.9800e-003	0.5168	0.1362	3.6600e-003	0.1399	0.0000	430.2041	430.2041	0.0111	0.0000	430.4810
Total	**0.2046**	**1.0122**	**1.7830**	**7.8000e-003**	**0.5915**	**5.0100e-003**	**0.5965**	**0.1589**	**4.6500e-003**	**0.1636**	**0.0000**	**725.5838**	**725.5838**	**0.0272**	**0.0000**	**726.2630**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0814	0.6066	4.0887	6.7000e-003		9.9400e-003	9.9400e-003		9.9400e-003	9.9400e-003	0.0000	573.0770	573.0770	0.1235	0.0000	576.1641
Total	**0.0814**	**0.6066**	**4.0887**	**6.7000e-003**		**9.9400e-003**	**9.9400e-003**		**9.9400e-003**	**9.9400e-003**	**0.0000**	**573.0770**	**573.0770**	**0.1235**	**0.0000**	**576.1641**

3.4 Stations - Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0270	0.8841	0.2835	3.0400e-003	0.0786	1.0300e-003	0.0797	0.0227	9.9000e-004	0.0237	0.0000	295.3797	295.3797	0.0161	0.0000	295.7821
Worker	0.1776	0.1281	1.4995	4.7600e-003	0.5128	3.9800e-003	0.5168	0.1362	3.6600e-003	0.1399	0.0000	430.2041	430.2041	0.0111	0.0000	430.4810
Total	**0.2046**	**1.0122**	**1.7830**	**7.8000e-003**	**0.5915**	**5.0100e-003**	**0.5965**	**0.1589**	**4.6500e-003**	**0.1636**	**0.0000**	**725.5838**	**725.5838**	**0.0272**	**0.0000**	**726.2630**

3.4 Stations - Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2044	1.9024	2.1626	3.9900e-003		0.0766	0.0766		0.0728	0.0728	0.0000	341.6612	341.6612	0.0730	0.0000	343.4863
Total	**0.2044**	**1.9024**	**2.1626**	**3.9900e-003**		**0.0766**	**0.0766**		**0.0728**	**0.0728**	**0.0000**	**341.6612**	**341.6612**	**0.0730**	**0.0000**	**343.4863**

3.4 Stations - Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0157	0.5251	0.1638	1.8000e-003	0.0469	6.1000e-004	0.0475	0.0135	5.8000e-004	0.0141	0.0000	175.3902	175.3902	9.4500e-003	0.0000	175.6266
Worker	0.1003	0.0696	0.8325	2.7500e-003	0.3057	2.3400e-003	0.3081	0.0812	2.1500e-003	0.0834	0.0000	248.5158	248.5158	6.0500e-003	0.0000	248.6671
Total	**0.1160**	**0.5947**	**0.9963**	**4.5500e-003**	**0.3526**	**2.9500e-003**	**0.3555**	**0.0947**	**2.7300e-003**	**0.0975**	**0.0000**	**423.9060**	**423.9060**	**0.0155**	**0.0000**	**424.2936**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0485	0.3616	2.4375	3.9900e-003		5.9200e-003	5.9200e-003		5.9200e-003	5.9200e-003	0.0000	341.6608	341.6608	0.0730	0.0000	343.4859
Total	**0.0485**	**0.3616**	**2.4375**	**3.9900e-003**		**5.9200e-003**	**5.9200e-003**		**5.9200e-003**	**5.9200e-003**	**0.0000**	**341.6608**	**341.6608**	**0.0730**	**0.0000**	**343.4859**

3.4 Stations - Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0157	0.5251	0.1638	1.8000e-003	0.0469	6.1000e-004	0.0475	0.0135	5.8000e-004	0.0141	0.0000	175.3902	175.3902	9.4500e-003	0.0000	175.6266
Worker	0.1003	0.0696	0.8325	2.7500e-003	0.3057	2.3400e-003	0.3081	0.0812	2.1500e-003	0.0834	0.0000	248.5158	248.5158	6.0500e-003	0.0000	248.6671
Total	**0.1160**	**0.5947**	**0.9963**	**4.5500e-003**	**0.3526**	**2.9500e-003**	**0.3555**	**0.0947**	**2.7300e-003**	**0.0975**	**0.0000**	**423.9060**	**423.9060**	**0.0155**	**0.0000**	**424.2936**

3.5 Guideway - Track slab construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1329	1.1980	1.5810	2.4900e-003		0.0551	0.0551		0.0523	0.0523	0.0000	213.4729	213.4729	0.0464	0.0000	214.6338
Total	**0.1329**	**1.1980**	**1.5810**	**2.4900e-003**		**0.0551**	**0.0551**		**0.0523**	**0.0523**	**0.0000**	**213.4729**	**213.4729**	**0.0464**	**0.0000**	**214.6338**

3.5 Guideway - Track slab construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9300e-003	0.1615	0.0518	5.6000e-004	0.0144	1.9000e-004	0.0146	4.1500e-003	1.8000e-004	4.3300e-003	0.0000	53.9636	53.9636	2.9400e-003	0.0000	54.0371
Worker	0.0216	0.0156	0.1826	5.8000e-004	0.0625	4.8000e-004	0.0630	0.0166	4.5000e-004	0.0170	0.0000	52.3967	52.3967	1.3500e-003	0.0000	52.4304
Total	**0.0266**	**0.1771**	**0.2344**	**1.1400e-003**	**0.0768**	**6.7000e-004**	**0.0775**	**0.0207**	**6.3000e-004**	**0.0214**	**0.0000**	**106.3603**	**106.3603**	**4.2900e-003**	**0.0000**	**106.4675**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0304	0.2244	1.7350	2.4900e-003		3.7200e-003	3.7200e-003		3.7200e-003	3.7200e-003	0.0000	213.4726	213.4726	0.0464	0.0000	214.6336
Total	**0.0304**	**0.2244**	**1.7350**	**2.4900e-003**		**3.7200e-003**	**3.7200e-003**		**3.7200e-003**	**3.7200e-003**	**0.0000**	**213.4726**	**213.4726**	**0.0464**	**0.0000**	**214.6336**

3.5 Guideway - Track slab construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9300e-003	0.1615	0.0518	5.6000e-004	0.0144	1.9000e-004	0.0146	4.1500e-003	1.8000e-004	4.3300e-003	0.0000	53.9636	53.9636	2.9400e-003	0.0000	54.0371
Worker	0.0216	0.0156	0.1826	5.8000e-004	0.0625	4.8000e-004	0.0630	0.0166	4.5000e-004	0.0170	0.0000	52.3967	52.3967	1.3500e-003	0.0000	52.4304
Total	**0.0266**	**0.1771**	**0.2344**	**1.1400e-003**	**0.0768**	**6.7000e-004**	**0.0775**	**0.0207**	**6.3000e-004**	**0.0214**	**0.0000**	**106.3603**	**106.3603**	**4.2900e-003**	**0.0000**	**106.4675**

3.5 Guideway - Track slab construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2044	1.8479	2.5789	4.0700e-003		0.0803	0.0803		0.0762	0.0762	0.0000	348.3157	348.3157	0.0752	0.0000	350.1946
Total	**0.2044**	**1.8479**	**2.5789**	**4.0700e-003**		**0.0803**	**0.0803**		**0.0762**	**0.0762**	**0.0000**	**348.3157**	**348.3157**	**0.0752**	**0.0000**	**350.1946**

3.5 Guideway - Track slab construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.8500e-003	0.2625	0.0819	9.0000e-004	0.0234	3.0000e-004	0.0237	6.7600e-003	2.9000e-004	7.0500e-003	0.0000	87.6951	87.6951	4.7300e-003	0.0000	87.8133
Worker	0.0334	0.0232	0.2775	9.2000e-004	0.1019	7.8000e-004	0.1027	0.0271	7.2000e-004	0.0278	0.0000	82.8386	82.8386	2.0200e-003	0.0000	82.8890
Total	**0.0413**	**0.2857**	**0.3594**	**1.8200e-003**	**0.1253**	**1.0800e-003**	**0.1264**	**0.0338**	**1.0100e-003**	**0.0348**	**0.0000**	**170.5337**	**170.5337**	**6.7500e-003**	**0.0000**	**170.7023**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0495	0.3661	2.8309	4.0700e-003		6.0600e-003	6.0600e-003		6.0600e-003	6.0600e-003	0.0000	348.3153	348.3153	0.0752	0.0000	350.1942
Total	**0.0495**	**0.3661**	**2.8309**	**4.0700e-003**		**6.0600e-003**	**6.0600e-003**		**6.0600e-003**	**6.0600e-003**	**0.0000**	**348.3153**	**348.3153**	**0.0752**	**0.0000**	**350.1942**

3.5 Guideway - Track slab construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.8500e-003	0.2625	0.0819	9.0000e-004	0.0234	3.0000e-004	0.0237	6.7600e-003	2.9000e-004	7.0500e-003	0.0000	87.6951	87.6951	4.7300e-003	0.0000	87.8133
Worker	0.0334	0.0232	0.2775	9.2000e-004	0.1019	7.8000e-004	0.1027	0.0271	7.2000e-004	0.0278	0.0000	82.8386	82.8386	2.0200e-003	0.0000	82.8890
Total	**0.0413**	**0.2857**	**0.3594**	**1.8200e-003**	**0.1253**	**1.0800e-003**	**0.1264**	**0.0338**	**1.0100e-003**	**0.0348**	**0.0000**	**170.5337**	**170.5337**	**6.7500e-003**	**0.0000**	**170.7023**

3.6 Paving - Parking Lots - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0884	0.7497	1.2147	1.9000e-003		0.0378	0.0378		0.0353	0.0353	0.0000	166.4542	166.4542	0.0457	0.0000	167.5954
Paving	5.3700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0938**	**0.7497**	**1.2147**	**1.9000e-003**		**0.0378**	**0.0378**		**0.0353**	**0.0353**	**0.0000**	**166.4542**	**166.4542**	**0.0457**	**0.0000**	**167.5954**

3.6 Paving - Parking Lots - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0162	0.0112	0.1343	4.4000e-004	0.0493	3.8000e-004	0.0497	0.0131	3.5000e-004	0.0134	0.0000	40.0832	40.0832	9.8000e-004	0.0000	40.1076
Total	**0.0162**	**0.0112**	**0.1343**	**4.4000e-004**	**0.0493**	**3.8000e-004**	**0.0497**	**0.0131**	**3.5000e-004**	**0.0134**	**0.0000**	**40.0832**	**40.0832**	**9.8000e-004**	**0.0000**	**40.1076**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0226	0.0979	1.3929	1.9000e-003		3.0100e-003	3.0100e-003		3.0100e-003	3.0100e-003	0.0000	166.4540	166.4540	0.0457	0.0000	167.5952
Paving	5.3700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0280**	**0.0979**	**1.3929**	**1.9000e-003**		**3.0100e-003**	**3.0100e-003**		**3.0100e-003**	**3.0100e-003**	**0.0000**	**166.4540**	**166.4540**	**0.0457**	**0.0000**	**167.5952**

3.6 Paving - Parking Lots - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0162	0.0112	0.1343	4.4000e-004	0.0493	3.8000e-004	0.0497	0.0131	3.5000e-004	0.0134	0.0000	40.0832	40.0832	9.8000e-004	0.0000	40.1076
Total	**0.0162**	**0.0112**	**0.1343**	**4.4000e-004**	**0.0493**	**3.8000e-004**	**0.0497**	**0.0131**	**3.5000e-004**	**0.0134**	**0.0000**	**40.0832**	**40.0832**	**9.8000e-004**	**0.0000**	**40.1076**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
Enclosed Parking with Elevator	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Parking Lot	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
User Defined Industrial	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,717.6471	1,717.6471	0.0406	8.3900e-003	1,721.1624
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,717.6471	1,717.6471	0.0406	8.3900e-003	1,721.1624
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	1.03136e+006	574.4279	0.0136	2.8100e-003	575.6035
Enclosed Parking with Elevator	1.172e+006	652.7589	0.0154	3.1900e-003	654.0949
Enclosed Parking with Elevator	820400	456.9312	0.0108	2.2300e-003	457.8664
Parking Lot	23800	13.2557	3.1000e-004	6.0000e-005	13.2828
Parking Lot	36400	20.2734	4.8000e-004	1.0000e-004	20.3149
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**1,717.6471**	**0.0406**	**8.3900e-003**	**1,721.1624**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	1.03136e+006	574.4279	0.0136	2.8100e-003	575.6035
Enclosed Parking with Elevator	1.172e+006	652.7589	0.0154	3.1900e-003	654.0949
Enclosed Parking with Elevator	820400	456.9312	0.0108	2.2300e-003	457.8664
Parking Lot	23800	13.2557	3.1000e-004	6.0000e-005	13.2828
Parking Lot	36400	20.2734	4.8000e-004	1.0000e-004	20.3149
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**1,717.6471**	**0.0406**	**8.3900e-003**	**1,721.1624**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0561	2.0000e-004	0.0219	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0427	0.0427	1.1000e-004	0.0000	0.0455
Unmitigated	0.0561	2.0000e-004	0.0219	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0427	0.0427	1.1000e-004	0.0000	0.0455

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	9.5700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0445					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0200e-003	2.0000e-004	0.0219	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0427	0.0427	1.1000e-004	0.0000	0.0455
Total	**0.0561**	**2.0000e-004**	**0.0219**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0427**	**0.0427**	**1.1000e-004**	**0.0000**	**0.0455**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	9.5700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0445					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0200e-003	2.0000e-004	0.0219	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0427	0.0427	1.1000e-004	0.0000	0.0455
Total	**0.0561**	**2.0000e-004**	**0.0219**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0427**	**0.0427**	**1.1000e-004**	**0.0000**	**0.0455**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

LACMTA West Santa Ana Branch Construction - Aerial LRT

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	24.85	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2028
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

Project Characteristics -

Land Use - 4.1 miles aerial x 50 foot width = 24.85 acres

Construction Phase - LACMTA Construction Methods Report (October 2018)
Maximum length of construction approximately 30 months (2.5 years)

Off-road Equipment - LACMTA Construction Methods Report

Off-road Equipment - LACMTA Construction Methods Report

Off-road Equipment - LACMTA Construction Methods Report (October 2018)

Off-road Equipment - LACMTA Construction Methods Report

Off-road Equipment - LACMTA Construction Methods Report

Trips and VMT - Hauling Trips accounted for in G&E modeling.
20 daily material delivery trips accounted for.

Vehicle Trips -

Construction Off-road Equipment Mitigation - LACMTA Green Construction Policy (2011)

Grading -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	370.00	390.00
tblConstructionPhase	NumDays	370.00	390.00
tblConstructionPhase	NumDays	10.00	390.00
tblConstructionPhase	NumDays	10.00	390.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	PhaseEndDate	8/4/2023	8/3/2024
tblConstructionPhase	PhaseEndDate	1/3/2025	11/1/2024
tblConstructionPhase	PhaseEndDate	2/18/2022	5/6/2023
tblConstructionPhase	PhaseEndDate	3/4/2022	5/6/2023
tblConstructionPhase	PhaseStartDate	3/5/2022	5/8/2023
tblConstructionPhase	PhaseStartDate	8/5/2023	5/8/2023
tblConstructionPhase	PhaseStartDate	2/19/2022	2/7/2022
tblLandUse	LotAcreage	0.00	24.85
tblOffRoadEquipment	LoadFactor	0.37	0.37

tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	WorkerTripNumber	13.00	150.00
tblTripsAndVMT	WorkerTripNumber	13.00	150.00
tblTripsAndVMT	WorkerTripNumber	0.00	150.00
tblTripsAndVMT	WorkerTripNumber	0.00	150.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.7099	5.9313	4.8439	0.0127	2.3686	0.2494	2.6180	1.0789	0.2295	1.3084	0.0000	1,127.1087	1,127.1087	0.2451	0.0000	1,133.2364
2023	0.5712	4.3453	4.8243	0.0129	1.3656	0.1685	1.5342	0.5154	0.1558	0.6712	0.0000	1,147.2803	1,147.2803	0.2193	0.0000	1,152.7630
2024	0.3383	2.4215	3.2026	8.5000e-003	0.3593	0.0864	0.4456	0.0960	0.0803	0.1763	0.0000	755.4226	755.4226	0.1282	0.0000	758.6286
Maximum	**0.7099**	**5.9313**	**4.8439**	**0.0129**	**2.3686**	**0.2494**	**2.6180**	**1.0789**	**0.2295**	**1.3084**	**0.0000**	**1,147.2803**	**1,147.2803**	**0.2451**	**0.0000**	**1,152.7630**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2718	0.5664	5.8578	0.0127	1.2065	0.0172	1.2237	0.4959	0.0169	0.5128	0.0000	1,127.1078	1,127.1078	0.2451	0.0000	1,133.2356
2023	0.2702	0.9328	5.7694	0.0129	0.8428	0.0161	0.8589	0.2837	0.0158	0.2996	0.0000	1,147.2796	1,147.2796	0.2193	0.0000	1,152.7622
2024	0.1762	0.7939	3.6907	8.5000e-003	0.3593	0.0100	0.3693	0.0960	9.7800e-003	0.1058	0.0000	755.4222	755.4222	0.1282	0.0000	758.6282
Maximum	**0.2718**	**0.9328**	**5.8578**	**0.0129**	**1.2065**	**0.0172**	**1.2237**	**0.4959**	**0.0169**	**0.5128**	**0.0000**	**1,147.2796**	**1,147.2796**	**0.2451**	**0.0000**	**1,152.7622**

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**55.65**	**81.94**	**-19.01**	**0.00**	**41.16**	**91.41**	**46.67**	**48.20**	**90.87**	**57.41**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**2-7-2022**	**5-6-2022**	1.7973	0.2274
2	**5-7-2022**	**8-6-2022**	1.8526	0.2298
3	**8-7-2022**	**11-6-2022**	1.8561	0.2334
4	**11-7-2022**	**2-6-2023**	1.7568	0.2361
5	**2-7-2023**	**5-6-2023**	1.5459	0.2215
6	**5-7-2023**	**8-6-2023**	1.0385	0.3356
7	**8-7-2023**	**11-6-2023**	1.0529	0.3422
8	**11-7-2023**	**2-6-2024**	1.0336	0.3444
9	**2-7-2024**	**5-6-2024**	0.9741	0.3311
10	**5-7-2024**	**8-6-2024**	0.9727	0.3289
11	**8-7-2024**	**9-30-2024**	0.2464	0.1017
		Highest	1.8561	0.3444

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Stations - Foundation Prep	Site Preparation	2/7/2022	5/6/2023	6	390	
2	Guideway - Foundation Prep	Site Preparation	2/7/2022	5/6/2023	6	390	
3	Guideway - Column Construction	Building Construction	5/8/2023	8/3/2024	6	390	
4	Stations - Platform Construction	Building Construction	5/8/2023	11/1/2024	5	390	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Guideway - Column Construction	Bore/Drill Rigs	1	8.00	221	0.50
Guideway - Column Construction	Other Construction Equipment	1	8.00	172	0.42
Stations - Platform Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Stations - Foundation Prep	Rubber Tired Dozers	1	8.00	247	0.40
Guideway - Foundation Prep	Excavators	1	8.00	158	0.38
Stations - Foundation Prep	Excavators	1	8.00	158	0.38
Stations - Foundation Prep	Rollers	1	8.00	80	0.38
Stations - Foundation Prep	Rubber Tired Loaders	1	8.00	203	0.36
Stations - Foundation Prep	Graders	1	8.00	187	0.41
Guideway - Foundation Prep	Rubber Tired Dozers	1	8.00	247	0.40
Guideway - Column Construction	Rough Terrain Forklifts	2	8.00	100	0.40
Guideway - Foundation Prep	Rollers	1	8.00	80	0.38
Guideway - Column Construction	Cranes	1	8.00	231	0.29
Guideway - Foundation Prep	Rubber Tired Loaders	1	8.00	203	0.36
Guideway - Foundation Prep	Graders	1	8.00	187	0.41
Stations - Platform Construction	Cranes	1	8.00	231	0.29
Stations - Platform Construction	Welders	2	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Stations - Foundation Prep	5	150.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Guideway - Foundation Prep	5	150.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Guideway - Column Construction	5	150.00	20.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Stations - Platform Construction	5	150.00	20.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Stations - Foundation Prep - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9525	0.0000	0.9525	0.4779	0.0000	0.4779	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2696	2.9017	1.6850	4.1200e-003		0.1229	0.1229		0.1130	0.1130	0.0000	361.7506	361.7506	0.1170	0.0000	364.6755
Total	**0.2696**	**2.9017**	**1.6850**	**4.1200e-003**	**0.9525**	**0.1229**	**1.0754**	**0.4779**	**0.1130**	**0.5910**	**0.0000**	**361.7506**	**361.7506**	**0.1170**	**0.0000**	**364.6755**

3.2 Stations - Foundation Prep - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0853	0.0640	0.7369	2.2300e-003	0.2318	1.8500e-003	0.2336	0.0616	1.7000e-003	0.0633	0.0000	201.8037	201.8037	5.5600e-003	0.0000	201.9427
Total	**0.0853**	**0.0640**	**0.7369**	**2.2300e-003**	**0.2318**	**1.8500e-003**	**0.2336**	**0.0616**	**1.7000e-003**	**0.0633**	**0.0000**	**201.8037**	**201.8037**	**5.5600e-003**	**0.0000**	**201.9427**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3715	0.0000	0.3715	0.1864	0.0000	0.1864	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0506	0.2192	2.1920	4.1200e-003		6.7400e-003	6.7400e-003		6.7400e-003	6.7400e-003	0.0000	361.7502	361.7502	0.1170	0.0000	364.6751
Total	**0.0506**	**0.2192**	**2.1920**	**4.1200e-003**	**0.3715**	**6.7400e-003**	**0.3782**	**0.1864**	**6.7400e-003**	**0.1931**	**0.0000**	**361.7502**	**361.7502**	**0.1170**	**0.0000**	**364.6751**

3.2 Stations - Foundation Prep - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0853	0.0640	0.7369	2.2300e-003	0.2318	1.8500e-003	0.2336	0.0616	1.7000e-003	0.0633	0.0000	201.8037	201.8037	5.5600e-003	0.0000	201.9427
Total	**0.0853**	**0.0640**	**0.7369**	**2.2300e-003**	**0.2318**	**1.8500e-003**	**0.2336**	**0.0616**	**1.7000e-003**	**0.0633**	**0.0000**	**201.8037**	**201.8037**	**5.5600e-003**	**0.0000**	**201.9427**

3.2 Stations - Foundation Prep - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4286	0.0000	0.4286	0.1899	0.0000	0.1899	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0908	0.9501	0.6166	1.5800e-003		0.0392	0.0392		0.0360	0.0360	0.0000	138.5199	138.5199	0.0448	0.0000	139.6399
Total	**0.0908**	**0.9501**	**0.6166**	**1.5800e-003**	**0.4286**	**0.0392**	**0.4677**	**0.1899**	**0.0360**	**0.2259**	**0.0000**	**138.5199**	**138.5199**	**0.0448**	**0.0000**	**139.6399**

3.2 Stations - Foundation Prep - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0307	0.0222	0.2595	8.2000e-004	0.0888	6.9000e-004	0.0895	0.0236	6.3000e-004	0.0242	0.0000	74.4584	74.4584	1.9200e-003	0.0000	74.5063
Total	**0.0307**	**0.0222**	**0.2595**	**8.2000e-004**	**0.0888**	**6.9000e-004**	**0.0895**	**0.0236**	**6.3000e-004**	**0.0242**	**0.0000**	**74.4584**	**74.4584**	**1.9200e-003**	**0.0000**	**74.5063**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1672	0.0000	0.1672	0.0741	0.0000	0.0741	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.0839	0.8395	1.5800e-003		2.5800e-003	2.5800e-003		2.5800e-003	2.5800e-003	0.0000	138.5197	138.5197	0.0448	0.0000	139.6397
Total	**0.0194**	**0.0839**	**0.8395**	**1.5800e-003**	**0.1672**	**2.5800e-003**	**0.1697**	**0.0741**	**2.5800e-003**	**0.0767**	**0.0000**	**138.5197**	**138.5197**	**0.0448**	**0.0000**	**139.6397**

3.2 Stations - Foundation Prep - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0307	0.0222	0.2595	8.2000e-004	0.0888	6.9000e-004	0.0895	0.0236	6.3000e-004	0.0242	0.0000	74.4584	74.4584	1.9200e-003	0.0000	74.5063
Total	**0.0307**	**0.0222**	**0.2595**	**8.2000e-004**	**0.0888**	**6.9000e-004**	**0.0895**	**0.0236**	**6.3000e-004**	**0.0242**	**0.0000**	**74.4584**	**74.4584**	**1.9200e-003**	**0.0000**	**74.5063**

3.3 Guideway - Foundation Prep - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9525	0.0000	0.9525	0.4779	0.0000	0.4779	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2696	2.9017	1.6850	4.1200e-003		0.1229	0.1229		0.1130	0.1130	0.0000	361.7506	361.7506	0.1170	0.0000	364.6755
Total	**0.2696**	**2.9017**	**1.6850**	**4.1200e-003**	**0.9525**	**0.1229**	**1.0754**	**0.4779**	**0.1130**	**0.5910**	**0.0000**	**361.7506**	**361.7506**	**0.1170**	**0.0000**	**364.6755**

3.3 Guideway - Foundation Prep - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0853	0.0640	0.7369	2.2300e-003	0.2318	1.8500e-003	0.2336	0.0616	1.7000e-003	0.0633	0.0000	201.8037	201.8037	5.5600e-003	0.0000	201.9427
Total	**0.0853**	**0.0640**	**0.7369**	**2.2300e-003**	**0.2318**	**1.8500e-003**	**0.2336**	**0.0616**	**1.7000e-003**	**0.0633**	**0.0000**	**201.8037**	**201.8037**	**5.5600e-003**	**0.0000**	**201.9427**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3715	0.0000	0.3715	0.1864	0.0000	0.1864	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0506	0.2192	2.1920	4.1200e-003		6.7400e-003	6.7400e-003		6.7400e-003	6.7400e-003	0.0000	361.7502	361.7502	0.1170	0.0000	364.6751
Total	**0.0506**	**0.2192**	**2.1920**	**4.1200e-003**	**0.3715**	**6.7400e-003**	**0.3782**	**0.1864**	**6.7400e-003**	**0.1931**	**0.0000**	**361.7502**	**361.7502**	**0.1170**	**0.0000**	**364.6751**

3.3 Guideway - Foundation Prep - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0853	0.0640	0.7369	2.2300e-003	0.2318	1.8500e-003	0.2336	0.0616	1.7000e-003	0.0633	0.0000	201.8037	201.8037	5.5600e-003	0.0000	201.9427
Total	**0.0853**	**0.0640**	**0.7369**	**2.2300e-003**	**0.2318**	**1.8500e-003**	**0.2336**	**0.0616**	**1.7000e-003**	**0.0633**	**0.0000**	**201.8037**	**201.8037**	**5.5600e-003**	**0.0000**	**201.9427**

3.3 Guideway - Foundation Prep - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4286	0.0000	0.4286	0.1899	0.0000	0.1899	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0908	0.9501	0.6166	1.5800e-003		0.0392	0.0392		0.0360	0.0360	0.0000	138.5199	138.5199	0.0448	0.0000	139.6399
Total	**0.0908**	**0.9501**	**0.6166**	**1.5800e-003**	**0.4286**	**0.0392**	**0.4677**	**0.1899**	**0.0360**	**0.2259**	**0.0000**	**138.5199**	**138.5199**	**0.0448**	**0.0000**	**139.6399**

3.3 Guideway - Foundation Prep - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0307	0.0222	0.2595	8.2000e-004	0.0888	6.9000e-004	0.0895	0.0236	6.3000e-004	0.0242	0.0000	74.4584	74.4584	1.9200e-003	0.0000	74.5063
Total	**0.0307**	**0.0222**	**0.2595**	**8.2000e-004**	**0.0888**	**6.9000e-004**	**0.0895**	**0.0236**	**6.3000e-004**	**0.0242**	**0.0000**	**74.4584**	**74.4584**	**1.9200e-003**	**0.0000**	**74.5063**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1672	0.0000	0.1672	0.0741	0.0000	0.0741	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.0839	0.8395	1.5800e-003		2.5800e-003	2.5800e-003		2.5800e-003	2.5800e-003	0.0000	138.5197	138.5197	0.0448	0.0000	139.6397
Total	**0.0194**	**0.0839**	**0.8395**	**1.5800e-003**	**0.1672**	**2.5800e-003**	**0.1697**	**0.0741**	**2.5800e-003**	**0.0767**	**0.0000**	**138.5197**	**138.5197**	**0.0448**	**0.0000**	**139.6397**

3.3 Guideway - Foundation Prep - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0307	0.0222	0.2595	8.2000e-004	0.0888	6.9000e-004	0.0895	0.0236	6.3000e-004	0.0242	0.0000	74.4584	74.4584	1.9200e-003	0.0000	74.5063
Total	**0.0307**	**0.0222**	**0.2595**	**8.2000e-004**	**0.0888**	**6.9000e-004**	**0.0895**	**0.0236**	**6.3000e-004**	**0.0242**	**0.0000**	**74.4584**	**74.4584**	**1.9200e-003**	**0.0000**	**74.5063**

3.4 Guideway - Column Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1149	1.2334	1.2693	2.8900e-003		0.0504	0.0504		0.0464	0.0464	0.0000	253.5484	253.5484	0.0820	0.0000	255.5985
Total	**0.1149**	**1.2334**	**1.2693**	**2.8900e-003**		**0.0504**	**0.0504**		**0.0464**	**0.0464**	**0.0000**	**253.5484**	**253.5484**	**0.0820**	**0.0000**	**255.5985**

3.4 Guideway - Column Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.4100e-003	0.1445	0.0463	5.0000e-004	0.0129	1.7000e-004	0.0130	3.7100e-003	1.6000e-004	3.8700e-003	0.0000	48.2832	48.2832	2.6300e-003	0.0000	48.3490
Worker	0.0581	0.0419	0.4902	1.5600e-003	0.1677	1.3000e-003	0.1690	0.0445	1.2000e-003	0.0457	0.0000	140.6436	140.6436	3.6200e-003	0.0000	140.7342
Total	**0.0625**	**0.1864**	**0.5366**	**2.0600e-003**	**0.1805**	**1.4700e-003**	**0.1820**	**0.0482**	**1.3600e-003**	**0.0496**	**0.0000**	**188.9269**	**188.9269**	**6.2500e-003**	**0.0000**	**189.0832**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0356	0.1542	1.7158	2.8900e-003		4.7500e-003	4.7500e-003		4.7500e-003	4.7500e-003	0.0000	253.5481	253.5481	0.0820	0.0000	255.5982
Total	**0.0356**	**0.1542**	**1.7158**	**2.8900e-003**		**4.7500e-003**	**4.7500e-003**		**4.7500e-003**	**4.7500e-003**	**0.0000**	**253.5481**	**253.5481**	**0.0820**	**0.0000**	**255.5982**

3.4 Guideway - Column Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.4100e-003	0.1445	0.0463	5.0000e-004	0.0129	1.7000e-004	0.0130	3.7100e-003	1.6000e-004	3.8700e-003	0.0000	48.2832	48.2832	2.6300e-003	0.0000	48.3490
Worker	0.0581	0.0419	0.4902	1.5600e-003	0.1677	1.3000e-003	0.1690	0.0445	1.2000e-003	0.0457	0.0000	140.6436	140.6436	3.6200e-003	0.0000	140.7342
Total	**0.0625**	**0.1864**	**0.5366**	**2.0600e-003**	**0.1805**	**1.4700e-003**	**0.1820**	**0.0482**	**1.3600e-003**	**0.0496**	**0.0000**	**188.9269**	**188.9269**	**6.2500e-003**	**0.0000**	**189.0832**

3.4 Guideway - Column Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1003	1.0525	1.1536	2.6300e-003		0.0424	0.0424		0.0391	0.0391	0.0000	231.3281	231.3281	0.0748	0.0000	233.1985
Total	**0.1003**	**1.0525**	**1.1536**	**2.6300e-003**		**0.0424**	**0.0424**		**0.0391**	**0.0391**	**0.0000**	**231.3281**	**231.3281**	**0.0748**	**0.0000**	**233.1985**

3.4 Guideway - Column Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.9300e-003	0.1313	0.0410	4.5000e-004	0.0117	1.5000e-004	0.0119	3.3800e-003	1.4000e-004	3.5300e-003	0.0000	43.8476	43.8476	2.3600e-003	0.0000	43.9066
Worker	0.0501	0.0348	0.4162	1.3700e-003	0.1529	1.1700e-003	0.1540	0.0406	1.0800e-003	0.0417	0.0000	124.2579	124.2579	3.0300e-003	0.0000	124.3335
Total	**0.0541**	**0.1661**	**0.4572**	**1.8200e-003**	**0.1646**	**1.3200e-003**	**0.1659**	**0.0440**	**1.2200e-003**	**0.0452**	**0.0000**	**168.1054**	**168.1054**	**5.3900e-003**	**0.0000**	**168.2402**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0325	0.1406	1.5644	2.6300e-003		4.3300e-003	4.3300e-003		4.3300e-003	4.3300e-003	0.0000	231.3278	231.3278	0.0748	0.0000	233.1982
Total	**0.0325**	**0.1406**	**1.5644**	**2.6300e-003**		**4.3300e-003**	**4.3300e-003**		**4.3300e-003**	**4.3300e-003**	**0.0000**	**231.3278**	**231.3278**	**0.0748**	**0.0000**	**233.1982**

3.4 Guideway - Column Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.9300e-003	0.1313	0.0410	4.5000e-004	0.0117	1.5000e-004	0.0119	3.3800e-003	1.4000e-004	3.5300e-003	0.0000	43.8476	43.8476	2.3600e-003	0.0000	43.9066
Worker	0.0501	0.0348	0.4162	1.3700e-003	0.1529	1.1700e-003	0.1540	0.0406	1.0800e-003	0.0417	0.0000	124.2579	124.2579	3.0300e-003	0.0000	124.3335
Total	**0.0541**	**0.1661**	**0.4572**	**1.8200e-003**	**0.1646**	**1.3200e-003**	**0.1659**	**0.0440**	**1.2200e-003**	**0.0452**	**0.0000**	**168.1054**	**168.1054**	**5.3900e-003**	**0.0000**	**168.2402**

3.5 Stations - Platform Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0988	0.8258	0.8190	1.4500e-003		0.0358	0.0358		0.0336	0.0336	0.0000	121.4095	121.4095	0.0324	0.0000	122.2197
Total	**0.0988**	**0.8258**	**0.8190**	**1.4500e-003**		**0.0358**	**0.0358**		**0.0336**	**0.0336**	**0.0000**	**121.4095**	**121.4095**	**0.0324**	**0.0000**	**122.2197**

3.5 Stations - Platform Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.6800e-003	0.1204	0.0386	4.1000e-004	0.0107	1.4000e-004	0.0109	3.0900e-003	1.3000e-004	3.2300e-003	0.0000	40.2360	40.2360	2.1900e-003	0.0000	40.2908
Worker	0.0484	0.0349	0.4085	1.3000e-003	0.1397	1.0800e-003	0.1408	0.0371	1.0000e-003	0.0381	0.0000	117.2030	117.2030	3.0200e-003	0.0000	117.2785
Total	**0.0521**	**0.1553**	**0.4471**	**1.7100e-003**	**0.1504**	**1.2200e-003**	**0.1517**	**0.0402**	**1.1300e-003**	**0.0413**	**0.0000**	**157.4390**	**157.4390**	**5.2100e-003**	**0.0000**	**157.5693**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0199	0.2247	0.8719	1.4500e-003		2.1600e-003	2.1600e-003		2.1600e-003	2.1600e-003	0.0000	121.4093	121.4093	0.0324	0.0000	122.2195
Total	**0.0199**	**0.2247**	**0.8719**	**1.4500e-003**		**2.1600e-003**	**2.1600e-003**		**2.1600e-003**	**2.1600e-003**	**0.0000**	**121.4093**	**121.4093**	**0.0324**	**0.0000**	**122.2195**

3.5 Stations - Platform Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.6800e-003	0.1204	0.0386	4.1000e-004	0.0107	1.4000e-004	0.0109	3.0900e-003	1.3000e-004	3.2300e-003	0.0000	40.2360	40.2360	2.1900e-003	0.0000	40.2908
Worker	0.0484	0.0349	0.4085	1.3000e-003	0.1397	1.0800e-003	0.1408	0.0371	1.0000e-003	0.0381	0.0000	117.2030	117.2030	3.0200e-003	0.0000	117.2785
Total	**0.0521**	**0.1553**	**0.4471**	**1.7100e-003**	**0.1504**	**1.2200e-003**	**0.1517**	**0.0402**	**1.1300e-003**	**0.0413**	**0.0000**	**157.4390**	**157.4390**	**5.2100e-003**	**0.0000**	**157.5693**

3.5 Stations - Platform Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1199	1.0066	1.0511	1.8800e-003		0.0410	0.0410		0.0386	0.0386	0.0000	157.1547	157.1547	0.0417	0.0000	158.1963
Total	**0.1199**	**1.0066**	**1.0511**	**1.8800e-003**		**0.0410**	**0.0410**		**0.0386**	**0.0386**	**0.0000**	**157.1547**	**157.1547**	**0.0417**	**0.0000**	**158.1963**

3.5 Stations - Platform Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.6400e-003	0.1553	0.0484	5.3000e-004	0.0139	1.8000e-004	0.0140	4.0000e-003	1.7000e-004	4.1700e-003	0.0000	51.8627	51.8627	2.8000e-003	0.0000	51.9326
Worker	0.0593	0.0412	0.4923	1.6200e-003	0.1808	1.3800e-003	0.1822	0.0480	1.2700e-003	0.0493	0.0000	146.9717	146.9717	3.5800e-003	0.0000	147.0612
Total	**0.0639**	**0.1964**	**0.5408**	**2.1500e-003**	**0.1947**	**1.5600e-003**	**0.1962**	**0.0520**	**1.4400e-003**	**0.0535**	**0.0000**	**198.8344**	**198.8344**	**6.3800e-003**	**0.0000**	**198.9937**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0258	0.2907	1.1284	1.8800e-003		2.7900e-003	2.7900e-003		2.7900e-003	2.7900e-003	0.0000	157.1546	157.1546	0.0417	0.0000	158.1961
Total	**0.0258**	**0.2907**	**1.1284**	**1.8800e-003**		**2.7900e-003**	**2.7900e-003**		**2.7900e-003**	**2.7900e-003**	**0.0000**	**157.1546**	**157.1546**	**0.0417**	**0.0000**	**158.1961**

3.5 Stations - Platform Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.6400e-003	0.1553	0.0484	5.3000e-004	0.0139	1.8000e-004	0.0140	4.0000e-003	1.7000e-004	4.1700e-003	0.0000	51.8627	51.8627	2.8000e-003	0.0000	51.9326
Worker	0.0593	0.0412	0.4923	1.6200e-003	0.1808	1.3800e-003	0.1822	0.0480	1.2700e-003	0.0493	0.0000	146.9717	146.9717	3.5800e-003	0.0000	147.0612
Total	**0.0639**	**0.1964**	**0.5408**	**2.1500e-003**	**0.1947**	**1.5600e-003**	**0.1962**	**0.0520**	**1.4400e-003**	**0.0535**	**0.0000**	**198.8344**	**198.8344**	**6.3800e-003**	**0.0000**	**198.9937**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

LACMTA West Santa Ana Branch Construction - Systems

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2028
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Installatinon of system elements (i.e., electrical, mechanical, signals, communications, TPSS, etc.) - Minimal ground disturbance

Construction Phase - LACMTA Construction Methods Report: approx 2 years each for Signals/OCS/TPSS

Off-road Equipment - LACMTA Construction Methods Report (October 2018)

Trips and VMT - LACMTA Construction Methods Report (October 2018)

Construction Off-road Equipment Mitigation - LACMTA Green Construction Policy (2011)

Off-road Equipment - Construction Methods Report

Off-road Equipment - Construction Methods Report

Off-road Equipment - Construction Methods Report

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	1.00	630.00
tblConstructionPhase	NumDays	1.00	630.00
tblConstructionPhase	NumDays	100.00	630.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes

tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	40.00
tblTripsAndVMT	VendorTripNumber	0.00	40.00
tblTripsAndVMT	VendorTripNumber	0.00	40.00
tblTripsAndVMT	WorkerTripNumber	25.00	200.00
tblTripsAndVMT	WorkerTripNumber	25.00	200.00
tblTripsAndVMT	WorkerTripNumber	0.00	200.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	1.5193	13.4387	14.2733	0.0315	1.0336	0.6121	1.6457	0.2770	0.5665	0.8435	0.0000	2,821.0008	2,821.0008	0.5205	0.0000	2,834.0143
2023	1.5621	13.3889	15.4016	0.0343	1.1436	0.6074	1.7510	0.3065	0.5621	0.8686	0.0000	3,074.4969	3,074.4969	0.5698	0.0000	3,088.7419
2024	0.1717	1.4607	1.7476	3.9200e-003	0.1320	0.0647	0.1966	0.0354	0.0598	0.0952	0.0000	351.4768	351.4768	0.0654	0.0000	353.1123
Maximum	**1.5621**	**13.4387**	**15.4016**	**0.0343**	**1.1436**	**0.6121**	**1.7510**	**0.3065**	**0.5665**	**0.8686**	**0.0000**	**3,074.4969**	**3,074.4969**	**0.5698**	**0.0000**	**3,088.7419**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.6109	2.7967	15.7064	0.0315	1.0336	0.0397	1.0734	0.2770	0.0390	0.3160	0.0000	2,820.9989	2,820.9989	0.5205	0.0000	2,834.0124
2023	0.6393	2.6381	17.0662	0.0343	1.1436	0.0420	1.1856	0.3065	0.0413	0.3477	0.0000	3,074.4948	3,074.4948	0.5698	0.0000	3,088.7397
2024	0.0715	0.3012	1.9439	3.9200e-003	0.1320	4.8300e-003	0.1368	0.0354	4.7500e-003	0.0401	0.0000	351.4765	351.4765	0.0654	0.0000	353.1121
Maximum	**0.6393**	**2.7967**	**17.0662**	**0.0343**	**1.1436**	**0.0420**	**1.1856**	**0.3065**	**0.0413**	**0.3477**	**0.0000**	**3,074.4948**	**3,074.4948**	**0.5698**	**0.0000**	**3,088.7397**

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**59.37**	**79.72**	**-10.48**	**0.00**	**0.00**	**93.26**	**33.33**	**0.00**	**92.84**	**61.05**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**2-7-2022**	**5-6-2022**	4.0407	0.9161
2	**5-7-2022**	**8-6-2022**	4.1666	0.9367
3	**8-7-2022**	**11-6-2022**	4.1736	0.9436
4	**11-7-2022**	**2-6-2023**	4.0223	0.9048
5	**2-7-2023**	**5-6-2023**	3.6528	0.7985
6	**5-7-2023**	**8-6-2023**	3.7666	0.8161
7	**8-7-2023**	**11-6-2023**	3.7729	0.8224
8	**11-7-2023**	**2-6-2024**	3.7005	0.8269
9	**2-7-2024**	**5-6-2024**	0.1556	0.0356
		Highest	4.1736	0.9436

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Signals	Site Preparation	2/7/2022	2/10/2024	6	630	Foundations & Conduit construction
2	OCS	Site Preparation	2/7/2022	2/10/2024	6	630	Overhead Catenary System Foundations
3	TPSS	Building Construction	2/7/2022	2/10/2024	6	630	Install TPSS Foundations/Structures

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Signals	Cranes	2	8.00	231	0.29
OCS	Cranes	2	8.00	231	0.29
OCS	Tractors/Loaders/Backhoes	2	8.00	97	0.37
OCS	Rough Terrain Forklifts	2	8.00	100	0.40
OCS	Other Construction Equipment	2	8.00	172	0.42
OCS	Trenchers	2	8.00	78	0.50
TPSS	Other Construction Equipment	2	8.00	172	0.42
TPSS	Cranes	1	8.00	231	0.29
TPSS	Forklifts	3	8.00	89	0.20
TPSS	Generator Sets	2	8.00	84	0.74
TPSS	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Signals	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Signals	Rough Terrain Forklifts	2	8.00	100	0.40
Signals	Trenchers	2	8.00	78	0.50
Signals	Other Construction Equipment	2	8.00	172	0.42

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Signals	10	200.00	40.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
OCS	10	200.00	40.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
TPSS	10	200.00	40.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Signals - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3918	4.0989	3.6767	6.1700e-003		0.2126	0.2126		0.1956	0.1956	0.0000	542.1222	542.1222	0.1753	0.0000	546.5056
Total	**0.3918**	**4.0989**	**3.6767**	**6.1700e-003**		**0.2126**	**0.2126**		**0.1956**	**0.1956**	**0.0000**	**542.1222**	**542.1222**	**0.1753**	**0.0000**	**546.5056**

3.2 Signals - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0164	0.5288	0.1428	1.4200e-003	0.0355	9.9000e-004	0.0365	0.0103	9.5000e-004	0.0112	0.0000	137.8030	137.8030	8.2300e-003	0.0000	138.0088
Worker	0.1138	0.0853	0.9826	2.9800e-003	0.3090	2.4700e-003	0.3115	0.0821	2.2700e-003	0.0844	0.0000	269.0717	269.0717	7.4100e-003	0.0000	269.2569
Total	**0.1302**	**0.6141**	**1.1254**	**4.4000e-003**	**0.3446**	**3.4600e-003**	**0.3480**	**0.0923**	**3.2200e-003**	**0.0956**	**0.0000**	**406.8746**	**406.8746**	**0.0156**	**0.0000**	**407.2657**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0758	0.3286	4.1766	6.1700e-003		0.0101	0.0101		0.0101	0.0101	0.0000	542.1216	542.1216	0.1753	0.0000	546.5049
Total	**0.0758**	**0.3286**	**4.1766**	**6.1700e-003**		**0.0101**	**0.0101**		**0.0101**	**0.0101**	**0.0000**	**542.1216**	**542.1216**	**0.1753**	**0.0000**	**546.5049**

3.2 Signals - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0164	0.5288	0.1428	1.4200e-003	0.0355	9.9000e-004	0.0365	0.0103	9.5000e-004	0.0112	0.0000	137.8030	137.8030	8.2300e-003	0.0000	138.0088
Worker	0.1138	0.0853	0.9826	2.9800e-003	0.3090	2.4700e-003	0.3115	0.0821	2.2700e-003	0.0844	0.0000	269.0717	269.0717	7.4100e-003	0.0000	269.2569
Total	**0.1302**	**0.6141**	**1.1254**	**4.4000e-003**	**0.3446**	**3.4600e-003**	**0.3480**	**0.0923**	**3.2200e-003**	**0.0956**	**0.0000**	**406.8746**	**406.8746**	**0.0156**	**0.0000**	**407.2657**

3.2 Signals - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4067	4.1875	4.0397	6.8300e-003		0.2132	0.2132		0.1962	0.1962	0.0000	599.9522	599.9522	0.1940	0.0000	604.8032
Total	**0.4067**	**4.1875**	**4.0397**	**6.8300e-003**		**0.2132**	**0.2132**		**0.1962**	**0.1962**	**0.0000**	**599.9522**	**599.9522**	**0.1940**	**0.0000**	**604.8032**

3.2 Signals - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0135	0.4420	0.1417	1.5200e-003	0.0393	5.2000e-004	0.0398	0.0113	4.9000e-004	0.0118	0.0000	147.6898	147.6898	8.0500e-003	0.0000	147.8910
Worker	0.1184	0.0854	0.9997	3.1700e-003	0.3419	2.6500e-003	0.3445	0.0908	2.4400e-003	0.0933	0.0000	286.8027	286.8027	7.3800e-003	0.0000	286.9873
Total	**0.1319**	**0.5274**	**1.1414**	**4.6900e-003**	**0.3812**	**3.1700e-003**	**0.3844**	**0.1022**	**2.9300e-003**	**0.1051**	**0.0000**	**434.4926**	**434.4926**	**0.0154**	**0.0000**	**434.8783**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0839	0.3636	4.6210	6.8300e-003		0.0112	0.0112		0.0112	0.0112	0.0000	599.9515	599.9515	0.1940	0.0000	604.8024
Total	**0.0839**	**0.3636**	**4.6210**	**6.8300e-003**		**0.0112**	**0.0112**		**0.0112**	**0.0112**	**0.0000**	**599.9515**	**599.9515**	**0.1940**	**0.0000**	**604.8024**

3.2 Signals - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0135	0.4420	0.1417	1.5200e-003	0.0393	5.2000e-004	0.0398	0.0113	4.9000e-004	0.0118	0.0000	147.6898	147.6898	8.0500e-003	0.0000	147.8910
Worker	0.1184	0.0854	0.9997	3.1700e-003	0.3419	2.6500e-003	0.3445	0.0908	2.4400e-003	0.0933	0.0000	286.8027	286.8027	7.3800e-003	0.0000	286.9873
Total	**0.1319**	**0.5274**	**1.1414**	**4.6900e-003**	**0.3812**	**3.1700e-003**	**0.3844**	**0.1022**	**2.9300e-003**	**0.1051**	**0.0000**	**434.4926**	**434.4926**	**0.0154**	**0.0000**	**434.8783**

3.2 Signals - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0450	0.4562	0.4646	7.9000e-004		0.0230	0.0230		0.0211	0.0211	0.0000	69.2270	69.2270	0.0224	0.0000	69.7868
Total	**0.0450**	**0.4562**	**0.4646**	**7.9000e-004**		**0.0230**	**0.0230**		**0.0211**	**0.0211**	**0.0000**	**69.2270**	**69.2270**	**0.0224**	**0.0000**	**69.7868**

3.2 Signals - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.5200e-003	0.0508	0.0159	1.7000e-004	4.5400e-003	6.0000e-005	4.5900e-003	1.3100e-003	6.0000e-005	1.3700e-003	0.0000	16.9733	16.9733	9.1000e-004	0.0000	16.9961
Worker	0.0129	8.9800e-003	0.1074	3.5000e-004	0.0395	3.0000e-004	0.0398	0.0105	2.8000e-004	0.0108	0.0000	32.0666	32.0666	7.8000e-004	0.0000	32.0861
Total	**0.0145**	**0.0598**	**0.1233**	**5.2000e-004**	**0.0440**	**3.6000e-004**	**0.0443**	**0.0118**	**3.4000e-004**	**0.0121**	**0.0000**	**49.0398**	**49.0398**	**1.6900e-003**	**0.0000**	**49.0822**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.6800e-003	0.0420	0.5332	7.9000e-004		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	69.2270	69.2270	0.0224	0.0000	69.7867
Total	**9.6800e-003**	**0.0420**	**0.5332**	**7.9000e-004**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**69.2270**	**69.2270**	**0.0224**	**0.0000**	**69.7867**

3.2 Signals - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.5200e-003	0.0508	0.0159	1.7000e-004	4.5400e-003	6.0000e-005	4.5900e-003	1.3100e-003	6.0000e-005	1.3700e-003	0.0000	16.9733	16.9733	9.1000e-004	0.0000	16.9961
Worker	0.0129	8.9800e-003	0.1074	3.5000e-004	0.0395	3.0000e-004	0.0398	0.0105	2.8000e-004	0.0108	0.0000	32.0666	32.0666	7.8000e-004	0.0000	32.0861
Total	**0.0145**	**0.0598**	**0.1233**	**5.2000e-004**	**0.0440**	**3.6000e-004**	**0.0443**	**0.0118**	**3.4000e-004**	**0.0121**	**0.0000**	**49.0398**	**49.0398**	**1.6900e-003**	**0.0000**	**49.0822**

3.3 OCS - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3918	4.0989	3.6767	6.1700e-003		0.2126	0.2126		0.1956	0.1956	0.0000	542.1222	542.1222	0.1753	0.0000	546.5056
Total	**0.3918**	**4.0989**	**3.6767**	**6.1700e-003**		**0.2126**	**0.2126**		**0.1956**	**0.1956**	**0.0000**	**542.1222**	**542.1222**	**0.1753**	**0.0000**	**546.5056**

3.3 OCS - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0164	0.5288	0.1428	1.4200e-003	0.0355	9.9000e-004	0.0365	0.0103	9.5000e-004	0.0112	0.0000	137.8030	137.8030	8.2300e-003	0.0000	138.0088
Worker	0.1138	0.0853	0.9826	2.9800e-003	0.3090	2.4700e-003	0.3115	0.0821	2.2700e-003	0.0844	0.0000	269.0717	269.0717	7.4100e-003	0.0000	269.2569
Total	**0.1302**	**0.6141**	**1.1254**	**4.4000e-003**	**0.3446**	**3.4600e-003**	**0.3480**	**0.0923**	**3.2200e-003**	**0.0956**	**0.0000**	**406.8746**	**406.8746**	**0.0156**	**0.0000**	**407.2657**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0758	0.3286	4.1766	6.1700e-003		0.0101	0.0101		0.0101	0.0101	0.0000	542.1216	542.1216	0.1753	0.0000	546.5049
Total	**0.0758**	**0.3286**	**4.1766**	**6.1700e-003**		**0.0101**	**0.0101**		**0.0101**	**0.0101**	**0.0000**	**542.1216**	**542.1216**	**0.1753**	**0.0000**	**546.5049**

3.3 OCS - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0164	0.5288	0.1428	1.4200e-003	0.0355	9.9000e-004	0.0365	0.0103	9.5000e-004	0.0112	0.0000	137.8030	137.8030	8.2300e-003	0.0000	138.0088
Worker	0.1138	0.0853	0.9826	2.9800e-003	0.3090	2.4700e-003	0.3115	0.0821	2.2700e-003	0.0844	0.0000	269.0717	269.0717	7.4100e-003	0.0000	269.2569
Total	**0.1302**	**0.6141**	**1.1254**	**4.4000e-003**	**0.3446**	**3.4600e-003**	**0.3480**	**0.0923**	**3.2200e-003**	**0.0956**	**0.0000**	**406.8746**	**406.8746**	**0.0156**	**0.0000**	**407.2657**

3.3 OCS - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4067	4.1875	4.0397	6.8300e-003		0.2132	0.2132		0.1962	0.1962	0.0000	599.9522	599.9522	0.1940	0.0000	604.8032
Total	**0.4067**	**4.1875**	**4.0397**	**6.8300e-003**		**0.2132**	**0.2132**		**0.1962**	**0.1962**	**0.0000**	**599.9522**	**599.9522**	**0.1940**	**0.0000**	**604.8032**

3.3 OCS - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0135	0.4420	0.1417	1.5200e-003	0.0393	5.2000e-004	0.0398	0.0113	4.9000e-004	0.0118	0.0000	147.6898	147.6898	8.0500e-003	0.0000	147.8910
Worker	0.1184	0.0854	0.9997	3.1700e-003	0.3419	2.6500e-003	0.3445	0.0908	2.4400e-003	0.0933	0.0000	286.8027	286.8027	7.3800e-003	0.0000	286.9873
Total	**0.1319**	**0.5274**	**1.1414**	**4.6900e-003**	**0.3812**	**3.1700e-003**	**0.3844**	**0.1022**	**2.9300e-003**	**0.1051**	**0.0000**	**434.4926**	**434.4926**	**0.0154**	**0.0000**	**434.8783**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0839	0.3636	4.6210	6.8300e-003		0.0112	0.0112		0.0112	0.0112	0.0000	599.9515	599.9515	0.1940	0.0000	604.8024
Total	**0.0839**	**0.3636**	**4.6210**	**6.8300e-003**		**0.0112**	**0.0112**		**0.0112**	**0.0112**	**0.0000**	**599.9515**	**599.9515**	**0.1940**	**0.0000**	**604.8024**

3.3 OCS - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0135	0.4420	0.1417	1.5200e-003	0.0393	5.2000e-004	0.0398	0.0113	4.9000e-004	0.0118	0.0000	147.6898	147.6898	8.0500e-003	0.0000	147.8910
Worker	0.1184	0.0854	0.9997	3.1700e-003	0.3419	2.6500e-003	0.3445	0.0908	2.4400e-003	0.0933	0.0000	286.8027	286.8027	7.3800e-003	0.0000	286.9873
Total	**0.1319**	**0.5274**	**1.1414**	**4.6900e-003**	**0.3812**	**3.1700e-003**	**0.3844**	**0.1022**	**2.9300e-003**	**0.1051**	**0.0000**	**434.4926**	**434.4926**	**0.0154**	**0.0000**	**434.8783**

3.3 OCS - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0450	0.4562	0.4646	7.9000e-004		0.0230	0.0230		0.0211	0.0211	0.0000	69.2270	69.2270	0.0224	0.0000	69.7868
Total	**0.0450**	**0.4562**	**0.4646**	**7.9000e-004**		**0.0230**	**0.0230**		**0.0211**	**0.0211**	**0.0000**	**69.2270**	**69.2270**	**0.0224**	**0.0000**	**69.7868**

3.3 OCS - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.5200e-003	0.0508	0.0159	1.7000e-004	4.5400e-003	6.0000e-005	4.5900e-003	1.3100e-003	6.0000e-005	1.3700e-003	0.0000	16.9733	16.9733	9.1000e-004	0.0000	16.9961
Worker	0.0129	8.9800e-003	0.1074	3.5000e-004	0.0395	3.0000e-004	0.0398	0.0105	2.8000e-004	0.0108	0.0000	32.0666	32.0666	7.8000e-004	0.0000	32.0861
Total	**0.0145**	**0.0598**	**0.1233**	**5.2000e-004**	**0.0440**	**3.6000e-004**	**0.0443**	**0.0118**	**3.4000e-004**	**0.0121**	**0.0000**	**49.0398**	**49.0398**	**1.6900e-003**	**0.0000**	**49.0822**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.6800e-003	0.0420	0.5332	7.9000e-004		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	69.2270	69.2270	0.0224	0.0000	69.7867
Total	**9.6800e-003**	**0.0420**	**0.5332**	**7.9000e-004**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**69.2270**	**69.2270**	**0.0224**	**0.0000**	**69.7867**

3.3 OCS - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.5200e-003	0.0508	0.0159	1.7000e-004	4.5400e-003	6.0000e-005	4.5900e-003	1.3100e-003	6.0000e-005	1.3700e-003	0.0000	16.9733	16.9733	9.1000e-004	0.0000	16.9961
Worker	0.0129	8.9800e-003	0.1074	3.5000e-004	0.0395	3.0000e-004	0.0398	0.0105	2.8000e-004	0.0108	0.0000	32.0666	32.0666	7.8000e-004	0.0000	32.0861
Total	**0.0145**	**0.0598**	**0.1233**	**5.2000e-004**	**0.0440**	**3.6000e-004**	**0.0443**	**0.0118**	**3.4000e-004**	**0.0121**	**0.0000**	**49.0398**	**49.0398**	**1.6900e-003**	**0.0000**	**49.0822**

3.4 TPSS - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3450	3.3986	3.5439	5.9200e-003		0.1764	0.1764		0.1656	0.1656	0.0000	516.1325	516.1325	0.1230	0.0000	519.2063
Total	**0.3450**	**3.3986**	**3.5439**	**5.9200e-003**		**0.1764**	**0.1764**		**0.1656**	**0.1656**	**0.0000**	**516.1325**	**516.1325**	**0.1230**	**0.0000**	**519.2063**

3.4 TPSS - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0164	0.5288	0.1428	1.4200e-003	0.0355	9.9000e-004	0.0365	0.0103	9.5000e-004	0.0112	0.0000	137.8030	137.8030	8.2300e-003	0.0000	138.0088
Worker	0.1138	0.0853	0.9826	2.9800e-003	0.3090	2.4700e-003	0.3115	0.0821	2.2700e-003	0.0844	0.0000	269.0717	269.0717	7.4100e-003	0.0000	269.2569
Total	**0.1302**	**0.6141**	**1.1254**	**4.4000e-003**	**0.3446**	**3.4600e-003**	**0.3480**	**0.0923**	**3.2200e-003**	**0.0956**	**0.0000**	**406.8746**	**406.8746**	**0.0156**	**0.0000**	**407.2657**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0685	0.2970	3.9770	5.9200e-003		9.1400e-003	9.1400e-003		9.1400e-003	9.1400e-003	0.0000	516.1319	516.1319	0.1230	0.0000	519.2056
Total	**0.0685**	**0.2970**	**3.9770**	**5.9200e-003**		**9.1400e-003**	**9.1400e-003**		**9.1400e-003**	**9.1400e-003**	**0.0000**	**516.1319**	**516.1319**	**0.1230**	**0.0000**	**519.2056**

3.4 TPSS - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0164	0.5288	0.1428	1.4200e-003	0.0355	9.9000e-004	0.0365	0.0103	9.5000e-004	0.0112	0.0000	137.8030	137.8030	8.2300e-003	0.0000	138.0088
Worker	0.1138	0.0853	0.9826	2.9800e-003	0.3090	2.4700e-003	0.3115	0.0821	2.2700e-003	0.0844	0.0000	269.0717	269.0717	7.4100e-003	0.0000	269.2569
Total	**0.1302**	**0.6141**	**1.1254**	**4.4000e-003**	**0.3446**	**3.4600e-003**	**0.3480**	**0.0923**	**3.2200e-003**	**0.0956**	**0.0000**	**406.8746**	**406.8746**	**0.0156**	**0.0000**	**407.2657**

3.4 TPSS - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3530	3.4316	3.8981	6.5500e-003		0.1715	0.1715		0.1610	0.1610	0.0000	571.1147	571.1147	0.1354	0.0000	574.5005
Total	**0.3530**	**3.4316**	**3.8981**	**6.5500e-003**		**0.1715**	**0.1715**		**0.1610**	**0.1610**	**0.0000**	**571.1147**	**571.1147**	**0.1354**	**0.0000**	**574.5005**

3.4 TPSS - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0135	0.4420	0.1417	1.5200e-003	0.0393	5.2000e-004	0.0398	0.0113	4.9000e-004	0.0118	0.0000	147.6898	147.6898	8.0500e-003	0.0000	147.8910
Worker	0.1184	0.0854	0.9997	3.1700e-003	0.3419	2.6500e-003	0.3445	0.0908	2.4400e-003	0.0933	0.0000	286.8027	286.8027	7.3800e-003	0.0000	286.9873
Total	**0.1319**	**0.5274**	**1.1414**	**4.6900e-003**	**0.3812**	**3.1700e-003**	**0.3844**	**0.1022**	**2.9300e-003**	**0.1051**	**0.0000**	**434.4926**	**434.4926**	**0.0154**	**0.0000**	**434.8783**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0758	0.3286	4.4001	6.5500e-003		0.0101	0.0101		0.0101	0.0101	0.0000	571.1140	571.1140	0.1354	0.0000	574.4999
Total	**0.0758**	**0.3286**	**4.4001**	**6.5500e-003**		**0.0101**	**0.0101**		**0.0101**	**0.0101**	**0.0000**	**571.1140**	**571.1140**	**0.1354**	**0.0000**	**574.4999**

3.4 TPSS - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0135	0.4420	0.1417	1.5200e-003	0.0393	5.2000e-004	0.0398	0.0113	4.9000e-004	0.0118	0.0000	147.6898	147.6898	8.0500e-003	0.0000	147.8910
Worker	0.1184	0.0854	0.9997	3.1700e-003	0.3419	2.6500e-003	0.3445	0.0908	2.4400e-003	0.0933	0.0000	286.8027	286.8027	7.3800e-003	0.0000	286.9873
Total	**0.1319**	**0.5274**	**1.1414**	**4.6900e-003**	**0.3812**	**3.1700e-003**	**0.3844**	**0.1022**	**2.9300e-003**	**0.1051**	**0.0000**	**434.4926**	**434.4926**	**0.0154**	**0.0000**	**434.8783**

3.4 TPSS - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0383	0.3689	0.4487	7.6000e-004		0.0177	0.0177		0.0166	0.0166	0.0000	65.9033	65.9033	0.0156	0.0000	66.2922
Total	**0.0383**	**0.3689**	**0.4487**	**7.6000e-004**		**0.0177**	**0.0177**		**0.0166**	**0.0166**	**0.0000**	**65.9033**	**65.9033**	**0.0156**	**0.0000**	**66.2922**

3.4 TPSS - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.5200e-003	0.0508	0.0159	1.7000e-004	4.5400e-003	6.0000e-005	4.5900e-003	1.3100e-003	6.0000e-005	1.3700e-003	0.0000	16.9733	16.9733	9.1000e-004	0.0000	16.9961
Worker	0.0129	8.9800e-003	0.1074	3.5000e-004	0.0395	3.0000e-004	0.0398	0.0105	2.8000e-004	0.0108	0.0000	32.0666	32.0666	7.8000e-004	0.0000	32.0861
Total	**0.0145**	**0.0598**	**0.1233**	**5.2000e-004**	**0.0440**	**3.6000e-004**	**0.0443**	**0.0118**	**3.4000e-004**	**0.0121**	**0.0000**	**49.0398**	**49.0398**	**1.6900e-003**	**0.0000**	**49.0822**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.7500e-003	0.0379	0.5077	7.6000e-004		1.1700e-003	1.1700e-003		1.1700e-003	1.1700e-003	0.0000	65.9032	65.9032	0.0156	0.0000	66.2922
Total	**8.7500e-003**	**0.0379**	**0.5077**	**7.6000e-004**		**1.1700e-003**	**1.1700e-003**		**1.1700e-003**	**1.1700e-003**	**0.0000**	**65.9032**	**65.9032**	**0.0156**	**0.0000**	**66.2922**

3.4 TPSS - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.5200e-003	0.0508	0.0159	1.7000e-004	4.5400e-003	6.0000e-005	4.5900e-003	1.3100e-003	6.0000e-005	1.3700e-003	0.0000	16.9733	16.9733	9.1000e-004	0.0000	16.9961
Worker	0.0129	8.9800e-003	0.1074	3.5000e-004	0.0395	3.0000e-004	0.0398	0.0105	2.8000e-004	0.0108	0.0000	32.0666	32.0666	7.8000e-004	0.0000	32.0861
Total	**0.0145**	**0.0598**	**0.1233**	**5.2000e-004**	**0.0440**	**3.6000e-004**	**0.0443**	**0.0118**	**3.4000e-004**	**0.0121**	**0.0000**	**49.0398**	**49.0398**	**1.6900e-003**	**0.0000**	**49.0822**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Maintenance and Storage Facility (MSF) Construction
Annual CalEEMod Output Files

LACMTA West Santa Ana Branch MSF - Paramount Option

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	8.07	1000sqft	0.19	8,070.00	0
General Light Industry	24.47	1000sqft	0.56	24,470.00	0
General Light Industry	6.74	1000sqft	0.15	6,740.00	0
Industrial Park	95.11	1000sqft	2.18	95,110.00	0
Unrefrigerated Warehouse-Rail	7.56	1000sqft	0.17	7,560.00	0
Other Asphalt Surfaces	3.00	Acre	3.00	130,680.00	0
Other Non-Asphalt Surfaces	13.20	Acre	13.20	574,992.00	0
Parking Lot	307.00	Space	2.76	122,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2028
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Preliminary Schedule

Off-road Equipment - Project Inventory

Off-road Equipment - Project Inventory

Off-road Equipment - Project Inventory

Off-road Equipment - Project Inventory

Off-road Equipment - Project Inventory

Trips and VMT - 150 worker trips, 20 vendor deliveries, 30 haul loads daily.

Grading -

Vehicle Trips - 250 daily employees/visitors

Area Coating - SCAQMD Rule 1113

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - Metro GCP Compliance

Fleet Mix -

Off-road Equipment - Project Inventory

Architectural Coating - SCAQMD Rule 1113

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	60.00
tblConstructionPhase	NumDays	370.00	450.00
tblConstructionPhase	NumDays	20.00	90.00
tblConstructionPhase	NumDays	20.00	60.00
tblConstructionPhase	NumDays	10.00	360.00
tblConstructionPhase	NumDaysWeek	5.00	6.00

tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
tblOffRoadEquipment	PhaseName		Paving Parking & Access Roads
tblOffRoadEquipment	PhaseName		Building Construction & Track Laydown
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	HaulingTripNumber	910.00	5,400.00
tblTripsAndVMT	HaulingTripNumber	0.00	21,600.00
tblTripsAndVMT	VendorTripNumber	0.00	40.00
tblTripsAndVMT	VendorTripNumber	0.00	40.00
tblTripsAndVMT	VendorTripNumber	159.00	40.00
tblTripsAndVMT	VendorTripNumber	0.00	40.00
tblTripsAndVMT	WorkerTripNumber	25.00	300.00
tblTripsAndVMT	WorkerTripNumber	25.00	300.00
tblTripsAndVMT	WorkerTripNumber	408.00	300.00
tblTripsAndVMT	WorkerTripNumber	20.00	200.00

tblTripsAndVMT	WorkerTripNumber	82.00	100.00
tblVehicleTrips	DV_TP	19.00	5.00
tblVehicleTrips	PB_TP	2.00	3.00
tblVehicleTrips	PR_TP	79.00	92.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	ST_TR	2.49	2.63
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	SU_TR	0.73	2.63
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblVehicleTrips	WD_TR	6.83	2.63
tblVehicleTrips	WD_TR	1.68	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.8537	9.2354	6.3529	0.0217	2.4415	0.2847	2.7262	0.8913	0.2633	1.1545	0.0000	2,001.5464	2,001.5464	0.3166	0.0000	2,009.4601
2023	0.6970	6.3520	5.9794	0.0185	2.2021	0.2094	2.4116	0.7973	0.1941	0.9914	0.0000	1,686.2206	1,686.2206	0.2671	0.0000	1,692.8984
2024	0.5619	3.2514	5.0486	0.0120	0.5557	0.1105	0.6662	0.1485	0.1043	0.2528	0.0000	1,065.6466	1,065.6466	0.1413	0.0000	1,069.1799
2025	0.6743	0.4357	0.8017	1.8700e-003	0.0920	0.0175	0.1095	0.0246	0.0164	0.0409	0.0000	167.9064	167.9064	0.0229	0.0000	168.4789
Maximum	**0.8537**	**9.2354**	**6.3529**	**0.0217**	**2.4415**	**0.2847**	**2.7262**	**0.8913**	**0.2633**	**1.1545**	**0.0000**	**2,001.5464**	**2,001.5464**	**0.3166**	**0.0000**	**2,009.4601**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.3688	3.3237	7.1966	0.0217	1.3850	0.0131	1.3981	0.4631	0.0125	0.4755	0.0000	2,001.5454	2,001.5454	0.3166	0.0000	2,009.4591
2023	0.3231	1.9942	6.7643	0.0185	1.2939	8.0600e-003	1.3020	0.4266	7.6600e-003	0.4343	0.0000	1,686.2197	1,686.2197	0.2671	0.0000	1,692.8975
2024	0.3484	1.1252	5.3911	0.0120	0.5557	5.7800e-003	0.5615	0.1485	5.4400e-003	0.1539	0.0000	1,065.6460	1,065.6460	0.1413	0.0000	1,069.1793
2025	0.6444	0.1353	0.8754	1.8700e-003	0.0920	9.3000e-004	0.0930	0.0246	8.8000e-004	0.0255	0.0000	167.9063	167.9063	0.0229	0.0000	168.4789
Maximum	**0.6444**	**3.3237**	**7.1966**	**0.0217**	**1.3850**	**0.0131**	**1.3981**	**0.4631**	**0.0125**	**0.4755**	**0.0000**	**2,001.5454**	**2,001.5454**	**0.3166**	**0.0000**	**2,009.4591**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**39.55**	**65.87**	**-11.25**	**0.00**	**37.13**	**95.53**	**43.27**	**42.91**	**95.43**	**55.36**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
9	**1-22-2022**	**4-21-2022**	1.9308	0.8012
10	**4-22-2022**	**7-21-2022**	2.7268	0.9848
11	**7-22-2022**	**10-21-2022**	2.9902	1.0213
12	**10-22-2022**	**1-21-2023**	2.8785	0.9755
13	**1-22-2023**	**4-21-2023**	2.4036	0.7600
14	**4-22-2023**	**7-21-2023**	2.3155	0.7289
15	**7-22-2023**	**10-21-2023**	0.9818	0.3508
16	**10-22-2023**	**1-21-2024**	0.9770	0.3556

17	**1-22-2024**	**4-21-2024**	0.9276	0.3456
18	**4-22-2024**	**7-21-2024**	0.9218	0.3398
19	**7-22-2024**	**10-21-2024**	0.9337	0.3453
20	**10-22-2024**	**1-21-2025**	1.1785	0.6198
21	**1-22-2025**	**4-21-2025**	0.7145	0.5023
		Highest	2.9902	1.0213

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6361	5.0000e-005	5.9200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0115	0.0115	3.0000e-005	0.0000	0.0123
Energy	9.2100e-003	0.0837	0.0703	5.0000e-004		6.3600e-003	6.3600e-003		6.3600e-003	6.3600e-003	0.0000	1,062.4398	1,062.4398	0.0247	6.4200e-003	1,064.9692
Mobile	0.0642	0.3258	0.9468	4.2800e-003	0.4203	2.9600e-003	0.4232	0.1126	2.7500e-003	0.1154	0.0000	397.3026	397.3026	0.0169	0.0000	397.7252
Waste						0.0000	0.0000		0.0000	0.0000	35.2717	0.0000	35.2717	2.0845	0.0000	87.3842
Water						0.0000	0.0000		0.0000	0.0000	10.4142	238.0601	248.4743	1.0753	0.0264	283.2288
Total	**0.7096**	**0.4096**	**1.0230**	**4.7800e-003**	**0.4203**	**9.3400e-003**	**0.4296**	**0.1126**	**9.1300e-003**	**0.1218**	**45.6859**	**1,697.8140**	**1,743.4999**	**3.2014**	**0.0328**	**1,833.3195**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6361	5.0000e-005	5.9200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0115	0.0115	3.0000e-005	0.0000	0.0123
Energy	9.2100e-003	0.0837	0.0703	5.0000e-004		6.3600e-003	6.3600e-003		6.3600e-003	6.3600e-003	0.0000	1,062.4398	1,062.4398	0.0247	6.4200e-003	1,064.9692
Mobile	0.0642	0.3258	0.9468	4.2800e-003	0.4203	2.9600e-003	0.4232	0.1126	2.7500e-003	0.1154	0.0000	397.3026	397.3026	0.0169	0.0000	397.7252
Waste						0.0000	0.0000		0.0000	0.0000	35.2717	0.0000	35.2717	2.0845	0.0000	87.3842
Water						0.0000	0.0000		0.0000	0.0000	10.4142	238.0601	248.4743	1.0753	0.0264	283.2288
Total	**0.7096**	**0.4096**	**1.0230**	**4.7800e-003**	**0.4203**	**9.3400e-003**	**0.4296**	**0.1126**	**9.1300e-003**	**0.1218**	**45.6859**	**1,697.8140**	**1,743.4999**	**3.2014**	**0.0328**	**1,833.3195**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

LACMTA West Santa Ana Branch MSF - Paramount Option - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/7/2022	5/21/2022	6	90	
2	Site Preparation	Site Preparation	5/23/2022	7/15/2023	6	360	Site Preparation & Grading
3	Building Construction & Track Laydown	Building Construction	7/17/2023	12/21/2024	6	450	
4	Paving Parking & Access Roads	Paving	12/23/2024	3/1/2025	6	60	
5	Road Striping & Architectural Coating	Architectural Coating	12/23/2024	3/1/2025	6	60	

Acres of Grading (Site Preparation Phase): 900

Acres of Grading (Grading Phase): 0

Acres of Paving: 18.96

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 212,925; Non-Residential Outdoor: 70,975; Striped Parking Area: 49,708 (Architectural Coating – sqft)

OffRoad Equipment

LACMTA West Santa Ana Branch MSF - Paramount Option - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Excavators	2	8.00	158	0.38
Demolition	Rough Terrain Forklifts	2	8.00	100	0.40
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Rubber Tired Loaders	2	8.00	203	0.36
Site Preparation	Crawler Tractors	1	8.00	212	0.43
Site Preparation	Excavators	2	8.00	158	0.38
Site Preparation	Graders	2	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction & Track Laydown	Cranes	1	8.00	231	0.29
Building Construction & Track Laydown	Generator Sets	1	8.00	84	0.74
Building Construction & Track Laydown	Rough Terrain Forklifts	3	8.00	100	0.40
Building Construction & Track Laydown	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction & Track Laydown	Welders	2	8.00	46	0.45
Paving Parking & Access Roads	Forklifts	2	8.00	89	0.20
Paving Parking & Access Roads	Pavers	2	8.00	130	0.42
Paving Parking & Access Roads	Paving Equipment	2	8.00	132	0.36
Paving Parking & Access Roads	Rollers	2	8.00	80	0.38
Road Striping & Architectural Coating	Air Compressors	2	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	10	300.00	40.00	5,400.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	10	300.00	40.00	21,600.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction & Track Laydown	10	300.00	40.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving Parking & Access Roads	8	200.00	40.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Road Striping & Architectural Coating	2	100.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0984	0.0000	0.0984	0.0149	0.0000	0.0149	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1620	1.6089	1.2889	2.6700e-003		0.0726	0.0726		0.0679	0.0679	0.0000	233.4387	233.4387	0.0625	0.0000	235.0009
Total	**0.1620**	**1.6089**	**1.2889**	**2.6700e-003**	**0.0984**	**0.0726**	**0.1710**	**0.0149**	**0.0679**	**0.0828**	**0.0000**	**233.4387**	**233.4387**	**0.0625**	**0.0000**	**235.0009**

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0216	0.6937	0.1723	2.0600e-003	0.0464	1.9400e-003	0.0484	0.0127	1.8600e-003	0.0146	0.0000	203.3724	203.3724	0.0141	0.0000	203.7240
Vendor	5.2500e-003	0.1688	0.0456	4.5000e-004	0.0113	3.2000e-004	0.0117	3.2700e-003	3.0000e-004	3.5800e-003	0.0000	43.9797	43.9797	2.6300e-003	0.0000	44.0454
Worker	0.0545	0.0409	0.4704	1.4200e-003	0.1479	1.1800e-003	0.1491	0.0393	1.0900e-003	0.0404	0.0000	128.8109	128.8109	3.5500e-003	0.0000	128.8996
Total	**0.0814**	**0.9033**	**0.6883**	**3.9300e-003**	**0.2057**	**3.4400e-003**	**0.2091**	**0.0553**	**3.2500e-003**	**0.0586**	**0.0000**	**376.1630**	**376.1630**	**0.0202**	**0.0000**	**376.6690**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0384	0.0000	0.0384	5.8100e-003	0.0000	5.8100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0315	0.1366	1.5351	2.6700e-003		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	233.4384	233.4384	0.0625	0.0000	235.0006
Total	**0.0315**	**0.1366**	**1.5351**	**2.6700e-003**	**0.0384**	**6.3000e-004**	**0.0390**	**5.8100e-003**	**6.3000e-004**	**6.4400e-003**	**0.0000**	**233.4384**	**233.4384**	**0.0625**	**0.0000**	**235.0006**

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0216	0.6937	0.1723	2.0600e-003	0.0464	1.9400e-003	0.0484	0.0127	1.8600e-003	0.0146	0.0000	203.3724	203.3724	0.0141	0.0000	203.7240
Vendor	5.2500e-003	0.1688	0.0456	4.5000e-004	0.0113	3.2000e-004	0.0117	3.2700e-003	3.0000e-004	3.5800e-003	0.0000	43.9797	43.9797	2.6300e-003	0.0000	44.0454
Worker	0.0545	0.0409	0.4704	1.4200e-003	0.1479	1.1800e-003	0.1491	0.0393	1.0900e-003	0.0404	0.0000	128.8109	128.8109	3.5500e-003	0.0000	128.8996
Total	**0.0814**	**0.9033**	**0.6883**	**3.9300e-003**	**0.2057**	**3.4400e-003**	**0.2091**	**0.0553**	**3.2500e-003**	**0.0586**	**0.0000**	**376.1630**	**376.1630**	**0.0202**	**0.0000**	**376.6690**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.6335	0.0000	1.6335	0.6871	0.0000	0.6871	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4368	4.7961	2.9073	6.7100e-003		0.2013	0.2013		0.1852	0.1852	0.0000	589.4637	589.4637	0.1906	0.0000	594.2298
Total	**0.4368**	**4.7961**	**2.9073**	**6.7100e-003**	**1.6335**	**0.2013**	**1.8348**	**0.6871**	**0.1852**	**0.8723**	**0.0000**	**589.4637**	**589.4637**	**0.1906**	**0.0000**	**594.2298**

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0462	1.4799	0.3677	4.4000e-003	0.1641	4.1500e-003	0.1683	0.0432	3.9700e-003	0.0471	0.0000	433.8612	433.8612	0.0300	0.0000	434.6113
Vendor	0.0112	0.3600	0.0972	9.7000e-004	0.0242	6.8000e-004	0.0249	6.9800e-003	6.5000e-004	7.6300e-003	0.0000	93.8233	93.8233	5.6000e-003	0.0000	93.9634
Worker	0.1162	0.0871	1.0035	3.0400e-003	0.3156	2.5200e-003	0.3181	0.0838	2.3200e-003	0.0861	0.0000	274.7966	274.7966	7.5700e-003	0.0000	274.9858
Total	**0.1736**	**1.9271**	**1.4684**	**8.4100e-003**	**0.5039**	**7.3500e-003**	**0.5113**	**0.1340**	**6.9400e-003**	**0.1409**	**0.0000**	**802.4811**	**802.4811**	**0.0432**	**0.0000**	**803.5605**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.6371	0.0000	0.6371	0.2680	0.0000	0.2680	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0823	0.3566	3.5049	6.7100e-003		1.6500e-003	1.6500e-003		1.6500e-003	1.6500e-003	0.0000	589.4630	589.4630	0.1906	0.0000	594.2291
Total	**0.0823**	**0.3566**	**3.5049**	**6.7100e-003**	**0.6371**	**1.6500e-003**	**0.6387**	**0.2680**	**1.6500e-003**	**0.2696**	**0.0000**	**589.4630**	**589.4630**	**0.1906**	**0.0000**	**594.2291**

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0462	1.4799	0.3677	4.4000e-003	0.1641	4.1500e-003	0.1683	0.0432	3.9700e-003	0.0471	0.0000	433.8612	433.8612	0.0300	0.0000	434.6113
Vendor	0.0112	0.3600	0.0972	9.7000e-004	0.0242	6.8000e-004	0.0249	6.9800e-003	6.5000e-004	7.6300e-003	0.0000	93.8233	93.8233	5.6000e-003	0.0000	93.9634
Worker	0.1162	0.0871	1.0035	3.0400e-003	0.3156	2.5200e-003	0.3181	0.0838	2.3200e-003	0.0861	0.0000	274.7966	274.7966	7.5700e-003	0.0000	274.9858
Total	**0.1736**	**1.9271**	**1.4684**	**8.4100e-003**	**0.5039**	**7.3500e-003**	**0.5113**	**0.1340**	**6.9400e-003**	**0.1409**	**0.0000**	**802.4811**	**802.4811**	**0.0432**	**0.0000**	**803.5605**

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.4889	0.0000	1.4889	0.6077	0.0000	0.6077	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3400	3.6235	2.4324	5.8700e-003		0.1487	0.1487		0.1368	0.1368	0.0000	515.7055	515.7055	0.1668	0.0000	519.8753
Total	**0.3400**	**3.6235**	**2.4324**	**5.8700e-003**	**1.4889**	**0.1487**	**1.6376**	**0.6077**	**0.1368**	**0.7444**	**0.0000**	**515.7055**	**515.7055**	**0.1668**	**0.0000**	**519.8753**

3.3 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0265	0.8496	0.2919	3.6800e-003	0.1611	1.5200e-003	0.1626	0.0421	1.4500e-003	0.0435	0.0000	363.8180	363.8180	0.0244	0.0000	364.4275
Vendor	7.2700e-003	0.2380	0.0763	8.2000e-004	0.0212	2.8000e-004	0.0214	6.1100e-003	2.7000e-004	6.3700e-003	0.0000	79.5253	79.5253	4.3300e-003	0.0000	79.6336
Worker	0.0956	0.0690	0.8074	2.5600e-003	0.2761	2.1400e-003	0.2783	0.0733	1.9700e-003	0.0753	0.0000	231.6484	231.6484	5.9600e-003	0.0000	231.7974
Total	**0.1294**	**1.1566**	**1.1756**	**7.0600e-003**	**0.4584**	**3.9400e-003**	**0.4623**	**0.1215**	**3.6900e-003**	**0.1252**	**0.0000**	**674.9916**	**674.9916**	**0.0347**	**0.0000**	**675.8585**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5807	0.0000	0.5807	0.2370	0.0000	0.2370	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0720	0.3121	3.0668	5.8700e-003		1.4400e-003	1.4400e-003		1.4400e-003	1.4400e-003	0.0000	515.7049	515.7049	0.1668	0.0000	519.8746
Total	**0.0720**	**0.3121**	**3.0668**	**5.8700e-003**	**0.5807**	**1.4400e-003**	**0.5821**	**0.2370**	**1.4400e-003**	**0.2384**	**0.0000**	**515.7049**	**515.7049**	**0.1668**	**0.0000**	**519.8746**

3.3 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0265	0.8496	0.2919	3.6800e-003	0.1611	1.5200e-003	0.1626	0.0421	1.4500e-003	0.0435	0.0000	363.8180	363.8180	0.0244	0.0000	364.4275
Vendor	7.2700e-003	0.2380	0.0763	8.2000e-004	0.0212	2.8000e-004	0.0214	6.1100e-003	2.7000e-004	6.3700e-003	0.0000	79.5253	79.5253	4.3300e-003	0.0000	79.6336
Worker	0.0956	0.0690	0.8074	2.5600e-003	0.2761	2.1400e-003	0.2783	0.0733	1.9700e-003	0.0753	0.0000	231.6484	231.6484	5.9600e-003	0.0000	231.7974
Total	**0.1294**	**1.1566**	**1.1756**	**7.0600e-003**	**0.4584**	**3.9400e-003**	**0.4623**	**0.1215**	**3.6900e-003**	**0.1252**	**0.0000**	**674.9916**	**674.9916**	**0.0347**	**0.0000**	**675.8585**

3.4 Building Construction & Track Laydown - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1395	1.3088	1.6139	2.6800e-003		0.0547	0.0547		0.0517	0.0517	0.0000	228.8032	228.8032	0.0568	0.0000	230.2237
Total	**0.1395**	**1.3088**	**1.6139**	**2.6800e-003**		**0.0547**	**0.0547**		**0.0517**	**0.0517**	**0.0000**	**228.8032**	**228.8032**	**0.0568**	**0.0000**	**230.2237**

3.4 Building Construction & Track Laydown - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.2300e-003	0.2040	0.0654	7.0000e-004	0.0181	2.4000e-004	0.0184	5.2400e-003	2.3000e-004	5.4600e-003	0.0000	68.1645	68.1645	3.7100e-003	0.0000	68.2574
Worker	0.0820	0.0591	0.6921	2.2000e-003	0.2367	1.8400e-003	0.2385	0.0629	1.6900e-003	0.0646	0.0000	198.5557	198.5557	5.1100e-003	0.0000	198.6835
Total	**0.0882**	**0.2631**	**0.7575**	**2.9000e-003**	**0.2548**	**2.0800e-003**	**0.2569**	**0.0681**	**1.9200e-003**	**0.0700**	**0.0000**	**266.7203**	**266.7203**	**8.8200e-003**	**0.0000**	**266.9409**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0335	0.2624	1.7645	2.6800e-003		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	228.8029	228.8029	0.0568	0.0000	230.2234
Total	**0.0335**	**0.2624**	**1.7645**	**2.6800e-003**		**6.1000e-004**	**6.1000e-004**		**6.1000e-004**	**6.1000e-004**	**0.0000**	**228.8029**	**228.8029**	**0.0568**	**0.0000**	**230.2234**

3.4 Building Construction & Track Laydown - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.2300e-003	0.2040	0.0654	7.0000e-004	0.0181	2.4000e-004	0.0184	5.2400e-003	2.3000e-004	5.4600e-003	0.0000	68.1645	68.1645	3.7100e-003	0.0000	68.2574
Worker	0.0820	0.0591	0.6921	2.2000e-003	0.2367	1.8400e-003	0.2385	0.0629	1.6900e-003	0.0646	0.0000	198.5557	198.5557	5.1100e-003	0.0000	198.6835
Total	**0.0882**	**0.2631**	**0.7575**	**2.9000e-003**	**0.2548**	**2.0800e-003**	**0.2569**	**0.0681**	**1.9200e-003**	**0.0700**	**0.0000**	**266.7203**	**266.7203**	**8.8200e-003**	**0.0000**	**266.9409**

3.4 Building Construction & Track Laydown - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2796	2.6325	3.4180	5.6900e-003		0.1032	0.1032		0.0974	0.0974	0.0000	486.2563	486.2563	0.1201	0.0000	489.2575
Total	**0.2796**	**2.6325**	**3.4180**	**5.6900e-003**		**0.1032**	**0.1032**		**0.0974**	**0.0974**	**0.0000**	**486.2563**	**486.2563**	**0.1201**	**0.0000**	**489.2575**

3.4 Building Construction & Track Laydown - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0129	0.4319	0.1347	1.4800e-003	0.0386	5.0000e-004	0.0391	0.0111	4.8000e-004	0.0116	0.0000	144.2726	144.2726	7.7800e-003	0.0000	144.4670
Worker	0.1649	0.1146	1.3695	4.5200e-003	0.5030	3.8500e-003	0.5068	0.1336	3.5400e-003	0.1371	0.0000	408.8485	408.8485	9.9500e-003	0.0000	409.0974
Total	**0.1779**	**0.5465**	**1.5043**	**6.0000e-003**	**0.5415**	**4.3500e-003**	**0.5459**	**0.1447**	**4.0200e-003**	**0.1487**	**0.0000**	**553.1211**	**553.1211**	**0.0177**	**0.0000**	**553.5644**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0712	0.5576	3.7495	5.6900e-003		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	486.2558	486.2558	0.1201	0.0000	489.2569
Total	**0.0712**	**0.5576**	**3.7495**	**5.6900e-003**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**486.2558**	**486.2558**	**0.1201**	**0.0000**	**489.2569**

3.4 Building Construction & Track Laydown - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0129	0.4319	0.1347	1.4800e-003	0.0386	5.0000e-004	0.0391	0.0111	4.8000e-004	0.0116	0.0000	144.2726	144.2726	7.7800e-003	0.0000	144.4670
Worker	0.1649	0.1146	1.3695	4.5200e-003	0.5030	3.8500e-003	0.5068	0.1336	3.5400e-003	0.1371	0.0000	408.8485	408.8485	9.9500e-003	0.0000	409.0974
Total	**0.1779**	**0.5465**	**1.5043**	**6.0000e-003**	**0.5415**	**4.3500e-003**	**0.5459**	**0.1447**	**4.0200e-003**	**0.1487**	**0.0000**	**553.1211**	**553.1211**	**0.0177**	**0.0000**	**553.5644**

3.5 Paving Parking & Access Roads - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.7100e-003	0.0452	0.0676	1.0000e-004		2.2800e-003	2.2800e-003		2.1000e-003	2.1000e-003	0.0000	9.0849	9.0849	2.9400e-003	0.0000	9.1584
Paving	1.0100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.7200e-003**	**0.0452**	**0.0676**	**1.0000e-004**		**2.2800e-003**	**2.2800e-003**		**2.1000e-003**	**2.1000e-003**	**0.0000**	**9.0849**	**9.0849**	**2.9400e-003**	**0.0000**	**9.1584**

3.5 Paving Parking & Access Roads - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4000e-004	0.0113	3.5200e-003	4.0000e-005	1.0100e-003	1.0000e-005	1.0200e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	3.7718	3.7718	2.0000e-004	0.0000	3.7769
Worker	2.8700e-003	2.0000e-003	0.0239	8.0000e-005	8.7700e-003	7.0000e-005	8.8300e-003	2.3300e-003	6.0000e-005	2.3900e-003	0.0000	7.1259	7.1259	1.7000e-004	0.0000	7.1302
Total	**3.2100e-003**	**0.0133**	**0.0274**	**1.2000e-004**	**9.7800e-003**	**8.0000e-005**	**9.8500e-003**	**2.6200e-003**	**7.0000e-005**	**2.6900e-003**	**0.0000**	**10.8977**	**10.8977**	**3.7000e-004**	**0.0000**	**10.9072**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.2700e-003	5.5100e-003	0.0785	1.0000e-004		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	9.0849	9.0849	2.9400e-003	0.0000	9.1584
Paving	1.0100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.2800e-003**	**5.5100e-003**	**0.0785**	**1.0000e-004**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**9.0849**	**9.0849**	**2.9400e-003**	**0.0000**	**9.1584**

3.5 Paving Parking & Access Roads - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4000e-004	0.0113	3.5200e-003	4.0000e-005	1.0100e-003	1.0000e-005	1.0200e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	3.7718	3.7718	2.0000e-004	0.0000	3.7769
Worker	2.8700e-003	2.0000e-003	0.0239	8.0000e-005	8.7700e-003	7.0000e-005	8.8300e-003	2.3300e-003	6.0000e-005	2.3900e-003	0.0000	7.1259	7.1259	1.7000e-004	0.0000	7.1302
Total	**3.2100e-003**	**0.0133**	**0.0274**	**1.2000e-004**	**9.7800e-003**	**8.0000e-005**	**9.8500e-003**	**2.6200e-003**	**7.0000e-005**	**2.6900e-003**	**0.0000**	**10.8977**	**10.8977**	**3.7000e-004**	**0.0000**	**10.9072**

3.5 Paving Parking & Access Roads - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0283	0.2657	0.4380	6.7000e-004		0.0132	0.0132		0.0121	0.0121	0.0000	59.0332	59.0332	0.0191	0.0000	59.5105
Paving	6.5400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0349**	**0.2657**	**0.4380**	**6.7000e-004**		**0.0132**	**0.0132**		**0.0121**	**0.0121**	**0.0000**	**59.0332**	**59.0332**	**0.0191**	**0.0000**	**59.5105**

3.5 Paving Parking & Access Roads - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1400e-003	0.0728	0.0223	2.5000e-004	6.5500e-003	8.0000e-005	6.6300e-003	1.8900e-003	8.0000e-005	1.9700e-003	0.0000	24.3833	24.3833	1.3000e-003	0.0000	24.4159
Worker	0.0178	0.0119	0.1440	4.9000e-004	0.0570	4.3000e-004	0.0574	0.0151	3.9000e-004	0.0155	0.0000	44.5249	44.5249	1.0300e-003	0.0000	44.5506
Total	**0.0199**	**0.0846**	**0.1663**	**7.4000e-004**	**0.0635**	**5.1000e-004**	**0.0640**	**0.0170**	**4.7000e-004**	**0.0175**	**0.0000**	**68.9082**	**68.9082**	**2.3300e-003**	**0.0000**	**68.9664**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.2700e-003	0.0358	0.5101	6.7000e-004		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	59.0331	59.0331	0.0191	0.0000	59.5105
Paving	6.5400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0148**	**0.0358**	**0.5101**	**6.7000e-004**		**1.7000e-004**	**1.7000e-004**		**1.7000e-004**	**1.7000e-004**	**0.0000**	**59.0331**	**59.0331**	**0.0191**	**0.0000**	**59.5105**

3.5 Paving Parking & Access Roads - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1400e-003	0.0728	0.0223	2.5000e-004	6.5500e-003	8.0000e-005	6.6300e-003	1.8900e-003	8.0000e-005	1.9700e-003	0.0000	24.3833	24.3833	1.3000e-003	0.0000	24.4159
Worker	0.0178	0.0119	0.1440	4.9000e-004	0.0570	4.3000e-004	0.0574	0.0151	3.9000e-004	0.0155	0.0000	44.5249	44.5249	1.0300e-003	0.0000	44.5506
Total	**0.0199**	**0.0846**	**0.1663**	**7.4000e-004**	**0.0635**	**5.1000e-004**	**0.0640**	**0.0170**	**4.7000e-004**	**0.0175**	**0.0000**	**68.9082**	**68.9082**	**2.3300e-003**	**0.0000**	**68.9664**

3.6 Road Striping & Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0921					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9300e-003	0.0130	0.0193	3.0000e-005		6.5000e-004	6.5000e-004		6.5000e-004	6.5000e-004	0.0000	2.7235	2.7235	1.5000e-004	0.0000	2.7273
Total	**0.0941**	**0.0130**	**0.0193**	**3.0000e-005**		**6.5000e-004**	**6.5000e-004**		**6.5000e-004**	**6.5000e-004**	**0.0000**	**2.7235**	**2.7235**	**1.5000e-004**	**0.0000**	**2.7273**

3.6 Road Striping & Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4400e-003	1.0000e-003	0.0119	4.0000e-005	4.3800e-003	3.0000e-005	4.4200e-003	1.1600e-003	3.0000e-005	1.2000e-003	0.0000	3.5630	3.5630	9.0000e-005	0.0000	3.5651
Total	**1.4400e-003**	**1.0000e-003**	**0.0119**	**4.0000e-005**	**4.3800e-003**	**3.0000e-005**	**4.4200e-003**	**1.1600e-003**	**3.0000e-005**	**1.2000e-003**	**0.0000**	**3.5630**	**3.5630**	**9.0000e-005**	**0.0000**	**3.5651**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0921					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2000e-004	1.3700e-003	0.0196	3.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7235	2.7235	1.5000e-004	0.0000	2.7273
Total	**0.0924**	**1.3700e-003**	**0.0196**	**3.0000e-005**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**2.7235**	**2.7235**	**1.5000e-004**	**0.0000**	**2.7273**

3.6 Road Striping & Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4400e-003	1.0000e-003	0.0119	4.0000e-005	4.3800e-003	3.0000e-005	4.4200e-003	1.1600e-003	3.0000e-005	1.2000e-003	0.0000	3.5630	3.5630	9.0000e-005	0.0000	3.5651
Total	**1.4400e-003**	**1.0000e-003**	**0.0119**	**4.0000e-005**	**4.3800e-003**	**3.0000e-005**	**4.4200e-003**	**1.1600e-003**	**3.0000e-005**	**1.2000e-003**	**0.0000**	**3.5630**	**3.5630**	**9.0000e-005**	**0.0000**	**3.5651**

3.6 Road Striping & Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5988					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0119	0.0794	0.1254	2.1000e-004		3.5700e-003	3.5700e-003		3.5700e-003	3.5700e-003	0.0000	17.7026	17.7026	9.7000e-004	0.0000	17.7267
Total	**0.6106**	**0.0794**	**0.1254**	**2.1000e-004**		**3.5700e-003**	**3.5700e-003**		**3.5700e-003**	**3.5700e-003**	**0.0000**	**17.7026**	**17.7026**	**9.7000e-004**	**0.0000**	**17.7267**

3.6 Road Striping & Architectural Coating - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.8800e-003	5.9400e-003	0.0720	2.5000e-004	0.0285	2.1000e-004	0.0287	7.5700e-003	2.0000e-004	7.7600e-003	0.0000	22.2624	22.2624	5.1000e-004	0.0000	22.2753
Total	**8.8800e-003**	**5.9400e-003**	**0.0720**	**2.5000e-004**	**0.0285**	**2.1000e-004**	**0.0287**	**7.5700e-003**	**2.0000e-004**	**7.7600e-003**	**0.0000**	**22.2624**	**22.2624**	**5.1000e-004**	**0.0000**	**22.2753**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5988					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0600e-003	8.9300e-003	0.1271	2.1000e-004		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	17.7025	17.7025	9.7000e-004	0.0000	17.7267
Total	**0.6008**	**8.9300e-003**	**0.1271**	**2.1000e-004**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**17.7025**	**17.7025**	**9.7000e-004**	**0.0000**	**17.7267**

3.6 Road Striping & Architectural Coating - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.8800e-003	5.9400e-003	0.0720	2.5000e-004	0.0285	2.1000e-004	0.0287	7.5700e-003	2.0000e-004	7.7600e-003	0.0000	22.2624	22.2624	5.1000e-004	0.0000	22.2753
Total	**8.8800e-003**	**5.9400e-003**	**0.0720**	**2.5000e-004**	**0.0285**	**2.1000e-004**	**0.0287**	**7.5700e-003**	**2.0000e-004**	**7.7600e-003**	**0.0000**	**22.2624**	**22.2624**	**5.1000e-004**	**0.0000**	**22.2753**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0642	0.3258	0.9468	4.2800e-003	0.4203	2.9600e-003	0.4232	0.1126	2.7500e-003	0.1154	0.0000	397.3026	397.3026	0.0169	0.0000	397.7252
Unmitigated	0.0642	0.3258	0.9468	4.2800e-003	0.4203	2.9600e-003	0.4232	0.1126	2.7500e-003	0.1154	0.0000	397.3026	397.3026	0.0169	0.0000	397.7252

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
General Light Industry	0.00	0.00	0.00		
General Light Industry	0.00	0.00	0.00		
Industrial Park	250.14	250.14	250.14	1,107,686	1,107,686
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-Rail	0.00	0.00	0.00		
Total	250.14	250.14	250.14	1,107,686	1,107,686

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Industrial Park	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Industrial Park	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Other Asphalt Surfaces	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Other Non-Asphalt Surfaces	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Parking Lot	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Unrefrigerated Warehouse-Rail	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

LACMTA West Santa Ana Branch MSF - Paramount Option - Los Angeles-South Coast County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	971.3136	971.3136	0.0229	4.7500e-003	973.3015
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	971.3136	971.3136	0.0229	4.7500e-003	973.3015
NaturalGas Mitigated	9.2100e-003	0.0837	0.0703	5.0000e-004		6.3600e-003	6.3600e-003		6.3600e-003	6.3600e-003	0.0000	91.1262	91.1262	1.7500e-003	1.6700e-003	91.6677
NaturalGas Unmitigated	9.2100e-003	0.0837	0.0703	5.0000e-004		6.3600e-003	6.3600e-003		6.3600e-003	6.3600e-003	0.0000	91.1262	91.1262	1.7500e-003	1.6700e-003	91.6677

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	121994	6.6000e-004	5.9800e-003	5.0200e-003	4.0000e-005		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004	0.0000	6.5101	6.5101	1.2000e-004	1.2000e-004	6.5488
General Light Industry	146067	7.9000e-004	7.1600e-003	6.0100e-003	4.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004	0.0000	7.7947	7.7947	1.5000e-004	1.4000e-004	7.8410
General Light Industry	442907	2.3900e-003	0.0217	0.0182	1.3000e-004		1.6500e-003	1.6500e-003		1.6500e-003	1.6500e-003	0.0000	23.6352	23.6352	4.5000e-004	4.3000e-004	23.7757
Industrial Park	990095	5.3400e-003	0.0485	0.0408	2.9000e-004		3.6900e-003	3.6900e-003		3.6900e-003	3.6900e-003	0.0000	52.8353	52.8353	1.0100e-003	9.7000e-004	53.1492
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-Rail	6577.2	4.0000e-005	3.2000e-004	2.7000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.3510	0.3510	1.0000e-005	1.0000e-005	0.3531
Total		**9.2200e-003**	**0.0837**	**0.0703**	**5.0000e-004**		**6.3500e-003**	**6.3500e-003**		**6.3500e-003**	**6.3500e-003**	**0.0000**	**91.1262**	**91.1262**	**1.7400e-003**	**1.6700e-003**	**91.6677**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	121994	6.6000e-004	5.9800e-003	5.0200e-003	4.0000e-005		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004	0.0000	6.5101	6.5101	1.2000e-004	1.2000e-004	6.5488
General Light Industry	146067	7.9000e-004	7.1600e-003	6.0100e-003	4.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004	0.0000	7.7947	7.7947	1.5000e-004	1.4000e-004	7.8410
General Light Industry	442907	2.3900e-003	0.0217	0.0182	1.3000e-004		1.6500e-003	1.6500e-003		1.6500e-003	1.6500e-003	0.0000	23.6352	23.6352	4.5000e-004	4.3000e-004	23.7757
Industrial Park	990095	5.3400e-003	0.0485	0.0408	2.9000e-004		3.6900e-003	3.6900e-003		3.6900e-003	3.6900e-003	0.0000	52.8353	52.8353	1.0100e-003	9.7000e-004	53.1492
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-Rail	6577.2	4.0000e-005	3.2000e-004	2.7000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.3510	0.3510	1.0000e-005	1.0000e-005	0.3531
Total		**9.2200e-003**	**0.0837**	**0.0703**	**5.0000e-004**		**6.3500e-003**	**6.3500e-003**		**6.3500e-003**	**6.3500e-003**	**0.0000**	**91.1262**	**91.1262**	**1.7400e-003**	**1.6700e-003**	**91.6677**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	271617	151.2802	3.5700e-003	7.4000e-004	151.5898
General Light Industry	74814	41.6685	9.8000e-004	2.0000e-004	41.7538
General Light Industry	89577	49.8909	1.1800e-003	2.4000e-004	49.9931
Industrial Park	1.23548e+006	688.1142	0.0163	3.3600e-003	689.5225
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	42980	23.9382	5.7000e-004	1.2000e-004	23.9872
Unrefrigerated Warehouse-Rail	29484	16.4215	3.9000e-004	8.0000e-005	16.4551
Total		**971.3136**	**0.0229**	**4.7400e-003**	**973.3015**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	271617	151.2802	3.5700e-003	7.4000e-004	151.5898
General Light Industry	74814	41.6685	9.8000e-004	2.0000e-004	41.7538
General Light Industry	89577	49.8909	1.1800e-003	2.4000e-004	49.9931
Industrial Park	1.23548e+006	688.1142	0.0163	3.3600e-003	689.5225
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	42980	23.9382	5.7000e-004	1.2000e-004	23.9872
Unrefrigerated Warehouse-Rail	29484	16.4215	3.9000e-004	8.0000e-005	16.4551
Total		**971.3136**	**0.0229**	**4.7400e-003**	**973.3015**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6361	5.0000e-005	5.9200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0115	0.0115	3.0000e-005	0.0000	0.0123
Unmitigated	0.6361	5.0000e-005	5.9200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0115	0.0115	3.0000e-005	0.0000	0.0123

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0691					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5665					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.5000e-004	5.0000e-005	5.9200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0115	0.0115	3.0000e-005	0.0000	0.0123
Total	**0.6361**	**5.0000e-005**	**5.9200e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0115**	**0.0115**	**3.0000e-005**	**0.0000**	**0.0123**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0691					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5665					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.5000e-004	5.0000e-005	5.9200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0115	0.0115	3.0000e-005	0.0000	0.0123
Total	**0.6361**	**5.0000e-005**	**5.9200e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0115**	**0.0115**	**3.0000e-005**	**0.0000**	**0.0123**

7.0 Water Detail

7.1 Mitigation Measures Water

LACMTA West Santa Ana Branch MSF - Paramount Option - Los Angeles-South Coast County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	248.4743	1.0753	0.0264	283.2288
Unmitigated	248.4743	1.0753	0.0264	283.2288

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	9.0835 / 0	68.7571	0.2975	7.3100e-003	78.3743
Industrial Park	21.9942 / 0	166.4839	0.7205	0.0177	189.7702
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-Rail	1.74825 / 0	13.2333	0.0573	1.4100e-003	15.0843
Total		**248.4743**	**1.0753**	**0.0264**	**283.2287**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	9.0835 / 0	68.7571	0.2975	7.3100e-003	78.3743
Industrial Park	21.9942 / 0	166.4839	0.7205	0.0177	189.7702
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-Rail	1.74825 / 0	13.2333	0.0573	1.4100e-003	15.0843
Total		**248.4743**	**1.0753**	**0.0264**	**283.2287**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	35.2717	2.0845	0.0000	87.3842
Unmitigated	35.2717	2.0845	0.0000	87.3842

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	48.71	9.8877	0.5844	0.0000	24.4963
Industrial Park	117.94	23.9408	1.4149	0.0000	59.3122
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-Rail	7.11	1.4433	0.0853	0.0000	3.5756
Total		**35.2717**	**2.0845**	**0.0000**	**87.3842**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	48.71	9.8877	0.5844	0.0000	24.4963
Industrial Park	117.94	23.9408	1.4149	0.0000	59.3122
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-Rail	7.11	1.4433	0.0853	0.0000	3.5756
Total		**35.2717**	**2.0845**	**0.0000**	**87.3842**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

LACMTA West Santa Ana Branch MSF - Bellflower Option

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	4.60	1000sqft	0.11	4,600.00	0
General Light Industry	12.10	1000sqft	0.28	12,100.00	0
Industrial Park	103.44	1000sqft	2.37	103,440.00	0
Unrefrigerated Warehouse-Rail	11.90	1000sqft	0.27	11,900.00	0
Other Asphalt Surfaces	3.00	Acre	3.00	130,680.00	0
Other Non-Asphalt Surfaces	12.50	Acre	12.50	544,500.00	0
Parking Lot	307.00	Space	2.76	122,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2028
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

LACMTA West Santa Ana Branch MSF - Bellflower Option - Los Angeles-South Coast County, Annual

Project Characteristics -

Construction Phase - Preliminary Schedule

Off-road Equipment - Project Inventory

Off-road Equipment - Project Inventory

Off-road Equipment - Project Inventory

Off-road Equipment - Project Inventory

Off-road Equipment - Project Inventory

Trips and VMT - Maximum Daily Workers = 150.
Daily Haul Trips = 30 x 90 = 2700 (Demo), 60 x 360 = 21600

Grading - Equip = 1 scraper (1 acre/day), 2 graders (1 acres/day), 1 crawler tractor (0.5 acres/day) = 2.5 acres/day x 360 days = 900

Vehicle Trips - 250 trips/day

Area Coating - SCAQMD Rule 1113 - Building Envelope = 50 g/L

Construction Off-road Equipment Mitigation - Metro GCP Compliance

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	90.00
tblConstructionPhase	NumDays	10.00	360.00
tblConstructionPhase	NumDays	370.00	450.00
tblConstructionPhase	NumDays	20.00	60.00
tblConstructionPhase	NumDays	20.00	60.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	HaulingTripNumber	910.00	5,400.00
tblTripsAndVMT	HaulingTripNumber	0.00	21,600.00
tblTripsAndVMT	VendorTripNumber	0.00	40.00
tblTripsAndVMT	VendorTripNumber	0.00	40.00
tblTripsAndVMT	VendorTripNumber	152.00	40.00
tblTripsAndVMT	VendorTripNumber	0.00	40.00
tblTripsAndVMT	WorkerTripNumber	25.00	300.00
tblTripsAndVMT	WorkerTripNumber	25.00	300.00
tblTripsAndVMT	WorkerTripNumber	391.00	300.00
tblTripsAndVMT	WorkerTripNumber	20.00	200.00
tblTripsAndVMT	WorkerTripNumber	78.00	100.00
tblVehicleTrips	DV_TP	19.00	5.00
tblVehicleTrips	PB_TP	2.00	3.00
tblVehicleTrips	PR_TP	79.00	92.00

tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	ST_TR	2.49	2.42
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	SU_TR	0.73	2.42
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblVehicleTrips	WD_TR	6.83	2.42
tblVehicleTrips	WD_TR	1.68	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.8537	9.2354	6.3529	0.0217	2.4415	0.2847	2.7262	0.8913	0.2633	1.1545	0.0000	2,001.5464	2,001.5464	0.3166	0.0000	2,009.4601
2023	0.6970	6.3520	5.9794	0.0185	2.2021	0.2094	2.4116	0.7973	0.1941	0.9914	0.0000	1,686.2206	1,686.2206	0.2671	0.0000	1,692.8984
2024	0.5560	3.2514	5.0486	0.0120	0.5557	0.1105	0.6662	0.1485	0.1043	0.2528	0.0000	1,065.6466	1,065.6466	0.1413	0.0000	1,069.1799
2025	0.6358	0.4357	0.8017	1.8700e-003	0.0920	0.0175	0.1095	0.0246	0.0164	0.0409	0.0000	167.9064	167.9064	0.0229	0.0000	168.4789
Maximum	**0.8537**	**9.2354**	**6.3529**	**0.0217**	**2.4415**	**0.2847**	**2.7262**	**0.8913**	**0.2633**	**1.1545**	**0.0000**	**2,001.5464**	**2,001.5464**	**0.3166**	**0.0000**	**2,009.4601**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.3688	3.3237	7.1966	0.0217	1.3850	0.0131	1.3981	0.4631	0.0125	0.4755	0.0000	2,001.5454	2,001.5454	0.3166	0.0000	2,009.4591
2023	0.3231	1.9942	6.7643	0.0185	1.2939	8.0600e-003	1.3020	0.4266	7.6600e-003	0.4343	0.0000	1,686.2197	1,686.2197	0.2671	0.0000	1,692.8975
2024	0.3425	1.1252	5.3911	0.0120	0.5557	5.7800e-003	0.5615	0.1485	5.4400e-003	0.1539	0.0000	1,065.6460	1,065.6460	0.1413	0.0000	1,069.1793
2025	0.6059	0.1353	0.8754	1.8700e-003	0.0920	9.3000e-004	0.0930	0.0246	8.8000e-004	0.0255	0.0000	167.9063	167.9063	0.0229	0.0000	168.4789
Maximum	**0.6059**	**3.3237**	**7.1966**	**0.0217**	**1.3850**	**0.0131**	**1.3981**	**0.4631**	**0.0125**	**0.4755**	**0.0000**	**2,001.5454**	**2,001.5454**	**0.3166**	**0.0000**	**2,009.4591**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**40.19**	**65.87**	**-11.25**	**0.00**	**37.13**	**95.53**	**43.27**	**42.91**	**95.43**	**55.36**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
9	**1-22-2022**	**4-21-2022**	1.9308	0.8012
10	**4-22-2022**	**7-21-2022**	2.7268	0.9848
11	**7-22-2022**	**10-21-2022**	2.9902	1.0213
12	**10-22-2022**	**1-21-2023**	2.8785	0.9755
13	**1-22-2023**	**4-21-2023**	2.4036	0.7600
14	**4-22-2023**	**7-21-2023**	2.3155	0.7289
15	**7-22-2023**	**10-21-2023**	0.9818	0.3508
16	**10-22-2023**	**1-21-2024**	0.9770	0.3556

17	**1-22-2024**	**4-21-2024**	0.9276	0.3456
18	**4-22-2024**	**7-21-2024**	0.9218	0.3398
19	**7-22-2024**	**10-21-2024**	0.9337	0.3453
20	**10-22-2024**	**1-21-2025**	1.1595	0.6007
21	**1-22-2025**	**4-21-2025**	0.6898	0.4775
		Highest	2.9902	1.0213

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5939	5.0000e-005	5.7900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0113	0.0113	3.0000e-005	0.0000	0.0120
Energy	7.4900e-003	0.0681	0.0572	4.1000e-004		5.1800e-003	5.1800e-003		5.1800e-003	5.1800e-003	0.0000	975.5574	975.5574	0.0227	5.7600e-003	977.8428
Mobile	0.0643	0.3261	0.9475	4.2900e-003	0.4206	2.9700e-003	0.4236	0.1127	2.7600e-003	0.1155	0.0000	397.5972	397.5972	0.0169	0.0000	398.0201
Waste						0.0000	0.0000		0.0000	0.0000	32.5131	0.0000	32.5131	1.9215	0.0000	80.5497
Water						0.0000	0.0000		0.0000	0.0000	9.6871	221.4404	231.1275	1.0002	0.0246	263.4556
Total	**0.6657**	**0.3942**	**1.0105**	**4.7000e-003**	**0.4206**	**8.1700e-003**	**0.4288**	**0.1127**	**7.9600e-003**	**0.1207**	**42.2002**	**1,594.6062**	**1,636.8064**	**2.9613**	**0.0303**	**1,719.8803**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5939	5.0000e-005	5.7900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0113	0.0113	3.0000e-005	0.0000	0.0120
Energy	7.4900e-003	0.0681	0.0572	4.1000e-004		5.1800e-003	5.1800e-003		5.1800e-003	5.1800e-003	0.0000	975.5574	975.5574	0.0227	5.7600e-003	977.8428
Mobile	0.0643	0.3261	0.9475	4.2900e-003	0.4206	2.9700e-003	0.4236	0.1127	2.7600e-003	0.1155	0.0000	397.5972	397.5972	0.0169	0.0000	398.0201
Waste						0.0000	0.0000		0.0000	0.0000	32.5131	0.0000	32.5131	1.9215	0.0000	80.5497
Water						0.0000	0.0000		0.0000	0.0000	9.6871	221.4404	231.1275	1.0002	0.0246	263.4556
Total	**0.6657**	**0.3942**	**1.0105**	**4.7000e-003**	**0.4206**	**8.1700e-003**	**0.4288**	**0.1127**	**7.9600e-003**	**0.1207**	**42.2002**	**1,594.6062**	**1,636.8064**	**2.9613**	**0.0303**	**1,719.8803**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

LACMTA West Santa Ana Branch MSF - Bellflower Option - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/7/2022	5/21/2022	6	90	
2	Site Preparation	Site Preparation	5/23/2022	7/15/2023	6	360	
3	Building Construction & Track Laydown	Building Construction	7/17/2023	12/21/2024	6	450	
4	Paving Parking & Access Roads	Paving	12/23/2024	3/1/2025	6	60	
5	Road Striping & Architectural Coating	Architectural Coating	12/23/2024	3/1/2025	6	60	

Acres of Grading (Site Preparation Phase): 900

Acres of Grading (Grading Phase): 0

Acres of Paving: 18.26

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 198,060; Non-Residential Outdoor: 66,020; Striped Parking Area: 47,879 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Excavators	2	8.00	158	0.38
Demolition	Rough Terrain Forklifts	2	8.00	100	0.40
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Rubber Tired Loaders	2	8.00	203	0.36
Site Preparation	Crawler Tractors	1	8.00	212	0.43
Site Preparation	Excavators	2	8.00	158	0.38
Site Preparation	Graders	2	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction & Track Laydown	Cranes	1	8.00	231	0.29
Building Construction & Track Laydown	Generator Sets	1	8.00	84	0.74
Building Construction & Track Laydown	Rough Terrain Forklifts	3	8.00	100	0.40
Building Construction & Track Laydown	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction & Track Laydown	Welders	2	8.00	46	0.45
Paving Parking & Access Roads	Forklifts	2	8.00	89	0.20
Paving Parking & Access Roads	Pavers	2	8.00	130	0.42
Paving Parking & Access Roads	Paving Equipment	2	8.00	132	0.36
Paving Parking & Access Roads	Rollers	2	8.00	80	0.38
Road Striping & Architectural Coating	Air Compressors	2	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	10	300.00	40.00	5,400.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	10	300.00	40.00	21,600.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction & Track Laydown	10	300.00	40.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving Parking & Access Roads	8	200.00	40.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Road Striping & Architectural Coating	2	100.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0984	0.0000	0.0984	0.0149	0.0000	0.0149	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1620	1.6089	1.2889	2.6700e-003		0.0726	0.0726		0.0679	0.0679	0.0000	233.4387	233.4387	0.0625	0.0000	235.0009
Total	**0.1620**	**1.6089**	**1.2889**	**2.6700e-003**	**0.0984**	**0.0726**	**0.1710**	**0.0149**	**0.0679**	**0.0828**	**0.0000**	**233.4387**	**233.4387**	**0.0625**	**0.0000**	**235.0009**

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0216	0.6937	0.1723	2.0600e-003	0.0464	1.9400e-003	0.0484	0.0127	1.8600e-003	0.0146	0.0000	203.3724	203.3724	0.0141	0.0000	203.7240
Vendor	5.2500e-003	0.1688	0.0456	4.5000e-004	0.0113	3.2000e-004	0.0117	3.2700e-003	3.0000e-004	3.5800e-003	0.0000	43.9797	43.9797	2.6300e-003	0.0000	44.0454
Worker	0.0545	0.0409	0.4704	1.4200e-003	0.1479	1.1800e-003	0.1491	0.0393	1.0900e-003	0.0404	0.0000	128.8109	128.8109	3.5500e-003	0.0000	128.8996
Total	**0.0814**	**0.9033**	**0.6883**	**3.9300e-003**	**0.2057**	**3.4400e-003**	**0.2091**	**0.0553**	**3.2500e-003**	**0.0586**	**0.0000**	**376.1630**	**376.1630**	**0.0202**	**0.0000**	**376.6690**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0384	0.0000	0.0384	5.8100e-003	0.0000	5.8100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0315	0.1366	1.5351	2.6700e-003		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	233.4384	233.4384	0.0625	0.0000	235.0006
Total	**0.0315**	**0.1366**	**1.5351**	**2.6700e-003**	**0.0384**	**6.3000e-004**	**0.0390**	**5.8100e-003**	**6.3000e-004**	**6.4400e-003**	**0.0000**	**233.4384**	**233.4384**	**0.0625**	**0.0000**	**235.0006**

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0216	0.6937	0.1723	2.0600e-003	0.0464	1.9400e-003	0.0484	0.0127	1.8600e-003	0.0146	0.0000	203.3724	203.3724	0.0141	0.0000	203.7240
Vendor	5.2500e-003	0.1688	0.0456	4.5000e-004	0.0113	3.2000e-004	0.0117	3.2700e-003	3.0000e-004	3.5800e-003	0.0000	43.9797	43.9797	2.6300e-003	0.0000	44.0454
Worker	0.0545	0.0409	0.4704	1.4200e-003	0.1479	1.1800e-003	0.1491	0.0393	1.0900e-003	0.0404	0.0000	128.8109	128.8109	3.5500e-003	0.0000	128.8996
Total	**0.0814**	**0.9033**	**0.6883**	**3.9300e-003**	**0.2057**	**3.4400e-003**	**0.2091**	**0.0553**	**3.2500e-003**	**0.0586**	**0.0000**	**376.1630**	**376.1630**	**0.0202**	**0.0000**	**376.6690**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.6335	0.0000	1.6335	0.6871	0.0000	0.6871	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4368	4.7961	2.9073	6.7100e-003		0.2013	0.2013		0.1852	0.1852	0.0000	589.4637	589.4637	0.1906	0.0000	594.2298
Total	**0.4368**	**4.7961**	**2.9073**	**6.7100e-003**	**1.6335**	**0.2013**	**1.8348**	**0.6871**	**0.1852**	**0.8723**	**0.0000**	**589.4637**	**589.4637**	**0.1906**	**0.0000**	**594.2298**

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0462	1.4799	0.3677	4.4000e-003	0.1641	4.1500e-003	0.1683	0.0432	3.9700e-003	0.0471	0.0000	433.8612	433.8612	0.0300	0.0000	434.6113
Vendor	0.0112	0.3600	0.0972	9.7000e-004	0.0242	6.8000e-004	0.0249	6.9800e-003	6.5000e-004	7.6300e-003	0.0000	93.8233	93.8233	5.6000e-003	0.0000	93.9634
Worker	0.1162	0.0871	1.0035	3.0400e-003	0.3156	2.5200e-003	0.3181	0.0838	2.3200e-003	0.0861	0.0000	274.7966	274.7966	7.5700e-003	0.0000	274.9858
Total	**0.1736**	**1.9271**	**1.4684**	**8.4100e-003**	**0.5039**	**7.3500e-003**	**0.5113**	**0.1340**	**6.9400e-003**	**0.1409**	**0.0000**	**802.4811**	**802.4811**	**0.0432**	**0.0000**	**803.5605**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.6371	0.0000	0.6371	0.2680	0.0000	0.2680	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0823	0.3566	3.5049	6.7100e-003		1.6500e-003	1.6500e-003		1.6500e-003	1.6500e-003	0.0000	589.4630	589.4630	0.1906	0.0000	594.2291
Total	**0.0823**	**0.3566**	**3.5049**	**6.7100e-003**	**0.6371**	**1.6500e-003**	**0.6387**	**0.2680**	**1.6500e-003**	**0.2696**	**0.0000**	**589.4630**	**589.4630**	**0.1906**	**0.0000**	**594.2291**

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0462	1.4799	0.3677	4.4000e-003	0.1641	4.1500e-003	0.1683	0.0432	3.9700e-003	0.0471	0.0000	433.8612	433.8612	0.0300	0.0000	434.6113
Vendor	0.0112	0.3600	0.0972	9.7000e-004	0.0242	6.8000e-004	0.0249	6.9800e-003	6.5000e-004	7.6300e-003	0.0000	93.8233	93.8233	5.6000e-003	0.0000	93.9634
Worker	0.1162	0.0871	1.0035	3.0400e-003	0.3156	2.5200e-003	0.3181	0.0838	2.3200e-003	0.0861	0.0000	274.7966	274.7966	7.5700e-003	0.0000	274.9858
Total	**0.1736**	**1.9271**	**1.4684**	**8.4100e-003**	**0.5039**	**7.3500e-003**	**0.5113**	**0.1340**	**6.9400e-003**	**0.1409**	**0.0000**	**802.4811**	**802.4811**	**0.0432**	**0.0000**	**803.5605**

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.4889	0.0000	1.4889	0.6077	0.0000	0.6077	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3400	3.6235	2.4324	5.8700e-003		0.1487	0.1487		0.1368	0.1368	0.0000	515.7055	515.7055	0.1668	0.0000	519.8753
Total	**0.3400**	**3.6235**	**2.4324**	**5.8700e-003**	**1.4889**	**0.1487**	**1.6376**	**0.6077**	**0.1368**	**0.7444**	**0.0000**	**515.7055**	**515.7055**	**0.1668**	**0.0000**	**519.8753**

3.3 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0265	0.8496	0.2919	3.6800e-003	0.1611	1.5200e-003	0.1626	0.0421	1.4500e-003	0.0435	0.0000	363.8180	363.8180	0.0244	0.0000	364.4275
Vendor	7.2700e-003	0.2380	0.0763	8.2000e-004	0.0212	2.8000e-004	0.0214	6.1100e-003	2.7000e-004	6.3700e-003	0.0000	79.5253	79.5253	4.3300e-003	0.0000	79.6336
Worker	0.0956	0.0690	0.8074	2.5600e-003	0.2761	2.1400e-003	0.2783	0.0733	1.9700e-003	0.0753	0.0000	231.6484	231.6484	5.9600e-003	0.0000	231.7974
Total	**0.1294**	**1.1566**	**1.1756**	**7.0600e-003**	**0.4584**	**3.9400e-003**	**0.4623**	**0.1215**	**3.6900e-003**	**0.1252**	**0.0000**	**674.9916**	**674.9916**	**0.0347**	**0.0000**	**675.8585**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5807	0.0000	0.5807	0.2370	0.0000	0.2370	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0720	0.3121	3.0668	5.8700e-003		1.4400e-003	1.4400e-003		1.4400e-003	1.4400e-003	0.0000	515.7049	515.7049	0.1668	0.0000	519.8746
Total	**0.0720**	**0.3121**	**3.0668**	**5.8700e-003**	**0.5807**	**1.4400e-003**	**0.5821**	**0.2370**	**1.4400e-003**	**0.2384**	**0.0000**	**515.7049**	**515.7049**	**0.1668**	**0.0000**	**519.8746**

3.3 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0265	0.8496	0.2919	3.6800e-003	0.1611	1.5200e-003	0.1626	0.0421	1.4500e-003	0.0435	0.0000	363.8180	363.8180	0.0244	0.0000	364.4275
Vendor	7.2700e-003	0.2380	0.0763	8.2000e-004	0.0212	2.8000e-004	0.0214	6.1100e-003	2.7000e-004	6.3700e-003	0.0000	79.5253	79.5253	4.3300e-003	0.0000	79.6336
Worker	0.0956	0.0690	0.8074	2.5600e-003	0.2761	2.1400e-003	0.2783	0.0733	1.9700e-003	0.0753	0.0000	231.6484	231.6484	5.9600e-003	0.0000	231.7974
Total	**0.1294**	**1.1566**	**1.1756**	**7.0600e-003**	**0.4584**	**3.9400e-003**	**0.4623**	**0.1215**	**3.6900e-003**	**0.1252**	**0.0000**	**674.9916**	**674.9916**	**0.0347**	**0.0000**	**675.8585**

3.4 Building Construction & Track Laydown - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1395	1.3088	1.6139	2.6800e-003		0.0547	0.0547		0.0517	0.0517	0.0000	228.8032	228.8032	0.0568	0.0000	230.2237
Total	**0.1395**	**1.3088**	**1.6139**	**2.6800e-003**		**0.0547**	**0.0547**		**0.0517**	**0.0517**	**0.0000**	**228.8032**	**228.8032**	**0.0568**	**0.0000**	**230.2237**

3.4 Building Construction & Track Laydown - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.2300e-003	0.2040	0.0654	7.0000e-004	0.0181	2.4000e-004	0.0184	5.2400e-003	2.3000e-004	5.4600e-003	0.0000	68.1645	68.1645	3.7100e-003	0.0000	68.2574
Worker	0.0820	0.0591	0.6921	2.2000e-003	0.2367	1.8400e-003	0.2385	0.0629	1.6900e-003	0.0646	0.0000	198.5557	198.5557	5.1100e-003	0.0000	198.6835
Total	**0.0882**	**0.2631**	**0.7575**	**2.9000e-003**	**0.2548**	**2.0800e-003**	**0.2569**	**0.0681**	**1.9200e-003**	**0.0700**	**0.0000**	**266.7203**	**266.7203**	**8.8200e-003**	**0.0000**	**266.9409**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0335	0.2624	1.7645	2.6800e-003		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	228.8029	228.8029	0.0568	0.0000	230.2234
Total	**0.0335**	**0.2624**	**1.7645**	**2.6800e-003**		**6.1000e-004**	**6.1000e-004**		**6.1000e-004**	**6.1000e-004**	**0.0000**	**228.8029**	**228.8029**	**0.0568**	**0.0000**	**230.2234**

3.4 Building Construction & Track Laydown - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.2300e-003	0.2040	0.0654	7.0000e-004	0.0181	2.4000e-004	0.0184	5.2400e-003	2.3000e-004	5.4600e-003	0.0000	68.1645	68.1645	3.7100e-003	0.0000	68.2574
Worker	0.0820	0.0591	0.6921	2.2000e-003	0.2367	1.8400e-003	0.2385	0.0629	1.6900e-003	0.0646	0.0000	198.5557	198.5557	5.1100e-003	0.0000	198.6835
Total	**0.0882**	**0.2631**	**0.7575**	**2.9000e-003**	**0.2548**	**2.0800e-003**	**0.2569**	**0.0681**	**1.9200e-003**	**0.0700**	**0.0000**	**266.7203**	**266.7203**	**8.8200e-003**	**0.0000**	**266.9409**

3.4 Building Construction & Track Laydown - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2796	2.6325	3.4180	5.6900e-003		0.1032	0.1032		0.0974	0.0974	0.0000	486.2563	486.2563	0.1201	0.0000	489.2575
Total	**0.2796**	**2.6325**	**3.4180**	**5.6900e-003**		**0.1032**	**0.1032**		**0.0974**	**0.0974**	**0.0000**	**486.2563**	**486.2563**	**0.1201**	**0.0000**	**489.2575**

3.4 Building Construction & Track Laydown - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0129	0.4319	0.1347	1.4800e-003	0.0386	5.0000e-004	0.0391	0.0111	4.8000e-004	0.0116	0.0000	144.2726	144.2726	7.7800e-003	0.0000	144.4670
Worker	0.1649	0.1146	1.3695	4.5200e-003	0.5030	3.8500e-003	0.5068	0.1336	3.5400e-003	0.1371	0.0000	408.8485	408.8485	9.9500e-003	0.0000	409.0974
Total	**0.1779**	**0.5465**	**1.5043**	**6.0000e-003**	**0.5415**	**4.3500e-003**	**0.5459**	**0.1447**	**4.0200e-003**	**0.1487**	**0.0000**	**553.1211**	**553.1211**	**0.0177**	**0.0000**	**553.5644**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0712	0.5576	3.7495	5.6900e-003		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	486.2558	486.2558	0.1201	0.0000	489.2569
Total	**0.0712**	**0.5576**	**3.7495**	**5.6900e-003**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**486.2558**	**486.2558**	**0.1201**	**0.0000**	**489.2569**

3.4 Building Construction & Track Laydown - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0129	0.4319	0.1347	1.4800e-003	0.0386	5.0000e-004	0.0391	0.0111	4.8000e-004	0.0116	0.0000	144.2726	144.2726	7.7800e-003	0.0000	144.4670
Worker	0.1649	0.1146	1.3695	4.5200e-003	0.5030	3.8500e-003	0.5068	0.1336	3.5400e-003	0.1371	0.0000	408.8485	408.8485	9.9500e-003	0.0000	409.0974
Total	**0.1779**	**0.5465**	**1.5043**	**6.0000e-003**	**0.5415**	**4.3500e-003**	**0.5459**	**0.1447**	**4.0200e-003**	**0.1487**	**0.0000**	**553.1211**	**553.1211**	**0.0177**	**0.0000**	**553.5644**

3.5 Paving Parking & Access Roads - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.7100e-003	0.0452	0.0676	1.0000e-004		2.2800e-003	2.2800e-003		2.1000e-003	2.1000e-003	0.0000	9.0849	9.0849	2.9400e-003	0.0000	9.1584
Paving	1.0100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.7200e-003**	**0.0452**	**0.0676**	**1.0000e-004**		**2.2800e-003**	**2.2800e-003**		**2.1000e-003**	**2.1000e-003**	**0.0000**	**9.0849**	**9.0849**	**2.9400e-003**	**0.0000**	**9.1584**

3.5 Paving Parking & Access Roads - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4000e-004	0.0113	3.5200e-003	4.0000e-005	1.0100e-003	1.0000e-005	1.0200e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	3.7718	3.7718	2.0000e-004	0.0000	3.7769
Worker	2.8700e-003	2.0000e-003	0.0239	8.0000e-005	8.7700e-003	7.0000e-005	8.8300e-003	2.3300e-003	6.0000e-005	2.3900e-003	0.0000	7.1259	7.1259	1.7000e-004	0.0000	7.1302
Total	**3.2100e-003**	**0.0133**	**0.0274**	**1.2000e-004**	**9.7800e-003**	**8.0000e-005**	**9.8500e-003**	**2.6200e-003**	**7.0000e-005**	**2.6900e-003**	**0.0000**	**10.8977**	**10.8977**	**3.7000e-004**	**0.0000**	**10.9072**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.2700e-003	5.5100e-003	0.0785	1.0000e-004		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	9.0849	9.0849	2.9400e-003	0.0000	9.1584
Paving	1.0100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.2800e-003**	**5.5100e-003**	**0.0785**	**1.0000e-004**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**9.0849**	**9.0849**	**2.9400e-003**	**0.0000**	**9.1584**

3.5 Paving Parking & Access Roads - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4000e-004	0.0113	3.5200e-003	4.0000e-005	1.0100e-003	1.0000e-005	1.0200e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	3.7718	3.7718	2.0000e-004	0.0000	3.7769
Worker	2.8700e-003	2.0000e-003	0.0239	8.0000e-005	8.7700e-003	7.0000e-005	8.8300e-003	2.3300e-003	6.0000e-005	2.3900e-003	0.0000	7.1259	7.1259	1.7000e-004	0.0000	7.1302
Total	**3.2100e-003**	**0.0133**	**0.0274**	**1.2000e-004**	**9.7800e-003**	**8.0000e-005**	**9.8500e-003**	**2.6200e-003**	**7.0000e-005**	**2.6900e-003**	**0.0000**	**10.8977**	**10.8977**	**3.7000e-004**	**0.0000**	**10.9072**

3.5 Paving Parking & Access Roads - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0283	0.2657	0.4380	6.7000e-004		0.0132	0.0132		0.0121	0.0121	0.0000	59.0332	59.0332	0.0191	0.0000	59.5105
Paving	6.5400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0349**	**0.2657**	**0.4380**	**6.7000e-004**		**0.0132**	**0.0132**		**0.0121**	**0.0121**	**0.0000**	**59.0332**	**59.0332**	**0.0191**	**0.0000**	**59.5105**

3.5 Paving Parking & Access Roads - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1400e-003	0.0728	0.0223	2.5000e-004	6.5500e-003	8.0000e-005	6.6300e-003	1.8900e-003	8.0000e-005	1.9700e-003	0.0000	24.3833	24.3833	1.3000e-003	0.0000	24.4159
Worker	0.0178	0.0119	0.1440	4.9000e-004	0.0570	4.3000e-004	0.0574	0.0151	3.9000e-004	0.0155	0.0000	44.5249	44.5249	1.0300e-003	0.0000	44.5506
Total	**0.0199**	**0.0846**	**0.1663**	**7.4000e-004**	**0.0635**	**5.1000e-004**	**0.0640**	**0.0170**	**4.7000e-004**	**0.0175**	**0.0000**	**68.9082**	**68.9082**	**2.3300e-003**	**0.0000**	**68.9664**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.2700e-003	0.0358	0.5101	6.7000e-004		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	59.0331	59.0331	0.0191	0.0000	59.5105
Paving	6.5400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0148**	**0.0358**	**0.5101**	**6.7000e-004**		**1.7000e-004**	**1.7000e-004**		**1.7000e-004**	**1.7000e-004**	**0.0000**	**59.0331**	**59.0331**	**0.0191**	**0.0000**	**59.5105**

3.5 Paving Parking & Access Roads - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1400e-003	0.0728	0.0223	2.5000e-004	6.5500e-003	8.0000e-005	6.6300e-003	1.8900e-003	8.0000e-005	1.9700e-003	0.0000	24.3833	24.3833	1.3000e-003	0.0000	24.4159
Worker	0.0178	0.0119	0.1440	4.9000e-004	0.0570	4.3000e-004	0.0574	0.0151	3.9000e-004	0.0155	0.0000	44.5249	44.5249	1.0300e-003	0.0000	44.5506
Total	**0.0199**	**0.0846**	**0.1663**	**7.4000e-004**	**0.0635**	**5.1000e-004**	**0.0640**	**0.0170**	**4.7000e-004**	**0.0175**	**0.0000**	**68.9082**	**68.9082**	**2.3300e-003**	**0.0000**	**68.9664**

3.6 Road Striping & Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0862					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9300e-003	0.0130	0.0193	3.0000e-005		6.5000e-004	6.5000e-004		6.5000e-004	6.5000e-004	0.0000	2.7235	2.7235	1.5000e-004	0.0000	2.7273
Total	**0.0881**	**0.0130**	**0.0193**	**3.0000e-005**		**6.5000e-004**	**6.5000e-004**		**6.5000e-004**	**6.5000e-004**	**0.0000**	**2.7235**	**2.7235**	**1.5000e-004**	**0.0000**	**2.7273**

3.6 Road Striping & Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4400e-003	1.0000e-003	0.0119	4.0000e-005	4.3800e-003	3.0000e-005	4.4200e-003	1.1600e-003	3.0000e-005	1.2000e-003	0.0000	3.5630	3.5630	9.0000e-005	0.0000	3.5651
Total	**1.4400e-003**	**1.0000e-003**	**0.0119**	**4.0000e-005**	**4.3800e-003**	**3.0000e-005**	**4.4200e-003**	**1.1600e-003**	**3.0000e-005**	**1.2000e-003**	**0.0000**	**3.5630**	**3.5630**	**9.0000e-005**	**0.0000**	**3.5651**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0862					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2000e-004	1.3700e-003	0.0196	3.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7235	2.7235	1.5000e-004	0.0000	2.7273
Total	**0.0865**	**1.3700e-003**	**0.0196**	**3.0000e-005**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**2.7235**	**2.7235**	**1.5000e-004**	**0.0000**	**2.7273**

3.6 Road Striping & Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4400e-003	1.0000e-003	0.0119	4.0000e-005	4.3800e-003	3.0000e-005	4.4200e-003	1.1600e-003	3.0000e-005	1.2000e-003	0.0000	3.5630	3.5630	9.0000e-005	0.0000	3.5651
Total	**1.4400e-003**	**1.0000e-003**	**0.0119**	**4.0000e-005**	**4.3800e-003**	**3.0000e-005**	**4.4200e-003**	**1.1600e-003**	**3.0000e-005**	**1.2000e-003**	**0.0000**	**3.5630**	**3.5630**	**9.0000e-005**	**0.0000**	**3.5651**

3.6 Road Striping & Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5603					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0119	0.0794	0.1254	2.1000e-004		3.5700e-003	3.5700e-003		3.5700e-003	3.5700e-003	0.0000	17.7026	17.7026	9.7000e-004	0.0000	17.7267
Total	**0.5721**	**0.0794**	**0.1254**	**2.1000e-004**		**3.5700e-003**	**3.5700e-003**		**3.5700e-003**	**3.5700e-003**	**0.0000**	**17.7026**	**17.7026**	**9.7000e-004**	**0.0000**	**17.7267**

3.6 Road Striping & Architectural Coating - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.8800e-003	5.9400e-003	0.0720	2.5000e-004	0.0285	2.1000e-004	0.0287	7.5700e-003	2.0000e-004	7.7600e-003	0.0000	22.2624	22.2624	5.1000e-004	0.0000	22.2753
Total	**8.8800e-003**	**5.9400e-003**	**0.0720**	**2.5000e-004**	**0.0285**	**2.1000e-004**	**0.0287**	**7.5700e-003**	**2.0000e-004**	**7.7600e-003**	**0.0000**	**22.2624**	**22.2624**	**5.1000e-004**	**0.0000**	**22.2753**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5603					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0600e-003	8.9300e-003	0.1271	2.1000e-004		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	17.7025	17.7025	9.7000e-004	0.0000	17.7267
Total	**0.5623**	**8.9300e-003**	**0.1271**	**2.1000e-004**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**17.7025**	**17.7025**	**9.7000e-004**	**0.0000**	**17.7267**

3.6 Road Striping & Architectural Coating - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.8800e-003	5.9400e-003	0.0720	2.5000e-004	0.0285	2.1000e-004	0.0287	7.5700e-003	2.0000e-004	7.7600e-003	0.0000	22.2624	22.2624	5.1000e-004	0.0000	22.2753
Total	**8.8800e-003**	**5.9400e-003**	**0.0720**	**2.5000e-004**	**0.0285**	**2.1000e-004**	**0.0287**	**7.5700e-003**	**2.0000e-004**	**7.7600e-003**	**0.0000**	**22.2624**	**22.2624**	**5.1000e-004**	**0.0000**	**22.2753**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0643	0.3261	0.9475	4.2900e-003	0.4206	2.9700e-003	0.4236	0.1127	2.7600e-003	0.1155	0.0000	397.5972	397.5972	0.0169	0.0000	398.0201
Unmitigated	0.0643	0.3261	0.9475	4.2900e-003	0.4206	2.9700e-003	0.4236	0.1127	2.7600e-003	0.1155	0.0000	397.5972	397.5972	0.0169	0.0000	398.0201

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
General Light Industry	0.00	0.00	0.00		
Industrial Park	250.32	250.32	250.32	1,108,508	1,108,508
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-Rail	0.00	0.00	0.00		
Total	250.32	250.32	250.32	1,108,508	1,108,508

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Industrial Park	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Industrial Park	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Other Asphalt Surfaces	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Other Non-Asphalt Surfaces	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Parking Lot	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Unrefrigerated Warehouse-Rail	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

LACMTA West Santa Ana Branch MSF - Bellflower Option - Los Angeles-South Coast County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	901.4120	901.4120	0.0213	4.4000e-003	903.2568
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	901.4120	901.4120	0.0213	4.4000e-003	903.2568
NaturalGas Mitigated	7.4900e-003	0.0681	0.0572	4.1000e-004		5.1800e-003	5.1800e-003		5.1800e-003	5.1800e-003	0.0000	74.1455	74.1455	1.4200e-003	1.3600e-003	74.5861
NaturalGas Unmitigated	7.4900e-003	0.0681	0.0572	4.1000e-004		5.1800e-003	5.1800e-003		5.1800e-003	5.1800e-003	0.0000	74.1455	74.1455	1.4200e-003	1.3600e-003	74.5861

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	219010	1.1800e-003	0.0107	9.0200e-003	6.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	11.6872	11.6872	2.2000e-004	2.1000e-004	11.7567
General Light Industry	83260	4.5000e-004	4.0800e-003	3.4300e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	4.4431	4.4431	9.0000e-005	8.0000e-005	4.4695
Industrial Park	1.07681e+006	5.8100e-003	0.0528	0.0443	3.2000e-004		4.0100e-003	4.0100e-003		4.0100e-003	4.0100e-003	0.0000	57.4627	57.4627	1.1000e-003	1.0500e-003	57.8042
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-Rail	10353	6.0000e-005	5.1000e-004	4.3000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.5525	0.5525	1.0000e-005	1.0000e-005	0.5558
Total		**7.5000e-003**	**0.0681**	**0.0572**	**4.0000e-004**		**5.1800e-003**	**5.1800e-003**		**5.1800e-003**	**5.1800e-003**	**0.0000**	**74.1455**	**74.1455**	**1.4200e-003**	**1.3500e-003**	**74.5861**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	83260	4.5000e-004	4.0800e-003	3.4300e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	4.4431	4.4431	9.0000e-005	8.0000e-005	4.4695
General Light Industry	219010	1.1800e-003	0.0107	9.0200e-003	6.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	11.6872	11.6872	2.2000e-004	2.1000e-004	11.7567
Industrial Park	1.07681e+006	5.8100e-003	0.0528	0.0443	3.2000e-004		4.0100e-003	4.0100e-003		4.0100e-003	4.0100e-003	0.0000	57.4627	57.4627	1.1000e-003	1.0500e-003	57.8042
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-Rail	10353	6.0000e-005	5.1000e-004	4.3000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.5525	0.5525	1.0000e-005	1.0000e-005	0.5558
Total		**7.5000e-003**	**0.0681**	**0.0572**	**4.0000e-004**		**5.1800e-003**	**5.1800e-003**		**5.1800e-003**	**5.1800e-003**	**0.0000**	**74.1455**	**74.1455**	**1.4200e-003**	**1.3500e-003**	**74.5861**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	134310	74.8055	1.7700e-003	3.7000e-004	74.9586
General Light Industry	51060	28.4385	6.7000e-004	1.4000e-004	28.4967
Industrial Park	1.34369e+006	748.3812	0.0177	3.6600e-003	749.9128
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	42980	23.9382	5.7000e-004	1.2000e-004	23.9872
Unrefrigerated Warehouse-Rail	46410	25.8486	6.1000e-004	1.3000e-004	25.9015
Total		**901.4119**	**0.0213**	**4.4200e-003**	**903.2568**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	134310	74.8055	1.7700e-003	3.7000e-004	74.9586
General Light Industry	51060	28.4385	6.7000e-004	1.4000e-004	28.4967
Industrial Park	1.34369e+006	748.3812	0.0177	3.6600e-003	749.9128
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	42980	23.9382	5.7000e-004	1.2000e-004	23.9872
Unrefrigerated Warehouse-Rail	46410	25.8486	6.1000e-004	1.3000e-004	25.9015
Total		**901.4119**	**0.0213**	**4.4200e-003**	**903.2568**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5939	5.0000e-005	5.7900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0113	0.0113	3.0000e-005	0.0000	0.0120
Unmitigated	0.5939	5.0000e-005	5.7900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0113	0.0113	3.0000e-005	0.0000	0.0120

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0647					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5287					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.3000e-004	5.0000e-005	5.7900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0113	0.0113	3.0000e-005	0.0000	0.0120
Total	**0.5939**	**5.0000e-005**	**5.7900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0113**	**0.0113**	**3.0000e-005**	**0.0000**	**0.0120**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0647					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5287					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.3000e-004	5.0000e-005	5.7900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0113	0.0113	3.0000e-005	0.0000	0.0120
Total	**0.5939**	**5.0000e-005**	**5.7900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0113**	**0.0113**	**3.0000e-005**	**0.0000**	**0.0120**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	231.1275	1.0002	0.0246	263.4556
Unmitigated	231.1275	1.0002	0.0246	263.4556

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	3.86187 / 0	29.2323	0.1265	3.1100e-003	33.3210
Industrial Park	23.9205 / 0	181.0650	0.7836	0.0193	206.3909
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-Rail	2.75188 / 0	20.8302	0.0901	2.2100e-003	23.7437
Total		**231.1275**	**1.0002**	**0.0246**	**263.4556**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	3.86187 / 0	29.2323	0.1265	3.1100e-003	33.3210
Industrial Park	23.9205 / 0	181.0650	0.7836	0.0193	206.3909
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-Rail	2.75188 / 0	20.8302	0.0901	2.2100e-003	23.7437
Total		**231.1275**	**1.0002**	**0.0246**	**263.4556**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	32.5131	1.9215	0.0000	80.5497
Unmitigated	32.5131	1.9215	0.0000	80.5497

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	20.71	4.2039	0.2485	0.0000	10.4151
Industrial Park	128.27	26.0377	1.5388	0.0000	64.5072
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-Rail	11.19	2.2715	0.1342	0.0000	5.6275
Total		**32.5131**	**1.9215**	**0.0000**	**80.5497**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	20.71	4.2039	0.2485	0.0000	10.4151
Industrial Park	128.27	26.0377	1.5388	0.0000	64.5072
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-Rail	11.19	2.2715	0.1342	0.0000	5.6275
Total		**32.5131**	**1.9215**	**0.0000**	**80.5497**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation